REGULAR BOARD MEETING
GONZALES COUNTY UNDERGROUND WATER CONSERVATION DISTRICT
MEETING OF THE BOARD OF DIRECTORS

The Directors of the Gonzales County Underground Water Conservation District will meet in a public session on September 10, 2024, immediately following the public hearing at 5:30 p.m., at the Gonzales County Underground Water Conservation District Office located at 522 Saint Matthew Street, Gonzales, Texas.

Note: Members of the public wishing to comment **must** attend the meeting in-person. However, any person may view or listen to the meeting via audio and video conference call. No participation or public comments will be allowed via video or conference call. The Audio and Video Conference Opens 5 minutes before the 5:30 p.m. beginning of the meeting.

GCUWCD September 10, 2024, Public Hearing Proposed Tax Rate and Regular Board Meeting
Sep 10, 2024, 5:30 – 7:30 PM (America/Chicago)
Please join my meeting from your computer, tablet or smartphone.
https://meet.goto.com/645742965
You can also dial in using your phone.
Access Code: 645-742-965
United States (Toll Free): 1 877 309 2073
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POSTED
SEP 04 2024
1:15 pm
LONA ACKMAN
COUNTY CLERK, GONZALES COUNTY TEXAS
BY Laurie Cook DEPUTY

The agenda is as follows:

1. Call to Order.
2. Public Comments. Limit to 3 minutes per person.
3. Consent Agenda (Note: These items may be considered and approved by one motion of the Board. Directors may request to have any consent item removed from the consent agenda for consideration and possible action as a separate agenda item):
    a. Approval of minutes of August 13, 2024, Public Hearing.
    b. Approval of minutes of August 13, 2024, Regular Board Meeting.
    c. Approval of the Financial Report.
    d. Approval of the District's bills to be paid.
    e. Approval of the Mitigation Fund bills to be paid.
    f. Approval of District Manager, Administrative Staff, Board Member, Field Technician, and Mitigation Manager Expenses.
    g. Approval of Manager's Report (monthly report, transporter usage, drought index).
    h. Approval of Well Mitigation Manager's Report (well mitigation progress).
    i. Approval of Field Technician's Report (well registrations, water levels, water quality).
4. Discuss and possibly take action on any item removed from Consent Agenda.
5. Discuss and possibly take action on a resolution for a moratorium on new permits and permit amendments until the draft rules are adopted.
6. Discuss and possibly take action on setting the tax rate for the 2024 – 2025 fiscal year.
7. Discus and possibly take action on revisions to the District's fiscal year 2023 – 2024 budget
8. Discuss and possibly take action on the District's fiscal year 2024 – 2025 Budget.
9. Discuss and possibly take action on the District's Western Mitigation Fund fiscal year 2024 – 2025 budget.
10. Discuss and possibly take action on the District's Eastern Mitigation Fund fiscal year 2024 – 2025 budget.
11. Discuss and possibly take action on the scheduling of a draft District Rule amendment workshop.
12. Discuss and possibly take action on draft District Rule amendments.

REGULAR BOARD MEETING
GONZALES COUNTY UNDERGROUND WATER CONSERVATION DISTRICT
MEETING OF THE BOARD OF DIRECTORS

12. Discuss and possibly take action on draft District Rule amendments.
13. Executive session pursuant to § 551.074 Government Code for personnel matters.
14. Discus and possibly take action on the agenda layout, and general board policies regarding virtual public comments.
15. Discuss and take action on a permit renewal for an irrigation well in the Carrizo Aquifer for E.P. Valley.
16. Discuss and take action on a permit renewal for an irrigation well in the Carrizo Aquifer for Mr. Troy Kisner.
17. Discuss and take action on a permit renewal for an industrial well in the Carrizo Aquifer for Seger Family Investments, LLC.
18. Presentation on website navigation.
19. Presentation of legislative/legal updates from legal counsel.
20. Discussion of other items of interest by the Board and direction to management based on the items set forth above.
21. Adjourn.

The above agenda schedule represents an estimate of the order for the indicated items and is subject to change at any time. These public meetings are available to all persons regardless of disability. If you require special assistance to attend the meeting, please call 830.672.1047 at least 24 hours in advance of the meeting to coordinate any special physical access arrangements.

At any time during the meeting and in compliance with the Texas Open Meetings Act, Chapter 551, Government Code, Vernon's Texas Codes, Annotated, the Gonzales County Underground Water Conservation District Board may meet in executive session on any of the above agenda items or other lawful items for consultation concerning attorney-client matters (§ 551.071); deliberation regarding real property (§ 551.072); deliberation regarding prospective gift (§ 551.073); personnel matters (§ 551.074); and deliberation regarding security devices (§ 551.076). Any subject discussed in executive session may be subject to action during an open meeting.

POSTED THIS THE 4th DAY OF SEPTEMBER 2024 AT _____ O'CLOCK by _____.

Gonzales County Underground Water Conservation District
Minutes of the Board of Directors
August 13, 2024
Public Hearing Draft Rules

Call to Order
The Board of Directors of the Gonzales County Underground Water Conservation District (the District) called a public hearing regarding the District's Draft Rules. The meeting was called to order at 5:31 PM. Present for the meeting were directors: Mr. Barry Miller, Mr. Mark Ainsworth, Mr. Michael St. John, Mr. Bruce Tieken. Mr. Glenn Glass was not in attendance. Also present for the meeting was GCUWCD General Manager Ms. Laura Martin, and legal counsel, Mr. Gregory Ellis. Other Attendees included: (See Attached List)

President of the Board to make comments
None.

Receive comments from the public on the District's proposed Draft Rules.
Ms. Sally Ploeger, landowner made a public comment, then Ms. Ploeger made a public comment on behalf of Mr. Ted Boriack, landowner who was not in attendance. Mr. Graham Moore, Alliance Regional Water Authority, Mr. Charlie Hickman, Guadalupe-Blanco River Authority, and Ms. Trish Carls, Canyon Regional Water Authority, made public comments. A recording of the board meeting and comments received are filed at the District office and on the District website.

Discussion of other items of interest by the Board and direction to management based on the items set forth above.
None.

Adjourn
A motion was made by Mr. Barry Miller to adjourn the meeting, and Mr. Michael St. John seconded the motion. The motion passed unanimously. The meeting adjourned at 5:50 PM.

Approved By:

_____
September 10, 2024

HS

Gonzales County Underground Water Conservation District
Minutes of the Board of Directors
August 13, 2024
Regular Board Meeting

The regular meeting of the Board of Directors of the Gonzales County Underground Water Conservation District (the District) was called to order. Present for the meeting were directors: Mr. Bruce Tieken, Mr. Barry Miller, Mr. Mark Ainsworth, and Mr. Michael St. John. Mr. Glenn Glass was not in attendance Also present for the meeting were GCUWCD General Manager Ms. Laura Martin, and Legal Counsel Mr. Gregory Ellis. Other Attendees included: (See Attached List)

Call to Order.
The President of the Board called the meeting to order at 5:51 PM.

Public Comments. Limit to 3 minutes per person.
Ms. Sally Ploeger, landowner, made a public comment. A recording of the board meeting and comments received are filed at the District office and on the District website.

Consent Agenda (Note: These items may be considered and approved by one motion of the Board. Directors may request to have any consent item removed from the consent agenda for consideration and possible action as a separate agenda item):

a. **Approval of minutes of July 09, 2024, Regular Board Meeting.**
b. **Approval of the Financial Report.**
c. **Approval of the District's bills to be paid.**
d. **Approval of the Mitigation Fund bills to be paid.**
e. **Approval of District Manager, Administrative Staff, Board Member, Field Technician, Mitigation Manager Expenses.**
f. **Approval of Manager's Report (monthly report, transporter usage, drought index).**
g. **Approval of Well Mitigation Manager's Report (well mitigation progress).**
h. **Approval of Field Technician Report (monthly report).**

The consent agenda was reviewed by the Board of Directors. Mr. Barry Miller made a motion to approve the consent agenda. Mr. Mark Ainsworth seconded the motion. The motion passed unanimously.

Discuss and possibly take action on any item removed from Consent Agenda.
None.

Discuss and possibly take action on Receipt of the Certification of 2023 Appraisal Rolls for Gonzales and Caldwell Counties.
The Board of Directors received the 2023 Appraisal Rolls for Gonzales and Caldwell Counties. Mr. Ainsworth made a motion to accept and receive the Appraisal Rolls for Gonzales and Caldwell Counties. Mr. Michael St. John seconded the motion. The motion passed unanimously.

Discuss and possibly take action on revisions of the District's fiscal year 2023-2024 budget.
No action taken.

Executive session pursuant to §551.074 Government Code for discussion of personnel matters.
No action taken.

Discuss and possibly take action on the District's fiscal year 2024-2025 budget.
No action taken.

Discuss and possibly take action on setting Proposed Tax Rate for the District.
The General Manager and Board of Directors discussed the tax rate, and the rollback rate. Mr. Miller made a motion to set a proposed tax rate of 0.002817%. Mr. St. John seconded the motion. The motion passed unanimously.

Discuss and possibly take action on the Western Mitigation Fund fiscal year 2024-2025 budget.
No action taken at this time.

Discuss and possibly take action on the Eastern Mitigation Fund fiscal year 2024-2025 budget.
No action taken at this time.

Discuss and possibly take action on renewal of CD #8549 at Sage Capital Bank expiring on August 14, 2024.
The General Manager and Board of Directors discussed the various rates offered from the local banks on Certificates of Deposit over $100,000. Mr. Miller made a motion to rollover CD#8549 into a Sage Capital Bank of Gonzales for 12 months at a 5.00% rate. Mr. St. John seconded the motion. The motion passed unanimously.

Discuss and possibly take action on adopting the GCUWCD Draft Rules.
No action was taken at this time.

Discuss and take action on a permit renewal for an irrigation well in the Carrizo Aquifer for well owners Ms. Sally Ploeger, Mr. Mark Ploeger, and Mrs. Mary Ann Menning.
The General Manager and the Board of Directors discussed the permit renewal to approve the permit renewal for an irrigation well in the Carrizo City Aquifer for Ms. Sally Ploeger, Mr. Mark Ploeger, and Mrs. Mary Ann Menning. Mr. Ainsworth made a motion to renew the permit. Mr. Bruce Tieken seconded the motion. The motion passed unanimously.

Discuss and take action on a permit renewal for Schertz-Seguin Local Government Corporation for Carrizo wells #1-12.
The General Manager and the Board of Directors discussed approving the permit renewal for Schertz-Seguin Local Government Corporation for Carrizo wells #1-12. Mr. Ainsworth made a motion to approve the permit renewal. Mr. St. John seconded the motion. The motion passed unanimously.

Discuss and possibly take action on a Bank Resolution to update bank signatures.
Mr. Miller made a motion to pass the bank resolution to update all bank signature cards with the current board members. Mr. Tieken seconded the motion. The motion passed unanimously.

Discuss and take action on a resolution adopting the revised Management Plan.
Mr. Miller made a motion to adopt and submit the revised Management Plan. Mr. St. John seconded the motion. The motion passed unanimously.

Presentation of legislative/legal updates from legal counsel.
Mr. Greg Ellis discussed Legislative and legal updates.

Discussion of other items of interest by the Board and direction to management based on the items set forth above.
Discussion took place about the S.O.A.H. preliminary hearing timeline. No action was taken.

Adjourn:
A motion was made by Mr. Ainsworth to adjourn the meeting and Mr. St. John seconded the motion. The motion passed unanimously. The meeting adjourned at 7:03 PM.

Approved By:

_____
September 10, 2024

HS

Gonzales County Underground Water Conservation District
Investment Report
September 10, 2024

CD Information - District Funds

Account	Place	Purchase Date	Purchase Value	Interest Rate	Maturity Date	As of	Amount
CD #11	Sage Capital Bank	8/4/2023	$152,818.77	5.15%	2/4/2025	8/31/2024	$179,869.14
CD #365	Randolph Brooks FCU	3/28/2023	$271,523.86	4.50%	9/28/2024	8/31/2024	$271,589.47
CD #49	Sage Capital Bank	8/14/2024	$250,000.00	5.00%	8/14/2025	8/31/2024	$285,521.75
					Total CD's to Date		**$736,980.36**
Market Comparisons							
	Tex Pool			5.27%		9/5/2024	
	6 Mo. Treasury Yield			4.74%		9/5/2024	

Banking Information - District Funds

Account	Place	As of	Amount
#59 Money Market	Sage Capital Bank	8/31/2024	$1,397,804.80
#61 Operating	Sage Capital Bank	8/31/2024	$23,499.32
#356 Savings	Randolph Brooks	8/31/2024	$1.00
	Total Cash to Date		**$1,421,305.12**

Banking Information - Western Mitigation Fund

Account	Place	As of	Amount
#35 Money Market	Sage Capital Bank	8/31/2024	$216,848.73
#70 Operating	Sage Capital Bank	8/31/2024	$2,132.93
	Total Cash to Date		**$218,981.66**

Banking Information - Eastern Mitigation Fund

Account	Place	As of	Amount
#64 Money Market	Sage Capital Bank	8/31/2024	$280,882.19
#98 Operating	Sage Capital Bank	8/31/2024	$2,134.03
	Total Cash to Date		**$283,016.22**

Weighted Average Maturity (WAM) **$2,660,283.36**

Using the Current Date and Maturity Date: Weighted Average Maturity (WAM) =

The overall sum of each security's par amount multiplied by its number of days to maturity, divided by the total of all investments.

Security Description	Investment Amount	CD Start Date	Reprting Period Date	Mat. Date	Mat. in Days (DTM)	WAM	CD Term
Sage Capital CD #11	$179,869.14	8/4/2023	8/31/2024	2/4/2025	157	38.318	18 mo
Randolph Brooks CD #365	$271,589.47	3/28/2023	8/31/2024	9/28/2024	28	10.318	18 mo
Sage Capital CD #49	$285,521.75	8/14/2024	8/31/2024	8/14/2025	348	134.823	12 mo
CD Total	**$736,980.36**					183.459	
#59 Money Market	$1,397,804.80				1	0.727	
#61 Operating	$23,499.32				1	0.012	
#365 Savings	$1.00				1	0.000	
#35 Money Market	$216,848.73				1	0.113	
#70 Operating	$2,132.93				1	0.001	
#64 Money Market	$280,882.19				1	0.146	
#98 Operating	$2,134.03				1	0.001	
Fund Total	**$1,923,303.00**					1.000	
Grand Totals	**$2,660,283.36**				WAM	**184.459**	

The portfolio of the Gonzales County Underground Water Conservation District is believed to be in compliance with the District's Board approved Investment Policy, State law, and the Investment Strategy.

Signed: _____
Laura Martin, Investment Officer

Dated: 09/05/2024

GCUWCD BILLS TO BE PAID
September 10, 2024

GVTC (Local & Long Distance & Internet)-**Paid**	$	279.23
City of Gonzales (Utilities)-**Paid**	$	233.58
Ricoh (Copier Rental)-**Paid**	$	217.75
Immense Impact (Annual website)-**Paid**	$	499.00
Post Office Box Rental	$	266.00
Hyatt Regency (TAGD Annual Summit)-**Paid**	$	405.84
Hi-Tech Pest Services	$	95.00
Caldwell County, County Clerk (post notice)-**Paid**	$	2.00
Lockhart Post-Register (Published Notices)	$	1,032.00
ESRI (ArcGIS Desktop)	$	1,108.25
Texas Water Conservation Association-**Paid**	$	454.00
GoToMeeting (Monthly Phone Charge)-**Paid**	$	1.92
H-E-B (Office Supplies)-**Paid**	$	53.96
Amazon (extention cord cover)-**Paid**	$	42.06
McElroy Sullivan Miller & Weber LLP (GBRA Hearing-August)	$	8,110.30
Coastal Office Solutions (office supplies, Invoice QE-47706-1 & QE-47708-1)-**Paid**	$	151.99
Coastal Office Solutions (office supplies, Invoice IN-5333 & IN-5376)	$	127.80
Caldwell County Appraisal District (2024 4th QTR Coll.)	$	17.31
Caldwell County Appraisal District (2024 4th QTR Prop.)	$	54.94
Gonzales Central Appraisal District (2024 4th QTR Budget Share)	$	748.25
Synergisdic, LLC	$	824.00
Texas A&M AGRILIFE EXTENSION (Water Fair:WQ Samples)-**Paid**	$	1,225.00
Gonzales Inquirer (Published Notices)	$	612.00
Walmart (office supplies)	$	35.86
Total	$	16,598.04

GCUWCD WMF BILLS TO BE PAID
September 10, 2024

TOTAL $0.00

GCUWCD EMF BILLS TO BE PAID
September 10, 2024

TOTAL $0.00

Gonzales County Underground Water Conservation District
Expense Report

Laura M. Martin

Nature of Trip/Date	From	To	Beginning Mileage	Ending Mileage	Total Miles
8/19 TAGD Fieldtrip to H2Oaks Facility	Office	San Antonio	101537	101624	87
	San Antonio	Home	101624	101716	92
8/20 TAGD Summit	Home	San Antonio	101716	101808	92
8/22 Return From TAGD Summit	San Antonio	Home	101808	101901	92
					0
				Total Miles	364
				Current Rate X	0.67
			Mileage X Rate	Subtotal	$243.61
8/00 Hyatt Regency (Travel & Meetings)					$77.84
Telephone					$70.00
Period Covered August 1-31, 2024 Approved By: Date: September 10, 2024				Total Due	$391.45

verizon

PO BOX 489
NEWARK, NJ 07101-0489

Account: 788600115-00001
Invoice: 4690810128
Billing period: Jul 13 - Aug 12, 2024

Questions about your bill?
verizon.com/support
800-922-0204

KEYLINE

LAURA MARTIN
PO BOX 363
GONZALES, TX 78629-0363

Snapshot of your bill

(details on page 3)

Balance from last bill	$0.00
This month's charges	$359.67
Total due on Sep 4	**$359.67**

You have Auto Pay scheduled for Sep 1, 2024.

If you don't pay the total charges due by the due date, you'll be charged 5% of the unpaid balance or $7, whichever is greater, if allowed by law in the state of your billing address.

Ways to pay

My Verizon app

You can check your bill easily with the My Verizon app available in App Store or Google Play.

Online

Go to go.vzw.com/bill and sign in to review your bill.

By phone

Simply dial #PMT (#768) on your phone and follow the instructions to pay.

Cash

Go to www.verizon.com/stores to find a Verizon Wireless store near you or find a Check Free Pay or Western Union near you to make a cash payment.

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verizon

LAURA MARTIN
PO BOX 363
GONZALES, TX 78629-0363

Bill date	August 12, 2024
Account number	788600115-00001
Invoice number	4690810128

Total Amount Due

Deducted from bank account on 09/01/24
DO NOT MAIL PAYMENT

$359.67

Please see back for instructions on writing to us.

PO BOX 16810
NEWARK, NJ 07101-6810

46908101280107886001150000100000035967000000359670

Hyatt Regency Hill Country
Springhouse
9800 Hyatt Resort Dr
San Antonio, TX 78251
(210) 647-1234

1287547 Patsy M.

CHK 23394 TBL 60/4
8/20/2024 11:45 AM

2 Breakfast Buffet Adult @ 29.95	59.90
Subtotal	$59.90
%Tax	$4.94
Payment Due	$64.84

Tip: 13.00

Total: 77.84

Room: _____

Name: Laura Martin

Signature: _____

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and start earning points for
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Visit worldofhyatt.com
#Not point earning eligible
##Not point redemption eligible

Gonzales County Underground Water Conservation District
Mitigation Fund
Expense Report

Link Benson

Nature of Trip/Date	From	To	Beginning Mileage	Ending Mileage	Total Miles
8/21 Ottine/Shelton	Home	Ottine	129,994	130,022	28
8/21 Ottine/Shelton	Home	Ottine	130,078	130,106	28
					0
					0
					0
					0
					0
				Total Miles	56
				Current Rate X	0.67
Expenses				**Mileage Subtotal**	**$37.52**
Phone					$70.00
August 1-31, 2024 **Approved By**: **Date**: September 10, 2024				**Total Due**	**$107.52**

Gonzales County Underground Water Conservation District
Field Technician
Expense Report

Frank Agee

Nature of Trip/Date	From	To	Beginning Mileage	Ending Mileage	Total Miles
8/1 Friedel/J-Bar-B & Drillink/Holmes Food In	Home	Northeastern Gonzales Co.	26,223	26,269	46
8/2 Drillink/Holmes Food Inc.	Home	Northcentral Gonzales Co.	26,270	26,310	40
8/7 One Source/Cochran	Home	Northwestern Gonzales Co.	26,355	26,404	49
8/9 One Source/Cochran	Home	Northwestern Gonzales Co.	26,404	26,454	50
8/15 MWCZ #9 & # 10	Home	Northcentral Gonzales Co.	26,538	26,590	52
8/19 Herbold/Holden	Home	Northcentral Gonzales Co.	26,651	26,689	38
8/20 Herbold/Holmes/Cochran/Borehole	Home	Northcentral Gonzales Co.	26,689	26,752	63
8/21 Herbold/Hahn	Home	Northcentral Gonzales Co.	26,784	26,836	52
8/26 Schmidt/Niemeier	Home	NE & SE Gonzales Co.	26843	26,939	96
8/28 Niemeier	Home	Southeastern Gonzales Co.	26939	27,001	62
				Total Miles	548
				Current Rate X	0.67
				Mileage Subtotal	**$367.16**
Expenses					
Distilled Water Wash Bottle					$10.27
Folding Stands for pH meters					$8.64
Period Covered:August 1-31, 2024 **Approved By**: **Date**: September 10, 2024				**Total Due**	**$386.07**

Gonzales County Underground Water Conservation District
Administrative Assistant
Expense Report

Haley Stakes

Nature of Trip/Date	From	To	Beginning Mileage	Ending Mileage	Total Miles
08/20 Caldwell County Justice Center(Post Notice)	Office	CCJC	179,491	179,551	60
				Total Miles	60
				Current Rate X	0.67
				Mileage Subtotal	**$40.20**
Expenses					
Period Covered: August 1-31, 2024 **Approved By**: **Date**: Septemer 09, 2024				**Total Due**	**$40.20**

Gonzales County Underground Water Conservation District
Manager's Report
August 2024

On August 1st, I virtually attended the South Central Texas Regional Water Planning Group (SCTRWPG, Region L) meeting. A copy of the agenda is attached.

On August 2nd, I met with members of the Rules Committee, geologist, and legal counsel to discuss the rule workshop schedule, desired future conditions, and task orders for consultation.

On August 6th, I virtually met with Adam Conner, Central Texas Water Supply Planning Lead for Freese and Nichols, Inc. and members of County Line SUD to discuss potential management strategies they are submitting to SCTRWPG for the 2026 plan in the Gonzales County Underground Water Conservation District boundaries. These are in draft and are confidential.

On August 13th, I virtually met with panel members of the Texas Alliance of Groundwater District (TAGD) Summit panel presentation to discuss the upcoming panel presentation on Emerging Management Issues for Large-scale Production Permits. An article from the Texas Water Journal is attached.

On August 19th, I met with members of the Rules Committee to discuss rule workshop schedules and timelines. Then I went to San Antonio to the Texas Alliance of Groundwater Districts fieldtrip to San Antonio Water Systems Aquifer Storage and Recovery and Desalination Facility, H2Oaks water plant.

On August 20th-22nd, I attended the TAGD Annual Summit. I was a presenter on a panel discussing Emerging Management Issues for Large Scale Production. A copy of the agenda is attached.

On August 23rd, I met with James "Jim" Totten General Manager of Lost Pines GCD, and Mrs. Natasha Martin, legal counsel to discuss an interlocal agreement to share data and the possibility of mitigation over boundary lines.

On August 28th, I virtually attended the Texas Commission of Environmental Quality (TCEQ) Commission meeting. I had volunteered to be on a review panel for a Petition of Inquiry received on Lone Star GCD.

On August 29th, I virtually attended the Texas Water Foundation, Texas Runs on Water toolkit campaign seminar.

AQUA's July production was about 29.08 ac-ft which is about 6.97% of the monthly allowable production.

CRWA's August production was about 740.62 ac-ft which is about 106.81% of the monthly allowable production.

GBRA's August production was 45.54 ac-ft which is 3.64% of the monthly allowable production.

SAWS August production was about 851.80 ac-ft which is about 87.45% of the monthly allowable production.

SSLGC's August production was about 1567.69 ac-ft which is about 97.19% of the monthly allowable production.

The Palmer Drought Index, as of August 27, 2024, indicates that the District is currently under no drought conditions. The latest drought map shows overall increases in drought conditions in Western Texas in the week of September 09, 2024.

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

TAKE NOTICE that a meeting of the South-Central Texas Regional Water Planning Group (SCTRWPG) as established by the Texas Water Development Board will be held on Thursday, August 1, 2024 at 9:30 AM both in person and virtually. The in-person meeting will be held at the San Antonio Water System's Customer Service Building, Room CR-145, 2800 US Hwy 281 North, San Antonio, TX 78212. You can attend virtually on WebEx at https://saws.webex.com/saws/j.php?MTID=m23e3d61939dadb5fc2ef0ae6eb50f466. The planning group members will consider and may take action regarding:

1. (9:30 AM) Roll-Call
2. Public Comment (Limited to 3 minutes)
3. Approval of the Minutes from the Previous Meeting of the South-Central Texas Regional Water Planning Group (SCTRWPG)
4. Status Reports and Communications by TWDB
5. Status Reports and Communications Related to Regional Water Planning including reports by the Chair, Regional Liaisons, Groundwater Management Area Representatives, and Members of the Planning Group
6. Consideration and Appropriate Action Regarding Briefings on Workgroup Activities:
   a. Chapter 8 Policy and Legislative Recommendations Workgroup
   b. Rural and Community Outreach Workgroup
7. Consideration and Appropriate Action Regarding Presentation by Technical Consultant Regarding Schedule and Progress Update
8. Consideration and Appropriate Action for the Technical Consultant to Evaluate Weather Modification as a New Water Management Strategy
9. Consideration and Appropriate Action Regarding Designation of the Nueces River Authority as a Wholesale Water Provider (WWP) as defined in 31 TAC §357.10(44) for Regional Water Planning Purposes
10. Discussion and Appropriate Action Regarding the Establishment of Additional Subcommittees
11. Schedule and Potential Agenda Items for the Next Meeting of the SCTRWPG
12. Public Comment (Limited to 3 minutes)
13. Adjourn

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

texaswaterjournal.org

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Texas Water Journal

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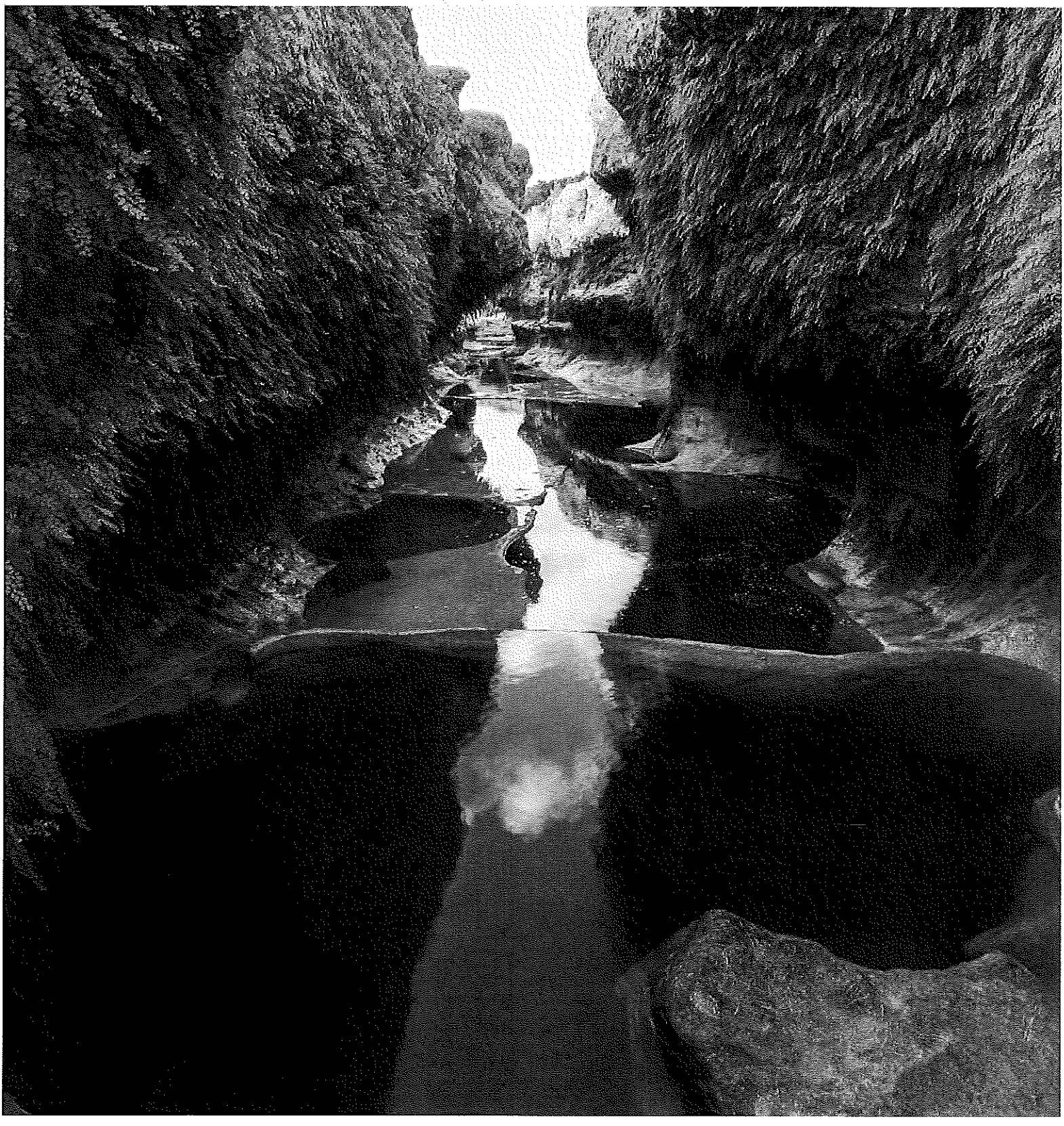

Texas Water Journal

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The Narrows on the Blanco River.

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Case Study of Groundwater Management Issues at the Forefront of Large-scale Production from a Confined Aquifer: The Vista Ridge Project

Steven C. Young[1*], Carlos Rubinstein[2], and Russell Johnson[3]

Abstract: Continuing population growth, increasing demands for water, and declining water availability are statewide water concerns in Texas. The development and movement of water from where it is located to where it is needed entails benefits to the receiving area and concerns for the area of origin. The Vista Ridge Project serves as an on-point example and case study of issues that will be revisited with future large water projects across Texas. Water level declines in existing wells caused by production from the Vista Ridge well field was a focus of significant public discussion in 2022, including Texas House and Senate interim session hearings. This paper spotlights groundwater management issues related to the Vista Ridge Project, including well mitigation; impacts from groundwater production across groundwater conservation district boundaries; meaningful consideration of nine factors in Texas Water Code § 36.108 (d); achieving the balance between groundwater production and conservation in Texas Water Code § 36.108 (d-2); protection of property rights; and the need for both good science and good science communication during the joint-planning process.

Keywords: Mitigation, property rights, fair share, modeled available groundwater, Groundwater Management Area 12, Post Oak Savannah GCD, Lost Pines GCD, Vista Ridge, socioeconomic impacts, desired future conditions

[1] Principal Geoscientist, INTERA Incorporated, Austin, TX
[2] Principal of RSAH$_2$O, LLC and a former Chairman of the Texas Water Development Board and Commissioner of the Texas Commission on Environmental Quality
[3] Of Counsel, McGinnis Lochridge, Austin, TX
[*] Corresponding author: syoung@intera.com
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Terms used in paper

Acronym/Initialism	Descriptive Name
af/yr	acre-feet per year
bgs	below ground surface
BVGCD	Brazos Valley Groundwater Conservation District
DFC(s)	desired future condition(s)
ft	feet
ft^2/day	square feet per day
GAM(s)	groundwater availability model(s)
GCD(s)	groundwater conservation district(s)
GMA(s)	groundwater management area(s)
GULF	Gulf Coast Land Subsidence and Groundwater-Flow
GWAP	Groundwater Assistance Program
HB	House Bill
LPGCD	Lost Pines Groundwater Conservation District
MAG(s)	modeled available groundwater(s)
PDL	protective drawdown limits
POSGCD	Post Oak Savannah Groundwater Conservation District
SAWS	San Antonio Water System
TCEQ	Texas Commission on Environmental Quality
TWC	Texas Water Code
TWDB	Texas Water Development Board
USC	United States Code

INTRODUCTION

The 2022 Texas state water plan predicts that Texas's population will increase 73% between 2020 and 2070 (Texas Water Development Board [TWDB], 2022). During this 50-year period, the demand for municipal water will increase 66%, or approximately 3.3 million acre-feet per year (af/yr). The existing supply of water is projected to decline by 18% over the same period, primarily due to statewide aquifer depletion (TWDB, 2022). More than 25% of the growth in water usage is projected to occur in four Texas regional water planning groups. The water demand for these four regional water planning groups, which encompass the cities of Dallas, Fort Worth, Houston, San Antonio, and Austin, is projected to increase 2.5 million af/yr from 2020 to 2070 (TWDB, 2022).

The complexity of moving water to where it is needed will be a key factor in meeting Texas's unprecedented economic and population growth. Projects that move water from where it is located to where it is needed have socioeconomic impacts to both the receiving area as well as the area of origin. Updated groundwater modeling and proper construction of these models are indispensable to properly consider the benefits and impacts from such projects.

This paper presents a case study of the Vista Ridge Project—a large groundwater export project in Burleson County—that illustrates the controversies, uncertainties, impacts, and expenses associated with moving large volumes of groundwater to where it is needed in Texas and spotlights issues that will likely be of concern related to other Texas groundwater development projects in the near future. These issues include:

- The potential importance of a fair share doctrine to the protection of property rights, the production of groundwater, and the conservation of groundwater in place (*see* section elaborating on this topic);
- Consideration of permitted production as a factor when developing desired future conditions (DFCs) (*see* section elaborating on this topic);
- Consideration of local socioeconomic impacts from the groundwater's area of origin when developing DFCs (*see* section elaborating on this topic);
- Potential benefits from presenting spatial and temporal distributions of drawdowns and water levels generated by groundwater availability model (GAM) simulations used to develop DFCs (*see* section elaborating on this topic);
- Recognition of uncertainty in GAM predictions of drawdown and DFCs (*see* section elaborating on this topic); and
- Understanding the limitations of modeled available groundwater (MAG) as an indicator for assessing the achievement of a DFC (*see* section elaborating on this topic).

Given that groundwater water supply projects like the Vista Ridge Project are being considered across Texas, groundwater decision makers would benefit from a familiarization with the groundwater issues, science, modeling, and mitigating factors associated with the Vista Ridge Project. Additionally, now that the 88th Texas Legislature has passed bills partly informed by the experiences and actions to mitigate impacts from groundwater production for transport—such as the Vista Ridge Project—this case study should assist GCDs with developing mitigation policies and accomplishing their groundwater management goals.

The case study is organized into five additional sections. Section II provides information on the hydrogeology and production associated with the Vista Ridge well field and on the Post Oak Savannah Groundwater Conservation District (POSGCD) management strategies most relevant to permitting and regulating Vista Ridge. Section III discusses several of the complex issues associated with the Vista Ridge Project from the perspectives associated with the responsibilities assigned to GCDs and groundwater management areas (GMAs). Section IV provides recommendations for improving the management of the joint planning process for adopting DFCs. Section V provides references, and Section VI provides the attachment.

GENERAL INFORMATION

Vista Ridge Project

The Vista Ridge Project is in western Burleson County within a few miles of the Lee County border. In 2020, the Vista Ridge Project began producing 50,000–55,000 af/yr from the Carrizo-Wilcox Aquifer and transporting it through a 142-mile pipeline to San Antonio. Because of impacts on the water levels in existing wells, the Vista Ridge Project was a focus of significant public discussion in 2022, including Texas House and Senate interim session hearings, front-page newspaper articles, GMA 12 meetings, and GCD meetings. These discussions and concerns led to consideration of several bills attempting to address the issues during the 88th Texas legislative session.

Hydrogeological Conditions

Vista Ridge production occurs from the deep confined portion of the Carrizo-Wilcox Aquifer. The Carrizo-Wilcox Aquifer is composed of four geologic units, which from youngest to oldest (or from shallowest to deepest) are the Carrizo, Calvert Bluff, Simsboro, and Hooper aquifers. The Vista Ridge wells are completed in the Carrizo and Simsboro aquifers.

Figure 1 shows the locations of the Vista Ridge well field and areas where the four geologic units outcrop at ground surface. Figure 2 shows a vertical cross section of the Carrizo-Wilcox Aquifer along a transect that begins in Milam County and

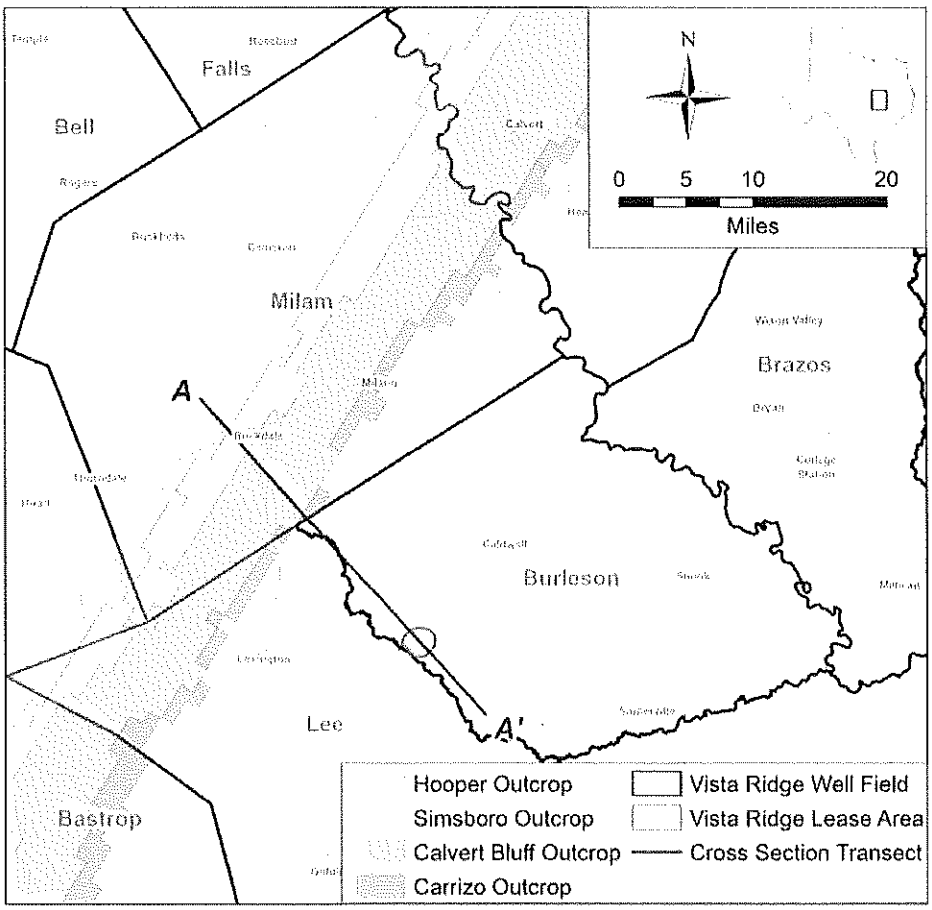


Figure 1. Location of the Vista Ridge well field and the outcrops of the four geologic units that comprise the Carrizo-Wilcox Aquifer (outcrop is where the aquifer intersects the ground surface).

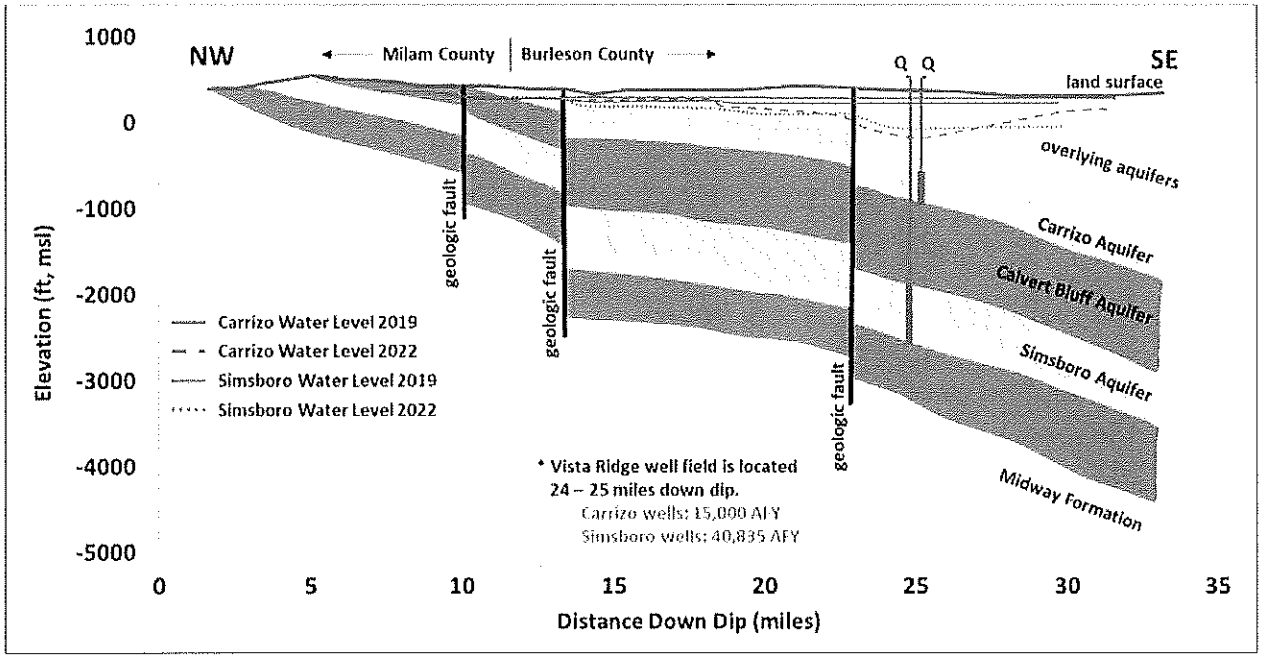


Figure 2. Vertical cross section along Transect A-A' in Figure 1 showing the four geological units that comprise the Carrizo-Wilcox Aquifer, the locations of several geologic faults, the Vista Ridge wells, and the Carrizo and Simsboro aquifer water levels in 2019 and 2022.

passes through the Vista Ridge well field in Burleson County. The cross section shows that the Carrizo-Wilcox Aquifer dips toward the southeast and occurs at increasingly deeper depths toward the Gulf Coast. At the Vista Ridge well field, the tops of the Carrizo and the Simsboro aquifers occur at approximately 800 and 2,000 feet (ft) below ground surface (bgs), respectively. Also shown in Figure 2 are 2019 and 2022 water level surfaces for the Carrizo and Simsboro aquifers. A water level surface represents the height that water will rise in a well as a result of the hydraulic pressure in the aquifer. Water level is recorded relative to sea level and has the units of feet above mean sea level.

Aquifer systems can be categorized as either unconfined or confined. Unconfined aquifer conditions exist where the water level in a well occurs below the top of the aquifer, typically at aquifer outcrops. Confined aquifer conditions exist where the water level in a well occurs above the top of the aquifer. In an unconfined aquifer, a decline in a well's water level represents a reduction in the saturated thickness of the aquifer caused by removal of water from the pore spaces between the aquifer sands and clays. In a confined aquifer, a decline in a well's water level represents a change in the hydraulic pressure of the groundwater in a fully-saturated aquifer. If sufficient drawdown occurs, a confined aquifer system will transition from a confined aquifer into an unconfined aquifer.

The water levels in Figure 2 show that despite drawdowns of hundreds of feet in both the Carrizo and Simsboro aquifers in 2022, both aquifers remain fully saturated with water levels in the production wells occurring several hundred feet above the top of their respective aquifer.

Operation Permits, Wells, and Groundwater Production

The Vista Ridge production permit is associated with 29,026 acres of leased water rights, which under POSGCD rules allow a maximum annual production of 58,052 af/yr. The Vista Ridge permit has an annual production cap of 55,835 af/yr, which consists of 15,000 af/yr from the Carrizo Aquifer and 40,835 af/yr from the Simsboro Aquifer.

Vista Ridge began testing the well field and transmission system in late 2019. Delivery of groundwater to the San Antonio Water System (SAWS) started in April 2020. Groundwater production occurs from 18 wells: nine wells pump the Carrizo Aquifer, and another nine wells pump the Simsboro Aquifer. The nine Carrizo Aquifer wells have screened intervals that span the interval from about 800 to 1,250 ft bgs. The nine Simsboro Aquifer wells have screened intervals that span the interval from about 2,200 to 2,700 ft bgs. Through the end of 2022, the maximum permitted pumping rates for the Carrizo Aquifer and Simsboro Aquifer wells were 1,200 and 3,000 gallons per minute, respectively.

Drawdowns Generated from 2 Years of Vista Ridge Production

Figures 3 and 4 show drawdowns for the first 2 years of Vista Ridge production in the Carrizo and Simsboro aquifers, respectively. The drawdown contours were generated by interpolating water level changes (drawdown) between water levels measured prior to Vista Ridge's 2020 production and in early 2022. Within the well field, the drawdowns are approximately 400 and 300 ft in the Carrizo and Simsboro aquifers, respectively. The cones of depression created by the Vista Ridge pumping in the Carrizo and Simsboro aquifers extend approximately 15 and 25 miles into Lee County, respectively.

Post Oak Savannah Groundwater Conservation District

Groundwater production from the Vista Ridge Project is permitted by the POSGCD. The POSGCD was created in Milam and Burleson counties by House Bill (HB) 1784 in 2001 and a local confirmation election in November 2002. The POSGCD is a member of GMA 12, which sets DFCs for the Carrizo and Simsboro aquifers. POSGCD is bordered by two other GCDs that are members of GMA 12: Lost Pines GCD (LPGCD) to the southwest and Brazos Valley GCD (BVGCD) to the northeast. This section discusses several POSGCD management strategies and programs relevant to addressing impacts from large production projects such as the Vista Ridge Project.

Management Strategy: Management Zones and Management Areas

The POSGCD allows production up to a total of 2 af/yr for each acre tied to the permit application. This maximum production is allowed until changes in aquifer conditions or groundwater levels mandate curtailment of permitted production. Allocations of water per acre are not uncommon in water management and permitting. For evaluating and managing groundwater resources, POSGCD has assigned each of its aquifers to a separate management zone and has subdivided the management zones into management areas. POSGCD has adopted DFCs for the Carrizo and Simsboro aquifers that are in Table 1. The DFCs represent the average predicted drawdown across the entire aquifer from January 2011 to January 2070. The protective drawdown limits (PDLs) in Table 1 were derived using the same methodology and GAM simulations used to determine DFCs, except the management areas cover only a portion of the aquifer instead of the entire aquifer. POSGCD created the PDLs to address concerns about potential problems with enforcing DFC compliance caused by the absence of monitoring wells across large areas of the aquifer.

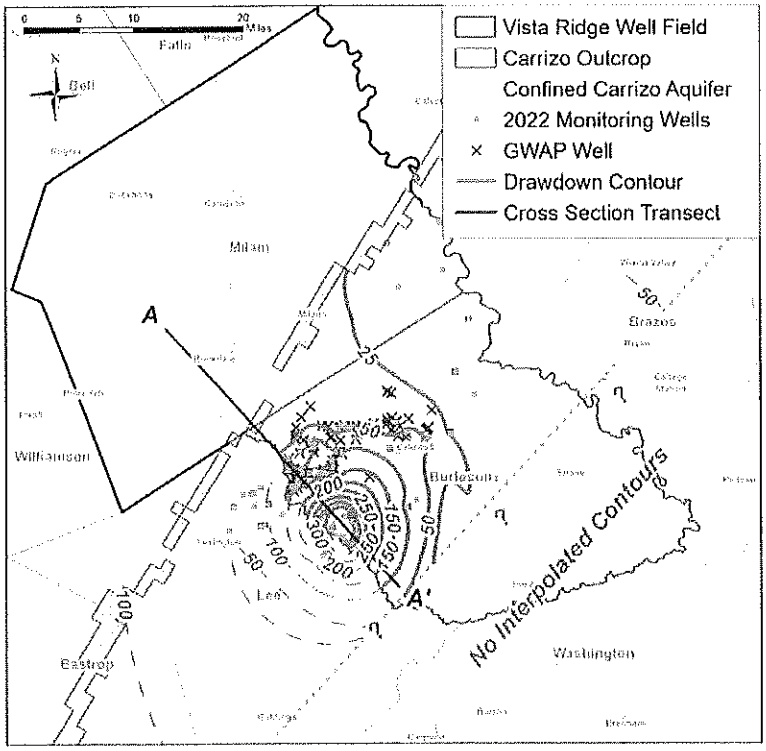


Figure 3. Contours of drawdown in the Carrizo Aquifer that occurred from 2019 to 2022 based on interpolation of measured water level data. Also shown are the location of 92 Carrizo Aquifer wells that Post Oak Savannah Groundwater Conservation District assisted through its Groundwater Assistance Program (GWAP).

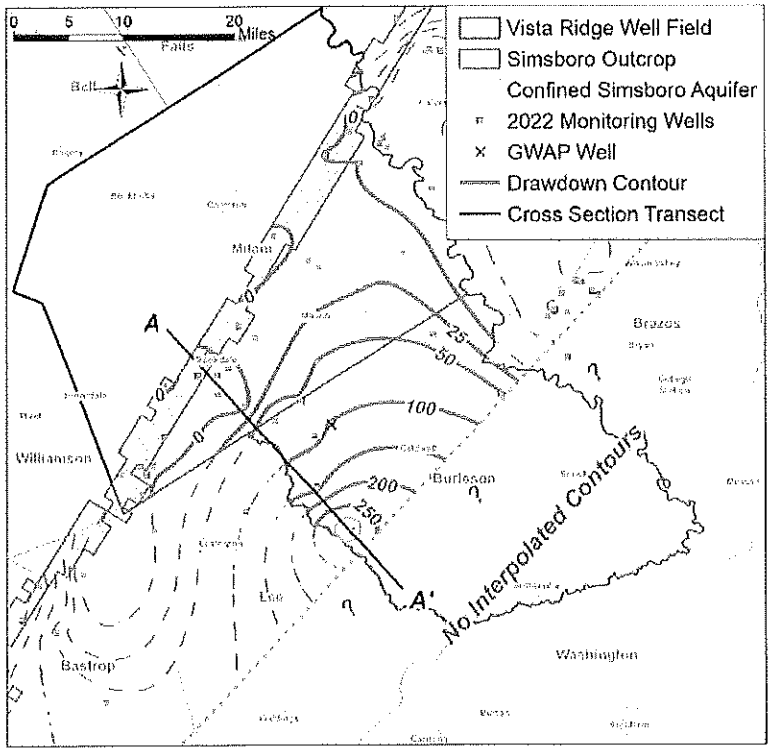


Figure 4. Contours of drawdown in the Simsboro Aquifer that occurred from 2019 to 2022 based on interpolation of measured water level data.

Table 1. Post Oak Savannah Groundwater Conservation District desired future conditions (DFCs) and protective drawdown limits (PDLs) for the Carrizo and Simsboro aquifers.

Aquifer management zone	Average drawdown January 2011–December 2069		
	DFC for entire aquifer	PDL for Management Area 1	PDL for Management Area 2
Carrizo	146	75	175
Simsboro	278	91	335

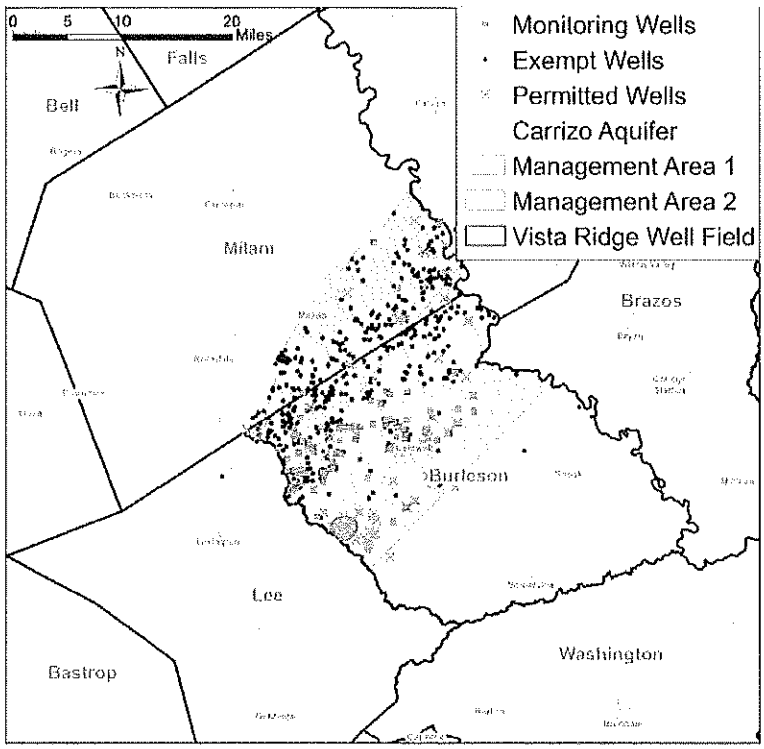


Figure 5. Areal extend of the Carrizo Aquifer and two management areas associated with Post Oak Savannah Groundwater Conservation District desired future conditions and protective drawdown limits.

Figure 5 shows the management areas associated with the two PDLs for the Carrizo Aquifer. Both management areas have monitoring wells spatially distributed throughout the entire area.

Management Strategy: Curtailment of Production

POSGCD rules that govern reductions in permitted production are summarized as follows:

- *Preventing DFCs or PDLs exceedances:* POSGCD has three threshold levels (1, 2, and 3) to gage compliance to DFCs and PDLs. Each increasing threshold level provides for an increased level of response. POSGCD has rules to authorize the development of plans for reducing permitted production when threshold level 3 has been exceeded. Threshold level 3 is reached when 75% of a DFC or a PDL has been achieved.
- *Restoration of aquifer conditions after an unreasonable impact:* Before granting or denying a permit, Texas Water Code (TWC) § 36.113 (d) (2) requires GCDs to consider if the permitted production would unreasonably affect existing groundwater and surface water resources or existing permit holders. POSGCD defines unreasonable impacts in their Rule 16.4.6 (POSGCD, 2023a). POSGCD considers the impacts from an aggregate of wells associated with one or more permits to be unreasonable if pumping from the aggregated wells by themselves and not part of the aggregate of permitted wells caused by any one of several conditions. For the confined aquifer conditions occurring at the Vista Ridge

Project, POSGCD Rule 16.4.6 states unreasonable impacts to groundwater are defined as more than a 100-foot reduction and more than a 40% reduction in water level above the top of the aquifer being pumped along any part of the boundary of the permit's property.

Groundwater Assistance Program

POSGCD began developing its Groundwater Assistance Program (GWAP) in early 2016, received public comment throughout 2017, and adopted the program on January 9, 2018. The primary objective of GWAP is to predict and provide corrective action for landowners whose wells experience water level declines below the pump due to regional pumping in GMA 12. Corrective actions provided by GWAP include, but are not limited to, lowering a pump in a well, modifying the construction of an existing well, or drilling a new well. In most cases, these actions result in the pump being set at a depth that is below the anticipated 30-year water level decline. To be eligible for funding under GWAP, a well must be a low capacity non-exempt well or an exempt well. Another eligibility requirement for GWAP assistance is that the landowner commits to the well becoming a part of the POSGCD monitoring program. As of December 2022, GWAP had addressed 100 wells. Out of these 100 wells, 92 are Carrizo Aquifer wells, the locations of which are shown in Figure 3.

TEXAS WATER CODE § 36.0015 (b) REQUIREMENTS OF GROUNDWATER CONSERVATION DISTRICTS

Per TWC § 36.0015 (b), GCDs have the responsibility "to protect property rights, balance the conservation and development of groundwater to meet the needs of this state, and use the best available science in the conservation and development of groundwater through rules" (TWC § 36, 2023, § 36.0015 (b)). Per TWC § 36.108 (d-2), within a GMA, GCDs are required to adopt DFCs that "provide a balance between the highest practicable level of groundwater production and the conservation, preservation, protection, recharging, and prevention of waste of groundwater and control of subsidence in the management area" (TWC § 36, 2023, § 36.0018 (d-2)).

Protect Property Rights

TWC § 36.002 recognizes that landowners own the groundwater below the surface of their land as real property. The TWC also authorizes GCDs to regulate the drilling and operation of wells within their jurisdiction. Despite assigning the GCD responsibilities to protect property rights, the TWC does not clearly articulate what that protection entails, much less how it should be implemented. Relevant to any discussion of property rights is the evolution of case law regarding groundwater as a property right. For that reason, this paper includes Attachment A, which provides a historical account of case law on the ownership of groundwater in Texas.

Property Right Issues Raised by Well Owners Affected by Vista Ridge Production

The Vista Ridge Project gained increased statewide attention with an August 2021 Texas Tribune article entitled *Central Texas Landowners Blame SAWS Vista Ridge Pipeline for Dry Wells* (Douglas, 2021). The article states that dozens of landowners in LPGCD have lowered their water pumps because of declines in water levels attributed to the Vista Ridge Project. Public hearings were conducted by the Texas House Committee on Natural Resources on August 24, 2022, and by the Texas Senate Committee on Water, Agriculture & Rural Affairs on November 16, 2022. During both hearings, rural landowners from LPGCD voiced complaints over the Vista Ridge Project. The complaints included a loss of property rights caused by lower water levels, the financial burden of lowering pumps, no access to a well assistance program similar to POSGCD's GWAP, no evaluation of local socioeconomic impacts of Vista Ridge permits as part of the DFC process, and the injustice of water marketers profiting at the expense of rural landowners.

During the 2022 House interim session hearing, the LPGCD president's concern regarding the impacts of the Vista Ridge Project on Lee County was conveyed in the testimony: "One option is for us [i.e., LPGCD] to file a petition with TCEQ asserting that Post Oak is not properly managing their groundwater, not considering unreasonable impacts, nor balancing groundwater production with conservation as required by statute. Though Chapter 36 is a great tool to assist districts in managing their groundwater resources in a fair and equitable manner, much is open to interpretation" (Texas House Committee on Natural Resources, 2022, 4:34:42).

Potential Importance of a Fair Share Doctrine to the Protection of Property Rights, the Production of Groundwater, and the Conservation of Groundwater in Place

Fair share is relevant to the discussion of the protection of property rights since the opinion in *Edwards Aquifer Authority v. Day* (2012). Case law has established that groundwater is a vested right and regulation cannot unreasonably deprive landowners of their vested groundwater rights without just compensation. However, because fair share has not been explicitly applied in evaluating GCD regulations and is not defined in TWC § 36, the application of fair share to permit decisions remains unexplained by the courts. Consequently, a landowner's property right to preserve, protect, and produce ground-

water is for all practical purposes determined by the rules of capture or the groundwater rules of a GCD or of a conservation district.

Per TWC § 36.0015, GCDs are required to use the best available science to develop rules associated with conservation and development of groundwater (TWC § 36, 2023). A sensible assumption for TWC § 36.0015 is to promote similar and reasonable groundwater rules and by extension similar protection of property rights for landowners sharing the same aquifer but located in adjacent GCDs. Yet the rules developed by POSGCD and LPGCD to regulate production from the Carrizo-Wilcox Aquifer in Burleson and Lee counties have substantial differences. The differences in LPGCD and POSGCD rules and policies concerning the protection of property and a fair share doctrine would seemingly be the basis for the concerns raised by the LPGCD president during the 2022 Legislature interim hearings (Texas House Committee on Natural Resources, 2022, 4:34:42).

The decisions of the courts discussed in Attachment A suggest that the fair share doctrine applicable to mineral ownership and development, if applied to groundwater, will need to be modified to account for how groundwater differs from oil/gas in both its source and uses. Policies regarding a fair share doctrine for groundwater property rights should therefore consider, among other factors, the following: (1) historic use; (2) provisions for future use because unlike oil and gas, it is replenished; (3) consequences caused by the use of groundwater, such as environmental impacts or land subsidence; (4) prevention of waste; (5) considerations for groundwater's many uses from irrigation and industry to drinking and recreation; and (6) just compensation for a possible taking. Both POSGCD and LPGCD have comparable rules that address several of these items, including well spacing, achievement of the DFCs, the prevention of waste, consideration of environmental impact, and land subsidence. For this paper, we have focused on noticeable differences between the POSGCD and LPGCD rules as related to protection and production of groundwater. The comparison is based on GCD rules that were in existence at the time of the legislative interim hearings in 2022. Since that time, LPGCD, POSGCD and BVGCD have adopted and are considering additional rule changes (BVGCD, 2023; LPGCD, 2023; POSGCD, 2023a).

1. *Historical use:* POSGCD rules recognize historical production and provide greater protection than do the rules for non-historical production permitted since the creation of POSGCD. LPGCD rules do not provide for permitting of historic use.
2. *Fair opportunity to extract groundwater:* POSGCD rules recognize a correlative right of 2 af/yr per acre assigned to the permit to as the maximum annual production associated with a permit. The 2 af/yr/ac production rate was adopted by POSGCD primarily to accommodate irrigation needs for agricultural use but extends to all types of permitted use to provide the same property right regardless of usage. LPGCD does not use a correlative right approach in its rules or permitting decisions. LPGCD requires the applicant to prove the amount needed for the intended use. The applicant then negotiates with district staff to agree on a permit amount. If accepted, the application is then sent to the LPGCD board for approval, or the applicant, if unsatisfied, can request a contested case hearing.
3. *Reductions in authorized production to prevent unreasonable impacts:* POSGCD adopted rules regarding unreasonable impacts to help protect and protect the groundwater levels at the property boundary near large capacity well fields. These rules augment POSGCD well spacing rules and are intended to discourage a permittee from disproportionately concentrating production within a small portion of the permitted acreage near the property boundary.
4. *Well assistance/mitigation:* Throughout Texas, some permit applicants have voluntarily created mitigation programs to address impacts to existing wells. In POSGCD, mitigation programs with a specifically targeted set of landowners were created and executed by the permittees for the Vista Ridge, Blue Water 130, and Sandow Lakes Properties Projects. As previously discussed, POSGCD began using these funds to establish GWAP in 2018. In LPGCD, Recharge Water LP agreed that the issued permits would require funding a well mitigation program that can be accessed after Recharge Water LP begins production. During the House testimony, the LPGCD president explained that LPGCD had started a program to reimburse well owners for their mitigation efforts but had terminated it after being threatened with litigation by an attorney. At the time of the hearing, LPGCD had no mitigation program similar to POSGCD's GWAP (Texas House Committee on Natural Resources, 2022, 4:29:46).

The comparison of the two sets of GCD rules illustrates the significant differences in how POSGCD and LPGCD were managing and regulating groundwater resources in 2022. The differences occurred despite the two GCDs overlying the same aquifers and the TWC requirements to use best available science in rulemaking and to protect property rights. The notable differences in rules between the two GCDs likely causes landowners in both GCDs to question whether their GCD is appropriately protecting their property rights when a large well field is permitted near their well(s). In the case of the Vista Ridge well field, a disproportionate number of LPGCD landowners as compared to POSGCD landowners vocalized their discontentment with the Vista Ridge Project. Based on testimonies, the LPGCD president's and LPGCD landowners' concerns go

beyond the lack of a well assistance program like POSGCD and includes several of the components of a fair share doctrine for groundwater that have been previously discussed.

Emerging Issues

As the demand for groundwater in central Texas increases, the question of how to balance property rights and manage groundwater production and protection will grow increasingly more contentious. The evolution of statutes and rules related to protecting property rights could address a number of issues, including the following:

- Whether the courts will apply the fair share doctrine to their evaluations of production authorizations and permits;
- What role the Legislature will play in outlining the authority of groundwater districts to regulate; and
- How GCD rules will evolve to strike an appropriate balance between producing and protecting the groundwater with appropriate consideration for the protection of historical use, current use, and future use, while recognizing the vested property rights of the landowners and a responsibility to meet the needs of the state.

Balance the Conservation and Development of Groundwater to Meet the Needs of the State

TWC § 36.0015 (b) tasks GCDs with the responsibility to balance the conservation and development of groundwater to meet the needs of the state of Texas. This responsibility overlaps with responsibilities in TWC § 36.108 (d-2), which requires GMAs to adopt DFCs that "must provide a balance between the highest practicable level of groundwater production and the conservation, preservation, protection, recharging, and prevention of waste of groundwater and control of subsidence in the management area" (TWC § 36, 2023, § 36.108 (d-2)). This section discusses some of the challenges faced by GMAs and GCDs when achieving these balancing requirements.

Overview of the Joint Planning Process

The joint planning process requires GMAs to adopt DFCs every 5 years. TWC § 36.001 defines DFCs as a "quantitative description, adopted in accordance with Section 36.108, of the desired condition of the groundwater resources in a management area at one or more specified future times" (TWC § 36, 2023, § 36.001 (30)). TWDB equates a DFC as a representation of "a management goal that captures the philosophy and policies addressing how an aquifer will be managed" (Mace et al., 2006, p. 3; Mace et al., 2008, p. 3). After a GMA adopts its DFCs, TWC § 36.1084 (b) requires TWDB to determine a MAG for each management area that the districts have adopted a DFC (TWC § 36, 2023). A MAG is defined as "the amount of water that may be produced on an average annual basis to achieve a desired future condition established under Section 36.108" (TWC § 36, 2023, § 36.001 (25)). The MAGs are then incorporated into regional water plans and used to determine future available water and as part of the evaluation to determine if a water project is eligible for financial assistance from the State Water Implementation Fund for Texas (SWIFT).

Consideration of Permitted Production as a Factor When Developing DFCs

Like many other GMAs, GMA 12 used GAM simulations to predict drawdown impacts caused by different future pumping scenarios to help evaluate DFCs. After 20 GAM simulations, GMA 12 selected Run S-19 in November 2021 for developing and justifying DFCs (Daniel B. Stephens & Associates et al., 2022; POSGCD, 2023b). Most of the GMA 12 future pumping scenarios, including Run S-19, were based on a combination of permitted and anticipated pumping.

Prior to adopting GAM Run S-19, POSGCD discovered that GAM simulations that incorporated Vista Ridge's full permitted production of 15,000 af/yr from the Carrizo Aquifer predicted what POSGCD deemed as an undesirable amount of drawdown in about 140 Carrizo Aquifer wells in Burleson County (INTERA Incorporated, 2020; INTERA Incorporated, 2021a, 2021b; POSGCD, 2021b, 2021c; Wise, 2021). To reduce the Vista Ridge pumping to a level that would achieve a balance between development and conservation, POSGCD proposed to GMA 12 that Vista Ridge reduce Vista Ridge maximum production in the Carrizo Aquifer from 15,000 af/yr to about 9,000 af/yr, in the GAM, so that the maximum total Carrizo Aquifer production in POSGCD would be reduced from 18,200 af/yr to about 12,000 af/yr (INTERA Incorporated, 2021a). During their meeting on January 15, 2021, GMA 12 voted 4–1 (with POSGCD opposing) to not only to maintain Carrizo Aquifer pumping rate in the GAM simulations at 15,000 af/yr for the Vista Ridge Project but to keep that pumping rate until 2070, which is 18 years beyond when the 40-year Vista Ridge permit expires (GMA 12, 2021).

To justify their request to represent Vista Ridge Carrizo Aquifer production as 9,000 af/yr in the GAM simulations instead of the permitted production of 15,000 af/yr, POSGCD (2021a, 2021b) argued that: (1) there are no requirements in the TWC to include all permitted production in the GAM DFC simulations; (2) POSGCD had developed DFCs for the Carrizo-Wilcox Aquifer primarily using spreadsheet calculations with minimal reliance on GAM simulations and permitted production amounts in previous joint planning cycles; (3) the GAM simulations predicted that Vista Ridge's production of 15,000 af/yr from the Carrizo Aquifer would lower water

levels below pump elevations in an objectionable number of exempt wells; and (4) a reduction in the drawdowns simulated from a Vista Ridge production amount of 15,000 af/yr from the Carrizo Aquifer is warranted in order to achieve the balance required in TWC § 36.108 (d-2) (POSGCD, 2021b, 2021c; Wise, 2021).

During 2020 and 2021, GMA 12 had multiple discussions about whether all of Vista Ridge Project permitted production in the Carrizo Aquifer should be included in GAM DFC simulations. Several GCDs voiced concerns about legal action from Vista Ridge if GMA 12 did not include the full Vista Ridge production. Both BVGCD (2021) and Vista Ridge Blue Water (Terrill & Waldrop, 2020) sent letters to POSGCD to explain the rationale for keeping the Vista Ridge Carrizo Aquifer production at 15,000 af/yr in the GAM simulations. Below are excerpts from their letters:

> "To that end, it is essential that the 15,000 acre-feet of known, permitted Carrizo Aquifer production for the Vista Ridge Project be included in the model input in this DFC/MAG planning cycle to comply with the legal requirements of Chapter 36" (Terrill & Waldrop, 2020).

> "The desired future conditions ('DFCs') adopted under Section 36.108 of the Texas Water Code, are a joint planning tool of the management area that must include in its planning numbers the groundwater permits issued by each groundwater district that are currently in effect, as well as known production. ... The request of Post Oak Groundwater Conservation District (POSGCD) to use a Groundwater Availability Model ("GAM") run that does not include all known permitting and production in all districts is not only troubling for transparency and accuracy issues, but also for the precedence that it sets in the GMA of not acknowledging each district's local permitting. Although POSGCD this time is voluntarily asking GMA 12 to disregard permits that it has issued, it is concerning that the precedent would be set for the permits issued by the constituent districts to be involuntarily disregarded by the GMA in the future" (BVGCD, 2021).

Consideration of Local Socioeconomic Impacts from the Groundwater's Area of Origin When Developing DFCs

The TWC lists two key requirements for developing DFCs. TWC § 36.108 (d) states that the districts shall consider nine factors when developing the DFCs, and TWC § 36.108 (d-2) states that DFCs "must provide a balance between the highest practicable level of groundwater production and the conservation, preservation, protection, recharging, and prevention of waste of groundwater and control of subsidence" (TWC § 36, 2023, § 36.108 (d-2)).

During the House and Senate public hearings concerning Vista Ridge and during GMA 12 meetings, LPGCD landowners expressed concerns that GMA 12 was not adequately considering the nine factors. A specific concern was an alleged inadequate consideration of the socioeconomic impact to existing exempt wells and specifically those wells near Vista Ridge. As discussed in a recent Environment Defense Fund report (Rubinstein & Puig-Williams, 2023), GMA 12 and most other GMAs met the TWC requirement for considering the socioeconomic impacts by presenting the TWDB socioeconomic impacts for regional water planning groups, which focuses on the impacts of not meeting the identified water needs in their regional water plans.

A criticism of using the TWDB socioeconomic analysis is that it does not address the socioeconomic impacts associated with declining aquifer levels from increased groundwater pumping and drought, which can result in local socioeconomic consequences, such as impacts to groundwater wells or aquifer interactions with surface water. As a result, the TWDB analysis is not directly applicable for evaluating the differences in socioeconomic impacts associated with different DFCs, including impacts to existing wells. An alternative or supplement to using the TWDB socioeconomic analysis is one that considers local-scale impacts resulting from the water level changes predicted by the DFC GAM simulation. One such approach is discussed by Thompson et al. (2020), who describe a methodology that includes evaluating the increased costs associated with lowering pumps, replacing pumps, and operating pumps as water levels in existing wells decline over time because of regional pumping. When POSGCD (POSGCD, 2021b, 2021c) presented their case to GMA 12 to reduce the Vista Ridge Carrizo Aquifer pumping in the GAM simulations, their evaluation was similar to that of Thompson et al. (2020). POSGCD predicted drawdowns at existing wells and identified wells where pumps would require lowering to maintain the productivity of the well. The approaches used by Thompson et al. (2020) and POSGCD for assessing local-scale drawdown-related socioeconomic impacts at individual wells is straightforward and provides the type of information that well owners can understand.

Put another way, the socioeconomic impact analysis currently undertaken by GMA 12 and other GMAs thus far is a one-way consideration of how insufficient additional water supply development impacts the area of need. As reflected in this paper, and certainly a central consideration, the impacts to the area of the groundwater origin must be recognized and quantified as part of a proper assessment of overall socioeconomic impacts. Although not comprehensive, the evaluations conducted by POSGCD and Thompson et al. (2020) provide a mechanism to help recognize local-scale impacts that have been largely ignored by GMA 12 and other GMAs.

Emerging Issues

Among the emerging questions at the forefront of groundwater management issues with TWC § 36.108 (d-2) are:

- What are reasonable criteria for defining a "highest practicable level of groundwater production"?
- What are reasonable criteria for evaluating whether DFCs provide a balance between the opposing objectives of production and protection of groundwater?
- Should the evaluation of the balance requirement be determined piecemeal by each GCD or globally by the GMA?

Possible drivers in evaluating balance requirements in TWC § 36.108 (d-2) are considerations for the nine factors per TWC § 36.108 (d), a fair share doctrine applicable to groundwater, and mitigation programs. The last issue may be fast approaching some GMAs, including GMA 12. Within 5–10 years, GMA 12 may have at least three additional well fields besides the Vista Ridge's well field that are within a few miles of a GCD boundary, exporting groundwater outside of GMA 12. These three known projects will export groundwater to a Samsung plant in Taylor, Texas, and to the cities of Georgetown, Hutto, and Manor. The transport permits for all four water supply projects will likely exceed 110,000 af/yr—thus, the fees associated with the passage of HB 3059 during the 88th legislative session could be substantial. HB 3059 authorizes a GCD to use fees collected from the export of water to maintain the operability of wells significantly affected by groundwater development, develop and distribute alternative water supplies, or conduct aquifer monitoring, data collection, or science (Kirkle et al., 2023). An emerging issue that will impact the functionality among GCDs in a GMA is how the GCDs decide to share fees authorized by HB 3059 with their neighboring GCDs and whether well owners believe that their GCDs are adequately funding the mitigation of impacted wells.

During the third joint planning cycle that was completed in January 2022, subtle but significant changes occurred in how GMA 12 developed its GAM simulation for DFC evaluations compared to previous joint planning cycles. One change was a greater emphasis on representing permitted production in the GAM simulation for evaluating and developing DFCs. Another change was to not allow POSGCD to determine how to represent its permitted production in the GAM simulations. During the first two joint planning cycles, GMA 12 allowed all GCDs to unilaterally determine how to represent their permitted production in the GAM simulations. Although we can only speculate why these two changes occurred, the GMA 12 meetings provide ample evidence that a motivation for these two changes were concerns of a takings claim by the Vista Ridge Project and other water supply projects if their permitted production were not adequately accounted for in the MAG values determined by TWDB. The use of GAM Run S-19 to develop DFCs for GMA 12 raises several questions about the joint planning process, which include:

- Is there a point where the DFC process can become over-reliant on GAM simulations given the inherent limitations and deficiencies of GAMs?
- Under what circumstances, if any, should individual production permits be treated differently in generating future pumping scenarios used in GAM simulations to develop DFCs?
- Was GMA 12's veto of POSGCD's request to underrepresent the Vista Ridge Carrizo Aquifer production in the GAM simulations appropriate given the requirements in TWC § 36.108 (d) and TWC § 36.108 (d-2)?

Communicating the Use of Best Available Science

During the 2022 Senate and House interim hearings, there were several inferences that bad science may have contributed to some well owners being caught off guard by the large drawdowns associated with Vista Ridge production. This section discusses the science relevant to DFCs, MAGs, impacts caused by Vista Ridge production in GMA 12, uncertainty associated with the GAM predictions, and the importance of good communication of the science to policy makers and the public.

Potential Benefits from Presenting the Spatial and Temporal Distributions of Simulated Drawdowns and Water Levels Associated with GAM Simulations Used to Develop DFCs

In GMA 12, as in some other GMAs, creating DFCs has evolved into a process where the pumping rates used in GAM simulation for DFC evaluations are based on existing and anticipated operational permits. Because they incorporate numerous permits across a GMA, the output from these simulations, if analyzed and visualized properly, could provide valuable information for areas with the greatest adverse impacts to groundwater levels and surface water flows. The Vista Ridge Project is included in most of GMA 12 GAM simulations, including Run S-19. Run S-19 therefore contains information about the spatial and temporal distributions of simulated drawdowns that is potentially useful for planning and anticipating future impacts to existing wells.

Figures 6–9 have been generated to show how much greater and quicker drawdowns can occur in the localized area around the Vista Ridge Project compared to the timing and magnitude of a DFC at a regional scale. Figure 6 shows the contours of drawdowns that are predicted to occur in 2011–2070 in the Carrizo and Simsboro aquifers within about 35 miles of the

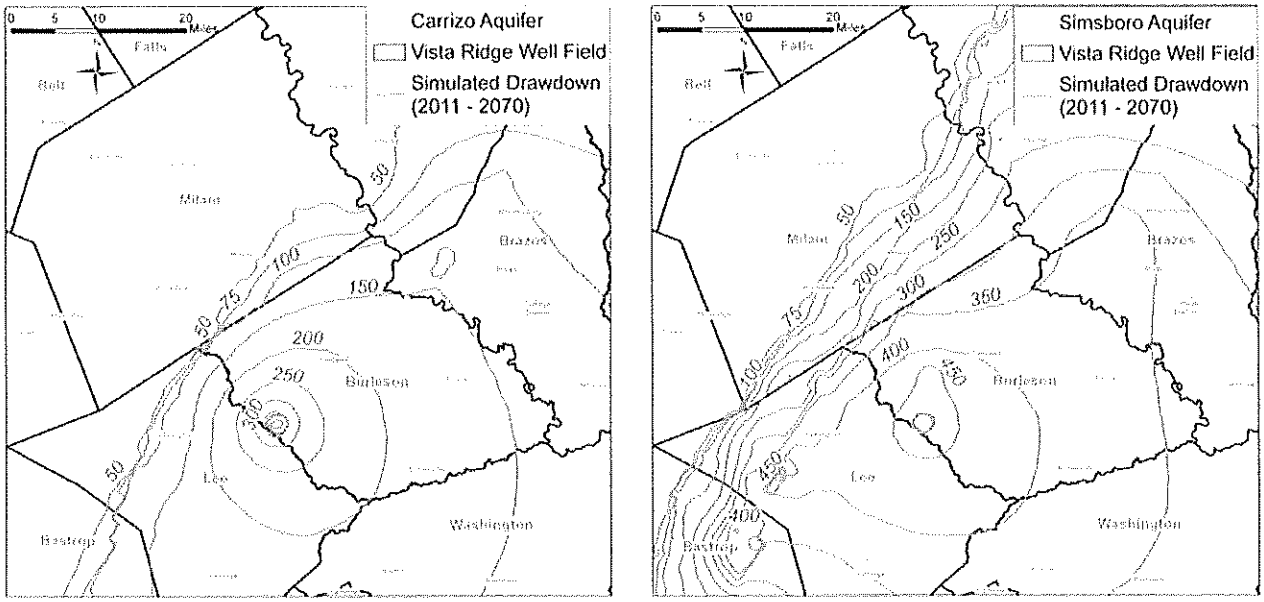


Figure 6. Contours of simulated drawdown from January 2011 to January 2070 for the Carrizo and Simsboro aquifers based on Groundwater Availability Model Run S-19.

Vista Ridge well field. The contours indicate that drawdowns greater than 300 and 450 ft occur in the Carrizo and Simsboro aquifers, respectively. Figure 7 displays charts of the Simsboro Aquifer spatial distribution of drawdown as a function of aquifer area distributions for POSGCD and LPGCD. For both POSGCD and LPGCD, charts show: (1) only 15% of the Simsboro Aquifer area has predicted drawdowns within 50 ft of the DFCs; (2) more than 33% of the Simsboro Aquifer area has drawdowns greater than 100 ft than the DFCs; and (3) drawdowns greater than 500 ft occur in both POSGCD and LPGCD. Figure 8 shows that after 4 years of Vista Ridge production, more than one-third (33%) of the Simsboro and Carrizo aquifers' DFCs would be "achieved" in Lee and Burleson counties. This means that 33% of the average drawdown that was planned to occur in 59 years would occur in only 4 years, 2020–2023. Figure 9 shows that approximately 180 Carrizo Aquifer wells and 30 Simsboro Aquifer wells would experience more than 100 ft of drawdown after 3 years of Vista Ridge pumping.

If these types of figures were regularly discussed in GMA 12, landowners in Lee County would have known that the large drawdowns they experienced in 2021 and 2022 were predicted by the GAM simulations. Besides providing information that could help attract well owners to the DFC process, illustrations of spatial and temporal distributions of predicted drawdown could provide information to better assist general managers and board members of GCDs to manage, plan, and regulate the groundwater production and mitigate well impacts.

Recognition of Uncertainty in GAM Predictions of Drawdowns and DFCs

Because of the large size of many GAMs (for instance, the GAM for the central portion of the Carrizo-Wilcox Aquifer covers more than 26,000 square miles), GAMs often have a wide variation in the types, quality, and amount of data used to develop and calibrate different modeled areas. As a result, a GAM's predictions of water level change will often contain different degrees of uncertainty and error for different areas of interest.

The GAM currently being used by GMA 12 for the Carrizo-Wilcox Aquifer was developed in 2020 (Young et al., 2020). This GAM was developed in response to concerns by GMA 12 about the suitability of using a GAM (Young et al., 2018) that was developed in 2018 prior to any data regarding the impacts that the large production from Vista Ridge would have on groundwater resources. These concerns included: (1) historical water levels from only one Simsboro Aquifer well in Burleson County was used in calibrating the model; (2) the maximum annual production from the Simsboro Aquifer in Burleson County during the GAM calibration period was only 140 af/yr, which is too low a production rate to validate the GAM's capability to predict drawdown caused by production of 35,000 af/yr; and (3) the GAM calibration did not incorporate the simulation of the nine Simsboro Aquifer pumping tests conducted by Vista Ridge. As a result of these concerns, GMA 12 performed a recalibration of the 2018 GAM to create

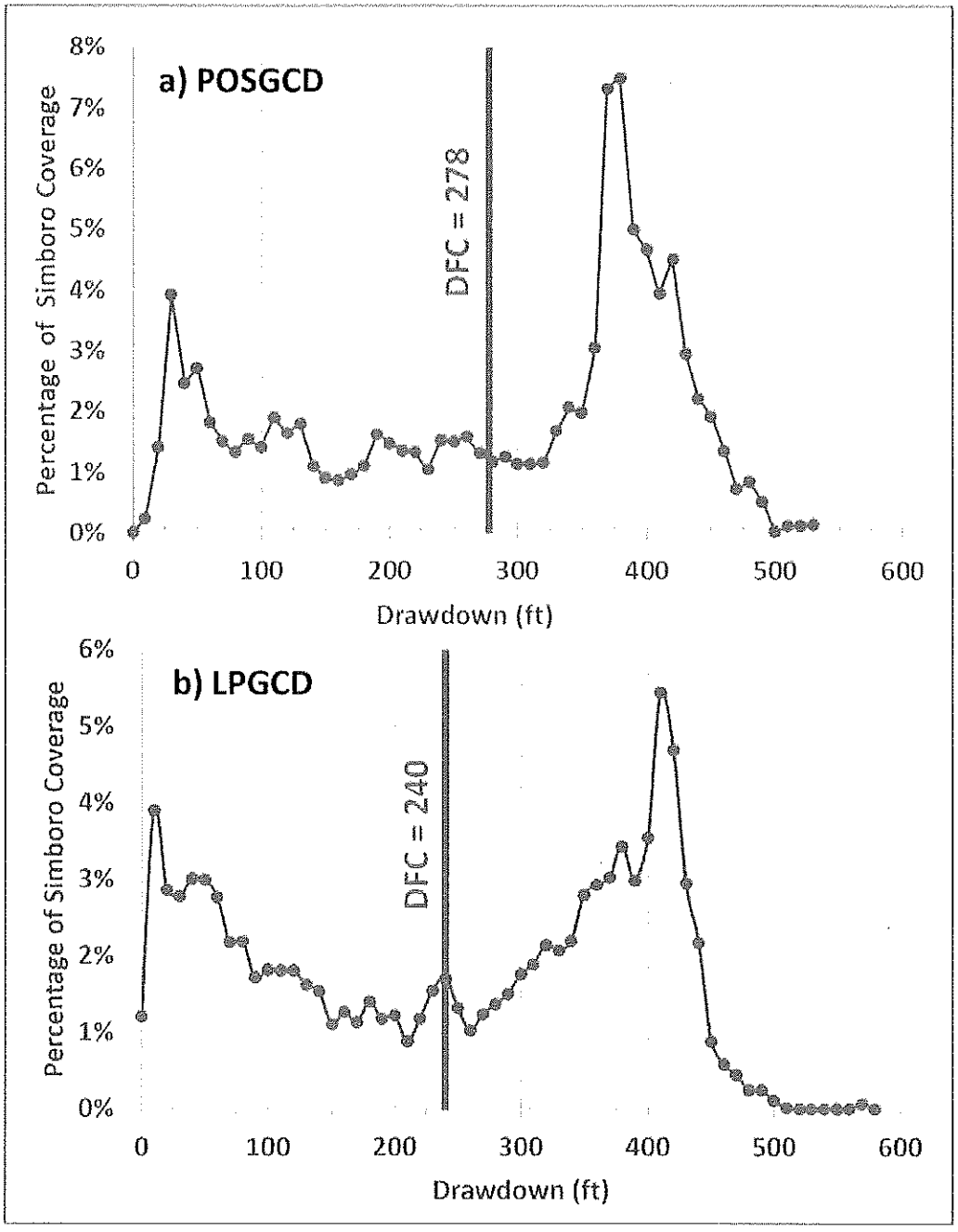


Figure 7. Distributions of the Simsboro Aquifer drawdowns simulated by Run S-19 that are used to determine the desired future conditions for Post Oak Savannah Groundwater Conservation District (POSGCD) and Lost Pines Groundwater Conservation District (LPGCD). Note the bin size for the x-axis is 10 feet (ft).

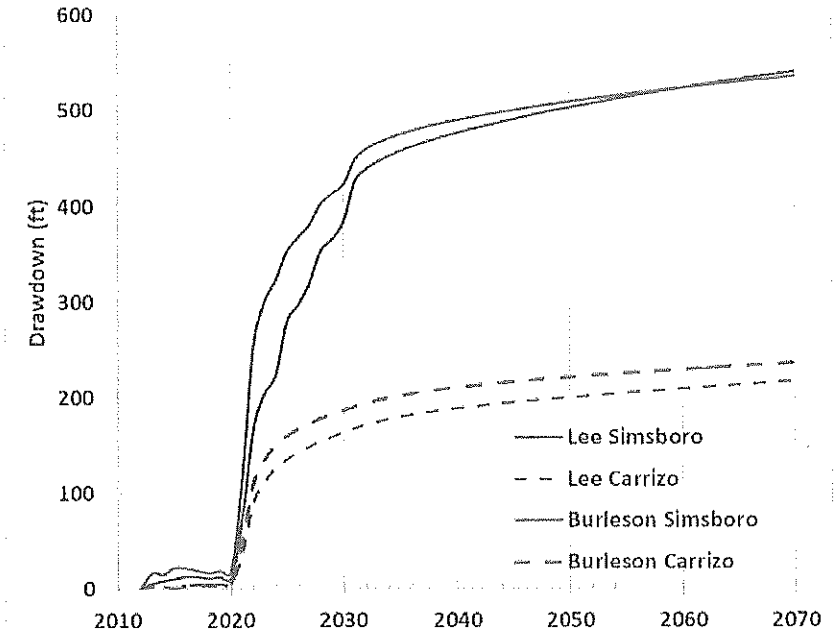


Figure 8. Evolution of the average drawdown calculated from Run S-19 for the Simsboro and Carrizo aquifers in Burleson and Lee counties.

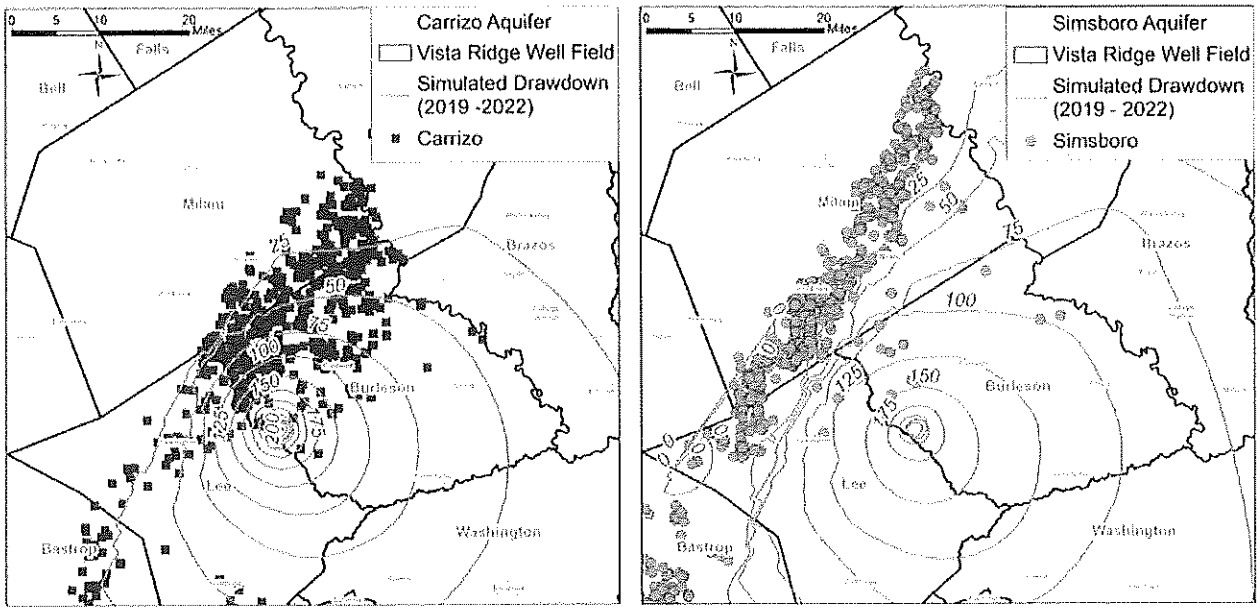


Figure 9. Contours of drawdowns simulated from Run S-19 from December 2019 to December 2022 superimposed on the locations of exempt wells in the Lost Pines and Post Oak groundwater conservation districts database for the Carrizo and Simsboro aquifers.

Table 2. Comparison of the average drawdown predicted in Lost Pines Groundwater Conservation District (LPGCD) and Post Oak Savannah Groundwater Conservation District (POSGCD) from 2011 to 2070 based on Groundwater Availability Model (GAM) Run S-19 and on a GAM simulation with the same annual pumping equally distributed across the groundwater conservation districts (GCDs) by aquifer.

GCD	Aquifer	MAG[1] (acre-feet per year)	Average drawdown (feet) 2011–2070 based on pumping distribution	
			Based on Run S-19	Based on distributing pumping from Run S-19 across the entire aquifer by county
LPGCD	Carrizo	12,980	134	49
	Simsboro	79,945	238	61
POSGCD	Carrizo	18,206	146	56
	Simsboro	79,422	236	87

the 2020 GAM. The 2020 GAM was developed using both a regional-scale calibration using historical water levels from 1930 to 2010 across the entire model domain and a series of local-scale calibrations using 36-hour pumping tests performed at each of the nine Simsboro Aquifer wells. A major change effected by the recalibration was doubling the Simsboro Aquifer transmissivity values from about 7,000 square feet per day (ft^2/day) to about 15,000 ft^2/day in the vicinity of the well field for the Vista Ridge Project (Daniel B. Stephens & Associates et al., 2020).

Realizing the importance of calibrating GAMs at both local and regional scales for improved GAM predictions, POSGCD has an ongoing program to improve the calibration for the central portion of the Carrizo-Aquifer GAM by using the calibration software called PEST++ (White et al., 2020), which helps quantify uncertainty in predictions of drawdowns. Figure 10 shows the uncertainty in the prediction of the POSGCD DFCs for the Simsboro Aquifer using GMA Run S-12, which preceded Run S-19 after the GAM recalibration had been expanded to include simulating the evolution of the drawdown cone case by Vista Ridge production from 2020 to 2021. The drawdown results in Figure 10 were generated from the statistics of 100 runs and average 292 ft with standard deviation of about 11 ft (Young et al., 2021). The prudent application of PEST++ offers considerable promise in helping GCDs understand predictive uncertainty and how to reduce it. An example of applying PEST++ to quantify predictive uncertainty is provided by Ellis et al. (2023), who document the development and application of the *Gulf Coast Land Subsidence and Groundwater-Flow* (GULF) groundwater model for GMA 14.

Understanding the Limitations of Modeled Available Groundwater as an Indicator for Assessing the Achievement of Desired Future Conditions

After the Vista Ridge Project began pumping in 2020, several landowners in POSGCD became concerned that the permitted production and the actual production volumes from the Carrizo and Simsboro aquifers in POSGCD were greater than the respective MAG for each aquifer. These concerns were expressed during GMA 12 meetings and were part of an inquiry submitted to the Texas Commission on Environmental Quality (TCEQ).

Table 2 shows the importance of pumping location to achieving a DFC. This demonstration involves performing a variation of Run S-19 by reallocating the annual pumping so that the total annual pumping in each GCD is distributed evenly across the entire GCD by aquifer. The reallocation was achieved by determining the annual amount of pumping per square mile per aquifer for each GCD then applying the rate for each respective GCD to each aquifer grid. This reallocation will cause the MAG to be spread uniformly across each aquifer in each GCD. The model results in Table 2 show that changing the location of the pumping while maintaining the MAG can reduce the value of a calculated DFC by about 60% for both the Carrizo and Simsboro aquifers. The results in Table 2, along with the understandings that GAMs are not perfect predictors of an aquifer drawdown and that the future hydrogeological conditions are unknown, are substantial reasons why a MAG may not be a reliable indicator of whether a DFC will be achieved if the MAG is pumped on an annual basis.

Emerging Issues

Because of HB 3059 becoming law and the potential importance of GAMs to GCDs' management decisions, an emerging issue will be the emphasis placed on developing GAMs for the purpose of improving their capabilities to support predictions of localized impact from pumping; evaluation of permit applications for production; development of mitigation strategies; evaluation of DFCs; and implementing curtailment of permitted production. A relatively recent advancement with constructing models that will greatly enhance the utility of GMA is using a groundwater code called MODFLOW 6 (Langevin et al., 2021). MODFLOW 6 allows submodels, which cover small areas of interest, to be built into a much larger regional model. GAMs built using MODFLOW 6 will allow GCD consultants to straightforwardly refine and recalibrate GAMs in one or more well fields of interest.

An emerging issue with groundwater management is improved coordination among GCDs in a GMA to coordinate and integrate their design monitoring of well networks, measurement of water levels, and evaluation of compliance with DFCs. Ideally, the GCDs in the same GMA should have similar, if not identical, methods for collecting data and evaluating DFC compliance. The inconsistency in how GCDs in a GMA collect and evaluate water level data for DFC compliance can only work against a GCD trying to demonstrate a DFC violation and the need for curtailment of production.

As the discussion continues regarding the need to improve the GAMs, it is necessary to acknowledge that, despite the known limitations with the current set of GAMs, the GAMs remain our best available science for developing DFCs and MAGs. Even with those limitations, GAMs may be reasonably good predictors of pumping impacts for some areas of interest. To better understand GAMs' potential limitations and how these limitations may be GMA- and problem-dependent, the issue of predictive uncertainty will likely become increasingly important. The importance of uncertainty is recognized by the U.S. Code (USC), which is the codification of the statutory laws of the United States. The USC Title 33 § 1321 (a) (27) (c) definition of "best available science" includes the requirement that it "clearly documents and communicates risks and uncertainties in the scientific basis for such projects" (USC 33 § 1321, 2023, § 1321 (a) (27) (C)). The importance of communicating risks and uncertainties is an important and emerging issue for GCDs to address soon as they adopt DFCs.

RECOMMENDATIONS

We, the authors, recognize that we each represent different groundwater-related points of view and skill sets. Among these are legal, hydrogeologic, and policy considerations. The purpose of writing this case study was, in our view, to review and learn from what has taken place in GMA 12 related to large-scale water transfers, current joint planning and modeling limitations, real world impacts, and mitigation efforts. As noted in this paper, the 88th Legislature has recognized some of these limitations and impacts and has taken action to address some of these concerns. We welcome the recent legislative action including the enactment of HB 3059. In the spirit of continued improvement, informed by a retrospective review of what has taken place, and in this case, the lessons learned from the Vista Ridge Project, we offer recommendations that we feel could, in total or in part, assist in consideration of additional large-scale water transfers in other similarly situated parts of the state. We recognize that site- and case-specific considerations may differ. Thus, based on our review of the impacts of the Vista Ridge Project on groundwater management in GMA 12, we recommend that the following topics be considered for future discussions:

1. Explore options for clarifying the language in TWC § 36 regarding the balance requirements in TWC § 36.108 (d-2) and TWC § 36.0015 (b) to help guide GMAs and GCDs with accomplishing the intent of the statute;
2. Expand TWDB's role to authorize—only upon petition by an affected landowner within a GCD—for TWDB to undertake a limited review of the explanatory report beyond an administrative review. An expanded review could include determining whether the GMA and the explanatory report have, in fact, (1) undertaken substantial review and applicability of the nine factors outlined in TWC § 36.108; (2) meaningfully and appropriately evaluated the "balance test" in TWC § 36.108 (d-2); and (3) adequately addressed the concerns and questions submitted to a GMA during the public comment period on the proposed DFCs. This recommendation recognizes the increased transparency requirements of GCDs in the development, consideration, and adoption of a DFC as enacted by the Legislature during the 88th legislative session as HB 3278. The review would not authorize TWDB to determine the appropriateness of the DFC, but rather to recommend additional data and analysis that should be considered by the GCD in developing a DFC under a process that has been, upon TWDB review, found to have not meaningfully considered the nine elements under the TWC;
3. Provide TWDB with appropriate funding to support the development and improvement of the data and capability of GAMs to evaluate the environmental and localized socioeconomic impacts of proposed DFCs; and
4. Provide GMAs with funding to improve communication of the science, improve public participation, and prepare explanatory reports that document a meaningful consideration of the nine factors in TWC § 36.108 (d).

REFERENCES

Atlantic Refining Co. v. Railroad Commission, 346 S.W.2d 801 (Tex. 1961).

Brazos Valley Groundwater Conservation District. (2021). Memo to Post Oak Savannah Groundwater Conservation District Board of Directors from Stephen Cast, Board President, Brazos Valley Groundwater Conservation District. https://posgcd.org/wp-content/uploads/2022/01/Draft_-Explanatory_Report_Appendices-A-to-X-.pdf.

Brazos Valley Groundwater Conservation District. (2023). Rules of the Brazos Valley Groundwater Conservation District. https://brazosvalleygcd.org/files/?catid=293.

Coyote Lake Ranch LLC v. City of Lubbock, 498 W. W. 3d 53 (Tex. 2016).

Daniel B. Stephens & Associates, Ground Water Consultants, LLC, & INTERA Incorporated. (2020). Presentation to GMA-12: S-7 Results for GAM 2018 and GAM 2020. https://posgcd.org/wp-content/uploads/2020/10/GMA12_Oct_22_GAM2020_comparison.pdf .

Daniel B. Stephens & Associates, INTERA Incorporated, & Ground Water Consultants, LLC. (2022). Desired Future Condition Explanatory Report for Groundwater Management Area 12. January 28, 2022. https://posgcd.org/wp-content/uploads/2022/01/GMA_12_Explanatory-Report_Final_1-28-2022.pdf.

Douglas, E. (2021, August 2). San Antonio built a pipeline to rural Central Texas to increase its water supply. Now local landowners say their wells are running dry. The Texas Tribune. https://www.texastribune.org/2021/08/02/san-antonio-water-supply-rural-wells/.

Edwards Aquifer Auth. V. Day, 369 S. W. 3d 814 (Tex. 2012).

Ellis, J., Knight, J. E., White, J. T., Sneed, M., Hughes, J. D., Ramage, J. K., Braun, C. L., Teeple, A., Foster, L. K., Rendon, S. H., & Brandt, J. T. (2023). Hydrogeology, land-surface subsidence, and documentation of the Gulf Coast Land Subsidence and Groundwater-Flow (GULF) model, southeast Texas, 1897–2018 (Professional Paper 1877). U.S. Geological Survey. https://doi.org/10.3133/pp1877.

Groundwater Management Area 12. (2021). Groundwater Management Area 12 Meeting Minutes for January 15, 2021. https://posgcd.org/wp-content/uploads/2021/12/GMA-12-Minutes-01.15.2021-Signed.pdf.

Houston & T.C. Ry. Co. v. East, 81 S.W. 279, 281 (Tex. 1904).

Texas House Committee on Natural Resources. (2022, August 24). House Committee on Natural Resources Hearing [Video]. https://tlchouse.granicus.com/MediaPlayer.php?view_id=46&clip_id=23448.

INTERA Incorporated. (2020, December 4). Desired Future Conditions Committee update [Presentation]. POSGCD DFC Committee Meeting. https://posgcd.org/wp-content/uploads/2020/12/DFC_meeting-Dec_4_final.pdf.

INTERA Incorporated. (2021a, January 15). Submission of S-10^{+} for GMA 12 Consideration [Presentation]. GMA 12 Meeting. https://posgcd.org/wp-content/uploads/2021/01/GMA_12_S-10_summary_final.pdf.

INTERA Incorporated. (2021b, February 12). GMA 12 Desired Future Conditions Presented to GMA 12 [Presentation] GMA 12 Meeting. https://posgcd.org/wp-content/uploads/2021/01/GMA12_meeting_Feb_12_2021b.pdf.

INTERA Incorporated. (2021c, June 7). Update for GMA 12 Desired Future Conditions [Presentation]. POSGCD Board Meeting. https://posgcd.org/wp-content/uploads/2021/06/Agenda-Item-6.g-Board_meeting_June_7_202_v3.pdf.

Kirkle, S. R., Martinsson, L. K., Schlessinger, S. R., Ortiz, A. R., Fowler, P. L., Puig-Williams, V., Mazur, J. B., & Votteler, T. H. (2023). Commentary: 88th Texas State Legislature: Summaries of Water-Related Legislative Action. Texas Water Journal, 14(1), 105–135. https://doi.org/10.21423/twj.v14i1.7167.

Langevin, C. D., Hughes, J. D., Banta, E. R., Provost, A. M., Niswonger, R. G., & Panday, S. (2021). MODFLOW 6 Modular Hydrologic Model (Version 6.2.1). U.S. Geological Survey. https://doi.org/10.5066/P9FL1JCC.

Lost Pines Groundwater Conservation District. (2023). Rules of the Lost Pines Groundwater Conservation District. https://www.lostpineswater.org/191/District-Rules.

Mace, R. E., Petrossian, R., Bradley, R., & Mullican, W. F., III. (2006, May 18–19). A streetcar named desired future conditions – the new groundwater availability for Texas. State Bar of Texas, 7th Annual Changing Face of Water Rights in Texas, San Antonio, TX, United States. https://aquiferalliance.org/wp-content/uploads/2014/01/Desired-Future-Conditions-03-1_mace.pdf.

Mace, R. E., Petrossian, R., Bradley, R., Mullican, W. F., III, & Christian, L. (2008, May 8–9). A streetcar named desired future conditions (revised). State Bar of Texas, Changing Face of Water Rights in Texas, Bastrop, TX, United States. https://www.twdb.texas.gov/groundwater/docs/Streetcar.pdf.

Pecos County Water Control & Improvement District No. 1 v. Williams, 271 S.W.2d 503, 505 (Tex. App. 1954)

Post Oak Savannah Groundwater Conservation District. (2021a, June 7). Post Oak Savannah Groundwater Conservation Districts Board of Directors Meeting Minutes. https://posgcd.org/wp-content/uploads/2021/07/June-7-2021-Board-Meeting-Minutes.pdf.

Post Oak Savannah Groundwater Conservation District. (2021b). Post Oak Savannah Groundwater Conservation District position paper on GMA 12 proposed DFCs for the 3rd joint planning cycle. https://posgcd.org/wp-content/uploads/2021/07/Position-Paper-on-GMA-12-Proposed-DFCs_13.pdf.

Post Oak Savannah Groundwater Conservation District. (2021c, June 24). POSGCD discussion regarding proposed desired future conditions. [Presentation] GMA 12 DFC Planning Meeting. https://posgcd.org/wp-content/uploads/2021/06/2021_12_June_24_GMA12_v9-2.pdf.

Post Oak Savannah Groundwater Conservation District. (2023a). Rules of the Post Oak Savannah Groundwater Conservation District. https://posgcd.org/wp-content/uploads/2023/09/Approved-Rules-4-11-2023.pdf.

Post Oak Savannah Groundwater Conservation District. (2023b). GMA 12 Agenda & Minutes. https://posgcd.org/agendas-minutes/gma-12-agendas-minutes/.

Rubinstein, C., & Puig-Williams, V. (2023). Improving water planning in Texas: the critical but overlooked link between desired future conditions and the state water plan. Environmental Defense Fund. https://www.edf.org/sites/default/files/documents/Improving%20Water%20Planning%20in%20Texas_0.pdf.

Terrill & Waldrop. (2020, November 10). Memo to Gary Westbrook, GM, POSGCD from Paul M. Terrill III.

Thompson, J. C., Kreitler, C. W., & Young, M. H. (2020). Exploring groundwater recoverability in Texas: maximum economically recoverable storage. Texas Water Journal, 11(1), 152–171. https://doi.org/10.21423/twj.v11i1.7113.

Texas Water Development Board. (2022). 2022 State Water Plan. https://www.twdb.texas.gov/waterplanning/swp/2022/index.asp.

Texas Water Code § 36. (2023). https://statutes.capitol.texas.gov/Docs/WA/htm/WA.36.htm.

United States Code 33 § 1321. (2023). https://codes.findlaw.com/us/title-33-navigation-and-navigable-waters/33-usc-sect-1321/.

White, J. T., Hunt, R. J., Fienen, M. N., & Doherty, J. E. (2020). Approaches to highly parameterized inversion: PEST++ version 5, a software suite for parameter estimation, uncertainty analysis, management optimization and sensitivity analysis (Techniques and Methods 7-C26). U.S. Geological Survey. https://doi.org/10.3133/tm7C26.

Wise, S. (2021). Letter to Board of Directors Brazos Valley Groundwater Conservation District. https://posgcd.org/wp-content/uploads/2024/02/Comments_Wise-to-BVGCD_DFCs-GMA12_2021_01_19.pdf.

Young, S., Jigmond, M., Jones, T., & Ewing, T. (2018). Groundwater availability model for central portion of the Sparta, Queen City, and Carrizo-Wilcox aquifers. Texas Water Development Board. https://www.twdb.texas.gov/groundwater/models/gam/czwx_c/Updated_CWQCSP_GAM_vol1_all.pdf?d=15131.300000071526.

Young, S., Kushnereit, R., Donnelly, A., & Seifert, J. (2020). GMA 12 update to the groundwater availability model for the central portion of the Sparta, Queen City, and Carrizo-Wilcox aquifers: update to improve representation of the transmissive properties of the Simsboro Aquifer in the vicinity of the Vista Ridge well field. Texas Water Development Board. https://www.twdb.texas.gov/groundwater/models/gam/czwx_c/PE_Report_GMA12_final_october_2020_merge.pdf?d=15131.300000071526.

Young, S., Kushnereit, R., White, J., & Beal, L. (2021). The future is here: comparing projected and actual impacts of Vista Ridge Project [Presentation]. Milam and Burleson Counties Groundwater Summit, 2021. August 12, 2021. https://vimeo.com/showcase/7469202.

ATTACHMENT A: GROUNDWATER OWNERSHIP IN TEXAS

Although the rule of capture has been the law in Texas since 1904 and has been consistently described as a property right incident to ownership, the courts were never required to define the exact nature of the right until regulation of these rights became authorized through groundwater conservation districts. Beginning with *Houston & T.C. Ry. Co. v. East* (1904), the courts described the rule of capture as a right but never clearly defined when or if the right is a vested real property right protected by the constitutional prohibition against a governmental taking without compensation. In *Houston & T.C. Ry. Co. v. East* (1904), the Texas Supreme Court, citing New York law, stated: "So the owner of land is the absolute owner of the soil and of percolating water, which is a part of, and not different from, the soil" *(Houston & T.C. Ry. Co. v. East* (1904), p. 4). Similarly, in Pecos County, the El Paso Court of Appeals stated:

> "It seems clear to us that percolating or diffused and percolating waters belong to the landowner, and may be used by him at his will . . . . These cases seem to hold that the landowner owns the percolating water under his land and that he can make a non-wasteful use thereof, and such is based on a concept of property ownership" *(Pecos County Water Control & Improvement District No. 1 v. Williams*, 1954, p. 1).

The nature of the groundwater right and whether it was vested remained hotly debated yet unresolved until the Supreme Court's decision in *Edwards Aquifer Authority v. Day* (2012). On February 24, 2012, the Supreme Court issued a 50-page, unanimous opinion confronting and answering for the first time the question of whether a landowner's groundwater rights are a vested real property right protected by the Texas and U.S. Constitutions' prohibitions against uncompensated taking. The opinion begins with a succinct summary of the issue presented in the decision:

> "We decide in this case whether landownership includes an interest in groundwater in place that cannot be taken for public use without adequate compensation guaranteed by Article 1, § 17(a) of the Texas Constitution. We hold that it does" *(Edwards Aquifer Authority v. Day*, 2012, p. 2).

The court noted that while it had never addressed the issue regarding groundwater, it had done so long ago with respect to oil and gas, to which the rule of capture also applies. The court, quoting its previous decisions, noted that the right to the oil and gas beneath a landowner's property is an exclusive and private property right inherent in landownership, which may not be deprived without a taking of private property.

The Supreme Court found that there was no basis in the differences cited between groundwater and oil and gas to conclude that the common law recognized a vested ownership of oil and gas in place but not groundwater. Specifically, the court explained:

> "In our state the landowner is regarded as having absolute title and severalty to the oil and gas in place beneath his land. The only qualification of that rule of ownership is that it must be considered in connection with the law of capture and is subject to police regulations. The oil and gas beneath the soil are considered a part of the realty. Each owner of land owns separately, distinctly and exclusively all the oil and gas under his land and is accorded the usual remedies against trespassers who appropriate the minerals or destroy their market value.
>
> We now hold that this correctly states the common law regarding the ownership of groundwater in place" *(Edwards Aquifer. v. Day*, 2012, p. 2).

The court cited the legislative revisions to TWC § 36.002 demonstrating the Legislature's understanding of the interplay between groundwater ownership and groundwater regulation.

The opinion in *Edwards Aquifer Authority v. Day* resolved decades of conflict concerning the nature of the ownership right held by landowners in groundwater in Texas. By applying the case law applicable to oil and gas, the Supreme Court has determined that groundwater is "owned in place" in *Edwards Aquifer v. Day* (2012, p. 9) by the landowner and that this ownership right can support a claim for uncompensated taking under the state and federal constitutions.

The Supreme Court further signaled that it would rely on its over 100 years of decisions applying the absolute ownership rule to oil and gas disputes in resolving groundwater issues in its decision in *Coyote Lake Ranch LLC v. City of Lubbock* (2016). The City of Lubbock had purchased and held the groundwater rights under the Coyote Lake Ranch for years. New owners of the property objected to plans announced by the city to drill 60+ wells on the ranch to produce and transport groundwater to the city. On review of a judgment favorable to the landowner, the Supreme Court determined that the severed groundwater right was, like a severed mineral interest, the dominant estate, with the right to use the surface to access the groundwater. However, the court ruled that, like in oil and gas law, the Accommodation Doctrine applied to the exercise of this right. In summary, this means the groundwater estate, in exercising it rights, must act with due regard for the surface owner's use.

This decision indicates that the courts will likely consider its decisions in disputes involving minerals on issues arising in groundwater disputes involving permitting. The ownership rights must be considered and addressed by groundwater districts in striking the appropriate balance between conserving and protecting the groundwater resources within their jurisdic-

tion while recognizing the vested property rights of the landowners subject to regulation.

The courts' decisions make clear two fundamental principles: (1) that groundwater rights are a vested property right protected from governmental action that constitutes a taking of that right without just compensation; and (2) that the courts will consider case law in disputes involving oil and gas in deciding conflicts regarding groundwater.

Groundwater districts need to be mindful of the judicial precedents established in evaluating oil and gas regulatory programs and impacts on landowners' vested rights in the minerals below ground. One important and likely relevant concept is that regulation cannot unreasonably deprive the landowner of their fair share of the managed resource (*Atlantic Refining Co. v. Railroad Commission*, 1961). While the goals and consequences of groundwater management are distinctly different than in mineral development, the courts will consider oil and gas precedents in deciding whether regulatory decisions made by groundwater districts limit the landowners' groundwater ownership rights to the extent that a constitutionally prohibited taking has occurred.

This tension is particularly acute when districts protect existing use by limiting or preventing future use. The Rule of Capture, as a legal principle, provides no protection for historic use. Landowners who have conserved the resource by not producing from it can have their rights limited to protect the resource and historic use, but the courts will consider oil and gas decisions in determining if limiting those rights rises to the level of a taking. At the same time, they must consider how the goals of groundwater regulation differ from the goals of regulation of oil and gas. As the Supreme Court noted in *Edwards Aquifer Auth. v. Day* (2012):

> "The principal concerns in regulating oil and gas production are to prevent waste and to provide a landowner a fair opportunity to extract and market the oil and gas beneath the surface of the property. Groundwater is different in both its source and uses. Unlike oil and gas, groundwater in an aquifer is often being replenished from the surface, and while it may be sold as a commodity, its uses vary widely, from irrigation, to industry, to drinking, to recreation. Groundwater regulation must take into account not only historical usage but future needs, including the relative importance of various uses, as well as concerns unrelated to use, such as environmental impacts and subsidence" (*Edwards Aquifer Auth. v. Day*, 2012, p. 18).

How this balance will be struck will be the subject of future court decisions.

Laura Martin

From: Texas Alliance of Groundwater Districts <TAGD@wildapricot.org>
Sent: Friday, August 16, 2024 12:36 PM
To: Laura Martin
Cc: Haley Stakes
Subject: Monday Field Trip: Important Information

Follow Up Flag: Follow up
Flag Status: Completed

Dear Laura,

We're excited that you've registered for the pre-conference educational field trip to the San Antonio Water System (SAWS) H2Oaks Center, taking place from 12:30-4:30 pm on Monday, August 19, the day before the Texas Groundwater Summit begins. This is a unique opportunity to explore one of the most innovative water facilities in Texas. Click here to learn more about the facility.

Note: We do still have a few spots available! Any interested colleagues can register here.

Field Trip Team:

- **Blaire Parker** is the SAWS representative for the field trip and will be on the bus available for any SAWS-specific questions. Thanks to Blaire and other SAWS staff for coordinating this opportunity and providing transportation and snacks!
- **Kelley Cochran**, TAGD Parliamentarian and General Manager of Guadalupe County GCD, will serve as the TAGD liaison and field trip "captain." Make sure to check in with her when you arrive.

Logistics & Details:

- **Meeting Spot:** Please meet at the Windmill Motor Court Foyer at 12:30. Our field trip team will be there to greet you and get everyone on the bus. See a map of the hotel with the meeting space circled here.
- **Transportation:** We will be providing transportation from the Hyatt Regency Hill Country Resort to the H2Oaks Center and back.
- **Refreshments:** While lunch will not be provided, snacks and drinks will be available upon our arrival at the H2Oaks Center.
- **Registration:** If anyone else from your organization would like to join and hasn't registered yet, we still have a few spots left. Please encourage them to sign up by clicking the yellow "Register" button here.

Helpful Tips:

- Please bring a refillable water bottle if you would like to enjoy water during your visit.
- Wear comfortable, closed-toe walking shoes, and dress appropriately for the weather. While most of our time will be spent indoors, there will be some walking around the facility.
- Restroom facilities will only be available on the bus and at the H2Oaks Center, so please plan accordingly.

We look forward to seeing you on Monday for what promises to be a fun and educational experience! If you have any questions before the trip, feel free to reach out. However, TAGD staff availability will be limited on Monday, so for any last-minute questions or updates on that day, please email blaire.parker@saws.org, kelley@gcgcd.org, AND summit@texasgroundwater.org so your issue can be handled accordingly.

Thank you,

The TAGD Team

TEXAS ALLIANCE OF GROUNDWATER DISTRICTS

2024 TEXAS GROUNDWATER SUMMIT

Hyatt Regency Hill Country • San Antonio, TX • August 20-22

AGENDA

Monday, August 19 – Optional field trip add-on to San Antonio Water System H2Oaks Center

Day 1 – Tuesday, August 20

8:30am **Registration Table Opens**

9:30am – 11:00am **TAGD Annual Membership Meeting**

1:00pm – 3:00pm **Welcome Address**
Adam Foster, Executive Director, Texas Alliance of Groundwater Districts

Groundwater Rights in Texas
Charles Porter, Real Estate & Water Rights Consultant

Panel - Playing by the Rules: GCD Violations & Enforcement
Moderator: Drew Satterwhite, General Manager, Canadian River Municipal Water Authority
John Martin, General Manager, Southeast Texas GCD
Dave Mauk, General Manager, Bandera County River Authority & Groundwater District
Stacey Reese, Attorney, Stacey Reese Law
Patrick Wagner, General Manager, Middle Trinity GCD

Hydrogen Energy Value Chain and Impacts on Water
Ning Lin, Center for Energy Economics Chief Economist, Bureau of Economic Geology

3:00pm – 3:30pm **Afternoon Break** (Sponsored by Edwards Aquifer Authority, Halff Associates, and McElroy Sullivan Miller & Weber LLP)

3:30pm – 5:15pm **Keynote Address – Communication: The Last Frontier in Science**
Dr. "Hurricane Hal" Needham, Extreme Weather and Disaster Scientist, GeoTrek

Panel - All the Small Things: Studying & Managing Minor Aquifers
Moderator: Amy Bush, Hydrologist, RMBJ Geo
Natalie Ballew, Groundwater Division Director, Texas Water Development Board
Blaine Hicks, Staff Geologist, Upper Trinity GCD
Bill Hutchison, Independent Groundwater Consultant
Kevin Urbanczyk, Director of Rio Grande Research Center, Sul Ross State University

5:15pm – 6:15pm **Welcome Reception** (Sponsored by Brazoria County GCD)

TEXAS ALLIANCE OF GROUNDWATER DISTRICTS

2024 TEXAS GROUNDWATER SUMMIT

Hyatt Regency Hill Country • San Antonio, TX • August 20-22

Day 2 – Wednesday, August 21 (continued)

1:30pm – 3:00pm **Breakout Track B – Waste Not, Want Not: Advancements in Produced Water Reuse**

Critical Minerals in Produced Water
Brent Elliott, Associate Research Professor, Bureau of Economic Geology

Land Application of Produced Water
Adrianne Lopez, Technical Research & Development Manager, Texas Pacific Water Resources

New Rules for Oil & Gas Waste Pits and Recycling Facilities
Virginia Palacios, Executive Director, Commission Shift

1:30pm – 3:00pm **Breakout Track C – Navigating the Intersections of Local Regulation**

Primer on the PUC and Water Providers
Adam Friedman, Partner, McElroy Sullivan Miller & Weber LLP

Annexation and CCN Issues
Emily Rogers, Managing Partner, Bickerstaff Heath Delgado Acosta LLP

Opportunities in Subdivision Regulation
Marisa Bruno, Water Program Manager, Hill Country Alliance

3:00pm – 3:30pm **Afternoon Break** (Sponsored by Edwards Aquifer Authority, Halff Associates, and McElroy Sullivan Miller & Weber LLP)

3:30pm – 5:00pm **Breakout Track A (repeat) – Fundamentals of Groundwater Management**

Basics of Bottom-Up Water Planning in Texas
Robert Bradley, Groundwater Technical Assistance Manager, Texas Water Development Board

Demystifying GCD Permitting
Jake Steen, Attorney, Lloyd Gosselink Rochelle & Townsend

Anatomy of a Well
Joel Pigg, Texas Well Owner Network Coordinator, Texas A&M AgriLife Extension

Breakout Track B – Local Science Developments

Hydrostratigraphic Model of the Trinity Aquifer for a Portion of Central Texas
Vince Clause, Texas Groundwater Lead, LRE Water

San Solomon Springs Studies
Rebecca Nunu, Principal Geoscientist, Edwards Aquifer Authority

Planning, Leadership, and Science: Developing the Bandera Well Longevity Model
James Golab, Innovative Water Technologies Manager, Texas Water Development Board

3:30pm – 5:00pm **Breakout Track C – Leading Them to Water: Effective Public Outreach**

Applying Adult Learning Strategies for Better Engagement
Amy Hays, Assistant Director of Development & Outreach, Oka Water Institute

Outreach by Meeting People Where They're At
Greg Wukasch, External Affairs Manager, San Antonio Water System

Making a Splash With Storytelling
Leah Cuddeback, Storytelling & Public Engagement Manager, Hill Country Alliance

TEXAS ALLIANCE OF GROUNDWATER DISTRICTS

2024 TEXAS GROUNDWATER SUMMIT

Hyatt Regency Hill Country • San Antonio, TX • August 20-22

Day 2 – Wednesday, August 21 (continued)

5:00pm – 6:00pm **Happy Hour Reception** (Sponsored by INTERA)

8:00pm – 10:00pm **Drinks & Desserts Networking Event** (Sponsored by Real Edwards Conservation & Reclamation District)

Day 3 – Thursday, August 22

7:45am – 8:15am **Breakfast Taco Bar** (Sponsored by Olsson and Upper Trinity GCD)

8:15am – 10:00am **Welcome**
Adam Foster, Executive Director, Texas Alliance of Groundwater Districts

Panel - Emerging Management Issues for Large-Scale Production Permits
Moderator: John Dupnik, Deputy Executive Administrator, Texas Water Development Board
Russell Johnson, Partner, McGinnis Lochridge LLP
Laura Martin, General Manager, Gonzales County UWCD
Carlos Rubinstein, Principal, RSAH2O
Steve Young, Principal Geoscientist, INTERA

Panel – Groundwater Crossroads: Perspectives From Agriculture, Ranching, and Wildlife
Moderator: Jim Bradbury, Partner, James D. Bradbury PLLC
Andrew Earl, Director of Conservation, Texas Wildlife Association
David Gibson, Executive Director, Texas Corn Producers
James Oliver, Board Member, Texas & Southwestern Cattle Raisers Association

10:00-10:30 am **Morning Break** (Sponsored by Edwards Aquifer Authority, Halff Associates, and McElroy Sullivan Miller & Weber LLP)

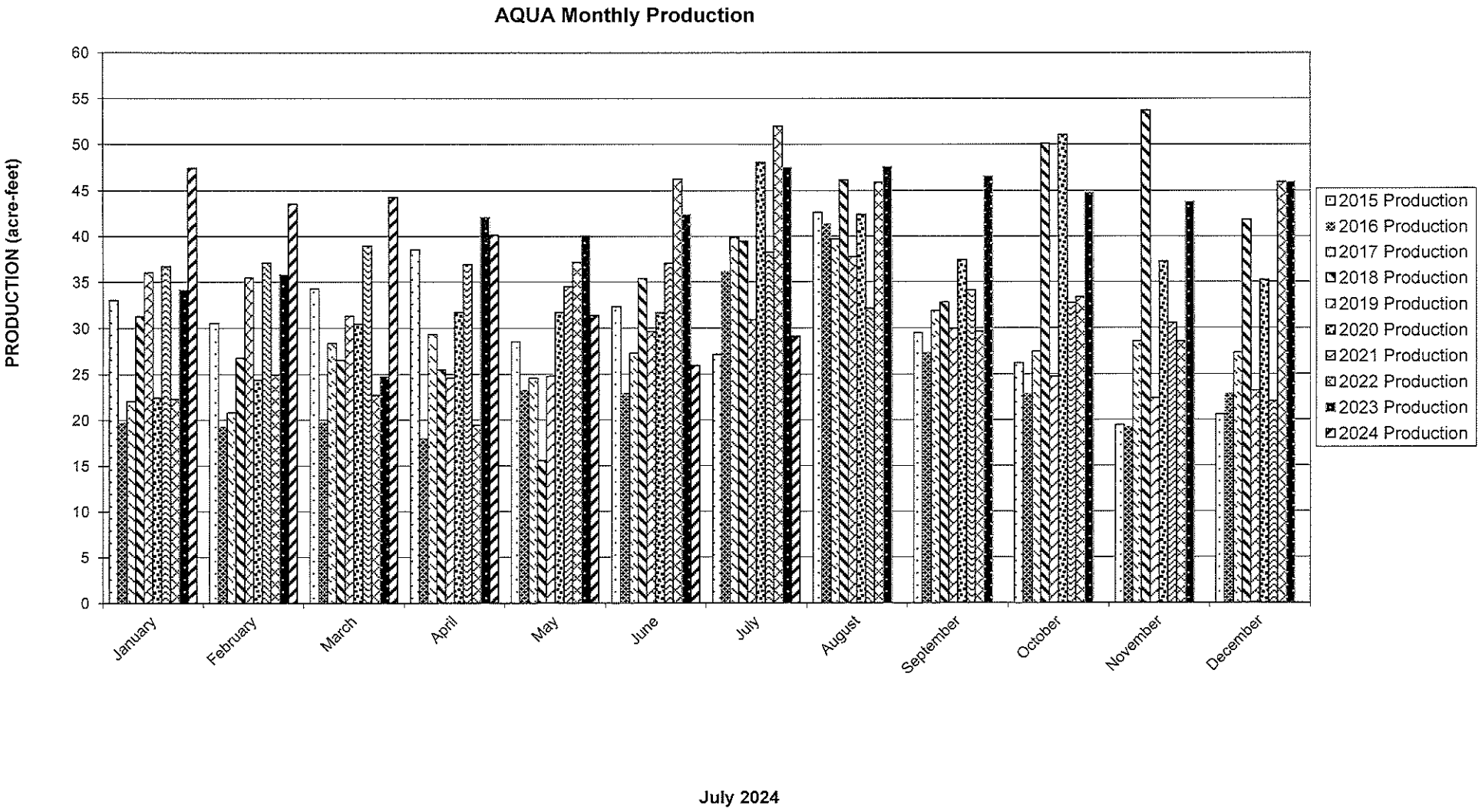
10:30-12:15pm **Current Legal Issues - Litigation and GCD Action Appeals**
Greg Ellis, Attorney, GM Ellis Law Firm
Deborah Trejo, Partner, Kemp Smith Law

Head Above Water: How Professionals Can Avoid Burnout *(1-Hour Ethics)*
Paul Jacobs, Staff Attorney, Texas Lawyers' Assistance Program

AQUA Water Supply Corporation
Meter Reading - Usage
2024

Date	F255 Delhi #1 Meter	Usage	Transported	F256 Delhi #2 Meter	Usage	Transported	Hinton Well Meter	Usage	Transported	Fees
January	761,383,700	7,193.70		954,740,000	8,268.00		0.00	0.00		
			6,411.62			7,369.12			0.00	$ 344.52
February	767,934,700	6,551.00		962,374,000	7,634.00		0.00	0.00		
			5,806.03			6,765.88			0.00	$ 314.30
March	774,586,700	6,652.00		970,151,000	7,777.00		0.00	0.00		
			5,953.35			6,960.19			0.00	$ 322.84
April	780,803,000	6,216.30		977,004,000	6,853.00		0.00	0.00		
			5,478.98			6,040.16			0.00	$ 287.98
May	785,164,100	4,361.10		982,894,000	5,860.00		0.00	0.00		
			3,197.66			4,296.68			0.00	$ 187.36
June	786,047,900	877.80		990,452,000	7,588.00		0.00	0.00		
			747.59			6,462.41			0.00	$ 180.25
July	786,557,500	515.60		999,411,000	8,959.00		0.00	0.00		
			453.26			7,875.82			0.00	$ 208.23
August										
September										
October										
November										
December										
Total Gallons*		32,368			52,939			0		
Total AC/FT		99.33			162.46			0.00		
Current Month Production in AC/FT			29.08							
Percentage of monthly allowable for current month					6.97					
Total AC/FT for year		261.80		**Percentage of yearly prod.**		5.24	**Total Dollars**			**$1,845.47**

*gallons in thousands


AQUA Monthly Production
PRODUCTION (acre-feet)
60
55
50
45
40
35
30
25
20
15
10
5
0
January
February
March
April
May
June
July
August
September
October
November
December
2015 Production
2016 Production
2017 Production
2018 Production
2019 Production
2020 Production
2021 Production
2022 Production
2023 Production
2024 Production
July 2024

Canyon Regional Water Authority
Wells Ranch Water Meter Reading - Usage
2024

	P030 Well #12 Bultrap Well		P029 Well #11 Coastal Field Well		P028 Well #9 Camp House Well		P027 Well #1 Tommy's Well		P086 Well #8 Chicken House		L188 Well #5 Littlefield		L189 Well #13 Bond West		L190 Well #14 Christian West		L191 Well #15 Bond East		L192 Well #16 Christian East	
Date	Meter	Usage	Meter	Usage	Meter	Usage	Meter	Usage	Meter	Usage	Meter	Usage	Meter	Usage	Meter	Usage	Meter	Usage	Meter	Usage
Jan	1,344,354		1,565,444		2,142,729		1,574,167		776,335		1,120,341		947,830		1,026,863		1,693,983		501,288	
		14,161		16,816		19,144		15,532		19,491		21,564		21,373		19,733		37,103		13,906
Feb	1,356,417		1,579,822		2,159,080		1,589,437		792,867		1,138,613		965,583		1,043,922		1,725,165		512,634	
		12,063		14,378		16,351		15,270		16,532		18,272		17,753		17,059		31,182		11,346
March	1,370,265		1,595,892		2,177,400		1,605,300		811,135		1,158,615		985,719		1,063,248		1,760,005		525,158	
		13,848		16,070		18,320		15,863		18,268		20,002		20,136		19,326		34,840		12,524
April	1,384,411		1,611,866		2,195,686		1,621,301		829,121		1,178,359		1,006,457		1,084,196		1,797,787		537,782	
		14,146		15,974		18,286		16,001		17,986		19,744		20,738		20,948		37,782		12,624
May	1,398,970		1,629,108		2,215,313		1,638,443		848,866		1,197,101		1,027,884		1,108,715		1,836,559		552,253	
		14,559		17,242		19,627		17,142		19,745		18,742		21,427		24,519		38,772		14,471
June	1,414,454		1,647,210		2,236,176		1,655,980		869,937		1,219,433		1,050,315		1,131,781		1,877,316		567,752	
		15,484		18,102		20,863		17,537		21,071		22,332		22,431		23,066		40,757		15,499
July	1,429,582		1,665,102		2,256,249		1,673,703		890,382		1,242,492		1,072,724		1,155,128		1,916,362		579,438	
		15,128		17,892		20,073		17,723		20,445		23,059		22,409		23,347		39,046		11,686
Aug	1,446,710		1,685,399		2,279,255		1,693,823		913,978		1,267,163		1,098,584		1,180,416		1,960,805		596,360	
		17,128		20,297		23,006		20,120		23,596		24,671		25,860		25,288		44,443		16,922
Sept																				
Oct																				
Nov																				
Dec																				
Total Gallons*		116517		136771		155670		135188		157134		168386		172127		173286		303925		108978
Total AC/FT		357.58		419.73		477.73		414.88		482.23		516.76		528.24		531.80		932.71		334.44

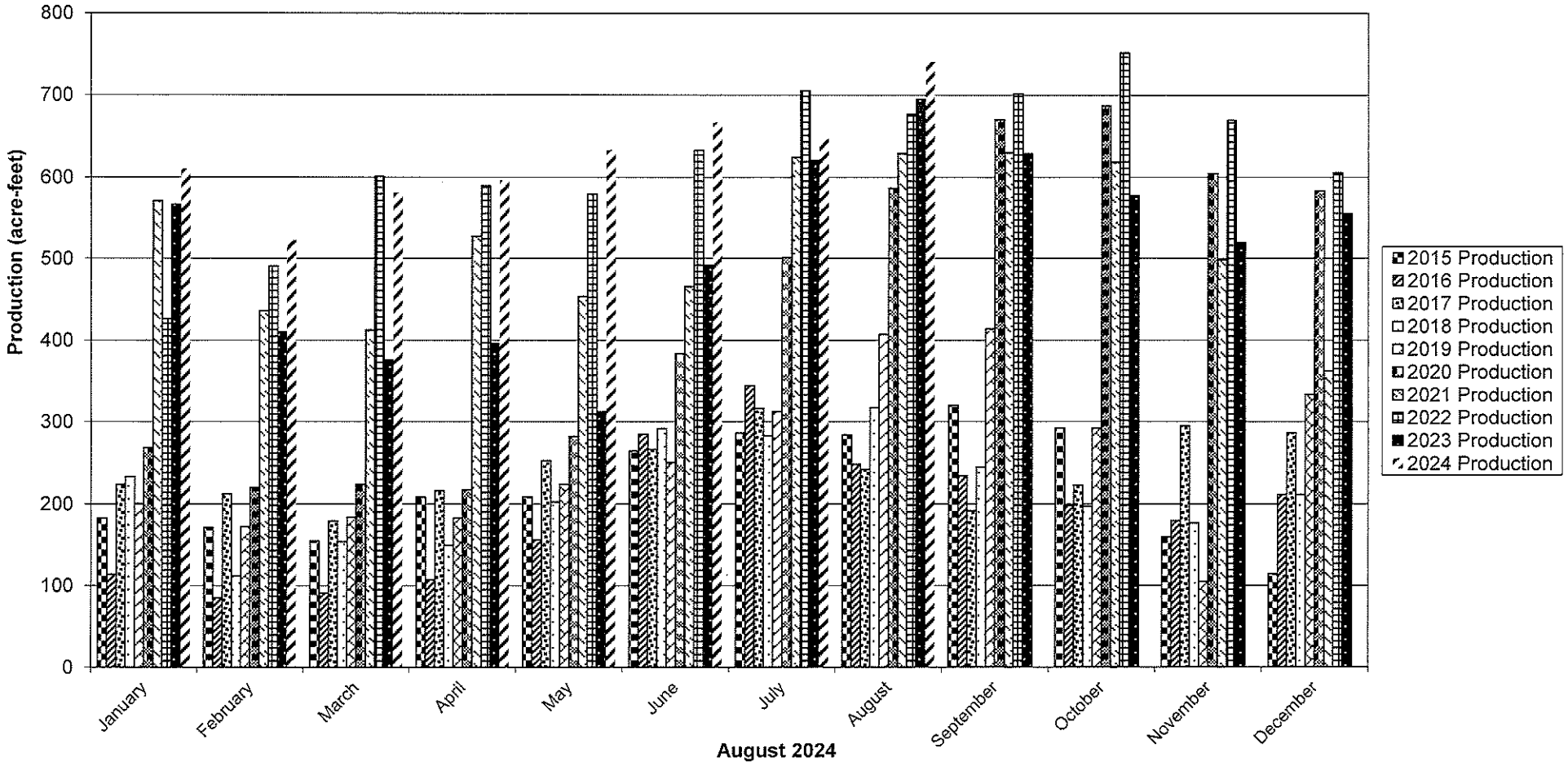
Current Month Production in AC/FT 740.62

Percentage of monthly allowable for current mo. 106.81

Total AC/FT for yr 4996.09 Percentage of yearly production 60.05

* gallons in thousands

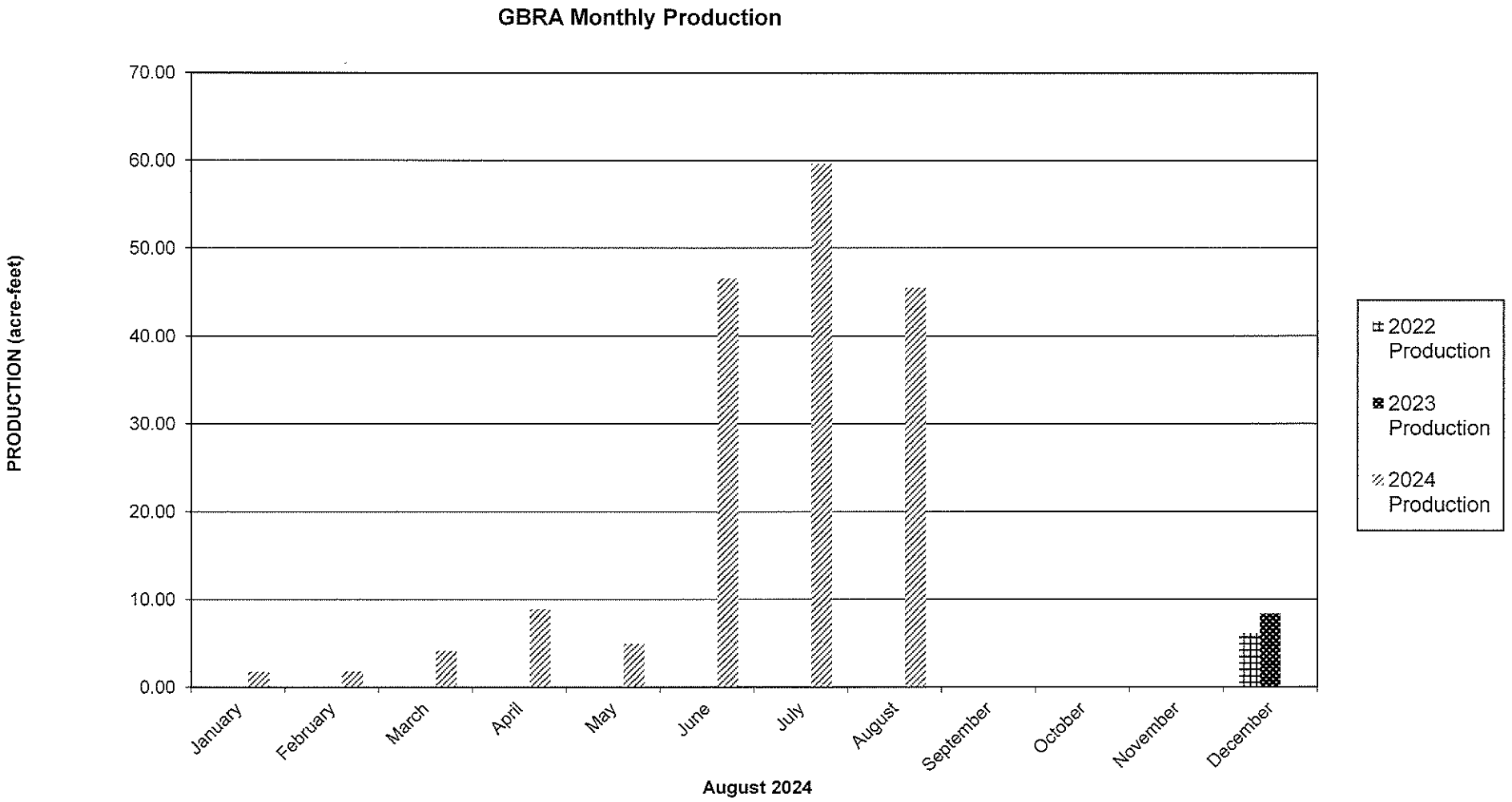
CRWA Monthly Production



Gudalupe-Blanco River Authority
Meter Reading - Usage
2024

	P059 Well #1		P060 Well #2		P061 Well #3		P062 Well #4		P063 Well #5		P064 Well #6		P065 Well #7		
Date	Meter	Usage	Meter	Usage	Meter	Usage	Meter	Usage	Meter	Usage	Meter	Usage	Meter	Usage	B/W
Jan	0		0		0		0		0		0		570,700		
		0		0		0		0		0		0		570	
Feb	586,815		0		0		0		0		0		570,700		
		587		0		0		0		0		0		0	
Mar	586,815		0		0		642,800		0		0		570,700		
		0		0		0		643		0		0		704	
Apr	586,815		0		0		642,800		0		725,000		1,274,700		
		653		0		0		653		0		725		860	
May	1,239,815		135,000		0		1,295,800		1,268,000		725,000		2,134,700		
		50		135		0		50		1,268		50		50	
June	1,289,815		135,000		3,298,000		1,345,800		1,268,000		775,000		2,184,700		
		2,737		962		3,298		1,298		3,080		1,454		2,347	
July	1,767,206		1,546,422		1,473,749		966,058		3,805,461		2,969,704		5,911,182		
		1,767		1,546		1,962		966		3,805		2,970		6,423	327
Aug	1,767,206		4,308,612		2,474,968		2,920,261		5,833,646		5,812,966		10,162,674		
		0		2,762		1,001		1,954		2,028		2,843		4,251	264
Sept															
Oct															
Nov															
Dec															
Total Gallons* (kg		5,794		5,406		6,261		5,564		10,182		8,042		15,205	
Total ac/ft		17.78		16.59		19.21		17.08		31.25		24.68		46.66	
Current Mo. Production in ac/ft				45.54											
% of monthly allowable for current mo.					3.64										
Total ac/ft for yr		173.25	% of prod. for year				1.15								

gallons in thousands


GBRA Monthly Production
PRODUCTION (acre-feet)
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
January
February
March
April
May
June
July
August
September
October
November
December
August 2024
2022 Production
2023 Production
2024 Production

San Antonio Water System
Meter Reading - Usage
2024

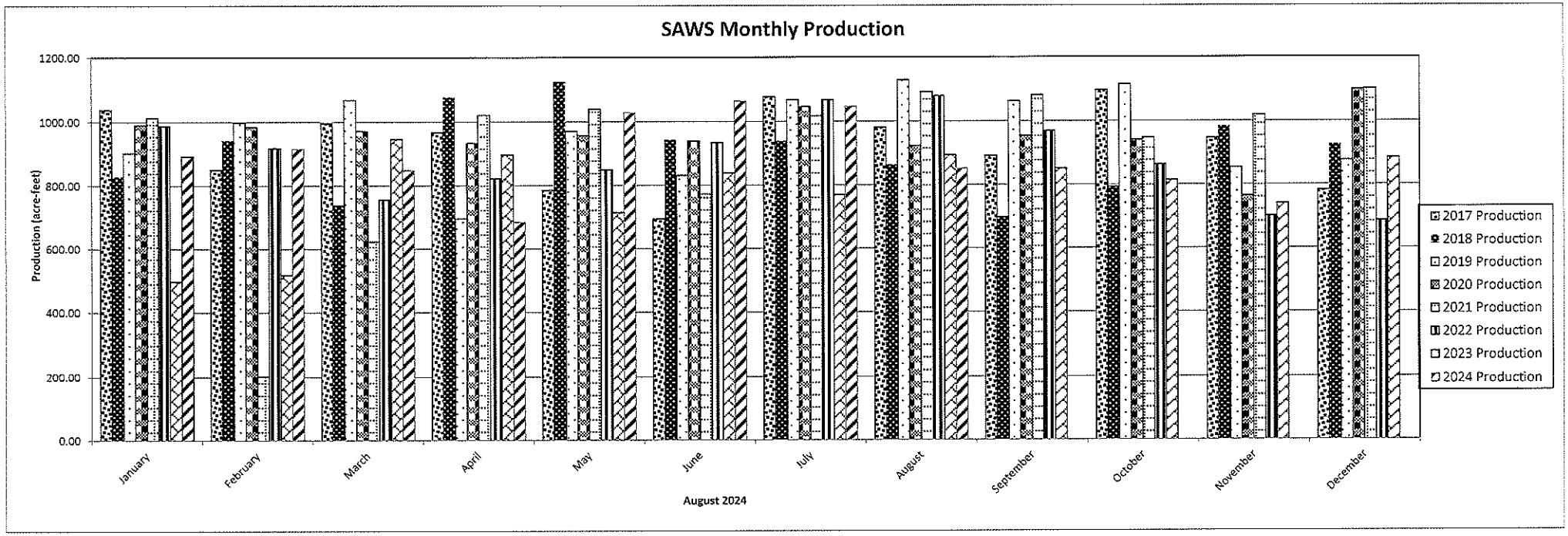
Date	P036 Well WG-2 Meter	Usage	P039 Well WG-5 Meter	Usage	P040 Well WG-6 Meter	Usage	P041 Well WG-7 Meter	Usage	P042 Well WG-8 Meter	Usage	P043 Well WG-9 Meter	Usage	P044 Well WG-10 Meter	Usage	P047 Well WG-14 Meter	Usage	P048 Well WG-15 Meter	Usage	B/W	Fees
Jan	2,987,811		3,080,151		4,328,423		528,455		4,235,138		276,716		3,045,050		4,645,916		3,525,513			
		46,420		53,775		0		29,742		3		59,432		54,354		3		46,907	6594.7	$7,101.03
Feb	3,044,510		3,132,036		4,328,540		549,661		4,235,138		330,598		3,092,964		4,658,128		3,579,754			
		56,699		51,885		117		21,206		0		53,882		47,915		12,212		54,240	6,079	$7,301.94
Mar	3,106,674		3,169,429		4,328,544		549,661		4,235,387		388,804		3,112,321		4,703,000		3,633,864			
		62,165		37,392		4		0		249		58,206		19,357		44,872		54,110	5,717	$6,765.94
Apr	3,171,504		3,185,707		4,328,559		549,661		4,235,556		448,620		3,134,078		4,703,044		3,693,788			
		64,830		16,379		14		0		169		59,816		21,756		45		59,924	5,037	$5,447.41
May	3,328,351		3,239,554		4,357,699		549,661		4,270,177		501,751		3,182,637		4,733,829		3,722,233			
		56,847		53,747		29,141		0		34,622		53,131		48,559		30,785		28,445	7,050	$8,205.66
June	3,288,524		3,293,994		4,396,075		549,661		5,415,476		556,679		3,199,184		4,762,979		3,757,866			
		60,173		54,440		38,375		0		45,298		54,927		16,547		41,522		35,633	6,991	$8,498.14
July	3,311,417		3,351,474		4,437,406		549,873		4,341,302		614,509		3,229,901		4,810,229		3,815,441			
		22,893		57,480		41,331		212		25,827		57,830		30,718		47,250		57,575	6,829	$8,357.15
Aug	33,211,417		3,406,538		4,471,585		549,883		4,341,302		670,322		3,171,394		4,862,883		3,853,788			
		0		55,065		34,179		10		0		55,813		41,493		52,654		38,346	7,452	$6,752.70
Sept																				
Oct																				
Nov																				
Dec																				
Total Gallons*		370,026		380,162		143,162		51,170		106,168		453,038		280,698		229,343		375,181		2,388,948
Total ac/ft		1135.57		1166.67		439.35		157.04		325.82		1390.32		861.43		703.83		1151.39		7,331.41

Current Month Production in ac/ft 851.80

% of monthly allowable for current month 87.45

Total ac/ft for year 7331.41 % of prod. for year 62.73 Total Dollars $58,429.97

gallons in thousands


SAWS Monthly Production
1200.00
1000.00
800.00
600.00
400.00
200.00
0.00
Production (acre-feet)
January
February
March
April
May
June
July
August
September
October
November
December
August 2024
2017 Production
2018 Production
2019 Production
2020 Production
2021 Production
2022 Production
2023 Production
2024 Production

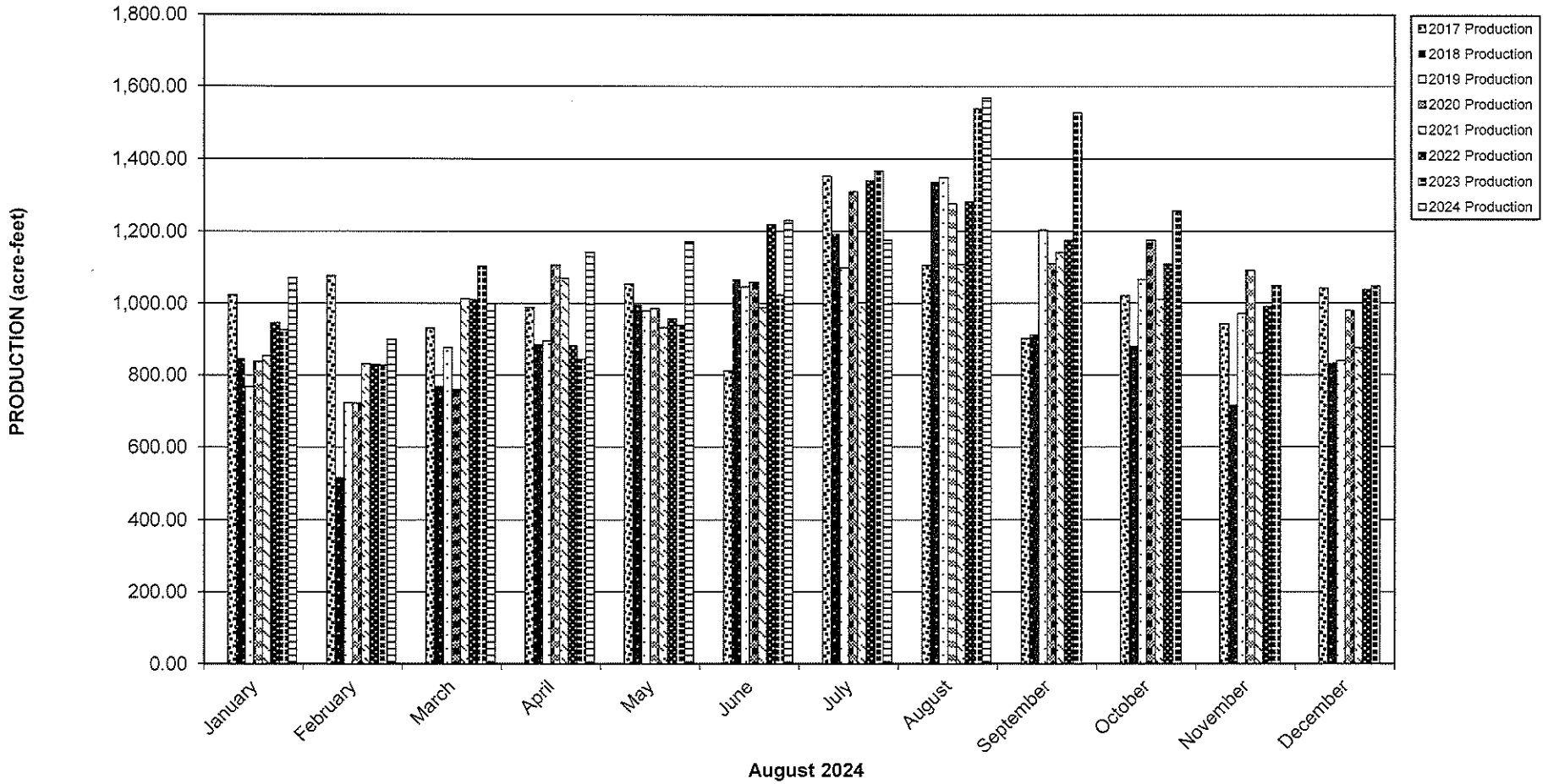
Schertz-Seguin Local Government Corporation
Meter Reading - Usage
2024

	P007 Well #1		P008 Well #2		P009 Well #3		P010 Well #4		P011 Well #5		P012 Well #6		P016 Well #7		P017 Well #8		P031 Well #9		P032 Well #10		P033 Well #11		P034 Well #12			
Date	**Meter**	**Usage**	**Meter**	**Usage**	**Meter**	**Usage**	**Meter**	**Usage**	**Meter**	**Usage**	**Meter**	**Usage**	**Meter**	**Usage**	**Meter**	**Usage**	**Meter**	**Usage**	**Meter**	**Usage**	**Meter**	**Usage**	**Meter**	**Usage**	**B/W**	**Fees**
Jan	890,960		287,534		836,744		365,702		287,672		541,090		331,250		611,391		2,898,556		2,349,304		3,151,746		4,557,111			
		16,920		0		43,511		35,496		4,309		36,977		7,043		43,064		43,975		43,703		0		74,128	7922	$8,530.10
Feb	891,016		287,534		882,614		379,481		287,672		570,271		354,771		660,041		2,947,884		2,369,601		3,151,746		4,619,306			
		36		0		45,870		13,779		0		29,181		23,521		48,650		49,328		20,297		0		62,195	5,971	$7,172.15
Mar	891,052		287,534		926,049		419,583		295,143		587,068		402,269		708,379		2,992,112		2,397,066		3,143,676		4,668,180			
		36		0		43,435		40,102		7,471		16,797		47,498		48,338		44,228		27,465		1,606		48,874	6,741	$7,977.73
Apr	897,100		287,534		967,437		433,137		340,512		630,027		452,372		747,217		3,040,940		2,418,947		3,148,242		4,726,960			
		6,048		0		41,388		13,554		45,369		42,959		50,103		38,838		48,828		21,881		4,566		58,780	8,412	$9,097.55
May	921,436		287,534		13,413		436,881		374,892		683,942		498,343		792,125		3,105,704		2,461,419		3,159,357		4,737,141			
		24,336		0		45,976		3,744		34,380		53,915		45,971		44,908		64,764		42,472		11,115		10,181	8,027	$9,343.38
June	973,276		287,534		61,061		438,897		377,107		736,213		547,471		843,514		3,174,714		2,511,365		3,185,265		4,737,141			
		51,840		0		47,648		2,016		2,215		52,271		49,128		51,389		69,010		49,946		25,908		0	8,088	$9,832.08
July	1,026,376		287,534		108,276		438,897		379,227		788,515		598,169		879,170		3,235,742		2,549,233		3,228,668		4,737,141			
		53,100		0		47,215		0		2,120		52,302		50,698		35,656		61,028		37,868		43,403		0	7,675	$9,392.88
Aug	1,083,400		309,566		156,128		458,913		392,361		846,671		649,843		931,492		3,303,619		2,574,546		3,264,758		4,796,483			
		57,024		22,032		47,852		20,016		13,134		58,156		51,674		52,322		67,877		25,313		36,090		59,342	13,716	$12,427.90
Sept																										
Oct																										
Nov																										
Dec																										
Total Gallons*		209,340		22,032		362,895		128,707		108,998		342,558		325,636		363,165		449,038		268,945		122,688		313,500		3,017,502
Total ac/ft		642.44		67.61		1113.68		394.99		334.50		1051.27		999.34		1114.51		1378.05		825.36		376.52		962.10		9260.37
Current Mo. Production in ac/ft				1567.69																						
% of monthly allowable for current mo.						97.19																				
Total ac/ft for yr		9260.37		**% of prod. for year**				47.83																		

Total Dollars **$73,773.75**

gallons in thousands

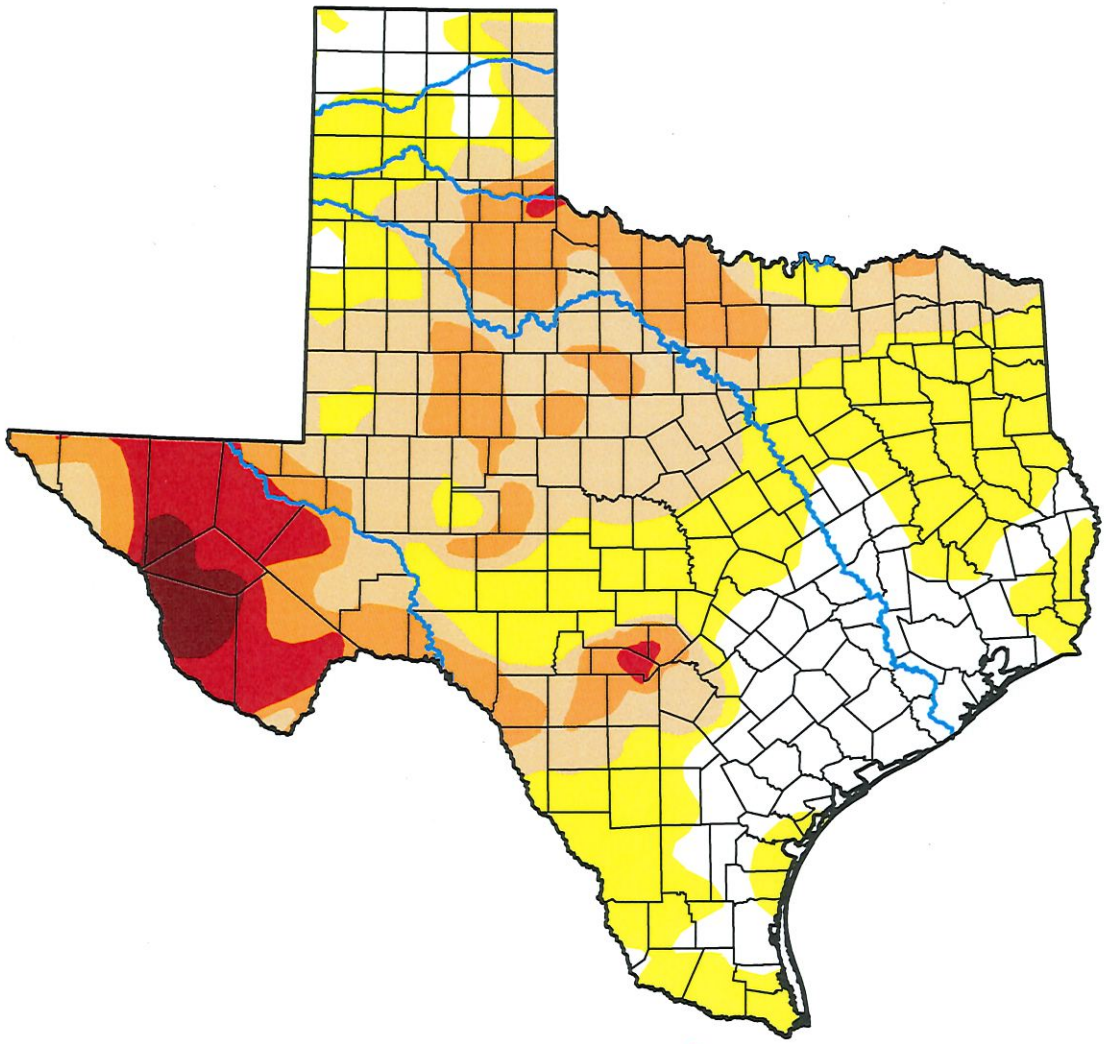
SSLGC Monthly Production



August 2024

U.S. Drought Monitor

Texas



August 27, 2024

(Released Thursday, Aug. 29, 2024)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	19.02	80.98	48.13	22.25	7.60	1.82
Last Week *08-20-2024*	37.79	62.21	40.01	14.17	6.18	1.82
3 Months Ago *05-28-2024*	50.84	49.16	26.48	13.03	1.90	0.00
Start of Calendar Year *01-02-2024*	39.60	60.40	39.47	17.78	5.68	0.68
Start of Water Year *09-26-2023*	3.03	96.97	80.64	59.66	38.06	12.68
One Year Ago *08-29-2023*	1.55	98.45	75.83	61.41	32.33	12.64

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:
Richard Heim
NCEI/NOAA

droughtmonitor.unl.edu

Water Weekly

For the week of **09/02/24**

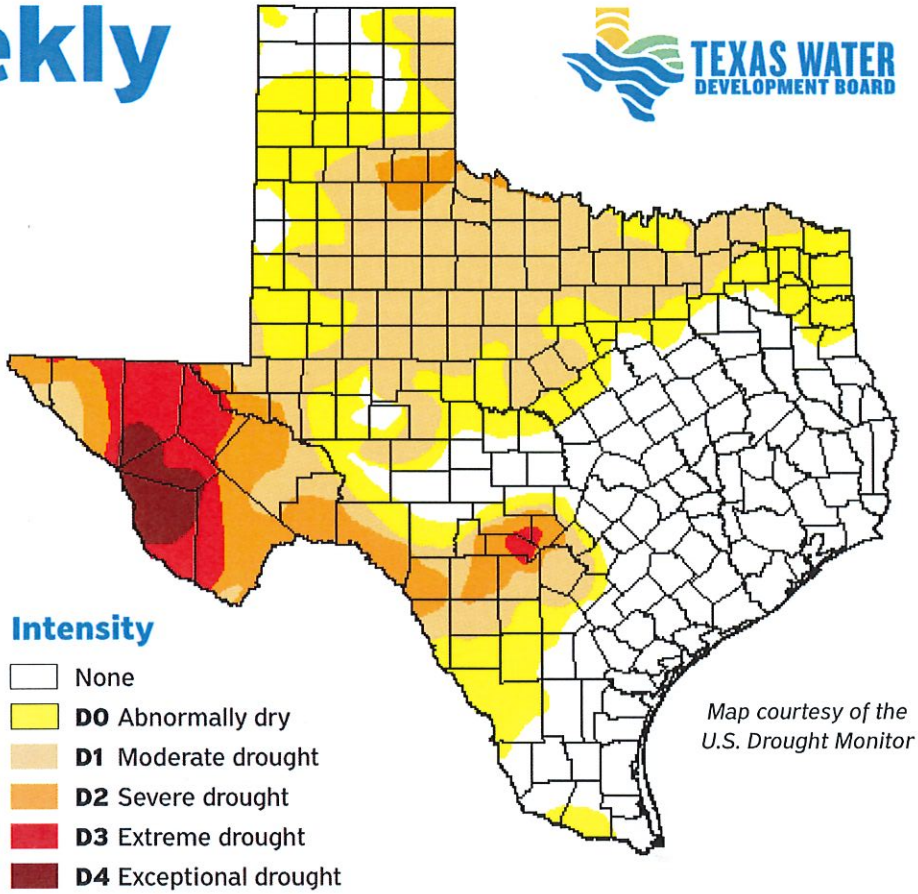
TEXAS WATER DEVELOPMENT BOARD

Water conditions

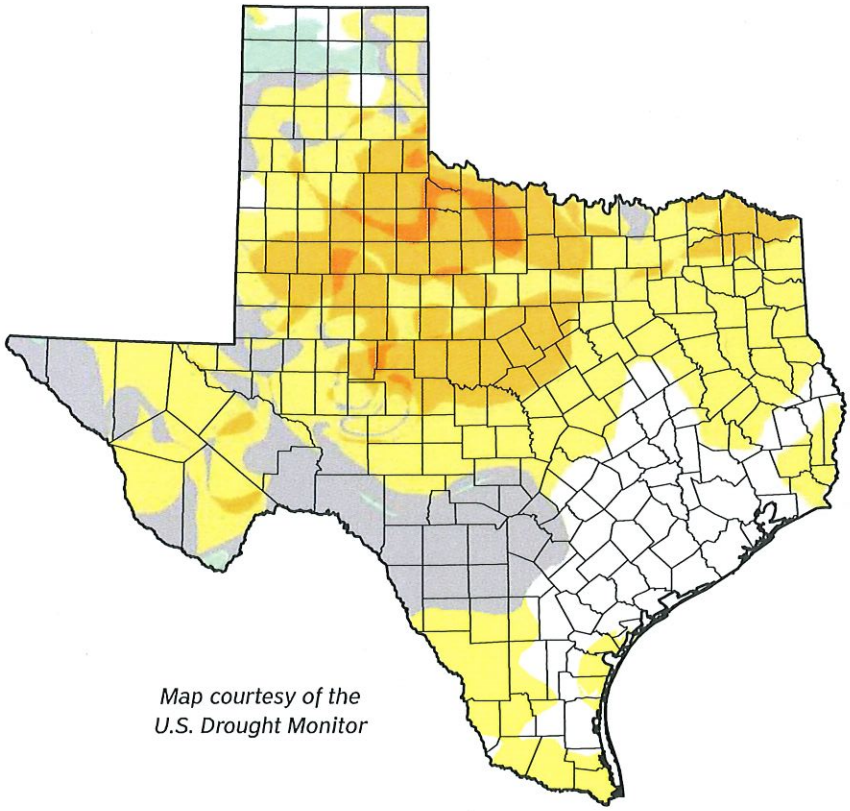
The latest drought map for conditions as of August 27 shows an increase in drought area for the fourth consecutive week. Drought has reached its largest extent since November 2023. Widespread rainfall over the Labor Day weekend should at least slow drought expansion on next week's map.

Drought conditions

48% now
40% a week ago
26% three months ago
76% a year ago



Map courtesy of the U.S. Drought Monitor



Map courtesy of the U.S. Drought Monitor

Drought change in the last month

The area of the state impacted by drought expanded almost 28 percentage points in the last month, the second largest expansion during August in the last 25 years. In the northern half of the state, large areas saw two or three classes of degradation.

Key

- 5 Class degradation
- 4 Class degradation
- 3 Class degradation
- 2 Class degradation
- 1 Class degradation
- No change
- 1 Class improvement
- 2 Class improvement
- 3 Class improvement
- 4 Class improvement
- 5 Class improvement

By Dr. Mark Wentzel, Hydrologist, Office of Water Science and Conservation

Kellen McMurry, Government Relations | Kellen.McMurry@twdb.texas.gov | 512-475-1589
Media Relations | MediaRelations@twdb.texas.gov | 512-463-5129

www.twdb.texas.gov

Gonzales County Underground Water Conservation District
Mitigation Fund Manager's Report
August 2024

On August 21st, I went to Ottine to meet with Dale Shelton to discuss possible mitigation.

On August 23rd, I went to Ottine to the Shelton location to review work that needs to be done.

Gonzales County Underground Water Conservation District
Field Technician Report
August 2024

On August 1st, I went to observe water well development with Friedel Drilling/J-Bar-B in Waelder, TX. Then, went to observe Drillink/Holmes Food Inc. on County Road 447 in Waelder, TX

On August 2nd, I went to County Road 447 in Waelder, TX and monitored well development with Drillink/Holmes Food Inc.

On August 7th, I observed water well development with One Source Drilling/Cochran at 6393 FM 1680, Flatonia, TX.

On August 9th, I went to 6393 FM 1680 Flatonia, TX to monitor water well development with One Source/Cochran.

On August 15th, I went to northcentral Gonzales County and applied flags at water wells MWCZ #9 and MWCZ # 10.

On August 19th, I went to 3404 County Road 397 Gonzales, TX to observe water well development with Herbold/Holden.

On August 20th, I went to Flatonia, TX to obtain a water level at the Cochran Well. Then, I went to Waelder, TX to Holmes Food Inc. Well to monitor well development. Then, I went to check on the borehole at Black Rock Saltwater Disposal on FM 284 Waelder, TX.

On August 22nd, I went to 3404 County Road 397 in Gonzales, TX to obtain water level on the Holden well. Then, I went to Harwood, TX to obtain a water level at the Hahn/Johnson Farms Well at Lot # 16.

On August 26th, I performed a pH and conductivity readings at the Schmidt's test well, District ID T049, on County Road 443 Waelder, TX. Then, I went Smiley, TX to monitor new well development with H2O Well Services/Niemeier on County Road 219E Smiley, TX.

On August 28th, I went to Smiley, TX to observe new well development with H2O Well Services/Niemeier.

No. XXXX

RESOLUTION DECLARING A TEMPORARY MORATORIUM OF THE GONZALES COUNTY UNDERGROUND WATER CONSERVATION DISTRICT ON PROCESSING NEW NON-EXEMPT OPERATING PERMIT APPLICATIONS AND APPLICATIONS TO AMEND NON-EXEMPT OPERATING PERMITS

WHEREAS, the Gonzales County Underground Water Conservation District (the "District") was created by the Texas Legislature to provide for the conservation, preservation, protection, recharging, and prevention of waste of groundwater regarding the aquifers within the boundaries of the District;

WHEREAS, the District was also created to protect property rights, balance the conservation and development of groundwater to meet the needs of this State, and use the best available science in the conservation and development of groundwater through rules developed, adopted, and promulgated by the District;

WHEREAS, pursuant to rulemaking authority granted to the District in Tex. Water Code 36.101 and other legal authority, the Board of Directors has adopted rules and orders designed to regulate the use of groundwater within the District's boundaries ("Rules");

WHEREAS, the Board of Directors is considering amending the rules to better establish production limitations;

WHEREAS, processing applications for new permits or amendments to increase existing permits during consideration of the draft rule amendments may further complicate the rulemaking process.

NOW, THEREFORE, BE IT RESOLVED that effective immediately upon adoption of this resolution until lifted by action of the Board, in order to fulfill its obligations to regulate the groundwater in the District, the Board of Directors hereby:

(1) directs the District, through the General Manager, to cease all activities related to accepting applications for any new non-exempt operating permits and any amendments to non-exempt operating permits if those amendments would result in an increase in authorized groundwater production ("Prohibited Applications"); and

(2) directs the District, through the General Manager, to continue to accept, review and process pending applications of any type already received by the District prior to enacting the moratorium and accept, review, and process exempt well registrations, non-exempt operating permit renewals, amendments to non-exempt permits that do not increase the authorized groundwater production amount, permit ownership transfers, and replacement wells so long as each request does not result in an increase in authorized production ("Exceptions");

(3) directs the General Manager to accept and process applications to permit existing wells that require an operating permit under the District rules

(4) directs the General Manager to update the Board quarterly regarding the processing of any Exceptions.

(5) FURTHERMORE, the Board of Directors intends that the moratorium on Prohibited Applications only applies to applications received on or after the effective date of this resolution and will not affect applications currently pending before the District.

PASSED, APPROVED, AND EFFECTIVE on September 10, 2024.

_____
Bruce Tieken, President

ATTEST:

_____
Barry Miller, Secretary/Treasurer

Tax Year	Tax Rate	Taxable Value	Taxable Value/100	Tax	
	0.000000	$4,949,013,207.00	$49,490,132.07	$0.00	
Tax Rate 23-24	0.002935	$4,949,013,207.00	$49,490,132.07	$145,253.54	
Gonzales County	0.003000	$4,949,013,207.00	$49,490,132.07	$148,470.40	
	0.003125	$4,949,013,207.00	$49,490,132.07	$154,656.66	
	0.003150	$4,949,013,207.00	$49,490,132.07	$155,893.92	
	0.003174	$4,949,013,207.00	$49,490,132.07	$157,081.68	
	0.003500	$4,949,013,207.00	$49,490,132.07	$173,215.46	
	0.003735	$4,949,013,207.00	$49,490,132.07	$184,845.64	
	0.003947	$4,949,013,207.00	$49,490,132.07	$195,337.55	
	0.003999	$4,949,013,207.00	$49,490,132.07	$197,911.04	
	0.004000	$4,949,013,207.00	$49,490,132.07	$197,960.53	
	0.004500	$4,949,013,207.00	$49,490,132.07	$222,705.59	
	0.004600	$4,949,013,207.00	$49,490,132.07	$227,654.61	
	0.004700	$4,949,013,207.00	$49,490,132.07	$232,603.62	

Tax Year	Tax Rate	Taxable Value	Taxable Value/100	Tax	
	0.000000	$315,819,692.00	$3,158,196.92	$0.00	
Tax Rate 23-24	0.002935	$315,819,692.00	$3,158,196.92	$9,269.31	
Caldwell County	0.003000	$315,819,692.00	$3,158,196.92	$9,474.59	
	0.003125	$315,819,692.00	$3,158,196.92	$9,869.37	
	0.003150	$315,819,692.00	$3,158,196.92	$9,948.32	
	0.003174	$315,819,692.00	$3,158,196.92	$10,024.12	
	0.003500	$315,819,692.00	$3,158,196.92	$11,053.69	
	0.003735	$315,819,692.00	$3,158,196.92	$11,795.87	
	0.003947	$315,819,692.00	$3,158,196.92	$12,465.40	
	0.003999	$315,819,692.00	$3,158,196.92	$12,629.63	
	0.004000	$315,819,692.00	$3,158,196.92	$12,632.79	
	0.004500	$315,819,692.00	$3,158,196.92	$14,211.89	
	0.004600	$315,819,692.00	$3,158,196.92	$14,527.71	
	0.004700	$315,819,692.00	$3,158,196.92	$14,843.53	

Tax Year	Tax Rate	Taxable Value	Taxable Value/100	Tax	
	0.000000	$5,257,832,899.00	$52,578,328.99	$0.00	
Tax Rate 23-24	0.002604	$5,257,832,899.00	$52,578,328.99	$136,913.97	(24-25 No-New Revenue Rate
Gonzales/Caldwell	0.002817	$5,257,832,899.00	$52,578,328.99	$148,113.15	**(24-25 Voter Approval Rate 1.058% increase)**
Combined	0.002900	$5,257,832,899.00	$52,578,328.99	$152,477.15	
	0.002925	$5,257,832,899.00	$52,578,328.99	$153,791.61	
	0.002950	$5,257,832,899.00	$52,578,328.99	$155,106.07	
	0.002990	$5,257,832,899.00	$52,578,328.99	$157,209.20	
	0.003000	$5,257,832,899.00	$52,578,328.99	$157,734.99	
	0.003125	$5,257,832,899.00	$52,578,328.99	$164,307.28	
	0.003150	$5,257,832,899.00	$52,578,328.99	$165,621.74	
	0.003174	$5,257,832,899.00	$52,578,328.99	$166,883.62	(23-24 Tax Rate)
	0.003500	$5,257,832,899.00	$52,578,328.99	$184,024.15	
	0.003735	$5,257,832,899.00	$52,578,328.99	$196,380.06	
	0.003947	$5,257,832,899.00	$52,578,328.99	$207,526.66	

(24-25 No-New Revenue Rate
(24-25 Voter Approval Rate 1.058% increase)
(23-24 Tax Rate)

Gonzales County UWCD
Amended 2023-2024 Budget/Proposed 2024-2025 Budget

GCUWCD EXPENSES

CATEGORIES	23-24 ESTIMATED TO DATE	23-24 BUDGET	23-24 BUDGET AMENDMENTS	23-24 AMENDED BUDGET	24-25 PROPOSED BUDGET
001 Payroll Expenses					
Directors' Salary	$9,150.00	$9,500.00		$9,500.00	$ 15,000.00
Manager Salary	$83,148.02	$90,706.95		$90,706.95	$ 93,428.16
Office Aide Salary	$24,763.53	$26,000.00		$35,490.46	$ 37,811.03
Temporary (Office Aide)	$0.00	$2,170.00		$2,170.00	$ 2,170.00
Part Time Field Technician	$23,578.00	$29,705.20		$25,000.00	$ 25,750.00
Well Mitigation Manager	$28,538.13	$67,897.60		$67,897.60	$ 69,934.53
FICA (SS & Medicare)	$13,700.39	$16,394.70		$16,394.70	$ 17,359.66
State Unemployment	$500.93	$4,071.89		$4,071.89	$ 4,311.55
Workers Compensation	$0.00	$2,143.10		$2,143.10	$ 2,269.24
GCUWCD Retirement Match	$3,438.18	$4,758.14		$4,758.14	$ 4,900.88
Employee Health Insurance	$0.00	$0.00		$0.00	$ 21,000.00
Payroll Expense Total	**$186,817.18**	**$253,347.57**	**$0.00**	**$258,132.84**	**$ 293,935.05**
002 Operating Expenses					
Association Dues	$125.00	$2,500.00		$2,500.00	$2,500.00
Education	$636.01	$700.00		$700.00	$700.00
Audit Fees	$2,866.68	$3,000.00		$3,000.00	$3,000.00
Marketing/Advertisement	$0.00	$1,500.00	$1,500.00	$0.00	$1,500.00
Office Maintenance(Pest/Janitorial/AC)	$995.46	$2,000.00		$2,000.00	$2,000.00
Building Repair	$5,303.84	$0.00	($5,350.00)	$5,350.00	$2,000.00
Office Utilities (Trash/Water/Elec)	$2,245.71	$2,500.00		$2,500.00	$2,500.00
Office Building Insurance	$3,389.00	$3,000.00	($400.00)	$4,000.00	$4,000.00
Employee Insurance (TML/Dubose)	$4,509.06	$3,500.00	($1,050.00)	$4,550.00	$4,600.00
Equip. Rental (Ricoh Copy/Scan/Fax)	$3,571.24	$4,000.00		$4,000.00	$4,000.00
Equip Maintenance	$0.00	$300.00	$300.00	$0.00	$300.00
Internet Access GVTC	$1,114.45	$1,980.00		$1,980.00	$1,980.00
Software Upgrades (ESRI/Quickbook)	$3,381.52	$2,800.00	($600.00)	$3,400.00	$3,500.00
IT Service (Virtualis Soltuions)	$10,006.21	$11,000.00		$11,000.00	$11,000.00
Electronic Data Storage (DropBox)	$146.00	$200.00		$200.00	$200.00
GoToMeeting (Online Meeting Host)	$144.00	$200.00		$200.00	$200.00
Consultant	$21,569.09	$30,000.00	$5,000.00	$25,000.00	$30,000.00
Legal	$33,327.07	$60,000.00		$60,000.00	$60,000.00
Lobbying	$30,000.00	$30,000.00		$30,000.00	$30,000.00
Hearing Procedures	$0.00	$0.00		$0.00	$15,000.00
Legal SOAH GBRA	$145,267.30	$0.00	($160,000.00)	$160,000.00	$80,000.00
Legal CRWA	$6,726.00	$0.00	($6,800.00)	$6,800.00	$0.00
Office Supplies	$1,315.21	$2,000.00		$2,000.00	$2,000.00
Postage	$598.64	$500.00	($100.00)	$600.00	$700.00
Published Notices	$4,921.95	$500.00	($4,500.00)	$5,000.00	$3,000.00
Telephone/Cell Phones	$3,587.96	$4,000.00		$4,000.00	$4,000.00
Travel and Meetings	$810.84	$7,500.00	$6,500.00	$1,000.00	$7,500.00
Vehicle Mileage	$5,448.59	$15,000.00	$1,300.00	$13,700.00	$15,000.00
Website Maintenance	$457.00	$500.00		$500.00	$500.00
Database Hosting (Halff/Standen)	$5,500.00	$5,500.00		$5,500.00	$5,500.00
Operating Expense Total	**$297,963.83**	**$194,680.00**	**-$164,200.00**	**$359,480.00**	**$297,180.00**
003 Capital Outlay Expenses					
Lab/Field Equipment	$2,804.39	$3,000.00		$3,000.00	$3,000.00
Office Equipment	$0.00	$3,000.00	$3,000.00	$0.00	$3,000.00
Reference Materials	$0.00	$0.00		$0.00	$0.00
Capital Outlay Expense Total	**$2,804.39**	**$6,000.00**	**$3,000.00**	**$3,000.00**	**$6,000.00**
004 Project Expenses					
Groundwater Testing & GW Fair	$4,024.33	$11,000.00		$11,000.00	$6,500.00
WL Recorder Equip. & Maintenance	$0.00	$2,000.00	$2,000.00	$0.00	$2,000.00
Well Plugging Program	$0.00	$75,000.00	$75,000.00	$0.00	$75,000.00
Well Inspection Program	$0.00	$10,000.00	$10,000.00	$0.00	$10,000.00
Election Expenses	$6,210.77	$10,000.00		$10,000.00	$0.00
Post Modeling VS Actual Report	$0.00	$30,000.00	In Progress	$30,000.00	$20,000.00
Eastern Drawdown Report	$0.00	$40,000.00	In Progress	$40,000.00	$32,000.00
Subsidance Probability	$0.00	$20,000.00	In Progress	$20,000.00	$12,000.00
Leased Property Audit	$0.00	$12,000.00	In Progress	$12,000.00	$7,500.00
Carrizo Outcrop Census	$0.00	$0.00	New	$0.00	$40,000.00
Aquifer Interaction Study	$0.00	$0.00	New	$0.00	$25,000.00
Project Expense Total	**$10,235.10**	**$210,000.00**	**$87,000.00**	**$123,000.00**	**$230,000.00**
005 Tax Expenses					
Appraisal District Budget Share/Tax Expense	$2,461.50	$3,271.83		$3,271.83	$3,397.28
Tax Expense Total	**$2,461.50**	**$3,271.83**	**$0.00**	**$3,271.83**	**$3,397.28**
TOTAL ALL EXPENSES	$500,282.00	$667,299.40	-$74,200.00	$746,884.67	$830,512.33

GCUWCD INCOME

CATEGORIES	23-24 ESTIMATED TO DATE	23-24 BUDGET	23-24 BUDGET AMENDMENTS	23-24 AMENDED BUDGET	24-25 PROPOSED BUDGET
006 Tax Collection					
Current Tax	$140,781.10	$144,942.12		$144,942.12	$148,113.15
Delinquent Tax	$2,060.28	$0.00		$0.00	$0.00
Penalty & Interest	$1,846.66	$0.00		$0.00	$0.00
Less Commission	($1,883.62)	($2,000.00)		($2,000.00)	($2,000.00)
Less Tax Refunds	$198.18	$0.00		$0.00	$0.00
Tax Collection Total	**$143,002.60**	**$142,942.12**	**$0.00**	**$142,942.12**	**$146,113.15**
007 Fees, Interest, Reimbursement					
Miscellaneous Income	$1,129.23	$0.00		$0.00	$0.00
Permit Fees	$477.00	$0.00		$0.00	$0.00
Export Fee	$ 173,058.28	$186,314.26		$186,314.26	$186,368.26
Interest Earned	$48,943.12	$10,500.00		$10,500.00	$45,000.00
Fees and Interest Total	**$223,607.63**	**$196,814.26**	**$0.00**	**$196,814.26**	**$231,368.26**
008 Transfer From Prior Year Funds					
Transfer Total	$0.00	$0.00		$0.00	$0.00
TOTAL ALL FUNDING	$366,610.23	$339,756.38	$0.00	$339,756.38	$377,481.41

DEFICIT/SURPLUS

	($133,671.77)	($327,543.02)		($407,128.29)	($453,030.92)

ANTICIPATED CASH ON HAND

Estimated Cash on Hand FYE 23-24	$2,223,778.30
Cash on Hand to Cover Expenses	($74,200.00)
Budget Surplus/Deficit FY 24-25	($453,030.92)
Total 2024-2025 FYE	$1,844,947.38

Gonzales County Underground Water Conservation District
Fiscal Year 2024 - 2025 Negotiated Fee Estimate

SSLGC EXPORT FEE

SSLGC 2024 Estimate = 11,314.20 ac-ft = 3,686,746,000 gal/1,000 gal x 0.025= **$92,168.65**

SAWS EXPORT FEE

SAWS 2024 Estimate = 11,200 ac-ft = 3,649,531,200 gal/1,000 gal x 0.025= **$91,238.28**

AQUA WSC EXPORT FEES

2021	2022	2023	
$2,872.00	$2,750.00	$3,262.00 (avg. = $2,961.00)	**$2,961.33**

Total Est. Transport Fees **$186,368.26**

GCUWCD 2024-2025 BUDGET

$830,512.33

GCUWCD 2024-2025 PROPOSED TAXES

$148,113.15

CRWA/ARWA/GBRA NEGOTIATED FEE

Negotiated Fee = GCUWCD Budget - (SSLGC + SAWS + AQUA Fees) - Taxes **$496,030.92**

	Budgeted FY 2024-2025	FY 2023-2024	FY 2023-2024 + 10%
CRWA (21.7%) =	$107,638.71	$57,297.33	$63,027.06
ARWA (34.2%) =	$169,642.57	$90,302.71	$99,332.98
GBRA (44.1%) =	$218,749.63	$116,442.97	$128,087.27
	$496,030.92	**$264,043.01**	**$290,447.31**

1. XX agrees to make an annual payment to the District in the amount of 22.8% ("XX's Percentage Share") of the District's annual budget, less the amount of export fees due for that budget year from exporters whose permits or authorizations were issued or approved by the District prior to November 12, 2012 ("Existing Permittees"), and less ad valorem taxes due for that budget year. This amount is the negotiated export fee between XX and the District (the "XX Export Fee").

2. Beginning in 2013 and continuing annually during the term of this Agreement, the District will notify XX no later than August 31 of each calendar year of the amount of the XX Export Fee. XX will remit payment of the XX Export Fee to the District on or before October 1st of each calendar year.

Gonzales County UWCD
2023-2024 Amended Budget
2024- 2025 Proposed Budget
Eastern Mitigation Fund

GCUWCD EXPENSES					
CATEGORIES	23-24 ESTIMATED TO DATE	23-24 BUDGET	23-23 4 BUDGET AMENDMENTS	23-24 AMENDED BUDGET	24-25 PROPOSED BUDGET
002 Operating Expenses					
Audit Fees	$2,866.66	$3,000.00	$0.00	$3,000.00	$3,000.00
Legal	$0.00	$2,500.00	$0.00	$2,500.00	$0.00
Operating Expense Total	**$2,866.66**	**$5,500.00**	**$0.00**	**$5,500.00**	**$3,000.00**
003 Capital Outlay Expenses					
Field Equipment	$0.00	$0.00	$0.00	$0.00	$2,500.00
Office Equipment	$0.00	$0.00	$0.00	$0.00	$1,500.00
Capital Outlay Expense Total	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$4,000.00**
004 Project Expenses					
Groundwater Testing	$0.00	$2,500.00	$0.00	$2,500.00	$0.00
Well Mitigation (contractors)	$40,000.00	$310,000.00	$0.00	$310,000.00	$282,000.00
Project Expense Total	**$40,000.00**	**$312,500.00**	**$0.00**	**$312,500.00**	**$282,000.00**
TOTAL ALL EXPENSES	$40,000.00	$318,000.00	$0.00	$318,000.00	$289,000.00

GCUWCD INCOME					
CATEGORIES	23-24 ESTIMATED TO DATE	23-24 BUDGET	23-23 4 BUDGET AMENDMENTS	23-24 AMENDED BUDGET	24-25 PROPOSED BUDGET
006 Export Fee Surcharges					
ARWA	$0.00	$0.00	$0.00	$0.00	$50,000.00
GBRA	$0.00	$0.00	$0.00	$0.00	$50,000.00
Export Fee Surcharge Total	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$100,000.00**
007 Fees, Interest, Reimbursement					
Mitigation Fund MM	$4,370.30	$1,000.00	$0.00	$1,000.00	$1,500.00
Interest Total	**$4,370.30**	**$1,000.00**	**$0.00**	**$1,000.00**	**$1,500.00**
TOTAL ALL FUNDING					$101,500.00
DEFICIT/SURPLUS					
					($187,500.00)

Estimated Cash on Hand FYE 23-24	$282,600.99
Budget Surplus/Deficit	($187,500.00)
ANTICIPATED CASH ON HAND	
TOTAL 2024 - 2025 FYE	$95,100.99

Gonzales County UWCD
2023-2024 Amended Budget
2024-2025 Proposed Budget
Western Mitigation Fund

GCUWCD EXPENSES

CATEGORIES	23-24 ESTIMATED TO DATE	23-24 BUDGET	23-24 BUDGET AMENDMENTS	23-24 AMENDED BUDGET	24-25 PROPOSED BUDGET
002 Operating Expenses					
Audit Fees	$2,866.66	$3,000.00		$3,000.00	$3,000.00
Legal	$0.00	$2,500.00		$2,500.00	$0.00
Operating Expense Total	**$2,866.66**	**$5,500.00**	**$0.00**	**$5,500.00**	**$3,000.00**
003 Capital Outlay Expenses					
Field Equipment	$0.00	$2,500.00		$2,500.00	$2,500.00
Office Equipment	$0.00	$1,000.00		$1,000.00	$1,000.00
Capital Outlay Expense Total	**$0.00**	**$3,500.00**	**$0.00**	**$3,500.00**	**$3,500.00**
004 Project Expenses					
Ground Water Testing	$0.00	$2,500.00		$2,500.00	$2,500.00
Well Mitigation (contractors)	$0.00	$300,000.00		$300,000.00	$175,000.00
Project Expense Total	**$0.00**	**$302,500.00**	**$0.00**	**$302,500.00**	**$177,500.00**
TOTAL ALL EXPENSES	$2,866.66	$311,500.00	$0.00	$311,500.00	$184,000.00

GCUWCD INCOME

CATEGORIES	23-24 ESTIMATED TO DATE	23-24 BUDGET	23-24 BUDGET AMENDMENTS	23-24 AMENDED BUDGET	24-25 PROPOSED BUDGET
005 Export Fee Surcharges					
CRWA	$58,223.20	$35,058.52		$0.00	$58,223.00
SSLGC	$64,518.06	$71,195.51		$0.00	$64,518.00
SAWS	$61,352.21	$59,234.73		$0.00	$61,352.00
Initial Payment Total	**$184,093.47**	**$165,488.76**	$0.00	**$0.00**	**$184,093.00**
007 Fees, Interest, Reimbursement					
Mitigation Fund MM	$1,913.28	$200.00		$0.00	$1,500.00
Interest Total	**$1,913.28**	**$200.00**	$0.00	**$0.00**	**$1,500.00**
Transfer Total					
TOTAL ALL FUNDING					$185,593.00
DEFICIT/SURPLUS					
					$1,593.00

Estimated Cash on Hand FYE 23-24	$166,970.31
Budget Surplus/Deficit	$1,593.00
ANTICIPATED CASH ON HAND	
TOTAL 2024- 2025 FYE	$168,563.31

What Is a Consent Agenda?

Consent Agenda / Consent Agendas

A consent agenda — or a consent calendar according to Robert's Rules of Order — is a valuable tool used to streamline board meeting processes. It is a component of the meeting agenda that presents multiple routine, non-controversial topics as one agenda item. The grouped items can be approved by filing a single motion and voting on it. A board member can always ask for the removal of a particular item from the consent agenda if they believe it requires further discussion before approval.

Which items would you find in a consent agenda?

The following items are typically included in a consent agenda:

- Routine or recurring items such as the previous meeting's minutes.
- Procedural decisions, including committee and staff appointments that need confirmation.
- Non-controversial topics that do not require discussion such as department and financial reports.
- Items requiring an official vote that the members have previously discussed and agreed upon, including final approvals of reports and proposals.

Benefits of a consent agenda

Here are the benefits of a consent agenda:

- Enhanced productivity

Grouping recurring and already-addressed issues minimises the discussion around these topics, thereby saving the board's valuable time and improving meeting efficiency.

- Reduced meeting fatigue

Going over and approving each routine item that does not require further deliberation can lead to meeting fatigue. By grouping these items in a consent agenda, directors can approve them all in one motion instead of enduring the process of filing multiple motions.

- Shifting the focus to more important matters

A consent agenda leaves more room for the board to redirect their focus towards strategic planning and taking care of critical company matters during meetings.

Best practices for a consent agenda

The best practices for a consent agenda include:

- Only including non-controversial items

For a consent agenda to work properly, all the items must be familiar to the board, require no discussion and have no prior conflicts.

- Using clear and concise descriptions

The topics should be well-defined so that no further clarification is required by any member.

- The opportunity for members to remove items

The board members should have the option to remove an item from the consent agenda if they think that it should not be approved without deliberation.

RECEIVED AUG 2 8 2024

Fred Loya Sr.
10279 HWY 304
Harwood, TX 78632

August 21, 2024

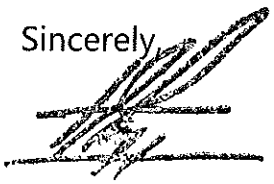
Board of Directors
Gonzales County Underground
Water Conservation District
P. O. Box 1919
Gonzales, TX 78629

Re: Permit Renewal
Permit GCP-02-09-06
Well IDs P021 & P109

Dear Boar of Directors

As owners we respectfully request renewal of our Permit GCP-02-09-06 at the original pumping rate of #gpm. We greatly appreciate your attention to the renewal of our Permit.

Sincerely,



Fred Loya Sr..

Gonzales County Underground Water Conservation District

522 Saint Matthew Street
P.O. Box 1919
Gonzales, TX 78629
Phone: 830.672.1047
Fax: 830.672.1387

Aggregate Drilling and Production Permit
Irrigation Wells
Permit No.: GCP-02-09-06
GCUWCD Well ID No.: P021 & P109

Permit Issued To: E P Valley Investments, LP

Mailing Address: Mr. Fred Loya
1800 Lee Trevino, Suite 201
El Paso, TX 79936

Telephone Number: 915.629.5130

Date Original Application Filed (Well P021): July 05, 2006
Date of Public Hearing on Original Application (Well P021): September 12, 2006
Date Well Original Permit Granted (Well P021): September 12, 2006
Date First Permit Renewal Request Granted (Well P021): September 09, 2008
Date Second Permit Renewal Granted (Well P021): September 10, 2013
Date Third Permit Renewal Granted (Well P021): September 11, 2018

Date Aggregate Permit Application Filed (Wells P021 and P109): August 28, 2019
Date Aggregate Permit Application Granted (Wells P021 and P109): October 08, 2019
Current Aggregate Permit Expiration Date (Wells P021 and P109): October 08, 2024

Aggregate Production Permit Provisions: Total production is limited to 500 acre-feet per year
The rate of production from a well or well field may vary throughout the year; however, the total production in a calendar year beginning on January 1st and ending on December 31st shall not exceed the permitted production for that year. Individual well production rates are allowed to increase up to 150% of the permitted production rate during peak demand periods

Aquifer Production Allocation: 1.0 acre-foot per acre from the Carrizo Aquifer

Maximum Pumping Capacity of Water Wells: Well P021 is limited to 720 gpm and Well P109 is limited to 610 gpm by the minimum well-to-property boundary offset distance in Rule 18.A

Number of Acres Irrigated: 170

Additional Conditions Applicable to Operating Permits:

A. **General Conditions**

Acceptance of the permit by the person to whom it is issued constitutes acknowledgment of and agreement to comply with all of the terms, provisions, conditions, limitations, and restrictions of these rules including, but not limited to, the following:

1. Permits are granted in accordance with the provisions of the Texas Water Code and the Rules, Management Plan and Orders of the District, and acceptance of the permit constitutes an acknowledgment and agreement that the permittee will comply with the Texas Water Code, the District Rules, Management Plan, Orders of the District Board, and all the terms, provisions, conditions, requirements, limitations and restrictions embodied in a permit.

2. A permit confers no vested rights in the holder, and it may be revoked or suspended, or its terms may be modified or amended pursuant to the provisions of the District's Rules.

3. The operation of a well for the authorized withdrawal must be conducted in a non-wasteful manner. In the event the groundwater is to be transported a distance greater than one-half mile from the well, it must be transported by pipeline to prevent waste caused by evaporation and percolation.

4. The permittee must keep records of the amount of groundwater produced and the purpose of the production and such records shall be available for inspection by District representatives. Immediate written notice must be given to the District in the event production exceeds the quantity authorized by a permit, or the well is either polluted or causing pollution of the aquifer. **You must supply written documentation of your water usage annually to the District.**

5. A well site must be accessible to District representatives for inspection, and the permittee agrees to fully cooperate in any reasonable inspection of the well and well site by District representatives.

6. Applications for which a permit is issued are incorporated in the permit and thus permits are granted on the basis of and contingent upon the accuracy of the information supplied in the application and any amendments to the application. A finding that false information has been supplied is grounds for immediate revocation of a permit. In the event of conflict between the provisions of a permit and the contents of the application, the provisions of the permit shall control.

7. Suspension or revocation of a permit may require immediate cessation of all activities granted by the permit.

8. Violation of a permit's terms, conditions, requirements or special provisions is punishable by civil penalties provided by the District's Rules.

9. Where ever special provisions in a permit are inconsistent with other provisions or District Rules, the special provisions prevail.

10. Changes in the withdrawal and use of groundwater during the term of a permit may not be made without prior approval of a permit amendment authorizing the change issued by the District.

B. Change of Ownership

An operating permit may be transferred to another person through change of ownership of the well provided all permit conditions remain in compliance with District Rules and the District is notified, in advance, of the proposed change in ownership. The General Manager is authorized to effectuate the permit transfer.

C. Enforcement of Rules

All Rules duly adopted, promulgated and published by this District shall be enforced as provided for under Chapter 36, Texas Water Code.

1. The District may enforce Chapter 36, Texas Water Code and its Rules by injunction, mandatory injunction, or other appropriate remedy in a court of competent jurisdiction.

2. The Board by rule may set reasonable civil penalties for breach of any rule of the District not to exceed $10,000 per day per violation, and each day of a continuing violation constitutes a separate violation in accordance with Chapter 36.102 of the Texas Water Code.

3. A penalty under Chapter 36, Texas Water Code or the District's Rules is in addition to any other penalty provided by the law of this state and may be enforced by complaints filed in a court of competent jurisdiction in Gonzales County.

4. If the District prevails in any suit to enforce its Rules, it may, in the same action, recover reasonable fees for attorneys, expert witnesses, and other costs incurred by the District before the court. The amount of the attorney's fees shall be fixed by the court.

5. The Board shall notify the appropriate person or entity alleged to have committed a violation of the rules of the District by certified mail return receipt requested or by publication in a newspaper of general circulation in the District of the date of the public hearing to hear testimony about the circumstances regarding the enforcement action. Notice must be provided at least ten (10) days prior to the public hearing.

6. The Board, either on its own motion or upon receipt of sufficient written complaint, may at any time, after due notice to all interested parties, cite any person operating a well within the District to appear before it and require them to show cause why their operating authority or permit should not be suspended, canceled, revoked or otherwise restricted or limited for failure to comply with the Rules or Orders of the Board, any permit issued by the Board, or any relevant State statutes. A decision on suspending, cancelling or revoking permit authority may be contested under Rule 25.

Bruce Tieken
President
Gonzales County UWCD

10-08-2019
Date

RECEIVED AUG 1 2 2024

August 12, 2024

Board of Directors
Gonzales County Underground
Water Conservation District
P.O. Box 1919
Gonzales, TX 78629

Dear Board of Directors:

August 12, 2024

Re: Permit Renewal
Permit 10-15-01

As owners we respectfully request renewal of our Permit 10-15-01 at the original pumping rate of 375 gpm. We greatly appreciate your attention to the renewal of our permit.
Thank you.

Sincerely,

Troy Kisner
Kisner Enterprises, LLC
12 Scotsmoor Ct.
Sugar Land, TX 77479

832-483-2604

Gonzales County Underground Water Conservation District

522 Saint Matthew Street
P.O. Box 1919
Gonzales, TX 78629
Phone: 830.672.1047
Fax: 830.672.1387

Drilling and Production Permit
Irrigation Well
Permit No.: 10-15-01
GCUWCD Well ID: P005

Permit Issued To: Kisner Enterprises, LLC

Mailing Address: 12 Scotsmoor Ct.
Sugarland, TX 77479

Telephone Number: 832-483-2604

Date Original Application Filled: August 15, 2015
Date Original Permit Granted: October 13, 2015
Date Second Permit Renewal Request Granted: October 08, 2019

Operating Permit Provisions: Total production is limited to 606 acre-feet per year
The rate of production from a well or well field may vary throughout the year; however, the total production in a calendar year beginning on January 1st and ending on December 31st shall not exceed the permitted production for that year. Individual well production rates are allowed to increase up to 150% of the permitted production rate during peak demand periods

Aquifer Production Allocation: 1.0 acre-foot per acre from the Carrizo Aquifer

Maximum Pumping Capacity of Water Well: 901 gpm by the maximum well-to-property boundary offset distance in Rule 18.A

Term of Production Permit: 5 years
A permittee holding a drilling and production permit due to expire shall file a written request to reissue the permit to the General Manager no later than 30 days prior to the expiration date of the permit. The permit shall remain effective until final Board action on the reissue of the permit. Requests to reissue a permit shall be subject to review for substantial compliance with the rules of the District by the General Manager.

Any permit subject to reissue shall after due consideration and an affirmative vote by the Board be reissued for a period of five years in accordance to the rules in effect at the time of reissue.

- *a. is delinquent in paying a fee required by the district;*
- *b. is subject to a pending enforcement action for a substantive violation of a district permit, order, or rule that has not been settled by agreement with the district or a final adjudication; or*
- *c. has not paid a civil penalty or has otherwise failed to comply with an order resulting from a final adjudication of a violation of a district permit, order, or rule.*

An application for renewal of a permit that also requests a major amendment is subject to notice and hearing, and final approval by the Board. During consideration of a contested renewal application, the permit shall remain effective until final Board action on renewal of the permit.

Additional Conditions Applicable to Drilling and Production Permit:

A. General Conditions

Acceptance of the permit by the person to whom it is issued constitutes acknowledgment of and agreement to comply with all of the terms, provisions, conditions, limitations, and restrictions of these rules including, but not limited to, the following:

1. Permits are granted in accordance with the provisions of the Texas Water Code and the Rules, Management Plan and Orders of the District, and acceptance of the permit constitutes an acknowledgment and agreement that the permittee will comply with the Texas Water Code, the District Rules, Management Plan, Orders of the District Board, and all the terms, provisions, conditions, requirements, limitations and restrictions embodied in a permit.

2. A permit confers no vested rights in the holder, and it may be revoked or suspended, or its terms may be modified or amended pursuant to the provisions of the District's Rules.

3. The operation of a well for the authorized withdrawal must be conducted in a non-wasteful manner. In the event the groundwater is to be transported a distance greater than one-half mile from the well, it must be transported by pipeline to prevent waste caused by evaporation and percolation.

4. The permittee must keep records of the amount of groundwater produced and the purpose of the production and such records shall be available for inspection by District representatives. Immediate written notice must be given to the District in the event production exceeds the quantity authorized by a permit, or the well is either polluted or causing pollution of the aquifer. **You must supply written documentation of your water usage annually to the District.**

5. A well site must be accessible to District representatives for inspection, and the permittee agrees to fully cooperate in any reasonable inspection of the well and well site by District representatives.

6. Applications for which a permit is issued are incorporated in the permit and thus permits are granted on the basis of and contingent upon the accuracy of the information supplied in the application and any amendments to the application. A finding that false information has been supplied is grounds for immediate revocation of a permit. In the event of conflict between the provisions of a permit and the contents of the application, the provisions of the permit shall control.

7. Suspension or revocation of a permit may require immediate cessation of all activities granted by the permit.

8. Violation of a permit's terms, conditions, requirements or special provisions is punishable by civil penalties provided by the District's Rules.

9. Where ever special provisions in a permit are inconsistent with other provisions or District Rules, the special provisions prevail.

10. Changes in the withdrawal and use of groundwater during the term of a permit may not be made without prior approval of a permit amendment authorizing the change issued by the District.

B. Change of Ownership

A drilling or production permit may be transferred to another person through change of ownership of the well provided all permit conditions remain in compliance with District Rules and the District is notified, in advance, of the proposed change in ownership. The General Manager is authorized to effectuate the permit transfer.

C. Enforcement of Rules

All Rules duly adopted, promulgated and published by this District shall be enforced as provided for under Chapter 36, Texas Water Code.

1. The District may enforce Chapter 36, Texas Water Code and its Rules by injunction, mandatory injunction, or other appropriate remedy in a court of competent jurisdiction.

2. The Board by rule may set reasonable civil penalties for breach of any rule of the District not to exceed $10,000 per day per violation, and each day of a continuing violation constitutes a separate violation in accordance with Chapter 36.102 of the Texas Water Code.

3. A penalty under Chapter 36, Texas Water Code or the District's Rules is in addition to any other penalty provided by the law of this state and may be enforced by complaints filed in a court of competent jurisdiction in Gonzales County.

4. If the District prevails in any suit to enforce its Rules, it may, in the same action, recover reasonable fees for attorneys, expert witnesses, and other costs incurred by the District before the court. The amount of the attorney's fees shall be fixed by the court.

5. The Board shall notify the appropriate person or entity alleged to have committed a violation of the rules of the District by certified mail return receipt requested or by publication in a newspaper of general circulation in the District of the date of the public hearing to hear testimony about the circumstances regarding the enforcement action. Notice must be provided at least ten (10) days prior to the public hearing.

6. The Board, either on its own motion or upon receipt of sufficient written complaint, may at any time, after due notice to all interested parties, cite any person operating a well within the District to appear before it and require them to show cause why their operating authority or permit should not be suspended, canceled, revoked or otherwise restricted or limited for failure to comply with the Rules or Orders of the Board, any permit issued by the Board, or any relevant State statutes. A decision on suspending, cancelling or revoking permit authority may be contested under Rule 25.

Bruce Ticken
President
Gonzales County UWCD

Date

RECEIVED AUG 0 9 2024

Seger, Permit. industrial.

July 16, 2024

Board of Directors
Gonzales County Underground
Water Conservation District
P. O. Box 1919
Gonzales, TX 78629

Re: Permit Renewal
Permit GCP-##-##-##

10-14-01

Dear Board of Directors:

As owners we respectfully request renewal of our Permit GCP-##-##-## at the original pumping rate of #gpm. We greatly appreciate your attention to the renewal of our permit.

Thank you.

Sincerely,

Signature

Name
Address

PLEAS RENEW MY PERMIT

8/9/24

Gonzales County Underground Water Conservation District

505 Saint Mathew
P.O. Box 1919
Gonzales, TX 78629
Phone: 830.672.1047
Fax: 830.672.1387

Drilling and Production Permit
Industrial Supply Well
Permit No.: 10-14-01

Permit Issued To: Seger Family Investments, LLP

Mailing Address: P.O. Box C
Flatonia, TX 78941

Telephone Number: 361.401.2166

Date of Board Meeting: January 09, 2018
Date Permit Granted: January 09, 2018
Date Permit Renewal Required: January 09, 2023

Operating Permit Provisions: Total production is limited to 380 acre-feet per year
The rate of production from a well or well field may vary throughout the year; however, the total production in a calendar year beginning on January 1st and ending on December 31st shall not exceed the permitted production for that year. Individual well production rates are allowed to increase up to 150% of the permitted production rate during peak demand periods.

Aquifer Production Allocation: 1.0 acre-foot per acre from the Carrizo Aquifer

Maximum Pumping Capacity of Water Well: Limited to 440 gpm by the minimum well-to-property boundary offset distance in Rule 18.A

Term of Operating Permit: 5 years
A permittee holding a drilling and operating permit due to expire may file a written request to renew the permit to the General Manager no later than thirty (30) days prior to the expiration date of the permit. An operating permit subject to renewal shall be administratively renewed for a period of five years in accordance to the rules in effect at the time of renewal. Requests to renew a permit shall be subject to review for substantial compliance with the rules of the District by the General Manager.

The District is not required to renew a permit under this section if the applicant:

a. is delinquent in paying a fee required by the district;
b. is subject to a pending enforcement action for a substantive violation of a district permit, order, or rule that has not been settled by agreement with the district or a final adjudication; or
c. has not paid a civil penalty or has otherwise failed to comply with an order resulting from a final adjudication of a violation of a district permit, order, or rule.

An application for renewal of a permit that also requests a major amendment is subject to notice and hearing, and final approval by the Board. During consideration of a contested renewal application, the permit shall remain effective until final Board action on renewal of the permit.

Additional Conditions Applicable to Operating Permits:

A. General Conditions

Acceptance of the permit by the person to whom it is issued constitutes acknowledgment of and agreement to comply with all of the terms, provisions, conditions, limitations, and restrictions of these rules including, but not limited to, the following:

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2. A permit confers no vested rights in the holder, and it may be revoked or suspended, or its terms may be modified or amended pursuant to the provisions of the District's Rules.

3. The operation of a well for the authorized withdrawal must be conducted in a non-wasteful manner. In the event the groundwater is to be transported a distance greater than one-half mile from the well, it must be transported by pipeline to prevent waste caused by evaporation and percolation.

4. The permittee must keep records of the amount of groundwater produced and the purpose of the production and such records shall be available for inspection by District representatives. Immediate written notice must be given to the District in the event production exceeds the quantity authorized by a permit, or the well is either polluted or causing pollution of the aquifer. **You must supply written documentation of your water usage monthly to the District.**

5. A well site must be accessible to District representatives for inspection, and the permittee agrees to fully cooperate in any reasonable inspection of the well and well site by District representatives.

6. Applications for which a permit is issued are incorporated in the permit and thus permits are granted on the basis of and contingent upon the accuracy of the information supplied in the application and any amendments to the application. A finding that false information has been supplied is grounds for immediate revocation of a permit. In the event of conflict between the provisions of a permit and the contents of the application, the provisions of the permit shall control.

7. Suspension or revocation of a permit may require immediate cessation of all activities granted by the permit.

8. Violation of a permit's terms, conditions, requirements or special provisions is punishable by civil penalties provided by the District's Rules.

9. Where ever special provisions in a permit are inconsistent with other provisions or District Rules, the special provisions prevail.

10. Changes in the withdrawal and use of groundwater during the term of a permit may not be made without prior approval of a permit amendment authorizing the change issued by the District.

B. Change of Ownership

An operating permit may be transferred to another person through change of ownership of the well provided all permit conditions remain in compliance with District Rules and the District is notified, in advance, of the proposed change in ownership. The General Manager is authorized to effectuate the permit transfer.

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4. If the District prevails in any suit to enforce its Rules, it may, in the same action, recover reasonable fees for attorneys, expert witnesses, and other costs incurred by the District before the court. The amount of the attorney's fees shall be fixed by the court.

5. The Board shall notify the appropriate person or entity alleged to have committed a violation of the rules of the District by certified mail return receipt requested or by publication in a newspaper of general circulation in the District of the date of the public hearing to hear testimony about the circumstances regarding the enforcement action. Notice must be provided at least ten (10) days prior to the public hearing.

6. The Board, either on its own motion or upon receipt of sufficient written complaint, may at any time, after due notice to all interested parties, cite any person operating a well within the District to appear before it and require them to show cause why their operating authority or permit should not be suspended, canceled, revoked or otherwise restricted or limited for failure to comply with the Rules or Orders of the Board, any permit issued by the Board, or any relevant State statutes. A decision on suspending, cancelling or revoking permit authority may be contested under Rule 25.

Bruce Tieken
President
Gonzales County UWCD

1-9-18
Date