Region L
South Central Texas Regional Water Planning Group

c/o San Antonio River Authority
100 East Guenther Street
San Antonio, Texas 78204
(210) 227-1373 Office
www.RegionLTexas.org

DATE: Friday, July 24, 2020

TO: Members of the South Central Texas Regional Water Planning Group

FROM: Caitlin Heller

The schedule and location of the meeting of the South Central Texas Regional Water Planning Group is as follows:

TIME AND LOCATION

Thursday, July 24, 2020
9:30 a.m.
GotoMeeting Virtual Web Address:
https://global.gotomeeting.com/
join/291558957

You can also dial in using your phone.
United States: +1 (669) 224-3412

Access Code: 291-558-957

Enclosed is a copy of the posted public meeting notice.

Caitlin Heller

Enclosure

Agenda Packet for July 30, 2020

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 as established by the Texas Water Development Board will be held on Thursday, July 30, 2020, at 9:30 AM virtually on GotoMeeting at https://global.gotomeeting.com/join/291558957. You may also dial into the meeting on your phone at +1 (669) 224-3412, access code: 291-558-957.

1. (9:30 AM) Roll-Call
2. Public Comment
3. Approval of the Minutes from the February 20, 2020 Meeting of the South Central Texas Regional Water Planning Group (SCTRWPG)
4. Remarks from Texas Water Development Board Director, Kathleen Jackson
5. Status of Edwards Aquifer Habitat Conservation Plan (EAHCP), Scott Storment
6. Status of Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays Basin and Bay Stakeholder Committee (BBASC) and Expert Science Team (BBEST)
7. Texas Water Development Board (TWDB) Communications
8. Chair's Report
9. Discussion and Appropriate Action Regarding the Consultant's Work and Schedule
10. Presentation of Region L Budget Current Status
11. Discussion and Appropriate Action Regarding Comments Received to Date on the 2021 Region L IPP
12. Presentation of Infrastructure Financing Survey, Chapter 9
13. Presentation of Implementation Survey, Chapter 11
14. Discussion and Appropriate Action Regarding Project Prioritization and Approach
15. Discussion and Appropriate Action Regarding Regional Liaisons Including Roles and Responsibilities and Nominations for Regions N, J, K, M, and P
16. Discussion and Appropriate Action Regarding Planning Members Bylaws Violation
17. Possible Agenda Items for the Next Region L Meeting
18. Public Comment

2. Public Comment

3. Approval of the Minutes from the February 20, 2020, Meeting of the South Central Texas Regional Water Planning Group (SCTRWPG)

Minutes of the
South Central Texas Regional Water Planning Group

February 20, 2020

Chair Scott called the meeting to order at 9:30 a.m. in the San Antonio Water System's (SAWS) Customer Service Building, Room CR 145, 2800 US Highway 281 North, San Antonio, Bexar County, Texas.

27 of the 31 voting members, or their alternates, were present.

Voting Members Present:
Kenneth Eller for Tim Andruss
John Byrum
Curt Campbell
Patrick Garcia for Rey Chavez
Alan Cockerell
Charlie Flatten
Kevin Janak
Tom Jungman
Russel Labus
Glenn Lord
Dan Meyer
Gary Middleton
Johnathan Stinson for Kevin Patteson
Robert Puente
Humberto Ramos
Steve Ramsey
Weldon Riggs
Roland Ruiz
Diane Savage
Greg Senglemann
Mitchell Sowards
Heather Sumpter
Thomas Taggart
Ian Taylor
Diane Wassenich
Adam Yablonski

Voting Members Absent:
Pat Calhoun
Will Conley
Vic Hilderbran
Iliana Pena

Non-Voting Members Present:
Ron Ellis for Elizabeth McCoy, Texas Water Development Board (TWDB)
Jami McCool, TX Dept. of Agriculture
Ronald Fieseler, Region K Liaison
Marty Kelly, TX Department of Parks and Wildlife
Tony Franklin for Rusty Ray, Texas Soil & Water Cons. Board

Non-Voting Members Absent:
Iliana Delgado, TCEQ
Don McGhee, Region M Liaison
Joseph McDaniel, Region J Liaison
Carl Crull, Region N Liaison
Rusty Ray, Texas Soil & Water Cons. Board

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: (9:30 AM) ROLL CALL

Caitlin Heller, San Antonio River Authority, called the role, and confirmed a quorum

AGENDA ITEM NO. 2: PUBLIC COMMENT

No public comment.

AGENDA ITEM NO. 3: APPROVAL OF THE MINUTES FROM THE JANUARY 23, 2020, MEETING OF THE SOUTH CENTRAL TEXAS REGIONAL WATER PLANNING GROUP (SCTRWPG)

Ms. Wassenich moved for the approval of the minutes. Mr. Middleton seconded the motion. The minutes were approved.

AGENDA ITEM NO. 4: STATUS OF EDWARDS AQUIFER HABITAT CONSERVATION PLAN (EAHCP), SCOTT STORMENT

Mr. Storment was unable to attend the meeting; therefore, no update was given.

AGENDA ITEM NO. 5: STATUS OF GUADALUPE, SAN ANTONIO, MISSION, AND ARANSAS RIVERS AND MISSION, COPANO, ARANSAS, AND SAN ANTONIO BAYS BASIN AND BAY STAKEHOLDER COMMITTEE (BBASC) AND EXPERT SCIENCE TEAM (BBEST)

Ms. Scott informed the group that the TWDB had received the BBASC list of recommended projects on December 2, 2019. On February 5, 2020, BBASC received the list of chosen projects to receive funding and noticed that only one of their projects was being funded; *Guadalupe Delta Ecological Assessment of Freshwater Inflows.* Ms. Scott told the group that their number one priority project, *Developing Models to Forecast Ecological Outcomes of Various Flow Scenarios on Oysters and Sport Finfish in the Colorado-Lavaca, Guadalupe-San Antonio, Mission-Aransas, and Nueces Estuaries*, was not chosen. She explained that BBASC wanted clarification from the TWDB on the share rejection memo for this project and was arranging a meeting to better understand the project selection process.

AGENDA ITEM NO. 6: TEXAS WATER DEVELOPMENT BOARD (TWDB) COMMUNICATIONS

Mr. Ellis announced to the members that the first meeting for the Interregional Planning Council would take place on April 30, 2020 and that the TWDB was hiring a facilitator for that meeting. He informed the group that the SWIFT application cycle was closed, and the Board is considering amounts for the applications received. Full applications will be open to be submitted in the Spring.

Mr. Ellis then elaborated on the Regional Water Planning rules which went to the Board on February 13, 2020 and is to be published in the Texas Register on February 28, 2020. A comment period will be open until March 30, 2020 and comments can be sent to the TWDB website. The

updates to the rules were required because of the legislative updates from SB 7 & 8. Mr. Ellis stated that these rules would be finalized in the Spring.

AGENDA ITEM NO. 7: PRESENTATION OF THE SOCIOECONOMIC IMPACT REPORT BY TWDB

Dr. Ellis reviewed the socioeconomic impact analysis process that the TWDB developed on behalf of the Regional Water Planning Groups. He highlighted that this information can be found on the new Socioeconomic Impact Data Dashboards and Methodology website created by the TWDB. A summary of the methodology can be found on page 16 of the agenda packet.

AGENDA ITEM NO. 8: CHAIR'S REPORT

Ms. Scott informed the group that the state's Water Conservation Advisory Council (WCAC) is requesting feedback on their proposed legislative recommendations. The draft version of these recommendations is included in the agenda packets. She likewise encouraged members to review the new TWDB RWPG rules and submit comments by March 30, 2020.

Ms. Scott told the members that the process to begin for the 6th Regional Water Plan would be beginning in meetings later this year.

AGENDA ITEM NO. 9: CONSULTANT'S WORK AND SCHEDULE

Ms. Gonzalez reviewed the Consultant's schedule and noted that the deadline for the IPP submittal is March 3, 2020. She stated that the finals parts include the presentation of the Cumulative Effects Analysis. Ms. Gonzalez spoke briefly about the upcoming public hearings, the additional Planning Group meeting on July 30, 2020, and the adoption of the final plan on September 3, 2020.

AGENDA ITEM NO. 10: PRESENTATION OF THE CUMULATIVE EFFECTS ANALYSIS

Ms. Gonzalez presented Chapter 6, which includes the impact of the RWP and consistency with protection of resources. She reviewed impacts on instream flow and freshwater inflow for New Braunfels, San Marcos River at Luling, Guadalupe River at Victoria, San Antonio River near Falls City, San Antonio River at Goliad, Guadalupe River at Diversion Dam, and the Guadalupe Estuary. Her team presented on the Regional Environment, Ecoregions and Environmental Effect Analysis as well. This presentation can be found in the agenda packet.

AGENDA ITEM NO. 11: DISCUSSION REGARDING COMMENTS RECEIVED TO DATE ON THE REGION L WATER PLAN CHAPTERS

Ms. Gonzalez explained the process for how Black & Veatch collected comments from the Region L Google Drive, phone, email, and ones that she personally discovered. The comments were then categorized as Substantive or Editorial. Ms. Gonzalez then reviewed the comments that were gathered from the Planning Group and explained the consultant team's responses for Chapters 8,

3, 2, 4, 5, 11 and 7. Members made several minor changes to clarify the intent of the language in the chapters.

AGENDA ITEM NO. 12: DISCUSSION AND APPROPRIATE ACTION TO ADOPT AND SUBMIT THE 2021 INITALLY PREPARED PLAN (IPP) AND AUTHORIZATION FOR THE CONSULTANT TO ADDRESS ANY PLANNING GROUP CHANGES TO THE IPP DOCUMENT PRIOR TO SUBMITTING TO THE TWDB

Ms. Gonzales briefed the Planning Group on a high-level summary of the 2021 Initially Prepared Plan. She noted that Chapter 9 currently has a placeholder as that data will be gathered after the IPP has been submitted. Likewise, Chapter 10 information will be developed after the public hearings, but relevant portions were included in the IPP.

Ms. Gonzales then reviewed the updated schedule for the 2021 Regional Water Plan. Ms. Scott requested that the Guiding Principles workgroup be included into the IPP presentation. Mr. Middleton motioned to adopt the IPP and was seconded by Mr. Riggs. The motion passed unanimously.

AGENDA ITEM NO. 13: DISCUSSION AND APPROPRIATE ACTION AUTHORIZING THE CONSULTANT TO SUBMIT THE 2021 INITIALLY PREPARED PLAN (IPP) ON BEHALF OF THE SOUTH CENTRAL TEXAS REGIONAL WATER PLANNING GROUP (SCTRWPG) BY MARCH 3, 2020

Mr. Janak motioned to authorize the consultant and Mr. Middleton seconded. The motion passed unanimously.

AGENDA ITEM NO. 14: DISCUSSION AND APPROPRIATE ACTION TO AUTHORIZE THE SAN ANTONIO RIVER AUTHORITY TO POST THE INITALLY PREPARED PLAN PUBLIC HEARING NOTICE

Ms. Heller explained the IPP public hearing notice to the group members and highlighted the dates and locations of the three upcoming public hearing meetings. Mr. Taggart motioned to authorize and Mr. Campbell seconded. The motion passed unanimously.

AGENDA ITEM NO. 15: DISCUSSION AND APPROPRIATE ACTION SETTING THE SCHEDULE FOR CALENDAR YEAR 2020 MEETINGS

Ms. Heller informed the group that July 30, 2020 was chosen as the next meeting date for the SCTRWPG. This earlier meeting is to provide time for the members to review any questions received from the public hearings. Mr. Middleton motioned and Mr. Eller seconded. The motion passed unanimously.

AGENDA ITEM NO. 16: POSSIBLE AGENDA ITEMS FOR THE NEXT REGION L MEETING (JULY 30, 2020)

The next planning group meeting will involve discussion of public hearing comments, presentations of chapters 9, 10, and 11 of the regional water plan, a review of the Region L consultant and administrative budget, absences of planning group members and the presentation of project prioritization.

AGENDA ITEM NO. 17: PUBLIC COMMENT

No public comment.

The meeting adjourned at 11:56 am.

Approved by the South Central Texas Regional Water Planning Group at a meeting held on July 30. 2020.

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GARY MIDDLETON, SECRETARY

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SUZANNE SCOTT, CHAIR

4. Remarks from Texas Water Development Board Director, Kathleen Jackson

5. Status of Edwards Aquifer Habitat Conservation Plan (EAHCP), Scott Storment

6. Status of Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays Basin and Bay Stakeholder Committee (BBASC) and Expert Science Team (BBEST)

7. Texas Water Development Board (TWDB) Communications

8. Chair’s Report

9. Discussion and Appropriate Action Regarding the Consultant's Work and Schedule

Agenda Item 9: Consultant's Work and Schedule

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Anticipated Schedule

July 2020

Task/ Chapter	Description	2019 J	A	S	O	N	D	2020 J	F	M	A	M	J	J	A	S	O	N	D
1	Planning Area Description																		
2	Population/Water Demands																		
3	Existing Supply Analyses																		
4	Identification of Needs																		
5	Identification & Evaluation of Potential WMSs																		
6	Impacts of Regional Water Plan; Cumulative Effects																		
7	Drought Response Information, Activities, & Recommendations																		
8	Policy Recommendations & Unique Sites																		
9	Infrastructure Financing Analysis																		
10	Public Participation & Plan Adoption										Public Hearings								
11	Implementation & Comparison to Previous Plan																		
12	Prioritization											Due Oct. 14, 2020							
NA	Texas Legislative Sessions																		
NA	GMA DFC Revisions/Readoption																		

Legend
- Scheduled Region L Meeting
- Anticipated Region L Meeting
- Anticipated Activity
- Current Month

2021 Initially Prepared Plan (IPP) Due: Mar. 3, 2020

Jul 30

Sep 3 Adopt Plan

2021 Final Plan Due Oct. 14, 2020

Draft 7/29/2020

2

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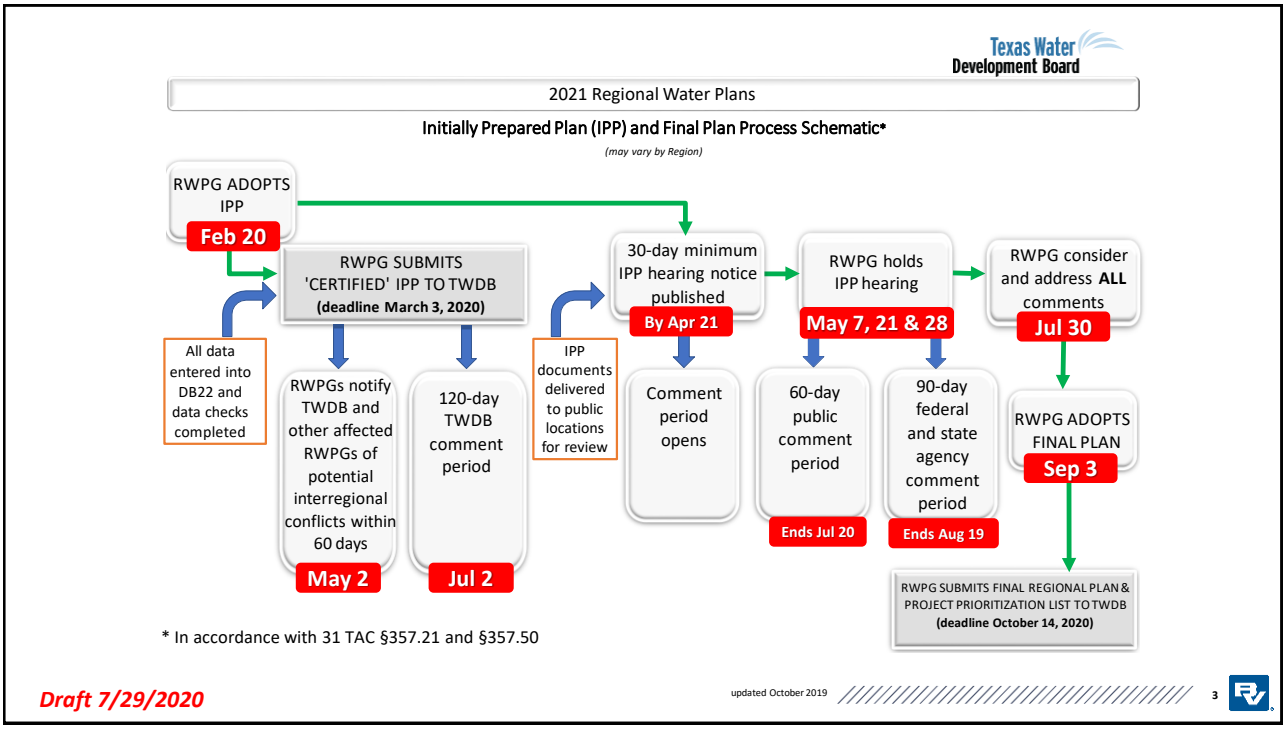
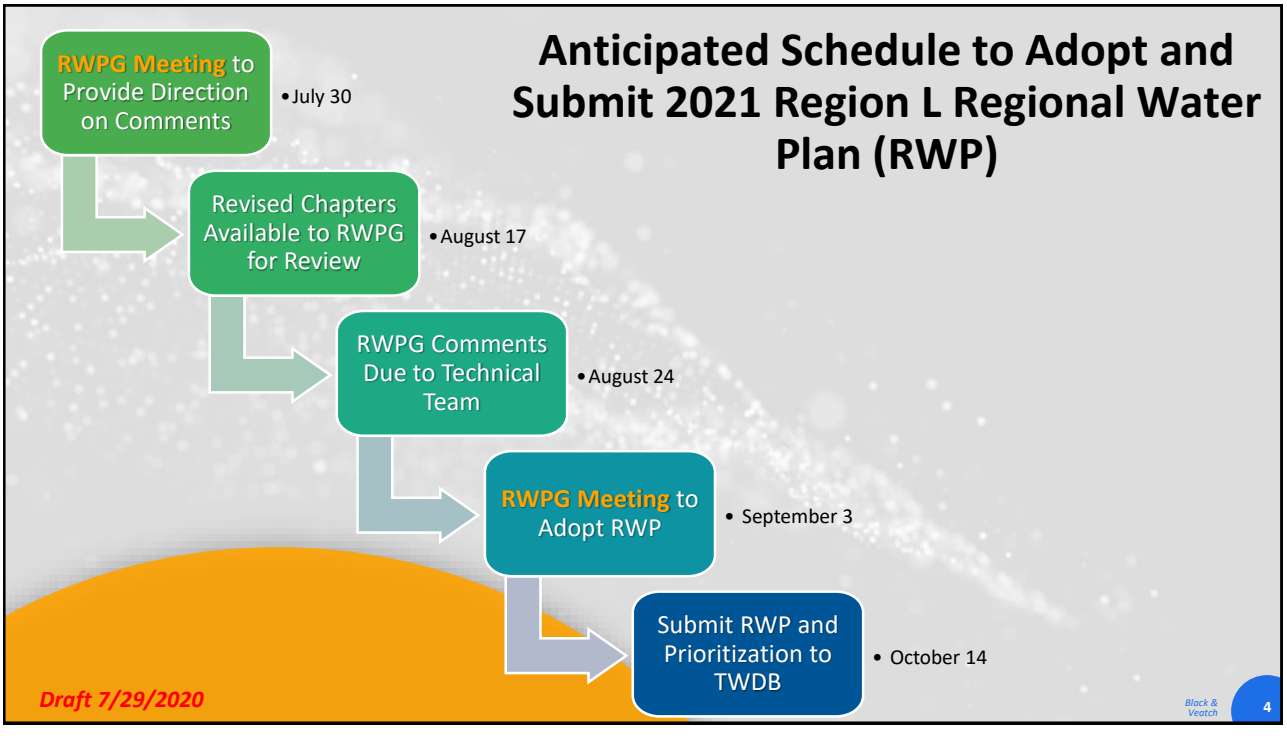

Texas Water Development Board
2021 Regional Water Plans
Initially Prepared Plan (IPP) and Final Plan Process Schematic*
(may vary by Region)
RWPG ADOPTS IPP
Feb 20
RWPG SUBMITS 'CERTIFIED' IPP TO TWDB
(deadline March 3, 2020)
All data entered into DB22 and data checks completed
RWPGs notify TWDB and other affected RWPGs of potential interregional conflicts within 60 days
May 2
120-day TWDB comment period
Jul 2
IPP documents delivered to public locations for review
30-day minimum IPP hearing notice published
By Apr 21
Comment period opens
RWPG holds IPP hearing
May 7, 21 & 28
60-day public comment period
Ends Jul 20
90-day federal and state agency comment period
Ends Aug 19
RWPG consider and address ALL comments
Jul 30
RWPG ADOPTS FINAL PLAN
Sep 3
RWPG SUBMITS FINAL REGIONAL PLAN & PROJECT PRIORITIZATION LIST TO TWDB
(deadline October 14, 2020)
* In accordance with 31 TAC §357.21 and §357.50
Draft 7/29/2020
updated October 2019
3

3


Anticipated Schedule to Adopt and Submit 2021 Region L Regional Water Plan (RWP)
RWPG Meeting to Provide Direction on Comments
• July 30
Revised Chapters Available to RWPG for Review
• August 17
RWPG Comments Due to Technical Team
• August 24
RWPG Meeting to Adopt RWP
• September 3
Submit RWP and Prioritization to TWDB
• October 14
Draft 7/29/2020
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Comment Tutorial for 2021 Regional Water Plan

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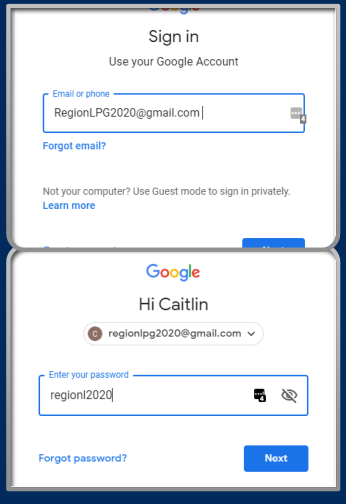

Step 1: Log Into Google Drive

1. Open your browser
2. Go to https://google.com/drive/
3. Click "Go to Google Drive"
4. Type in the username and password shown below:
   a) Username: RegionLPG2020@gmail.com
   b) Password: region!2020

*If Google asks you to "verify your account," choose the email option. Input my email cheller@sara-tx.org and it will let you through.

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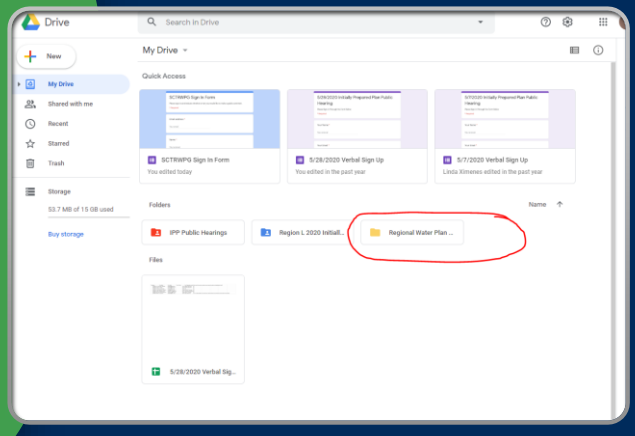
Step 2: Commenting on the 2021 Regional Water Plan



1. Once in the drive, click on the folder “Regional Water Plan” (It is a yellow folder)
2. Each volume will have a folder. Click the volume folder you wish to review.
3. Inside the folder, you will see PDFs of all chapters.

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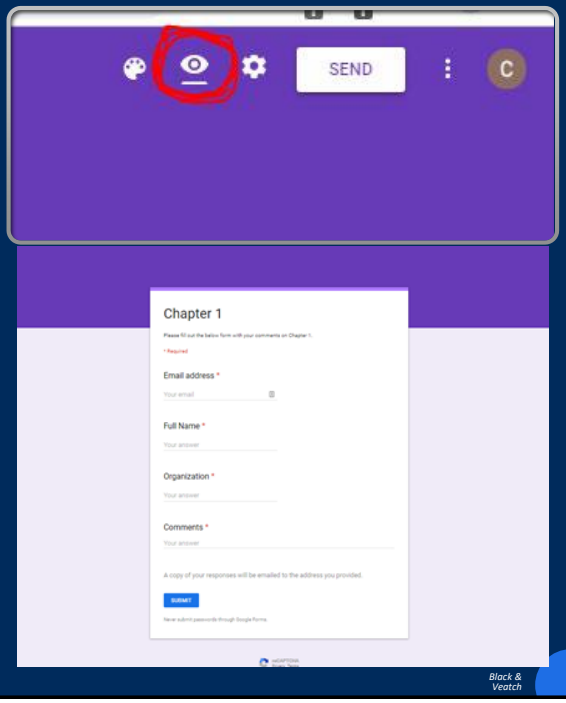
Step 2: Continued

4. To comment, click on the form
5. *IMPORTANT STEP* In the top right corner there is an eye, click that eye to proceed
6. Include the chapter and section number for each comment.
7. Fill out the form with your comments and hit “submit”



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10. Presentation of the Region L Budget Current Status

11. Discussion and Appropriate Action Regarding Comments Received to Date on the 2021 Region L IPP

Agenda Item 11: Comments Received to Date

2021 Initially Prepared Plan (IPP) for the South Central Texas Region (Region L)

Regional Water Planning Group Meeting
July 30, 2020

Draft 7/29/2020

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Comments Received to Date

1. Comments from the Public
2. Comments from State and Federal Agencies
3. Comments from Texas Water Development Board (TWDB)

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1. Comments from the Public

- Received 4 Comments (2 verbal, 2 written)
  - Public (1)
  - Representative of Sierra Club (2)
  - Representative of McCoy WSC (1)

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1. Comments from the Public Summary (1 of 9)

Summarized Comment	Proposed Response
Population • Projections are overestimated • Projections are too conservative • Margins of error (upper and lower bounds) should be included	• The 2021 RWP is an update of the 2016 RWP. The emphasis of the population/demand projections in the 2021 RWP is to transition 2017 State Water Plan (SWP) data from political boundaries to utility service area boundaries, making limited modifications based on relevant changed conditions. • The TWDB provides population projections to RWPGs

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1. Comments from the Public Summary (2 of 9)

Summarized Comment	Proposed Response
Water Demands: • Non-municipal demands are stable through 2070 but climate change would pressure significant changes and should be taken into account **Water Supply/Availability** • Climate change and recent available models depicting its impacts should be considered in water supply/availability evaluations	New Proposed Policy Recommendation in Chapter 8: **8.9.4 Consideration of Climate Variability** Regional Water Plans are based on drought of record conditions using historical hydrological data. Historically, the TWDB has not used climate models to predict impacts to future water resources in Texas because forecasting tools do not 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:*** None. ***Other Recommendation:*** The SCTRWPG encourages the TWDB to reassess available climate models and consider the appropriateness of incorporating them into regional water planning.

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1. Comments from the Public Summary (3 of 9)

Summarized Comment	Proposed Response
Water Conservation • Per capita water use goals inadequate; 70-100 gpcd is achievable	• Region L recognizes the importance of water conservation as a primary water management strategy and recommends every WUG implement water conservation measures. Region L will continue to emphasize importance of conservation to reduce water use. • The SCTRWPG has incorporated recommendations from the Water Conservation Advisory Council (WCAC), which recommends a goal of 140 gallons per capita per day (gpcd) or less. WUGs may choose to incorporate utility-specific goals beyond those identified by the SCTRWPG. • A clarifying statement will be added to the Advanced Water Conservation WMS, as follows: "The table shows anticipated per capita water use as a result of passive water conservation, which is the incorporation of low flow plumbing fixtures. […] **For most WUGs, additional GPCD savings are expected when the Advanced Water Conservation strategy goals are applied."** • SAWS is mentioned as having achieved a 110 gpcd by 2070 in the Advanced Water Conservation WMS; however, this is not the case. A corrected summary of SAWS' gpcd with Advanced Water Conservation will be included in Section 5.2.1.2. • Additionally, SAWS Advanced Meter Infrastructure (AMI) project has been included since the IPP, which will further reduce SAWS' projected gpcd in the final, adopted RWP.

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1. Comments from the Public Summary (4 of 9)

Summarized Comment	Proposed Response
Water Conservation (cont'd) • Commercial and non-municipal water conservation reductions should be included	• Region L recognizes the importance of water conservation as a primary water management strategy and recommends every WUG implement water conservation measures. Region L will continue to emphasize importance of conservation to reduce water use.

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1. Comments from the Public Summary (5 of 9)

Summarized Comment	Proposed Response
Drought Management • SCTRWPG should use more than the 5% reduction in demand	The Drought Management WMS is meant to be a short-term reduction in demand as a result of periodic activation of approved drought contingency plans (DCPs). This WMS was applied to WUGs that have needs in the 2020 decade. The SCTRWPG evaluated reductions of 5% to 20% and ultimately chose to use 5% as the demand reduction standard for most WUGs due to significantly larger total annual costs associated with reductions greater than 5%. WUGs have the choice to implement utility-specific reduction goals beyond the 5%, if desired. For example, SAWS has utility-specific drought management goals under this WMS.
Cumulative Effects Evaluation • The environmental concerns need more detailed analysis and mitigation planning	TBD

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1. Comments from the Public Summary (6 of 9)

Summarized Comment: Innovative Strategies

Region L should consider net-zero water and consider policies to encourage and incentivize enhanced reuse

Net Zero Water: limiting consumption of water resources and returning it back to the same watershed so as not to deplete resources of that region in quantity or quality over the course of the year.

One Water: reuse-based approach that views drinking water, wastewater, stormwater, and more as a singular resource to be managed holistically and sustainably.

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1. Comments from the Public Summary (7 of 9)

Option 1: No change to Recommendations, Water Reuse is already covered

8.6.7 Water Reuse

The SCTRWPG recognizes the potential to augment water supply by reuse of treated municipal wastewater, agricultural return flows, and industrial process water. 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 encourages the legislature to amend the TWC to add a new chapter to include reuse in the state's administration of water rights.

Other Recommendation: The SCTRWPG recommends that the state, through 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.

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1. Comments from the Public Summary (8 of 9)

Option 2: Add recommendation to consider studies or funding of One Water

8.6.8 One Water

In recent years, municipalities have begun to view water resources from a holistic, system-wide approach, known as One Water. One Water is a decentralized concept that views all water resources as valuable: from stormwater, to a new way of looking at water. 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 encourages the legislature to review existing state laws regarding rainwater, reuse, and blackwater reuse systems to enable and incentivize implementation of One Water Projects.

Other Recommendation: The SCTRWPG recommends that 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; and (2) assist the funding and development of incentive programs to advance One Water in Texas.

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1. Comments from the Public Summary (9 of 9)

Summarized Comment	Proposed Response
McCoy WSC requested revisions to 2021 RWP to be consistent with their *2019 Five Year Conservation Plan*: • Population projections: average increase of 10% • Demand projections: average increase of 10% • Supply projections: average increase of 19% • Needs/Surplus projections: surplus increase of 32%	• McCoy WSC has sufficient surplus (no Needs) for 2020-2070. • The SCTRWPG appreciates McCoy WSC's engagement with Regional Water Plan development and recognizes the desire to have data reported consistently among water resources plans. However, given the previous opportunities for involvement in the population and water demand projections, and the time and effort constraints associated with revising or amending the plan, the SCTRWPG acknowledges the comment and recommends no changes to the 2021 RWP at this time. In order to ensure that population, demands, and supplies are represented appropriately in future plans, the SCTRWPG encourages McCoy WSC to engage with the next cycle of Regional Water Planning (2026 RWP), which will incorporate 2020 Census data.

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2. Comments from State and Federal Agencies

- Received 2 Comment Letters:
  - Texas State Soil and Water Conservation Board (TSSWCB)
  - Texas Parks and Wildlife Department (TPWD)

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2. Comments from State and Federal Agencies (TSSWCB)

- **Majority of Texas' land area is privately-owned; implementation of best management practices (BMPs) on these lands can:**
  - **Improve water quality**
  - **Increase water quantity**
  - **Slow sedimentation of reservoirs**
  - **Increase water infiltration into aquifers**
- **TSSWCB encourages education and implementation of land management techniques**
- **Voluntary incentive-based programs are essential for soil and water conservation in Texas**

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2. Comments from State and Federal Agencies (TPWD)

General Comments

- TPWD appreciative of SCTRWPG efforts in prior cycles to follow TPWD comments
  - Including recommendation for Instream Flow Studies and funding for data access
- Commends SCTRWPG strong emphasis on water conservation, reuse, and drought contingency planning
  - Including successful designation of five segments as ecologically unique
- Overall, IPP provides sufficient detail on habitat protection
  - Description of natural resources
  - Detailed quantitative reporting of environmental factors for each WMS
  - Discussion of cumulative environmental effects

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2. Comments from State and Federal Agencies (TPWD), cont.

General Comments

- Invasive exotic species (i.e. zebra mussels)
- WMS' recommended for stream segments identified by TPWD as ecologically significant
- Increased groundwater development on springs and surface water interactions
- New appropriations and/or increased use of Guadalupe River water rights impacting instream and freshwater inflows

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2. Comments from State and Federal Agencies (TPWD), cont. Recommendations (1 of 3)

TPWD Recommendation	Proposed RWPG Response
(To Entities) Coordinate with TPWD to develop plans to avoid aquatic resources impact, or in some instances, relocate aquatic resources outside project area	This comment is acknowledged.

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2. Comments from State and Federal Agencies (TPWD), cont. Recommendations (2 of 3)

TPWD Recommendation	Proposed RWPG Response
Incorporate recently updated (March 30, 2020) list of State and Federal Species of Greatest Conservation Need (SGCN) in Chapter 5.2 • Concerned about declining freshwater mussel populations	Proposed language for Chapter 5.2: The TPWD county species lists were updated by the TPWD March 30, 2020, which was after the WMS evaluations were performed and after the Initially Prepared Plan (IPP) was submitted to the TWDB and made available for public review. The evaluations of impacts to threated, endangered, and species of greatest conservation need included in this RWP were based on the TPWD county species lists available at the time of evaluation. Projects would require independent review of impacts to threatened, endangered, and species of greatest conservation need as part of the regulatory permitting for the project. Most updates reflected additions, deletions, or revisions of SGCN species; updates to state listed species included updated status of black-capped vireo and bald eagle, which are no longer considered endangered or threatened; and updates to freshwater mussels to reflect taxonomic revisions.

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2. Comments from State and Federal Agencies (TPWD), cont. Recommendations (3 of 3)

TPWD Recommendation	Proposed RWPG Response
Identify areas where zebra mussels exist in order to prevent spread of zebra mussels via water transfer and negative impacts of invasive exotic species	

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3. Comments from TWDB

- Received and Responded to Preliminary Draft Comments
  - New this Planning Cycle
  - As courtesy to RWPGs, draft preliminary comments provided so consultants/RWPGs can point TWDB in direction of where to find existing information in the IPP
- Received Final Comments from TWDB
  - Provided in June 2020

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3. Comments from TWDB, General Summary

- Confirm that all strategies shown as providing water in 2020 will be online and providing water supply by Jan. 5, 2023
- Include revised water demands and needs for WUGs split with other regions in Chapters 2, 4, and 5
- Include Major Water Providers (MWPs) summary tables for existing supplies, needs, second-tier need analyses, and management supply factors
- Ensure consistency between plan and DB22
- Advanced Water Conservation (AWC) as a Recommended WMS for Irrigation Users should be removed from Chapter 5.3; a narrative will be added to the AWS WMS to clarify that conservation is recommended for all WUGs.
- Provide explanation for establishing some groundwater supplies equal to demands

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Direction Requested

TWDB Comment A:

- Include documentation of why seawater desalination was not selected as a recommended WMS in the final, adopted regional water plan.

30

Proposal to Address Comment A

Proposed text for Chapter 5.1:

"As indicated in Table 5.1-1, the SCTRWPG recommended inclusion of several Aquifer Storage and Recovery (ASR) strategies and brackish groundwater desalination strategies in the 2021 SCTRWP. The SCTRWPG includes WMSs in the RWP at the request of WUG or WWP sponsors. For the 2021 SCTRWP, seawater desalination was not included as a recommended WMS because it was not requested for inclusion by WUGs and the majority of needs in the region can be met by fresh water, groundwater, brackish groundwater, reuse and conservation WMSs. There are several seawater desalination facilities currently being planned within Texas; seawater desalination may become a feasible and cost-effective strategy for Region L in the future."

31

Direction Requested

TWDB Comment B:

- Indicate how the planning group considered relevant recommendations from the Drought Preparedness Council that were provided in an August 2019 letter to the planning groups

32

Background for Comment B: Recommendations from Drought Preparedness Council

1. Follow the outline template for Chapter 7 **(Done)**
2. Develop region-specific model drought contingency plans (DCPs) for water use categories accounting for more than 10 percent of water demands in any decade **(Direction Requested)**
   - For Region L, the categories are Municipal (Done), Steam-Electric, and Irrigation
   - Region L has previously referred to TCEQ's model DCPs

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Options to Address Comment B

- Do not develop region specific Model DCP for Irrigation and Steam-electric Uses; Reference TCEQ Model DCPs
- Include EAA Critical Period Management as a Model DCP for Irrigation and Steam-electric users
- Hybrid or other options

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Chapter 7 of 2021 Region L RWP

- **Section 7.5.1:** Recommended Surface Water Triggers and Responses
  - Includes summary of GBRA's DCP as a Model DCP for Surface Water users
- **Section 7.5.2:** Recommended Groundwater Triggers and Responses
  - Includes summary of SAWS' DCP as a Model DCP for Groundwater users
- **PROPOSED ADDITION: Section 7.5.3:** Recommended Triggers and Responses for Irrigation and Steam-electric Uses
  - Include EAA Critical Period Management as a Model DCP

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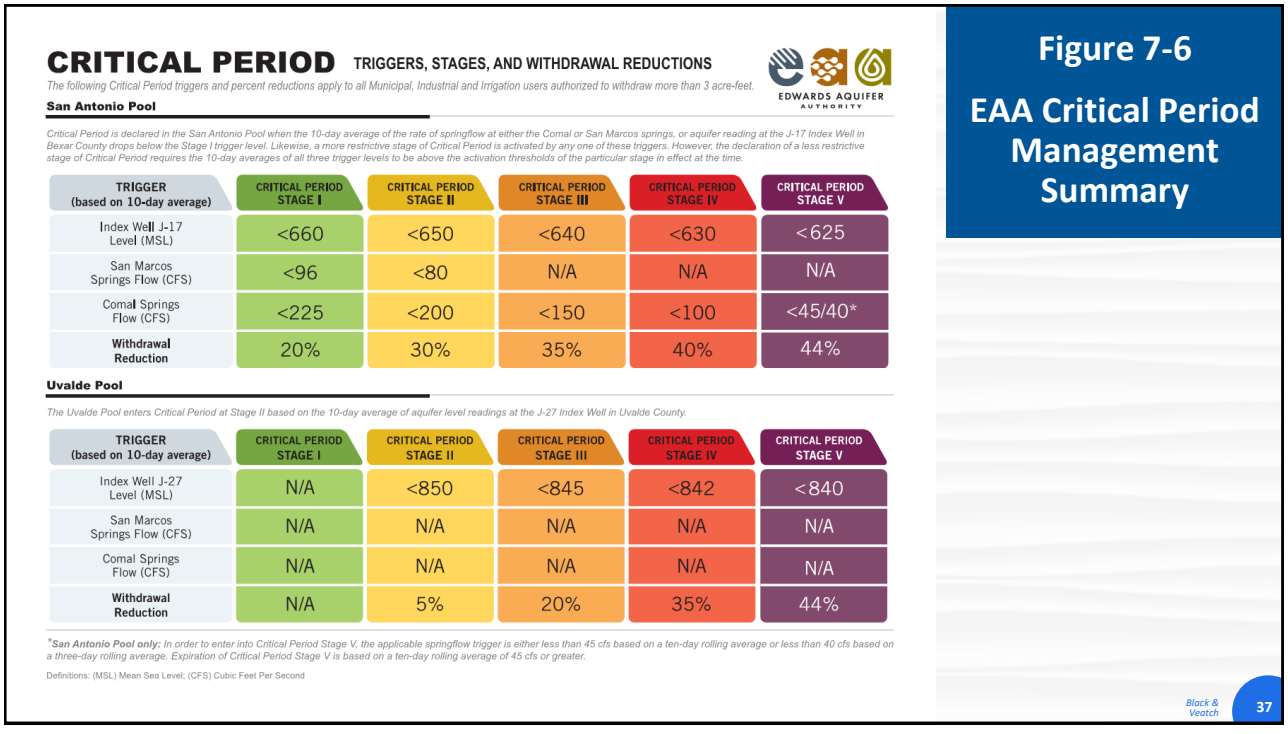
PROPOSED ADDITION – Section 7.5.3

7.5.3 Recommended Triggers and Responses for Irrigation and Steam-electric Uses

As mentioned previously, it is difficult to create a set of drought triggers and responses that will fit the needs of all WUGs in the regional planning area. Irrigation and Steam-electric water use categories each represent 10 percent or more of water demands in any decade. For entities supplying significant amounts of water to customers for irrigation and steam-electric uses, the SCTRWPG suggests reviewing the drought responses and recommendations used by similar entities in the region.

An example of triggers and responses from the Edwards Aquifer Authority (EAA) Critical Period/Drought Management Plan is presented in Figure 7-6. EAA was selected as a representative example because their Critical Period Management Plan applies to municipal, industrial, and irrigation users that are authorized to withdraw more than 3 acre-feet. The Critical Period Management Plan includes five critical period water stages. The triggers depend on 10-day average spring and index well levels and the responses are stepwise, mandatory withdrawal reductions.

36


CRITICAL PERIOD TRIGGERS, STAGES, AND WITHDRAWAL REDUCTIONS
The following Critical Period triggers and percent reductions apply to all Municipal, Industrial and Irrigation users authorized to withdraw more than 3 acre-feet.
EDWARDS AQUIFER AUTHORITY
San Antonio Pool
Critical Period is declared in the San Antonio Pool when the 10-day average of the rate of springflow at either the Comal or San Marcos springs, or aquifer reading at the J-17 Index Well in Bexar County drops below the Stage I trigger level. Likewise, a more restrictive stage of Critical Period is activated by any one of these triggers. However, the declaration of a less restrictive stage of Critical Period requires the 10-day averages of all three trigger levels to be above the activation thresholds of the particular stage in effect at the time.
TRIGGER (based on 10-day average) | CRITICAL PERIOD STAGE I | CRITICAL PERIOD STAGE II | CRITICAL PERIOD STAGE III | CRITICAL PERIOD STAGE IV | CRITICAL PERIOD STAGE V
Index Well J-17 Level (MSL) | <660 | <650 | <640 | <630 | <625
San Marcos Springs Flow (CFS) | <96 | <80 | N/A | N/A | N/A
Comal Springs Flow (CFS) | <225 | <200 | <150 | <100 | <45/40*
Withdrawal Reduction | 20% | 30% | 35% | 40% | 44%
Uvalde Pool
The Uvalde Pool enters Critical Period at Stage II based on the 10-day average of aquifer level readings at the J-27 Index Well in Uvalde County.
TRIGGER (based on 10-day average) | CRITICAL PERIOD STAGE I | CRITICAL PERIOD STAGE II | CRITICAL PERIOD STAGE III | CRITICAL PERIOD STAGE IV | CRITICAL PERIOD STAGE V
Index Well J-27 Level (MSL) | N/A | <850 | <845 | <842 | <840
San Marcos Springs Flow (CFS) | N/A | N/A | N/A | N/A | N/A
Comal Springs Flow (CFS) | N/A | N/A | N/A | N/A | N/A
Withdrawal Reduction | N/A | 5% | 20% | 35% | 44%
*San Antonio Pool only: In order to enter into Critical Period Stage V, the applicable springflow trigger is either less than 45 cfs based on a ten-day rolling average or less than 40 cfs based on a three-day rolling average. Expiration of Critical Period Stage V is based on a ten-day rolling average of 45 cfs or greater.
Definitions: (MSL) Mean Sea Level; (CFS) Cubic Feet Per Second
Figure 7-6
EAA Critical Period Management Summary
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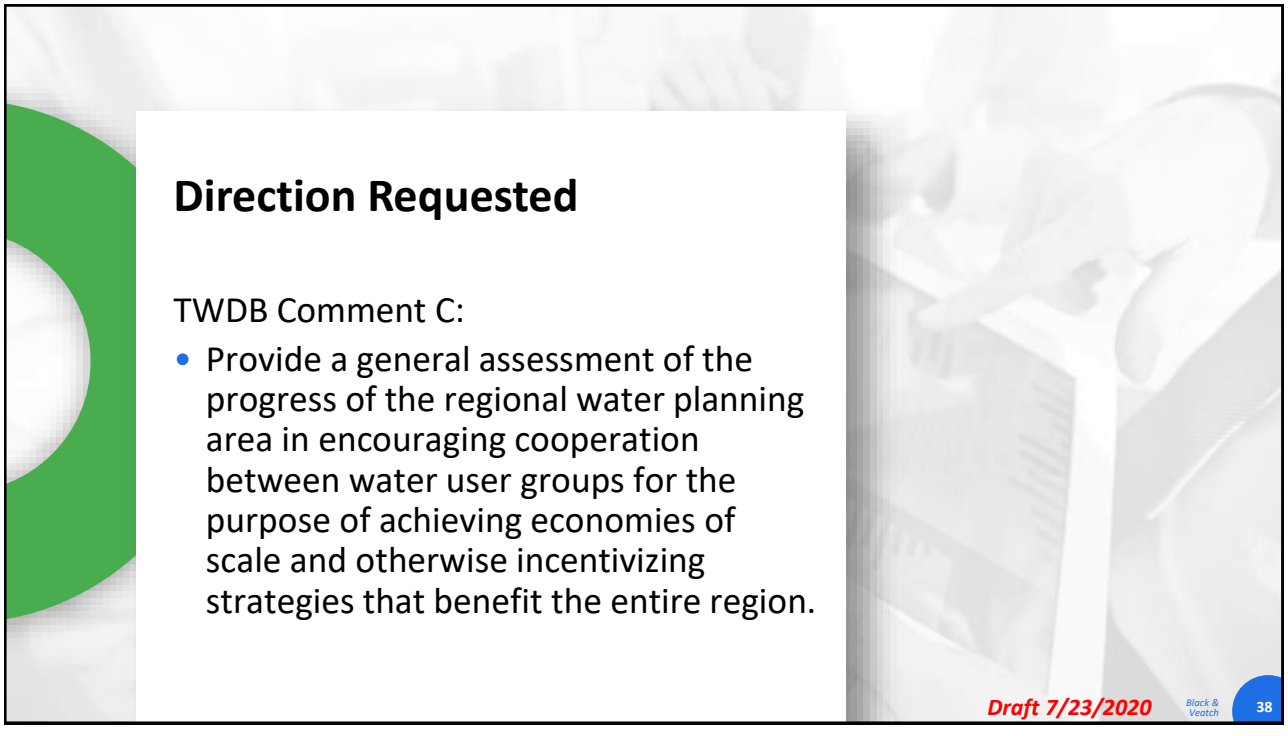
Direction Requested
TWDB Comment C:
• Provide a general assessment of the progress of the regional water planning area in encouraging cooperation between water user groups for the purpose of achieving economies of scale and otherwise incentivizing strategies that benefit the entire region.
Draft 7/23/2020
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Background for Comment C: New Rule

31 TAC §357.45 (b) [Effective June 28, 2020]:

RWPGs shall assess the progress of the RWPA in encouraging cooperation between WUGs for the purpose of achieving economies of scale and otherwise incentivizing WMSs that benefit the entire RWPA. This assessment of regionalization shall include:

1) The number of recommended WMSs in the previously adopted and current RWPs that serve more than one WUG;
2) The number of recommended WMSs in the previously adopted RWP that serve more than one WUG and have been implemented since the previously adopted RWP; and.
3) A description of efforts the RWPG has made to encourage WMSs and WMSPs that serve more than one WUG, and that benefit the entire region.

TWDB has provided guidance that the 2021 RWP can include a general assessment instead of numbered items above.

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Options to Address Comment C

Proposed Subsection to add to Chapter 11:

11.2.7 Assessment of Progress Toward Encouraging Cooperation Among WUGs

- SCTRWPG encourages active participation in cooperative organizations like the Regional Water Alliance.
- WWPs such as ARWA, CRWA, CVLGC, and SSLGC are partnerships of one or more utilities that share water supplies and costs of infrastructure development.
- Several WMSs in the 2016 RWP were combined or separated in the 2021 RWP to accommodate WUG or WWP cooperative agreements. For example, the ARWA/GBRA Project (Phase 1) is a cooperative WMS implemented by two WWPs to achieve capital and operational costs savings from economies of scale and to avoid unnecessary construction of additional pipelines and infrastructure.
- EAA Habitat Conservation Plan (HCP) is an example of local partnerships and coordination in an effort to provide overall benefit to the springs systems and the species that inhabit those springs.

This assessment demonstrates that the prevailing approach for entities within the SCTRWPA is to coordinate and collaborate. Based on the array of collaborative projects and partnerships, the SCTRWPA has been successful in encouraging cooperation among WUGs.

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Direction Requested

TWDB Comment D:

- Each Water Management Strategy (WMS) evaluation should include quantitative reporting of reliability, water loss, and impacts to agricultural resources.

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Reliability

- Surface water: "Firm yield was estimated using the ___ Basin Water Availability Model (WAM Run 3)/___ model. Based on model results, this WMS is considered to have a reliable supply.
- Groundwater: "This strategy was developed in accordance with applicable Modeled Available Groundwater (MAG) values, which would ensure that Desired Future Conditions (DFCs) are maintained. Therefore, this WMS is considered to have a reliable supply."

Agricultural Resources

- This strategy may result in the permanent conversion of approximately __ acres of agricultural land uses to industrial uses."

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Strategy Water Loss

As summarized in Chapter 5.2

- Some conservation strategies are intended to decrease the water loss for existing infrastructure.
- Drought Management Strategies are assumed to have no associated water losses.
- Indirect reuse strategies are assumed to have minimal water losses. For strategies with bed and bank permits, carriage losses are taken into account.
- Direct potable reuse (DPR) strategies that use reverse osmosis (RO) have losses associated with concentrate disposal. Each DPR strategy has its own loss identified.
- ASR strategies have losses due to recovery efficiency from the aquifer. Each ASR WMS evaluation has its own recovery efficiency identified.
- Groundwater desalination strategies include concentrate disposal, which assumes 10% water loss.
- Others

Draft 7/29/2020

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Direction Requested

TWDB Comment E:

- Provide a specific assessment of the potential for ASR projects to meet significant identified needs in the final, adopted regional water plan.

Draft 7/23/2020

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Background for Comment E: Significant Identified Needs

- SCTRWPG defines significant water needs as a WUG or use type with an identified need of 10,000 ac-ft/yr or greater
- For 2021 Region L Plan, those WUGs include:
  - New Braunfels Utilities (NBU)
  - San Antonio Water System (SAWS)
  - San Marcos
  - Victoria
  - Irrigation
  - Mining

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Proposal to Address Comment E

Proposed text for Chapter 5.1:

"Summary of the potential for ASR projects to meet significant identified water needs in Region L:

- To meet **New Braunfels'** significant identified needs, the SCTRWPG recommended the New Braunfels Utilities (NBU) ASR Project in the 2021 SCTRWP. An evaluation of the NBU ASR Project can be found in Section 5.2.25.
- **SAWS** already has an ASR facility in operation, the H2Oaks Center, for which a water treatment plant expansion is included as a recommended WMS in the 2021 SCTRWP. The WMS evaluation for the SAWS ASR WTP expansion project can be found in Section 5.2.8.
- A full strategy evaluation of the potential for ASR projects to meet **San Marcos'** significant identified water needs was not conducted because their needs have been met through a variety of cost-effective WMSs, including Advanced Water Conservation, ARWA/GBRA Project (Phase 1), ARWA Project (Phase 2), and indirect and potable reuse. Given the location and groundwater characteristics in the area, an ASR project could potentially be developed to meet additional needs for San Marcos in the future.
- To meet **Victoria's** significant identified needs, the SCTRWPG recommended the City of Victoria ASR Project in the 2021 SCTRWP. An evaluation of the Victoria ASR Project can be found in Section 5.2.27.
- A full strategy evaluation of ASR was not conducted for **Irrigation** or **Mining** in Region L because implementation of ASR may be considered cost-prohibitive compared to the cost of surface water and/or groundwater projects."

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Other Changes to the IPP:

- Revise Advanced Water Conservation WMS narrative for clarity, and specify the demand reduction and costs associated with the SAWS Advanced Meter Infrastructure Project.
- Revise DB22 to better reflect planned water purchases
- Various editorial revisions and clarifications

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Appendix 10-A: Public Comments

This appendix provides the comments received from the public and federal/state agencies regarding the 2021 Region L IPP; TWDB comments are compiled in Appendix 10-B. An overview and summary of comments is included in Chapter 10 of the SCTRWP. The following provides a list of each comment and includes the SCTRWPG's response. If applicable, the SCTRWPG Response describes any revisions made to the IPP to address the comment. Comments are numbered sequentially and cross-reference with Table 1: Commenter Information.

Comments and Responses

COMMENT NO. 1:

Terry Bruns, representing the Chair of the San Antonio (Alamo Area) Sierra Club. I want to make some general comments regarding the proposed plan. There is a lot of good data. I find that first of all the goals for per capita water municipally use reductions are totally inadequate with many areas even in year 2070 using in excess or close to 200 gallons per day. Way unnecessary and way out of line. This should be far lower. You also have no commercial or non-municipal reduction goals to speak of which should be corrected. In addition, you show electricity production usage at essentially unchanged levels and I would expect by 2070 there will be no fossil fuel energy production in the entire area and that will result in large decrease in water use and need. Most egregiously I think in this plan I see there is zero mention of climate change and you're predicting out to 2070 on the basis of current climate data and information about storms and precipitation. This is totally unrealistic, makes no sense what so ever. The world is changing rapidly. You need to use available modeling. The fourth climate assessment that the US Government put out in 2018 includes our area and has information. This is vitally important to incorporate into your water predictions, and I urge you to do so. In addition, I would urge an element of caution regarding the population predictions. You know, Detroit in the 1960's predicting to be one of the largest cities in the country and we see how that turned out. It's hard to know what is going to happen with COVID-19 but we may not continue growing at the rate we have, and we ought to have some margins of error in this modeling, so we can see upper and lower points of reference. Please consider these seriously comments as you go forward. Thank you very much.

RESPONSE:

Response for Comment No. 1 is TBD.

COMMENT NO. 2:

I concur with many of Terry Burns concerns. I also wanted to note that the population projections, although they are originated by the state, are extremely conservative based upon the current rate of natural growth and that's not even allowing for immigration to the area, over-looking a fifty (50) year period and we all know water demand is positively correlated with population. Along with Terry I want to say that the projections of GPCD are not even in keeping in with many of the much lower levels which some of the municipalities have already achieved. In the long term, there is a way to always avoid all of these problems and eventually everyone is going to have to deal with that which is to use the technology that will be used. For instance, this week in SpaceX, and which has been used by every astronaut ever, which is Net-Zero water. There are some industries that could easily adopt Net-Zero. I think that forward-looking Region L and all of its entities should start to educate themselves on Net-Zero water and start considering what would be to implement that and what would it take to do so. Would there be any municipal or state ordinances or laws that would need to be changed or advocated for. And also, what incentives might help those who are able to readily adapt to reusing the same water over and over within their cycle to do so. Thank you so much.

RESPONSE:

Response for Comment No. 2 is TBD.

COMMENT NO. 3:

My name is Terry Burns, M.D., Chair of the San Antonio (Alamo) Group of the Sierra Club, the nation's oldest, and largest volunteer based environmental organization. I write in follow up to the oral comments I provided to the May 28th on line hearing.

The failure of this plan to address Climate Change is a FATAL FLAW. Predictions out to 2070 MUST take account of predicted climate changes. I refer you to https://nca2018.globalchange.gov. There is a whole section on changes in the Southern Great Plains. These data and predictions MUST be considered. We are looking at an average 7-8 degree Fahrenheit temperature rise by 2070. And since the publication of this report carbon emissions have continued and modeling continues to be refined, and the rapidity and extent of these predicted changes continues to increase. We are looking at OVER 100 DAYS of temperatures above 95 degrees by 2070. This plan will be pure science fiction without incorporation of climate data.

This plan shows essentially no changes in predicted non-municipal water uses. This seems highly unlikely. One example is the unchanged prediction for steam-electric power. By 2070, there will probably be ZERO steam-electric power left in Region L, and so this use will disappear. Agriculture use will be greatly impacted by climate change. In addition to warming there will be more intermittency and variability in rain fall and stream flows, with severe storms and intervening intense droughts. Agricultural irrigation and livestock production will be under tremendous pressure to change crops, change livestock, and change water use. I see no accounting of these pressures. I also see no water saving management proposals for these non-municipal categories, and the absence of pre-existing data is not at all a satisfactory excuse for not including such proposals.

This plan shows vast differences in municipal water use in Region L. The existing differences SHOULD serve as motivation for aggressive proposals to reduce greatly these differences. We find wealthy San Antonio area urban enclaves using 200-300 gpcd currently, and barely achieving any reductions 50 YEARS LATER. For example, Alamo Heights currently shows 244 gpcd, and achieves 235 gpcd. Shavano Park goes from 282 to 276 gpcd. These changes are attributed to institution of low flow plumbing fixtures, but seem essentially within margin of statistical error. Advanced Conservation methods are predicted to achieve no additional benefit in Alamo Heights for some reason, while Shavano Park does show significant improvement from 265 to160 gpcd. SAWS itself is at about 118 gpcd and only achieves 110 gpcd with the lesser or advanced conservation effort. The implication seems to be that additional municipal water use reductions will be modest and difficult to achieve. Sierra Club asserts that these goals for rural and urban municipalities are FAR TOO MODEST. All municipal areas in Region L should be able to achieve less than 100 gpcd by 2070, and should aim for less than 70 gpcd. You currently show total Region L municipal water use rising from about 450,000 A-F/year to about 680,000. This increase, even with your projected population increases, could be largely eliminated with more ambitious water conservation goals. In particular you show 30% of residential water use state wide due to landscape watering. Anticipated climate changes will have a huge impact on this. Unless landscaping practices change and more drought tolerant plantings are adopted the costs of maintaining the current water hungry landscapes will become extreme.

It is good that Drought Management Plan proposals show a range of options from 5 to 20 %. It is UNCONSCIONABLE that the Region L 2021 Plan should choose a goal of 5%, the least ambitious option. SAWS alone could achieve 56,588 Acre Feet of water savings using the 20% figure. Of course SAWS spent $3 Billion on Vista Ridge in order to NEVER implement any beyond Stage 2 Drought Management Plan actions.

Finally, environmental impacts in the Plan are fairly cursory: "The environmental assessments of individual WMSs should be regarded as high-level preliminary". 6.1.5.1 Environmental Benefits, calls as benefits largely things like the absence of new dams, and plans to "not exceed environmental flow standards." These are beneficial in being LESS NEGATIVE than other actions but not in the sense of IMPROVING our water resources environment. The 6.1.5.2 Environmental Concerns are, however, of huge importance, ESPECIALLY in the face of predicted climate change impacts:

"Reductions in instream flows and freshwater inflows to bays and estuaries associated with surface water supply and

direct consumptive reuse projects.
■ Projects located in stream segments identified by TPWD as ecologically significant.25
■ Effects on small springs and reductions in flux entering streams from aquifers associated with groundwater development.
Potential interaction of climate variability with other identified impacts."
These NEGATIVE SERIOUS IMPACTS need far more detailed analysis and mitigation planning.

In summary, I thank Black & Veatch for the extensive data collection and preparation of this Draft Plan. I URGE REGION L TO GO WAY BEYOND THE VERY MODEST PROPOSALS IN THIS REPORT. As it stands it outlines a future of hugely over extended costly and unnecessary water infrastructure. It also totally ignores climate change.

Sincerely,
Terry Burns, M.D.
Chair, Alamo regional Group, Lone Star Chapter, Sierra Club
tbscpbsc@satx.rr.com

RESPONSE:

Response for Comment No. 3 is TBD.

COMMENT NO. 4:

For the past 2 years the Texas State Soil and Water Conservation Board (TSSWCB) has been participating in the Texas Water Development Board's (TWDB) Regional Water Planning meetings as directed by Senate Bill 1511, passed in the 2017 legislative session. We appreciate being included in the process and offer these constructive comments to the regional water plans and ultimately the State water plan.

As you may know 82% of Texas' land area is privately-owned and are working lands, involved in agricultural, timber, and wildlife operations. These lands are important as they provide substantial economic, environmental, and recreational resources that benefit both the landowners and public. They also provide ecosystem services that we all rely on for everyday necessities, such as air and water quality, carbon sequestration, and wildlife habitat.

With that said, these working lands are where the vast majority of our rain falls and ultimately supply the water for all of our needs, such as municipal, industrial, wildlife, and agricultural to name a few. Texas' private working lands are a valuable resource for all Texans.

Over the years, the private landowners of these working lands have been good stewards of their property. In an indirect way they have been assisting the 16 TWDB's Regional Water Planning Groups in achieving their goals through voluntary incentive-based land conservation practices.

It has been proven over time if a raindrop is controlled where it hits the ground there can be a benefit to both water quality and water quantity. Private landowners have been providing benefits to our water resources by implementing Best Management Practices (BMP) that slow water runoff and provide for soil stabilization, which also slows the sedimentation of our reservoirs and allows for more water infiltration into our aquifers.

Some common BMPs include brush management, prescribed grazing, fencing, grade stabilization, irrigation land leveling, terrace, contour farming, cover crop, residue and tillage management, and riparian herbaceous cover.

The TSSWCB has been active with agricultural producers since 1939 as the lead agency for planning, implementing, and managing coordinated natural resource conservation programs for preventing and abating agricultural and sivicultural nonpoint sources of water pollution.

The TSSWCB also works to ensure that the State's network of over 2,000 flood control dams are protecting lives and property by providing operation, maintenance, and structural repair grants to local government sponsors.

The TSSWCB successfully delivers technical and financial assistance to private landowners of Texas through Texas' 216 local Soil and Water Conservation Districts (SWCD) which are led by 1,080 locally elected district directors who are active in agriculture. Through the TSSWCB Water Quality Management Plan Program (WQMP), farmers, ranchers, and silviculturalists receive technical and financial assistance to voluntarily conserve and protect our natural resources. Participants receive assistance with conservation practices, BMPs, that address water quality, water quantity, and soil erosion while promoting the productivity of agricultural lands. This efficient locally led conservation delivery system ensures that those most affected by conservation programs can make decisions on how and what programs will be implemented voluntarily on their private lands.

Over time, lands change ownership and many larger tracts are broken up into smaller parcels. Most new landowners did not grow up on working lands and therefore may not have a knowledge of land management techniques. The TSSWCB is writing new WQMPs for these new landowners who are implementing BMPs on their land. Education and implementation of proper land management and BMPs continues to be essential. Voluntary incentive-based programs are essential to continue to address soil and water conservation in Texas.

These BMPs implemented for soil and water conservation provide benefits not only to the landowner but ultimately to all Texans and our water supply.

RESPONSE:

Response for Comment No. 4 is TBD.

COMMENT NO. 5:

Thank you for seeking review and comment from the Texas Parks and Wildlife Department ("TPWD") on the 2021 Initially Prepared Regional Water Plan (IPP) for the South Central Texas Region L Water Planning Area (SCTRWPA). Thank you for the Region's responsiveness to TPWD's comments in previous planning cycles. Water impacts every aspect of TPWD's mission to manage and conserve the natural and cultural resources of Texas. Although TPWD has limited regulatory authority over the use of state waters, we are the agency charged with primary responsibility for protecting the state's fish and wildlife resources. To that end, TPWD offers these comments intended to help avoid or minimize impacts to state fish and wildlife resources. TPWD understands that regional water planning groups are guided by 31 TAC §357 when preparing regional water plans. These water planning rules spell out requirements related to natural resource and environmental protection. Accordingly, TPWD staff reviewed the IPP with a focus on the following questions:

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

The population of the 20 county SCTRWPA is estimated to grow from about 3.0 million in 2020 to about 5.2 million by 2070, an increase of 73 percent. Water demands are expected to grow from about 1.05 million acre-feet (ac-ft) to approximately 1.3 million ac-ft in 2070. Water conservation, including drought management, and water reuse are expected to meet 41 percent of future water needs. The IPP includes the development of four brackish groundwater desalination projects, comprising 14 percent of future supplies. Three new aquifer storage and recovery (ASR) projects are recommended in the IPP to provide approximately 7 percent of future supplies in the region. From the perspective of environmental impacts, ASR projects are generally preferred over surface reservoirs since habitat impacts can be minimized. Finally, new surface water development projects such as the GBRA Lower Basin Project are expected to meet
15 percent of future needs and groundwater wells are expected to meet 22 percent of future needs.

The IPP includes a description of natural resources as well as a detailed quantitative reporting of environmental factors. A brief description of natural resources including fish and wildlife resources is provided in Chapter 1.2.4. Chapter 5 outlines each water management strategy and the threats from each WMS. Chapter 6 outlines threats to environmental and natural resources due to water quantity and quality issues. Chapter 6 also addresses the cumulative environmental effects of the full implementation of the plan. The long-term cumulative effects of recommended WMSs on the Edwards Aquifer are based on the full implementation of the Edwards Aquifer Habitat Conservation Plan (EAHCP) and for the Trinity, Carrizo-Wilcox, and Gulf Coast Aquifers are based on protection of Desired Future Condition (DFC) of the aquifers assuming full implementation of the Modeled Available Groundwater (MAG) within each Groundwater Management Area.

Potential cumulative effects of implementation of the 2021 SCTRWP on instream flows and freshwater inflows to bays and estuaries was assessed for seven locations in the Guadalupe-San Antonio (GSA) River Basin. Baseline modeled stream flow for the year 2070 is compared to stream flow with full implementation of the plan for 2070. For the seven sites assessed stream flows with full plan implementation generally stay above flow standards except at very low flows. The causes of the streams to drop below flow standards are thought to be existing senior water rights that do not have to adhere to flow standards, the GBRA Mid Basin Project, and the CRWA Siesta Project. Freshwater inflow into the GSA estuaries are within ranges specified by SB 3 environmental flow standards found at 30 TAC Section 298.380(a).

State and Federal species of greatest conservation need (SGCN) including threatened and endangered species and candidates for listing as threatened or endangered species are listed and discussed in terms of the potential impacts of each WMS in Volume II. According to the IPP there is also a listing of these species by county Appendix G. TPWD was not able to locate Appendix G. The TPWD is particularly concerned about declining freshwater mussel populations, reflected in the 2009 Texas Parks and Wildlife Commission's decision to list 15 species of freshwater mussels as threatened. In order to avoid adverse impacts to aquatic resources and potential civil and criminal liability, the department recommends entities coordinate with the department to develop a plan to avoid impacts to aquatic resources and, in some instances, relocate aquatic resources outside of the project area. There have been recent updates (March 30, 2020) to the list of federal and state listed species and Species of Greatest Conservation need, including species in Region L counties. We recommend that you update tables found in Volume II and Appendix G with the latest information that is available at https://tpwd.texas.gov/huntwild/wild/wildlife diversity/nongame/listed-species/.

Chapter 6 briefly discusses the spread of invasive exotic species and their potential negative environmental impacts. TPWD requests this threat be addressed by any water management strategies that involve the transfer of surface water. The introduction of invasive exotic species can directly and/or indirectly impact native species, their habitats and associated ecosystem functions, recreational opportunities (e.g., anglers and boaters) and the public water supply and other water infrastructure negatively. In particular, the zebra mussel is an invasive freshwater mollusk that could affect water management by clogging intake structures and fouling pipelines, resulting in increased maintenance needs and potentially hazardous conditions for workers. The presence of zebra mussels also raises concerns with the transfer of water from affected waterbodies that may require mitigation to prevent transfer of zebra mussels. The potential transport of zebra mussels and other invasive species via pipelines falls under Parks and Wildlife Code §66.007(n) and §66.0072(g) To prevent the transmission of invasive species TPWD recommends avoiding transport of water from water bodies where these species are known to occur, including rivers downstream of infested lakes. If this is unavoidable, effective mitigative measures should be considered and implemented for preventing the transfer of zebra mussels. Canyon Reservoir is known to be infested with zebra mussels. In addition zebra mussels have been found in several lakes downstream on the Guadalupe River. Please be advised TPWD regularly updates information on the TPWD website to clearly identify lakes with zebra mussels in Texas, as it is subject to change; this information can be found at: https://tpwd.texas.gov/huntwild/wild/species/exotic/zebramusselmap.phtml.

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

The SCTRWPG is to be commended for its strong emphasis and on water conservation, reuse and drought contingency planning. The IPP includes municipal water conservation water management strategies. Water conservation in the industrial and steam-electric power generation use categories are encouraged as well. According to the IPP, per capita water use in Region L is projected to decline over the planning period from 128 gallons per person per day in 2020 to 117 gallons per person per day in 2070, bringing it well under the Texas Water Conservation Task Force goal of 140 gallons per person per day.

While TPWD is pleased to see that many of our earlier comments have been addressed, concerns remain regarding potential impacts associated with several strategies. Several water management strategies are recommended for stream segments identified by TPWD as ecologically significant. Increased groundwater development may impact small springs and adversely impact groundwater-surface water interactions. New appropriations from the Guadalupe River and/or increased use of previously unused water rights from the Guadalupe River will impact instream flows and freshwater inflows to San Antonio Bay that will likely reduce long-term inflows and increase bay salinities, potentially leading to complex estuarine community changes. Brackish groundwater desalination can be an ecologically advantageous strategy, as long as issues such as brine disposal options are carefully considered. Recognition is deserved for drought management as a water management strategy, aquifer storage and recovery projects, use of off-channel reservoirs, use of recycled water for non-potable uses for several water user groups, and an ecological analysis of the impact of the 2021 plan. TPWD looks forward to continued coordination with project sponsors in an effort to avoid and/or minimize threats to fish and wildlife resources.

The 2021 IPP is a well written and organized report with detailed descriptions of natural resources and potential impacts. TPWD highly commends SCTRWPG's efforts that have resulted in the successful designation of five segments recommended in the IPP as ecologically unique and agrees with the statement " ...designating ecologically unique stream segments raises public awareness and voluntary stewardship that can result in the preservation of the character and environmental function of these segments." In addition, TPWD appreciates the recommendations regarding completion of the Texas Instream Flow Studies as well as funding for access to water data.

Thank you for your consideration of these comments. TPWD looks forward to continuing to work with the planning group to develop water supply strategies that not only meet the future water supply needs of the region but also preserve the ecological health of the region's aquatic resources.

RESPONSE:

Response for Comment No. 5 is TBD.

COMMENT NO. 6:

The following revisions are to McCoy WSC numbers in the given tables:

Population Projections
Page 141 Atascosa County 2020 = 8009, 2030 = 9228, 2040 = 10328, 2050 = 11421, 2060 = 12441, 2070 = 13389
Page 146 Nueces Basin 2020 = 378, 2030 = 464, 2040 = 548, 2050 = 624, 2060 = 696, 2070 = 761
Page 146 San Antonio Basin 2020 = 31, 2030 = 39, 2040 = 45, 2050 = 51, 2060 = 57, 2070 = 62

Demand Projections
Page 149 Nueces Basin 2020 = 996, 2030 = 1106, 2040 = 1215, 2050 = 1331, 2060 = 1449, 2070 = 1545
Page 157 Nueces Basin 2020 = 47, 2030 = 56, 2040 = 64, 2050 = 73, 2060 = 81, 2070 = 88
Page 157 San Antonio Basin 2020 = 4, 2030 = 5, 2040 = 5, 2050 = 6, 2060 = 7, 2070 = 7

Existing Water Supply
Page 167 Queen City Aquifer 2020 = 2260, 2030 = 2251, 2040 = 2247, 2050 = 2243, 2060 = 2241, 2070 = 2237
Page 167 Carrizo-Wilcox Aquifer 2020 = 88, 2030 = 89, 2040 = 89, 2050 = 89, 2060 = 89, 2070 = 89
Page 183 Carrizo-Wilcox Aquifer 2020 = 108, 2030 = 114, 2040 = 118, 2050 = 122, 2060 = 125, 2070 = 126
Page 183 Queen City Aquifer 2020-2070 = 6
Page 184 Carrizo-Wilcox Aquifer 2020 = 8, 2030 = 10, 2040 = 11, 2050 = 10, 2060 = 10, 2070 = 12

Needs/Surplus
Page 185 2020 = 1354, 2030 = 1236, 2040 = 1121, 2050 = 1002, 2060 = 880, 2070 = 782
Page 193 Nueces Basin 2020 = 53, 2030 = 50, 2040 = 46, 2050 = 42, 2060 = 37, 2070 = 31
Page 193 San Antonio Basin 2020 = 5, 2030 = 5, 2040 = 5, 2050 = 4, 2060 = 4, 2070 = 4

RESPONSE:

Response for Comment No. 6 is TBD.

Appendix 10-A: Comments from the Public and State/Federal

Table 1: Commenter Information

	Entity and Commenter Information			
Comment No.	Date	Medium (verbal, mail, email)	Entity Representation	Name
1	5/28/2020	Verbal, Public Hearing	Sierra Club, San Antonio (Alamo) Group	Terry Burns, M.D.
2	5/28/2020	Verbal, Public Hearing		Rachel Cywinski
3	6/8/2020	Written, email	Sierra Club, San Antonio (Alamo) Group	Terry Burns, M.D.
4	6/18/2020	Written, email	Texas State Soil and Water Conservation Board	Barry Mahler (Chairman) and Rex Isom (Executive Director)
5	7/20/2020	Written, email	Texas Parks & Wildlife Department	Cindy Loeffler (Chief)
6	7/20/2020	Written, spreadsheet	McCoy Water Supply Corporation	Kerry McCollough

South Central Texas Regional Water Planning Group
TWDB Comments and Proposed Responses on the Initially Prepared 2021 South Central Texas (Region L) Regional Water Plan

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
Level 1: Comments, questions, and data revisions that must be satisfactorily addressed in order to meet statutory, agency rule, and/or contract requirements.				
1.a	Chapter 5 and the State Water Planning Database (DB22).	The plan includes the following recommended water management strategies (WMS) by WMS type, providing supply in 2020 (not including demand management): 18 groundwater wells & other, six other direct reuse, two aquifer storage and recovery, and six other surface water. Strategy supply with an online decade of 2020 must be constructed and delivering water by January 5, 2023. a) Please confirm that all strategies shown as providing supply in 2020 are expected to be providing water supply by January 5, 2023. [31 § TAC 357.10(21); Contract Exhibit C, Section 5.2]	6. Requires Further Investigation, Next Submittal	Black & Veatch requested feedback from sponsors with projects beginning in 2020 to confirm that projects providing a supply in 2020 will be online by 1/5/2023. Based on responses received from sponsors, two projects will have the implementation decade revised from 2020 to 2030, including: SAWS Facilities Expanion CPS Direct Recycling Pipeline and SAWS Recycled Water Strategies Recycled Water Program. The RWP and DB22 will be revised to reflect the change in implementation decade.
1.b	Chapter 5 and the State Water Planning Database (DB22).	b) Please provide the specific basis on which the planning group anticipates that it is feasible that the two aquifer storage and recovery and six other surface water WMSs will all actually be online and providing water supply by January 5, 2023. For example, provide information on actions taken by sponsors and anticipated future project milestones that demonstrate sufficient progress toward implementation. [31 § TAC 357.10(21); Contract Exhibit C, Section 5.2]	6. Requires Further Investigation, Next Submittal	The two ASR projects are expected to provide supply by 1/5/2023.
1.c	Chapter 5 and the State Water Planning Database (DB22).	c) In the event that the resulting adjustment of the timing of WMSs in the plan results in an increase in near-term unmet water needs, please update the related portions of the plan and DB22 accordingly, and also indicate whether 'demand management' will be the WMS used in the event of drought to address such water supply shortfalls or if the plan will show these as simply 'unmet'. If municipal shortages are left 'unmet' and without a 'demand management' strategy to meet the shortage, please also ensure that adequate justification is included in accordance with 31 TAC § 357.50(j). [TWC § 16.051(a); 31 § TAC 357.50(j); [31 TAC § 357.34(i)(2); Contract Exhibit C, Section 5.2]	6. Requires Further Investigation, Next Submittal	Once comment 1a and 1b are incoorperated, Black & Veatch will ensure that this comment is addressed and all necessary elements of the RWP and DB22 are appropriately updated.
1.d	Chapter 5 and the State Water Planning Database (DB22).	d) Please be advised that, in accordance with Senate Bill 1511, 85th Texas Legislature, the planning group will be expected to rely on its next planning cycle budget to amend its 2021 Regional Water Plan during development of the 2026 Regional Water Plan, if recommended WMSs or projects become infeasible, for example, due to timing of projects coming online. Infeasible WMSs include those WMSs where proposed sponsors have not taken an affirmative vote or other action to make expenditures necessary to construct or file applications for permits required in connection with implementation of the WMS on a schedule in order for the WMS to be completed by the time the WMS is needed to address drought in the plan. [TWC § 16.053(h)(10); 31 TAC § 357.12(b)]	3. Noted	This comment is acknowledged.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
2	Section 2.3.4.6, page 2-23	It appears that 2020 steam-electric water demand projections by county are missing from Table 2-12. Please revise the table to present the demands by county in the final, adopted regional water plan. [31 TAC § 357.31(e)(1)]	1. Incorporate	2020 Steam-electric demand projections by county will be added to Table 2-12.
3	Section 2.3.5, page 2-25	Table 2-13 does not appear to present any demand projections for Alliance Regional Water Authority (ARWA) or Cibolo Valley Local Government Corporation (CVLGC), however this is clarified in the table footnote for ARWA. Please add a clarifying footnote to Table 2-13 noting why demands are not presented for CVLGC in the final, adopted regional water plan. [31 TAC § 357.31(b)]	1. Incorporate	A clarifying footnote has been included in Table 2-13: "1 ARWA has executed contracts with San Marcos, CRWA, Kyle, and Buda to sell water that will be developed by three water management strategies included in the 2021 South Central Texas Regional Water Plan (See Chapter 5.2): ARWA/GBRA Project (Phase 1), ARWA Project (Phase 2), and ARWA Project (Phase 3). 2 CVLGC comprises the cities of Schertz and Cibolo. The CVLGC Carrizo Project is the first major water management strategy project planned and developed by the corporation to provide water to both Schertz and Cibolo. This water management strategy is discussed in Chapter 5.2.22"
4	Chapter 2	The plan does not appear to include a summary of water savings due to plumbing code savings. Please include a summary of the municipal demand savings due to plumbing fixture requirements in the final, adopted regional water plan. [31 TAC § 357.31(d)]	6. Requires Further Investigation, Next Submittal	A separate table showing water savings due to plumbing code requirements will be added to Chapter 2. This information has been requested from TWDB and will be incorporated.
5	Chapter 2	The plan in several instances does not appear to report Board-adopted water demand projections. Water demands presented for Caldwell, DeWitt, and Hays Counties and total regional demands presented in Table 2-4 do not appear to be consistent with Board-adopted water demand projections; and, Tables 2-7 and 2-9 present appear to present incorrect demand projections for Hays County and total regional demands. For example, the regional total in Table 2-4 is presented as 1,048,291 acre-ft/year in 2020; 1,112,911 acre-ft/yr in 2030; 1,160,856 acre-ft/yr in 2040; 1,207,238 acre-ft/yr in 2050; 1,255,062 acre-ft/yr in 2060; and 1,305,824 acre-ft/yr in 2070. TWDB Board-adopted water demands for Region L is 1,050,964 acre-ft/year in 2020, 1,114,948 acre-ft/yr in 2030; 1,164,107 acre-ft/yr in 2040; 1,211,327 acre-ft/yr in 2050; 1,263,897 acre-ft/yr in 2060; and 1,320,128 acre-ft/yr in 2070. Please review water demands reported in Tables 2-4 through 2-9 and 2-11 and all water demand values presented in the text of Section 2.3 and revise to include Board-adopted water demands in the final, adopted regional water plan. [31 TAC § 357.31(e)(1)]	6. Requires Further Investigation, Next Submittal	Clarifying information and data has been provided by TWDB to revise these chapters, as necessary.
6	Appendix 2-A	The plan includes some DB22 reports that appear blank due to the region not having relevant data for these reports. Please provide a cover page to the DB22 report appendix indicating the reason for these report contents being blank.	1. Incorporate	A cover page to the DB22 report appendix will be added to indicate the reason for some of report contents being blank.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
7	Section 3.1.1, page 3-3	The plan states that "SCTRWPG did not receive any such information from a commissioners' court" for counties or parts of counties not in a groundwater conservation district, however the plan does not appear to include information on the Hill Country Priority Groundwater Management Area (PGMA), which is partially located within the region. Please note how the Hill Country PGMA was considered in the final, adopted regional water plan. [31 TAC § 357.22(a)(6)]	6. Requires Further Investigation, Next Submittal	The following language is proposed to be added to Section 3.1.1: "There are several Priority Groundwater Management Areas (PGMAs) around the State, with portions of the Hill Country PGMA located within Region L. PGMAs are established to ensure management of groundwater in areas with critical groundwater problems and to consider to the need for creating Groundwater Conservation Districts (GCDs). PGMAs are designated or delineated by the Texas Commission on Environmental Quality (TCEQ) for areas that are experiencing, or are expected to experience critical groundwater problems within 50 years, including shortages of surface water or groundwater, land subsidence resulting from groundwater withdrawal, or contamination of groundwater supplies. Each Region L county located within the Hill Country PGMA has a GCD: The Comal Trinity GCD in Comal County , the Hays Trinity GCD in Hays County, and the Trinity Glen Rose GCD in Bexar County. These GCDs give notice to area residents that the declaration of the PGMA means that their water availability and quality will be at risk within the next 50 years. The Hays County Development Regulations have specific requirements listed for subdivisions served by individual water wells producing local groundwater within the PGMA. These requirements can be found in Chapter 715, Sub-Chapter 3, Section 3.06 of the Hays County Development Regulations. GMAs are a different concept in that every county in the State is in one or more of sixteen GMAs. For the most part, the major aquifers are not split across multiple GMAs, and the goal is to manage entire aquifer systems across political subdivisions in a consistent way. GCDs and GMAs are discussed in Chapter 1 of this plan and on the TWDB website at http://www.twdb.texas.gov/groundwater/index.asp."
8	Section 3.1.1, page 3-3	The plan does not appear to document the methodology used to develop estimates of groundwater availability for non-relevant aquifers and local aquifers, such as the Austin Chalk, Buda, and Leona Gravel. The electronic GAM appendix appears to include a brief summary of this information, however information on how RWPG-estimated groundwater availabilities were determined should be included in the final, adopted regional water plan; including specifying which aquifers used TWDB compatible availabilities. [Contract Exhibit C, Section 3.5.2]	6. Requires Further Investigation, Next Submittal	A summary of the methodology or the relevant GAM report used to develop estimates of groundwater availability for non-relevant aquifers and local aquifers will be added to Chapter 3, Table 3-1.
9	Section 3.1.2, pages 3-7 and 3-9	Please provide justification as to why rural municipal, irrigation, mining, and livestock existing water supplies were set equal to demands during the planning period in the final, adopted regional water plan. [Contract Exhibit C, Section 3.7 item 4]	6. Requires Further Investigation, Next Submittal	A justification for setting existing groundwater supplies equal to demands for some WUGs will be developed and included in the final plan. The justification will be provided to the TWDB for pre-review.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
10	Chapter 3, Section 3.2	Please include the methodology used to estimate local surface water supplies, including clarifying if these supplies were estimated under drought of record conditions **and a include table that lists the volume of each local surface water supply** in the final, adopted regional water plan. [31 TAC § 357.32(a); Contract Exhibit C, Sections 3.2 and 3.7]	6. Requires Further Investigation, Next Submittal	Local surface water supplies were identified for livestock uses only. Methodology used to develop livestock demand can be used to infer that sufficient water will be available to meet demands. The following language is proposed to be added to Section 3.2: "Local surface water supplies are disbursed supplies that are available only at the point of use and do not impact firm yield. These supplies are generally runoff collection, such as livestock supply ponds, and are assumed to be fresh water. Local surface water supplies were assumed to be used only for a portion of livestock and independent of other surface water sources listed (Table 3-4). Livestock local surface water supplies were assumed for all counties with livestock demand. Because the demands are based on a drought year scenario, it was assumed that ranchers will manage their livestock in such a way that populations will be maintained at a level that can be supported by a combination of local surface water supplies and known water or groundwater supplies."
11	Chapter 3, Section 3.2	It is not clear from the plan whether reservoir sedimentation has been accounted for in reservoirs (except Canyon Lake) where the available supply is a constant across all planning decades (2020 through 2070). Please clarify how sedimentation was considered in supply estimates for major reservoirs. If sedimentation was not considered, please include revised supply estimates that account for sedimentation in the final, adopted regional water plan. [Contract Exhibit C, Section 3.2]	6. Requires Further Investigation, Next Submittal	Major reservoirs include Canyon Lake, the Medina Lake System, and three cooling lakes for power generation facilities which are not operated as supply reservoirs and therefore have been evaluated on the basis of the lowest annual summation of monthly diversions as described in Contract Exhibit C, Section 3.2, p. 25. The Medina Lake System has a zero-value firm-yield, and therefore does not include an evaluation of sedimentation. Therefore, aside from Canyon Lake, consideration of sedimentation is not required and/or necessary for any of the reservoirs listed in the Region L IPP.
12	Chapter 3	The plan does not appear to include the evaluation results of existing supplies for major water providers (MWP). Please report existing supplies for MWP by decade and category of use in the final, adopted regional water plan. [31 TAC § 357.32(g)]	1. Incorporate	Chapter 3 will include a table that includes the evaluation results of existing supplies for Major Water Providers.
13	Appendix 3-A	Attachment B lists multiple GAM models, however it is not clear whether the region used GAM models to develop non-MAG availabilities. If models were used for non-MAG availabilities, please include the model information required by contract with the final, adopted regional water plan. [Contract Exhibit C, Section 3.5.4]	6. Requires Further Investigation, Next Submittal	Appendix 3-B includes correspondence regarding the approved hydrologic assumptions used in the 2021 Region L Regional Water Plan. Since the approved hydrologic assumptions have not changed, this appendix is not anticipated to be revised. However, a description of models used for non-MAG availabilities will be included in the narrative of Chapter 3, and the source of data for all groundwater availabilities will be included in Table 3-1. If applicable, associated model runs will be included in the digital appendices submitted to the TWDB with the Final Plan.
14	Section 4.9, page 4-23, Table 4-30	The plan does not appear to include identified water need volumes for MWPs reported by category of use including municipal, mining, manufacturing, irrigation, steam electric, mining, and livestock. Please report the results of the needs analysis for MWPs by categories of use as applicable in the region in the final, adopted regional water plan. [31 TAC § 357.33(b)]	6. Requires Further Investigation, Next Submittal	Chapter 4 will include a table that summarizes identified water need volumes for MWPs reported by category of use.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
15	Chapter 4	The following tables appear to present information on projected water needs that are inconsistent with data reported in DB22 at the time of review: Tables 4-1 through 4-3, Tables 4-5 through 4-9, Table 4-12, Tables 4-14 through 4-16, Table 4-19, Table 4-23, and Tables 4-27 through 4-29. Please carefully review all data in the tables and related text and revise as necessary to present data consistent with DB22 in the final, adopted regional water plan [31 TAC § 357.33(b)]	6. Requires Further Investigation, Next Submittal	We will carefully review all data in the tables and related text and revise as necessary to present data consistent with DB22 in the final, adopted regional water plan
16	Chapter 4	The plan does not appear to include a secondary needs analysis for MWPs. Please present the results of the secondary needs analysis by decade for MWPs in the final, adopted regional water plan. [31 TAC § 357.33(e)]	6. Requires Further Investigation, Next Submittal	Chapter 4 will include a table that summarizes the second-tier Needs Analysis for MWPs. This information will be provided by TWDB and incorporated into the chapter.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
17	Chapter 5	The plan does not appear to define a threshold for significant water needs or provide a specific assessment of the potential for aquifer storage and recovery (ASR) projects to meet those needs. Please include information on how the planning groups defines significant water need and provide a specific assessment of the potential for ASR projects to meet those needs in the final, adopted regional water plan. [TWC § 16.053(e)(10); 31 TAC § 357.34(h)]	5. RWPG Direction Requested	The following language is proposed to be added to Section 5.1: "Per House Bill 807 (HB 807), if a Regional Water Planning Area (RWPA) has significant identified water needs, the Regional Water Planning Group (RWPG) shall provide a specific assessment of the potential for ASR projects to meet those needs. At the August 1, 2019, RWPG meeting, the SCTRWPG defined the threshold of significant water needs to be a WUG or use type with an identified need of 10,000 ac-ft/yr or greater. WUGs or use types meeting this definition in the 2021 SCTRWP include New Braunfels, San Antonio Water Systems (SAWS), San Marcos, Victoria, Irrigation, and Mining. The following provides a summary of the potential for ASR projects to meet significant identified water needs in Region L: • To meet New Braunfels' significant identified needs, the SCTRWPG recommended the New Braunfels Utilities (NBU) ASR Project in the 2021 SCTRWP. An evaluation of the NBU ASR Project can be found in Section 5.2.25. • SAWS already has an ASR facility in operation, the H2Oaks Center, for which a water treatment plant expansion is included as a recommended WMS in the 2021 SCTRWP. The WMS evaluation for the SAWS ASR WTP expansion project can be found in Section 5.2.8. • A full strategy evaluation of the potential for ASR projects to meet San Marcos' significant identified water needs was not conducted because their needs have been met through a variety of cost-effective WMSs, including Advanced Water Conservation, ARWA/GBRA Project (Phase 1), ARWA Project (Phase 2), and indirect and potable reuse. Given the location and groundwater characteristics in the area, an ASR project could potentially be developed to meet additional needs for San Marcos in the future. • To meet Victoria's significant identified needs, the SCTRWPG recommended the City of Victoria ASR Project in the 2021 SCTRWP. An evaluation of the Victoria ASR Project can be found in Section 5.2.27. • A full strategy evaluation of ASR was not conducted for Irrigation or Mining in Region L because implementation of ASR may be considered cost-prohibitive compared to the cost of surface water and/or groundwater projects."""
18	Chapter 5	WMS and associated project evaluations presented in the plan do not appear to include quantitative reporting of reliability or anticipated strategy water losses. Please provide this information for all strategy evaluations in the final, adopted regional water plan. [31 TAC § 357.34(e)(3)(A); Contract Exhibit C, Section 5.2.3]	6. Requires Further Investigation, Next Submittal	Information will be added to the WMS Evaluations in Chapter 5.2 to specifically include the quantitative reporting of reliability and anticipated strategy water losses.
19	Chapter 5	The plan does not appear to provide a quantitative reporting of impacts to agricultural resources for each WMS evaluation. Please include a quantitative reporting of impacts to agricultural resources as part of each WMS evaluation in the final, adopted regional water plan. [31 TAC § 357.34(e)(3)(C)]	6. Requires Further Investigation, Next Submittal	Information will be added to each WMS evaluation that will include quantitative reporting of impacts to agricultural resources (i.e., this WMS is proposed to impact approximately __ acres of agricultural land.") Chapter 6 will include a summary table of the quantitative impacts for all WMSs.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
20	Section 5.2	Several WMS projects, such as the SAWS Expanded Local Carrizo Project, SAWS Expanded Brackish Groundwater Project, County Line SUD Trinity Well Field, and County Line SUD Brackish Edwards Project, appear to present a single project cost that combines the cost of multiple project phases. Please present costs for individual project phases separately in the final, adopted regional water plan. [Contract Exhibit C, Section 5.6]	1. Incorporate	Costs for individual project phases will be provided separately in the final RWP.
21	Chapter 5	The plan does not appear to provide documentation of why seawater desalination was not recommended. Please include documentation of why seawater desalination was not selected as a recommended WMS in the final, adopted regional water plan. [TWC § 16.053(e)(5)(j); Contract Exhibit C, Section 5.2; 31 TAC § 357.34(g)]	5. RWPG Direction Requested	The following language is proposed to be added to Chapter 5.1: "As indicated in Table 5.1-1, the SCTRWPG recommended inclusion of several Aquifer Storage and Recovery (ASR) strategies and brackish groundwater desalination strategies in the 2021 SCTRWP. The SCTRWPG includes WMSs in the RWP at the request of WUG or WWP sponsors. For the 2021 SCTRWP, seawater desalination was not included as a recommended WMS because it was not requested for inclusion by WUGs and the majority of needs in the region can be met by fresh water, groundwater, brackish groundwater, reuse and conservation WMSs. There are several seawater desalination facilities currently being planned within Texas; seawater desalination may become a feasible and cost-effective strategy for Region L in the future."
22	Pages 5.2.1-26 through 5.2.1-30	Table 5.2.1-10 appears to report advanced water conservation strategy supplies for several split region WUGs such as Aqua WSC, Buda, Canyon Lake Water Service, and El Oso WSC inconsistently with strategy supplies reported in DB22. Strategy supplies for Randolph Air Force Base, County-OtherHays, and San Antonio Water System presented in Table 5.2.1-10 also appear inconsistent with supplies reported in DB22. Please reconcile this information as necessary in the final, adopted regional water plan. [31 TAC §357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.
23	Page 5.2.2-1 to 5.2.2-9	The plan notes in Section 5.2.2 that the drought management strategy was considered only for WUGs with needs in the 2020 decade. It appears that several WUGs with needs in 2020 were not included in the analysis such as County-Other Victoria, Elmendorf, and Goforth SUD. Please document the reason why drought management was recommended for some but not other WUGs with 2020 needs or for entities that have anticipated needs after 2020 in the final, adopted regional water plan. [31 TAC § 357.34(i)(1)]	6. Requires Further Investigation, Next Submittal	The supplies provided by the drought management WMS were determined using the TWDB provided Drought Management Costing Tool. This tool does not include County-Other WUGs such as County-Other, Victoria. The 2021 Region L IPP did not include County-Other WUGs to maintain consistency with the TWDB's tool. Additionally, the drought management WMS was considered for WUGs that exhibited overall needs in 2020. While Goforth SUD exhibited needs in Caldwell County (-16 acre-feet per year [af/yr]), Goforth SUD has a surplus in Hays County (3,175 af/yr). Given an overall surplus of 3,159 af/yr for Goforth SUD, the drought management WMS was not applied to Goforth SUD.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
24	Chapter 5	It appears that WMSs were not identified and recommended for all WUGs with needs, specifically irrigation and mining WUGs with unmet needs. If no feasible WMSs were able to be identified for these WUGs, including drought management (as demand management), please provide an explanation in the final, adopted regional water plan. [31 TAC § 357.35(d)]	5. RWPG Direction Requested	The following statement in Chapter 6 has been revised, as follows: "The 2021 SCTRWP did not recommend WMSs to meet some mining and irrigation needs, as strategies to meet those needs may be cost-prohibitive. As shown in the TWDB socio-economic impact analyses in Chapter 6, however, these unmet irrigation and mining needs would represent only 1 percent of the potential income losses in 2070, considering projected shortages in all water use sectors. Table ES-4 summarizes the unmet needs of the region by use type. There are no unmet municipal needs included in the 2021 SCTRWP."
25	Page 5.2.4-11	In several instances in Tables 5.2.4-5 and 5.2.4-6 project yields or unit costs do not match those reported in DB22. For example, strategy supplies for Atascosa Rural WSC, El Oso WSC, and Mining- Comal County, and unit costs for Manufacturing- Karnes County appear to be inconsistently reported in the referenced tables and DB22. Please review this information and revise as necessary in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.
26	Section 5.2	In several instances total capital costs presented for project evaluations in Section 5.2 do not appear to match those reported in DB22. For example, capital costs for Reuse-County Line SUD, SAWS-Expanded Brackish Wilcox Project, and SSLGC Expanded Carrizo Project appear to be inconsistently reported in Section 5.2 and DB22. Please reconcile this information as necessary in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.
27	Page 5.2.14-3	The evaluation for the ARWA Project (Phase 3) appears to provide strategy supplies for the following entities: Buda, County Line SUD, County Line SUD, Green Valley SUD, Kyle, and San Marcos. Strategy supplies for ARWA Project (Phase 3) do not appear to be included in DB22 for these entities. Please review this information and if recommended for the above mentioned WUGs, please report this information in DB22 for the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Delivery volumes listed in the RWP for the ARWA Project (Phase 3) will be incorporated into DB22 for consistency.
28	Section 5.2.4	Tables 5.2.4-1 and 5.2.4-4 appear to present a summary of recommended well field projects related to the local groundwater strategy for multiple water users. DB22 does not appear to include all of the projects presented in these tables. For example, DB22 does not have related projects for the following entities: Atascosa Rural WSC, Luling, KT Water Development, Water Services Inc, Winder Water Systems, County-Other Calhoun, Calhoun, El Oso, Mining- Comal, Mining- Uvalde, Manufacturing- Karnes, and Manufacturing DeWitt. Please reconcile this information as necessary in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
29	Pages 5.2.3-4 and 5.3-21	Recommended Edwards Transfer strategy supplies appear to be inconsistently reported for Alamo Heights and Leon Valley in Table 5.2.3-2, Table 5.3.2-4, Table 5.3.2-24, and DB22. Please clarify the supply provided by Edwards Transfers for these two entities and present consistently in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.
30	Section 5.2.9	Several recycled water projects appear to include costs for infrastructure components that do not appear to belong in the regional water plan, such as expansions of distribution service into new areas (Boerne) and single-family developments (SAWS). Please review the project components evaluated in each of recycled water strategy projects presented in Section 5.2.9.2 and remove any components associated with reuse distribution lines directly to residences or commercial businesses in the final, adopted regional water plan. [Contract Exhibit C, Section 5.5.3]	6. Requires Further Investigation, Next Submittal	Costs for recycled water projects will be investigated. Any components associated with reuse distribution lines directly to residence or commercial businesses will be removed or justification provided.
31	Section 5.2.16	The GBRA Lower Basin Storage Project evaluation does not appear to present land costs broken out separately for land area and purchase cost in conservation pool footprint, mitigation land area and purchase cost, and construction costs of embankment/dam separate from transmission facilities. Please provide broken-out land costs for this reservoir project in the final, adopted regional water plan. [Contract Exhibit C, Section 5.5]	6. Requires Further Investigation, Next Submittal	The costs for this WMS are directly from the Unified Costing Model. We will reach out to the TWDB to request guidance on this comment.
32	Pages 5.2.22-1	It is not clear from the Section 5.2.22 strategy evaluation for Cibolo Valley Local Government Corporation Carrizo Project when the strategy and associated projects are anticipated to come online. DB22 shows this strategy as providing supply in 2020 with the associated project coming online in 2030. Please clarify the anticipated online decade for water supply for this WMS and associated WMSPs and revise as necessary to ensure that the projects needed to implement strategies are online prior to the WMS supply online decade. [31 TAC § 357.10(21); Contract Exhibit C, Section 5.2]	1. Incorporate	The anticipated online decade for this WMS is 2030. DB22 will be revised for consistency with the RWP.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
33	Section 5.2	It is not clear in several WMS evaluations in which decade the strategy is anticipated to provide supply. For example, in Section 5.2.10, it is not clear when the three phases of the SAWS Expanded Local Carrizo Project are anticipated to begin providing supplies. Please include the anticipated online dates in each of the WMS and WMSP evaluations in the final, adopted regional water plan. [Contract Exhibit C, Section 5.2]	6. Requires Further Investigation, Next Submittal	The online decades for phased projects will be explicitly stated in the narrative of the RWP.
34	Page 5.2.30-1	The evaluation for the Martindale WSC Alluvial Well notes that the strategy is planned for the 2030 decade. The planning database show this strategy as providing supplies in the 2020 decade. Please reconcile as necessary to ensure WMSs shown as providing supply in a planning decade come online prior to the initial decade year. [31 TAC § 357.10(21); Contract Exhibit C, Section 5.2]	6. Requires Further Investigation, Next Submittal	The online decade for this WMS was confirmed with the sponsor to be 2030. DB22 and the RWP will be revised for consistency.
35	Page 5.3-41	Section 5.3.4.4 summarizes the water supply plan for the Manufacturing, Calhoun County WUG but does not reference the Lavaca Off-Channel Reservoir which is assigned as an alternative WMS in DB22 for this Region L WUG. Please confirm this alternative WMS has been appropriately assigned to Manufacturing, Calhoun County in DB22 and revise if necessary or include clarification on the Sponsor and WUG relationship and refer readers to the Region P 2021 Regional Water Plan for the WMS evaluation information in the final, adopted regional water plan. [31 TAC § 357.35(g)(3)]	6. Requires Further Investigation, Next Submittal	Black & Veatch has reached out to TWDB and Region P's consultant regarding this comment. The Lavaca Off-Channel Reservoir Alternative WMS is not included in the 2021 Region L IPP, because it is sponsored by the adjacent Region P. According to the 2021 Region P IPP, this WMS would be developed by the Lavaca Navidad River Authority and would be located within Region P. Therefore, an evaluation of this WMS is not necessary. If this Alternative WMS for Region P is appropriately represented in DB22 and in Region P's plan, then the water supply plan for Calhoun County Manufacutring in Chapter 5.3 will include a reference to this Alternative WMS and refer the reader to Region P's plan for more information.
36	Section 5.3	In several instances in Section 5.3 recommended water supply plan tables, the plan appears to present strategy supplies that are inconsistent with those reported in DB22. For example, Table 5.3.2-6 presents strategy supplies for Local Groundwater and Facilities Expansion that do not match supplies for those strategies that are reported in DB22. Please review and revise as necessary in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.
37	Section 5.3	It appears that potential errors in calculated water needs identified in Chapter 4 (as noted in comment number 15) were carried through to tables in Chapter 5 Section 5.3. Please carefully review tables and text in Section 5.3 and revise as necessary to accurately present WUG needs in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Chapter 5.3 will be revised to incorporate water needs for split-WUGs.
38	Section 5.3	The plan appears to include non-recommended strategies in the county summary tables with a zero yield. For example, Table 5.3.11-8 includes advanced water conservation as a recommended WMS for Marion with a zero yield, however advanced water conservation does not appear to be a recommended WMS for Marion in DB22. Please remove all zero yield strategy references from the County Summary tables in the plan to avoid confusion, since regional water plans may not include zero yield recommended strategies. [31 TAC § 357.34(d)]	5. RWPG Direction Requested	Chapter 5.3 will be revised to remove instances where zero-yield WMS are included in water supply plans. The Advanced Water Conservation WMS has been clarified to state the following as a note in Table 5.2.1-9: "Note: Conservation is generally recommended by the SCTRWPG for all municipal WUGs in Region L. However, for purposes of this plan, the Advanced Water Conservation strategy is a recommended WMS for WUGs that have a non-zero demand reduction for any decade."

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
39	Section 5.4	The plan does not appear to present 'management supply factors' for MWPs Please report management supply factors for all MWPs by decade in the final, adopted regional water plan. [31 TAC § 357.35(g)(2)]	1. Incorporate	Management supply factors for MWPs in each decade will be included in the final RWP.
40	Chapter 5	The plan does not appear to include a strategy evaluation for the City of Kenedy well field, which is included in the contract scope of work under Task 5A subtask 21(ii) Additional Strategies. Please clarify why the evaluation was not included for this potentially feasible strategy in the final, adopted regional water plan. [Contract Scope of Work, Task 5A]	6. Requires Further Investigation, Next Submittal	The following statement will be added to Chapter 5.1: "A well field project for the City of Kenedy was initially identified and explored as a potentially feasible WMS. However, the City of Kenedy's well field project was not developed to a level where it could be appropriately evaluated for inclusion as a potentially feasible WMS, in accordance with the Region L process and guiding principles. Therefore, the SCTRWPG elected not to include the City of Kenedy well field project as a potentially feasible WMS. The City of Kenedy and their representatives were advised that they may request an amendment to the 2021 SCTRWP to add the WMS in the future, if desired."
41	Pages 6-40 and 6-41	Section 6.1.3.2 appears to note that several WMSs such as Water Conservation, Drought Management, Facilities Expansions, Local Groundwater, and Recycled Water Strategies, were not evaluated for environmental impacts. Please include a quantitative reporting of environmental impacts for all evaluated WMSs and projects in the final, adopted regional water plan. [31 TAC § 357.34(e)(3)(B)]	6. Requires Further Investigation, Next Submittal	Chapter 6 tables will be revised to include quantitative impacts for WMS Nos 1 through 9 for Endangered and Threatened Species, Vegetation and Land Use, Water Quality and Aquatic Habitats, and Cultural Resources.
42	Section 7.7.1, page 7-23	The plan appears to discuss the outdated, 2014 recommendations from the Drought Preparedness Council. Please indicate how the planning group considered relevant recommendations from the Drought Preparedness Council that were provided in an August 2019 letter to the planning groups in the final, adopted regional water plan. [31 TAC § 357.42(h)]	5. RWPG Direction Requested	Section 7.7.1 will be updated to discuss the 2019 recommendations from the Texas Drought Preparedness Council. Additionally, a new section is suggested to be added as Section 7.5.3, as follows: "**Section 7.5.3 Recommended Triggers and Responses for Irrigation and Steam-electric Uses** As mentioned previously, it is difficult to create a set of drought triggers and responses that will fit the needs of all WUGs in the regional planning area. Irrigation and Steam-electric water use categories each represent 10 percent or more of water demands in any decade. For entities supplying significant amounts of water to customers for irrigation and steam-electric uses, the SCTRWPG suggests reviewing the drought responses and recommendations used by similar entities in the region. An example of triggers and responses from the Edwards Aquifer Authority (EAA) Critical Period/Drought Management Plan is presented in Figure 7 6. EAA was selected as a representative example because their Critical Period Management Plan applies to municipal, industrial, and irrigation users that are authorized to withdraw more than 3 acre-feet. The Critical Period Management Plan includes five critical period water stages. The triggers depend on 10-day average spring and index well levels and the responses are stepwise, mandatory withdrawal reductions."
43	Section 7.4	Please confirm whether the entities evaluated for emergency responses to local drought conditions or loss of municipal supply were assumed to have 180 days or less of remaining supply. [Contract Exhibit C, Section 7.4]	2. Confirmed	The entities evaluated for emergency responses were assumed to have 180 days or less of remaining supply.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
44	Chapter 7	The plan does not appear to include a discussion of whether drought contingency measures have been recently implemented (for example, since adoption of the last regional water plan) in response to drought conditions. Please describe this in the final, adopted regional water plan. [Contract Scope of Work, Task 7, subtask 3]	6. Requires Further Investigation, Next Submittal	Black & Veatch will reach out to certain WUGs/WWPs to gather this information, and it will be added to the final RWP.
45	Chapter 7	The plan does not appear to include discussion of unnecessary or counterproductive variations in drought response strategies that may impede drought response efforts. Please include discussion of any unnecessary or counterproductive variations in drought response strategies that were identified by the planning group in the final, adopted regional water plan. [TWC § 16.053(e)(3)(E); 31 TAC § 357.42(b)(2)]	1. Incorporate	The SCTRWPG previously determined that there were no unnecessary or counterproductive variations in drought response strategies. The following text is proposed to be added to the end of section 7.2.2: "In accordance with Title 31 of the Texas Administrative Code (31 TAC) §357.42(b)(2), the SCTRWPG considered whether there exists any unnecessary or counterproductive variations in drought response strategies. 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."
46	Section 11.2.1, page 11-2	Projections summarized in Section 11.2.1 for the 2021 plan total municipal water demand and total regional demand appear to be inconsistent with water demand projections reported in DB22. Please reconcile this information as necessary in the final, adopted regional water plan. [31 TAC § 357.45(c)(1)]	6. Requires Further Investigation, Next Submittal	We will investigate the inconsistencies between DB22 and the RWP narrative and reconcile the information and include the accurate data for the final RWP
47	Page 11-4	Table 11-2 summarizes modeling assumptions for the 2016 and 2021 South Central Texas Regional Water Plans. The table appears to show several assumptions incorrectly indicated as being used only for the 2021 plan. For example, 2021 assumptions related to Edwards Aquifer withdrawals, operations of Canyon Reservoir, GBRA deliveries, operation of power plant reservoirs, and operation of Choke Canyon Reservoir appear to have been assumptions for the 2016 plan (based on appendix J of the 2016 plan) as well. Please reconcile this information as appropriate in the final, adopted regional water plan. [31 TAC § 357.45(c)(2)]	1. Incorporate	The summary of modeling assumptions will be revised to be consistent with the hydrologic assumptions included as an appendix to Chapter 3, as necessary.
48	Page 11-6	Section 11.2.3 notes the total availability in 2020 is 1,449,057 acre-feet per year. This is inconsistent with total availability reported in DB22 for 2020, 1,511,657 acre-feet per year. Please reconcile this data as necessary in the final, adopted regional water plan. [31 TAC § 357.45(c)(3)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.
49	Page 11-9	Section 11.2.5 presents a summary of total regional needs in 2020 and 2070. The values presented appear to be inconsistent with the needs reported in DB22. Please reconcile this data as necessary in the final, adopted regional water plan. [31 TAC § 357.45(c)(3)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.
50	Chapter 11	Please provide a brief summary of how the 2016 Plan differs from the 2021 Plan with regards to recommended and alternative WMS projects in the final, adopted regional water plan. [31 TAC § 357.45(c)(4)]	6. Requires Further Investigation, Next Submittal	A summary of the differences between the 2016 Plan and 2021 Plan with regards to WMS projects will be added to the final RWP.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
51	Chapter 11	The plan does not appear to assess the progress of the regional water planning area in encouraging cooperation between water user groups for the purpose of achieving economies of scale and otherwise incentivizing strategies that benefit the entire region. Please provide a general assessment of these items in the final, adopted regional water plan. [TWC § 16.053(e)(12); 31 TAC § 357.45(b)]	5. RWPG Direction Requested	Add subsection to Chapter 11: 11.2.7Assessment of Progress Toward Encouraging Cooperation Among WUGs • SCTRWPG encourages active participation in cooperative organizations like the Regional Water Alliance. • WWPs such as ARWA, CRWA, CVLGC, and SSLGC are partnerships of one or more utilities that share water supplies and costs of infrastructure development. • Several WMSs in the 2016 RWP were combined or separated in the 2021 RWP to accommodate WUG or WWP cooperative agreements. For example, the ARWA/GBRA Project (Phase 1) is a cooperative WMS implemented by two WWPs to achieve capital and operational costs savings from economies of scale and to avoid unnecessary construction of additional pipelines and infrastructure. • EAA Habitat Conservation Plan (HCP) is an example of local partnerships and coordination in an effort to provide overall benefit to the springs systems and the species that inhabit those springs. • • • Based on the array of collaborative projects and partnerships, the SCTRWPA has been successful in encouraging cooperation among WUGs for the purpose of achieving economies of scale or otherwise incentivizing WMSs that benefit the entire RWPA.
52	GIS Files	The GIS files submitted did not appear to include the locations of every recommended WMS project. Please include the locations of every recommended WMS project listed in the final, adopted regional water plan with the final GIS data submitted. [Contract Exhibit C, Section 13.1.2]	1. Incorporate	The GIS files submitted with the Final RWP will include locations for every recommended WMS Project.

Appendix 10-A: Public Comments

This appendix provides the comments received from the public and federal/state agencies regarding the 2021 Region L IPP; TWDB comments are compiled in Appendix 10-B. An overview and summary of comments is included in Chapter 10 of the SCTRWP. The following provides a list of each comment and includes the SCTRWPG's response. If applicable, the SCTRWPG Response describes any revisions made to the IPP to address the comment. Comments are numbered sequentially and cross-reference with Table 1: Commenter Information.

Comments and Responses

COMMENT NO. 1:

Terry Bruns, representing the Chair of the San Antonio (Alamo Area) Sierra Club. I want to make some general comments regarding the proposed plan. There is a lot of good data. I find that first of all the goals for per capita water municipally use reductions are totally inadequate with many areas even in year 2070 using in excess or close to 200 gallons per day. Way unnecessary and way out of line. This should be far lower. You also have no commercial or non-municipal reduction goals to speak of which should be corrected. In addition, you show electricity production usage at essentially unchanged levels and I would expect by 2070 there will be no fossil fuel energy production in the entire area and that will result in large decrease in water use and need. Most egregiously I think in this plan I see there is zero mention of climate change and you're predicting out to 2070 on the basis of current climate data and information about storms and precipitation. This is totally unrealistic, makes no sense what so ever. The world is changing rapidly. You need to use available modeling. The fourth climate assessment that the US Government put out in 2018 includes our area and has information. This is vitally important to incorporate into your water predictions, and I urge you to do so. In addition, I would urge an element of caution regarding the population predictions. You know, Detroit in the 1960's predicting to be one of the largest cities in the country and we see how that turned out. It's hard to know what is going to happen with COVID-19 but we may not continue growing at the rate we have, and we ought to have some margins of error in this modeling, so we can see upper and lower points of reference. Please consider these seriously comments as you go forward. Thank you very much.

RESPONSE:

Response for Comment No. 1 is TBD.

COMMENT NO. 2:

I concur with many of Terry Burns concerns. I also wanted to note that the population projections, although they are originated by the state, are extremely conservative based upon the current rate of natural growth and that's not even allowing for immigration to the area, over-looking a fifty (50) year period and we all know water demand is positively correlated with population. Along with Terry I want to say that the projections of GPCD are not even in keeping in with many of the much lower levels which some of the municipalities have already achieved. In the long term, there is a way to always avoid all of these problems and eventually everyone is going to have to deal with that which is to use the technology that will be used. For instance, this week in SpaceX, and which has been used by every astronaut ever, which is Net-Zero water. There are some industries that could easily adopt Net-Zero. I think that forward-looking Region L and all of its entities should start to educate themselves on Net-Zero water and start considering what would be to implement that and what would it take to do so. Would there be any municipal or state ordinances or laws that would need to be changed or advocated for. And also, what incentives might help those who are able to readily adapt to reusing the same water over and over within their cycle to do so. Thank you so much.

RESPONSE:

Response for Comment No. 2 is TBD.

COMMENT NO. 3:

My name is Terry Burns, M.D., Chair of the San Antonio (Alamo) Group of the Sierra Club, the nation's oldest, and largest volunteer based environmental organization. I write in follow up to the oral comments I provided to the May 28th on line hearing.

The failure of this plan to address Climate Change is a FATAL FLAW. Predictions out to 2070 MUST take account of predicted climate changes. I refer you to https://nca2018.globalchange.gov. There is a whole section on changes in the Southern Great Plains. These data and predictions MUST be considered. We are looking at an average 7-8 degree Fahrenheit temperature rise by 2070. And since the publication of this report carbon emissions have continued and modeling continues to be refined, and the rapidity and extent of these predicted changes continues to increase. We are looking at OVER 100 DAYS of temperatures above 95 degrees by 2070. This plan will be pure science fiction without incorporation of climate data.

This plan shows essentially no changes in predicted non-municipal water uses. This seems highly unlikely. One example is the unchanged prediction for steam-electric power. By 2070, there will probably be ZERO steam-electric power left in Region L, and so this use will disappear. Agriculture use will be greatly impacted by climate change. In addition to warming there will be more intermittency and variability in rain fall and stream flows, with severe storms and intervening intense droughts. Agricultural irrigation and livestock production will be under tremendous pressure to change crops, change livestock, and change water use. I see no accounting of these pressures. I also see no water saving management proposals for these non-municipal categories, and the absence of pre-existing data is not at all a satisfactory excuse for not including such proposals.

This plan shows vast differences in municipal water use in Region L. The existing differences SHOULD serve as motivation for aggressive proposals to reduce greatly these differences. We find wealthy San Antonio area urban enclaves using 200-300 gpcd currently, and barely achieving any reductions 50 YEARS LATER. For example, Alamo Heights currently shows 244 gpcd, and achieves 235 gpcd. Shavano Park goes from 282 to 276 gpcd. These changes are attributed to institution of low flow plumbing fixtures, but seem essentially within margin of statistical error. Advanced Conservation methods are predicted to achieve no additional benefit in Alamo Heights for some reason, while Shavano Park does show significant improvement from 265 to160 gpcd. SAWS itself is at about 118 gpcd and only achieves 110 gpcd with the lesser or advanced conservation effort. The implication seems to be that additional municipal water use reductions will be modest and difficult to achieve. Sierra Club asserts that these goals for rural and urban municipalities are FAR TOO MODEST. All municipal areas in Region L should be able to achieve less than 100 gpcd by 2070, and should aim for less than 70 gpcd. You currently show total Region L municipal water use rising from about 450,000 A-F/year to about 680,000. This increase, even with your projected population increases, could be largely eliminated with more ambitious water conservation goals. In particular you show 30% of residential water use state wide due to landscape watering. Anticipated climate changes will have a huge impact on this. Unless landscaping practices change and more drought tolerant plantings are adopted the costs of maintaining the current water hungry landscapes will become extreme.

It is good that Drought Management Plan proposals show a range of options from 5 to 20 %. It is UNCONSCIONABLE that the Region L 2021 Plan should choose a goal of 5%, the least ambitious option. SAWS alone could achieve 56,588 Acre Feet of water savings using the 20% figure. Of course SAWS spent $3 Billion on Vista Ridge in order to NEVER implement any beyond Stage 2 Drought Management Plan actions.

Finally, environmental impacts in the Plan are fairly cursory: "The environmental assessments of individual WMSs should be regarded as high-level preliminary". 6.1.5.1 Environmental Benefits, calls as benefits largely things like the absence of new dams, and plans to "not exceed environmental flow standards." These are beneficial in being LESS NEGATIVE than other actions but not in the sense of IMPROVING our water resources environment. The 6.1.5.2 Environmental Concerns are, however, of huge importance, ESPECIALLY in the face of predicted climate change impacts:

"Reductions in instream flows and freshwater inflows to bays and estuaries associated with surface water supply and

direct consumptive reuse projects.
■ Projects located in stream segments identified by TPWD as ecologically significant.25
■ Effects on small springs and reductions in flux entering streams from aquifers associated with groundwater development.
Potential interaction of climate variability with other identified impacts."
These NEGATIVE SERIOUS IMPACTS need far more detailed analysis and mitigation planning.

In summary, I thank Black & Veatch for the extensive data collection and preparation of this Draft Plan. I URGE REGION L TO GO WAY BEYOND THE VERY MODEST PROPOSALS IN THIS REPORT. As it stands it outlines a future of hugely over extended costly and unnecessary water infrastructure. It also totally ignores climate change.

Sincerely,
Terry Burns, M.D.
Chair, Alamo regional Group, Lone Star Chapter, Sierra Club
tbscpbsc@satx.rr.com

RESPONSE:

Response for Comment No. 3 is TBD.

COMMENT NO. 4:

For the past 2 years the Texas State Soil and Water Conservation Board (TSSWCB) has been participating in the Texas Water Development Board's (TWDB) Regional Water Planning meetings as directed by Senate Bill 1511, passed in the 2017 legislative session. We appreciate being included in the process and offer these constructive comments to the regional water plans and ultimately the State water plan.

As you may know 82% of Texas' land area is privately-owned and are working lands, involved in agricultural, timber, and wildlife operations. These lands are important as they provide substantial economic, environmental, and recreational resources that benefit both the landowners and public. They also provide ecosystem services that we all rely on for everyday necessities, such as air and water quality, carbon sequestration, and wildlife habitat.

With that said, these working lands are where the vast majority of our rain falls and ultimately supply the water for all of our needs, such as municipal, industrial, wildlife, and agricultural to name a few. Texas' private working lands are a valuable resource for all Texans.

Over the years, the private landowners of these working lands have been good stewards of their property. In an indirect way they have been assisting the 16 TWDB's Regional Water Planning Groups in achieving their goals through voluntary incentive-based land conservation practices.

It has been proven over time if a raindrop is controlled where it hits the ground there can be a benefit to both water quality and water quantity. Private landowners have been providing benefits to our water resources by implementing Best Management Practices (BMP) that slow water runoff and provide for soil stabilization, which also slows the sedimentation of our reservoirs and allows for more water infiltration into our aquifers.

Some common BMPs include brush management, prescribed grazing, fencing, grade stabilization, irrigation land leveling, terrace, contour farming, cover crop, residue and tillage management, and riparian herbaceous cover.

The TSSWCB has been active with agricultural producers since 1939 as the lead agency for planning, implementing, and managing coordinated natural resource conservation programs for preventing and abating agricultural and sivicultural nonpoint sources of water pollution.

The TSSWCB also works to ensure that the State's network of over 2,000 flood control dams are protecting lives and property by providing operation, maintenance, and structural repair grants to local government sponsors.

The TSSWCB successfully delivers technical and financial assistance to private landowners of Texas through Texas' 216 local Soil and Water Conservation Districts (SWCD) which are led by 1,080 locally elected district directors who are active in agriculture. Through the TSSWCB Water Quality Management Plan Program (WQMP), farmers, ranchers, and silviculturalists receive technical and financial assistance to voluntarily conserve and protect our natural resources. Participants receive assistance with conservation practices, BMPs, that address water quality, water quantity, and soil erosion while promoting the productivity of agricultural lands. This efficient locally led conservation delivery system ensures that those most affected by conservation programs can make decisions on how and what programs will be implemented voluntarily on their private lands.

Over time, lands change ownership and many larger tracts are broken up into smaller parcels. Most new landowners did not grow up on working lands and therefore may not have a knowledge of land management techniques. The TSSWCB is writing new WQMPs for these new landowners who are implementing BMPs on their land. Education and implementation of proper land management and BMPs continues to be essential. Voluntary incentive-based programs are essential to continue to address soil and water conservation in Texas.

These BMPs implemented for soil and water conservation provide benefits not only to the landowner but ultimately to all Texans and our water supply.

RESPONSE:

Response for Comment No. 4 is TBD.

COMMENT NO. 5:

Thank you for seeking review and comment from the Texas Parks and Wildlife Department ("TPWD") on the 2021 Initially Prepared Regional Water Plan (IPP) for the South Central Texas Region L Water Planning Area (SCTRWPA). Thank you for the Region's responsiveness to TPWD's comments in previous planning cycles. Water impacts every aspect of TPWD's mission to manage and conserve the natural and cultural resources of Texas. Although TPWD has limited regulatory authority over the use of state waters, we are the agency charged with primary responsibility for protecting the state's fish and wildlife resources. To that end, TPWD offers these comments intended to help avoid or minimize impacts to state fish and wildlife resources. TPWD understands that regional water planning groups are guided by 31 TAC §357 when preparing regional water plans. These water planning rules spell out requirements related to natural resource and environmental protection. Accordingly, TPWD staff reviewed the IPP with a focus on the following questions:

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

The population of the 20 county SCTRWPA is estimated to grow from about 3.0 million in 2020 to about 5.2 million by 2070, an increase of 73 percent. Water demands are expected to grow from about 1.05 million acre-feet (ac-ft) to approximately 1.3 million ac-ft in 2070. Water conservation, including drought management, and water reuse are expected to meet 41 percent of future water needs. The IPP includes the development of four brackish groundwater desalination projects, comprising 14 percent of future supplies. Three new aquifer storage and recovery (ASR) projects are recommended in the IPP to provide approximately 7 percent of future supplies in the region. From the perspective of environmental impacts, ASR projects are generally preferred over surface reservoirs since habitat impacts can be minimized. Finally, new surface water development projects such as the GBRA Lower Basin Project are expected to meet
15 percent of future needs and groundwater wells are expected to meet 22 percent of future needs.

The IPP includes a description of natural resources as well as a detailed quantitative reporting of environmental factors. A brief description of natural resources including fish and wildlife resources is provided in Chapter 1.2.4. Chapter 5 outlines each water management strategy and the threats from each WMS. Chapter 6 outlines threats to environmental and natural resources due to water quantity and quality issues. Chapter 6 also addresses the cumulative environmental effects of the full implementation of the plan. The long-term cumulative effects of recommended WMSs on the Edwards Aquifer are based on the full implementation of the Edwards Aquifer Habitat Conservation Plan (EAHCP) and for the Trinity, Carrizo-Wilcox, and Gulf Coast Aquifers are based on protection of Desired Future Condition (DFC) of the aquifers assuming full implementation of the Modeled Available Groundwater (MAG) within each Groundwater Management Area.

Potential cumulative effects of implementation of the 2021 SCTRWP on instream flows and freshwater inflows to bays and estuaries was assessed for seven locations in the Guadalupe-San Antonio (GSA) River Basin. Baseline modeled stream flow for the year 2070 is compared to stream flow with full implementation of the plan for 2070. For the seven sites assessed stream flows with full plan implementation generally stay above flow standards except at very low flows. The causes of the streams to drop below flow standards are thought to be existing senior water rights that do not have to adhere to flow standards, the GBRA Mid Basin Project, and the CRWA Siesta Project. Freshwater inflow into the GSA estuaries are within ranges specified by SB 3 environmental flow standards found at 30 TAC Section 298.380(a).

State and Federal species of greatest conservation need (SGCN) including threatened and endangered species and candidates for listing as threatened or endangered species are listed and discussed in terms of the potential impacts of each WMS in Volume II. According to the IPP there is also a listing of these species by county Appendix G. TPWD was not able to locate Appendix G. The TPWD is particularly concerned about declining freshwater mussel populations, reflected in the 2009 Texas Parks and Wildlife Commission's decision to list 15 species of freshwater mussels as threatened. In order to avoid adverse impacts to aquatic resources and potential civil and criminal liability, the department recommends entities coordinate with the department to develop a plan to avoid impacts to aquatic resources and, in some instances, relocate aquatic resources outside of the project area. There have been recent updates (March 30, 2020) to the list of federal and state listed species and Species of Greatest Conservation need, including species in Region L counties. We recommend that you update tables found in Volume II and Appendix G with the latest information that is available at https://tpwd.texas.gov/huntwild/wild/wildlife diversity/nongame/listed-species/.

Chapter 6 briefly discusses the spread of invasive exotic species and their potential negative environmental impacts. TPWD requests this threat be addressed by any water management strategies that involve the transfer of surface water. The introduction of invasive exotic species can directly and/or indirectly impact native species, their habitats and associated ecosystem functions, recreational opportunities (e.g., anglers and boaters) and the public water supply and other water infrastructure negatively. In particular, the zebra mussel is an invasive freshwater mollusk that could affect water management by clogging intake structures and fouling pipelines, resulting in increased maintenance needs and potentially hazardous conditions for workers. The presence of zebra mussels also raises concerns with the transfer of water from affected waterbodies that may require mitigation to prevent transfer of zebra mussels. The potential transport of zebra mussels and other invasive species via pipelines falls under Parks and Wildlife Code §66.007(n) and §66.0072(g) To prevent the transmission of invasive species TPWD recommends avoiding transport of water from water bodies where these species are known to occur, including rivers downstream of infested lakes. If this is unavoidable, effective mitigative measures should be considered and implemented for preventing the transfer of zebra mussels. Canyon Reservoir is known to be infested with zebra mussels. In addition zebra mussels have been found in several lakes downstream on the Guadalupe River. Please be advised TPWD regularly updates information on the TPWD website to clearly identify lakes with zebra mussels in Texas, as it is subject to change; this information can be found at: https://tpwd.texas.gov/huntwild/wild/species/exotic/zebramusselmap.phtml.

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

The SCTRWPG is to be commended for its strong emphasis and on water conservation, reuse and drought contingency planning. The IPP includes municipal water conservation water management strategies. Water conservation in the industrial and steam-electric power generation use categories are encouraged as well. According to the IPP, per capita water use in Region L is projected to decline over the planning period from 128 gallons per person per day in 2020 to 117 gallons per person per day in 2070, bringing it well under the Texas Water Conservation Task Force goal of 140 gallons per person per day.

While TPWD is pleased to see that many of our earlier comments have been addressed, concerns remain regarding potential impacts associated with several strategies. Several water management strategies are recommended for stream segments identified by TPWD as ecologically significant. Increased groundwater development may impact small springs and adversely impact groundwater-surface water interactions. New appropriations from the Guadalupe River and/or increased use of previously unused water rights from the Guadalupe River will impact instream flows and freshwater inflows to San Antonio Bay that will likely reduce long-term inflows and increase bay salinities, potentially leading to complex estuarine community changes. Brackish groundwater desalination can be an ecologically advantageous strategy, as long as issues such as brine disposal options are carefully considered. Recognition is deserved for drought management as a water management strategy, aquifer storage and recovery projects, use of off-channel reservoirs, use of recycled water for non-potable uses for several water user groups, and an ecological analysis of the impact of the 2021 plan. TPWD looks forward to continued coordination with project sponsors in an effort to avoid and/or minimize threats to fish and wildlife resources.

The 2021 IPP is a well written and organized report with detailed descriptions of natural resources and potential impacts. TPWD highly commends SCTRWPG's efforts that have resulted in the successful designation of five segments recommended in the IPP as ecologically unique and agrees with the statement " ...designating ecologically unique stream segments raises public awareness and voluntary stewardship that can result in the preservation of the character and environmental function of these segments." In addition, TPWD appreciates the recommendations regarding completion of the Texas Instream Flow Studies as well as funding for access to water data.

Thank you for your consideration of these comments. TPWD looks forward to continuing to work with the planning group to develop water supply strategies that not only meet the future water supply needs of the region but also preserve the ecological health of the region's aquatic resources.

RESPONSE:

Response for Comment No. 5 is TBD.

COMMENT NO. 6:

The following revisions are to McCoy WSC numbers in the given tables:

Population Projections
Page 141 Atascosa County 2020 = 8009, 2030 = 9228, 2040 = 10328, 2050 = 11421, 2060 = 12441, 2070 = 13389
Page 146 Nueces Basin 2020 = 378, 2030 = 464, 2040 = 548, 2050 = 624, 2060 = 696, 2070 = 761
Page 146 San Antonio Basin 2020 = 31, 2030 = 39, 2040 = 45, 2050 = 51, 2060 = 57, 2070 = 62

Demand Projections
Page 149 Nueces Basin 2020 = 996, 2030 = 1106, 2040 = 1215, 2050 = 1331, 2060 = 1449, 2070 = 1545
Page 157 Nueces Basin 2020 = 47, 2030 = 56, 2040 = 64, 2050 = 73, 2060 = 81, 2070 = 88
Page 157 San Antonio Basin 2020 = 4, 2030 = 5, 2040 = 5, 2050 = 6, 2060 = 7, 2070 = 7

Existing Water Supply
Page 167 Queen City Aquifer 2020 = 2260, 2030 = 2251, 2040 = 2247, 2050 = 2243, 2060 = 2241, 2070 = 2237
Page 167 Carrizo-Wilcox Aquifer 2020 = 88, 2030 = 89, 2040 = 89, 2050 = 89, 2060 = 89, 2070 = 89
Page 183 Carrizo-Wilcox Aquifer 2020 = 108, 2030 = 114, 2040 = 118, 2050 = 122, 2060 = 125, 2070 = 126
Page 183 Queen City Aquifer 2020-2070 = 6
Page 184 Carrizo-Wilcox Aquifer 2020 = 8, 2030 = 10, 2040 = 11, 2050 = 10, 2060 = 10, 2070 = 12

Needs/Surplus
Page 185 2020 = 1354, 2030 = 1236, 2040 = 1121, 2050 = 1002, 2060 = 880, 2070 = 782
Page 193 Nueces Basin 2020 = 53, 2030 = 50, 2040 = 46, 2050 = 42, 2060 = 37, 2070 = 31
Page 193 San Antonio Basin 2020 = 5, 2030 = 5, 2040 = 5, 2050 = 4, 2060 = 4, 2070 = 4

RESPONSE:

Response for Comment No. 6 is TBD.

Appendix 10-A: Comments from the Public and State/Federal

Table 1: Commenter Information

	Entity and Commenter Information			
Comment No.	Date	Medium (verbal, mail, email)	Entity Representation	Name
1	5/28/2020	Verbal, Public Hearing	Sierra Club, San Antonio (Alamo) Group	Terry Burns, M.D.
2	5/28/2020	Verbal, Public Hearing		Rachel Cywinski
3	6/8/2020	Written, email	Sierra Club, San Antonio (Alamo) Group	Terry Burns, M.D.
4	6/18/2020	Written, email	Texas State Soil and Water Conservation Board	Barry Mahler (Chairman) and Rex Isom (Executive Director)
5	7/20/2020	Written, email	Texas Parks & Wildlife Department	Cindy Loeffler (Chief)
6	7/20/2020	Written, spreadsheet	McCoy Water Supply Corporation	Kerry McCollough

South Central Texas Regional Water Planning Group
TWDB Comments and Proposed Responses on the Initially Prepared 2021 South Central Texas (Region L) Regional Water Plan

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
Level 1: Comments, questions, and data revisions that must be satisfactorily addressed in order to meet statutory, agency rule, and/or contract requirements.				
1.a	Chapter 5 and the State Water Planning Database (DB22).	The plan includes the following recommended water management strategies (WMS) by WMS type, providing supply in 2020 (not including demand management): 18 groundwater wells & other, six other direct reuse, two aquifer storage and recovery, and six other surface water. Strategy supply with an online decade of 2020 must be constructed and delivering water by January 5, 2023. a) Please confirm that all strategies shown as providing supply in 2020 are expected to be providing water supply by January 5, 2023. [31 § TAC 357.10(21); Contract Exhibit C, Section 5.2]	6. Requires Further Investigation, Next Submittal	Black & Veatch requested feedback from sponsors with projects beginning in 2020 to confirm that projects providing a supply in 2020 will be online by 1/5/2023. Based on responses received from sponsors, two projects will have the implementation decade revised from 2020 to 2030, including: SAWS Facilities Expanion CPS Direct Recycling Pipeline and SAWS Recycled Water Strategies Recycled Water Program. The RWP and DB22 will be revised to reflect the change in implementation decade.
1.b	Chapter 5 and the State Water Planning Database (DB22).	b) Please provide the specific basis on which the planning group anticipates that it is feasible that the two aquifer storage and recovery and six other surface water WMSs will all actually be online and providing water supply by January 5, 2023. For example, provide information on actions taken by sponsors and anticipated future project milestones that demonstrate sufficient progress toward implementation. [31 § TAC 357.10(21); Contract Exhibit C, Section 5.2]	6. Requires Further Investigation, Next Submittal	The two ASR projects are expected to provide supply by 1/5/2023.
1.c	Chapter 5 and the State Water Planning Database (DB22).	c) In the event that the resulting adjustment of the timing of WMSs in the plan results in an increase in near-term unmet water needs, please update the related portions of the plan and DB22 accordingly, and also indicate whether 'demand management' will be the WMS used in the event of drought to address such water supply shortfalls or if the plan will show these as simply 'unmet'. If municipal shortages are left 'unmet' and without a 'demand management' strategy to meet the shortage, please also ensure that adequate justification is included in accordance with 31 TAC § 357.50(j). [TWC § 16.051(a); 31 § TAC 357.50(j); [31 TAC § 357.34(i)(2); Contract Exhibit C, Section 5.2]	6. Requires Further Investigation, Next Submittal	Once comment 1a and 1b are incoorperated, Black & Veatch will ensure that this comment is addressed and all necessary elements of the RWP and DB22 are appropriately updated.
1.d	Chapter 5 and the State Water Planning Database (DB22).	d) Please be advised that, in accordance with Senate Bill 1511, 85th Texas Legislature, the planning group will be expected to rely on its next planning cycle budget to amend its 2021 Regional Water Plan during development of the 2026 Regional Water Plan, if recommended WMSs or projects become infeasible, for example, due to timing of projects coming online. Infeasible WMSs include those WMSs where proposed sponsors have not taken an affirmative vote or other action to make expenditures necessary to construct or file applications for permits required in connection with implementation of the WMS on a schedule in order for the WMS to be completed by the time the WMS is needed to address drought in the plan. [TWC § 16.053(h)(10); 31 TAC § 357.12(b)]	3. Noted	This comment is acknowledged.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
2	Section 2.3.4.6, page 2-23	It appears that 2020 steam-electric water demand projections by county are missing from Table 2-12. Please revise the table to present the demands by county in the final, adopted regional water plan. [31 TAC § 357.31(e)(1)]	1. Incorporate	2020 Steam-electric demand projections by county will be added to Table 2-12.
3	Section 2.3.5, page 2-25	Table 2-13 does not appear to present any demand projections for Alliance Regional Water Authority (ARWA) or Cibolo Valley Local Government Corporation (CVLGC), however this is clarified in the table footnote for ARWA. Please add a clarifying footnote to Table 2-13 noting why demands are not presented for CVLGC in the final, adopted regional water plan. [31 TAC § 357.31(b)]	1. Incorporate	A clarifying footnote has been included in Table 2-13: "1 ARWA has executed contracts with San Marcos, CRWA, Kyle, and Buda to sell water that will be developed by three water management strategies included in the 2021 South Central Texas Regional Water Plan (See Chapter 5.2): ARWA/GBRA Project (Phase 1), ARWA Project (Phase 2), and ARWA Project (Phase 3). 2 CVLGC comprises the cities of Schertz and Cibolo. The CVLGC Carrizo Project is the first major water management strategy project planned and developed by the corporation to provide water to both Schertz and Cibolo. This water management strategy is discussed in Chapter 5.2.22"
4	Chapter 2	The plan does not appear to include a summary of water savings due to plumbing code savings. Please include a summary of the municipal demand savings due to plumbing fixture requirements in the final, adopted regional water plan. [31 TAC § 357.31(d)]	6. Requires Further Investigation, Next Submittal	A separate table showing water savings due to plumbing code requirements will be added to Chapter 2. This information has been requested from TWDB and will be incorporated.
5	Chapter 2	The plan in several instances does not appear to report Board-adopted water demand projections. Water demands presented for Caldwell, DeWitt, and Hays Counties and total regional demands presented in Table 2-4 do not appear to be consistent with Board-adopted water demand projections; and, Tables 2-7 and 2-9 present appear to present incorrect demand projections for Hays County and total regional demands. For example, the regional total in Table 2-4 is presented as 1,048,291 acre-ft/year in 2020; 1,112,911 acre-ft/yr in 2030; 1,160,856 acre-ft/yr in 2040; 1,207,238 acre-ft/yr in 2050; 1,255,062 acre-ft/yr in 2060; and 1,305,824 acre-ft/yr in 2070. TWDB Board-adopted water demands for Region L is 1,050,964 acre-ft/year in 2020, 1,114,948 acre-ft/yr in 2030; 1,164,107 acre-ft/yr in 2040; 1,211,327 acre-ft/yr in 2050; 1,263,897 acre-ft/yr in 2060; and 1,320,128 acre-ft/yr in 2070. Please review water demands reported in Tables 2-4 through 2-9 and 2-11 and all water demand values presented in the text of Section 2.3 and revise to include Board-adopted water demands in the final, adopted regional water plan. [31 TAC § 357.31(e)(1)]	6. Requires Further Investigation, Next Submittal	Clarifying information and data has been provided by TWDB to revise these chapters, as necessary.
6	Appendix 2-A	The plan includes some DB22 reports that appear blank due to the region not having relevant data for these reports. Please provide a cover page to the DB22 report appendix indicating the reason for these report contents being blank.	1. Incorporate	A cover page to the DB22 report appendix will be added to indicate the reason for some of report contents being blank.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
7	Section 3.1.1, page 3-3	The plan states that "SCTRWPG did not receive any such information from a commissioners' court" for counties or parts of counties not in a groundwater conservation district, however the plan does not appear to include information on the Hill Country Priority Groundwater Management Area (PGMA), which is partially located within the region. Please note how the Hill Country PGMA was considered in the final, adopted regional water plan. [31 TAC § 357.22(a)(6)]	6. Requires Further Investigation, Next Submittal	The following language is proposed to be added to Section 3.1.1: "There are several Priority Groundwater Management Areas (PGMAs) around the State, with portions of the Hill Country PGMA located within Region L. PGMAs are established to ensure management of groundwater in areas with critical groundwater problems and to consider to the need for creating Groundwater Conservation Districts (GCDs). PGMAs are designated or delineated by the Texas Commission on Environmental Quality (TCEQ) for areas that are experiencing, or are expected to experience critical groundwater problems within 50 years, including shortages of surface water or groundwater, land subsidence resulting from groundwater withdrawal, or contamination of groundwater supplies. Each Region L county located within the Hill Country PGMA has a GCD: The Comal Trinity GCD in Comal County , the Hays Trinity GCD in Hays County, and the Trinity Glen Rose GCD in Bexar County. These GCDs give notice to area residents that the declaration of the PGMA means that their water availability and quality will be at risk within the next 50 years. The Hays County Development Regulations have specific requirements listed for subdivisions served by individual water wells producing local groundwater within the PGMA. These requirements can be found in Chapter 715, Sub-Chapter 3, Section 3.06 of the Hays County Development Regulations. GMAs are a different concept in that every county in the State is in one or more of sixteen GMAs. For the most part, the major aquifers are not split across multiple GMAs, and the goal is to manage entire aquifer systems across political subdivisions in a consistent way. GCDs and GMAs are discussed in Chapter 1 of this plan and on the TWDB website at http://www.twdb.texas.gov/groundwater/index.asp."
8	Section 3.1.1, page 3-3	The plan does not appear to document the methodology used to develop estimates of groundwater availability for non-relevant aquifers and local aquifers, such as the Austin Chalk, Buda, and Leona Gravel. The electronic GAM appendix appears to include a brief summary of this information, however information on how RWPG-estimated groundwater availabilities were determined should be included in the final, adopted regional water plan; including specifying which aquifers used TWDB compatible availabilities. [Contract Exhibit C, Section 3.5.2]	6. Requires Further Investigation, Next Submittal	A summary of the methodology or the relevant GAM report used to develop estimates of groundwater availability for non-relevant aquifers and local aquifers will be added to Chapter 3, Table 3-1.
9	Section 3.1.2, pages 3-7 and 3-9	Please provide justification as to why rural municipal, irrigation, mining, and livestock existing water supplies were set equal to demands during the planning period in the final, adopted regional water plan. [Contract Exhibit C, Section 3.7 item 4]	6. Requires Further Investigation, Next Submittal	A justification for setting existing groundwater supplies equal to demands for some WUGs will be developed and included in the final plan. The justification will be provided to the TWDB for pre-review.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
10	Chapter 3, Section 3.2	Please include the methodology used to estimate local surface water supplies, including clarifying if these supplies were estimated under drought of record conditions **and a include table that lists the volume of each local surface water supply** in the final, adopted regional water plan. [31 TAC § 357.32(a); Contract Exhibit C, Sections 3.2 and 3.7]	6. Requires Further Investigation, Next Submittal	Local surface water supplies were identified for livestock uses only. Methodology used to develop livestock demand can be used to infer that sufficient water will be available to meet demands. The following language is proposed to be added to Section 3.2: "Local surface water supplies are disbursed supplies that are available only at the point of use and do not impact firm yield. These supplies are generally runoff collection, such as livestock supply ponds, and are assumed to be fresh water. Local surface water supplies were assumed to be used only for a portion of livestock and independent of other surface water sources listed (Table 3-4). Livestock local surface water supplies were assumed for all counties with livestock demand. Because the demands are based on a drought year scenario, it was assumed that ranchers will manage their livestock in such a way that populations will be maintained at a level that can be supported by a combination of local surface water supplies and known water or groundwater supplies."
11	Chapter 3, Section 3.2	It is not clear from the plan whether reservoir sedimentation has been accounted for in reservoirs (except Canyon Lake) where the available supply is a constant across all planning decades (2020 through 2070). Please clarify how sedimentation was considered in supply estimates for major reservoirs. If sedimentation was not considered, please include revised supply estimates that account for sedimentation in the final, adopted regional water plan. [Contract Exhibit C, Section 3.2]	6. Requires Further Investigation, Next Submittal	Major reservoirs include Canyon Lake, the Medina Lake System, and three cooling lakes for power generation facilities which are not operated as supply reservoirs and therefore have been evaluated on the basis of the lowest annual summation of monthly diversions as described in Contract Exhibit C, Section 3.2, p. 25. The Medina Lake System has a zero-value firm-yield, and therefore does not include an evaluation of sedimentation. Therefore, aside from Canyon Lake, consideration of sedimentation is not required and/or necessary for any of the reservoirs listed in the Region L IPP.
12	Chapter 3	The plan does not appear to include the evaluation results of existing supplies for major water providers (MWP). Please report existing supplies for MWP by decade and category of use in the final, adopted regional water plan. [31 TAC § 357.32(g)]	1. Incorporate	Chapter 3 will include a table that includes the evaluation results of existing supplies for Major Water Providers.
13	Appendix 3-A	Attachment B lists multiple GAM models, however it is not clear whether the region used GAM models to develop non-MAG availabilities. If models were used for non-MAG availabilities, please include the model information required by contract with the final, adopted regional water plan. [Contract Exhibit C, Section 3.5.4]	6. Requires Further Investigation, Next Submittal	Appendix 3-B includes correspondence regarding the approved hydrologic assumptions used in the 2021 Region L Regional Water Plan. Since the approved hydrologic assumptions have not changed, this appendix is not anticipated to be revised. However, a description of models used for non-MAG availabilities will be included in the narrative of Chapter 3, and the source of data for all groundwater availabilities will be included in Table 3-1. If applicable, associated model runs will be included in the digital appendices submitted to the TWDB with the Final Plan.
14	Section 4.9, page 4-23, Table 4-30	The plan does not appear to include identified water need volumes for MWPs reported by category of use including municipal, mining, manufacturing, irrigation, steam electric, mining, and livestock. Please report the results of the needs analysis for MWPs by categories of use as applicable in the region in the final, adopted regional water plan. [31 TAC § 357.33(b)]	6. Requires Further Investigation, Next Submittal	Chapter 4 will include a table that summarizes identified water need volumes for MWPs reported by category of use.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
15	Chapter 4	The following tables appear to present information on projected water needs that are inconsistent with data reported in DB22 at the time of review: Tables 4-1 through 4-3, Tables 4-5 through 4-9, Table 4-12, Tables 4-14 through 4-16, Table 4-19, Table 4-23, and Tables 4-27 through 4-29. Please carefully review all data in the tables and related text and revise as necessary to present data consistent with DB22 in the final, adopted regional water plan [31 TAC § 357.33(b)]	6. Requires Further Investigation, Next Submittal	We will carefully review all data in the tables and related text and revise as necessary to present data consistent with DB22 in the final, adopted regional water plan
16	Chapter 4	The plan does not appear to include a secondary needs analysis for MWPs. Please present the results of the secondary needs analysis by decade for MWPs in the final, adopted regional water plan. [31 TAC § 357.33(e)]	6. Requires Further Investigation, Next Submittal	Chapter 4 will include a table that summarizes the second-tier Needs Analysis for MWPs. This information will be provided by TWDB and incorporated into the chapter.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
17	Chapter 5	The plan does not appear to define a threshold for significant water needs or provide a specific assessment of the potential for aquifer storage and recovery (ASR) projects to meet those needs. Please include information on how the planning groups defines significant water need and provide a specific assessment of the potential for ASR projects to meet those needs in the final, adopted regional water plan. [TWC § 16.053(e)(10); 31 TAC § 357.34(h)]	5. RWPG Direction Requested	The following language is proposed to be added to Section 5.1: "Per House Bill 807 (HB 807), if a Regional Water Planning Area (RWPA) has significant identified water needs, the Regional Water Planning Group (RWPG) shall provide a specific assessment of the potential for ASR projects to meet those needs. At the August 1, 2019, RWPG meeting, the SCTRWPG defined the threshold of significant water needs to be a WUG or use type with an identified need of 10,000 ac-ft/yr or greater. WUGs or use types meeting this definition in the 2021 SCTRWP include New Braunfels, San Antonio Water Systems (SAWS), San Marcos, Victoria, Irrigation, and Mining. The following provides a summary of the potential for ASR projects to meet significant identified water needs in Region L: • To meet New Braunfels' significant identified needs, the SCTRWPG recommended the New Braunfels Utilities (NBU) ASR Project in the 2021 SCTRWP. An evaluation of the NBU ASR Project can be found in Section 5.2.25. • SAWS already has an ASR facility in operation, the H2Oaks Center, for which a water treatment plant expansion is included as a recommended WMS in the 2021 SCTRWP. The WMS evaluation for the SAWS ASR WTP expansion project can be found in Section 5.2.8. • A full strategy evaluation of the potential for ASR projects to meet San Marcos' significant identified water needs was not conducted because their needs have been met through a variety of cost-effective WMSs, including Advanced Water Conservation, ARWA/GBRA Project (Phase 1), ARWA Project (Phase 2), and indirect and potable reuse. Given the location and groundwater characteristics in the area, an ASR project could potentially be developed to meet additional needs for San Marcos in the future. • To meet Victoria's significant identified needs, the SCTRWPG recommended the City of Victoria ASR Project in the 2021 SCTRWP. An evaluation of the Victoria ASR Project can be found in Section 5.2.27. • A full strategy evaluation of ASR was not conducted for Irrigation or Mining in Region L because implementation of ASR may be considered cost-prohibitive compared to the cost of surface water and/or groundwater projects."""
18	Chapter 5	WMS and associated project evaluations presented in the plan do not appear to include quantitative reporting of reliability or anticipated strategy water losses. Please provide this information for all strategy evaluations in the final, adopted regional water plan. [31 TAC § 357.34(e)(3)(A); Contract Exhibit C, Section 5.2.3]	6. Requires Further Investigation, Next Submittal	Information will be added to the WMS Evaluations in Chapter 5.2 to specifically include the quantitative reporting of reliability and anticipated strategy water losses.
19	Chapter 5	The plan does not appear to provide a quantitative reporting of impacts to agricultural resources for each WMS evaluation. Please include a quantitative reporting of impacts to agricultural resources as part of each WMS evaluation in the final, adopted regional water plan. [31 TAC § 357.34(e)(3)(C)]	6. Requires Further Investigation, Next Submittal	Information will be added to each WMS evaluation that will include quantitative reporting of impacts to agricultural resources (i.e., this WMS is proposed to impact approximately __ acres of agricultural land.") Chapter 6 will include a summary table of the quantitative impacts for all WMSs.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
20	Section 5.2	Several WMS projects, such as the SAWS Expanded Local Carrizo Project, SAWS Expanded Brackish Groundwater Project, County Line SUD Trinity Well Field, and County Line SUD Brackish Edwards Project, appear to present a single project cost that combines the cost of multiple project phases. Please present costs for individual project phases separately in the final, adopted regional water plan. [Contract Exhibit C, Section 5.6]	1. Incorporate	Costs for individual project phases will be provided separately in the final RWP.
21	Chapter 5	The plan does not appear to provide documentation of why seawater desalination was not recommended. Please include documentation of why seawater desalination was not selected as a recommended WMS in the final, adopted regional water plan. [TWC § 16.053(e)(5)(j); Contract Exhibit C, Section 5.2; 31 TAC § 357.34(g)]	5. RWPG Direction Requested	The following language is proposed to be added to Chapter 5.1: "As indicated in Table 5.1-1, the SCTRWPG recommended inclusion of several Aquifer Storage and Recovery (ASR) strategies and brackish groundwater desalination strategies in the 2021 SCTRWP. The SCTRWPG includes WMSs in the RWP at the request of WUG or WWP sponsors. For the 2021 SCTRWP, seawater desalination was not included as a recommended WMS because it was not requested for inclusion by WUGs and the majority of needs in the region can be met by fresh water, groundwater, brackish groundwater, reuse and conservation WMSs. There are several seawater desalination facilities currently being planned within Texas; seawater desalination may become a feasible and cost-effective strategy for Region L in the future."
22	Pages 5.2.1-26 through 5.2.1-30	Table 5.2.1-10 appears to report advanced water conservation strategy supplies for several split region WUGs such as Aqua WSC, Buda, Canyon Lake Water Service, and El Oso WSC inconsistently with strategy supplies reported in DB22. Strategy supplies for Randolph Air Force Base, County-OtherHays, and San Antonio Water System presented in Table 5.2.1-10 also appear inconsistent with supplies reported in DB22. Please reconcile this information as necessary in the final, adopted regional water plan. [31 TAC §357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.
23	Page 5.2.2-1 to 5.2.2-9	The plan notes in Section 5.2.2 that the drought management strategy was considered only for WUGs with needs in the 2020 decade. It appears that several WUGs with needs in 2020 were not included in the analysis such as County-Other Victoria, Elmendorf, and Goforth SUD. Please document the reason why drought management was recommended for some but not other WUGs with 2020 needs or for entities that have anticipated needs after 2020 in the final, adopted regional water plan. [31 TAC § 357.34(i)(1)]	6. Requires Further Investigation, Next Submittal	The supplies provided by the drought management WMS were determined using the TWDB provided Drought Management Costing Tool. This tool does not include County-Other WUGs such as County-Other, Victoria. The 2021 Region L IPP did not include County-Other WUGs to maintain consistency with the TWDB's tool. Additionally, the drought management WMS was considered for WUGs that exhibited overall needs in 2020. While Goforth SUD exhibited needs in Caldwell County (-16 acre-feet per year [af/yr]), Goforth SUD has a surplus in Hays County (3,175 af/yr). Given an overall surplus of 3,159 af/yr for Goforth SUD, the drought management WMS was not applied to Goforth SUD.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
24	Chapter 5	It appears that WMSs were not identified and recommended for all WUGs with needs, specifically irrigation and mining WUGs with unmet needs. If no feasible WMSs were able to be identified for these WUGs, including drought management (as demand management), please provide an explanation in the final, adopted regional water plan. [31 TAC § 357.35(d)]	5. RWPG Direction Requested	The following statement in Chapter 6 has been revised, as follows: "The 2021 SCTRWP did not recommend WMSs to meet some mining and irrigation needs, as strategies to meet those needs may be cost-prohibitive. As shown in the TWDB socio-economic impact analyses in Chapter 6, however, these unmet irrigation and mining needs would represent only 1 percent of the potential income losses in 2070, considering projected shortages in all water use sectors. Table ES-4 summarizes the unmet needs of the region by use type. There are no unmet municipal needs included in the 2021 SCTRWP."
25	Page 5.2.4-11	In several instances in Tables 5.2.4-5 and 5.2.4-6 project yields or unit costs do not match those reported in DB22. For example, strategy supplies for Atascosa Rural WSC, El Oso WSC, and Mining- Comal County, and unit costs for Manufacturing- Karnes County appear to be inconsistently reported in the referenced tables and DB22. Please review this information and revise as necessary in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.
26	Section 5.2	In several instances total capital costs presented for project evaluations in Section 5.2 do not appear to match those reported in DB22. For example, capital costs for Reuse-County Line SUD, SAWS-Expanded Brackish Wilcox Project, and SSLGC Expanded Carrizo Project appear to be inconsistently reported in Section 5.2 and DB22. Please reconcile this information as necessary in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.
27	Page 5.2.14-3	The evaluation for the ARWA Project (Phase 3) appears to provide strategy supplies for the following entities: Buda, County Line SUD, County Line SUD, Green Valley SUD, Kyle, and San Marcos. Strategy supplies for ARWA Project (Phase 3) do not appear to be included in DB22 for these entities. Please review this information and if recommended for the above mentioned WUGs, please report this information in DB22 for the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Delivery volumes listed in the RWP for the ARWA Project (Phase 3) will be incorporated into DB22 for consistency.
28	Section 5.2.4	Tables 5.2.4-1 and 5.2.4-4 appear to present a summary of recommended well field projects related to the local groundwater strategy for multiple water users. DB22 does not appear to include all of the projects presented in these tables. For example, DB22 does not have related projects for the following entities: Atascosa Rural WSC, Luling, KT Water Development, Water Services Inc, Winder Water Systems, County-Other Calhoun, Calhoun, El Oso, Mining- Comal, Mining- Uvalde, Manufacturing- Karnes, and Manufacturing DeWitt. Please reconcile this information as necessary in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
29	Pages 5.2.3-4 and 5.3-21	Recommended Edwards Transfer strategy supplies appear to be inconsistently reported for Alamo Heights and Leon Valley in Table 5.2.3-2, Table 5.3.2-4, Table 5.3.2-24, and DB22. Please clarify the supply provided by Edwards Transfers for these two entities and present consistently in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.
30	Section 5.2.9	Several recycled water projects appear to include costs for infrastructure components that do not appear to belong in the regional water plan, such as expansions of distribution service into new areas (Boerne) and single-family developments (SAWS). Please review the project components evaluated in each of recycled water strategy projects presented in Section 5.2.9.2 and remove any components associated with reuse distribution lines directly to residences or commercial businesses in the final, adopted regional water plan. [Contract Exhibit C, Section 5.5.3]	6. Requires Further Investigation, Next Submittal	Costs for recycled water projects will be investigated. Any components associated with reuse distribution lines directly to residence or commercial businesses will be removed or justification provided.
31	Section 5.2.16	The GBRA Lower Basin Storage Project evaluation does not appear to present land costs broken out separately for land area and purchase cost in conservation pool footprint, mitigation land area and purchase cost, and construction costs of embankment/dam separate from transmission facilities. Please provide broken-out land costs for this reservoir project in the final, adopted regional water plan. [Contract Exhibit C, Section 5.5]	6. Requires Further Investigation, Next Submittal	The costs for this WMS are directly from the Unified Costing Model. We will reach out to the TWDB to request guidance on this comment.
32	Pages 5.2.22-1	It is not clear from the Section 5.2.22 strategy evaluation for Cibolo Valley Local Government Corporation Carrizo Project when the strategy and associated projects are anticipated to come online. DB22 shows this strategy as providing supply in 2020 with the associated project coming online in 2030. Please clarify the anticipated online decade for water supply for this WMS and associated WMSPs and revise as necessary to ensure that the projects needed to implement strategies are online prior to the WMS supply online decade. [31 TAC § 357.10(21); Contract Exhibit C, Section 5.2]	1. Incorporate	The anticipated online decade for this WMS is 2030. DB22 will be revised for consistency with the RWP.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
33	Section 5.2	It is not clear in several WMS evaluations in which decade the strategy is anticipated to provide supply. For example, in Section 5.2.10, it is not clear when the three phases of the SAWS Expanded Local Carrizo Project are anticipated to begin providing supplies. Please include the anticipated online dates in each of the WMS and WMSP evaluations in the final, adopted regional water plan. [Contract Exhibit C, Section 5.2]	6. Requires Further Investigation, Next Submittal	The online decades for phased projects will be explicitly stated in the narrative of the RWP.
34	Page 5.2.30-1	The evaluation for the Martindale WSC Alluvial Well notes that the strategy is planned for the 2030 decade. The planning database show this strategy as providing supplies in the 2020 decade. Please reconcile as necessary to ensure WMSs shown as providing supply in a planning decade come online prior to the initial decade year. [31 TAC § 357.10(21); Contract Exhibit C, Section 5.2]	6. Requires Further Investigation, Next Submittal	The online decade for this WMS was confirmed with the sponsor to be 2030. DB22 and the RWP will be revised for consistency.
35	Page 5.3-41	Section 5.3.4.4 summarizes the water supply plan for the Manufacturing, Calhoun County WUG but does not reference the Lavaca Off-Channel Reservoir which is assigned as an alternative WMS in DB22 for this Region L WUG. Please confirm this alternative WMS has been appropriately assigned to Manufacturing, Calhoun County in DB22 and revise if necessary or include clarification on the Sponsor and WUG relationship and refer readers to the Region P 2021 Regional Water Plan for the WMS evaluation information in the final, adopted regional water plan. [31 TAC § 357.35(g)(3)]	6. Requires Further Investigation, Next Submittal	Black & Veatch has reached out to TWDB and Region P's consultant regarding this comment. The Lavaca Off-Channel Reservoir Alternative WMS is not included in the 2021 Region L IPP, because it is sponsored by the adjacent Region P. According to the 2021 Region P IPP, this WMS would be developed by the Lavaca Navidad River Authority and would be located within Region P. Therefore, an evaluation of this WMS is not necessary. If this Alternative WMS for Region P is appropriately represented in DB22 and in Region P's plan, then the water supply plan for Calhoun County Manufacutring in Chapter 5.3 will include a reference to this Alternative WMS and refer the reader to Region P's plan for more information.
36	Section 5.3	In several instances in Section 5.3 recommended water supply plan tables, the plan appears to present strategy supplies that are inconsistent with those reported in DB22. For example, Table 5.3.2-6 presents strategy supplies for Local Groundwater and Facilities Expansion that do not match supplies for those strategies that are reported in DB22. Please review and revise as necessary in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.
37	Section 5.3	It appears that potential errors in calculated water needs identified in Chapter 4 (as noted in comment number 15) were carried through to tables in Chapter 5 Section 5.3. Please carefully review tables and text in Section 5.3 and revise as necessary to accurately present WUG needs in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	6. Requires Further Investigation, Next Submittal	Chapter 5.3 will be revised to incorporate water needs for split-WUGs.
38	Section 5.3	The plan appears to include non-recommended strategies in the county summary tables with a zero yield. For example, Table 5.3.11-8 includes advanced water conservation as a recommended WMS for Marion with a zero yield, however advanced water conservation does not appear to be a recommended WMS for Marion in DB22. Please remove all zero yield strategy references from the County Summary tables in the plan to avoid confusion, since regional water plans may not include zero yield recommended strategies. [31 TAC § 357.34(d)]	5. RWPG Direction Requested	Chapter 5.3 will be revised to remove instances where zero-yield WMS are included in water supply plans. The Advanced Water Conservation WMS has been clarified to state the following as a note in Table 5.2.1-9: "Note: Conservation is generally recommended by the SCTRWPG for all municipal WUGs in Region L. However, for purposes of this plan, the Advanced Water Conservation strategy is a recommended WMS for WUGs that have a non-zero demand reduction for any decade."

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
39	Section 5.4	The plan does not appear to present 'management supply factors' for MWPs Please report management supply factors for all MWPs by decade in the final, adopted regional water plan. [31 TAC § 357.35(g)(2)]	1. Incorporate	Management supply factors for MWPs in each decade will be included in the final RWP.
40	Chapter 5	The plan does not appear to include a strategy evaluation for the City of Kenedy well field, which is included in the contract scope of work under Task 5A subtask 21(ii) Additional Strategies. Please clarify why the evaluation was not included for this potentially feasible strategy in the final, adopted regional water plan. [Contract Scope of Work, Task 5A]	6. Requires Further Investigation, Next Submittal	The following statement will be added to Chapter 5.1: "A well field project for the City of Kenedy was initially identified and explored as a potentially feasible WMS. However, the City of Kenedy's well field project was not developed to a level where it could be appropriately evaluated for inclusion as a potentially feasible WMS, in accordance with the Region L process and guiding principles. Therefore, the SCTRWPG elected not to include the City of Kenedy well field project as a potentially feasible WMS. The City of Kenedy and their representatives were advised that they may request an amendment to the 2021 SCTRWP to add the WMS in the future, if desired."
41	Pages 6-40 and 6-41	Section 6.1.3.2 appears to note that several WMSs such as Water Conservation, Drought Management, Facilities Expansions, Local Groundwater, and Recycled Water Strategies, were not evaluated for environmental impacts. Please include a quantitative reporting of environmental impacts for all evaluated WMSs and projects in the final, adopted regional water plan. [31 TAC § 357.34(e)(3)(B)]	6. Requires Further Investigation, Next Submittal	Chapter 6 tables will be revised to include quantitative impacts for WMS Nos 1 through 9 for Endangered and Threatened Species, Vegetation and Land Use, Water Quality and Aquatic Habitats, and Cultural Resources.
42	Section 7.7.1, page 7-23	The plan appears to discuss the outdated, 2014 recommendations from the Drought Preparedness Council. Please indicate how the planning group considered relevant recommendations from the Drought Preparedness Council that were provided in an August 2019 letter to the planning groups in the final, adopted regional water plan. [31 TAC § 357.42(h)]	5. RWPG Direction Requested	Section 7.7.1 will be updated to discuss the 2019 recommendations from the Texas Drought Preparedness Council. Additionally, a new section is suggested to be added as Section 7.5.3, as follows: "**Section 7.5.3 Recommended Triggers and Responses for Irrigation and Steam-electric Uses** As mentioned previously, it is difficult to create a set of drought triggers and responses that will fit the needs of all WUGs in the regional planning area. Irrigation and Steam-electric water use categories each represent 10 percent or more of water demands in any decade. For entities supplying significant amounts of water to customers for irrigation and steam-electric uses, the SCTRWPG suggests reviewing the drought responses and recommendations used by similar entities in the region. An example of triggers and responses from the Edwards Aquifer Authority (EAA) Critical Period/Drought Management Plan is presented in Figure 7 6. EAA was selected as a representative example because their Critical Period Management Plan applies to municipal, industrial, and irrigation users that are authorized to withdraw more than 3 acre-feet. The Critical Period Management Plan includes five critical period water stages. The triggers depend on 10-day average spring and index well levels and the responses are stepwise, mandatory withdrawal reductions."
43	Section 7.4	Please confirm whether the entities evaluated for emergency responses to local drought conditions or loss of municipal supply were assumed to have 180 days or less of remaining supply. [Contract Exhibit C, Section 7.4]	2. Confirmed	The entities evaluated for emergency responses were assumed to have 180 days or less of remaining supply.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
44	Chapter 7	The plan does not appear to include a discussion of whether drought contingency measures have been recently implemented (for example, since adoption of the last regional water plan) in response to drought conditions. Please describe this in the final, adopted regional water plan. [Contract Scope of Work, Task 7, subtask 3]	6. Requires Further Investigation, Next Submittal	Black & Veatch will reach out to certain WUGs/WWPs to gather this information, and it will be added to the final RWP.
45	Chapter 7	The plan does not appear to include discussion of unnecessary or counterproductive variations in drought response strategies that may impede drought response efforts. Please include discussion of any unnecessary or counterproductive variations in drought response strategies that were identified by the planning group in the final, adopted regional water plan. [TWC § 16.053(e)(3)(E); 31 TAC § 357.42(b)(2)]	1. Incorporate	The SCTRWPG previously determined that there were no unnecessary or counterproductive variations in drought response strategies. The following text is proposed to be added to the end of section 7.2.2: "In accordance with Title 31 of the Texas Administrative Code (31 TAC) §357.42(b)(2), the SCTRWPG considered whether there exists any unnecessary or counterproductive variations in drought response strategies. 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."
46	Section 11.2.1, page 11-2	Projections summarized in Section 11.2.1 for the 2021 plan total municipal water demand and total regional demand appear to be inconsistent with water demand projections reported in DB22. Please reconcile this information as necessary in the final, adopted regional water plan. [31 TAC § 357.45(c)(1)]	6. Requires Further Investigation, Next Submittal	We will investigate the inconsistencies between DB22 and the RWP narrative and reconcile the information and include the accurate data for the final RWP
47	Page 11-4	Table 11-2 summarizes modeling assumptions for the 2016 and 2021 South Central Texas Regional Water Plans. The table appears to show several assumptions incorrectly indicated as being used only for the 2021 plan. For example, 2021 assumptions related to Edwards Aquifer withdrawals, operations of Canyon Reservoir, GBRA deliveries, operation of power plant reservoirs, and operation of Choke Canyon Reservoir appear to have been assumptions for the 2016 plan (based on appendix J of the 2016 plan) as well. Please reconcile this information as appropriate in the final, adopted regional water plan. [31 TAC § 357.45(c)(2)]	1. Incorporate	The summary of modeling assumptions will be revised to be consistent with the hydrologic assumptions included as an appendix to Chapter 3, as necessary.
48	Page 11-6	Section 11.2.3 notes the total availability in 2020 is 1,449,057 acre-feet per year. This is inconsistent with total availability reported in DB22 for 2020, 1,511,657 acre-feet per year. Please reconcile this data as necessary in the final, adopted regional water plan. [31 TAC § 357.45(c)(3)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.
49	Page 11-9	Section 11.2.5 presents a summary of total regional needs in 2020 and 2070. The values presented appear to be inconsistent with the needs reported in DB22. Please reconcile this data as necessary in the final, adopted regional water plan. [31 TAC § 357.45(c)(3)]	6. Requires Further Investigation, Next Submittal	Inconsistencies between DB22 and the RWP narrative will be investigated and reconciled for the final RWP.
50	Chapter 11	Please provide a brief summary of how the 2016 Plan differs from the 2021 Plan with regards to recommended and alternative WMS projects in the final, adopted regional water plan. [31 TAC § 357.45(c)(4)]	6. Requires Further Investigation, Next Submittal	A summary of the differences between the 2016 Plan and 2021 Plan with regards to WMS projects will be added to the final RWP.

IPP Comment			Proposed Response	
No.	**IPP Reference**	**Comment / Question**	**Response Code**	**Proposed Resolution/ Response**
51	Chapter 11	The plan does not appear to assess the progress of the regional water planning area in encouraging cooperation between water user groups for the purpose of achieving economies of scale and otherwise incentivizing strategies that benefit the entire region. Please provide a general assessment of these items in the final, adopted regional water plan. [TWC § 16.053(e)(12); 31 TAC § 357.45(b)]	5. RWPG Direction Requested	Add subsection to Chapter 11: 11.2.7Assessment of Progress Toward Encouraging Cooperation Among WUGs • SCTRWPG encourages active participation in cooperative organizations like the Regional Water Alliance. • WWPs such as ARWA, CRWA, CVLGC, and SSLGC are partnerships of one or more utilities that share water supplies and costs of infrastructure development. • Several WMSs in the 2016 RWP were combined or separated in the 2021 RWP to accommodate WUG or WWP cooperative agreements. For example, the ARWA/GBRA Project (Phase 1) is a cooperative WMS implemented by two WWPs to achieve capital and operational costs savings from economies of scale and to avoid unnecessary construction of additional pipelines and infrastructure. • EAA Habitat Conservation Plan (HCP) is an example of local partnerships and coordination in an effort to provide overall benefit to the springs systems and the species that inhabit those springs. • • • Based on the array of collaborative projects and partnerships, the SCTRWPA has been successful in encouraging cooperation among WUGs for the purpose of achieving economies of scale or otherwise incentivizing WMSs that benefit the entire RWPA.
52	GIS Files	The GIS files submitted did not appear to include the locations of every recommended WMS project. Please include the locations of every recommended WMS project listed in the final, adopted regional water plan with the final GIS data submitted. [Contract Exhibit C, Section 13.1.2]	1. Incorporate	The GIS files submitted with the Final RWP will include locations for every recommended WMS Project.

12. Presentation of Infrastructure Financing Survey, Chapter 9

Agenda Item 12: Infrastructure Financing Analysis

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Infrastructure Financing Analysis

31 TAC §357.44 requires RWPGs to:

1. Assess and quantitatively report how entities will fund RWP projects
2. Propose what role state will have in financing projects

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Infrastructure Financing Analysis

A summary of the Infrastructure Financing Survey will be included in Chapter 9 of the RWP, including:

- Introduction
- Objectives of the Infrastructure Financing Analysis
- Methods and Procedures
- Summary of Survey Responses

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Infrastructure Financing Analysis

Introduction

The Infrastructure Financing Survey is used to gather information about how project sponsors anticipate funding water supply projects recommended in the 2021 RWP including whether the sponsor intends to use financial assistance from the TWDB

- Requests info on the amount of funding estimated for planning, design, permitting and acquisition vs. construction funding
- Estimated year that funding is needed

This information helps TWDB tailor funding to you, any info is helpful.

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Infrastructure Financing Analysis

Project Name	IFR Element Name	IFR Element Value	Year Of Need
ARWA Phase 2	Planning, Design, Permitting & Acquisition Funding	$19,600,000.00	2035
ARWA Phase 2	Construction Funding	$110,926,000.00	2037
ARWA Phase 2	Percent State Participation In Owning Excess Capacity	0%	
ARWA Phase 3	Planning, Design, Permitting & Acquisition Funding	$17,261,000.00	2055
ARWA Phase 3	Construction Funding	$59,297,000.00	2060
ARWA Phase 3	Percent State Participation In Owning Excess Capacity	0%	
ARWA/GBRA Shared Facilities Project	Planning, Design, Permitting & Acquisition Funding	$57,295,000.00	2019
ARWA/GBRA Shared Facilities Project	Construction Funding	$171,000,000.00	2020
ARWA/GBRA Shared Facilities Project	Percent State Participation In Owning Excess Capacity	0%	
Cibolo Valley LGC Carrizo Project	Planning, Design, Permitting & Acquisition Funding	$12,000,000.00	2026
Cibolo Valley LGC Carrizo Project	Construction Funding	$57,382,000.00	2031
Cibolo Valley LGC Carrizo Project	Percent State Participation In Owning Excess Capacity	0%	
El Oso Region L Groundwater Development	Planning, Design, Permitting & Acquisition Funding	$1,553,115.00	2021
El Oso Region L Groundwater Development	Construction Funding	$9,908,200.00	2021
El Oso Region L Groundwater Development	Percent State Participation In Owning Excess Capacity	0%	

As of July 28th, 2020: 12 respondents provided info on 36 projects
0-50% state funding anticipated

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Infrastructure Financing Analysis

Project Name	IFR Element Name	IFR Element Value	Year Of Need
Maxwell WSC - Trinity Wellfield	Planning, Design, Permitting & Acquisition Funding	$1,000,000.00	2023
Maxwell WSC - Trinity Wellfield	Construction Funding	$6,971,000.00	2021
Maxwell WSC - Trinity Wellfield	Percent State Participation In Owning Excess Capacity	0%	
Brackish Wilcox Groundwater For SSWSC	Planning, Design, Permitting & Acquisition Funding	$3,000,000.00	2040
Brackish Wilcox Groundwater For SSWSC	Construction Funding	$7,000,000.00	2040-2042
Brackish Wilcox Groundwater For SSWSC	Percent State Participation In Owning Excess Capacity	50%	
Brackish Wilcox Groundwater For SSLGC	Planning, Design, Permitting & Acquisition Funding	$10,000.00	2032
Brackish Wilcox Groundwater For SSLGC	Construction Funding	$59,651,000.00	2035
Brackish Wilcox Groundwater For SSLGC	Percent State Participation In Owning Excess Capacity	0%	
SSLGC Expanded Carrizo Project	Planning, Design, Permitting & Acquisition Funding	$8,000,000.00	2018
SSLGC Expanded Carrizo Project	Construction Funding	$58,500,000.00	2021
SSLGC Expanded Carrizo Project	Percent State Participation In Owning Excess Capacity	26%	
FE - CPS Direct Recycle Pipeline	Planning, Design, Permitting & Acquisition Funding	$8,897,250.00	2030
FE - CPS Direct Recycle Pipeline	Construction Funding	$26,691,750.00	2035
FE - CPS Direct Recycle Pipeline	Percent State Participation In Owning Excess Capacity	0%	

As of July 28th, 2020: 12 respondents provided info on 36 projects
0-50% state funding anticipated

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Infrastructure Financing Analysis

Project Name	IFR Element Name	IFR Element Value	Year Of Need
Maxwell WSC - Trinity Wellfield	Planning, Design, Permitting & Acquisition Funding	$1,000,000.00	2023
Maxwell WSC - Trinity Wellfield	Construction Funding	$6,971,000.00	2021
Maxwell WSC - Trinity Wellfield	Percent State Participation In Owning Excess Capacity	0%	
Brackish Wilcox Groundwater For SSWSC	Planning, Design, Permitting & Acquisition Funding	$3,000,000.00	2040
Brackish Wilcox Groundwater For SSWSC	Construction Funding	$7,000,000.00	2040-2042
Brackish Wilcox Groundwater For SSWSC	Percent State Participation In Owning Excess Capacity	50%	
Brackish Wilcox Groundwater For SSLGC	Planning, Design, Permitting & Acquisition Funding	$10,000.00	2032
Brackish Wilcox Groundwater For SSLGC	Construction Funding	$59,651,000.00	2035
Brackish Wilcox Groundwater For SSLGC	Percent State Participation In Owning Excess Capacity	0%	
SSLGC Expanded Carrizo Project	Planning, Design, Permitting & Acquisition Funding	$8,000,000.00	2018
SSLGC Expanded Carrizo Project	Construction Funding	$58,500,000.00	2021
SSLGC Expanded Carrizo Project	Percent State Participation In Owning Excess Capacity	26%	
County Line SUD Brackish Edwards Project	Planning, Design, Permitting & Acquisition Funding	N/A	2050
County Line SUD Brackish Edwards Project	Construction Funding	N/A	2050
County Line SUD Brackish Edwards Project	Percent State Participation In Owning Excess Capacity	N/A	

As of July 28th, 2020: 12 respondents provided info on 36 projects
0-50% state funding anticipated

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Infrastructure Financing Analysis

Project Name	IFR Element Name	IFR Element Value	Year Of Need
County Line Trinity Wellfield	Planning, Design, Permitting & Acquisition Funding	N/A	2050
County Line Trinity Wellfield	Construction Funding	N/A	2050
County Line Trinity Wellfield	Percent State Participation In Owning Excess Capacity	N/A	
Reuse - County Line SUD	Planning, Design, Permitting & Acquisition Funding	$200,000.00	2021
Reuse - County Line SUD	Construction Funding	$1,800,000.00	2022
Reuse - County Line SUD	Percent State Participation In Owning Excess Capacity	0%	
Arwa/GBRA Shared Facilities Project	Planning, Design, Permitting & Acquisition Funding	$41,504,000.00	2020
Arwa/GBRA Shared Facilities Project	Construction Funding	$83,008,000.00	2021
Arwa/GBRA Shared Facilities Project	Percent State Participation In Owning Excess Capacity	0%	
FE - GBRA Western Canyon WTP Expansion	Planning, Design, Permitting & Acquisition Funding	$7,984,333.30	2024
FE - GBRA Western Canyon WTP Expansion	Construction Funding	$15,968,666.70	2026
FE - GBRA Western Canyon WTP Expansion	Percent State Participation In Owning Excess Capacity	0%	
FE - Hays County Pipeline	Planning, Design, Permitting & Acquisition Funding	$8,495,333.00	2020
FE - Hays County Pipeline	Construction Funding	$16,990,667.00	2023
FE - Hays County Pipeline	Percent State Participation In Owning Excess Capacity	0%	

As of July 28th, 2020: 12 respondents provided info on 36 projects
0-50% state funding anticipated

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Infrastructure Financing Analysis

Project Name	IFR Element Name	IFR Element Value	Year Of Need
GBRA Lower Basin Storage	Planning, Design, Permitting & Acquisition Funding	$21,823,333.00	2020
GBRA Lower Basin Storage	Construction Funding	$43,646,667.00	2023
GBRA Lower Basin Storage	Percent State Participation In Owning Excess Capacity	0%	
GBRA MidBasin Water Supply Project	Planning, Design, Permitting & Acquisition Funding	$120,913,800.00	2020
GBRA MidBasin Water Supply Project	Construction Funding	$282,132,200.00	2023
GBRA MidBasin Water Supply Project	Percent State Participation In Owning Excess Capacity	0%	
GBRA New Appropriation (Lower Basin)	Planning, Design, Permitting & Acquisition Funding	$114,588,000.00	2021
GBRA New Appropriation (Lower Basin)	Construction Funding	$267,372,000.00	2024
GBRA New Appropriation (Lower Basin)	Percent State Participation In Owning Excess Capacity	0%	
GBRA Victoria County Steam Electric Project	Planning, Design, Permitting & Acquisition Funding	$35,178,000.00	2022
GBRA Victoria County Steam Electric Project	Construction Funding	$82,082,000.00	2024
GBRA Victoria County Steam Electric Project	Percent State Participation In Owning Excess Capacity	0%	
SAWS - Automated Meter Infrastructure	Planning, Design, Permitting & Acquisition Funding	$52,015,000.00	N/A
SAWS - Automated Meter Infrastructure	Construction Funding	$156,045,000.00	2021
SAWS - Automated Meter Infrastructure	Percent State Participation In Owning Excess Capacity	0%	

As of July 28th, 2020: 12 respondents provided info on 36 projects
0-50% state funding anticipated

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Infrastructure Financing Analysis

Project Name	IFR Element Name	IFR Element Value	Year Of Need
FE - SAWS Expanded ASR Treatment Plant	Planning, Design, Permitting & Acquisition Funding	$9,877,000.00	2026
FE - SAWS Expanded ASR Treatment Plant	Construction Funding	$29,631,000.00	2028
FE - SAWS Expanded ASR Treatment Plant	Percent State Participation In Owning Excess Capacity	0%	
FE - SAWS Western Integrated Pipeline (Phase 2)	Planning, Design, Permitting & Acquisition Funding	$38,424,171.00	N/A
FE - SAWS Western Integrated Pipeline (Phase 2)	Construction Funding	$74,614,829.00	2021
FE - SAWS Western Integrated Pipeline (Phase 2)	Percent State Participation In Owning Excess Capacity	0%	
Recycled Water Program - SAWS	Planning, Design, Permitting & Acquisition Funding	$45,937,300.00	2035
Recycled Water Program - SAWS	Construction Funding	$137,811,900.00	2038
Recycled Water Program - SAWS	Percent State Participation In Owning Excess Capacity	0%	
SAWS - Expanded Brackish Wilcox Project	Planning, Design, Permitting & Acquisition Funding	$180,791,250.00	2038
SAWS - Expanded Brackish Wilcox Project	Construction Funding	$542,373,750.00	2040
SAWS - Expanded Brackish Wilcox Project	Percent State Participation In Owning Excess Capacity	0%	
SAWS - Expanded Local Carrizo	Planning, Design, Permitting & Acquisition Funding	$8,693,650.00	2038
SAWS - Expanded Local Carrizo	Construction Funding	$16,145,350.00	2040
SAWS - Expanded Local Carrizo	Percent State Participation In Owning Excess Capacity	0%	

As of July 28th, 2020: 12 respondents provided info on 36 projects
0-50% state funding anticipated

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Infrastructure Financing Analysis

Project Name	IFR Element Name	IFR Element Value	Year Of Need
CRWA - Brackish Wilcox Groundwater	Planning, Design, Permitting & Acquisition Funding	$52,165,000.00	2030
CRWA - Brackish Wilcox Groundwater	Construction Funding	$125,779,000.00	2030
CRWA - Brackish Wilcox Groundwater	Percent State Participation In Owning Excess Capacity	0%	
CRWA Siesta Project	Planning, Design, Permitting & Acquisition Funding	$31,579,000.00	2040
CRWA Siesta Project	Construction Funding	$75,582,000.00	2040
CRWA Siesta Project	Percent State Participation In Owning Excess Capacity	0%	
CRWA Wells Ranch (Phase 3)	Planning, Design, Permitting & Acquisition Funding	$8,930,000.00	2030
CRWA Wells Ranch (Phase 3)	Construction Funding	$50,470,000.00	2030
CRWA Wells Ranch (Phase 3)	Percent State Participation In Owning Excess Capacity	0%	
FE - CRWA Expanded Lake Dunlap WTP	Planning, Design, Permitting & Acquisition Funding	$3,035,000.00	2030
FE - CRWA Expanded Lake Dunlap WTP	Construction Funding	$17,165,000.00	2030
FE - CRWA Expanded Lake Dunlap WTP	Percent State Participation In Owning Excess Capacity	0%	
FE - CRWA Hays Caldwell WTP Expansion	Planning, Design, Permitting & Acquisition Funding	$2,888,000.00	2020
FE - CRWA Hays Caldwell WTP Expansion	Construction Funding	$14,369,000.00	2020
FE - CRWA Hays Caldwell WTP Expansion	Percent State Participation In Owning Excess Capacity	0%	

As of July 28th, 2020: 12 respondents provided info on 36 projects
0-50% state funding anticipated

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Infrastructure Financing Analysis

Project Name	IFR Element Name	IFR Element Value	Year Of Need
FE - NBU Seguin Interconnect	Planning, Design, Permitting & Acquisition Funding	$0.00	2020
FE - NBU Seguin Interconnect	Construction Funding	$2,428,000.00	2020
FE - NBU Seguin Interconnect	Percent State Participation In Owning Excess Capacity	0%	
FE - NBU South WTP Expansion	Planning, Design, Permitting & Acquisition Funding	$0.00	2020
FE - NBU South WTP Expansion	Construction Funding	$27,701,000.00	2020
FE - NBU South WTP Expansion	Percent State Participation In Owning Excess Capacity	0%	
NBU - Trinity Development	Planning, Design, Permitting & Acquisition Funding	$0.00	2020
NBU - Trinity Development	Construction Funding	$19,155,000.00	2020
NBU - Trinity Development	Percent State Participation In Owning Excess Capacity	0%	
NBU - ASR	Planning, Design, Permitting & Acquisition Funding	$0.00	2020
NBU - ASR	Construction Funding	$39,198,000.00	2020
NBU - ASR	Percent State Participation In Owning Excess Capacity	0%	
Victoria ASR	Planning, Design, Permitting & Acquisition Funding	$21,100,000.00	2015
Victoria ASR	Construction Funding	$14,500,000.00	2020
Victoria ASR	Percent State Participation In Owning Excess Capacity	0%	

As of July 28th, 2020: 12 respondents provided info on 36 projects
0-50% state funding anticipated

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Infrastructure Financing Analysis

- Surveys were sent to 24 WUGs/Project Sponsors
- Surveys were accepted until July 27th, 2020 in order to be reviewed and summarized in the RWP

This information helps TWDB tailor funding to you, any info is helpful.

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RWPG Direction Requested

What role would Region L propose for the state to have in financing projects identified in the plan?

Give particular attention to proposed increases in the level of state participation in funding for regional projects to meet needs beyond the reasonable financing capability of local governments, regional authorities, and other political subdivisions involved in building water infrastructure.

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13. Presentation of Implementation Survey, Chapter 11

Agenda Item 13: Implementation Survey

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Implementation Survey

The Implementation Survey is used to gather information about how projects that were recommended in the 2016 RWP have progressed:

- Has the sponsor taken action, if so provide date
- What level of implementation
- If not implemented, why – describe impediments to implementation
- Estimated yield
- Funding received, expected costs
- If not yet implemented, in the 2021 Plan?

Summary of Implementation Survey is included in Chapter 11.1 of the RWP

Helps to understand what projects are being implemented and where there are impediments.

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14. Discussion and Appropriate Action Regarding Project Prioritization and Approach

Agenda Item 14: Project Prioritization

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Project Prioritization - Overview

- Purpose
- Relationship to SWIFT funding
- How RWPG Prioritization Rolls into State Prioritization
- Past Region L Prioritization in the 2011 and 2016 Cycle
- Project Prioritization Approach for the 2021 Cycle
  - *Request RWPG guidance on one Uniform Standard*
- Example Project Prioritization for the 2021 Cycle
- Current status of the Project Prioritization process

Purpose

- RWPG is tasked with ranking recommended projects in their region
  - RWPG applies Uniform Standards provided by TWDB
    1. Decade of Need for Project
    2. Project Feasibility
    3. Project Viability
    4. Project Sustainability
    5. Project Cost Effectiveness
- Prioritization is submitted to TWDB **with Final Plan in October 2020**
- Regional prioritization is consolidated into state prioritization with the 2022 State Water Plan

Relationship to SWIFT Funding

State Water Implementation Fund for Texas (SWIFT)

- Created by Texas Legislature to provide financial assistance for projects in the state water plan
  - Low-interest loans, extended repayment terms, deferral, and incremental repurchase terms
- Eligible projects are recommended WMS projects
  - Sponsors must apply for SWIFT funding
- TWDB reviews applications and prioritization
  - Establishes funds available by category, structure of financing, and the terms of any subsidy

How RWPG Prioritization Rolls into State Prioritization

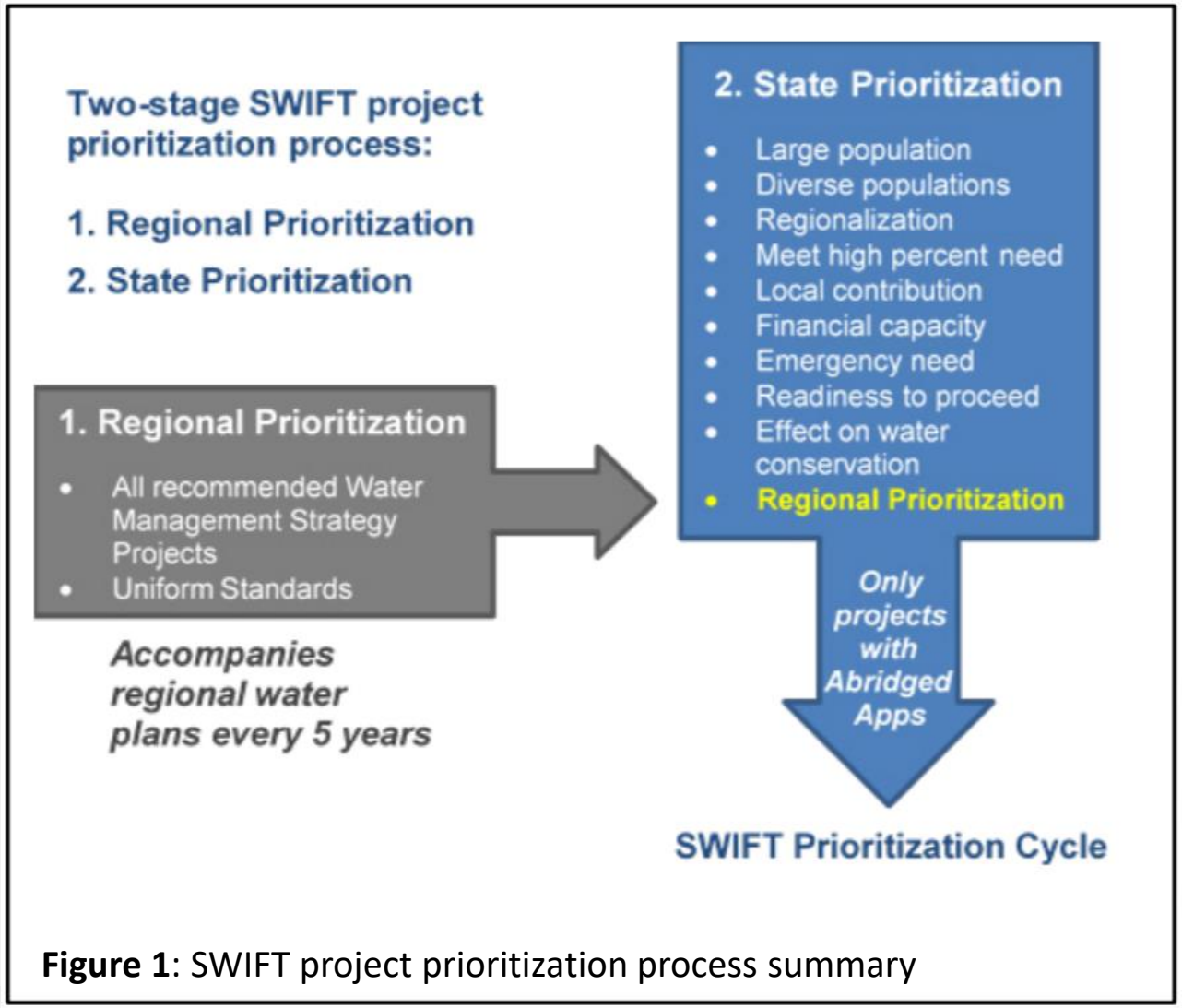

Figure 1: SWIFT project prioritization process summary

Source: https://www.twdb.texas.gov/waterplanning/rwp/education/SWIFTPrioritization.pdf

Past Region L Prioritization in Prior Cycles

2011 Region L RWP

- 2016 RWPG created the *Water Management Strategy Workgroup* to submit prioritization for the 2011 recommended WMS projects
- Submitted "Summary Report and 2011 Regional Water Plan Prioritization" document
  - Projects organized by maximum and average scores, and Interpretive Assumptions for Uniform Standards application
- Project prioritization for the 2011 RWP completed during 2016 Cycle

2016 Region L RWP

- 2016 RWPG updated above assumptions for 2016 RWP
- Project prioritization submitted along with Final 2016 RWP

Project Prioritization Approach for the 2021 Cycle

1. Assess projects listed in Project Prioritization sheet generated from the TWDB database
   - Projects based on WMS recommended in the 2021 IPP
   - List of projects will change once DB22 is finalized
2. Follow TWDB Project Prioritization guidance (updated Nov 2018)
3. Use 2021 Region L RWP Prioritization Approach updated from 2016 cycle as basis
4. Request updated information from WMS sponsors
5. Submit along with Final Plan in October 2020

**** RWPG direction is requested on one Uniform Standards interpretation***

Criteria 2 – Project Feasibility

Uniform Standard 2B *- If necessary, does the sponsor hold necessary legal rights, water rights and/or contracts to use the water that this project would require?*

0	Legal rights, water rights and/or contract application not submitted
2	Application submitted
3	Application is administratively complete
5	Legal rights, water rights and/or contracts obtained or not needed

Current RWPG Notes, Assumptions, and Comments

- Water rights and/or contracts not needed for Advanced Municipal Conservation (5)
- Potable and Non-Potable Reuse are assumed to already have water rights obtained or are not needed (5)
- Expansion of surface WTP are assumed to require permits, and have been applied for in 2020 and not applied for in future decades (0) unless known otherwise.
- Transmission and distribution projects (interconnects, pipelines) are assumed to not require water rights (5)
- If permits are not described in the “Description” or “Implementation Considerations”, the project is assumed to not have necessary rights, permits, or contracts (0)
- **A permit for part of the planned project firm yield may receive a (5)**

Project Prioritization – EXAMPLE

Projects Alphabetized

					Criteria 1 - Decade of Need for Project			
		MAXIMUM SCORES --->			10	10	20	400
Project Name	Project Sponsor Entity	Capital Cost	Rural/Agricultural Conservation?	Conservation/Reuse?	Uniform Standard 1A - What is the decade the RWP shows the project comes online? [2070 = 0 points; 2060 = 2; 2050 = 4; 2040 = 6; 2030 = 8; 2020 = 10]	Uniform Standard 1B - In what decade is initial funding needed? [2070 = 0 points; 2060 = 2; 2050 = 4; 2040 = 6; 2030 = 8; 2020 = 10]	Criteria 1 Total Score	*Weighted Criteria 1 Total*
ARWA/GBRA Phase 1 (ARWA)	ARWA	$ 228,365,000			8	10	18	360
ARWA/GBRA Phase 1 (GBRA)	GBRA	$ 124,512,000			8	10	18	360
ARWA Phase 2	ARWA	$ 130,526,000			6	8	14	280
Brackish Wilcox Groundwater for SSLGC	SSLGC	$ 31,941,000			6	8	14	280
CRWA Wells Ranch (Phase 3)	CRWA	$ 23,924,000			10	10	20	400
Local Groundwater - El Oso WSC	EL OSO WSC	$ 809,000			10	10	20	400
Fair Oaks Ranch Non-Potable Reuse Project	FAIR OAKS RANCH	$ 3,159,000		X	8	10	18	360
NBU Trinity Development Project	NEW BRAUNFELS	$ 19,155,000			8	10	18	360
SAWS Recycled Water Program	SAWS	$ 183,749,200		X	8	10	18	360
Victoria ASR Project	VICTORIA	$ 37,982,000			10	10	20	400

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Criteria 1: When is the project & funding needed?

Project Prioritization - EXAMPLE

Projects Alphabetized

			Criteria 2 - Project Feasibility					
MAXIMUM SCORES --->			5	5	10	5	25	100
Project Name	Project Sponsor Entity	Capital Cost	**Uniform Standard 2A** - What supporting data is available to show that the quantity of water needed is available? [Models suggest insufficient quantities of water or no modeling performed = 0 points; models suggest sufficient quantity of water = 3; Field tests, measurements, or project specific studies confirm sufficient quantities of water = 5]	**Uniform Standard 2B** - If necessary, does the sponsor hold necessary legal rights, water rights and/or contracts to use the water that this project would require? [Legal rights, water rights and/or contract application not submitted = 0 points; application submitted = 2; application is administratively complete = 3; legal rights, water rights and/or contracts obtained or not needed = 5]	**Uniform Standard 2C** - What level of engineering and/or planning has been accomplished for this project? [Project idea is outlined in RWP = 1 point; feasibility studies initiated = 2; feasibility studies completed = 3; conceptual design initiated = 4; conceptual design completed = 5; preliminary engineering report initiated = 6; preliminary engineering report completed = 7; preliminary design initiated = 8; preliminary design completed = 9; final design complete = 10]	**Uniform Standard 2D** - Has the project sponsor requested in writing that the project be included in the Regional Water Plan? [No = 0 points; yes = 5]	Criteria 2 Total Score	*Weighted Criteria 2 Total*
ARWA/GBRA Phase 1 (ARWA)	ARWA	$ 228,365,000	3	5	9	5	22	88
ARWA/GBRA Phase 1 (GBRA)	GBRA	$ 124,512,000	5	5	9	5	24	96
ARWA Phase 2	ARWA	$ 130,526,000	3	0	3	5	11	44
Brackish Wilcox Groundwater for SSLGC	SSLGC	$ 31,941,000	3	5	5	5	18	72
CRWA Wells Ranch (Phase 3)	CRWA	$ 23,924,000	5	5	5	5	20	80
Local Groundwater - El Oso WSC	EL OSO WSC	$ 809,000	3	0	1	0	4	16
Fair Oaks Ranch Non-Potable Reuse Project	FAIR OAKS RANCH	$ 3,159,000	3	5	5	5	18	72
NBU Trinity Development Project	NEW BRAUNFELS	$ 19,155,000	3	0	3	5	11	44
SAWS Recycled Water Program	SAWS	$ 183,749,200	3	5	1	5	14	56
Victoria ASR Project	VICTORIA	$ 37,982,000	5	5	5	5	20	80

Criteria 2: How much has feasibility been looked at (permits, water rights, engineering, sponsor involvement)?

Project Prioritization - EXAMPLE

Projects Alphabetized

			Criteria 3 - Project Viability			
	MAXIMUM SCORES --->		100	10	100	10
Project Name	**Project Sponsor Entity**	**Capital Cost**	**Uniform Standard 3A** - In the decade the project supply comes online, what is the % of the WUG's (or WUGs') needs satisfied by this project? *[Calculation is based on the needs of all WUGs receiving water from the project.]*	***Converted Needs-based score for Uniform Standard 3A***	**Uniform Standard 3B** - In the final decade of the planning period, what is the % of the WUG's (or WUGs') needs satisfied by this project? *[Calculation is based on the needs of all WUGs receiving water from the project.]*	***Converted Needs-based score for Uniform Standard 3B***
ARWA/GBRA Phase 1 (ARWA)	ARWA	$ 228,365,000	100	10.00	81	8.07
ARWA/GBRA Phase 1 (GBRA)	GBRA	$ 124,512,000	0	0.00	55	5.52
ARWA Phase 2	ARWA	$ 130,526,000	100	10.00	100	10.00
Brackish Wilcox Groundwater for SSLGC	SSLGC	$ 31,941,000	0	0.00	63	6.28
CRWA Wells Ranch (Phase 3)	CRWA	$ 23,924,000	88	8.84	64	6.43
Local Groundwater - El Oso WSC	EL OSO WSC	$ 809,000	35	3.46	41	4.10
Fair Oaks Ranch Non-Potable Reuse Project	FAIR OAKS RANCH	$ 3,159,000	92	9.21	15	1.54
NBU Trinity Development Project	NEW BRAUNFELS	$ 19,155,000	82	8.24	57	5.74
SAWS Recycled Water Program	SAWS	$ 183,749,200	32	3.24	0	0.00
Victoria ASR Project	VICTORIA	$ 37,982,000	64	6.38	80	7.97

Criteria 3: How viable a water supply does the project provide?

Project Prioritization - EXAMPLE

Projects Alphabetized			**Criteria 3 - Project Viability**			
	MAXIMUM SCORES --->		**5**	**5**	**30.00**	**250.00**
Project Name	**Project Sponsor Entity**	**Capital Cost**	**Uniform Standard 3C** - Is this project the only economically feasible source of new supply for the WUG, other than conservation? *[No = 0 points; Yes = 5]*	**Uniform Standard 3D** - Does this project serve multiple WUGs? *[No = 0 points; Yes = 5]*	**Criteria 3 Total Score**	***Weighted Criteria 3 Total***
ARWA/GBRA Phase 1 (ARWA)	ARWA	$ 228,365,000	0	5	23.07	192.21
ARWA/GBRA Phase 1 (GBRA)	GBRA	$ 124,512,000	0	5	10.52	87.67
ARWA Phase 2	ARWA	$ 130,526,000	0	5	25.00	208.33
Brackish Wilcox Groundwater for SSLGC	SSLGC	$ 31,941,000	5	0	11.28	94.00
CRWA Wells Ranch (Phase 3)	CRWA	$ 23,924,000	0	0	15.27	127.23
Local Groundwater - El Oso WSC	EL OSO WSC	$ 809,000	0	0	7.55	62.94
Fair Oaks Ranch Non-Potable Reuse Project	FAIR OAKS RANCH	$ 3,159,000	0	0	10.75	89.56
NBU Trinity Development Project	NEW BRAUNFELS	$ 19,155,000	0	5	18.98	158.14
SAWS Recycled Water Program	SAWS	$ 183,749,200	5	0	8.24	68.69
Victoria ASR Project	VICTORIA	$ 37,982,000	0	5	19.35	161.23

Criteria 3: How viable a water supply does the project provide?

Project Prioritization - EXAMPLE

Projects Alphabetized

			Criteria 4 - Project Sustainability			
		MAXIMUM SCORES --->	10	5	15	150
Project Name	**Project Sponsor Entity**	**Capital Cost**	**Uniform Standard 4A** - Over what period of time is this project expected to provide water (regardless of the planning period)? *[Less than or equal to 20 yrs = 5 points; greater than 20 yrs = 10]*	**Uniform Standard 4B** - Does the volume of water supplied by the project change over the regional water planning period? *[Decreases = 0 points; no change = 3; increases = 5]*	**Criteria 4 Total Score**	***Weighted Criteria 4 Total***
ARWA/GBRA Phase 1 (ARWA)	ARWA	$ 228,365,000	10	3	13	130
ARWA/GBRA Phase 1 (GBRA)	GBRA	$ 124,512,000	10	3	13	130
ARWA Phase 2	ARWA	$ 130,526,000	10	3	13	130
Brackish Wilcox Groundwater for SSLGC	SSLGC	$ 31,941,000	10	3	13	130
CRWA Wells Ranch (Phase 3)	CRWA	$ 23,924,000	10	3	13	130
Local Groundwater - El Oso WSC	EL OSO WSC	$ 809,000	10	5	15	150
Fair Oaks Ranch Non-Potable Reuse Project	FAIR OAKS RANCH	$ 3,159,000	10	3	13	130
NBU Trinity Development Project	NEW BRAUNFELS	$ 19,155,000	10	3	13	130
SAWS Recycled Water Program	SAWS	$ 183,749,200	10	3	13	130
Victoria ASR Project	VICTORIA	$ 37,982,000	10	5	15	150

Criteria 4: How sustainable is the project?

Project Prioritization - EXAMPLE

Projects Alphabetized

			Criteria 5 - Project Cost Effectiveness		FINAL SCORE FOR PROJECT
MAXIMUM SCORES --->			5	100	1000.00
Project Name	Project Sponsor Entity	Capital Cost	**Uniform Standard 5A** - What is the expected unit cost of water supplied by this project compared to the median unit cost of all other recommended strategies in the region's current RWP? (Project's Unit Cost divided by the median project's unit cost) [200% or greater than median = 0 points; 150% to 199% = 1; 101% to 149% = 2; 100% = 3; 51% to 99% = 4; 0% to 50% = 5]	*Weighted Criteria 5 Total*	
ARWA/GBRA Phase 1 (ARWA)	ARWA	$ 228,365,000	2	40	810.21
ARWA/GBRA Phase 1 (GBRA)	GBRA	$ 124,512,000	2	40	713.67
ARWA Phase 2	ARWA	$ 130,526,000	4	80	742.33
Brackish Wilcox Groundwater for SSLGC	SSLGC	$ 31,941,000	5	100	748.00
CRWA Wells Ranch (Phase 3)	CRWA	$ 23,924,000	5	100	851.23
Local Groundwater - El Oso WSC	EL OSO WSC	$ 809,000	5	100	748.94
Fair Oaks Ranch Non-Potable Reuse Project	FAIR OAKS RANCH	$ 3,159,000	4	80	743.56
NBU Trinity Development Project	NEW BRAUNFELS	$ 19,155,000	4	80	703.56
SAWS Recycled Water Program	SAWS	$ 183,749,200	5	100	728.94
Victoria ASR Project	VICTORIA	$ 37,982,000	3	60	807.23

Criteria 5: How cost effective is the project?

Project Prioritization - EXAMPLE

Projects by Final Score Ranking – High to Low

			Criteria 5 - Project Cost Effectiveness		FINAL SCORE FOR PROJECT
		MAXIMUM SCORES --->	5	100	1000.00
Project Name	**Project Sponsor Entity**	**Capital Cost**	**Uniform Standard 5A** - What is the expected unit cost of water supplied by this project compared to the median unit cost of all other recommended strategies in the region's current RWP? (Project's Unit Cost divided by the median project's unit cost) [200% or greater than median = 0 points; 150% to 199% = 1; 101% to 149% = 2; 100% = 3; 51% to 99% = 4; 0% to 50% = 5]	***Weighted Criteria 5 Total***	
CRWA Wells Ranch (Phase 3)	CRWA	$ 23,924,000	5	100	851.23
ARWA/GBRA Phase 1 (ARWA)	ARWA	$ 228,365,000	2	40	810.21
Victoria ASR Project	VICTORIA	$ 37,982,000	3	60	807.23
Local Groundwater - El Oso WSC	EL OSO WSC	$ 809,000	5	100	748.94
Brackish Wilcox Groundwater for SSLGC	SSLGC	$ 31,941,000	5	100	748.00
Fair Oaks Ranch Non-Potable Reuse Project	FAIR OAKS RANCH	$ 3,159,000	4	80	743.56
ARWA Phase 2	ARWA	$ 130,526,000	4	80	742.33
SAWS Recycled Water Program	SAWS	$ 183,749,200	5	100	728.94
ARWA/GBRA Phase 1 (GBRA)	GBRA	$ 124,512,000	2	40	713.67
NBU Trinity Development Project	NEW BRAUNFELS	$ 19,155,000	4	80	703.56

Criteria 5: How cost effective is the project?

Status of Project Prioritization Status

- Some projects are being revised based on survey feedback
- Some projects are being revised based on updated TWDB guidance
- Updated list of projects will be prioritized according to the guidelines and assumptions, provided prior to next meeting

** Sponsors, please confirm or revise Prioritization RFIs*

RWPG Direction Requested

Follow the **DRAFT 2021 South Central Texas (Region L) RWP Prioritization Approach**

Modify the **DRAFT 2021 South Central Texas (Region L) RWP Prioritization Approach**

Draft 7/22/2020

Recommended Guidance to Ensure Uniformity of Final Prioritization Submissions

The following guidance is being provided to regional water planning group (RWPG) stakeholders at the request of the Stakeholder Committee to assist RWPGs in achieving an acceptable degree of uniformity in the application of the uniform standards adopted by the stakeholder committee on November 28, 2018 and to be approved by TWDB at a future date. This guidance was developed based on: a generic interpretation of the language of the uniform standards; the limits of the information contained within the regional water plans; the time and resources available to the RWPGs; clarifications made to the uniform standards by the Stakeholder Committee on November 28, 2018; and with an acknowledgement of the flexible nature of the prioritization process moving forward. This guidance is strictly limited to recommending how the existing uniform standards should be applied within the confines of their existing scope as most recently adopted by the Stakeholder Committee. **This guidance does not attempt to address any overall concerns about the uniform standards themselves or matters not currently taken into consideration by the uniform standards.**

This guidance is subject to the Stakeholder Committee's discretion. Coordinate with your Stakeholder Committee representative before applying these guidelines.

RECOMMENDED GUIDANCE FOR APPLYING THE UNIFORM STANDARDS

1. **GENERAL - Grouping Projects for Scoring**
   Guidance: *(As indicated in previous guidance provided on October 9, 2013)*
   Projects cannot be bundled if they are considered separate water management strategy projects (WMSPs) and are presented as such in the regional plans and will or can be implemented separately. For example, two groundwater well projects that would serve two different entities and are entirely separate physically shouldn't be prioritized together. **The reason for this is that each project could be built independently and there would not be a single borrower to implement those two projects.** Moreover, with separate entities, the projects may receive different scoring under the criteria specified by House Bill (HB) 4 (83rd Leg. Session) due to entity-specific circumstances (e.g., decade of need, availability of water rights, cost-effectiveness, taking into consideration the expected unit cost). In instances when it is appropriate to bundle projects for scoring, please leave all the associated project line items in place (with their shared prioritization scores) and clearly note in the final submission where this occurred and which projects were related to each other.

2. **GENERAL – Tie-breakers**
   Background: There are likely to be some ties in scoring projects at the regional level.
   Guidance: In order to ensure uniformity in applying the uniform standards across all 16 regions, RWPGs should not introduce new variability into the scoring of projects by developing regional tie-breaking criteria. Ties at the regional level may not remain after a state-level prioritization.

3. **GENERAL – SWIFT funding category "flags"**
   Background: The Stakeholder Committee included flags in the Uniform Standards document to allow RWPGs to indicate potential funding categories.
   Guidance: These labels will not affect funding opportunities or priorities of projects requesting funding from TWDB. TWDB will determine what categories of funding each

project will qualify for at the time that funding applications are submitted, regardless of these flags.

4. **Uniform Standard 1A -** *What is the decade the RWP shows the project comes online?*
   Background: (The choices for response to standard 1A include only the planning decades 2020-2070.)
   Guidance: All the regional water plans present water supply information in the common form of the 2020-2070 planning decades. The online date of a project is the earliest planning decade presented in the published regional water plan in which there is a water supply volume shown, regardless of the date of water needs of any participants. A project that has zero supply shown for the 2020 decade, for example, could not be considered online in 2020 since there is not a supply volume in the 2020 decade. (Note that the online date of a project cannot be changed from what is in the regional water plan without a formal regional water plan amendment.)

5. **Uniform Standard 1B -** *In what decade is initial funding needed?*
   Background: There were questions about how to determine the score if there was no response to the Infrastructure Financing Survey or other information in the published plan regarding a date that initial funding will be needed. Several standards (including 1B, 2B and 2C) include a footnote indicated by a double asterisk that states: *"** indicates that additional data may have to be collected by RWPG in order to score projects."*
   Guidance: The footnote (**) suggests that not all the uniform standard scores would be based on water plan information obtained at a single, common point in time (e.g., from 2021). Data sources for this score should be limited as much as possible to the published plan and Infrastructure Financing Survey responses (survey data and forms provided by TWDB). In the absence of information directly related to the 2021 regional water plans, the RWPG should seek other published information and, in the absence of published information, the RWPG should apply a reasonable and consistent assumption for all project types. In any case, the decade that funding is needed should never be indicated later than the decade the project comes online in the plan.

6. **Uniform Standards (2A-C):**
   2A - *What supporting data is available to show that the quantity of water needed is available?*
   2B - *If necessary, does the sponsor hold necessary legal rights, water rights and/or contracts to use the water that this project would require?*
   2C - *What level of engineering and/or planning has been accomplished for this project? (Points based on progress on scientific data collection, stage of studies and design)*
   Background: There were questions about whether the scoring had to be based on conditions at the time of the plan (adoption) or current conditions. Several uniform standards (including 2B and 2C) include a footnote indicated by a double asterisk that states: *"** indicates that additional data may have to be collected by RWPG in order to score projects."*
   Guidance: The addition of a new project through an amendment, for example, will likely require scoring the additional project based on currently available information. Therefore, we recommend currently available information whenever possible. Because the regional project prioritizations are not considered part of the regional water plans, they may be updated by the RWPGs in the future (e.g., if the uniform standards are modified). The effort and frequency with which RWPGs acquire updated information and update their regional water plan prioritizations is for each RWPG to determine. Any such updates to regional

water plan prioritizations would be subject to RWPG approval. Uniform standard 2A specifically was clarified by the Stakeholder Committee on November 28, 2018 to include project specific studies as a measure for sufficient quantities of water in the score of five points awarded. This clarification was to address concern that surface water projects could only be modeled and were thus limited to a maximum score of three points.

7. **Uniform Standard 2D -** *Has the project sponsor requested that the project be included in the Regional Water Plan?*
   Guidance: Clarification was provided that project sponsors providing written requests during any cycle of regional water plan would be scored as "yes".

8. **Uniform Standards (3A and B):**
   3A - *In the decade the project supply comes online, what is the % of the WUG's (or WUGs') needs satisfied by this project?*
   3B - *In the final decade of the planning period, what is the % of the WUG's (or WUGs') needs satisfied by this project?*
   Background: The basis for obtaining points in these standards is meeting a percentage of identified water needs in the plans.
   Guidance:
   - If the entities served by a strategy in the plan have no needs in a decade of interest, that strategy would not be meeting any water needs and should therefore score zero points.
   - County-wide water user groups are considered a single water user group for the purpose of applying this standard.
   - RWPGs will need to perform an additional assessment to estimate the volume of supply from recommended projects. This may include but is not limited to reviewing the water management strategy volumes related to the project (data provided by TWDB).

9. **Uniform Standard 3C -** *Is this project the only economically feasible source of new supply for the WUG, other than conservation?*
   Guidance:
   - Since this particular uniform standard developed by the stakeholder committee does not directly consider conservation for scoring under this criteria, conservation would always score zero points based on the language.
   - For projects that are the only economically feasible strategy other than conservation *for at least one of the WUGs served by the project* (in the case of a project sponsored by a wholesale water supplier and that serves multiple WUGs) it should score five points.

10. **Uniform Standard 3D** - *Does the project serve multiple WUGs?*
    Guidance:
    - A wholesale water provider project will only score 5 points if the water plan data indicates that multiple water user groups rely on the project.
    - County-wide water user groups are considered a single water user group for the purpose of applying this standard.
    - Water user groups split by river basin and/or regional water planning area are considered a single water user for the purpose of applying this standard.

11. **Uniform Standard 4B -** *Does the volume of water supplied by the project change over the regional water planning period?*
    Guidance: Standard applies only to the associated "regional water planning period" (i.e., 2020 to 2070)

12. **Uniform Standard 5A -** *What is the expected unit cost of water supplied by this project compared to the median unit cost of all other recommended strategies in the region's current RWP? (Project's Unit Cost divided by the median project's unit cost)*
    Background: There were questions about a) whether strategies with zero unit costs should be included in the calculation, and b) which decade should be used as the basis for the calculation when determining the cost of the project relative to the median unit cost of all the recommended strategies.
    Guidance:
    - TWDB's Regional Water Planning rules have been revised since the development of the Uniform Standards such that projects are required to have a non-zero capital cost. Therefore, there should not be any projects with zero unit costs.
    - The unit cost should be calculated using the first decade online unit cost of the project of interest relative to the median of the first decade online unit costs of all recommended strategies.

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ENERGY WATER INFORMATION GOVERNMENT

DRAFT 2021 South Central Texas (Region L) RWP Prioritization Approach

The 2021 South Central Texas (Region L) Regional Water Planning Group (SCTRWPG) is charged with prioritizing water management strategy (WMS) projects included in the 2021 South Central Texas Regional Water Plan. The following summarizes the approach and assumptions used for prioritizing projects in the 2021 Region L Regional Water Plan.

APPROACH

The approach uses the following sources:

1. List of WMS projects provided by the Texas Water Development Board (TWDB), which is directly sourced from the TWDB database (DB22) list of WMS projects for which there are non-zero capital costs;
2. TWDB Project Prioritization guidance (updated Nov 2018);
3. Consolidation of the 2016 and 2011 Regional Water Plan methodologies; and
4. Project sponsor updates.

ASSUMPTIONS

(TWDB indicated that these set-asides (the Rural/Ag and Reuse/Conservation), are not clearly defined yet; they will apply the criteria when fully developed.)

Rural/Agricultural Conservation

- Do not flag if the WMS is not a conservation-based project

Reuse/conservation Projects

- Advanced municipal conservation
- Direct potable and non-potable reuse

Criteria 1A & 1B

A. What is the decade the RWP shows the project comes online?
B. In what decade is initial funding needed?

- 1A is based on the first decade of supply indicated for the WMS in DB22 regardless if multiple WUGs are served in different decades
- 1B If no IFR response is available, use one (1) decade prior to the decade at which the project comes online.

Criteria 2A

What supporting data is available to show that the quantity of water needed is available?

0 Models suggest insufficient quantities of water or no modeling has been performed
3 Models suggest sufficient quantity of water
5 Field tests and measurements confirm sufficient quantities of water

- Advanced municipal conservation includes toilet, showerhead, and aerator retrofits, clothes washer rebates, irrigation water audits, rainwater harvesting and rain barrels, and commercial general rebate. These are measureable, known means toward water conservation, so the water is said to be available. (5)
- New groundwater wells (fresh or brackish) are assumed to only have modeling done (3), unless it is known that test/monitoring wells have been drilled.
- Expansion of groundwater wells assumes that monitor well data is available. (5)
- Direct reuse (both potable and non-potable) WMS have been developed with field data supporting drought year firm yield (5)
- All weirs and reservoirs are assumed to have field tested availability data (5)
- Distribution and transmission projects that provide either measured loss reduction or supplies to new end users are assumed to be field tested (5)
- New/Expanded surface water treatment plant yields are based on either existing supplies (limited by treatment capacity) or include purchase of converted water rights (5)

Criteria 2B

If necessary, does the sponsor hold necessary legal rights, water rights and/or contracts to use the water that this project would require?

0 legal rights, water rights and/or contract application not submitted
2 application submitted
3 application is administratively complete
5 legal rights, water rights and/or contracts obtained or not needed

- Water rights and/or contracts not needed for Advanced Municipal Conservation (5)
- Potable and Non-Potable Reuse are assumed to already have water rights obtained or are not needed (5)
- Expansion of surface WTP are assumed to require permits, and have been applied for in 2020 and not applied for in future decades (0) unless known otherwise.
- Transmission and distribution projects (interconnects, pipelines) are assumed to not require water rights (5)
- If permits are not described in the “Description” or “Implementation Considerations”, the project is assumed to not have necessary rights, permits, or contracts (0)
- A permit for part of the planned project firm yield may receive a (5)

Criteria 2C

What level of engineering and/or planning has been accomplished for this project? (Points based on progress on scientific data collection, stage of studies and design)

1	Project idea is outlined in Regional Plan.	6	Preliminary engineering report initiated.
2	Feasibility studies initiated.	7	Preliminary engineering report completed.
3	Feasibility studies completed.	8	Preliminary design initiated.
4	Conceptual design initiated.	9	Preliminary design completed.
5	Conceptual design completed.	10	Final design complete.

- Advanced municipal conservation assumed to be only outlined in the regional plan (1) unless specific studies were submitted (5)
- Assuming the preliminary engineering report is completed (7) for all of the distribution and transmission, storage, surface water treatment projects, groundwater wells and treatment that were submitted with sufficient detail to be included.
- Preliminary engineering report completed for all non-potable reuse projects submitted (7)
- Conceptual design completed for all submitted potable reuse projects (5)
- Brackish Groundwater Desalination submitted (5) conceptual design completed, BGD developed (1)
- Expand existing ground water wells – assume feasibility studies initiated, 2pts (preliminary costs in RWP)

Criteria 2D

Has the project sponsor requested in writing that the project be included in the Regional Water Plan? [No = 0 points; yes = 5]

Criteria 3A & 3B

In the decade the project supply comes online/final decade of planning, what is the % of the WUG's (or WUGs') needs satisfied by this project? [Calculation is based on the needs of all WUGs receiving water from the project.]

- Entities with 0 needs when project is implemented receive (0) for 3A & 3B because project would not be meeting any needs
- 3A and 3B are calculated using the volume of the WMS related to the project (when the project is a component of a WMS)
- 3A and 3B: If % of needs satisfied is above 100%, then the entered value is 100

Criteria 3C

Is this project the only economically feasible source of new supply for the WUG, other than conservation?

0	no
5	yes

- Entities with only conservation strategies were given (0) points.

Criteria 3D

Does the project serve multiple WUGs?

- All projects serving multiple WUGs are given 5 pts

Criteria 4A

Over what period of time is this project expected to provide water (regardless of the planning period)?

5 less than or equal to 20 years

10 greater than 20 years

- Unless a project is temporary in nature and ends in a specific decade (e.g. Drought Management), assume the project continues on (e.g. after 2070)
- 5-year groundwater production permits or other short-term source water contracts and leases are assumed to be renewed for more than 20 years

Criteria 4B

Does the volume of water supplied by the project change over the regional water planning period?

0 decreases

3 no change

5 increases

- If the water supply for a project increase and decreases, use the overall trend from decade of implementation to last decade of supply (or last decade of planning horizon)

- Focus on sustainability of project, not phased implementations
  - If a project is phased in the same WMS, then the volume of water supplied is “no change” (3)
  - If a WMS is phased in separate WMS (e.g. ARWA and GBRA Phased projects), assess those phases separately

Criteria 5

What is the expected unit cost of water supplied by this project compared to the median unit cost of all other recommended strategies in the region's current RWP? (Project's Unit Cost divided by the median project's unit cost)

0 200% or greater than median

1 150% to 199% of median

2 101% to 149% of median

3 100% of median

4 51% to 99% of median

5 0% to 50% of median

- O&M COST METHOD: Median unit cost based on **complete** unit costs (debt service on capital, O&M) calculated and compared with complete unit cost at the decade of implementation for each strategy.
- Median unit cost determined by non-zero unit costs (e.g. Facilities Expansion projects are not used in this development because they do not provide new water)

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DATA IS NOT FINALIZED - DATA IS NOT FINALIZED

Indicates ongoing discussion with TWDB for Facilities Expansion WMS to resolve supply data

					Criteria 1 - Decade of Need for Project			
				MAX POINTS	**10**	**10**	**20**	**400**
Project Name	**Project Sponsor Entity**	**Capital Cost**	**Rural/Agricultural Conservation?**	**Conservation/Reuse?**	**Uniform Standard 1A** - What is the decade the RWP shows the project comes online? *[2070 = 0 points; 2060 = 2; 2050 = 4; 2040 = 6; 2030 = 8; 2020 = 10]*	**Uniform Standard 1B** - In what decade is initial funding needed? *[2070 = 0 points; 2060 = 2; 2050 = 4; 2040 = 6; 2030 = 8; 2020 = 10]*	**Criteria 1 Total Score**	***Weighted Criteria 1 Total***
Advanced Water Conservation - SAWS AMI Project	SAWS	$ 208,061,401			10	10	20	400
ARWA Phase 2	ARWA	$ 130,526,000			6	8	14	280
ARWA Phase 3	ARWA	$ 73,558,000		X	2	4	6	120
ARWA/GBRA Phase 1	ARWA	$ 228,365,000			10	10	20	400
ARWA/GBRA Phase 1	GBRA	$ 124,512,000			10	10	20	400
Count Line SUD Trinity Wellfield Project	COUNTY LINE SUD	$ 11,761,000			4	6	10	200
County Line SUD Brackish Edwards Project	COUNTY LINE SUD	$ 13,602,000			4	6	10	200
CRWA Brackish Wilcox Groundwater	CRWA	$ 177,944,000			8	10	18	360
CRWA Siesta Project	CRWA	$ 107,161		X	2	4	6	120
CRWA Wells Ranch Project (Phase 3)	CRWA	$ 23,924,000			10	10	20	400
CVLGC Carrizo Project	CVLGC	$ 130,277,000			8	10	18	360
Facilities Expansion - Atascosa Rural WSC Interconnect	ATASCOSA RURAL WSC	$ 3,623,000			10	10	20	400
Facilities Expansion - CPS Direct Recycle Pipeline	SAWS	$ 35,589,000			8	10	18	360
Facilities Expansion - CRWA Hays Caldwell WTP Expansion	CRWA	$ 11,362,000			10	10	20	400
Facilities Expansion - CRWA Lake Dunlap WTP Expansion	CRWA	$ 11,362,000			10	10	20	400
Facilities Expansion - GBRA Western Canyon WTP Expansion	GBRA	$ 23,953,000			2	4	6	120
Facilities Expansion - Hays County Pipeline	GBRA	$ 25,486,000			10	10	20	400
Facilities Expansion - NBU Seguin Interconnect	NBU	$ 2,428,000			10	10	20	400
Facilities Expansion - NBU South WTP Expansion	NBU	$ 27,701,000			10	10	20	400
Facilities Expansion - SAWS Expanded ASR Treatment Plant	SAWS	$ 39,508,000			8	10	18	360
Facilities Expansion - SAWS Western Integrated Pipeline (Phase 2)	SAWS	$ 113,039,000			10	10	20	400
Facilities Expansion - Springs Hill WSC Bored Pipeline Under the Guadalupe	SPRINGS HILL WSC	$ 490,000			8	10	18	360
Facilities Expansion - Springs Hill WSC Lake Placid WTP Expansion	SPRINGS HILL WSC	$ 12,995,000			10	10	20	400
GBRA Lower Basin New Appropriation	GBRA	$ 381,960,000			10	10	20	400
GBRA Lower Basin Storage Project	GBRA	$ 65,470,000			10	10	20	400
GBRA Mid Basin Project	GBRA	$ 403,046,000			8	10	18	360
GBRA Victoria Count Steam Electric Project	GBRA	$ 117,260,000			10	10	20	400
Local Groundwater - DeWitt Mining	MINING, DEWITT	$ 1,333,000			2	4	6	120
Local Groundwater - El Oso WSC	EL OSO WSC	$ 809,000			10	10	20	400
Local Groundwater - Floresville	FLORESVILLE	$ 5,200,000			6	8	14	280
Local Groundwater - Karnes City	KARNES CITY	$ 4,080,000			10	10	20	400
Local Groundwater - Pearsall	PEARSALL	$ 5,939,000			10	10	20	400
Martindale WSC Alluvial Well Project	MARTINDALE WSC	$ 1,253,000			10	10	20	400
Maxwell WSC Trinity Wellfield Project	MAXWELL WSC	$ 7,971,000			6	8	14	280
NBU ASR Project	NBU	$ 39,198,000			10	10	20	400
NBU Trinity Wellfield Expansion Project	NBU	$ 19,155,000			8	10	18	360
Recycled Water Strategies - Boerne Non-Potable Reuse Project	BOERNE	$ 6,184,000		X	10	10	20	400
Recycled Water Strategies - County Line SUD Reuse	COUNTY LINE SUD	$ 28,256,000		X	10	10	20	400
Recycled Water Strategies - Fair Oaks Non-Potable Reuse	FAIR OAKS RANCH	$ 3,159,000		X	8	10	18	360
Recycled Water Strategies - San Marcos Non-Potable Reuse	SAN MARCOS	$ 106,770,000		X	10	10	20	400
Recycled Water Strategies - San Marcos Potable Reuse	SAN MARCOS	$ 106,770,000		X	6	8	14	280
Recycled Water Strategies - SAWS Recycled Water Program	SAWS	$ 183,749,200		X	8	10	18	360
SAWS Expanded Brackish Wilcox Project	SAWS	$ 723,175,000			6	8	14	280
SAWS Expanded Local Carrizo Project	SAWS	$ 24,839,000			6	8	14	280
SSLGC Brackish Wilcox Groundwater Project	SSLGC	$ 31,941,000			6	8	14	280
SSLGC Expanded Carrizo Project	SSLGC	$ 130,227,000			10	10	20	400
SSWSC Brackish Wilcox Groundwater Project	SS WSC	$ 20,384,000			2	4	6	120
Victoria ASR Project	VICTORIA	$ 37,982,000			10	10	20	400

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DATA IS NOT FINALIZED - DATA IS NOT FINALIZED
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		Criteria 2 - Project Feasibility	
		5	5
Project Name	**Project Sponsor Entity**	**Uniform Standard 2A** - What supporting data is available to show that the quantity of water needed is available? *[Models suggest insufficient quantities of water or no modeling performed = 0 points; models suggest sufficient quantity of water = 3; Field tests, measurements, or project specific studies confirm sufficient quantities of water = 5]*	**Uniform Standard 2B** - If necessary, does the sponsor hold necessary legal rights, water rights and/or contracts to use the water that this project would require? *[Legal rights, water rights and/or contract application not submitted = 0 points; application submitted = 2; application is administratively complete = 3; legal rights, water rights and/or contracts obtained or not needed = 5]*
Advanced Water Conservation - SAWS AMI Project	SAWS	5	5
ARWA Phase 2	ARWA	3	0
ARWA Phase 3	ARWA	5	5
ARWA/GBRA Phase 1	ARWA	3	5
ARWA/GBRA Phase 1	GBRA	5	5
Count Line SUD Trinity Wellfield Project	COUNTY LINE SUD	3	0
County Line SUD Brackish Edwards Project	COUNTY LINE SUD	3	0
CRWA Brackish Wilcox Groundwater	CRWA	3	0
CRWA Siesta Project	CRWA	3	5
CRWA Wells Ranch Project (Phase 3)	CRWA	5	5
CVLGC Carrizo Project	CVLGC	5	5
Facilities Expansion - Atascosa Rural WSC Interconnect	ATASCOSA RURAL WSC	0	0
Facilities Expansion - CPS Direct Recycle Pipeline	SAWS	3	5
Facilities Expansion - CRWA Hays Caldwell WTP Expansion	CRWA	5	5
Facilities Expansion - CRWA Lake Dunlap WTP Expansion	CRWA	5	5
Facilities Expansion - GBRA Western Canyon WTP Expansion	GBRA	5	5
Facilities Expansion - Hays County Pipeline	GBRA	3	5
Facilities Expansion - NBU Seguin Interconnect	NBU	0	0
Facilities Expansion - NBU South WTP Expansion	NBU	0	0
Facilities Expansion - SAWS Expanded ASR Treatment Plant	SAWS	0	0
Facilities Expansion - SAWS Western Integrated Pipeline (Phase 2)	SAWS	0	5
Facilities Expansion - Springs Hill WSC Bored Pipeline Under the Guadalupe	SPRINGS HILL WSC	0	0
Facilities Expansion - Springs Hill WSC Lake Placid WTP Expansion	SPRINGS HILL WSC	0	5
GBRA Lower Basin New Appropriation	GBRA	3	2
GBRA Lower Basin Storage Project	GBRA	5	5
GBRA Mid Basin Project	GBRA	5	5
GBRA Victoria Count Steam Electric Project	GBRA	3	2
Local Groundwater - DeWitt Mining	MINING, DEWITT	3	0
Local Groundwater - El Oso WSC	EL OSO WSC	3	0
Local Groundwater - Floresville	FLORESVILLE	3	0
Local Groundwater - Karnes City	KARNES CITY	3	0
Local Groundwater - Pearsall	PEARSALL	3	0
Martindale WSC Alluvial Well Project	MARTINDALE WSC	3	0
Maxwell WSC Trinity Wellfield Project	MAXWELL WSC	3	0
NBU ASR Project	NBU	5	5
NBU Trinity Wellfield Expansion Project	NBU	3	0
Recycled Water Strategies - Boerne Non-Potable Reuse Project	BOERNE	5	0
Recycled Water Strategies - County Line SUD Reuse	COUNTY LINE SUD	3	0
Recycled Water Strategies - Fair Oaks Non-Potable Reuse	FAIR OAKS RANCH	3	3
Recycled Water Strategies - San Marcos Non-Potable Reuse	SAN MARCOS	5	5
Recycled Water Strategies - San Marcos Potable Reuse	SAN MARCOS	5	5
Recycled Water Strategies - SAWS Recycled Water Program	SAWS	3	5
SAWS Expanded Brackish Wilcox Project	SAWS	3	0
SAWS Expanded Local Carrizo Project	SAWS	5	5
SSLGC Brackish Wilcox Groundwater Project	SSLGC	3	5
SSLGC Expanded Carrizo Project	SSLGC	3	5
SSWSC Brackish Wilcox Groundwater Project	SS WSC	3	5
Victoria ASR Project	VICTORIA	5	5

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		Criteria 2 - Project Feasibility			
		10	5	25	100
Project Name	**Project Sponsor Entity**	**Uniform Standard 2C** - What level of engineering and/or planning has been accomplished for this project? *[Project idea is outlined in RWP = 1 point; feasibility studies initiated = 2; feasibility studies completed = 3; conceptual design initiated = 4; conceptual design completed = 5; preliminary engineering report initiated = 6; preliminary engineering report completed = 7; preliminary design initiated = 8; preliminary design completed = 9; final design complete = 10]*	**Uniform Standard 2D** - Has the project sponsor requested in writing that the project be included in the Regional Water Plan? *[No = 0 points; yes = 5]*	**Criteria 2 Total Score**	***Weighted Criteria 2 Total***
Advanced Water Conservation - SAWS AMI Project	SAWS	8	5	23	92
ARWA Phase 2	ARWA	3	5	11	44
ARWA Phase 3	ARWA	3	5	18	72
ARWA/GBRA Phase 1	ARWA	9	5	22	88
ARWA/GBRA Phase 1	GBRA	9	5	24	96
Count Line SUD Trinity Wellfield Project	COUNTY LINE SUD	5	5	13	52
County Line SUD Brackish Edwards Project	COUNTY LINE SUD	5	5	13	52
CRWA Brackish Wilcox Groundwater	CRWA	7	5	15	60
CRWA Siesta Project	CRWA	7	5	20	80
CRWA Wells Ranch Project (Phase 3)	CRWA	5	5	20	80
CVLGC Carrizo Project	CVLGC	7	5	22	88
Facilities Expansion - Atascosa Rural WSC Interconnect	ATASCOSA RURAL WSC	7	5	12	48
Facilities Expansion - CPS Direct Recycle Pipeline	SAWS	1	5	14	56
Facilities Expansion - CRWA Hays Caldwell WTP Expansion	CRWA	8	5	23	92
Facilities Expansion - CRWA Lake Dunlap WTP Expansion	CRWA	5	5	20	80
Facilities Expansion - GBRA Western Canyon WTP Expansion	GBRA	4	5	19	76
Facilities Expansion - Hays County Pipeline	GBRA	3	5	16	64
Facilities Expansion - NBU Seguin Interconnect	NBU	4	5	9	36
Facilities Expansion - NBU South WTP Expansion	NBU	4	5	9	36
Facilities Expansion - SAWS Expanded ASR Treatment Plant	SAWS	1	5	6	24
Facilities Expansion - SAWS Western Integrated Pipeline (Phase 2)	SAWS	10	5	20	80
Facilities Expansion - Springs Hill WSC Bored Pipeline Under the Guadalupe	SPRINGS HILL WSC	4	5	9	36
Facilities Expansion - Springs Hill WSC Lake Placid WTP Expansion	SPRINGS HILL WSC	1	5	11	44
GBRA Lower Basin New Appropriation	GBRA	3	5	13	52
GBRA Lower Basin Storage Project	GBRA	7	5	22	88
GBRA Mid Basin Project	GBRA	5	5	20	80
GBRA Victoria Count Steam Electric Project	GBRA	3	5	13	52
Local Groundwater - DeWitt Mining	MINING, DEWITT	1	0	4	16
Local Groundwater - El Oso WSC	EL OSO WSC	1	0	4	16
Local Groundwater - Floresville	FLORESVILLE	1	0	4	16
Local Groundwater - Karnes City	KARNES CITY	1	0	4	16
Local Groundwater - Pearsall	PEARSALL	1	0	4	16
Martindale WSC Alluvial Well Project	MARTINDALE WSC	7	5	15	60
Maxwell WSC Trinity Wellfield Project	MAXWELL WSC	7	5	15	60
NBU ASR Project	NBU	8	5	23	92
NBU Trinity Wellfield Expansion Project	NBU	3	5	11	44
Recycled Water Strategies - Boerne Non-Potable Reuse Project	BOERNE	7	5	17	68
Recycled Water Strategies - County Line SUD Reuse	COUNTY LINE SUD	5	5	13	52
Recycled Water Strategies - Fair Oaks Non-Potable Reuse	FAIR OAKS RANCH	7	5	18	72
Recycled Water Strategies - San Marcos Non-Potable Reuse	SAN MARCOS	5	5	20	80
Recycled Water Strategies - San Marcos Potable Reuse	SAN MARCOS	5	5	20	80
Recycled Water Strategies - SAWS Recycled Water Program	SAWS	1	5	14	56
SAWS Expanded Brackish Wilcox Project	SAWS	7	5	15	60
SAWS Expanded Local Carrizo Project	SAWS	8	5	23	92
SSLGC Brackish Wilcox Groundwater Project	SSLGC	5	5	18	72
SSLGC Expanded Carrizo Project	SSLGC	7	5	20	80
SSWSC Brackish Wilcox Groundwater Project	SS WSC	7	5	20	80
Victoria ASR Project	VICTORIA	5	5	20	80

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		Criteria 3 - Project Viability			
		100	10	100	10
Project Name	**Project Sponsor Entity**	**Uniform Standard 3A** - In the decade the project supply comes online, what is the % of the WUG's (or WUGs') needs satisfied by this project? *[Calculation is based on the needs of all WUGs receiving water from the project.]*	***Converted Needs-based score for Uniform Standard 3A***	**Uniform Standard 3B** - In the final decade of the planning period, what is the % of the WUG's (or WUGs') needs satisfied by this project? *[Calculation is based on the needs of all WUGs receiving water from the project.]*	***Converted Needs-based score for Uniform Standard 3B***
Advanced Water Conservation - SAWS AMI Project	SAWS	0	0.00	0	0.00
ARWA Phase 2	ARWA	100	10.00	100	10.00
ARWA Phase 3	ARWA	45	4.47	32	3.16
ARWA/GBRA Phase 1	ARWA	100	10.00	100	10.00
ARWA/GBRA Phase 1	GBRA	100	10.00	100	10.00
Count Line SUD Trinity Wellfield Project	COUNTY LINE SUD	100	10.00	87	8.69
County Line SUD Brackish Edwards Project	COUNTY LINE SUD	100	10.00	100	10.00
CRWA Brackish Wilcox Groundwater	CRWA	0	0.00	0	0.00
CRWA Siesta Project	CRWA	0	0.00	0	0.00
CRWA Wells Ranch Project (Phase 3)	CRWA	64	6.38	80	7.97
CVLGC Carrizo Project	CVLGC	100	10.00	100	10.00
Facilities Expansion - Atascosa Rural WSC Interconnect	ATASCOSA RURAL WSC	0	0.00	0	0.00
Facilities Expansion - CPS Direct Recycle Pipeline	SAWS	0	0.00	0	0.00
Facilities Expansion - CRWA Hays Caldwell WTP Expansion	CRWA	0	0.00	0	0.00
Facilities Expansion - CRWA Lake Dunlap WTP Expansion	CRWA	0	0.00	0	0.00
Facilities Expansion - GBRA Western Canyon WTP Expansion	GBRA	0	0.00	0	0.00
Facilities Expansion - Hays County Pipeline	GBRA	0	0.00	0	0.00
Facilities Expansion - NBU Seguin Interconnect	NBU	0	0.00	0	0.00
Facilities Expansion - NBU South WTP Expansion	NBU	0	0.00	0	0.00
Facilities Expansion - SAWS Expanded ASR Treatment Plant	SAWS	0	0.00	0	0.00
Facilities Expansion - SAWS Western Integrated Pipeline (Phase 2)	SAWS	0	0.00	0	0.00
Facilities Expansion - Springs Hill WSC Bored Pipeline Under the Guadalupe	SPRINGS HILL WSC	0	0.00	0	0.00
Facilities Expansion - Springs Hill WSC Lake Placid WTP Expansion	SPRINGS HILL WSC	0	0.00	0	0.00
GBRA Lower Basin New Appropriation	GBRA	100	10.00	100	10.00
GBRA Lower Basin Storage Project	GBRA	100	10.00	100	10.00
GBRA Mid Basin Project	GBRA	0	0.00	100	10.00
GBRA Victoria Count Steam Electric Project	GBRA	0	0.00	0	0.00
Local Groundwater - DeWitt Mining	MINING, DEWITT	100	10.00	0	0.00
Local Groundwater - El Oso WSC	EL OSO WSC	32	3.24	0	0.00
Local Groundwater - Floresville	FLORESVILLE	0	0.00	100	10.00
Local Groundwater - Karnes City	KARNES CITY	100	10.00	100	10.00
Local Groundwater - Pearsall	PEARSALL	100	10.00	100	10.00
Martindale WSC Alluvial Well Project	MARTINDALE WSC	100	10.00	31	3.08
Maxwell WSC Trinity Wellfield Project	MAXWELL WSC	0	0.00	0	0.00
NBU ASR Project	NBU	0	0.00	50	4.96
NBU Trinity Wellfield Expansion Project	NBU	92	9.21	15	1.54
Recycled Water Strategies - Boerne Non-Potable Reuse Project	BOERNE	0	0.00	67	6.67
Recycled Water Strategies - County Line SUD Reuse	COUNTY LINE SUD	0	0.00	100	10.00
Recycled Water Strategies - Fair Oaks Non-Potable Reuse	FAIR OAKS RANCH	0	0.00	63	6.28
Recycled Water Strategies - San Marcos Non-Potable Reuse	SAN MARCOS	0	0.00	0	0.00
Recycled Water Strategies - San Marcos Potable Reuse	SAN MARCOS	0	0.00	0	0.00
Recycled Water Strategies - SAWS Recycled Water Program	SAWS	35	3.46	41	4.10
SAWS Expanded Brackish Wilcox Project	SAWS	69	6.93	72	7.19
SAWS Expanded Local Carrizo Project	SAWS	60	6.04	22	2.15
SSLGC Brackish Wilcox Groundwater Project	SSLGC	82	8.24	57	5.74
SSLGC Expanded Carrizo Project	SSLGC	100	10.00	69	6.88
SSWSC Brackish Wilcox Groundwater Project	SS WSC	31	3.11	27	2.71
Victoria ASR Project	VICTORIA	88	8.84	64	6.43

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		Criteria 3 - Project Viability			
		5	5	30.00	250.00
Project Name	**Project Sponsor Entity**	**Uniform Standard 3C** - Is this project the only economically feasible source of new supply for the WUG, other than conservation? *[No = 0 points; Yes = 5]*	**Uniform Standard 3D** - Does this project serve multiple WUGs? *[No = 0 points; Yes = 5]*	**Criteria 3 Total Score**	***Weighted Criteria 3 Total***
Advanced Water Conservation - SAWS AMI Project	SAWS	0	0	0.00	0.00
ARWA Phase 2	ARWA	0	5	25.00	208.33
ARWA Phase 3	ARWA	0	5	12.64	105.31
ARWA/GBRA Phase 1	ARWA	0	5	25.00	208.33
ARWA/GBRA Phase 1	GBRA	0	5	25.00	208.33
Count Line SUD Trinity Wellfield Project	COUNTY LINE SUD	0	0	18.69	155.71
County Line SUD Brackish Edwards Project	COUNTY LINE SUD	0	0	20.00	166.67
CRWA Brackish Wilcox Groundwater	CRWA	0	5	5.00	41.67
CRWA Siesta Project	CRWA	0	5	5.00	41.67
CRWA Wells Ranch Project (Phase 3)	CRWA	0	5	19.35	161.23
CVLGC Carrizo Project	CVLGC	0	5	25.00	208.33
Facilities Expansion - Atascosa Rural WSC Interconnect	ATASCOSA RURAL WSC	0	5	5.00	41.67
Facilities Expansion - CPS Direct Recycle Pipeline	SAWS	0	0	0.00	0.00
Facilities Expansion - CRWA Hays Caldwell WTP Expansion	CRWA	0	5	5.00	41.67
Facilities Expansion - CRWA Lake Dunlap WTP Expansion	CRWA	0	5	5.00	41.67
Facilities Expansion - GBRA Western Canyon WTP Expansion	GBRA	0	5	5.00	41.67
Facilities Expansion - Hays County Pipeline	GBRA	0	5	5.00	41.67
Facilities Expansion - NBU Seguin Interconnect	NBU	0	5	5.00	41.67
Facilities Expansion - NBU South WTP Expansion	NBU	0	5	5.00	41.67
Facilities Expansion - SAWS Expanded ASR Treatment Plant	SAWS	0	5	5.00	41.67
Facilities Expansion - SAWS Western Integrated Pipeline (Phase 2)	SAWS	0	5	5.00	41.67
Facilities Expansion - Springs Hill WSC Bored Pipeline Under the Guadalupe	SPRINGS HILL WSC	0	0	0.00	0.00
Facilities Expansion - Springs Hill WSC Lake Placid WTP Expansion	SPRINGS HILL WSC	0	0	0.00	0.00
GBRA Lower Basin New Appropriation	GBRA	5	5	30.00	250.00
GBRA Lower Basin Storage Project	GBRA	5	5	30.00	250.00
GBRA Mid Basin Project	GBRA	5	5	20.00	166.67
GBRA Victoria Count Steam Electric Project	GBRA	5	0	5.00	41.67
Local Groundwater - DeWitt Mining	MINING, DEWITT	5	0	15.00	125.00
Local Groundwater - El Oso WSC	EL OSO WSC	5	0	8.24	68.69
Local Groundwater - Floresville	FLORESVILLE	5	0	15.00	125.00
Local Groundwater - Karnes City	KARNES CITY	5	0	25.00	208.33
Local Groundwater - Pearsall	PEARSALL	5	0	25.00	208.33
Martindale WSC Alluvial Well Project	MARTINDALE WSC	5	0	18.08	150.64
Maxwell WSC Trinity Wellfield Project	MAXWELL WSC	5	0	5.00	41.67
NBU ASR Project	NBU	0	0	4.96	41.29
NBU Trinity Wellfield Expansion Project	NBU	0	0	10.75	89.56
Recycled Water Strategies - Boerne Non-Potable Reuse Project	BOERNE	0	0	6.67	55.58
Recycled Water Strategies - County Line SUD Reuse	COUNTY LINE SUD	0	0	10.00	83.33
Recycled Water Strategies - Fair Oaks Non-Potable Reuse	FAIR OAKS RANCH	5	0	11.28	94.00
Recycled Water Strategies - San Marcos Non-Potable Reuse	SAN MARCOS	0	0	0.00	0.00
Recycled Water Strategies - San Marcos Potable Reuse	SAN MARCOS	0	0	0.00	0.00
Recycled Water Strategies - SAWS Recycled Water Program	SAWS	0	0	7.55	62.94
SAWS Expanded Brackish Wilcox Project	SAWS	0	0	14.12	117.68
SAWS Expanded Local Carrizo Project	SAWS	0	0	8.19	68.24
SSLGC Brackish Wilcox Groundwater Project	SSLGC	0	5	18.98	158.14
SSLGC Expanded Carrizo Project	SSLGC	0	5	21.88	182.37
SSWSC Brackish Wilcox Groundwater Project	SS WSC	0	0	5.82	48.51
Victoria ASR Project	VICTORIA	0	0	15.27	127.23

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		Criteria 4 - Project Sustainability			
		10	5	15	150
Project Name	**Project Sponsor Entity**	**Uniform Standard 4A** - Over what period of time is this project expected to provide water (regardless of the planning period)? *[Less than or equal to 20 yrs = 5 points; greater than 20 yrs = 10]*	**Uniform Standard 4B** - Does the volume of water supplied by the project change over the regional water planning period? *[Decreases = 0 points; no change = 3; increases = 5]*	**Criteria 4 Total Score**	***Weighted Criteria 4 Total***
Advanced Water Conservation - SAWS AMI Project	SAWS	10	3	13	130
ARWA Phase 2	ARWA	10	3	13	130
ARWA Phase 3	ARWA	10	3	13	130
ARWA/GBRA Phase 1	ARWA	10	3	13	130
ARWA/GBRA Phase 1	GBRA	10	3	13	130
Count Line SUD Trinity Wellfield Project	COUNTY LINE SUD	10	3	13	130
County Line SUD Brackish Edwards Project	COUNTY LINE SUD	10	3	13	130
CRWA Brackish Wilcox Groundwater	CRWA	10	3	13	130
CRWA Siesta Project	CRWA	10	3	13	130
CRWA Wells Ranch Project (Phase 3)	CRWA	10	5	15	150
CVLGC Carrizo Project	CVLGC	10	3	13	130
Facilities Expansion - Atascosa Rural WSC Interconnect	ATASCOSA RURAL WSC	5	3	8	80
Facilities Expansion - CPS Direct Recycle Pipeline	SAWS	5	3	8	80
Facilities Expansion - CRWA Hays Caldwell WTP Expansion	CRWA	5	3	8	80
Facilities Expansion - CRWA Lake Dunlap WTP Expansion	CRWA	5	3	8	80
Facilities Expansion - GBRA Western Canyon WTP Expansion	GBRA	5	3	8	80
Facilities Expansion - Hays County Pipeline	GBRA	5	3	8	80
Facilities Expansion - NBU Seguin Interconnect	NBU	5	3	8	80
Facilities Expansion - NBU South WTP Expansion	NBU	5	3	8	80
Facilities Expansion - SAWS Expanded ASR Treatment Plant	SAWS	5	3	8	80
Facilities Expansion - SAWS Western Integrated Pipeline (Phase 2)	SAWS	5	3	8	80
Facilities Expansion - Springs Hill WSC Bored Pipeline Under the Guadalupe	SPRINGS HILL WSC	5	3	8	80
Facilities Expansion - Springs Hill WSC Lake Placid WTP Expansion	SPRINGS HILL WSC	5	3	8	80
GBRA Lower Basin New Appropriation	GBRA	10	3	13	130
GBRA Lower Basin Storage Project	GBRA	10	3	13	130
GBRA Mid Basin Project	GBRA	10	3	13	130
GBRA Victoria Count Steam Electric Project	GBRA	10	3	13	130
Local Groundwater - DeWitt Mining	MINING, DEWITT	10	3	13	130
Local Groundwater - El Oso WSC	EL OSO WSC	10	3	13	130
Local Groundwater - Floresville	FLORESVILLE	10	5	15	150
Local Groundwater - Karnes City	KARNES CITY	10	3	13	130
Local Groundwater - Pearsall	PEARSALL	10	5	15	150
Martindale WSC Alluvial Well Project	MARTINDALE WSC	10	3	13	130
Maxwell WSC Trinity Wellfield Project	MAXWELL WSC	10	3	13	130
NBU ASR Project	NBU	10	3	13	130
NBU Trinity Wellfield Expansion Project	NBU	10	3	13	130
Recycled Water Strategies - Boerne Non-Potable Reuse Project	BOERNE	10	3	13	130
Recycled Water Strategies - County Line SUD Reuse	COUNTY LINE SUD	10	3	13	130
Recycled Water Strategies - Fair Oaks Non-Potable Reuse	FAIR OAKS RANCH	10	3	13	130
Recycled Water Strategies - San Marcos Non-Potable Reuse	SAN MARCOS	10	5	15	150
Recycled Water Strategies - San Marcos Potable Reuse	SAN MARCOS	10	5	15	150
Recycled Water Strategies - SAWS Recycled Water Program	SAWS	10	5	15	150
SAWS Expanded Brackish Wilcox Project	SAWS	10	5	15	150
SAWS Expanded Local Carrizo Project	SAWS	10	3	13	130
SSLGC Brackish Wilcox Groundwater Project	SSLGC	10	3	13	130
SSLGC Expanded Carrizo Project	SSLGC	10	3	13	130
SSWSC Brackish Wilcox Groundwater Project	SS WSC	10	3	13	130
Victoria ASR Project	VICTORIA	10	3	13	130

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		5	100	1000.00
Project Name	**Project Sponsor Entity**	**Uniform Standard 5A** - What is the expected unit cost of water supplied by this project compared to the median unit cost of all other recommended strategies in the region's current RWP? (Project's Unit Cost divided by the median project's unit cost) *[200% or greater than median = 0 points; 150% to 199% = 1; 101% to 149% = 2; 100% = 3; 51% to 99% = 4; 0% to 50% = 5]*	***Weighted Criteria 5 Total***	
Advanced Water Conservation - SAWS AMI Project	SAWS	0	0	622.00
ARWA Phase 2	ARWA	4	80	742.33
ARWA Phase 3	ARWA	1	20	447.31
ARWA/GBRA Phase 1	ARWA	2	40	866.33
ARWA/GBRA Phase 1	GBRA	2	40	874.33
Count Line SUD Trinity Wellfield Project	COUNTY LINE SUD	0	0	537.71
County Line SUD Brackish Edwards Project	COUNTY LINE SUD	2	40	588.67
CRWA Brackish Wilcox Groundwater	CRWA	1	20	611.67
CRWA Siesta Project	CRWA	0	0	371.67
CRWA Wells Ranch Project (Phase 3)	CRWA	3	60	851.23
CVLGC Carrizo Project	CVLGC	2	40	826.33
Facilities Expansion - Atascosa Rural WSC Interconnect	ATASCOSA RURAL WSC	5	100	669.67
Facilities Expansion - CPS Direct Recycle Pipeline	SAWS	5	100	596.00
Facilities Expansion - CRWA Hays Caldwell WTP Expansion	CRWA	5	100	713.67
Facilities Expansion - CRWA Lake Dunlap WTP Expansion	CRWA	5	100	701.67
Facilities Expansion - GBRA Western Canyon WTP Expansion	GBRA	5	100	417.67
Facilities Expansion - Hays County Pipeline	GBRA	5	100	685.67
Facilities Expansion - NBU Seguin Interconnect	NBU	5	100	657.67
Facilities Expansion - NBU South WTP Expansion	NBU	5	100	657.67
Facilities Expansion - SAWS Expanded ASR Treatment Plant	SAWS	5	100	605.67
Facilities Expansion - SAWS Western Integrated Pipeline (Phase 2)	SAWS	5	100	701.67
Facilities Expansion - Springs Hill WSC Bored Pipeline Under the Guadalupe	SPRINGS HILL WSC	5	100	576.00
Facilities Expansion - Springs Hill WSC Lake Placid WTP Expansion	SPRINGS HILL WSC	5	100	624.00
GBRA Lower Basin New Appropriation	GBRA	4	80	912.00
GBRA Lower Basin Storage Project	GBRA	5	100	968.00
GBRA Mid Basin Project	GBRA	2	40	776.67
GBRA Victoria Count Steam Electric Project	GBRA	5	100	723.67
Local Groundwater - DeWitt Mining	MINING, DEWITT	5	100	491.00
Local Groundwater - El Oso WSC	EL OSO WSC	2	40	654.69
Local Groundwater - Floresville	FLORESVILLE	5	100	671.00
Local Groundwater - Karnes City	KARNES CITY	2	40	794.33
Local Groundwater - Pearsall	PEARSALL	4	80	854.33
Martindale WSC Alluvial Well Project	MARTINDALE WSC	5	100	840.64
Maxwell WSC Trinity Wellfield Project	MAXWELL WSC	0	0	511.67
NBU ASR Project	NBU	5	100	763.29
NBU Trinity Wellfield Expansion Project	NBU	4	80	703.56
Recycled Water Strategies - Boerne Non-Potable Reuse Project	BOERNE	5	100	753.58
Recycled Water Strategies - County Line SUD Reuse	COUNTY LINE SUD	4	80	745.33
Recycled Water Strategies - Fair Oaks Non-Potable Reuse	FAIR OAKS RANCH	5	100	756.00
Recycled Water Strategies - San Marcos Non-Potable Reuse	SAN MARCOS	5	100	730.00
Recycled Water Strategies - San Marcos Potable Reuse	SAN MARCOS	5	100	610.00
Recycled Water Strategies - SAWS Recycled Water Program	SAWS	5	100	728.94
SAWS Expanded Brackish Wilcox Project	SAWS	0	0	607.68
SAWS Expanded Local Carrizo Project	SAWS	5	100	670.24
SSLGC Brackish Wilcox Groundwater Project	SSLGC	4	80	720.14
SSLGC Expanded Carrizo Project	SSLGC	2	40	832.37
SSWSC Brackish Wilcox Groundwater Project	SS WSC	0	0	378.51
Victoria ASR Project	VICTORIA	5	100	837.23

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					Criteria 1 - Decade of Need for Project			
				MAX POINTS	10	10	20	400
Project Name	**Project Sponsor Entity**	**Capital Cost**	**Rural/Agricultural Conservation?**	**Conservation/Reuse?**	**Uniform Standard 1A** - What is the decade the RWP shows the project comes online? *[2070 = 0 points; 2060 = 2; 2050 = 4; 2040 = 6; 2030 = 8; 2020 = 10]*	**Uniform Standard 1B** - In what decade is initial funding needed? *[2070 = 0 points; 2060 = 2; 2050 = 4; 2040 = 6; 2030 = 8; 2020 = 10]*	**Criteria 1 Total Score**	***Weighted Criteria 1 Total***
GBRA Lower Basin Storage Project	GBRA	$ 65,470,000			10	10	20	400
GBRA Lower Basin New Appropriation	GBRA	$ 381,960,000			10	10	20	400
ARWA/GBRA Phase 1	GBRA	$ 124,512,000			10	10	20	400
ARWA/GBRA Phase 1	ARWA	$ 228,365,000			10	10	20	400
Local Groundwater - Pearsall	PEARSALL	$ 5,939,000			10	10	20	400
CRWA Wells Ranch Project (Phase 3)	CRWA	$ 23,924,000			10	10	20	400
Martindale WSC Alluvial Well Project	MARTINDALE WSC	$ 1,253,000			10	10	20	400
Victoria ASR Project	VICTORIA	$ 37,982,000			10	10	20	400
SSLGC Expanded Carrizo Project	SSLGC	$ 130,227,000			10	10	20	400
CVLGC Carrizo Project	CVLGC	$ 130,277,000			8	10	18	360
Local Groundwater - Karnes City	KARNES CITY	$ 4,080,000			10	10	20	400
GBRA Mid Basin Project	GBRA	$ 403,046,000			8	10	18	360
NBU ASR Project	NBU	$ 39,198,000			10	10	20	400
Recycled Water Strategies - Fair Oaks Non-Potable Reuse	FAIR OAKS RANCH	$ 3,159,000		X	8	10	18	360
Recycled Water Strategies - Boerne Non-Potable Reuse Project	BOERNE	$ 6,184,000		X	10	10	20	400
Recycled Water Strategies - County Line SUD Reuse	COUNTY LINE SUD	$ 28,256,000		X	10	10	20	400
ARWA Phase 2	ARWA	$ 130,526,000			6	8	14	280
Recycled Water Strategies - San Marcos Non-Potable Reuse	SAN MARCOS	$ 106,770,000		X	10	10	20	400
Recycled Water Strategies - SAWS Recycled Water Program	SAWS	$ 183,749,200		X	8	10	18	360
GBRA Victoria Count Steam Electric Project	GBRA	$ 117,260,000			10	10	20	400
SSLGC Brackish Wilcox Groundwater Project	SSLGC	$ 31,941,000			6	8	14	280
Facilities Expansion - CRWA Hays Caldwell WTP Expansion	CRWA	$ 11,362,000			10	10	20	400
NBU Trinity Wellfield Expansion Project	NBU	$ 19,155,000			8	10	18	360
Facilities Expansion - CRWA Lake Dunlap WTP Expansion	CRWA	$ 11,362,000			10	10	20	400
Facilities Expansion - SAWS Western Integrated Pipeline (Phase 2)	SAWS	$ 113,039,000			10	10	20	400
Facilities Expansion - Hays County Pipeline	GBRA	$ 25,486,000			10	10	20	400
Local Groundwater - Floresville	FLORESVILLE	$ 5,200,000			6	8	14	280
SAWS Expanded Local Carrizo Project	SAWS	$ 24,839,000			6	8	14	280
Facilities Expansion - Atascosa Rural WSC Interconnect	ATASCOSA RURAL WSC	$ 3,623,000			10	10	20	400
Facilities Expansion - NBU Seguin Interconnect	NBU	$ 2,428,000			10	10	20	400
Facilities Expansion - NBU South WTP Expansion	NBU	$ 27,701,000			10	10	20	400
Local Groundwater - El Oso WSC	EL OSO WSC	$ 809,000			10	10	20	400
Facilities Expansion - Springs Hill WSC Lake Placid WTP Expansion	SPRINGS HILL WSC	$ 12,995,000			10	10	20	400
Advanced Water Conservation - SAWS AMI Project	SAWS	$ 208,061,401			10	10	20	400
CRWA Brackish Wilcox Groundwater	CRWA	$ 177,944,000			8	10	18	360
Recycled Water Strategies - San Marcos Potable Reuse	SAN MARCOS	$ 106,770,000		X	6	8	14	280
SAWS Expanded Brackish Wilcox Project	SAWS	$ 723,175,000			6	8	14	280
Facilities Expansion - SAWS Expanded ASR Treatment Plant	SAWS	$ 39,508,000			8	10	18	360
Facilities Expansion - CPS Direct Recycle Pipeline	SAWS	$ 35,589,000			8	10	18	360
County Line SUD Brackish Edwards Project	COUNTY LINE SUD	$ 13,602,000			4	6	10	200
Facilities Expansion - Springs Hill WSC Bored Pipeline Under the Guadalupe	SPRINGS HILL WSC	$ 490,000			8	10	18	360
Count Line SUD Trinity Wellfield Project	COUNTY LINE SUD	$ 11,761,000			4	6	10	200
Maxwell WSC Trinity Wellfield Project	MAXWELL WSC	$ 7,971,000			6	8	14	280
Local Groundwater - DeWitt Mining	MINING, DEWITT	$ 1,333,000			2	4	6	120
ARWA Phase 3	ARWA	$ 73,558,000		X	2	4	6	120
Facilities Expansion - GBRA Western Canyon WTP Expansion	GBRA	$ 23,953,000			2	4	6	120
SSWSC Brackish Wilcox Groundwater Project	SS WSC	$ 20,384,000			2	4	6	120
CRWA Siesta Project	CRWA	$ 107,161		X	2	4	6	120

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		Criteria 2 - Project Feasibility	
		5	5
Project Name	**Project Sponsor Entity**	**Uniform Standard 2A** - What supporting data is available to show that the quantity of water needed is available? *[Models suggest insufficient quantities of water or no modeling performed = 0 points; models suggest sufficient quantity of water = 3; Field tests, measurements, or project specific studies confirm sufficient quantities of water = 5]*	**Uniform Standard 2B** - If necessary, does the sponsor hold necessary legal rights, water rights and/or contracts to use the water that this project would require? *[Legal rights, water rights and/or contract application not submitted = 0 points; application submitted = 2; application is administratively complete = 3; legal rights, water rights and/or contracts obtained or not needed = 5]*
GBRA Lower Basin Storage Project	GBRA	5	5
GBRA Lower Basin New Appropriation	GBRA	3	2
ARWA/GBRA Phase 1	GBRA	5	5
ARWA/GBRA Phase 1	ARWA	3	5
Local Groundwater - Pearsall	PEARSALL	3	0
CRWA Wells Ranch Project (Phase 3)	CRWA	5	5
Martindale WSC Alluvial Well Project	MARTINDALE WSC	3	0
Victoria ASR Project	VICTORIA	5	5
SSLGC Expanded Carrizo Project	SSLGC	3	5
CVLGC Carrizo Project	CVLGC	5	5
Local Groundwater - Karnes City	KARNES CITY	3	0
GBRA Mid Basin Project	GBRA	5	5
NBU ASR Project	NBU	5	5
Recycled Water Strategies - Fair Oaks Non-Potable Reuse	FAIR OAKS RANCH	3	3
Recycled Water Strategies - Boerne Non-Potable Reuse Project	BOERNE	5	0
Recycled Water Strategies - County Line SUD Reuse	COUNTY LINE SUD	3	0
ARWA Phase 2	ARWA	3	0
Recycled Water Strategies - San Marcos Non-Potable Reuse	SAN MARCOS	5	5
Recycled Water Strategies - SAWS Recycled Water Program	SAWS	3	5
GBRA Victoria Count Steam Electric Project	GBRA	3	2
SSLGC Brackish Wilcox Groundwater Project	SSLGC	3	5
Facilities Expansion - CRWA Hays Caldwell WTP Expansion	CRWA	5	5
NBU Trinity Wellfield Expansion Project	NBU	3	0
Facilities Expansion - CRWA Lake Dunlap WTP Expansion	CRWA	5	5
Facilities Expansion - SAWS Western Integrated Pipeline (Phase 2)	SAWS	0	5
Facilities Expansion - Hays County Pipeline	GBRA	3	5
Local Groundwater - Floresville	FLORESVILLE	3	0
SAWS Expanded Local Carrizo Project	SAWS	5	5
Facilities Expansion - Atascosa Rural WSC Interconnect	ATASCOSA RURAL WSC	0	0
Facilities Expansion - NBU Seguin Interconnect	NBU	0	0
Facilities Expansion - NBU South WTP Expansion	NBU	0	0
Local Groundwater - El Oso WSC	EL OSO WSC	3	0
Facilities Expansion - Springs Hill WSC Lake Placid WTP Expansion	SPRINGS HILL WSC	0	5
Advanced Water Conservation - SAWS AMI Project	SAWS	5	5
CRWA Brackish Wilcox Groundwater	CRWA	3	0
Recycled Water Strategies - San Marcos Potable Reuse	SAN MARCOS	5	5
SAWS Expanded Brackish Wilcox Project	SAWS	3	0
Facilities Expansion - SAWS Expanded ASR Treatment Plant	SAWS	0	0
Facilities Expansion - CPS Direct Recycle Pipeline	SAWS	3	5
County Line SUD Brackish Edwards Project	COUNTY LINE SUD	3	0
Facilities Expansion - Springs Hill WSC Bored Pipeline Under the Guadalupe	SPRINGS HILL WSC	0	0
Count Line SUD Trinity Wellfield Project	COUNTY LINE SUD	3	0
Maxwell WSC Trinity Wellfield Project	MAXWELL WSC	3	0
Local Groundwater - DeWitt Mining	MINING, DEWITT	3	0
ARWA Phase 3	ARWA	5	5
Facilities Expansion - GBRA Western Canyon WTP Expansion	GBRA	5	5
SSWSC Brackish Wilcox Groundwater Project	SS WSC	3	5
CRWA Siesta Project	CRWA	3	5

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		Criteria 2 - Project Feasibility			
		10	5	25	100
Project Name	**Project Sponsor Entity**	**Uniform Standard 2C** - What level of engineering and/or planning has been accomplished for this project? *[Project idea is outlined in RWP = 1 point; feasibility studies initiated = 2; feasibility studies completed = 3; conceptual design initiated = 4; conceptual design completed = 5; preliminary engineering report initiated = 6; preliminary engineering report completed = 7; preliminary design initiated = 8; preliminary design completed = 9; final design complete = 10]*	**Uniform Standard 2D** - Has the project sponsor requested in writing that the project be included in the Regional Water Plan? *[No = 0 points; yes = 5]*	**Criteria 2 Total Score**	***Weighted Criteria 2 Total***
GBRA Lower Basin Storage Project	GBRA	7	5	22	88
GBRA Lower Basin New Appropriation	GBRA	3	5	13	52
ARWA/GBRA Phase 1	GBRA	9	5	24	96
ARWA/GBRA Phase 1	ARWA	9	5	22	88
Local Groundwater - Pearsall	PEARSALL	1	0	4	16
CRWA Wells Ranch Project (Phase 3)	CRWA	5	5	20	80
Martindale WSC Alluvial Well Project	MARTINDALE WSC	7	5	15	60
Victoria ASR Project	VICTORIA	5	5	20	80
SSLGC Expanded Carrizo Project	SSLGC	7	5	20	80
CVLGC Carrizo Project	CVLGC	7	5	22	88
Local Groundwater - Karnes City	KARNES CITY	1	0	4	16
GBRA Mid Basin Project	GBRA	5	5	20	80
NBU ASR Project	NBU	8	5	23	92
Recycled Water Strategies - Fair Oaks Non-Potable Reuse	FAIR OAKS RANCH	7	5	18	72
Recycled Water Strategies - Boerne Non-Potable Reuse Project	BOERNE	7	5	17	68
Recycled Water Strategies - County Line SUD Reuse	COUNTY LINE SUD	5	5	13	52
ARWA Phase 2	ARWA	3	5	11	44
Recycled Water Strategies - San Marcos Non-Potable Reuse	SAN MARCOS	5	5	20	80
Recycled Water Strategies - SAWS Recycled Water Program	SAWS	1	5	14	56
GBRA Victoria Count Steam Electric Project	GBRA	3	5	13	52
SSLGC Brackish Wilcox Groundwater Project	SSLGC	5	5	18	72
Facilities Expansion - CRWA Hays Caldwell WTP Expansion	CRWA	8	5	23	92
NBU Trinity Wellfield Expansion Project	NBU	3	5	11	44
Facilities Expansion - CRWA Lake Dunlap WTP Expansion	CRWA	5	5	20	80
Facilities Expansion - SAWS Western Integrated Pipeline (Phase 2)	SAWS	10	5	20	80
Facilities Expansion - Hays County Pipeline	GBRA	3	5	16	64
Local Groundwater - Floresville	FLORESVILLE	1	0	4	16
SAWS Expanded Local Carrizo Project	SAWS	8	5	23	92
Facilities Expansion - Atascosa Rural WSC Interconnect	ATASCOSA RURAL WSC	7	5	12	48
Facilities Expansion - NBU Seguin Interconnect	NBU	4	5	9	36
Facilities Expansion - NBU South WTP Expansion	NBU	4	5	9	36
Local Groundwater - El Oso WSC	EL OSO WSC	1	0	4	16
Facilities Expansion - Springs Hill WSC Lake Placid WTP Expansion	SPRINGS HILL WSC	1	5	11	44
Advanced Water Conservation - SAWS AMI Project	SAWS	8	5	23	92
CRWA Brackish Wilcox Groundwater	CRWA	7	5	15	60
Recycled Water Strategies - San Marcos Potable Reuse	SAN MARCOS	5	5	20	80
SAWS Expanded Brackish Wilcox Project	SAWS	7	5	15	60
Facilities Expansion - SAWS Expanded ASR Treatment Plant	SAWS	1	5	6	24
Facilities Expansion - CPS Direct Recycle Pipeline	SAWS	1	5	14	56
County Line SUD Brackish Edwards Project	COUNTY LINE SUD	5	5	13	52
Facilities Expansion - Springs Hill WSC Bored Pipeline Under the Guadalupe	SPRINGS HILL WSC	4	5	9	36
Count Line SUD Trinity Wellfield Project	COUNTY LINE SUD	5	5	13	52
Maxwell WSC Trinity Wellfield Project	MAXWELL WSC	7	5	15	60
Local Groundwater - DeWitt Mining	MINING, DEWITT	1	0	4	16
ARWA Phase 3	ARWA	3	5	18	72
Facilities Expansion - GBRA Western Canyon WTP Expansion	GBRA	4	5	19	76
SSWSC Brackish Wilcox Groundwater Project	SS WSC	7	5	20	80
CRWA Siesta Project	CRWA	7	5	20	80

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		Criteria 3 - Project Viability			
		100	10	100	10
Project Name	**Project Sponsor Entity**	**Uniform Standard 3A** - In the decade the project supply comes online, what is the % of the WUG's (or WUGs') needs satisfied by this project? *[Calculation is based on the needs of all WUGs receiving water from the project.]*	***Converted Needs-based score for Uniform Standard 3A***	**Uniform Standard 3B** - In the final decade of the planning period, what is the % of the WUG's (or WUGs') needs satisfied by this project? *[Calculation is based on the needs of all WUGs receiving water from the project.]*	***Converted Needs-based score for Uniform Standard 3B***
GBRA Lower Basin Storage Project	GBRA	100	10.00	100	10.00
GBRA Lower Basin New Appropriation	GBRA	100	10.00	100	10.00
ARWA/GBRA Phase 1	GBRA	100	10.00	100	10.00
ARWA/GBRA Phase 1	ARWA	100	10.00	100	10.00
Local Groundwater - Pearsall	PEARSALL	100	10.00	100	10.00
CRWA Wells Ranch Project (Phase 3)	CRWA	64	6.38	80	7.97
Martindale WSC Alluvial Well Project	MARTINDALE WSC	100	10.00	31	3.08
Victoria ASR Project	VICTORIA	88	8.84	64	6.43
SSLGC Expanded Carrizo Project	SSLGC	100	10.00	69	6.88
CVLGC Carrizo Project	CVLGC	100	10.00	100	10.00
Local Groundwater - Karnes City	KARNES CITY	100	10.00	100	10.00
GBRA Mid Basin Project	GBRA	0	0.00	100	10.00
NBU ASR Project	NBU	0	0.00	50	4.96
Recycled Water Strategies - Fair Oaks Non-Potable Reuse	FAIR OAKS RANCH	0	0.00	63	6.28
Recycled Water Strategies - Boerne Non-Potable Reuse Project	BOERNE	0	0.00	67	6.67
Recycled Water Strategies - County Line SUD Reuse	COUNTY LINE SUD	0	0.00	100	10.00
ARWA Phase 2	ARWA	100	10.00	100	10.00
Recycled Water Strategies - San Marcos Non-Potable Reuse	SAN MARCOS	0	0.00	0	0.00
Recycled Water Strategies - SAWS Recycled Water Program	SAWS	35	3.46	41	4.10
GBRA Victoria Count Steam Electric Project	GBRA	0	0.00	0	0.00
SSLGC Brackish Wilcox Groundwater Project	SSLGC	82	8.24	57	5.74
Facilities Expansion - CRWA Hays Caldwell WTP Expansion	CRWA	0	0.00	0	0.00
NBU Trinity Wellfield Expansion Project	NBU	92	9.21	15	1.54
Facilities Expansion - CRWA Lake Dunlap WTP Expansion	CRWA	0	0.00	0	0.00
Facilities Expansion - SAWS Western Integrated Pipeline (Phase 2)	SAWS	0	0.00	0	0.00
Facilities Expansion - Hays County Pipeline	GBRA	0	0.00	0	0.00
Local Groundwater - Floresville	FLORESVILLE	0	0.00	100	10.00
SAWS Expanded Local Carrizo Project	SAWS	60	6.04	22	2.15
Facilities Expansion - Atascosa Rural WSC Interconnect	ATASCOSA RURAL WSC	0	0.00	0	0.00
Facilities Expansion - NBU Seguin Interconnect	NBU	0	0.00	0	0.00
Facilities Expansion - NBU South WTP Expansion	NBU	0	0.00	0	0.00
Local Groundwater - El Oso WSC	EL OSO WSC	32	3.24	0	0.00
Facilities Expansion - Springs Hill WSC Lake Placid WTP Expansion	SPRINGS HILL WSC	0	0.00	0	0.00
Advanced Water Conservation - SAWS AMI Project	SAWS	0	0.00	0	0.00
CRWA Brackish Wilcox Groundwater	CRWA	0	0.00	0	0.00
Recycled Water Strategies - San Marcos Potable Reuse	SAN MARCOS	0	0.00	0	0.00
SAWS Expanded Brackish Wilcox Project	SAWS	69	6.93	72	7.19
Facilities Expansion - SAWS Expanded ASR Treatment Plant	SAWS	0	0.00	0	0.00
Facilities Expansion - CPS Direct Recycle Pipeline	SAWS	0	0.00	0	0.00
County Line SUD Brackish Edwards Project	COUNTY LINE SUD	100	10.00	100	10.00
Facilities Expansion - Springs Hill WSC Bored Pipeline Under the Guadalupe	SPRINGS HILL WSC	0	0.00	0	0.00
Count Line SUD Trinity Wellfield Project	COUNTY LINE SUD	100	10.00	87	8.69
Maxwell WSC Trinity Wellfield Project	MAXWELL WSC	0	0.00	0	0.00
Local Groundwater - DeWitt Mining	MINING, DEWITT	100	10.00	0	0.00
ARWA Phase 3	ARWA	45	4.47	32	3.16
Facilities Expansion - GBRA Western Canyon WTP Expansion	GBRA	0	0.00	0	0.00
SSWSC Brackish Wilcox Groundwater Project	SS WSC	31	3.11	27	2.71
CRWA Siesta Project	CRWA	0	0.00	0	0.00

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		Criteria 3 - Project Viability			
		5	5	30.00	250.00
Project Name	**Project Sponsor Entity**	**Uniform Standard 3C** - Is this project the only economically feasible source of new supply for the WUG, other than conservation? *[No = 0 points; Yes = 5]*	**Uniform Standard 3D** - Does this project serve multiple WUGs? *[No = 0 points; Yes = 5]*	**Criteria 3 Total Score**	***Weighted Criteria 3 Total***
GBRA Lower Basin Storage Project	GBRA	5	5	30.00	250.00
GBRA Lower Basin New Appropriation	GBRA	5	5	30.00	250.00
ARWA/GBRA Phase 1	GBRA	0	5	25.00	208.33
ARWA/GBRA Phase 1	ARWA	0	5	25.00	208.33
Local Groundwater - Pearsall	PEARSALL	5	0	25.00	208.33
CRWA Wells Ranch Project (Phase 3)	CRWA	0	5	19.35	161.23
Martindale WSC Alluvial Well Project	MARTINDALE WSC	5	0	18.08	150.64
Victoria ASR Project	VICTORIA	0	0	15.27	127.23
SSLGC Expanded Carrizo Project	SSLGC	0	5	21.88	182.37
CVLGC Carrizo Project	CVLGC	0	5	25.00	208.33
Local Groundwater - Karnes City	KARNES CITY	5	0	25.00	208.33
GBRA Mid Basin Project	GBRA	5	5	20.00	166.67
NBU ASR Project	NBU	0	0	4.96	41.29
Recycled Water Strategies - Fair Oaks Non-Potable Reuse	FAIR OAKS RANCH	5	0	11.28	94.00
Recycled Water Strategies - Boerne Non-Potable Reuse Project	BOERNE	0	0	6.67	55.58
Recycled Water Strategies - County Line SUD Reuse	COUNTY LINE SUD	0	0	10.00	83.33
ARWA Phase 2	ARWA	0	5	25.00	208.33
Recycled Water Strategies - San Marcos Non-Potable Reuse	SAN MARCOS	0	0	0.00	0.00
Recycled Water Strategies - SAWS Recycled Water Program	SAWS	0	0	7.55	62.94
GBRA Victoria Count Steam Electric Project	GBRA	5	0	5.00	41.67
SSLGC Brackish Wilcox Groundwater Project	SSLGC	0	5	18.98	158.14
Facilities Expansion - CRWA Hays Caldwell WTP Expansion	CRWA	0	5	5.00	41.67
NBU Trinity Wellfield Expansion Project	NBU	0	0	10.75	89.56
Facilities Expansion - CRWA Lake Dunlap WTP Expansion	CRWA	0	5	5.00	41.67
Facilities Expansion - SAWS Western Integrated Pipeline (Phase 2)	SAWS	0	5	5.00	41.67
Facilities Expansion - Hays County Pipeline	GBRA	0	5	5.00	41.67
Local Groundwater - Floresville	FLORESVILLE	5	0	15.00	125.00
SAWS Expanded Local Carrizo Project	SAWS	0	0	8.19	68.24
Facilities Expansion - Atascosa Rural WSC Interconnect	ATASCOSA RURAL WSC	0	5	5.00	41.67
Facilities Expansion - NBU Seguin Interconnect	NBU	0	5	5.00	41.67
Facilities Expansion - NBU South WTP Expansion	NBU	0	5	5.00	41.67
Local Groundwater - El Oso WSC	EL OSO WSC	5	0	8.24	68.69
Facilities Expansion - Springs Hill WSC Lake Placid WTP Expansion	SPRINGS HILL WSC	0	0	0.00	0.00
Advanced Water Conservation - SAWS AMI Project	SAWS	0	0	0.00	0.00
CRWA Brackish Wilcox Groundwater	CRWA	0	5	5.00	41.67
Recycled Water Strategies - San Marcos Potable Reuse	SAN MARCOS	0	0	0.00	0.00
SAWS Expanded Brackish Wilcox Project	SAWS	0	0	14.12	117.68
Facilities Expansion - SAWS Expanded ASR Treatment Plant	SAWS	0	5	5.00	41.67
Facilities Expansion - CPS Direct Recycle Pipeline	SAWS	0	0	0.00	0.00
County Line SUD Brackish Edwards Project	COUNTY LINE SUD	0	0	20.00	166.67
Facilities Expansion - Springs Hill WSC Bored Pipeline Under the Guadalupe	SPRINGS HILL WSC	0	0	0.00	0.00
Count Line SUD Trinity Wellfield Project	COUNTY LINE SUD	0	0	18.69	155.71
Maxwell WSC Trinity Wellfield Project	MAXWELL WSC	5	0	5.00	41.67
Local Groundwater - DeWitt Mining	MINING, DEWITT	5	0	15.00	125.00
ARWA Phase 3	ARWA	0	5	12.64	105.31
Facilities Expansion - GBRA Western Canyon WTP Expansion	GBRA	0	5	5.00	41.67
SSWSC Brackish Wilcox Groundwater Project	SS WSC	0	0	5.82	48.51
CRWA Siesta Project	CRWA	0	5	5.00	41.67

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		Criteria 4 - Project Sustainability			
		10	5	15	150
Project Name	**Project Sponsor Entity**	**Uniform Standard 4A** - Over what period of time is this project expected to provide water (regardless of the planning period)? *[Less than or equal to 20 yrs = 5 points; greater than 20 yrs = 10]*	**Uniform Standard 4B** - Does the volume of water supplied by the project change over the regional water planning period? *[Decreases = 0 points; no change = 3; increases = 5]*	**Criteria 4 Total Score**	***Weighted Criteria 4 Total***
GBRA Lower Basin Storage Project	GBRA	10	3	13	130
GBRA Lower Basin New Appropriation	GBRA	10	3	13	130
ARWA/GBRA Phase 1	GBRA	10	3	13	130
ARWA/GBRA Phase 1	ARWA	10	3	13	130
Local Groundwater - Pearsall	PEARSALL	10	5	15	150
CRWA Wells Ranch Project (Phase 3)	CRWA	10	5	15	150
Martindale WSC Alluvial Well Project	MARTINDALE WSC	10	3	13	130
Victoria ASR Project	VICTORIA	10	3	13	130
SSLGC Expanded Carrizo Project	SSLGC	10	3	13	130
CVLGC Carrizo Project	CVLGC	10	3	13	130
Local Groundwater - Karnes City	KARNES CITY	10	3	13	130
GBRA Mid Basin Project	GBRA	10	3	13	130
NBU ASR Project	NBU	10	3	13	130
Recycled Water Strategies - Fair Oaks Non-Potable Reuse	FAIR OAKS RANCH	10	3	13	130
Recycled Water Strategies - Boerne Non-Potable Reuse Project	BOERNE	10	3	13	130
Recycled Water Strategies - County Line SUD Reuse	COUNTY LINE SUD	10	3	13	130
ARWA Phase 2	ARWA	10	3	13	130
Recycled Water Strategies - San Marcos Non-Potable Reuse	SAN MARCOS	10	5	15	150
Recycled Water Strategies - SAWS Recycled Water Program	SAWS	10	5	15	150
GBRA Victoria Count Steam Electric Project	GBRA	10	3	13	130
SSLGC Brackish Wilcox Groundwater Project	SSLGC	10	3	13	130
Facilities Expansion - CRWA Hays Caldwell WTP Expansion	CRWA	5	3	8	80
NBU Trinity Wellfield Expansion Project	NBU	10	3	13	130
Facilities Expansion - CRWA Lake Dunlap WTP Expansion	CRWA	5	3	8	80
Facilities Expansion - SAWS Western Integrated Pipeline (Phase 2)	SAWS	5	3	8	80
Facilities Expansion - Hays County Pipeline	GBRA	5	3	8	80
Local Groundwater - Floresville	FLORESVILLE	10	5	15	150
SAWS Expanded Local Carrizo Project	SAWS	10	3	13	130
Facilities Expansion - Atascosa Rural WSC Interconnect	ATASCOSA RURAL WSC	5	3	8	80
Facilities Expansion - NBU Seguin Interconnect	NBU	5	3	8	80
Facilities Expansion - NBU South WTP Expansion	NBU	5	3	8	80
Local Groundwater - El Oso WSC	EL OSO WSC	10	3	13	130
Facilities Expansion - Springs Hill WSC Lake Placid WTP Expansion	SPRINGS HILL WSC	5	3	8	80
Advanced Water Conservation - SAWS AMI Project	SAWS	10	3	13	130
CRWA Brackish Wilcox Groundwater	CRWA	10	3	13	130
Recycled Water Strategies - San Marcos Potable Reuse	SAN MARCOS	10	5	15	150
SAWS Expanded Brackish Wilcox Project	SAWS	10	5	15	150
Facilities Expansion - SAWS Expanded ASR Treatment Plant	SAWS	5	3	8	80
Facilities Expansion - CPS Direct Recycle Pipeline	SAWS	5	3	8	80
County Line SUD Brackish Edwards Project	COUNTY LINE SUD	10	3	13	130
Facilities Expansion - Springs Hill WSC Bored Pipeline Under the Guadalupe	SPRINGS HILL WSC	5	3	8	80
Count Line SUD Trinity Wellfield Project	COUNTY LINE SUD	10	3	13	130
Maxwell WSC Trinity Wellfield Project	MAXWELL WSC	10	3	13	130
Local Groundwater - DeWitt Mining	MINING, DEWITT	10	3	13	130
ARWA Phase 3	ARWA	10	3	13	130
Facilities Expansion - GBRA Western Canyon WTP Expansion	GBRA	5	3	8	80
SSWSC Brackish Wilcox Groundwater Project	SS WSC	10	3	13	130
CRWA Siesta Project	CRWA	10	3	13	130

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		5	100	1000.00
Project Name	**Project Sponsor Entity**	**Uniform Standard 5A** - What is the expected unit cost of water supplied by this project compared to the median unit cost of all other recommended strategies in the region's current RWP? (Project's Unit Cost divided by the median project's unit cost) *[200% or greater than median = 0 points; 150% to 199% = 1; 101% to 149% = 2; 100% = 3; 51% to 99% = 4; 0% to 50% = 5]*	***Weighted Criteria 5 Total***	
GBRA Lower Basin Storage Project	GBRA	5	100	968.00
GBRA Lower Basin New Appropriation	GBRA	4	80	912.00
ARWA/GBRA Phase 1	GBRA	2	40	874.33
ARWA/GBRA Phase 1	ARWA	2	40	866.33
Local Groundwater - Pearsall	PEARSALL	4	80	854.33
CRWA Wells Ranch Project (Phase 3)	CRWA	3	60	851.23
Martindale WSC Alluvial Well Project	MARTINDALE WSC	5	100	840.64
Victoria ASR Project	VICTORIA	5	100	837.23
SSLGC Expanded Carrizo Project	SSLGC	2	40	832.37
CVLGC Carrizo Project	CVLGC	2	40	826.33
Local Groundwater - Karnes City	KARNES CITY	2	40	794.33
GBRA Mid Basin Project	GBRA	2	40	776.67
NBU ASR Project	NBU	5	100	763.29
Recycled Water Strategies - Fair Oaks Non-Potable Reuse	FAIR OAKS RANCH	5	100	756.00
Recycled Water Strategies - Boerne Non-Potable Reuse Project	BOERNE	5	100	753.58
Recycled Water Strategies - County Line SUD Reuse	COUNTY LINE SUD	4	80	745.33
ARWA Phase 2	ARWA	4	80	742.33
Recycled Water Strategies - San Marcos Non-Potable Reuse	SAN MARCOS	5	100	730.00
Recycled Water Strategies - SAWS Recycled Water Program	SAWS	5	100	728.94
GBRA Victoria Count Steam Electric Project	GBRA	5	100	723.67
SSLGC Brackish Wilcox Groundwater Project	SSLGC	4	80	720.14
Facilities Expansion - CRWA Hays Caldwell WTP Expansion	CRWA	5	100	713.67
NBU Trinity Wellfield Expansion Project	NBU	4	80	703.56
Facilities Expansion - CRWA Lake Dunlap WTP Expansion	CRWA	5	100	701.67
Facilities Expansion - SAWS Western Integrated Pipeline (Phase 2)	SAWS	5	100	701.67
Facilities Expansion - Hays County Pipeline	GBRA	5	100	685.67
Local Groundwater - Floresville	FLORESVILLE	5	100	671.00
SAWS Expanded Local Carrizo Project	SAWS	5	100	670.24
Facilities Expansion - Atascosa Rural WSC Interconnect	ATASCOSA RURAL WSC	5	100	669.67
Facilities Expansion - NBU Seguin Interconnect	NBU	5	100	657.67
Facilities Expansion - NBU South WTP Expansion	NBU	5	100	657.67
Local Groundwater - El Oso WSC	EL OSO WSC	2	40	654.69
Facilities Expansion - Springs Hill WSC Lake Placid WTP Expansion	SPRINGS HILL WSC	5	100	624.00
Advanced Water Conservation - SAWS AMI Project	SAWS	0	0	622.00
CRWA Brackish Wilcox Groundwater	CRWA	1	20	611.67
Recycled Water Strategies - San Marcos Potable Reuse	SAN MARCOS	5	100	610.00
SAWS Expanded Brackish Wilcox Project	SAWS	0	0	607.68
Facilities Expansion - SAWS Expanded ASR Treatment Plant	SAWS	5	100	605.67
Facilities Expansion - CPS Direct Recycle Pipeline	SAWS	5	100	596.00
County Line SUD Brackish Edwards Project	COUNTY LINE SUD	2	40	588.67
Facilities Expansion - Springs Hill WSC Bored Pipeline Under the Guadalupe	SPRINGS HILL WSC	5	100	576.00
Count Line SUD Trinity Wellfield Project	COUNTY LINE SUD	0	0	537.71
Maxwell WSC Trinity Wellfield Project	MAXWELL WSC	0	0	511.67
Local Groundwater - DeWitt Mining	MINING, DEWITT	5	100	491.00
ARWA Phase 3	ARWA	1	20	447.31
Facilities Expansion - GBRA Western Canyon WTP Expansion	GBRA	5	100	417.67
SSWSC Brackish Wilcox Groundwater Project	SS WSC	0	0	378.51
CRWA Siesta Project	CRWA	0	0	371.67

15. Discussion and Appropriate Action Regarding Regional Liaisons Including Roles and Responsibilities and Nominations for Regions N, J, K, M, and P

Region L
South Central Texas Regional Water Planning Group

Regional Liaison

The Role and Responsibilities of Being a Regional Liaison

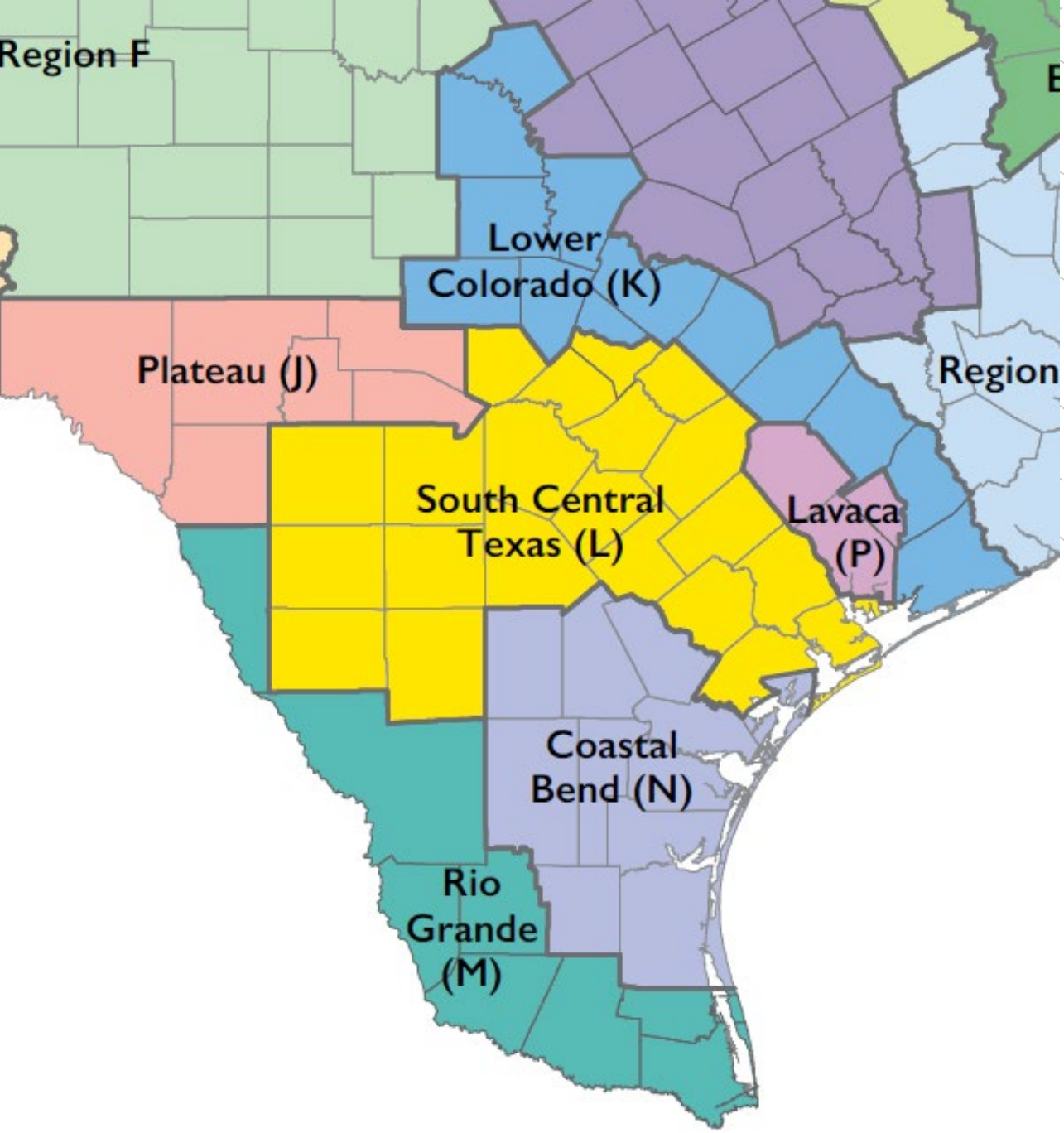
30 TAC 357.11(e)(3)

- The RWPGs shall add the following non-voting members, who shall receive meeting notifications and information in the same manner as voting members:

- (1) Staff member of the Board to be designated by the EA;
- (2) Staff member of the Texas Parks and Wildlife Department designated by its executive director;
- (3) Member designated by each adjacent RWPG to serve as a liaison;

Current Liaisons to Region L

- Region K Liaison: Ronald Fieseler
- Region M Liaison: Don McGee
- Region J Liaison: Joseph McDaniel
- Region N Liaison: Carl Crull



Regions Adjacent to Region L

Liaison Positions to Fill

- **Region K**
- **Region M**
- **Region J**
- **Region N***
- **Region P**

*John Byrum took over the Region N position from Con Mims but has not been formally confirmed by the Planning Group

Liaison Responsibilities

1. Serve as a nonvoting member of the Region you are assigned to and attend their quarterly meetings
2. Report to the Region you are assigned to on Region L activities that might affect that Region
3. Report on matters from the Region you are assigned to that may affect Region L at the Planning Group Meetings

16. Discussion and Appropriate Action Regarding Planning Members Bylaws Violation

Region L Bylaws, Article V, Section 5:

All members shall make a good faith effort to attend all SCTRWPG meetings and hearings. Records of attendance shall be kept by the Secretary at all SCTRWPG meetings and hearings and presented as part of the minutes. Voting members of the SCTRWPG who have missed three consecutive regular meetings, or at least one-half of all meetings in the preceding twelve months, shall be considered to have engaged in excessive absenteeism and are subject to removal from membership under Section 7 of this Article. The Planning Group shall notify any Groundwater Management Area of excessive absenteeism, as defined in this section, of a member appointed by that Groundwater Management Area under Texas Water Code §16.053(c) and request its consideration of replacing that member. Members are encouraged to notify the Chair if they will miss a meeting and/or send a designated alternate.

17. Possible Agenda Items for the Next Region L Meeting
    a. Discussion and Appropriate Action to Adopt the Project Prioritization
    b. Discussion and Appropriate Action to Authorize the San Antonio River Authority to Submit the Project Prioritization to TWDB
    c. Discussion and Appropriate Action to Adopt and Submit the 2021 Regional Water Plan
    d. Discussion and Appropriate Action to Authorize the San Antonio River Authority to Submit the 2021 Regional Water Plan to TWDB

18. Public Comment