

Blanco – Pedernales Groundwater Conservation District

GROUNDWATER MANAGEMENT PLAN

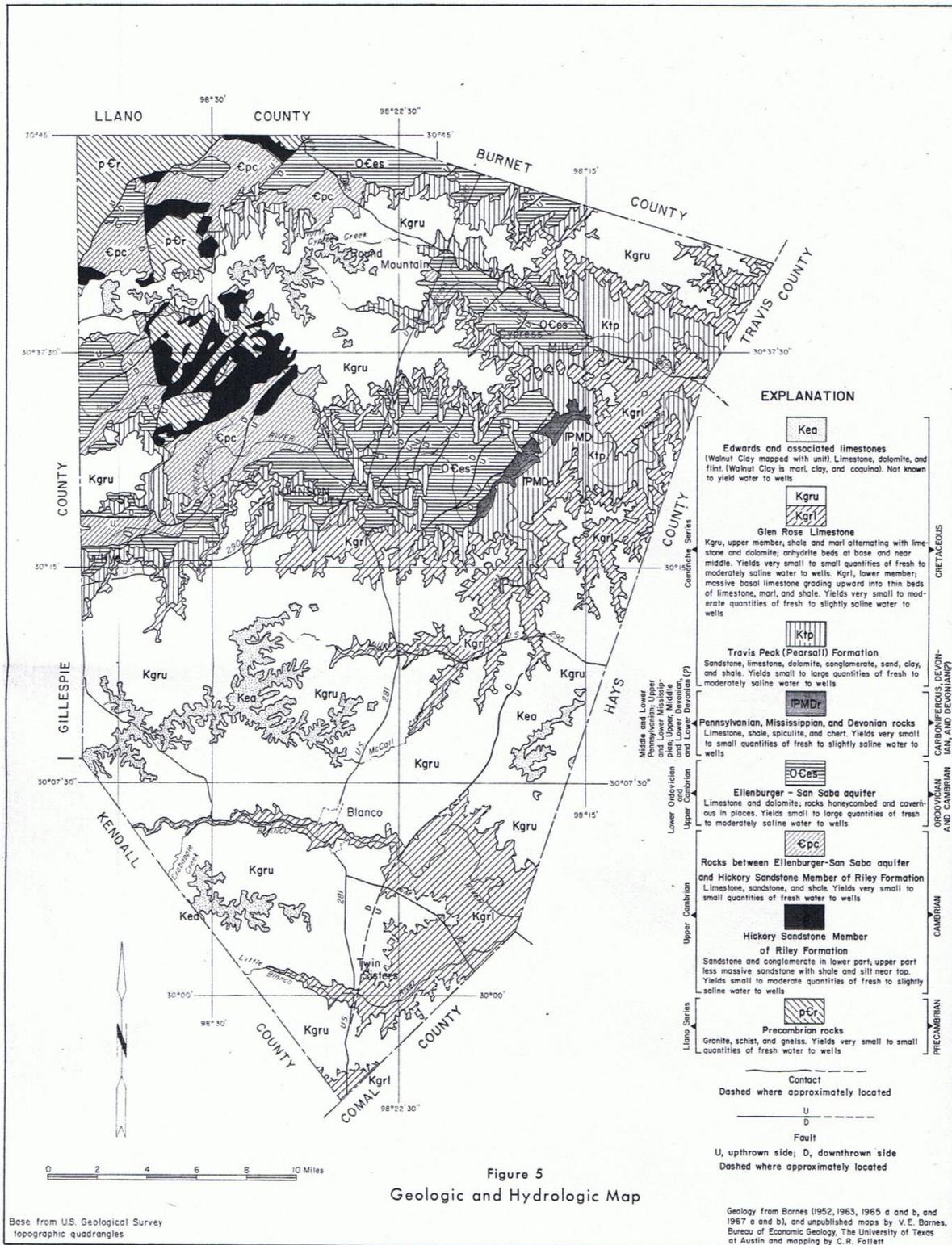
March 25, 2024

Appendices

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Appendix A

Geological and Hydrogeological Information on Blanco County



Geologic and Hydrologic Map of Blanco County, Texas

from

Texas Water Development Board Report 174, Groundwater Resources of Blanco County, Texas
 C.R. Follett, USGS, August 1973



Geologic and Hydrologic Units and Their Water-Bearing Properties

SYSTEM	SERIES	GROUP	GEOLOGIC OR HYDROLOGIC UNIT	APPROXIMATE THICKNESS (FEET)	LITHOLOGY	WATER-BEARING PROPERTIES	
Quaternary	Holocene and Pleistocene		Alluvium, fanglomerate, and high-level gravel	0 - 20 ?	Gravel, sand, silt, and clay.	Not known to yield water to wells in Blanco County. Alluvium probably would yield very small to small quantities of fresh water in some places along the Pedernales and Blanco Rivers.	
Cretaceous	Comanche	Fredericksburg	Edwards and associated limestones	0 - 160	Hard massive limestone, nodular marly limestone, dolomite, and flint.	Not known to yield water to wells in Blanco County but may contribute some water to uncased holes tapping the Glen Rose Limestone. Yields water to springs near the base of the unit.	
			Walnut Clay	0 - 13	Silty marl, clay, and basal coquina.	Not known to yield water to wells.	
		Trinity	Glen Rose Limestone	Upper member	0 - 330 ?	Shale and marl alternating with thin beds of impure limestone and dolomite; impure anhydrite beds at base and near middle.	Yields very small to small quantities of fresh to moderately saline water to wells in much of the county.
				Lower member	0 - 250 ?	Massive fossiliferous limestone in basal part grading upward into thin beds of limestone, marl and shale; <i>Salenia texana</i> and <i>Corbula texana</i> Whitney beds at top.	Yields very small to moderate quantities of fresh to slightly saline water to wells in much of the county.
			Travis Peak (Pearsall) Formation	0 - 285 ?	Sandstone, massive fossiliferous limestone, sandy limestone, dolomite, conglomerate, sand, clay, and shale.	Yields small to large quantities of fresh to moderately saline water to wells in much of the county.	
		Coahuila	Nuevo Leon and Durango of Mexico	Sligo and Hosston Formations	0 - 210 ?	Shale, limestone, dolomite, sand, sandstone, and conglomerate.	Not known to yield water to wells in Blanco County.
Carboniferous, Devonian, Devonian(?)	Middle and Lower Pennsylvanian; Upper and Lower Mississippian; Upper, Middle, and Lower Devonian (?)		Pennsylvanian, Mississippian, and Devonian rocks	0 - 800 ?	Massive limestone, in part cherty, shale, calcareous spiculite, lenticular biohermal limestone, crinoidal limestone, and chert.	Yields very small to small quantities of fresh to slightly saline water to a few wells near the Pedernales River south of Cypress Mills and at Cypress Mills.	
Ordovician and Cambrian	Lower Ordovician and Upper Cambrian		Ellenburger - San Saba aquifer	0 - 2,310 +	Thinly to thickly bedded cherty limestone and dolomite; rocks honeycombed and cavernous in places.	Yields small to large quantities of fresh to moderately saline water to wells north of an east-west line about midway between Johnson City and Blanco.	
Cambrian	Upper Cambrian		Rocks between Ellenburger - San Saba aquifer and Hickory Sandstone Member of Riley Formation	0 - 755 +	Thinly to thickly bedded limestone, in part biohermal, glauconitic, and shaly; glauconitic to non-glauconitic sandstone; and shale.	Yields very small to small quantities of fresh water to wells north of U.S. Highway 290 and west of U.S. Highway 281.	
			Hickory Sandstone Member of Riley Formation	0 - 300 +	Mostly noncalcareous, non-glauconitic, crossbedded sandstone; lower part massive with conglomerate lenses near base; upper part less massive with considerable shale and silt near top.	Yields small to moderate quantities of fresh to slightly saline water to wells north of U.S. Highway 290 and west of U.S. Highway 281.	
Precambrian	Llano		Precambrian rocks	-	Mostly medium to coarse-grained granite, amphibole and mica schist, and quartz diorite gneiss.	Yields very small to small quantities of fresh water to wells.	

Geologic and Hydrologic Units in Blanco County, Texas

from

Texas Water Development Board Report 174, Groundwater Resources of Blanco County, Texas
C.R. Follett, USGS, August 1973

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Appendix B

District Resolution #032524-01

STATE OF TEXAS

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RESOLUTION #032524-01

COUNTY OF BLANCO

BLANCO-PEDERNALES GROUNDWATER CONSERVATION DISTRICT

ADOPTION OF REVISED GROUNDWATER MANAGEMENT PLAN

WHEREAS, the Blanco-Pedernales Groundwater Conservation District (BPGCD) is a groundwater conservation district created in accordance with and subject to Chapter 36, Texas Water Code and;

WHEREAS, Chapter 36.1071, Texas Water Code requires that the BPGCD, following notice and hearing, shall review its groundwater management plan every five years and revise as necessary and;

WHEREAS, the Texas Water Development Board (TWDB) certified the current BPGCD Groundwater Management Plan on January 23, 2019 in accordance with the provisions of Chapter 36.1071 and the BPGCD is required to review the Groundwater Management Plan, revise as necessary, and resubmit prior to January 23, 2024 and;

WHEREAS, the BPGCD has conducted the required review and prepared a draft Revised Groundwater Management Plan in accordance with the provisions of Chapter 36.1071 and;

WHEREAS, the BPGCD submitted the draft Revised Groundwater Management Plan to the TWDB on October 19, 2023 for pre-review which was returned with required and recommended changes by the TWDB on February 1, 2024, and;

WHEREAS, the BPGCD has incorporated the TWDB required and recommended changes to the draft Revised Groundwater Management Plan, and;

WHEREAS, the BPGCD has, on March 22, 2024, provided public notice of the March 25, 2024 Board Meeting with an agenda item addressing proposed revisions to the previously adopted and certified Plan and an agenda item providing for a Public Hearing on those changes, by posting the Board Meeting Agenda on the BPGCD website, on the BPGCD bulletin board or the front door of the District Office and by emailing a copy of the Board Meeting Agenda to the current agenda email distribution list and;

WHEREAS, on March 25, 2018, the Board of Directors of the BPGCD held a public hearing and offered the public the opportunity to comment on the proposed revisions to the previously adopted and certified Plan at the Board of Directors Meeting and;

WHEREAS, the Board of Directors of the BPGCD has considered all public comment and;

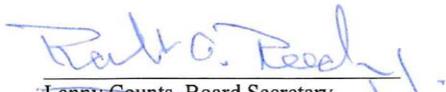
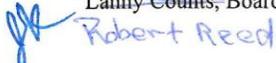
WHEREAS, the Board of Directors of the BPGCD has determined that the proposed revisions are appropriate and contribute to the overall effectiveness of the BPGCD Groundwater Management Plan;

NOW THEREFORE BE IT RESOLVED, that the Board of Directors of the Blanco-Pedernales Groundwater Conservation District does hereby approve and adopt the revised Groundwater Management Plan with an effective date of March 25, 2024.

PASSED AND APPROVED THIS 25th DAY OF March, 2024,

with 4 ayes, 0 nays, and 0 abstentions.


Jimmy Klepac, Board President


Lanny Counts, Board Secretary


Appendix C

Notice of Hearings and Meetings

Agenda for BPGCD Board of Directors Meeting March 25, 2024

Blanco-Pedernales Groundwater Conservation District

601 West Main, P.O. Box 1516, Johnson City, Texas 78636 (830) 868-9196
office@blancogw.org

Called Board Meeting

Notice is given that a **Regular Meeting** of the Board of Directors of the Blanco-Pedernales Groundwater Conservation District will be held at the **District Office, 601 West Main, Johnson City, Texas** on **Monday, March 25, 2024, at 3:00 p.m.** for the following purposes:

1. Call to Order
2. Pledge of Allegiance
3. Public Comment
4. Approval of Minutes for the February 22, 2024, Regular Board Meeting and the March 7, 2024, Called Meeting.
5. Financial Report
6. General Manager, Staff, and Committee Reports
7. Continuing Business
 - a. Discuss and Possible Action on District Drought Status and Drought Conditions.
 - b. Discussion and Possible Action on needed Rule Amendments including but not limited to Operating and Export Permits.
 - c. Discuss and Possible Action on Texas Hills Vineyard Variance Request.
8. New Business
 - a. Discuss and Possible Action on appointing replacement Director for Pct. 2.
 - b. Discuss and Possible Action on filling the vacancy of the Board Secretary-Treasurer role.
 - c. Public Hearing on proposed 2023 Management Plan.
 - d. Discuss and Possible Action on Resolution 032524-01 regarding the proposed district Groundwater Management Plan.
 - e. Discuss and Possible Action on appointing a Public Funds Investment Officer.
 - f. Discuss and Possible Action on Resolution 032524-02 revised banking signatory list.
 - g. Consider District Employee Personnel Matters, including the hiring, appointment, job titles, compensation, employment status, employee performance evaluation, review of employee benefits, reassignment of job duties, responsibilities and activities, and any other matters related to current District operational needs considering recent staffing changes.
 - h. Discuss and Possible Action on Resolution 032524-03 regarding hiring a General Manager.
 - i. Set Future Meeting Dates and propose future agenda items.
9. Executive Session: The Board of Directors of the BPGCD reserves the right to meet in Executive Session at any time during this meeting to discuss any matters authorized by Texas Government Code Sections §551.071 (Consultation with Attorney), 551.072 (Deliberations about Real Property), 551.073 (Deliberations about Gifts

and Donations), 551.074 (Personnel Matters), 551.076 (Deliberations about Security Devices) and 551.086 (Economic Development). No final action or decision will be made in Executive Session.

10. Adjournment

Posted at the Front Door of the District Office, 601 West Main, Johnson City, Texas, on this, the 22nd day of March 2024, at 1:30 p.m.

George Cofran

George Cofran, GENERAL MANAGER

Interim-General Manager, Blanco-Pedernales Groundwater Conservation District

The Blanco-Pedernales Groundwater Conservation District is committed to compliance with the Americans with Disabilities Act (ADA). Reasonable accommodations and equal opportunity for effective communications will be provided upon request. Please contact the District office at 830-868-9196 at least 24 hours in advance if accommodation is needed.

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Appendix D

Coordination with Surface Water Management Entities

Copies of Plan Transmittal Letters sent to:

Lower Colorado River Regional Planning Group (Region K)
Lower Colorado River Authority
Guadalupe-Blanco River Authority
City of Blanco
City of Johnson City
Canyon Lake Water Service Company

Blanco-Pedernales Groundwater Conservation District

601 West Main, P.O. Box 1516 Johnson City, Texas 78636 (830) 868-9196
GM@blancogw.org

April 15, 2024

Mayor Mike Arnold
City of Blanco
PO Box 750
Blanco, Texas 78606

RE: Revised Groundwater Management Plan for the Blanco-Pedernales Groundwater Conservation District

Dear Mayor Arnold,

Pursuant to Chapter 36.1071(a) of the Texas Water Code and 31 Texas Administrative Code Section 356.51, the Blanco-Pedernales Groundwater Conservation District is forwarding the attached files of our recently-revised Groundwater Management Plan to the City of Blanco for coordination with the regional surface water management entities.

Proposed revisions to the existing Plan were pre-reviewed by Texas Water Development Board staff who recommended minor changes and data file updates. District made appropriate changes and finalized the Draft Plan for Public Hearing and possible adoption by the BPGCD Board of Directors at their Board Meeting on March 25, 2024.

We provided public notice on March 22, 2024 in our posting for our March 25, 2024, Board Meeting Agenda. This Agenda provided an opportunity for public comment under Agenda Item # 8(c) Public Comment. The Board and General Manager publicly reviewed the proposed changes during the meeting under Agenda Item # 8(c). The proposed revisions to the GMP were made available for public review either at our office or on our website (www.bpgcd.org). No adverse public comments were received either orally, in writing, by phone, or email.

Following the Public Hearing, the Board of Directors discussed the final draft Plan under Agenda Item # 8(d) and subsequently unanimously approved BPGCD Resolution # 032524-01: Adoption of Revised Groundwater Management Plan as presented.

Thank you in advance for your cooperation in this matter. If you have any questions, please feel free to call me at (830) 868-9196.

Best Regards,

George

George L. Cofran, BSEE, MBA
Blanco-Pedernales Groundwater Conservation District
General Manager & Director-Precinct 3
<http://www.bpgcd.org>
Mobile: 281-300-7177, gm@blancogw.org

NOTE: Management Plan and Appendices can be viewed and copied at the following link:
<https://bpgcd.org/documents/>

Blanco-Pedernales Groundwater Conservation District

601 West Main, P.O. Box 1516 Johnson City, Texas 78636 (830) 868-9196
GM@blancogw.org

April 15, 2024

Mayor Stephanie Fisher
City of Johnson City
PO Box 369
Johnson City, Texas 78686

RE: Revised Groundwater Management Plan for the Blanco-Pedernales Groundwater
Conservation District

Dear Mayor Fisher,

Pursuant to Chapter 36.1071(a) of the Texas Water Code and 31 Texas Administrative Code Section 356.51, the Blanco-Pedernales Groundwater Conservation District is forwarding the attached files of our recently-revised Groundwater Management Plan to the City of Blanco for coordination with the regional surface water management entities.

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Blanco-Pedernales Groundwater Conservation District

601 West Main, P.O. Box 1516 Johnson City, Texas 78636 (830) 868-9196
GM@blancogw.org

April 15, 2024

Phil Wilson, General Manager
Lower Colorado River Authority
P.O. Box 220
Austin, TX 78767

RE: Revised Groundwater Management Plan for the Blanco-Pedernales Groundwater Conservation District

Dear Mr. Wilson,

Pursuant to Chapter 36.1071(a) of the Texas Water Code and 31 Texas Administrative Code Section 356.51, the Blanco-Pedernales Groundwater Conservation District is forwarding the attached files of our recently-revised Groundwater Management Plan to the City of Blanco for coordination with the regional surface water management entities.

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Blanco-Pedernales Groundwater Conservation District

601 West Main, P.O. Box 1516 Johnson City, Texas 78636 (830) 868-9196
GM@blancogw.org

April 15, 2024

Darrell Nichols, General Manager
Guadalupe Blanco River Authority
2225 E. Common Street
New Braunfels, Texas 78130

RE: Revised Groundwater Management Plan for the Blanco-Pedernales Groundwater
Conservation District

Dear Mr. Nichols,

Pursuant to Chapter 36.1071(a) of the Texas Water Code and 31 Texas Administrative Code Section 356.51, the Blanco-Pedernales Groundwater Conservation District is forwarding the attached files of our recently-revised Groundwater Management Plan to the City of Blanco for coordination with the regional surface water management entities.

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Blanco-Pedernales Groundwater Conservation District

601 West Main, P.O. Box 1516 Johnson City, Texas 78636 (830) 868-9196
GM@blancogw.org

April 15, 2024

Region K Chairman David Van Dresar, c/o LCRA
Attn: Annette Keaveny
P.O Box 220
Austin TX, 78767-0220

RE: Revised Groundwater Management Plan for the Blanco-Pedernales Groundwater Conservation District

Dear Chairman Van Dresar,

Pursuant to Chapter 36.1071(a) of the Texas Water Code and 31 Texas Administrative Code Section 356.51, the Blanco-Pedernales Groundwater Conservation District is forwarding the attached files of our recently-revised Groundwater Management Plan to the City of Blanco for coordination with the regional surface water management entities.

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Blanco-Pedernales Groundwater Conservation District

601 West Main, P.O. Box 1516 Johnson City, Texas 78636 (830) 868-9196
GM@blancogw.org

April 15, 2024

Aundrea Williams, President
The Texas Water Company
PO Box 1742
Canyon Lake, Texas 78133

RE: Revised Groundwater Management Plan for the Blanco-Pedernales Groundwater
Conservation District

Dear Ms Williams,

Pursuant to Chapter 36.1071(a) of the Texas Water Code and 31 Texas Administrative Code Section 356.51, the Blanco-Pedernales Groundwater Conservation District is forwarding the attached files of our recently-revised Groundwater Management Plan to the City of Blanco for coordination with the regional surface water management entities.

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Appendix E

**Groundwater Management Area 9
Adoption of Desired Future Conditions
November 15, 2021**

and

**Declaration by GMA 9
of Non-Relevant Aquifers**

STATE OF TEXAS

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RESOLUTION # 111521-01

GROUNDWATER
MANAGEMENT AREA 9

Adopting the Groundwater Management Area 9 Joint Planning Committee’s Proposed Classification of Locally Managed Aquifers as Non-Relevant for Joint Planning Purposes and the Desired Future Conditions for Relevant Major and Minor Aquifers in GMA 9, and authorizing the GMA 9 Chairman to formally submit them and all other required information to the TWDB.

WHEREAS, the Groundwater Conservation Districts (GCDs) located within or partially within Groundwater Management Area 9 (GMA 9) are required under Chapter 36.108, Texas Water Code to conduct joint planning and designate the Desired Future Conditions (DFCs) for aquifers within GMA 9; and

WHEREAS, the Board Presidents or their Designated Representatives of the GCD Members of the Groundwater Management Area 9 Joint Planning Committee (GMA 9) have met as a Committee in various meetings and conducted joint planning in accordance with Section 36.108, Texas Water Code since September 2005; and

WHEREAS, GMA 9, having given proper and timely notice, held an open meeting of the GMA 9 Committee on March 22, 2021 in a ZOOM Virtual Meeting format allowed under a variance to the Open Meetings Act issued by the Governor of Texas due to the Covid pandemic; and

WHEREAS, following GMA 9's March 22, 2021 adoption of GMA 9 Proposed DFCs and the Proposed Classification of Non-Relevant Aquifers, and in accordance with Section 36.108, GMA 9 has solicited and considered public comment during a Public Hearing at each GCD located within or partially within GMA 9, through written public comments, and through public comment in person at various GMA 9 Committee meetings; and

WHEREAS, the GMA 9 Committee received and considered technical advice regarding the requirements contained in Chapter 36.108(subsections c-d3), including but not limited to local aquifers, hydrology, geology, recharge characteristics, local groundwater demands and usage, population projections, ground and surface water inter-relationships, and other considerations that affect groundwater conditions from the Texas Water Development Board (TWDB), Regional Water Planning Groups J, K, and L, consultants, hydrologists, geologists, and other groundwater professionals; and

WHEREAS, following public discussion and due consideration of the current and future needs and conditions of the aquifers in question, the current and projected groundwater demand estimates from local GCDs, the TWDB, and Regional Water Planning Groups J, K, and L, the potential effects on springs, surface water, habitat, and water-dependent species for DFCs set through the year 2060 for the Trinity Aquifer or 2080 for the Edwards Group of the Edwards-Trinity (Plateau), the Ellenburger-San Saba, and Hickory aquifers, the following motions were made and acted upon:

Motion #1:

Moved by George Wissmann and seconded by Micah Voulgaris to adopt the following Desired Future Condition through the year 2060 for the Trinity Aquifer located in GMA 9:

- Allow for An Increase in Average Drawdown of Approximately 30 Feet Through 2060 (Throughout GMA 9) Consistent With "Scenario 6" in TWDB GAM Task 10-005.

The vote on the motion was 9 ayes, 0 nays, and 0 abstentions, and the Motion Passed.

Motion #2

Moved by Micah Voulgaris and seconded by Dave Mauk to adopt the following Desired Future Condition through the year 2080 for the Edwards Group of the Edwards-Trinity (Plateau) Aquifer for those portions located in Kendall and Bandera counties:

- Allow For No Net Increase in Average Drawdown in Kendall and Bandera Counties Through 2080.

The vote on the motion was 9 ayes, 0 nays, and 0 abstentions, and the Motion Passed.

Motion #3

Moved by Micah Voulgaris and seconded by Dave Mauk to adopt the following Desired Future Condition through the year 2080 for the portions of the Ellenburger-San Saba Aquifer located in Kendall County:

- Allow for An Increase in Average Drawdown of No More Than 7 Feet in Kendall County Through 2080.

The vote on the motion was 9 ayes, 0 nays, and 0 abstentions, and the Motion Passed.

Motion #4

Moved by Micah Voulgaris and seconded by Dave Mauk to adopt the following Desired Future Condition through the year 2080 for the portions of the Hickory Aquifer located in Kendall County:

- Allow for An Increase in Average Drawdown of No More Than 7 Feet in Kendall County Through 2080.

The vote on the motion was 9 ayes, 0 nays, and 0 abstentions, and the Motion Passed.

Motion #5

Moved by Jimmy Klepac and seconded by Gene Williams to propose the classification of the Edwards Group of the Edwards-Trinity (Plateau) Aquifer located in Blanco County and Kerr County as non-relevant for the purposes of joint planning.

The vote on the motion was 9 ayes, 0 nays, and 0 abstentions, and the Motion Passed

Motion #6

Moved by Jimmy Klepac and seconded by George Wissmann to propose the classification of the Ellenburger-San Saba Aquifer located in Blanco County and Kerr County as non-relevant for the purposes of joint planning.

The vote on the motion was 9 ayes, 0 nays, and 0 abstentions, and the Motion Passed.

Motion #7

Moved by Charlie Flatten and seconded by Jimmy Klepac to propose the classification of the Hickory Aquifer located in Blanco, Hays, Kerr, and Travis counties as non-relevant for the purposes of joint planning.

The vote on the motion was 9 ayes, 0 nays, and 0 abstentions, and the Motion Passed.

Motion #8

Moved by Jimmy Klepac and seconded by George Wissmann to propose the classification of the Marble Falls Aquifer located in Blanco County as non-relevant aquifer for the purposes of joint planning.

The vote on the motion was 9 ayes, 0 nays, and 0 abstentions, and the Motion Passed.

Motion #9

Moved by David Caldwell and seconded by Lane Cockrell to propose the classification of the Edwards Aquifer (Balcones Fault Zone) located in Bexar, Comal, Hays, and Travis counties as non-relevant for the purposes of joint planning.

The vote on the motion was 9 ayes, 0 nays, and 0 abstentions, and the Motion Passed.

Whereas, the above Motions and Votes of each Committee Member have been recorded in the Minutes of the November 15, 2021 GMA 9 Committee Meeting,

NOW THEREFORE BE IT RESOLVED, Groundwater Management Area 9 Joint Planning Committee Members present and voting on November 15, 2021 do hereby document, record, and confirm the above-described Motions and Votes.

Approved by consensus and signed on November 15, 2021 by the following Voting Groundwater Management Area 9 Joint Planning Committee Members:



Jimmy Klepac – Board President of the Blanco-Pedernales GCD



Dave Mauk – General Manager and Designated Representative for the Bandera County River Authority and Groundwater Conservation District



David Caldwell - General Manager and Designated Representative for the Medina County GCD



Charlie Flatten - General Manager and Designated Representative for the Hays Trinity GCD



Micah Voulgaris – General Manager and Designated Representative for the Cow Creek GCD



George Wissmann – General Manager and Designated Representative for the Trinity Glen Rose GCD



Gene Williams - General Manager and Designated Representative for the Headwaters GCD



H.L. Saur - General Manager and Designated Representative of the Comal Trinity GCD



Lane Cockrell - General Manager and Designated Representative for the Southwestern Travis County GCD

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Appendix F

**Adoption of DFCs
and
Declaration of Non-Relevant Aquifers**

**by the
Blanco-Pedernales Groundwater
Conservation District**

March 23, 2023

STATE OF TEXAS

§

RESOLUTION #032323-01

COUNTY OF BLANCO

§

§

BLANCO-PEDERNALES GROUNDWATER CONSERVATION DISTRICT

**ADOPTION OF DESIRED FUTURE CONDITIONS AND NON-RELEVANT AQUIFERS
FOR BLANCO COUNTY IN ACCORDANCE WITH
GROUNDWATER MANAGEMENT AREA 9 JOINT PLANNING**

WHEREAS, the Blanco-Pedernales Groundwater Conservation District (BPGCD) is a groundwater conservation district created in accordance with and subject to Chapter 36, Texas Water Code and;

WHEREAS, the BPGCD is required under Chapter 36.108, Texas Water Code; to participate in Groundwater Management Area Joint Planning and;

WHEREAS, the BPGCD is located in Groundwater Management Area # 9 and;

WHEREAS, Groundwater Management Area 9 has completed the joint planning required under Chapter 36.108 on November 15, 2021, and by resolution, has adopted Desired Future Conditions (DFCs) for relevant aquifers and declared portions of certain aquifers as non-relevant for regional planning purposes, and submitted the resolution and an Explanatory Report to the Texas Water Development Board (TWDB) and;

WHEREAS Chapter 36.108 (d-4) and TWDB Rule 356.34 require districts within GMA 9 to adopt the DFCs as soon as possible after being notified that the GMA 9 resolution and Explanatory Report are administratively complete and;

WHEREAS, the TWDB notified GMA 9 on November 8, 2022 that the GMA 9 DFCs and the Explanatory Report are administratively complete;

NOW THEREFORE BE IT RESOLVED, that the Board of Directors of the Blanco-Pedernales Groundwater Conservation District does hereby adopt the following DFCs and non-relevant aquifers for Blanco County as described in the GMA 9 resolution and Explanatory Report:

- Trinity Aquifer (Upper, Middle, and Lower undifferentiated) - Allow for an increase in average drawdown of approximately 30 feet through 2060 consistent with "Scenario 6" in TWDB Draft GAM Task 10-005

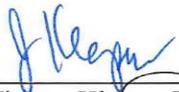
Note: The above DFC is for GMA 9 as a whole. In Appendix A of Draft GAM Task 10-005, the DFC calculation for the overall Trinity Aquifer located in Blanco County under Scenario 6 would allow for an increase in average drawdown of approximately 19.2 feet in Blanco County.

The following aquifers or portions of aquifers are classified as Non-Relevant for regional planning purposes:

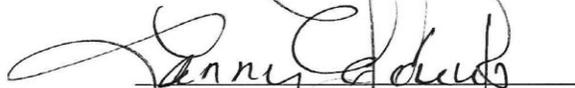
- Edwards Group of the Edwards Trinity (Plateau) located in Blanco Counties.
- Ellenburger-San Saba Aquifer located in Blanco County.
- Hickory Aquifer located in Blanco County.
- Marble Falls Aquifer located in Blanco County.

PASSED AND APPROVED THIS 23 DAY OF March, 2023,

with 4 ayes, 0 nays, and 0 abstentions.



Jimmy Klepac, Board President



Lanny Counts, Board Secretary

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Appendix G

Texas Water Development Board

Estimated Historical Water Use and 2022 State Water Plan Datasets:

Blanco-Pedernales Groundwater Conservation District

Estimated Historical Groundwater Use And 2022 State Water Plan Datasets:

Blanco-Pedernales Groundwater Conservation District

Texas Water Development Board
Groundwater Division
Groundwater Technical Assistance Section
stephen.allen@twdb.texas.gov
(512) 463-7317
June 30, 2023

GROUNDWATER MANAGEMENT PLAN DATA:

This package of water data reports (part 1 of a 2-part package of information) is being provided to groundwater conservation districts to help them meet the requirements for approval of their five-year groundwater management plan. Each report in the package addresses a specific numbered requirement in the Texas Water Development Board's groundwater management plan checklist. The checklist can be viewed and downloaded from this web address:

<http://www.twdb.texas.gov/groundwater/docs/GCD/GMPChecklist0113.pdf>

The five reports included in this part are:

1. Estimated Historical Groundwater Use (checklist item 2)
from the TWDB Historical Water Use Survey (WUS)
2. Projected Surface Water Supplies (checklist item 6)
3. Projected Water Demands (checklist item 7)
4. Projected Water Supply Needs (checklist item 8)
5. Projected Water Management Strategies (checklist item 9)
from the 2022 Texas State Water Plan (SWP)

Part 2 of the 2-part package is the groundwater availability model (GAM) report for the District (checklist items 3 through 5). The District should have received, or will receive, this report from the Groundwater Availability Modeling Section. Questions about the GAM can be directed to Grayson Dowlearn, grayson.dowlearn@twdb.texas.gov (512) 475-1552.

DISCLAIMER:

The data presented in this report represents the most up to date WUS and 2022 SWP data available as of 6/30/2023. Although it does not happen frequently, either of these datasets are subject to change pending the availability of more accurate WUS data or an amendment to the 2022 SWP. District personnel must review these datasets and correct any discrepancies to ensure approval of their groundwater management plan.

The WUS dataset can be verified at this web address:

<http://www.twdb.texas.gov/waterplanning/waterusesurvey/estimates>

The 2022 SWP dataset can be verified by contacting Sabrina Anderson (sabrina.anderson@twdb.texas.gov or 512-936-0886).

The values presented in the data tables of this report are county-based. In cases where groundwater conservation districts cover only a portion of one or more counties the data values are modified with an apportioning multiplier to create new values that more accurately represent conditions within district boundaries. The multiplier used in the following formula is a land area ratio: (data value * (land area of district in county / land area of county)). For two of the four SWP tables (Projected Surface Water Supplies and Projected Water Demands) only the county-wide water user group (WUG) data values (county other, manufacturing, steam electric power, irrigation, mining and livestock) are modified using the multiplier. WUG values for municipalities, water supply corporations, and utility districts are not apportioned; instead, their full values are retained when they are located within the district, and eliminated when they are located outside (we ask each district to identify these entity locations).

The remaining SWP tables (Projected Water Supply Needs and Projected Water Management Strategies) are not modified because district-specific values are not statutorily required. Each district needs only "consider" the county values in these tables.

In the WUS table every category of water use (including municipal) is apportioned. Staff determined that breaking down the annual municipal values into individual WUGs was too complex.

TWDB recognizes that the apportioning formula used is not ideal but it is the best available process with respect to time and staffing constraints. If a district believes it has data that is more accurate it can add those data to the plan with an explanation of how the data were derived. Apportioning percentages that the TWDB used are listed above each applicable table.

For additional questions regarding this data, please contact Stephen Allen (stephen.allen@twdb.texas.gov or 512-463-7317).

Estimated Historical Water Use

TWDB Historical Water Use Survey (WUS) Data

Groundwater and surface water historical use estimates are currently unavailable for calendar year 2020. TWDB staff anticipates the calculation and posting of these estimates at a later date.

BLANCO COUNTY

100% (multiplier)

All values are in acre-feet

Year	Source	Municipal	Manufacturing	Mining	Steam Electric	Irrigation	Livestock	Total
2019	GW	883	0	4	0	2,338	273	3,498
	SW	388	0	0	0	0	117	505
2018	GW	858	0	0	0	2,342	272	3,472
	SW	376	0	0	0	0	116	492
2017	GW	883	0	0	0	2,152	263	3,298
	SW	376	0	0	0	0	113	489
2016	GW	905	0	0	0	1,398	217	2,520
	SW	356	0	0	0	0	94	450
2015	GW	886	0	0	0	1,339	216	2,441
	SW	354	0	0	0	0	92	446
2014	GW	1,003	0	0	0	1,908	202	3,113
	SW	376	0	0	0	24	87	487
2013	GW	1,041	0	0	0	1,825	195	3,061
	SW	342	0	0	0	0	83	425
2012	GW	1,166	0	0	0	2,150	222	3,538
	SW	332	0	0	0	0	95	427
2011	GW	1,274	0	0	0	357	270	1,901
	SW	350	0	0	0	0	116	466
2010	GW	1,105	0	0	0	369	270	1,744
	SW	285	0	0	0	0	116	401
2009	GW	1,037	0	0	0	405	545	1,987
	SW	281	0	0	0	0	234	515
2008	GW	948	0	1	0	68	469	1,486
	SW	327	0	0	0	0	201	528
2007	GW	819	0	1	0	190	363	1,373
	SW	265	1	0	0	0	155	421
2006	GW	1,018	0	1	0	35	293	1,347
	SW	269	1	0	0	250	125	645
2005	GW	979	0	1	0	44	305	1,329
	SW	256	1	0	0	250	131	638
2004	GW	898	0	1	0	59	198	1,156
	SW	255	1	0	0	254	188	698

Projected Surface Water Supplies

TWDB 2022 State Water Plan Data

BLANCO COUNTY

100% (multiplier)

All values are in acre-feet

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
K	Blanco	Guadalupe	Blanco Lake/Reservoir	463	463	463	463	463	463
K	Blanco	Guadalupe	Canyon Lake/Reservoir	600	600	600	600	600	600
K	Canyon Lake Water Service	Guadalupe	Canyon Lake/Reservoir	118	119	118	118	118	119
K	Livestock, Blanco	Colorado	Colorado Livestock Local Supply	101	101	101	101	101	101
K	Livestock, Blanco	Guadalupe	Guadalupe Livestock Local Supply	101	101	101	101	101	101
Sum of Projected Surface Water Supplies (acre-feet)				1,383	1,384	1,383	1,383	1,383	1,384

Projected Water Demands

TWDB 2022 State Water Plan Data

Please note that the demand numbers presented here include the plumbing code savings found in the Regional and State Water Plans.

BLANCO COUNTY

100% (multiplier)

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
K	Blanco	Guadalupe	316	365	393	407	418	425
K	Canyon Lake Water Service	Guadalupe	83	115	147	180	213	245
K	County-Other, Blanco	Colorado	576	653	688	698	701	696
K	County-Other, Blanco	Guadalupe	432	490	517	524	526	523
K	Irrigation, Blanco	Colorado	934	934	934	934	934	934
K	Irrigation, Blanco	Guadalupe	393	393	393	393	393	393
K	Johnson City	Colorado	353	411	443	460	473	480
K	Livestock, Blanco	Colorado	255	255	255	255	255	255
K	Livestock, Blanco	Guadalupe	76	76	76	76	76	76
K	Mining, Blanco	Colorado	5	5	5	5	5	5
Sum of Projected Water Demands (acre-feet)			3,423	3,697	3,851	3,932	3,994	4,032

Projected Water Supply Needs

TWDB 2022 State Water Plan Data

Negative values (in red) reflect a projected water supply need, positive values a surplus.

BLANCO COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
K	Blanco	Guadalupe	747	698	670	656	645	638
K	Canyon Lake Water Service	Guadalupe	142	119	89	58	28	-2
K	County-Other, Blanco	Colorado	263	186	151	141	138	143
K	County-Other, Blanco	Guadalupe	242	184	157	150	148	151
K	Irrigation, Blanco	Colorado	45	45	45	45	45	45
K	Irrigation, Blanco	Guadalupe	26	26	26	26	26	26
K	Johnson City	Colorado	47	-11	-43	-60	-73	-80
K	Livestock, Blanco	Colorado	262	262	262	262	262	262
K	Livestock, Blanco	Guadalupe	73	73	73	73	73	73
K	Mining, Blanco	Colorado	0	0	0	0	0	0
Sum of Projected Water Supply Needs (acre-feet)			0	-11	-43	-60	-73	-82

Projected Water Management Strategies

TWDB 2022 State Water Plan Data

BLANCO COUNTY

WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
Blanco, Guadalupe (K)							
Direct Reuse - Blanco	Direct Reuse [Blanco]	0	146	146	146	146	146
Drought Management	DEMAND REDUCTION [Blanco]	63	55	60	63	65	66
Municipal Conservation - Blanco	DEMAND REDUCTION [Blanco]	0	27	23	21	21	21
		63	228	229	230	232	233
Canyon Lake Water Service, Guadalupe (K)							
Drought Management	DEMAND REDUCTION [Blanco]	11	14	16	20	23	27
GBRA - MBWSP - Surface Water w/ASR	Carrizo-Wilcox Aquifer ASR [Gonzales]	0	0	0	0	0	3
Municipal Water Conservation	DEMAND REDUCTION [Blanco]	0	0	0	1	6	9
		11	14	16	21	29	39
County-Other, Blanco, Colorado (K)							
Brush Management	Trinity Aquifer [Blanco]	0	708	708	708	708	708
Drought Management	DEMAND REDUCTION [Blanco]	70	65	59	56	54	54
		70	773	767	764	762	762
County-Other, Blanco, Guadalupe (K)							
Drought Management	DEMAND REDUCTION [Blanco]	53	49	44	42	41	40
		53	49	44	42	41	40
Johnson City, Colorado (K)							
Drought Management	DEMAND REDUCTION [Blanco]	64	77	84	87	90	91
Expansion of Current Groundwater Supplies - Ellenburger-San Saba Aquifer	Ellenburger-San Saba Aquifer [Blanco]	0	100	100	100	100	100
Municipal Conservation - Johnson City	DEMAND REDUCTION [Blanco]	31	28	25	23	23	23
		95	205	209	210	213	214
Sum of Projected Water Management Strategies (acre-feet)		292	1,269	1,265	1,267	1,277	1,288

Appendix H

**GAM RUN 23-017 MAG:
BLANCO-PEDERNALES GROUNDWATER
CONSERVATION DISTRICT
GROUNDWATER MANAGEMENT PLAN**

<https://www.twdb.texas.gov/groundwater/docs/GAMruns/GR23-017.pdf>

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