

AGENDA
LAVACA REGIONAL WATER PLANNING GROUP
Regular Meeting
February 5, 2024
12:00 p.m. (Noon)

Meeting will be held in person at the Main Office of the Lavaca Navidad River Authority Office Complex, 4631 FM 3131, located approximately seven (7) miles east of Edna.

The Lavaca Regional Water Planning Group will be accepting written comments related to Agenda Item 8. Written comments mailed to the Lavaca Regional Water Planning Group must be received no later than **February 5, 2024, at 12:00 p.m.** Written comments can be mailed to:

Patrick Brzozowski, Secretary, Lavaca Regional Water Planning Group, P.O. Box 429, Edna, Texas 77957, or pbrzozowski@lnra.org. Meeting materials will be available at least 7 days prior to the meeting.

You may also access the meeting through audio/video conferencing: <http://tinyurl.com/rk3t8326>

1. Open meeting.
2. Receive public comments.
3. Consider approval of meeting minutes of October 23, 2023 and act as necessary.
4. Consider nominations for new voting members and act as necessary.
5. Receive update from Texas Water Development Board (TWDB) Project Manager and act as necessary.
6. Receive reports from regional liaisons and Interregional Planning Council representative and act as necessary.
7. Receive briefing and update from Black and Veatch consultant and act as necessary.
 - A. Schedule and Progress Update
8. Receive briefing from Black & Veatch on 2026 Lavaca Regional Water Planning Technical Memorandum and act as necessary.
 - A. Black & Veatch to present Technical Memorandum for RWPG discussion.
 - B. RWPG to take public comments on the Technical Memorandum.
 - C. RWPG to consider public comments and take action to approve the Technical Memorandum, and to authorize Black & Veatch to submit to TWDB, to address DB27 updates and non-substantive revisions to the technical memorandum, and to address any requests from TWDB associated with processing the technical memorandum.
9. Receive briefing on Task 5B Scope of Work for Evaluating Water Management Strategies and act as necessary.
 - A. Black & Veatch to present draft Task 5B Scope of Work for RWPG discussion.
 - B. RWPG to take action to approve the Task 5B Scope of Work and submit it to TWDB.

- C. RWPG to take action to approve Black & Veatch or LNRA to work with the TWDB on any follow-up information needed.
- D. RWPG to take action to approve LNRA to negotiate and execute the subsequent TWDB contract amendment that will be issued.

10. Discuss and schedule future meeting dates and act as necessary.

11. Receive public comments.

12. Adjourn

WUG Name	County	Basin	Water Demand 2030 (AFY)	Water Demand 2080 (AFY)	RWPG Source	County	Basin	Source Name	Water Supplies 2030 (AFY)	Water Supplies 2080 (AFY)	Water Surplus/Needs 2030 (AFY)	Water Surplus/Needs 2080 (AFY)
COUNTY-OTHER	JACKSON	COLORADO-LAVACA	258	342	P	JACKSON	COLORADO-LAVACA	GULF COAST AQUIFER	342	342	84	0
COUNTY-OTHER	JACKSON	LAVACA	492	655	P	JACKSON	LAVACA	GULF COAST AQUIFER	655	655	163	0
COUNTY-OTHER	JACKSON	LAVACA-GUADALUPE	60	80	P	JACKSON	LAVACA-GUADALUPE	GULF COAST AQUIFER	80	80	20	0
EDNA	JACKSON	LAVACA	866	1,089	P	JACKSON	LAVACA	GULF COAST AQUIFER	1,089	1,089	223	0
GANADO	JACKSON	LAVACA	204	184	P	JACKSON	LAVACA	GULF COAST AQUIFER	204	204	0	20
QUADVEST	JACKSON	COLORADO-LAVACA	12	31	P	JACKSON	COLORADO-LAVACA	GULF COAST AQUIFER	31	31	19	0
IRRIGATION	JACKSON	COLORADO-LAVACA	23,834	23,834	P	JACKSON	COLORADO-LAVACA	GULF COAST AQUIFER	23,834	23,834	0	0
IRRIGATION	JACKSON	LAVACA	47,626	47,626	P	JACKSON	LAVACA	GULF COAST AQUIFER	46,626	46,626	-1,000	-1,000
IRRIGATION	JACKSON	LAVACA-GUADALUPE	7,038	7,038	P	JACKSON	LAVACA-GUADALUPE	GULF COAST AQUIFER	7,038	7,038	0	0
LIVESTOCK	JACKSON	COLORADO-LAVACA	470	470	P	JACKSON	COLORADO-LAVACA	GULF COAST AQUIFER	470	470	0	0
LIVESTOCK	JACKSON	LAVACA	693	693	P	JACKSON	LAVACA	GULF COAST AQUIFER	693	693	0	0
LIVESTOCK	JACKSON	LAVACA-GUADALUPE	208	208	P	JACKSON	LAVACA-GUADALUPE	GULF COAST AQUIFER	208	208	0	0
MANUFACTURING	JACKSON	COLORADO-LAVACA	8,727	9,449	P	JACKSON	COLORADO-LAVACA	GULF COAST AQUIFER	169	169	-3,679	-4,401
MANUFACTURING	JACKSON	LAVACA	106	115	P	JACKSON	LAVACA	GULF COAST AQUIFER	115	115	9	0
MANUFACTURING	JACKSON	LAVACA-GUADALUPE	6,385	6,913	P	JACKSON	LAVACA-GUADALUPE	GULF COAST AQUIFER	360	360	528	0
Jackson County Total			96,979	98,727					93,346	93,346	-3,633	-5,381
COUNTY-OTHER	LAVACA	GUADALUPE	6	9	P	LAVACA	GUADALUPE	GULF COAST AQUIFER	9	9	3	0
COUNTY-OTHER	LAVACA	LAVACA	1,424	1,950	P	LAVACA	LAVACA	GULF COAST AQUIFER	1,950	1,950	526	0
COUNTY-OTHER	LAVACA	LAVACA-GUADALUPE	1	1	P	LAVACA	LAVACA-GUADALUPE	GULF COAST AQUIFER	1	1	0	0
HALLETTSVILLE	LAVACA	LAVACA	675	959	P	LAVACA	LAVACA	GULF COAST AQUIFER	959	959	284	0
MOULTON	LAVACA	LAVACA	156	127	P	LAVACA	LAVACA	GULF COAST AQUIFER	156	156	0	29
SHINER	LAVACA	LAVACA	529	732	P	LAVACA	LAVACA	GULF COAST AQUIFER	732	732	203	0
YOAKUM	LAVACA	LAVACA	670	842	P	LAVACA	LAVACA	GULF COAST AQUIFER	842	842	172	0
IRRIGATION	LAVACA	LAVACA	8,692	8,692	P	LAVACA	LAVACA	GULF COAST AQUIFER	8,192	8,192	-500	-500
LIVESTOCK	LAVACA	GUADALUPE	21	21	P	LAVACA	GUADALUPE	GULF COAST AQUIFER	21	21	0	0
LIVESTOCK	LAVACA	LAVACA	3,484	3,484	P	LAVACA	LAVACA	GULF COAST AQUIFER	3,484	3,484	0	0
LIVESTOCK	LAVACA	LAVACA-GUADALUPE	40	40	P	LAVACA	LAVACA-GUADALUPE	GULF COAST AQUIFER	40	40	0	0
MANUFACTURING	LAVACA	LAVACA	528	634	P	LAVACA	LAVACA	GULF COAST AQUIFER	634	634	106	0
MINING	LAVACA	LAVACA	2,665	0	P	LAVACA	LAVACA	GULF COAST AQUIFER	2,665	2,665	0	2,665
Lavaca County Total			18,891	17,491					19,685	19,685	794	2,194
COUNTY-OTHER	WHARTON	COLORADO	72	68	P	WHARTON	COLORADO	GULF COAST AQUIFER	73	73	1	5
COUNTY-OTHER	WHARTON	COLORADO-LAVACA	74	69	P	WHARTON	COLORADO-LAVACA	GULF COAST AQUIFER	74	74	0	5
COUNTY-OTHER	WHARTON	LAVACA	294	276	P	WHARTON	LAVACA	GULF COAST AQUIFER	295	295	1	19
EL CAMPO	WHARTON	COLORADO	311	313	P	WHARTON	COLORADO-LAVACA	GULF COAST AQUIFER	314	314	3	1
EL CAMPO	WHARTON	COLORADO-LAVACA	1,899	1,910	P	WHARTON	COLORADO-LAVACA	GULF COAST AQUIFER	1,912	1,912	13	2
EL CAMPO	WHARTON	LAVACA	95	95	P	WHARTON	COLORADO-LAVACA	GULF COAST AQUIFER	95	95	0	0
WHARTON COUNTY WCID 1	WHARTON	LAVACA	121	145	P	WHARTON	LAVACA	GULF COAST AQUIFER	145	145	24	0
IRRIGATION	WHARTON	COLORADO-LAVACA	4,709	4,709	P	WHARTON	COLORADO-LAVACA	GULF COAST AQUIFER	4,709	4,709	0	0
IRRIGATION	WHARTON	LAVACA	83,737	83,737	P	WHARTON	LAVACA	GULF COAST AQUIFER	60,021	60,021	-7,716	-7,716
LIVESTOCK	WHARTON	COLORADO	8	8	P	WHARTON	COLORADO	GULF COAST AQUIFER	8	8	0	0
LIVESTOCK	WHARTON	COLORADO-LAVACA	151	151	P	WHARTON	COLORADO-LAVACA	GULF COAST AQUIFER	151	151	0	0
LIVESTOCK	WHARTON	LAVACA	344	344	P	WHARTON	LAVACA	GULF COAST AQUIFER	344	344	0	0
MANUFACTURING	WHARTON	COLORADO-LAVACA	33	38	P	WHARTON	COLORADO-LAVACA	GULF COAST AQUIFER	38	38	5	0
STEAM ELECTRIC POWER	WHARTON	LAVACA	1,572	1,572	P	WHARTON	LAVACA	GULF COAST AQUIFER	1,572	1,572	0	0
Wharton County Total			93,420	93,435					84,179	84,179	-7,669	-7,684

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TECHNICAL MEMORANDUM 2026 Lavaca Regional Water Plan

B&V PROJECT NO. 410083

PREPARED FOR

**Lavaca Regional Water Planning Group &
Texas Water Development Board**

29 JANUARY 2024

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1.0 INTRODUCTION

This Technical Memorandum is a compilation of the task work performed to date as part of the regional water planning process to develop the 2026 Lavaca Regional Water Plan for Region P. It is prepared for the Texas Water Development Board (TWDB) as a deliverable associated with Task 4C. On February 5, 2023, the Lavaca Regional Water Planning Group (LRWPG) accepted public comments on and approved the Technical Memorandum for submittal to the TWDB.

Appendix A of this Technical Memorandum includes the draft 2027 State Water Planning Database (DB27) Reports that provide data on population, water demand, water availability and supplies, water needs/surpluses, and a comparison of data to the 2021 Lavaca Regional Water Plan. The data provided in this Technical Memorandum is draft and may be subject to change prior to final approval of the 2026 Lavaca Regional Water Plan.

This Technical Memorandum also includes information regarding surface water and groundwater methodologies, water availability model versions and dates, infeasible water management strategies (WMSs) from the 2021 Lavaca Regional Water Plan, the documented process used by Region P to identify potentially feasible WMSs, a list of potentially feasible WMSs identified to date, and a description of interregional coordination efforts during this cycle.

2.0 SUMMARY OF PUBLIC COMMENTS

Rules in Title 31 of the Texas Administrative Code (31 TAC) Chapter 357.21(g)(2) describe notice requirements when a Regional Water Planning Group (RWPG) approves submittal of the Technical Memorandum. Specifically, notice must be provided at least 14 days prior to the meeting, written comment must be accepted for 14 days prior to the meeting and considered by the RWPG members prior to taking the associated action, and meeting materials must be made available on the RWPG website for a minimum of seven days prior to and 14 days following the meeting.

The following summarizes comments received during the required comment period.

3.0 TWDB DB27 REPORTS

The following reports have been generated from the TWDB 2027 State Water Planning Database (DB27) and are included in *Appendix A*.

1. Population Projections
2. Water Demand Projections
3. Source Water Availability
4. Existing Water Supplies
5. Identified Water Needs/Surpluses
6. Comparison of Supply, Demand, and Needs to 2021 RWP
7. Comparison of Source Availability to 2021 RWP

4.0 SOURCE WATER AVAILABILITY ASSUMPTIONS

The following describes the models and assumptions used to estimate the availability of water for surface water and groundwater.

4.1. SURFACE WATER

4.1.1. Water Availability Models and Associated Hydrologic Variances

For surface water availability modeling, the Lavaca Regional Water Planning Group (LRWPG) is using the unmodified Texas Commission on Environmental Quality (TCEQ) Lavaca River Water Availability Model (WAM) Run 3, dated October 1, 2023. Because the unmodified WAM is being used, a hydrologic variance request was not required for submittal to the TWDB.

The 2030 and 2080 model analyses were conducted by Black & Veatch on December 1, 2023. The WAM analyses estimated the firm yield for Lake Texana to be 79,000 acre-feet/year (acft/yr) for the 2030 and 2080 decades; therefore, no additional decadal runs were made. Because 4,500 acft/yr are required to be released for environmental flows, the water availability for Lake Texana in the 2026 Lavaca Regional Water Plan is identified as 74,500 acft/yr for all decades.

Table 1 includes details for the hydrologic model used, including the model name, version date, model input/output files used, date model used and any relevant comments. Appendix B (electronic) includes all model input/output files or other model files used to date in determining water availability.

Table 1 Details for Hydrologic Model Used

MODEL NAME	VERSION DATE	INPUT/OUTPUT FILES USED	DATE MODEL USED	COMMENTS
Unmodified TCEQ Lavaca WAM Run 3	10/1/23	2030 and 2080 model runs – created .YRO output files	12/1/23 -B&V	2030 and 2080 model Firm Yield was consistent; no other runs were performed

4.1.2. Sedimentation Methodology

The LRWPG incorporated sedimentation in the WAM analyses by using the *Volumetric and Sedimentation Survey of Lake Texana* report by the Texas Water Development Board, dated August 2020. The 2020 TWDB sedimentation survey indicates that Lake Texana has lost capacity at an average of 288 acft/yr since impoundment due to sedimentation below conservation pool elevation (44.0 feet NGVD29). The LRWPG used the area and capacity curve tables in the 2020 *Volumetric and Sedimentation Survey of Lake Texana* report to extrapolate and develop area-capacity rating curves for 2030 through 2080.

4.2. GROUNDWATER

The most recent work from Groundwater Management Areas (GMAs) are detailed in Modeled Available Groundwater (MAG) reports, prepared by the TWDB. The Lavaca Regional Water Planning Area intersects GMA 15. The MAG volumes for the Gulf Coast Aquifer System, which shows groundwater availability for each decade of the planning horizon, are detailed in GR21-020 MAG (GMA 15). There are no non-MAG groundwater numbers included for groundwater source availabilities.

At present, the LRWPG has not reallocated annual MAG volumes, nor identified the need to use MAG Peak Factors.

5.0 INFEASIBLE WATER MANAGEMENT STRATEGIES FROM THE 2021 RWP

The LRWPG conducted a one-time, mid-cycle analysis of the 2021 Lavaca Regional Water Plan to identify any newly infeasible Water Management Strategies (WMSs) and Water Management Strategy Projects (WMSPs). The LRWPG reviewed a list of WMSs and WMSPs from TWDB that were feasible and recommended at the time of adoption of the previous plan to determine if any have since become infeasible. Information from WMS and WMSP sponsors was gathered to determine whether they have taken affirmative steps to implement projects with a near-term online decade (2020, 2030, and 2040). In addition, the list of TWDB-provided strategies was presented to the LRWPG for discussion related to implementation status.

Results of the analysis were presented at the same public meeting in which the methodology for identifying potentially feasible WMSs for the current plan were presented. At the October 23, 2023, LRWPG meeting, after asking for public comments, the planning group approved that there were no infeasible water management strategies or water management strategy projects identified in the 2021 Lavaca Regional Water Plan.

6.0 DOCUMENTED PROCESS TO IDENTIFY POTENTIALLY FEASIBLE WATER MANAGEMENT STRATEGIES FOR THE 2026 PLANNING CYCLE

At the October 23, 2023, LRWPG meeting, after asking for public comments, the planning group approved the process to identify potentially feasible water management strategies for the 2026 planning cycle. The approved process is as follows:

1. Current water planning information, including specific water management strategies (WMS) of interest, will be solicited from Water User Groups (WUGs) and Wholesale Water Providers (WWPs) in Fall 2023.
 - a. Solicitation of planning information will include the recommended WMSs in the 2021 Regional Water Plan.
 - b. WUGs/WWPs will be encouraged to classify each WMS on their 2021 Plan list as included or rejected for the 2026 Planning Cycle and provide comments, and to list additional WMS that will be new for the 2026 Planning Cycle.

2. A list of potential WMSs will be prepared based on an initial technical evaluation and needs analysis and the comments received, which will be available for consideration by the RWPG by early 2024.
3. Additional WMSs may be brought forth to the RWPG for consideration until March 2024.
4. The list of potential WMSs will be further considered to identify “potentially feasible” or “not potentially feasible” WMSs for WUGs and WWP with identified water needs.

7.0 POTENTIALLY FEASIBLE WATER MANAGEMENT STRATEGIES IDENTIFIED BY THE RWPG

The LRWPG has identified potentially feasible WMSs for meeting needs in the region. Over the next two LRWPG meetings, the LRWPG may consider additional WMSs, review scope and fee of each, and submit the information to TWDB for notice to proceed. **Error! Reference source not found.** provides the potentially feasible WMSs identified to date for WUGs specifically with needs. There have also been other strategies identified through the process that may not be specifically for WUGs with needs, but have been requested for inclusion in the plan or are carried over from the last cycle. In summary, the potentially feasible WMSs identified to date include the following:

- Drought Management
- Advanced Water Conservation
- Expand Use of Groundwater
- Lake Texana Yield Enhancement Project
- LNRA Desalination
- LNRA Aquifer Storage and Recovery
- Reuse
- Lake Texana Dredging

8.0 INTERREGIONAL COORDINATION EFFORTS TO DATE

To support interregional coordination, the LRWPG has an agenda item at each RWPG meeting for regional liaisons and members of the interregional planning council to discuss any updates since the previous RWPG meeting. In addition, Black & Veatch regularly communicates with technical consultants of neighboring regions, and in one case, has regularly-scheduled meetings. The LRWPG has a vested interest in coordinating with neighboring regions because Region P both receives water supply from a neighboring region and provides water supplies to neighboring regions.

Appendix A DB27 Reports

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DRAFT Region P Water User Group (WUG) Population

	WUG Population					
	2030	2040	2050	2060	2070	2080
Jackson County Total	15,769	16,762	17,634	18,376	19,143	19,935
Jackson County / Colorado-Lavaca Basin Total	2,604	2,829	3,013	3,188	3,369	3,556
Quadvest*	55	75	89	107	124	142
County-Other	2,549	2,754	2,924	3,081	3,245	3,414
Jackson County / Lavaca Basin Total	12,573	13,293	13,942	14,472	15,020	15,586
Edna	5,848	6,213	6,534	6,807	7,089	7,381
Ganado	1,850	1,813	1,817	1,773	1,727	1,676
County-Other	4,875	5,267	5,591	5,892	6,204	6,529
Jackson County / Lavaca-Guadalupe Basin Total	592	640	679	716	754	793
County-Other	592	640	679	716	754	793
Lavaca County Total	21,419	22,796	24,127	25,631	27,185	28,790
Lavaca County / Guadalupe Basin Total	52	55	59	63	67	71
County-Other	52	55	59	63	67	71
Lavaca County / Lavaca Basin Total	21,359	22,732	24,059	25,558	27,108	28,708
Hallettsville	3,027	3,255	3,479	3,751	4,031	4,319
Moulton	776	746	717	689	662	636
Shiner	2,282	2,441	2,598	2,781	2,970	3,166
Yoakum*	3,852	4,057	4,251	4,445	4,648	4,860
County-Other	11,422	12,233	13,014	13,892	14,797	15,727
Lavaca County / Lavaca-Guadalupe Basin Total	8	9	9	10	10	11
County-Other	8	9	9	10	10	11
Wharton County Total	16,611	16,782	16,764	16,735	16,705	16,674
Wharton County / Colorado Basin Total	2,248	2,270	2,261	2,252	2,241	2,230
El Campo*	1,682	1,699	1,700	1,699	1,698	1,697
County-Other*	566	571	561	553	543	533
Wharton County / Colorado-Lavaca Basin Total	10,831	10,942	10,936	10,921	10,908	10,894
El Campo*	10,253	10,359	10,363	10,357	10,353	10,349
County-Other*	578	583	573	564	555	545
Wharton County / Lavaca Basin Total	3,532	3,570	3,567	3,562	3,556	3,550
El Campo*	512	517	517	517	517	516
Wharton County WCID 1	730	738	777	807	840	874

*A single asterisk next to a WUG's name denotes that the WUG is split by two or more planning regions.

DRAFT Region P Water User Group (WUG) Population

	WUG Population					
	2030	2040	2050	2060	2070	2080
County-Other*	2,290	2,315	2,273	2,238	2,199	2,160
Region P Population Total	53,799	56,340	58,525	60,742	63,033	65,399

*A single asterisk next to a WUG's name denotes that the WUG is split by two or more planning regions.

DRAFT Region P Water User Group (WUG) Demand

	WUG Demand (acre-feet per year)					
	2030	2040	2050	2060	2070	2080
Jackson County Total	96,979	98,195	98,335	98,460	98,592	98,727
Jackson County / Colorado-Lavaca Basin Total	33,301	33,957	33,999	34,039	34,082	34,126
Quadvest*	12	16	19	23	27	31
County-Other	258	276	294	309	326	342
Manufacturing	8,727	9,361	9,382	9,403	9,425	9,449
Livestock	470	470	470	470	470	470
Irrigation	23,834	23,834	23,834	23,834	23,834	23,834
Jackson County / Lavaca Basin Total	49,987	50,078	50,157	50,223	50,291	50,362
Edna	866	917	964	1,004	1,046	1,089
Ganado	204	199	199	194	189	184
County-Other	492	529	561	591	622	655
Manufacturing	106	114	114	115	115	115
Livestock	693	693	693	693	693	693
Irrigation	47,626	47,626	47,626	47,626	47,626	47,626
Jackson County / Lavaca-Guadalupe Basin Total	13,691	14,160	14,179	14,198	14,219	14,239
County-Other	60	64	68	72	76	80
Manufacturing	6,385	6,850	6,865	6,880	6,897	6,913
Livestock	208	208	208	208	208	208
Irrigation	7,038	7,038	7,038	7,038	7,038	7,038
Lavaca County Total	18,891	19,114	19,345	19,607	19,877	17,491
Lavaca County / Guadalupe Basin Total	27	28	28	29	29	30
County-Other	6	7	7	8	8	9
Livestock	21	21	21	21	21	21
Lavaca County / Lavaca Basin Total	18,823	19,045	19,276	19,537	19,807	17,420
Hallettsville	675	723	773	833	895	959
Moulton	156	149	143	138	132	127
Shiner	529	564	601	643	687	732
Yoakum*	670	703	736	770	805	842
County-Other	1,424	1,517	1,614	1,723	1,836	1,950
Manufacturing	528	548	568	589	611	634
Mining	2,665	2,665	2,665	2,665	2,665	0
Livestock	3,484	3,484	3,484	3,484	3,484	3,484
Irrigation	8,692	8,692	8,692	8,692	8,692	8,692

*A single asterisk next to a WUG's name denotes that the WUG is split by more than one planning region.

DRAFT Region P Water User Group (WUG) Demand

	WUG Demand (acre-feet per year)					
	2030	2040	2050	2060	2070	2080
Lavaca County / Lavaca-Guadalupe Basin Total	41	41	41	41	41	41
County-Other	1	1	1	1	1	1
Livestock	40	40	40	40	40	40
Wharton County Total	93,420	93,439	93,440	93,438	93,436	93,435
Wharton County / Colorado Basin Total	391	394	393	391	390	389
El Campo*	311	313	314	313	313	313
County-Other*	72	73	71	70	69	68
Livestock*	8	8	8	8	8	8
Wharton County / Colorado-Lavaca Basin Total	6,866	6,880	6,880	6,880	6,879	6,877
El Campo*	1,899	1,912	1,912	1,912	1,911	1,910
County-Other*	74	74	73	72	71	69
Manufacturing*	33	34	35	36	37	38
Livestock*	151	151	151	151	151	151
Irrigation*	4,709	4,709	4,709	4,709	4,709	4,709
Wharton County / Lavaca Basin Total	86,163	86,165	86,167	86,167	86,167	86,169
El Campo*	95	95	95	95	95	95
Wharton County WCID 1	121	122	129	134	139	145
County-Other*	294	295	290	285	280	276
Steam Electric Power*	1,572	1,572	1,572	1,572	1,572	1,572
Livestock*	344	344	344	344	344	344
Irrigation*	83,737	83,737	83,737	83,737	83,737	83,737
Region P Demand Total	209,290	210,748	211,120	211,505	211,905	209,653

*A single asterisk next to a WUG's name denotes that the WUG is split by more than one planning region.

DRAFT Region P Source Total Availability

				Source Availability (acre-feet per year)					
Source Name	County	Basin	Salinity*	2030	2040	2050	2060	2070	2080
Groundwater Source Availability Total				189,130	189,125	189,125	189,118	189,114	189,096
Carrizo-Wilcox Aquifer	Lavaca	Lavaca	Fresh	0	0	0	0	0	0
Gulf Coast Aquifer System	Jackson	Colorado-Lavaca	Fresh/Brackish	28,157	28,157	28,157	28,157	28,157	28,157
Gulf Coast Aquifer System	Jackson	Lavaca	Fresh/Brackish	49,484	49,484	49,484	49,484	49,484	49,484
Gulf Coast Aquifer System	Jackson	Lavaca-Guadalupe	Fresh	12,930	12,930	12,930	12,930	12,930	12,930
Gulf Coast Aquifer System	Lavaca	Guadalupe	Fresh	41	41	41	41	41	41
Gulf Coast Aquifer System	Lavaca	Lavaca	Fresh	19,942	19,937	19,937	19,930	19,926	19,908
Gulf Coast Aquifer System	Lavaca	Lavaca-Guadalupe	Fresh	401	401	401	401	401	401
Gulf Coast Aquifer System	Wharton	Colorado	Fresh	874	874	874	874	874	874
Gulf Coast Aquifer System	Wharton	Colorado-Lavaca	Fresh	14,100	14,100	14,100	14,100	14,100	14,100
Gulf Coast Aquifer System	Wharton	Lavaca	Fresh	63,193	63,193	63,193	63,193	63,193	63,193
Yegua-Jackson Aquifer	Lavaca	Lavaca	Fresh	8	8	8	8	8	8
Surface Water Source Availability Total				74,500	74,500	74,500	74,500	74,500	74,500
Texana Lake/Reservoir	Reservoir**	Lavaca	Fresh	74,500	74,500	74,500	74,500	74,500	74,500
Region P Source Availability Total				263,630	263,625	263,625	263,618	263,614	263,596

* Salinity field indicates whether the source availability is considered 'fresh' (less than 1,000 mg/L), 'brackish' (1,000 to 10,000 mg/L), 'saline' (10,001 mg/L to 34,999 mg/L), or 'seawater' (35,000 mg/L or greater). Sources can also be labeled as 'fresh/brackish' or 'brackish/saline', if a combination of the salinity types is appropriate.

** Since reservoir sources can exist across multiple counties, the county field value, 'reservoir' is applied to all reservoir sources.

DRAFT Region P Water User Group (WUG) Existing Water Supply

WUG Name	Source	Source Description	Existing Supply (acre-feet per year)					
	Region		2030	2040	2050	2060	2070	2080
Jackson County WUG Total			93,346	93,346	93,346	93,346	93,346	93,346
Jackson County / Colorado-Lavaca Basin WUG Total			29,725	29,725	29,725	29,725	29,725	29,725
Quadvest*	P	Gulf Coast Aquifer System Jackson County	31	31	31	31	31	31
County-Other	P	Gulf Coast Aquifer System Jackson County	342	342	342	342	342	342
Manufacturing	P	Gulf Coast Aquifer System Jackson County	169	169	169	169	169	169
Manufacturing	P	Texana Lake/Reservoir	4,879	4,879	4,879	4,879	4,879	4,879
Livestock	P	Gulf Coast Aquifer System Jackson County	470	470	470	470	470	470
Irrigation	P	Gulf Coast Aquifer System Jackson County	23,834	23,834	23,834	23,834	23,834	23,834
Jackson County / Lavaca Basin WUG Total			49,382	49,382	49,382	49,382	49,382	49,382
Edna	P	Gulf Coast Aquifer System Jackson County	1,089	1,089	1,089	1,089	1,089	1,089
Ganado	P	Gulf Coast Aquifer System Jackson County	204	204	204	204	204	204
County-Other	P	Gulf Coast Aquifer System Jackson County	655	655	655	655	655	655
Manufacturing	P	Gulf Coast Aquifer System Jackson County	115	115	115	115	115	115
Livestock	P	Gulf Coast Aquifer System Jackson County	693	693	693	693	693	693
Irrigation	P	Gulf Coast Aquifer System Jackson County	46,626	46,626	46,626	46,626	46,626	46,626
Jackson County / Lavaca-Guadalupe Basin WUG Total			14,239	14,239	14,239	14,239	14,239	14,239
County-Other	P	Gulf Coast Aquifer System Jackson County	80	80	80	80	80	80
Manufacturing	P	Gulf Coast Aquifer System Jackson County	360	360	360	360	360	360
Manufacturing	P	Texana Lake/Reservoir	6,553	6,553	6,553	6,553	6,553	6,553
Livestock	P	Gulf Coast Aquifer System Jackson County	208	208	208	208	208	208
Irrigation	P	Gulf Coast Aquifer System Jackson County	7,038	7,038	7,038	7,038	7,038	7,038

*A single asterisk next to a WUG's name denotes that the WUG is split by two or more planning regions.

DRAFT Region P Water User Group (WUG) Existing Water Supply

WUG Name	Source	Source Description	Existing Supply (acre-feet per year)					
	Region		2030	2040	2050	2060	2070	2080
Lavaca County WUG Total			19,685	19,685	19,685	19,685	19,685	19,685
Lavaca County / Guadalupe Basin WUG Total			30	30	30	30	30	30
County-Other	P	Gulf Coast Aquifer System Lavaca County	9	9	9	9	9	9
Livestock	P	Gulf Coast Aquifer System Lavaca County	21	21	21	21	21	21
Lavaca County / Lavaca Basin WUG Total			19,614	19,614	19,614	19,614	19,614	19,614
Hallettsville	P	Gulf Coast Aquifer System Lavaca County	959	959	959	959	959	959
Moulton	P	Gulf Coast Aquifer System Lavaca County	156	156	156	156	156	156
Shiner	P	Gulf Coast Aquifer System Lavaca County	732	732	732	732	732	732
Yoakum*	P	Gulf Coast Aquifer System Lavaca County	842	842	842	842	842	842
County-Other	P	Gulf Coast Aquifer System Lavaca County	1,950	1,950	1,950	1,950	1,950	1,950
Manufacturing	P	Gulf Coast Aquifer System Lavaca County	634	634	634	634	634	634
Mining	P	Gulf Coast Aquifer System Lavaca County	2,665	2,665	2,665	2,665	2,665	2,665
Livestock	P	Gulf Coast Aquifer System Lavaca County	3,484	3,484	3,484	3,484	3,484	3,484
Irrigation	P	Gulf Coast Aquifer System Lavaca County	8,192	8,192	8,192	8,192	8,192	8,192
Lavaca County / Lavaca-Guadalupe Basin WUG Total			41	41	41	41	41	41
County-Other	P	Gulf Coast Aquifer System Lavaca County	1	1	1	1	1	1
Livestock	P	Gulf Coast Aquifer System Lavaca County	40	40	40	40	40	40
Wharton County WUG Total			85,751	85,751	85,751	85,751	85,751	85,751
Wharton County / Colorado Basin WUG Total			395	395	395	395	395	395
El Campo*	P	Gulf Coast Aquifer System Wharton County	314	314	314	314	314	314
County-Other*	P	Gulf Coast Aquifer System Wharton County	73	73	73	73	73	73

*A single asterisk next to a WUG's name denotes that the WUG is split by two or more planning regions.

DRAFT Region P Water User Group (WUG) Existing Water Supply

WUG Name	Source Region	Source Description	Existing Supply (acre-feet per year)					
			2030	2040	2050	2060	2070	2080
Livestock*	P	Gulf Coast Aquifer System Wharton County	8	8	8	8	8	8
Wharton County / Colorado-Lavaca Basin WUG Total			6,884	6,884	6,884	6,884	6,884	6,884
El Campo*	P	Gulf Coast Aquifer System Wharton County	1,912	1,912	1,912	1,912	1,912	1,912
County-Other*	P	Gulf Coast Aquifer System Wharton County	74	74	74	74	74	74
Manufacturing*	P	Gulf Coast Aquifer System Wharton County	38	38	38	38	38	38
Livestock*	P	Gulf Coast Aquifer System Wharton County	151	151	151	151	151	151
Irrigation*	P	Gulf Coast Aquifer System Wharton County	4,709	4,709	4,709	4,709	4,709	4,709
Wharton County / Lavaca Basin WUG Total			78,472	78,472	78,472	78,472	78,472	78,472
El Campo*	P	Gulf Coast Aquifer System Wharton County	95	95	95	95	95	95
Wharton County WCID 1	P	Gulf Coast Aquifer System Wharton County	145	145	145	145	145	145
County-Other*	P	Gulf Coast Aquifer System Wharton County	295	295	295	295	295	295
Steam Electric Power*	P	Gulf Coast Aquifer System Wharton County	1,572	1,572	1,572	1,572	1,572	1,572
Livestock*	P	Gulf Coast Aquifer System Wharton County	344	344	344	344	344	344
Irrigation*	K	Colorado Run-of-River	16,000	16,000	16,000	16,000	16,000	16,000
Irrigation*	P	Gulf Coast Aquifer System Wharton County	60,021	60,021	60,021	60,021	60,021	60,021
Region P WUG Existing Water Supply Total			198,782	198,782	198,782	198,782	198,782	198,782

*A single asterisk next to a WUG's name denotes that the WUG is split by two or more planning regions.

DRAFT Region P Water User Group (WUG) Needs or Surplus

WUG supplies and projected demands are entered for each of a WUG's region-county-basin divisions. The needs shown in the WUG Needs/Surplus report are calculated by first deducting the WUG split's projected demand from its total existing water supply volume. If the WUG split has a greater existing supply volume than projected demand in any given decade, this amount is considered a surplus volume. Surplus volumes are shown as positive values, and needs are shown as negative values in parentheses.

			Water Supply Needs or Surplus (acre-feet per year)					
WUG Name	County	Basin	2030	2040	2050	2060	2070	2080
Quadvest*	Jackson	Colorado-Lavaca	19	15	12	8	4	0
County-Other	Jackson	Colorado-Lavaca	84	66	48	33	16	0
Manufacturing	Jackson	Colorado-Lavaca	(3,679)	(4,313)	(4,334)	(4,355)	(4,377)	(4,401)
Livestock	Jackson	Colorado-Lavaca	0	0	0	0	0	0
Irrigation	Jackson	Colorado-Lavaca	0	0	0	0	0	0
Edna	Jackson	Lavaca	223	172	125	85	43	0
Ganado	Jackson	Lavaca	0	5	5	10	15	20
County-Other	Jackson	Lavaca	163	126	94	64	33	0
Manufacturing	Jackson	Lavaca	9	1	1	0	0	0
Livestock	Jackson	Lavaca	0	0	0	0	0	0
Irrigation	Jackson	Lavaca	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)
County-Other	Jackson	Lavaca-Guadalupe	20	16	12	8	4	0
Manufacturing	Jackson	Lavaca-Guadalupe	528	63	48	33	16	0
Livestock	Jackson	Lavaca-Guadalupe	0	0	0	0	0	0
Irrigation	Jackson	Lavaca-Guadalupe	0	0	0	0	0	0
County-Other	Lavaca	Guadalupe	3	2	2	1	1	0
Livestock	Lavaca	Guadalupe	0	0	0	0	0	0
Hallettsville	Lavaca	Lavaca	284	236	186	126	64	0
Moulton	Lavaca	Lavaca	0	7	13	18	24	29
Shiner	Lavaca	Lavaca	203	168	131	89	45	0
Yoakum*	Lavaca	Lavaca	172	139	106	72	37	0
County-Other	Lavaca	Lavaca	526	433	336	227	114	0
Manufacturing	Lavaca	Lavaca	106	86	66	45	23	0
Mining	Lavaca	Lavaca	0	0	0	0	0	2,665
Livestock	Lavaca	Lavaca	0	0	0	0	0	0
Irrigation	Lavaca	Lavaca	(500)	(500)	(500)	(500)	(500)	(500)

*A single asterisk next to a WUG's name denotes that the WUG is split by two or more planning regions.

DRAFT Region P Water User Group (WUG) Needs or Surplus

			Water Supply Needs or Surplus (acre-feet per year)					
WUG Name	County	Basin	2030	2040	2050	2060	2070	2080
County-Other	Lavaca	Lavaca-Guadalupe	0	0	0	0	0	0
Livestock	Lavaca	Lavaca-Guadalupe	0	0	0	0	0	0
El Campo*	Wharton	Colorado	3	1	0	1	1	1
County-Other*	Wharton	Colorado	1	0	2	3	4	5
Livestock*	Wharton	Colorado	0	0	0	0	0	0
El Campo*	Wharton	Colorado-Lavaca	13	0	0	0	1	2
County-Other*	Wharton	Colorado-Lavaca	0	0	1	2	3	5
Manufacturing*	Wharton	Colorado-Lavaca	5	4	3	2	1	0
Livestock*	Wharton	Colorado-Lavaca	0	0	0	0	0	0
Irrigation*	Wharton	Colorado-Lavaca	0	0	0	0	0	0
El Campo*	Wharton	Lavaca	0	0	0	0	0	0
Wharton County WCID 1	Wharton	Lavaca	24	23	16	11	6	0
County-Other*	Wharton	Lavaca	1	0	5	10	15	19
Steam Electric Power*	Wharton	Lavaca	0	0	0	0	0	0
Livestock*	Wharton	Lavaca	0	0	0	0	0	0
Irrigation*	Wharton	Lavaca	(7,716)	(7,716)	(7,716)	(7,716)	(7,716)	(7,716)

*A single asterisk next to a WUG's name denotes that the WUG is split by two or more planning regions.

DRAFT Region P 2026 Regional Water Plan (RWP)
Water User Group (WUG) Data Comparison to 2021 RWP
 Water Volumes Shown in Acre-Feet per year

	2030 Planning Decade*			2070 Planning Decade*		
	2021 RWP	2026 RWP	Difference (%)	2021 RWP	2026 RWP	Difference (%)
Jackson County Municipal WUG Type						
Existing WUG supply total	2,625	2,401	-8.5%	2,625	2,401	-8.5%
Projected demand total	1,819	1,892	4.0%	1,797	2,286	27.2%
Water supply needs total**	0	0	0.0%	0	0	0.0%
Jackson County Manufacturing WUG Type						
Existing WUG supply total	11,005	12,076	9.7%	11,005	12,076	9.7%
Projected demand total	11,005	15,218	38.3%	11,005	16,437	49.4%
Water supply needs total**	0	3,679	100.0%	0	4,377	100.0%
Jackson County Mining WUG Type						
Existing WUG supply total	73	0	-100.0%	73	0	-100.0%
Projected demand total	73	0	-100.0%	19	0	-100.0%
Water supply needs total**	0	0	0.0%	0	0	0.0%
Jackson County Livestock WUG Type						
Existing WUG supply total	1,882	1,371	-27.2%	1,882	1,371	-27.2%
Projected demand total	1,882	1,371	-27.2%	1,882	1,371	-27.2%
Water supply needs total**	0	0	0.0%	0	0	0.0%
Jackson County Irrigation WUG Type						
Existing WUG supply total	78,498	77,498	-1.3%	78,498	77,498	-1.3%
Projected demand total	78,498	78,498	0.0%	78,498	78,498	0.0%
Water supply needs total**	0	1,000	100.0%	0	1,000	100.0%
Lavaca County Municipal WUG Type						
Existing WUG supply total	4,197	4,649	10.8%	4,197	4,649	10.8%
Projected demand total	3,136	3,461	10.4%	3,014	4,364	44.8%
Water supply needs total**	0	0	0.0%	0	0	0.0%
Lavaca County Manufacturing WUG Type						
Existing WUG supply total	625	634	1.4%	625	634	1.4%

*The 2030 and 2070 planning decades are used in this comparison because they represent the earliest and latest planning decades in both the 2021 and 2026 RWPs

**WUG supplies and projected demands are entered for each of a WUG's region-county-basin divisions. The needs shown in the WUG Data Comparison to 2021 RWP report are calculated by first deducting the WUG split's projected demand from its total existing water supply volume. If the WUG split has a greater existing supply volume than projected demand in any given decade, this amount is considered a surplus volume. Before aggregating the difference between supplies and demands to the WUG county and category level, calculated surpluses are updated to zero so that only the WUGs with needs in the decade are included with the water supply needs totals.

DRAFT Region P 2026 Regional Water Plan (RWP)
Water User Group (WUG) Data Comparison to 2021 RWP
 Water Volumes Shown in Acre-Feet per year

	2030 Planning Decade*			2070 Planning Decade*		
	2021 RWP	2026 RWP	Difference (%)	2021 RWP	2026 RWP	Difference (%)
Projected demand total	625	528	-15.5%	625	611	-2.2%
Water supply needs total**	0	0	0.0%	0	0	0.0%
Lavaca County Mining WUG Type						
Existing WUG supply total	2,544	2,665	4.8%	2,544	2,665	4.8%
Projected demand total	1,860	2,665	43.3%	297	2,665	797.3%
Water supply needs total**	0	0	0.0%	0	0	0.0%
Lavaca County Livestock WUG Type						
Existing WUG supply total	3,763	3,545	-5.8%	3,763	3,545	-5.8%
Projected demand total	3,763	3,545	-5.8%	3,763	3,545	-5.8%
Water supply needs total**	0	0	0.0%	0	0	0.0%
Lavaca County Irrigation WUG Type						
Existing WUG supply total	8,692	8,192	-5.8%	8,692	8,192	-5.8%
Projected demand total	8,692	8,692	0.0%	8,692	8,692	0.0%
Water supply needs total**	0	500	100.0%	0	500	100.0%
Wharton County Municipal WUG Type						
Existing WUG supply total	3,363	2,908	-13.5%	3,363	2,908	-13.5%
Projected demand total	3,015	2,866	-4.9%	3,363	2,878	-14.4%
Water supply needs total**	0	0	0.0%	0	0	0.0%
Wharton County Manufacturing WUG Type						
Existing WUG supply total	34	38	11.8%	34	38	11.8%
Projected demand total	34	33	-2.9%	34	37	8.8%
Water supply needs total**	0	0	0.0%	0	0	0.0%
Wharton County Mining WUG Type						
Existing WUG supply total	19	0	-100.0%	19	0	-100.0%
Projected demand total	19	0	-100.0%	4	0	-100.0%
Water supply needs total**	0	0	0.0%	0	0	0.0%

*The 2030 and 2070 planning decades are used in this comparison because they represent the earliest and latest planning decades in both the 2021 and 2026 RWPs

**WUG supplies and projected demands are entered for each of a WUG's region-county-basin divisions. The needs shown in the WUG Data Comparison to 2021 RWP report are calculated by first deducting the WUG split's projected demand from its total existing water supply volume. If the WUG split has a greater existing supply volume than projected demand in any given decade, this amount is considered a surplus volume. Before aggregating the difference between supplies and demands to the WUG county and category level, calculated surpluses are updated to zero so that only the WUGs with needs in the decade are included with the water supply needs totals.

DRAFT Region P 2026 Regional Water Plan (RWP)
Water User Group (WUG) Data Comparison to 2021 RWP
 Water Volumes Shown in Acre-Feet per year

	2030 Planning Decade*			2070 Planning Decade*		
	2021 RWP	2026 RWP	Difference (%)	2021 RWP	2026 RWP	Difference (%)
Wharton County Steam Electric Power WUG Type						
Existing WUG supply total	2,060	1,572	-23.7%	2,060	1,572	-23.7%
Projected demand total	2,060	1,572	-23.7%	2,060	1,572	-23.7%
Water supply needs total**	0	0	0.0%	0	0	0.0%
Wharton County Livestock WUG Type						
Existing WUG supply total	834	503	-39.7%	834	503	-39.7%
Projected demand total	834	503	-39.7%	834	503	-39.7%
Water supply needs total**	0	0	0.0%	0	0	0.0%
Wharton County Irrigation WUG Type						
Existing WUG supply total	80,379	80,730	0.4%	80,379	80,730	0.4%
Projected demand total	88,446	88,446	0.0%	88,446	88,446	0.0%
Water supply needs total**	8,067	7,716	-4.4%	8,067	7,716	-4.4%
Region P Total						
Existing WUG supply total	200,593	198,782	-0.9%	200,593	198,782	-0.9%
Projected demand total	205,761	209,290	1.7%	204,333	211,905	3.7%
Water supply needs total**	8,067	12,895	59.8%	8,067	13,593	68.5%

*The 2030 and 2070 planning decades are used in this comparison because they represent the earliest and latest planning decades in both the 2021 and 2026 RWPs

**WUG supplies and projected demands are entered for each of a WUG's region-county-basin divisions. The needs shown in the WUG Data Comparison to 2021 RWP report are calculated by first deducting the WUG split's projected demand from its total existing water supply volume. If the WUG split has a greater existing supply volume than projected demand in any given decade, this amount is considered a surplus volume. Before aggregating the difference between supplies and demands to the WUG county and category level, calculated surpluses are updated to zero so that only the WUGs with needs in the decade are included with the water supply needs totals.

DRAFT Region P 2026 Regional Water Plan (RWP)
Source Availability Comparison to 2021 RWP
 Water Volumes Shown in Acre-Feet per year

	2030 Planning Decade*			2070 Planning Decade*		
	2021 RWP	2026 RWP	Difference (%)	2021 RWP	2026 RWP	Difference (%)
Jackson County						
Groundwater availability total	90,482	90,571	0.1%	90,482	90,571	0.1%
Lavaca County						
Groundwater availability total	20,253	20,392	0.7%	20,253	20,376	0.6%
Reservoir** County						
Surface Water availability total	74,500	74,500	0.0%	74,500	74,500	0.0%
Wharton County						
Groundwater availability total	77,956	78,167	0.3%	77,956	78,167	0.3%
Region P Total						
Groundwater availability total	188,691	189,130	0.2%	188,691	189,114	0.2%
Surface Water availability total	74,500	74,500	0.0%	74,500	74,500	0.0%

*The 2030 and 2070 planning decades are used in this comparison because they represent the earliest and latest planning decades in both the 2021 and 2026 RWPs.

**Since reservoir sources can exist across multiple counties, the county field value, 'reservoir' is applied to all reservoir sources.

Appendix B Model Input/Output Files (Electronic)

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Appendix C Potentially Feasible Water Management Strategies Identified to Meet Needs

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Appendix C: Potentially Feasible Water Management Strategies Considered

Every WUG Entity with an Identified Need		WMSs to be considered by statute ¹												Additional WMSs to be considered by rule								
WUG Name	Maximum need 2030-2080 (af/yr)	conservation - water use reduction	conservation - water loss mitigation	drought management	reuse	management of existing supplies	development of large-scale marine seawater or brackish groundwater	conjunctive use	acquisition of available existing supplies	development of new supplies	development of regional water supply or regional management of water supply facilities	voluntary transfer of water (including regional water banks, sales, leases, options, subordination agreements, and financing agreements)	emergency transfer of water under Section 11.139	system optimization, reallocation of reservoir storage to new uses, contracts, water marketing, enhancement of yield, improvement of water quality	new surface water supply	new groundwater supply	brush management; precipitation enhancement	interbasin transfers of surface water	aquifer storage and recovery	cancellation of water rights	rainwater harvesting	other
Irrigation, Jackson County	1,000	PF	PF	nPF	PF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
Irrigation, Lavaca County	500	PF	PF	nPF	PF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
Irrigation, Wharton County	7,716	PF	PF	nPF	PF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
Manufacturing, Jackson County	4,401	PF	PF	nPF	nPF	nPF	PF	nPF	nPF	PF	nPF	nPF	nPF	PF	nPF	PF	nPF	PF	PF	nPF	nPF	

¹ Texas Water Code §16.053(e)(5)

nPF = considered but determined 'not potentially feasible' (may include WMSs that were initially identified as potentially feasible)

PF = considered 'potentially feasible' and therefore evaluated

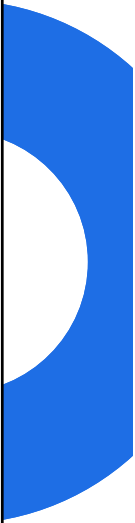
(all pertinent information for WMS evaluations must be presented in the regional water plan, including for WMSs considered potentially feasible but not recommended)

DRAFT

HANDOUT C

Strategy Type(s)													ASR	Conservation/Drought Management	Groundwater Desal	Groundwater Dylp	Reuse	New Major Reservoir	Other Surface Water	Seawater Desal	Conjunctive Use	Other WMS (Subordination, etc)	Region	Overall TWDB Task Number	SubTask WMS evaluation number	SubTask WMS	SubTask Scope of Work Write-up	Deliverable	SubTask Budget (\$)	WUG(s) &/OR WWP Entities Potentially Served by WMS(s)	Addressing a changed condition from previous cycle? If yes, describe the changed condition.	When was this WMS identified by RWPG as potentially feasible?	Was the WMS evaluated in any previous Regional Water Planning Cycles?	Is evaluation a limited update to previous technical evaluation information? If no, indicate specific update in subtask sow column E
														X									P	5B	1	Update to Drought Management	Drought management strategy evaluations will be updated based on existing drought contingency plans. Re-assessments of whether drought management is an appropriate strategy for a particular WUG will be performed, based on the conditions under which the base GPCD demand numbers were determined. Drought Management will be evaluated for all municipal WUGs (except County-Other), Irrigation in Counties with Needs, and Manufacturing in Jackson County.	Updated WMS documentation will include discussion of strategy, firm DOR demand reduction yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB27 interface.	\$7,848	All municipal WUGs except County-Other, Irrigation in Wharton County, and Manufacturing in Jackson County; others as needed	Yes, new municipal WUG and potential updated Drought Contingency Plans	February 5, 2024 Region P meeting	Yes, recommended in 2021 Plan	Yes
														X									P	5B	2	Update Multiple Advanced Water Conservation Strategies	Update the Municipal, Irrigation, and Manufacturing water use categories basic and advanced water conservation WMSs using the applicable subset from the general procedures and Best Management Practices (BMPs) starting with the 2021 Region P recommended WMSs and accounting for more current estimates of municipal per capita use, irrigation application rates, and BMP implementation costs, etc. As is required, these RWPG recommendations shall be assumed to be the “highest practicable level” of conservation for WUGs that are dependent upon WMSs involving an interbasin transfer(s). Each WMSP with a capital cost will be presented separately in the 2026 Plan and DB27.	Updated WMS documentation will include discussion of strategy, firm DOR demand reduction yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB27 interface. WSMP locations will be approximated using GIS.	\$23,544	Municipal, Irrigation, and Manufacturing WUGs	Yes, new municipal WUG and new Irrigation and Manufacturing Needs	February 5, 2024 Region P meeting	Yes, recommended in 2021 Plan	No
																X							P	5B	3	Expand Use of Groundwater	Strategy will evaluate whether additional groundwater is available to meet water needs for entities currently using groundwater and for those WUGs identifying that they plan to use more groundwater. MAG values will be considered and correlated with identified WUG needs. This strategy will likely evaluate the groundwater available in the Gulf Coast Aquifer System only.	New or updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB27 interface. WSMP locations will be approximated using GIS.	\$13,734	WUGs that are currently served by groundwater and looking to expand the amount of groundwater they use from a specific source.	Yes, MAG volume changes and WUGs requesting this strategy for this cycle	February 5, 2024 Region P meeting	Yes, alternative WMS in 2021 Plan	No
																		X					P	5B	4	Lake Texana Yield Enhancement Project	Update previously recommended phases of the Lavaca Off-Channel Reservoir strategy. Updates include WAM analysis, cost estimates, and yield allocations.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB27 interface. WSMP locations will be approximated using GIS.	\$17,658	LNRA and their existing/future customers	Yes, new TCEQ WAM	February 5, 2024 Region P meeting	Yes, recommended in 2021 Plan	Yes
																					X		P	5B	5	Update to LNRA Desalination	Update previously recommended phases of the LNRA Desalination strategy that considered both brackish groundwater and brackish surface water. Updates include WAM and groundwater analysis, cost estimates, and yield allocations.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB27 interface. WSMP locations will be approximated using GIS.	\$15,696	LNRA and their existing/future customers	Yes, new TCEQ WAM	February 5, 2024 Region P meeting	Yes, recommended in 2021 Plan	Yes
														X									P	5B	6	Update to LNRA Aquifer Storage and Recovery	Update previously recommended LNRA Aquifer Storage and Recovery strategy. Updates include WAM analysis, cost estimates, and yield allocations.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB27 interface. WSMP locations will be approximated using GIS.	\$13,734	LNRA and their existing/future customers	Yes, new TCEQ WAM	February 5, 2024 Region P meeting	Yes, alternative WMS in 2021 Plan	Yes

Strategy Type(s)													ASR	Conservation/Drought Management	Groundwater Desal	Groundwater Dd/p	Reuse	New Major Reservoir	Other Surface Water	Seawater Desal	Conjunctive Use	Other WMS (Subordination, etc)	Region	Overall TWDB Task Number	SubTask WMS evaluation number	SubTask WMS	SubTask Scope of Work Write-up	Deliverable	SubTask Budget (\$)	WUG(s) &/OR WWP Entities Potentially Served by WMS(s)	Addressing a changed condition from previous cycle? If yes, describe the changed condition.	When was this WMS identified by RWPG as potentially feasible?	Was the WMS evaluated in any previous Regional Water Planning Cycles?	Is evaluation a limited update to previous technical evaluation information? If no, indicate specific update in subtask sow column E
					X										P	5B	7	Reuse	Update previously recommended El Campo Reuse strategy, and potentially evaluate reuse strategies for other entities requesting it. Updates include cost estimates and yield allocations. Full evaluations needed for any new strategies.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB27 interface. WSMP locations will be approximated using GIS.	\$9,810	El Campo and their existing/future customers; potential other WUGs or WWPs	No	February 5, 2024 Region P meeting	Yes, recommended in 2021 Plan	Yes								
													X		P	5B	8	Lake Texana Dredging	Update strategy to evaluate the impacts of dredging Lake Texana. Coordinate with LNRA, the GLO, and their consultants, as needed, to determine current plans regarding this WMS. Prepare technical evaluation using latest bathymetric survey data with identification of sediment removal options and environmental and recreational impacts.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB27 interface. WSMP locations will be approximated using GIS.	\$11,774	LNRA and their existing/future customers	Yes, new sedimentation survey available, and new GLO study being performed	February 5, 2024 Region P meeting	Yes, alternative WMS in 2021 Plan	Yes								
																		REGION-SPECIFIC SUBTASKS TOTAL BUDGET		\$113,798														



Lavaca Regional Water Planning Group


Regular Planning Group Meeting

February 5, 2024

Jaime Burke, Black & Veatch





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Agenda Items

1. Open meeting
2. Public comments
3. Consider approval of minutes
4. Consider nomination of new voting members
5. TWDB update
6. Receive reports from regional liaisons and Interregional Planning Council reps
7. Receive briefing and update from Black & Veatch (technical consultant)
8. Consideration and approval regarding the 2026 Regional Water Planning Technical Memorandum
9. Consideration and approval regarding Task 5B Scope of Work
10. Schedule
11. Public comments
12. Adjourn



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Agenda Item #7

Briefing and Update from Black & Veatch

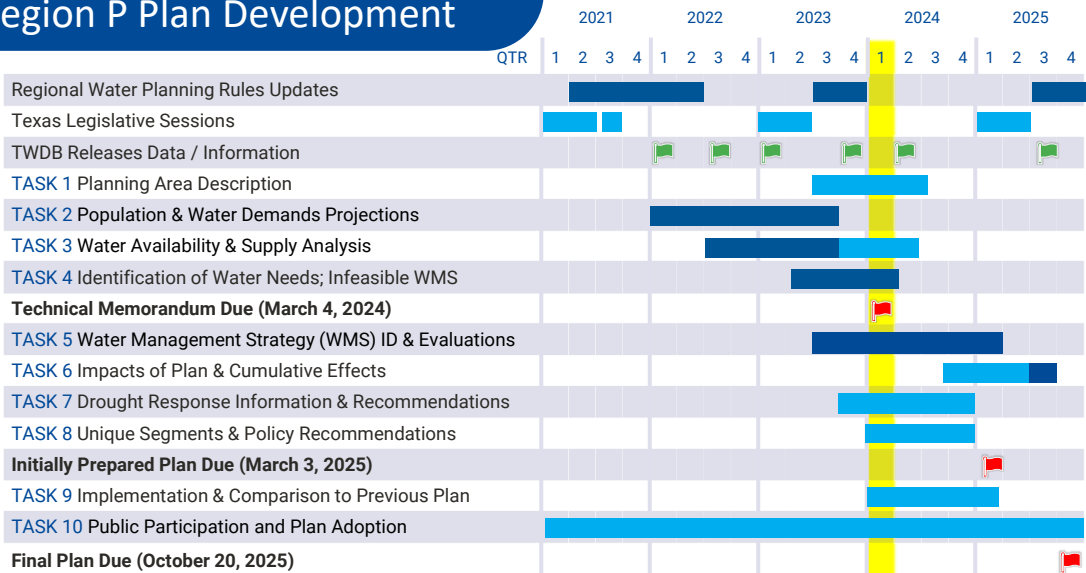
Schedule and Progress Update



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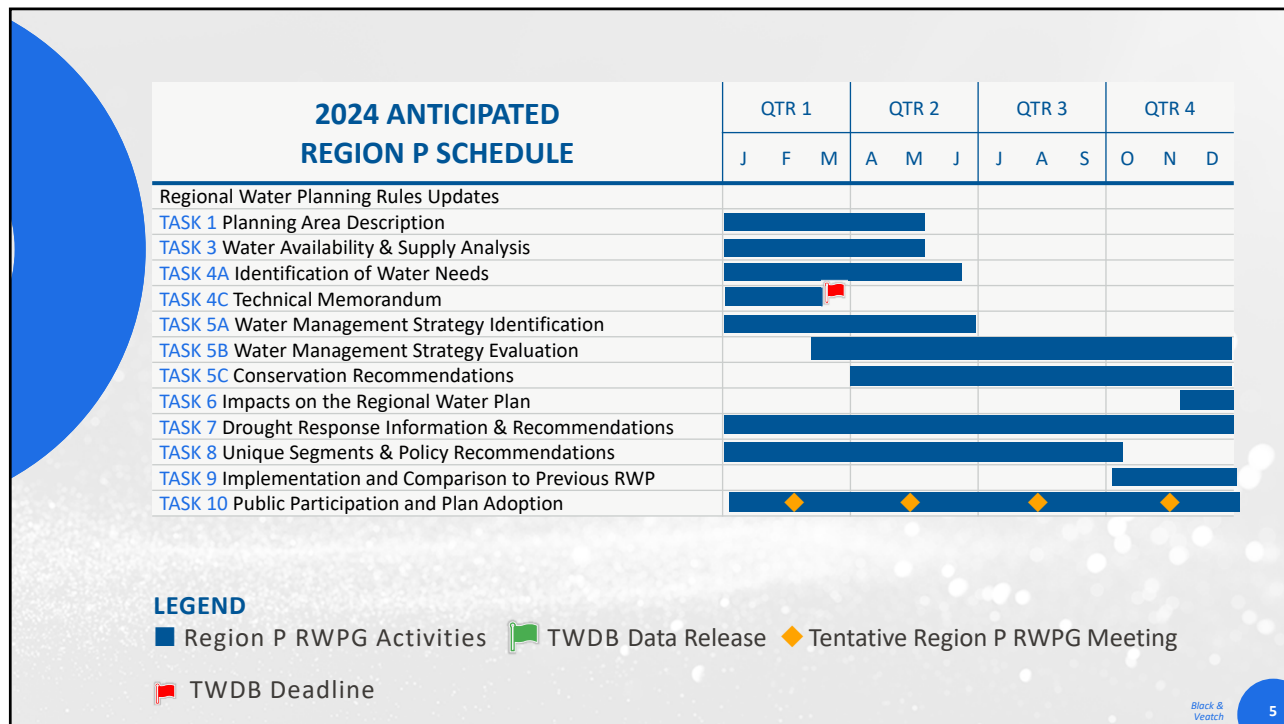
Conceptual Schedule for Region P Plan Development



■ TWDB Conceptual Schedule ■ B&V Planned Schedule ■ TWDB Data Release ■ TWDB Deadline

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Progress Since Last Meeting

- Chapter 1 review of needed updates (planning area description)
- Continued reaching out to utilities and water providers regarding water supplies and water management strategies.
- Updated water supplies in spreadsheets and DB27.
- Prepared draft Technical Memorandum.
- Developed draft Scope of Work for Task 5B – Evaluating Water Management Strategies.

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New or Ongoing Efforts

- New: Begin Drought Contingency Plan (DCP) Outreach and Evaluations for Task 7
 - Background:
 - Certain entities must prepare DCPs and submit to TCEQ and RWPGs.
 - DCPs updated every five years
 - Due to TCEQ by May 1, 2024
 - Planning Group Responsibilities, for all eligible WUGs:
 - Gather and request DCPs
 - Review DCPs and describe Drought Management Measures (defined as demand management activities to be implemented during drought that may be evaluated and included as Water Management Strategies)

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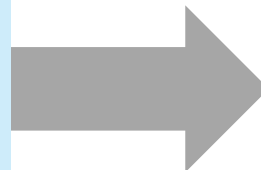
7

Existing Water Supplies: Methodology


[See Handout A](#)

Data Sources

- 2021 Region P Water Plan
- Supplies & Strategies Survey responses from WUGs and WWPs
- TCEQ Drinking Water Watch (DWW)
- TWDB Historical Groundwater Pumping Data
- TWDB Historical Industrial Water Use Data
- TWDB Supporting Data for Non-Municipal Demand Projections
- MAG limits



**Compile and
Update Data
for Entry in
DB27**

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Agenda Item #8

Consideration and approval regarding the 2026 Regional Water Planning Technical Memorandum

Task 4C: Technical Memorandum Deliverable

Task Objective:

Develop a mid-cycle deliverable for the 2026 Regional Water Plan (RWP) with a snapshot of March 2024 data.

The data within the Technical Memorandum (Tech Memo) remains in draft form until the submittal of Adopted Regional Water Plans by the Regional Water Planning Groups in October 2025.

Due to TWDB on March 4, 2024

Task 4C: Technical Memorandum Deliverable



See Handout B
for Tech Memo

Tech Memo Section	Required Contents (per 31 TAC §357.12)	Presented to RWPG	Date Presented to RWPG
3.0	Population and Water Demand projections adopted by Board	<input checked="" type="checkbox"/>	Various
3.0 & 4.0	Updated Source Water Availability , as entered into 2027 State Water Planning Database (DB27)	<input checked="" type="checkbox"/>	Various
3.0	Updated Existing Water Supplies , as entered into DB27	<input type="checkbox"/>	Today
3.0	Identified Water Needs and Surpluses	<input type="checkbox"/>	Today
5.0	List of infeasible WMSs and water management strategy projects (WMSPs) or a statement that no infeasible WMSs or WMSPs were identified by the RWPG	<input checked="" type="checkbox"/>	10/23/23
6.0	Region P's documented process to identify potentially feasible WMSs	<input checked="" type="checkbox"/>	10/23/23
7.0	List of potentially feasible WMSs identified to date	<input type="checkbox"/>	Today
8.0	Summary of interregional coordination efforts to date	<input checked="" type="checkbox"/>	Various

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Population and Water Demand Projections



See Handout B,
Appendix A

- Presented to RWPG on December 5, 2022; March 6, 2023; May 15, 2023; and July 24, 2023
- Adopted by TWDB on November 9, 2023
- Included in Section 3.0 and Appendix A

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Source Water Availability



See Handout B,
Section 4.0 and
Appendix A

- Surface Water Availability
 - Texas Commission on Environmental Quality (TCEQ) Lavaca River Basin WAM Run 3 (unmodified) used to determine firm yield of Lake Texana.
 - Lake Texana firm yield is 74,500 AFY for 2030-2080
- Groundwater
 - Modeled Available Groundwater (MAG) volumes used for all groundwater sources.

Ground Water Source	RWPG	County	Basin	2026 Plan	
				2030 MAG (AFY)	2080 MAG (AFY)
GULF COAST AQUIFER	P	JACKSON	COLORADO-LAVACA	28,157	28,157
GULF COAST AQUIFER	P	JACKSON	LAVACA	49,484	49,484
GULF COAST AQUIFER	P	JACKSON	LAVACA-GUADALUPE	12,930	12,930
Jackson County Total				90,571	90,571
GULF COAST AQUIFER	P	LAVACA	GUADALUPE	41	41
GULF COAST AQUIFER	P	LAVACA	LAVACA	19,942	19,942
GULF COAST AQUIFER	P	LAVACA	LAVACA-GUADALUPE	401	401
Lavaca County Total				20,384	20,384
GULF COAST AQUIFER	P	WHARTON	COLORADO	874	874
GULF COAST AQUIFER	P	WHARTON	COLORADO-LAVACA	14,100	14,100
GULF COAST AQUIFER	P	WHARTON	LAVACA	63,193	63,193
Wharton County (P) Total				78,167	78,167

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Existing Water Supplies



See Handout B,
Appendix A

- Existing water supplies entered into DB27 by Region, County, and Basin
- Coordinated with Region K regarding shared WUGs in Wharton County

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Identified Water Needs



See Handout B,
Appendix A

- Technical Memorandum includes:
 - WUGs with Needs and their decadal volumes included in a DB27 report in Section 3.0 and Appendix A
 - Table of Potentially Feasible WMSs for WUGs with Identified Needs is included in Appendix C.
 - Identified WUGs with Needs for 2026 Plan:
 - Irrigation, Jackson County – 1,000 AFY
 - Irrigation, Lavaca County – 500 AFY
 - Irrigation, Wharton County – 7,716 AFY
 - Manufacturing, Jackson County – 4,401 AFY

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Infeasible WMSs from 2021 Plan



See Handout B,
Section 5.0

Evaluation and Results (Presented to RWPG on October 23, 2023)

- Evaluated WMSs and WMSPs for feasibility
- Held discussion with RWPG regarding project status.
- Established feasibility for all projects from the evaluation of the 2021 RWP

Statement in Tech Memo, Section 5.0

At the October 23, 2023, LRWPG meeting, after asking for public comments, the planning group approved that there were no infeasible water management strategies or water management strategy projects identified in the 2021 Lavaca Regional Water Plan.

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Documented Process for Identifying Potentially Feasible WMS



See Handout B,
Section 6.0

- RWPG approved process presented on October 23, 2023
- Included in Section 6.0

Potentially Feasible Water Management Strategies



See Handout B,
Section 7.0 and
Appendix C

- Included in Section 7.0 and Appendix C of Tech Memo
- Uses template provided by TWDB to identify categories of strategies that are potentially feasible for the various Water User Groups
- List based on strategies from 2021 Plan and feedback from WUGs and WWP's this cycle

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Interregional Coordination Efforts



See Handout B,
Section 8.0

- Presented updates in previous RWPG meetings
- Included in Section 8.0 of Tech Memo
- The following summarizes interregional coordination efforts to date.
 - Regular meetings with consultants in Regions K and L
 - Regular reports from interregional liaisons
 - Engagement and membership in the Interregional Planning Council
 - Engagement with Regional Water Planning Chairs' Meetings

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8.B.

Receive Public Comments on the Technical Memorandum

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8.C.

RWPG to Consider Public Comments and Take Action to Approve the Technical Memorandum

1. Approval and authorization to submit the technical memorandum to the TWDB
2. Authorization for Black & Veatch to address DB27 updates and non-substantive revisions to the technical memorandum
3. Authorization for Black & Veatch to address any requests from TWDB associated with processing the technical memorandum

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Agenda Item #9

Consideration and approval regarding Task 5B Scope of Work

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Draft Scope of Work for Task 5B


[See Handout C](#)

No.	WMS Name	Anticipated WMS Updates*
1	Drought Management	Add new municipal WUG; updated DCPs
2	Advanced Water Conservation	Add new municipal WUG; add new Irrigation and Manufacturing Needs
3	Expand Use of Groundwater	Change in MAG volumes; WUGs requesting this strategy
4	Lake Texana Yield Enhancement Project	New TCEQ WAM; implementation status updates
5	LNRA Desalination	Incorporate new TCEQ WAM
6	LNRA Aquifer Storage and Recovery	Incorporate new TCEQ WAM
7	Reuse	Update previous El Campo Reuse project and consider any additional WUGs requesting this strategy
8	Lake Texana Dredging	New sedimentation survey; new GLO study

* Full evaluation updates will be performed for all strategies, including costs, yields, environmental and ag impacts, among other criteria

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9.B, 9.C, and 9.D RWPG to Consider Action to Approve the Results

- B. Approval and authorization to submit the notice-to-proceed scope of work request to the TWDB
- C. Authorization for Black & Veatch and/or LNRA to work with the TWDB on any follow up information that might be required, and
- D. Authorization for LNRA to negotiate and execute the subsequent TWDB contract amendment that will be issued.

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Agenda Item #10

Discuss and Schedule Future Meeting Dates

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