

NOTICE OF OPEN MEETING OF THE
SOUTH CENTRAL TEXAS REGIONAL
WATER PLANNING GROUP
RURAL COMMUNITY OUTREACH WORK GROUP

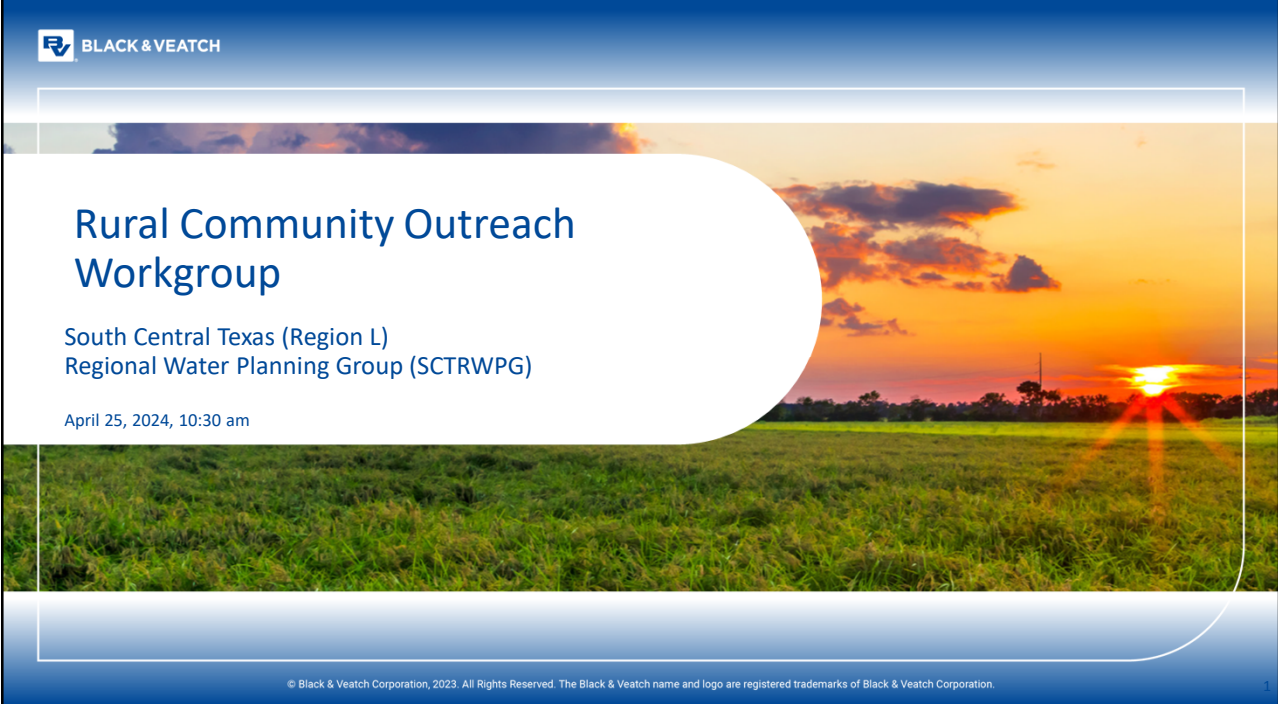
TAKE NOTICE that a meeting of the Rural Community Outreach Work Group, as established by the South-Central Texas Regional Water Planning Group (SCTRWPG), will be held on Thursday, April 25, 2024 at 10:30 AM both in person and virtually. The in-person meeting will be held at the San Antonio River Authority, 100 E. Guenther Street, San Antonio, TX 78204. You can attend virtually on GotoMeeting at <https://meet.goto.com/241760661>. The following subjects will be considered for discussion and/or action at said meeting.

1. Presentation Regarding Water Management Strategies and How to Add Them into the 2026 Plan
 - a. Define what WMSs are
 - b. Describe process for getting information into the plan as a WMS
 - c. Review deadlines for submitting WMS info and presenting to/getting approval from RWPG

2. Review and Discussion Regarding Water Management Strategies for Rural Communities
 - a. Agricultural Conservation Strategy
 - i. Metering and Reporting
 - ii. Demands and Needs
 - iii. Crops Grown in Region L
 - iv. Irrigation System Types in Region L
 - v. Example WMSs from other regions
 - vi. Identify a path forward for Agricultural Conservation WMSs in Region L
 - b. Mining Recycled Water Strategy
 - c. Brush Management
 - d. Other Strategies

3. Open Discussion

Comments and submissions may be submitted through email to ccastillo@sariverauthority.org. Any written documentation can be sent to Tim Andruss, Chair, South Central Texas Regional Water Planning Group, c/o San Antonio River Authority, Attn: Caye Castillo, 100 E. Guenther Street, San Antonio, TX 78204. Please direct any questions to Caye Castillo at (210) 302-4258.



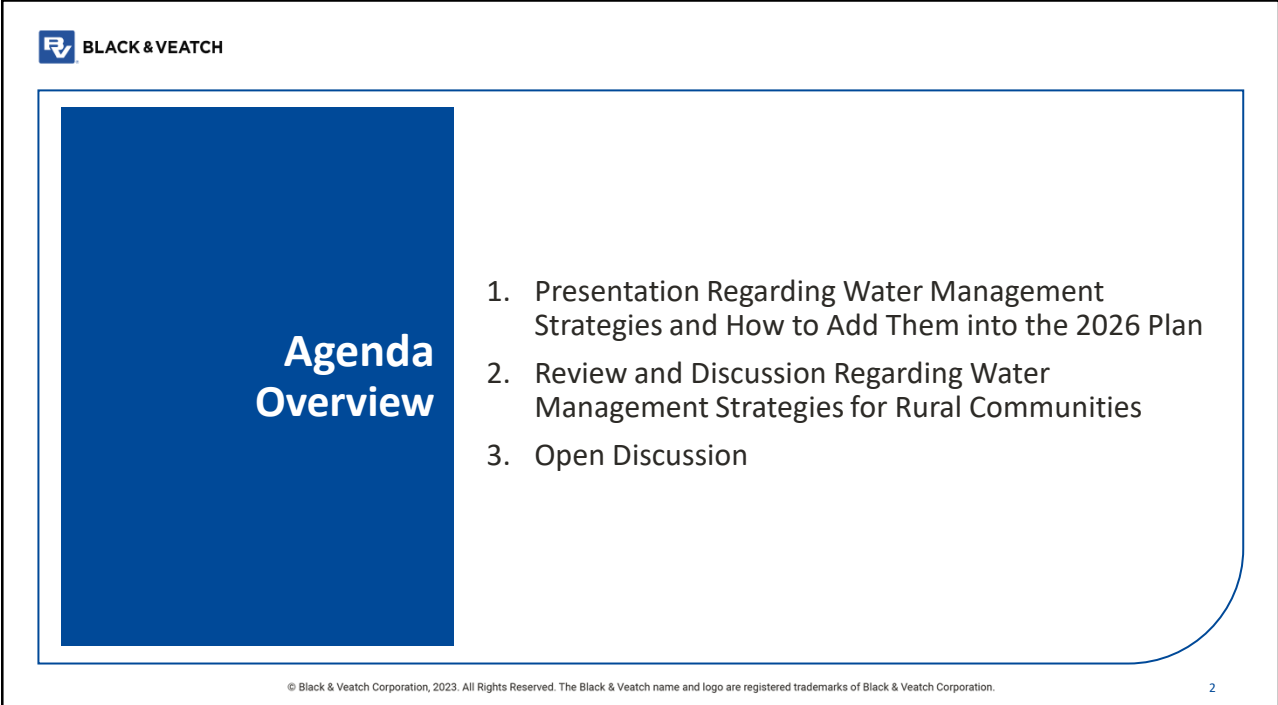
BLACK & VEATCH

Rural Community Outreach Workgroup

South Central Texas (Region L)
Regional Water Planning Group (SCTRWPG)

April 25, 2024, 10:30 am

© Black & Veatch Corporation, 2023. All Rights Reserved. The Black & Veatch name and logo are registered trademarks of Black & Veatch Corporation.



BLACK & VEATCH

Agenda Overview

1. Presentation Regarding Water Management Strategies and How to Add Them into the 2026 Plan
2. Review and Discussion Regarding Water Management Strategies for Rural Communities
3. Open Discussion

© Black & Veatch Corporation, 2023. All Rights Reserved. The Black & Veatch name and logo are registered trademarks of Black & Veatch Corporation.

Agenda Item 1: Presentation Regarding Water Management Strategies and How to Add Them into the 2026 Plan

Stakeholder Input on Water Management Strategies



Water Management Strategy (WMS)

A plan to meet a need for additional water by a discrete Water User Group, which can mean increasing the total water supply or maximizing an existing supply, including through reducing demands.

- To add a WMS to the 2026 Regional Water Plan, WUGs can:
 - Provide initial, conceptual information to Region L's Technical Consultant
 - Consultant will either evaluate the WMS or get approval from the RWPG to allocate funds to evaluate the WMS
 - Consultant will evaluate the WMS and present to the RWPG
- Region L's Technical Consultant Information:
 - Lauren Gonzalez
GonzalezL@bv.com
 512-782-4914

Stakeholder Input on Water Management Strategies

Have a project planned, but no identified water needs?

A WUG without identified water needs may request inclusion of a WMS or WMSP.

The project sponsor should provide sufficient detail so that the WMS/WMSP can be evaluated per TWDB requirements.

Generally, WMSs are included in Regional Water Plans to meet projected water needs

It Pays to have your WMS recommended in the Plan

Certain types of State Funding are only eligible if a project is included in Regional & State Water Plans

Black & Veatch

5

List of WMSs Identified to Date

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

6

List of WMSs Identified to Date

1. Advanced Water Conservation
2. Non-municipal Water Conservation
3. Drought Management
4. Edwards Transfers
5. Fresh Groundwater Development
6. Brackish Groundwater Development
7. Groundwater Conversions
8. Surface Water Rights
9. Balancing Storage
10. Facilities Expansion
11. Recycled Water Strategies

Examples:

- Advanced Meter Infrastructure (AMI)
- Incentivized installation of water-efficient plumbing fixtures
- Stronger water conservation pricing structures that discourage waste
- Education programs
- Year-round landscape irrigation restrictions

12. NBU Trinity Well Field Expansion
13. WWS Regional Wilcox Project
14. WWS Expanded Local Carrizo Project
15. WWS Expanded Brackish Groundwater Project
17. CRWA Siesta Project
18. CRWA Expanded Brackish Carrizo-Wilcox Project
19. CVLGC Carrizo Project
20. GBRA WaterSECURE
21. GBRA Lower Basin New Appropriation
22. NBU ASR
27. SSLGC Expanded Carrizo Project
28. SSLGC Expanded Brackish Wilcox Project
29. City of Victoria ASR
30. City of Victoria Groundwater-Surface Water Exchange
31. Additional WMSs, As Necessary

7

List of WMSs Identified to Date

1. Advanced Water Conservation
2. Non-municipal Water Conservation
3. Drought Management
4. Edwards Transfers
5. Fresh Groundwater Development
6. Brackish Groundwater Development
7. Groundwater Conversions
8. Surface Water Rights
9. Balancing Storage
10. Facilities Expansion
11. Recycled Water Strategies

Examples:

- Agriculture:
 - Conversion to Low Energy Precision Application systems and irrigation scheduling
 - Other changes to irrigation methods, equipment, and crops

12. NBU Trinity Well Field Expansion
13. WWS Regional Wilcox Project
14. WWS Expanded Local Carrizo Project
15. WWS Expanded Brackish Groundwater Project
17. CRWA Siesta Project
18. CRWA Expanded Brackish Carrizo-Wilcox Project
19. CVLGC Carrizo Project
20. GBRA WaterSECURE
21. GBRA Lower Basin New Appropriation
22. NBU ASR
27. SSLGC Expanded Carrizo Project
28. SSLGC Expanded Brackish Wilcox Project
29. City of Victoria ASR
30. City of Victoria Groundwater-Surface Water Exchange
31. Additional WMSs, As Necessary

8

List of WMSs Identified to Date

<ol style="list-style-type: none"> 1. Advanced Water Conservation 2. Non-municipal Water Conservation 3. Drought Management 4. Edwards Transfers 5. Fresh Groundwater Development 6. Brackish Groundwater Development 7. Groundwater Conversions 8. Surface Water Rights 9. Balancing Storage 10. Facilities Expansion 11. Recycled Water Strategies 	<ol style="list-style-type: none"> 12. Brush Management 13. Rainwater Harvesting 14. ARWA Project (Phase 2) 15. ARWA Project (Phase 3) 16. CRWA Wells Ranch (Phase 3) 17. CRWA Siesta Project 18. CRWA Expanded Brackish Carrizo-Wilcox Project 19. CVLGC Carrizo Project 20. GBRA WaterSECURE 21. GBRA Lower Basin New Appropriation 22. NBU ASR 	<ol style="list-style-type: none"> 23. NBU Trinity Well Field Expansion 24. SAWS Regional Wilcox Project 25. SAWS Expanded Local Carrizo Project 26. SAWS Expanded Brackish Groundwater Project 27. SSLGC Expanded Carrizo Project 28. SSLGC Expanded Brackish Wilcox Project 29. City of Victoria ASR 30. City of Victoria Groundwater-Surface Water Exchange 31. Additional WMSs, As Necessary
---	--	---

Examples:

- New fresh or brackish groundwater wells and associated infrastructure

9

List of WMSs Identified to Date

<ol style="list-style-type: none"> 1. Advanced Water Conservation 2. Non-municipal Water Conservation 3. Drought Management 4. Edwards Transfers 5. Fresh Groundwater Development 6. Brackish Groundwater Development 7. Groundwater Conversions 8. Surface Water Rights 9. Balancing Storage 10. Facilities Expansion 11. Recycled Water Strategies 	<ol style="list-style-type: none"> 12. Brush Management 13. Rainwater Harvesting 14. ARWA Project (Phase 2) 15. ARWA Project (Phase 3) 16. CRWA Wells Ranch (Phase 3) 17. CRWA Siesta Project 18. CRWA Expanded Brackish Carrizo-Wilcox Project 19. CVLGC Carrizo Project 20. GBRA WaterSECURE 21. GBRA Lower Basin New Appropriation 22. NBU ASR 	<ol style="list-style-type: none"> 23. NBU Trinity Well Field Expansion 24. SAWS Regional Wilcox Project 25. SAWS Expanded Local Carrizo Project 26. SAWS Expanded Brackish Groundwater Project 27. SSLGC Expanded Carrizo Project 28. SSLGC Expanded Brackish Wilcox Project 29. City of Victoria ASR 30. City of Victoria Groundwater-Surface Water Exchange 31. Additional WMSs, As Necessary
---	--	---

Examples:


- Water treatment plant expansion
- Expanded intake structures
- Expanded raw water transmission facilities

10

Schedule for Providing Project Information

Activity	Date	
Initiate process to add a new project or WMS	July 1, 2024	Technical Consultant Information to Add a WMS: Lauren Gonzalez GonzalezL@bv.com 512-782-4914
Provide all information to Technical Consultant for WMS evaluation	September 2, 2024	
Presentation to RWPG of all WMSs	November 7, 2024	

We cannot guarantee we will be able to include a WMS in the 2026 Plan if information is provided after the deadlines

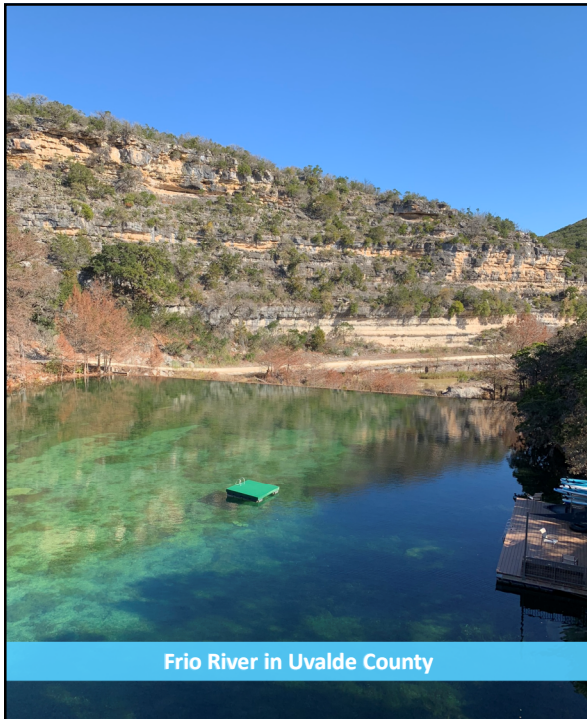

4/25/2024

Agenda Item 2: Review and Discussion Regarding Water Management Strategies for Rural Communities

© Black & Veatch Corporation, 2023. All Rights Reserved. The Black & Veatch name and logo are registered trademarks of Black & Veatch Corporation.

Potential WMSs to Meet Rural Needs

1. Advanced Water Conservation
2. Non-municipal Water Conservation
3. Drought Management
4. Edwards Transfers
5. Fresh Groundwater Development
6. Brackish Groundwater Development
7. Groundwater Conversions
8. Facilities Expansion
9. Recycled Water Strategies
10. Brush Management
11. Rainwater Harvesting



Frio River in Uvalde County

ADDRESS UNMET IRRIGATION NEEDS

2021 Region L Plan:

- 15 counties with 137,000 acft/yr of irrigation unmet needs
- Majority of needs are in the Nueces River Basin (103,000 acft/yr)

Solutions:

- Outreach Initiative
- Workgroup to Develop WMSs
 - Conservation Strategies
 - Drought Management Strategies

a. Agricultural Conservation

a. Agricultural Conservation

i. Metering and Reporting

Discussion:

- What are the predominant methods for:
 - Use metering?
 - Reporting?
- Do these vary by GCD or GMA?
- Does anyone use real-time use metering and monitoring?

a. Agricultural Conservation ii. Demands and Needs (1 of 3)

Entity Name	County	Basin	Demand 2030 (AFY)	Demand 2080 (AFY)	Draft Needs 2030 (AFY)	Draft Needs 2080 (AFY)
Irrigation, Atascosa	Atascosa	Nueces	25,188	25,188	-	-
Irrigation, Atascosa	Atascosa	San Antonio	253	253	-	-
Irrigation, Bexar	Bexar	Nueces	1,291	1,291	-	-
Irrigation, Bexar	Bexar	San Antonio	10,460	10,460	1,873	1,873
Irrigation, Caldwell	Caldwell	Colorado	19	19	19	19
Irrigation, Caldwell	Caldwell	Guadalupe	661	661	-	-
Irrigation, Calhoun	Calhoun	Colorado-Lavaca	525	525	-	-
Irrigation, Calhoun	Calhoun	Lavaca-Guadalupe	9,935	9,935	9,173	9,173
Irrigation, Comal	Comal	Guadalupe	533	533	-	-
Irrigation, Comal	Comal	San Antonio	58	58	-	-
Irrigation, DeWitt	DeWitt	Guadalupe	206	206	-	-
Irrigation, DeWitt	DeWitt	Lavaca	337	337	-	-
Irrigation, DeWitt	DeWitt	Lavaca-Guadalupe	6	6	-	-
Irrigation, DeWitt	DeWitt	San Antonio	41	41	-	-
Irrigation, Dimmit	Dimmit	Nueces	4,192	4,192	3,917	3,917
Irrigation, Dimmit	Dimmit	Rio Grande	497	497	419	419

a. Agricultural Conservation ii. Demands and Needs (2 of 3)

Entity Name	County	Basin	Demand 2030 (AFY)	Demand 2080 (AFY)	Draft Needs 2030 (AFY)	Draft Needs 2080 (AFY)
Irrigation, Frio	Frio	Nueces	70,567	70,567	-	-
Irrigation, Goliad	Goliad	Guadalupe	554	554	4	-
Irrigation, Goliad	Goliad	San Antonio	2,172	2,172	184	-
Irrigation, Goliad	Goliad	San Antonio-Nueces	400	400	-	-
Irrigation, Gonzales	Gonzales	Guadalupe	4,478	4,478	-	-
Irrigation, Guadalupe	Guadalupe	Guadalupe	764	764	20	20
Irrigation, Guadalupe	Guadalupe	San Antonio	178	178	-	-
Irrigation, Hays	Hays	Guadalupe	130	130	-	-
Irrigation, Karnes	Karnes	Guadalupe	46	46	-	-
Irrigation, Karnes	Karnes	Nueces	78	78	78	78
Irrigation, Karnes	Karnes	San Antonio	759	759	100	659
Irrigation, Karnes	Karnes	San Antonio-Nueces	32	32	7	7
Irrigation, Kendall	Kendall	Guadalupe	370	370	-	-
Irrigation, Kendall	Kendall	San Antonio	91	91	-	-
Irrigation, La Salle	La Salle	Nueces	4,461	4,461	413	413

a. Agricultural Conservation
ii. Demands and Needs (3 of 3)

Entity Name	County	Basin	Demand 2030 (AFY)	Demand 2080 (AFY)	Draft Needs 2030 (AFY)	Draft Needs 2080 (AFY)
Irrigation, Medina	Medina	Nueces	47,191	47,191	21,423	21,770
Irrigation, Medina	Medina	San Antonio	7,618	7,618	526	526
Irrigation, Refugio	Refugio	San Antonio-Nueces	867	867	-	-
Irrigation, Uvalde	Uvalde	Nueces	52,703	52,703	18,480	18,480
Irrigation, Victoria	Victoria	Guadalupe	1,331	1,331	200	200
Irrigation, Victoria	Victoria	Lavaca-Guadalupe	9,761	9,761	-	-
Irrigation, Wilson	Wilson	Nueces	5,801	5,801	-	-
Irrigation, Wilson	Wilson	San Antonio	7,517	7,517	331	331
Irrigation, Zavala	Zavala	Nueces	42,574	42,574	14,189	14,189

a. Agricultural Conservation

iii. Crops Grown in Region L

Major Crops Grown in Region L:

- Corn
- Grain sorghum
- Wheat
- Rice (in Victoria County)
- Cotton
- Soybeans
- Hay/Alfalfa

Source: 2017 USDA Census

COUNTY	CORN (BUSHEL)	GRAIN SORGHUM (BUSHEL)	WHEAT (BUSHEL)	RICE (100 POUNDS)	COTTON (BALES)	SOYBEANS (BUSHEL)	HAY, ALFALFA, OTHER (TONS)
Atascosa	135,917	78,469	50,759	0	5,517	0	58,244
Bexar	665,904	428,000	127,507	0	2,570	0	45,762
Caldwell	1,702,331	481,899	49,124	0	9,096	(D)	29,859
Calhoun	1,527,148	853,856	0	(D)	30,877	50,521	6,851
Comal	25,250	(D)	3,710	0	0	0	7,444
DeWitt	598,963	(D)		0	0	(D)	52,647
Dimmit	(D)	(D)	(D)	0	(D)	(D)	4,909
Frio	1,338,621	153,938	477,952	0	16,549	57,600	37,670
Goliad	797,255	127,144	0	0	(D)	0	15,278
Gonzales	383,037	15,866	3,676	0	(D)	0	57,417
Guadalupe	1,965,212	991,324	73,455	0	1,686	0	57,261
Hays (part) ¹	232,061	67,991	3,348	0	1,668	0	4,358
Karnes	1,102,107	346,780	57,117	0	6,166	0	50,526
Kendall	18,000	(D)	(D)	0	0	11,700	0
La Salle	(D)	(D)	0	0	0	0	3,615
Medina	2,694,597	331,827	323,143	0	41,141	0	52,197
Refugio	313,962	1,994,908	(D)	0	39,714	0	5,869
Uvalde	2,352,983	421,146	365,732	0	34,735	0	9,711
Victoria	3,115,357	1,090,155	(D)	269,370	37,131	243,537	23,484
Wilson	860,689	379,637	51,770	0	8,379	(D)	56,039
Zavala	1,104,854	214,665	333,464	0	19,746	0	21,273
Total	20,934,248	7,977,605	1,920,757	269,370	254,975	363,358	600,414
	+(2D)	+(5D)	+(4D)	+(D)	+(D)	+(3D)	

¹ Estimate for that portion of Hays County located in the planning region (50%).
(D) – Withheld to avoid disclosing data for individual producers.

a. Agricultural Conservation

iv. Irrigation System Types in Region L

Typical Irrigation Systems

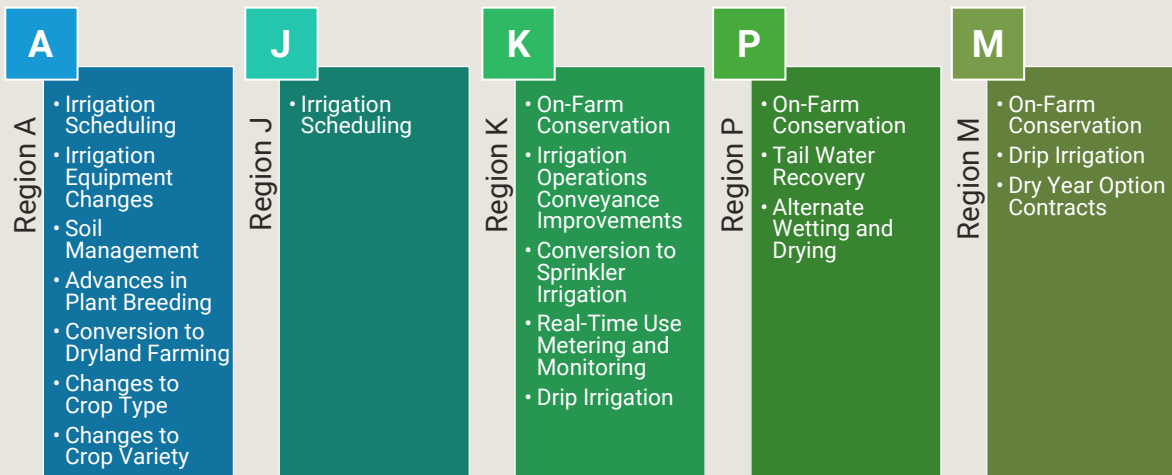
1. Surface Irrigation
 - a. Spray Irrigation
 - b. Furrow Irrigation
 - c. Flood Irrigation
2. Micro-irrigation Drip Irrigation
 - a. Surface Drip Irrigation
 - b. Subsurface Drip Irrigation
 - c. Microspray Irrigation

Example Management Practices

1. Shorten Irrigated Field Length
2. Irrigation Scheduling
 - a. Deficit Irrigation
 - b. Full-Deficit Irrigation
 - c. Historic or Real-time Weather/ET
3. Alternate Furrow Irrigation
4. Land Leveling & Grading
5. Surge Irrigation
6. Soil Moisture Management (scheduling based on soil or plant measurements)

a. Agricultural Conservation

v. Example WMSs from Other Regions



Other Potential Strategies

1. Conversion of Supplemental Irrigated Farmland to Dry-Land Farmland
2. Narrow Border Flooding
3. Partial Root-zone Drying
4. Alternative Water Supplies
5. SCADA & Automated Gates

a. Agricultural Conservation vi. Identify Path Forward

- Determine which conservation measures are appropriate for each county with needs, based on crop types and need
- Develop methodology to determine water savings (yield) and costs
- Evaluate impacts of strategies on natural resources

Counties with Irrigation Needs

- | | |
|--------------|--------------|
| 1. Bexar | 8. La Salle |
| 2. Caldwell | 9. Medina |
| 3. Calhoun | 10. Uvalde |
| 4. Dimmit | 11. Victoria |
| 5. Goliad | 12. Wilson |
| 6. Guadalupe | 13. Zavala |
| 7. Karnes | |

Counties with Livestock Needs

1. Bexar
2. Goliad
3. Karnes

b. Mining Recycled Water

- Strategy Description: Water reuse (also commonly known as water recycling or water reclamation) reclaims water from a variety of sources then treats and reuses it for beneficial purposes
- Goal: Estimate recycled water use for oil and gas exempt water users who are not required to submit a TWDB Water Use Survey
- Potential Approach:
 - Determine historical non-surveyed water use estimates for mining from TWDB by County
 - Determine percent reclaimed water use from the 2022 TWDB Mining Water Use Study
 - Use the information gathered to estimate recycled water use for each county and basin.

c. Brush Management

- Strategy Description: Selective control of brush species to reduce evapotranspiration, resulting in increase to surface and groundwater supplies (yield).
- Goal: Estimate
- Potential Approach:
 - Coordinate with Texas State Soil & Water Conservation Board to assist with determining methods and costs associated with brush management

d. Other Strategies

Discussion

- Are there other strategies to consider including in the Plan that would be beneficial for rural communities?

Agenda Item 3: Open Discussion