NOTICE OF OPEN MEETING

REGIONAL WATER PLANNING GROUP-NETRWPG

Wednesday, March 15, 2023 – 10:00 A.M.

Region 8 Education Service Center 4845 US 271 N Pittsburg, TX 75686

In compliance with the Texas Open Meetings Act, Chapter 551, of the Texas Government Code, the Regional Water Planning Group D issues this public notice. On March 15, 2023, at 10:00 A.M., the North East Texas Regional Water Planning Group (NETRWPG) will meet in-person. The meeting will be held the Region 8 Education Service Center, 4845 US 271 N, Pittsburg, TX 75686. The NETRWPG will consider and act on the following items:

- 1. Recognitions. Roll call.
- 2. Public Comment/participation.
- 3. Review and approval of minutes for October 19, 2022 meeting.
- Reports from liaisons: TWDB Project Manager TWDB Planner; GMA #8 & #11; Region C & I.
- 5. Election of Officers for Regional Water Planning Group D, pursuant to Article VIII, Section 2 of the NETRWPG Bylaws, and Committee Appointments for the Executive Committee (Officers and Two Members At-Large) and Liaisons to regional water planning groups and groundwater management areas.
- 6. Report of Region D consultants. This agenda item includes a summary discussion on the draft projections of population and water demand for Region D, and a report on proposed revisions to the draft non-municipal water use projections for Region D.
- 7. Discussion and Action as appropriate: Review, discuss, and consider taking action to authorize the technical consultant to submit a technical memorandum, populate, and distribute to the TWDB recommended revisions to the draft non-municipal demands for Region D consistent with the information provided in this meeting, and approve for the consultant to work with the Chair and Administrator to submit further revisions and make responses to revision requests by TWDB by July 14, 2023.
- 8. Financial report by Administrator. Approval of invoices of consultant.
- 9. Further public comment/participation.
- 10. Adjourn.

Additional information may be obtained from the Administrative Agency for NETRWPG: Riverbend Water Resources District, 228 Texas Avenue, Suite A, New Boston, Texas 75570; Office Telephone: (903) 831-0091; Office Fax: (903) 831-0096; E-mail: <u>kyledooley@rwrd.org</u>; Website: <u>https://rwrd.org/region-d/</u>; Attn: Kyle Dooley, P.E., Executive Director

MEETING OF THE North East Texas Regional Water Planning Group WEDNESDAY, March 15, 2023

> Agenda Item 3 October 19, 2022 Meeting Minutes

Minutes of the North East Texas Regional Water Planning Group October 19, 2022 – 10:00 A.M.

The North East Texas Regional Water Planning Group (NETRWPG) – Region D met in an open meeting on Wednesday, October 19, 2022, at 10:00 A.M. The meeting was held at the Region 8 Education Service Center, 4845 US 271 N, Pittsburg, TX 75686. Notice of the meeting was legally posted.

Jim Thompson called the meeting to order at 10:00 A.M. and welcomed everyone. Introductions were made and a quorum was present. Twenty-one members of the planning group were present in person or represented by a designated alternate.

The following voting members were present:

Russell Acker	Allen Beeler	Brandon Belcher	John Brooks	
Joe Bumgarner	Andy Endsley	Nicolas Fierro	Richard Garza	
Cindy Gwinn	Billy Henson	Conrad King	Richard LeTourneau	
Janet McCoy	Fred Milton	Ned Muse	George Otstott	
Bob Tardiff	Jim Thompson			
The following altern	nates were present:			
James Brooks	Kevin Chumbley	David Nabors		
The following votin	ng members were abser	it:		
Joe Coats	Donnie Duffie	Rolin McPhee	Sharron Nabors	
Lloyd Parker	Harlton Taylor			

The public was provided an opportunity for comment prior to any action being taken by the planning group. There were no public comments at this time.

Jim Thompson provided that the positions open for reappointment are currently held by Conrad King, John Brooks, Joe Bumgarner, Nicolas Fierro, Cynthia Gwinn, Rolin McPhee, Lloyd Parker, and Richard LeTourneau. There were nine nominations for the eight open positions. They included all of the current voting members minus Rolin McPhee and adding Newman Browning, David Akin and Kevin Chumbley. After approval by the Executive Committee, the appointees are as follows: Conrad King, John Brooks, Joe Bumgarner, Nicolas Fierro, Cynthia Gwinn, Richard LeTourneau, Kevin Chumbley, and David Akin. Terms for each of these positions is for 3 years commencing on October 1, 2022. A motion was made by Bob Tardiff to accept the slate of appointees as presented. David Nabors seconded the motion. Motion carried, all voting aye.

David Nabors made a motion to approve the minutes from the June 29, 2022 meeting. Fred Milton seconded the motion. Motion carried, all voting aye.

Ron Ellis with the Texas Water Development Board (TWDB) provided an update. His presentation will update the Board on contract amendments. The contract will route through DocuSign through to Kyle Dooley as the representative for Region D soon. The changes will

include anticipated total project cost, full scope of work, and updated contract guidance documents (exhibits C and D). The first meeting of the Interregional Planning Council is scheduled for November 9, 2022 both in person in Austin, Texas and virtually. There has been a one-page document published related to water planning. This document covers water supply and flood mitigation strategies. It can be found here:

http://www.twdb.texas.gov/waterplanning/rwp/education/WaterSupply and FloodMitigation Projects.pdf The current project timelines were also presented. The timelines are tighter for this cycle due to the pandemic occurring during 2020 which was the census year. Once the draft numbers have been released, the Board will request revisions to that data. The revision requests need to be submitted by August 11, 2023. That leaves approximately a 6 month window to submit the draft population projections and draft municipal water demand projections. All data that has been released so far is on the interactive dashboard on the TWDB website. There are a few steps the Regional Planning Boards need to take to get these deadlines met. Boards should meet soon after the release of those projections and develop strategy for meeting the deadline. Regions are strongly encouraged to submit non-municipal revision requests before municipal data is released. Historical declines in population will be reflected in the draft population projections. Mr. Ellis reminded the board that planning groups must take official action to approve submitting revision requests. Planning groups are encouraged to coordinate with TWDB as early as possible on recommended revisions. Guidance for requesting revisions is lined out in Exhibit C of the contract amendments to be covered later in the presentation. Water Development Board staff is available for assistance any time. The process for data collection and revisions is: TWDB presents draft data, the planning group requests revisions, and then negotiations and discussions lead to final numbers to be presented to TWDB for adoption. One the data is adopted planning funds cannot be used to revise the projections. The contract between TWDB and Riverbend provides the funds from the State of Texas for each Region to complete the planning process. Documents related to the 6th cycle of regional water planning can be found at the link below. Documents included are Working Schedule, Draft Projections, Recommended Water Management Strategies, and Contract Documents.

https://www.twdb.texas.gov/waterplanning/rwp/planningdocu/2026/documents.asp

Exhibit C is the guidance document on how to put together the plan. In Section 2.3 of this exhibit, which addresses water availability and existing supplies, the new requirement is that the technical memorandum and Regional Water Plans (RWP) must include methodology for calculating anticipated sedimentation rate and revising the area-capacity rating curves. This change was addressed at the last meeting. Reuse availability will now be presented as a separate subsection in Chapter 3. Hydrologic variance requests for surface water must use template checklist. Task 4B in Exhibit C, Section 2.11 requires that there is identification of infeasible water management strategies (WMS) previously presented in the 2021 RWP. This board will need to look back at the last plan and determine if any of the strategies in the last plan are infeasible. At a minimum, the strategies slated for coming online in the 2020 decade need to be reviewed. The infeasibility of a water strategy is determined by action taken by the project sponsor to file permit applications or spend money on planning the project. Analysis must be completed prior to March 4, 2024. Results must be presented at a planning meeting. In addition, the methodology for identifying potentially infeasible WMSs in 2026 RWP must also be presented. If any WMS are identified as infeasible, this board will amend the Region D 2021 RWP to either remove those strategies or projects, revise them, or incorporate new WMS or WMSP. The strategies could be revised by changing its "online

decade," which means, changing the decade in which the project could be online. Removing a strategy could result in unmet regional water needs in the plan. Regional water planning groups must adopt amendments to the 2021 Region D RWP by June 4, 2024. Section 2.12.1 the technical memo now requires inclusion of a summary of region's interregional coordination efforts to date as well as a list of infeasible strategies resulting from the new task as presented in Task B. Section 2.5 regarding evaluation and recommendation of strategies and projects contains additional guidance to address requirements in HB 807(ASR assessments and GPCD goals). Planning groups for ASR if there are significant needs the planning group needs to consider ASR. Planning groups also need to identify GPCD goals for municipal WUGs. Conservation WMSs required to be split out for water loss mitigation vs water use reduction. New subsection documenting implementation status of certain WMS types. Section 2.7 contains new guidance related to HB 807 regarding unnecessary or counterproductive drought responses. There is a new subsection required to address how the planning group is addressing uncertainty and droughts worse than drought of record (if applicable), and what additional measures not included in the plan could be available during a drought worse than drought of record. Section 2.9 addresses new guidance added to address HB 807 related to progress in achieving economies of scale. Sections 2.10, 2.13, and 2.14 state that the Initially Prepared Plan (IPP) and the final RWP must document a summary of the region's interregional coordination efforts. In addition, the State Database Reports (DB27) needs to be included in the IPP and the final RWP via hyperlinks to the Water Development Board's Database Reports application in lieu of hard copies. Final reminders: the infrastructure finance survey and related chapter have been removed and the priority of the planning group should be to recommend projects to be removed. Documents that are now available on the 2026 RWP Document page are: the General copy of the first amended scope of work, the first amended Exhibit C and the summary of major revisions to Exhibit C. For more information, please visit the TWDB website and navigate to 6th planning cycle page. The new webpage can be found here:

https://www.twdb.texas.gov/waterplanning/rwp/planningdocu/2026/index.asp

This page will be updated throughout the cycle with important documents, the working schedule, task organization, newsletters, as well as contract and administrative documents. The email address for the broadcast communications for the planning group is regionalwaterplanning@twdb.texas.gov.

There were no reports from Region C, Region I or GMA 11.

David Nabors provided that GMA 8 plan is moving forward.

Tony Smith, Carollo Engineering, working with Stan Hayes with Hayes Engineering, provided information on ongoing work during the 2026 water planning process. Mr. Smith presented the 2026 Water Plan Schedule. We are moving towards the end of year 2 of a five-year cycle. In February 2023 the draft municipal numbers will be available and that's when work will kick up significantly. There are 200+ water user groups (WUGs) to engage with that will involve mailing surveys and making phone calls to gather accurate data. So far, the budget usage is at about 15% and there are a few invoices to be approved today. During the first half of 2022, we received numbers on livestock, manufacturing and steam-electric power generation. The current task at hand is addressing the Non-Municipal Data summary on draft mining and irrigation projects. Mr. Smith provided updates on the methodologies and draft

non-municipal water use projections for irrigation and mining released for the RWPG's review. Mr. Smith discussed the methodologies for irrigation. The 2030 baseline is based on an average of recent annual irrigation water use using data reported between 2015 and 2019. Irrigation usage is assumed constant over the planning period from 2030 to 2080 unless groundwater availability over the planning period is projected to be less than the groundwater-portion of the baseline irrigation demand projections. If so, irrigation demand is commensurately decreased starting in 2040 or later. He presented a comparison of draft 2026 irrigation projections to the 2021 plan and these numbers are quite consistent. Geographically there are more decreases across the area. That means the projected irrigation demand is likely to decrease by roughly 2000 acre feet. During the first quarter of 2023, his team will be reviewing those numbers to ensure any adjustment that needs to be made are made. The assessment regarding the irrigation methodology is that irrigation is relatively small portion of the region's projected use numbers. However, Lamar county does warrant particular attention because it was most impacted by the 2021 plan. For previous planning, received from Daisy Farms and Hon. M.C. Superville, Jr. (Lamar Co. Judge) requesting increase in demands by 15,000 ac-ft/yr, which was approved by RWPG and TWDB. Mining is critical in Texas. The availability of adequate water is essential to mining process. The TWDB through a grant from the USGS, funded a mining study through the UT Bureau of Economic Geology. It evaluated two principal components: oil and gas and the plays that are currently in the state and what is projected to occur in those plays over the next 50 years. Over the next 20 to 30 years those plays will slowly start tapering down. The study also looked at the present aggregate use by the various mining industries county by county. The level of aggregate development they're using and how much water for that development is being used. They set that water demand for 2020 and then they looked at population growth for the next 50 years. Then they apply the recent growth rate over the past 10 years to the mining aggregate water use to come up with the projected mining use. They combine that with the oil and gas projections and come up with the updated picture of mining projections. This methodology results in a slow but steady increase in projected mining water use. He also presented a comparison of the mining use between the current and previous planning cycles. The study yielded an overall reduction in mining demands except for Bowie, Harrison, and Wood counties. The mining numbers are relatively small compared to other larger demands in Region D. The majority of the non-municipal water use is coming from Lamar, Cass, and Harrison counties. For the 2021 planning cycle, in Region D, manufacturing and steamelectric make up the lion's share of the non-municipal water demand projecting out to the 2030 decade. That remained consistent when the numbers are projected out to 2070. The percentage increase close to 50% for manufacturing for the 2026 planning cycle, cutting into the steam-electric projection numbers. Overall, the non-municipal demand projections are lower this cycle. Keep in mind, these are draft numbers. TWDB process is now to incorporate information from local sources. These numbers must be submitted by July 2023 but should be submitted sooner. The path forward is contract amendments, continue engagement with local entities and seek action on proposed demand revisions during the first quarter in 2023. No action taken.

Kyle Dooley presented five invoices from Carollo Engineers for approval. The invoices are for work spanning from March of 2022 to August 2022. The total for the five invoices is \$20,388.36. David Nabors made a motion to authorize Kyle Dooley to pay the invoices to Carollo. Russell Acker seconded the motion. Motion carried, all voting aye.

Kyle Dooley also provided that the language giving him the approval of signing the funding contract with TWDB accounted for the assumption that the approval carried over to approving any necessary amendments to that funding contract. The next meeting date is to be determined to ensure that Tony Smith with Carollo has all the necessary data compiled for the Region D board to approve on the water demand projection numbers.

With no further business to discuss, Jim Thompson adjourned the meeting at 11:30 a.m.

Secretary

Date

MEETING OF THE North East Texas Regional Water Planning Group WEDNESDAY, March 15, 2023

> Agenda Item 4 Reports From Liaisons



- 1. Data to assist with the new Infeasible WMS task was provided on January 10th
- 2. Clarification on Identifying Infeasible WMSs in the 2021 RWPs provided on January 31st

3. New one-pagers: Drought of Record, Consistency Reviews https://www.twdb.texas.gov/waterplanning/rwp/education/index.asp

4. New educational materials: Member Guide and Administrative Guidance <u>https://www.twdb.texas.gov/waterplanning/rwp/regions/newmembers.asp</u> <u>https://www.twdb.texas.gov/waterplanning/rwp/planningdocu/2026/documents.asp</u>

5. Interregional Planning Council update: IPC met on March 9, 2023.



Projections Timeline

Draft Water Demand Projections	Timeline	
Livestock, Manufacturing, Steam-Electric Projections + Supporting Data	January 20, 2022	
Water User Group List + Historical Population, Connections, Net Use, GPCD	March 16, 2022	
DUE: RWPGs review WUG list + historical WUG data	July 29, 2022	
Irrigation, Mining Projections + Supporting Data	August 23, 2022	
Non-municipal Basin Splits	August 23, 2022	
Population Projections + Plumbing Code Savings + Municipal Demand Projections	February 2023	
DUE: RWPGs request revisions for non-municipal demand projections	<mark>July 14, 2023</mark>	
DUE: RWPGs request revisions for population and municipal demand projections	August 11, 2023	
TWDB Board Meeting to Adopt Projections	Fall 2023	
DUE: Technical Memorandum	March 4, 2024	

😏 @twdb

Texas Water Development Board

Significant new requirements for the 2026 RWPs (cont.)

- Task 4B: Exhibit C, Section 2.11 (Identification of infeasible WMSs in the 2021 RWP)
 - Required by SB 1511, 85th Texas Legislature
 - Analysis must be completed prior to March 4, 2024 (Technical Memorandum due date)
 - Planning groups to present results of analysis at same public meeting where RWPG also presents methodology for identifying potentially feasible WMSs in 2026 RWP
 - Deliverable to TWDB: List of identified infeasible WMSs included in Technical Memorandum
 - If infeasible WMSs identified, planning groups must amend 2021 plans to:
 - Remove infeasible WMS or WMSP,
 - Revise infeasible WMS or WMSP to make feasible, and/or
 - Incorporate new WMS or WMSP
 - RWPG-adopted amendments due to TWDB June 5, 2024



Significant new requirements for the 2026 RWPs (cont.)

- Task 4B: Exhibit C, Section 2.11 (cont.)
 - Review WMSs and WMSPs in the previous RWP; coordinate with project sponsors to determine implementation status and determine infeasibility
 - Planning groups should review strategies & projects that require a permit and/or involve construction and that:
 - are shown to be online in 2020 or 2030
 - are related to new major reservoirs, seawater desalination, DPR, brackish groundwater, ASR, and out of state transfers
 - generally require significant resources and time to implement
 - Analysis **not** required for strategies/projects that do not require a permit or involve construction



Significant new requirements for the 2026 RWPs (cont.)

- Task 4B: Exhibit C, Section 2.11 (cont.)
 - Affirmative steps by the sponsor may include but not limited to:
 - spending money on the strategy or project,
 - voting to spend money on the strategy or project, or
 - applying for a federal or state permit for the strategy or project
 - -Supporting data provided to planning groups January 10th and clarification guidance provided January 31st



MEETING OF THE North East Texas Regional Water Planning Group WEDNESDAY, March 15, 2023

Agenda Item 5 Election of NETRWPG Officers

Administrative Summary

As per the bylaws, the annual election of officers will be held at the first regular meeting after January 1, 2023. Notice was emailed to the members on January 24, 2023.

NORTHEAST TEXAS REGIONAL WATER PLANNING GROUP NOTICE OF ELECTION OF OFFICERS First Regular Meeting after January 1st, 2023

Notice is hereby given to the members of the Northeast Texas Regional Water Planning Group in accordance with the By-Laws of the Group that the annual election of officers will be held during the first regular meeting after January 1st, 2023.

The meeting will be held on March 15, 2023, at the Region 8 Education Service Center at 4845 US 271, Pittsburg, TX, 75686. Nominations will be made from the floor by voting members of the Group. Agreement of two-thirds of the voting members present is required for election of each officer.

Offices to be filled are:

- 1. Chair
- 2. Vice-Chair
- 3. Secretary/Treasurer

It will also be necessary to elect two (2) at-large members of the Executive Committee and to select designated members to each adjacent regional water planning group to serve as a liaison and liaisons to each Groundwater Management Area within the Northeast Texas Regional Water Planning Group Area.

Cindy Gwinn Secretary/Treasurer MEETING OF THE North East Texas Regional Water Planning Group WEDNESDAY, March 15, 2023

Agenda Item 6 Report from the Region D Technical Consultant

Region D Water Planning

Consultant Presentation

Tony L. Smith, P.E.

Mount Pleasant, TX | March 15, 2023





2026 Planning Budget Progress

Teels #	Teel	Contract	Expended to	%
Task #	lask	Amount	Date	Complete
1	Planning Area Description	\$16,231	\$0	0%
2A	Non-Municipal Water Demand Projections	\$28,414	\$19,352.45	68%
2B	Population & Municipal Water Demand Projections	\$47,482	\$6,813.98	14%
3	Water Supply Analyses	n/a	n/a	0%
4A	Identification of Water Needs	n/a	n/a	0%
4B	Identification of Potentially Feasible WMSs and WMS Projects	n/a	n/a	0%
4C	Prepare and Submit Technical Memorandum	n/a	n/a	0%
5A	Evaluation & Recommendation of WMSs	n/a	n/a	0%
5B	Water Conservation Recommendations	n/a	n/a	0%
6	Impacts of Regional Water Plan	n/a	n/a	0%
7	Drought Response, Activities & Recommendations	n/a	n/a	0%
8	Recommendations Regarding Unique Stream Segments and/or Reservoir Sites and Legislative & Regional Policy Issues	\$10,648	\$0	0%
9	Implementation and Comparison to the Previous Regional Water Plan	n/a	n/a	0%
10	Public Participation and Plan Adoption	\$97,916	\$24,655.41	25%
	TOTAL	\$200,691	\$50,821.84	25%

Sixth Cycle of Regional Water Planning (2026 Regional Water Plans) Working Schedule (as of January 2023)^A



18	RWPG			
19	RWPG			
20	RWPG	Technical Memo due		
21	RWPG			
22	RWPG	RWPG adopted amendments to 2021 RWPs to remove/revise infeasible WMSs due to TWDB	2021 RWP amendments for infeasible WMSs due 6/5/2020	
23	RWPG			
24	TWD8/RWPG	Per Review and negotiate SOW submittals for WMS evaluations and issue notice-to-proceeds ^C		
25	IPC	Interregional Planning Council report due to the TWD8		
26	RWPG		IPP due 3/3/2025	
27	TWDB	Socioeconomic Impact Report released to RWPGs		
28	RWPG	Final Plan due	RWP due 10/20/2025	

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Notes: ^A Estimated timeline based on currently available agency resources and subject to change

⁶Only Tasks included in the initial contract scope of work have task numbers in this initial timeline.

^c DB27 is the updated, online water planning database for the 2027 State Water Plan

^D Anticipated database availability dates are estimates based on currently available agency resources

TWDB Board adopts projections

^f Subject to available funding

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TWDB

2026 Plan Schedule Detail

Date	Scheduled Events/Tasks
Jan 2022	TWDB releases initial Draft Non-Municipal data for Livestock, Manufacturing, and Steam-Electric Power Generation for review
Sept 2022	TWDB releases remaining Draft Non-Municipal data for Irrigation and Mining for review
Jan 2023	TWDB release of Draft Municipal Population and Demand Projections
March 2023	Region D Meeting – Summary of draft municipal population and demand projections, summary of proposed revisions to non-municipal demand projections and consideration of action to approve submittal of technical memorandum,
July-Aug 2023	Review Draft Projections and finalize adjustments with TWDB staff (Non-Municipal: July 14, Municipal: Aug 11)
Oct 2023	TWDB Board adopts projections

Today's Discussion

1: Summary Methodology

• Draft Municipal Population and Demand Projections

2: Recommended Revisions

Draft Non-Municipal Demand Projections

Seeking Action

 For approval of consultant to coordinate with the Administrator and Chair to submit recommended revisions to TWDB, allowing for future revisions if information is developed during future municipal discussions

Projections of Future Water Demands



Draft Municipal Population & Demand

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Population Projections by County

Based on Texas Demographic Center's county-level projections

Two migration scenarios (2010-2020):

- Full-migration
- Half-migration

2030-2060

• Texas Demographic Center (30-yr projections)

2070-2080

• Extended by TWDB

TDC projections available here::

<u>https://demographics.Texas.gov/Data/TPEPP/Projections</u>

Population Projections – TWDB Methodology

Difference this planning cycle:

• If a county's population is projected by TDC to decline, then the TWDB's county population projections will also decline.

TWDB draft projections

- Extended 2070-2080 both scenarios
- Use the full-migration scenario to sub-allocate to WUGs

Population projections: 2030 - 2080

Population Projections by WUG

- Sub-allocate to WUGs
- GIS mapping of WUG boundaries and census block data
- Evaluate:
 - »WUG's historical (2010 to 2020) share of the county's growth
 - »WUG's 2020 share of the region-county's 2020 population applied each decade
- Constant population: military bases, universities, primarily group quarter population
- Buildout: WUGs with buildout in the 2021 RWPs were held constant at or near their buildout population from the previous planning cycle

Population Projections

• TWDB projections newly released:

» Region-County projections 2030-2080: two migration scenarios
» WUG projections 2030-2080: only full-migration scenario

- RWPG has the option to revise to use half-migration scenario
- Ongoing coordination with RWPG and TWDB

Region D – Draft Regional Population Projections



– 2026 Population Projections by County (0.5 migration-scenario)

Example County Projections -



1 3

Example County Projections -



Municipal Demand Projections: GPCD

Gallons per Capita Daily

Baseline GPCD = dry-year

Municipal water use

- Residential
- CII (commercial, institutional, light industrial)
- E.g., restaurants, hotels, camps, transient populations' use included along with permanent residents

Exempt use difficult to estimate

Municipal Demand Projections Rely on <u>Baseline</u> GPCD and Projected Plumbing Code Savings



- Draft Baseline GPCD
 - » Based on 2021 Plan
 - » Reduced to account for passive savings between historical and projected (2030)
- Water sources: groundwater + surface water
 - »Water Use Survey

TWDB Estimated Reduction in <u>Baseline</u> GPCD: Change from 2021 RWP



40 0 09-0 61-80 81-100 >300 121-140 101-120 141-160 161-180 181-200 201-220 221-240 241-260 261-280 281-300 Per capita demand (gpcd) 2021 Region D Plan 2026 RWP (Returning WUGs)

TWDB Estimated <u>Baseline</u> Per-Capita WUG Demands

TWDB provided historical GPCDs for RWPGs to review and potentially revise

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Region D – Draft Municipal Demand Projections for Region

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Summary

Consideration of additional conservatism in estimates:

Population

- Utilization of 1.0- vs 0.5- migration scenario
- Dependent upon trend
- GPCD
- Remove passive savings assumption from baseline gpcd
- Identify maximum "dry-year" gpcd
- Still use TWDB's assumed passive savings for decadal projections

Engagement

- Surveys
- Calls

Look for evidence of:

- Data errors
- New studies
- New infrastructure/service area
- Major differences in long-term demand

Revision requests due Aug. 11, 2023

Recommended Revisions to Draft Non-Municipal Demand Projections

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Key Considerations

TAC §357.10 (39)

 Water Demand: "Volume of water required to carry out the anticipated domestic, public, and/or economic activities of a Water User Group <u>during drought</u> <u>conditions</u>."

TWDB Exhibit C Guidelines

• Identifies what information is required by TWDB for justification of changes to draft projections.

Irrigation

Irrigation

Same methodology as 2021 RWPs

Draft 2030 Baseline based on 5-yr average (2015-2019)

2030 – 2080 held constant

- Unless groundwater availability over the planning period is projected to be less than the groundwater-portion of the baseline irrigation demand projections,
- If so, irrigation demand is commensurately decreased starting in 2040 or later.

Irrigation Assessment

Overall reduction in projected irrigation demands.

Draft projections driven by:

- Decreases in estimated use in those counties with highest demands.
- Averaging over 2015-2019 period

Key criteria for revision:

- TWDB Guidelines (Section 2.2.2.5, Item 2)
 - "Evidence that recent (10 years or less) irrigation trends are more indicative of future trends than the draft water demand projections."
 - TAC §357.10 (39) definition of water demand as, "Volume of water required to carry out the anticipated domestic, public, and/or economic activities of a Water User Group during drought conditions."

	Ave	rage	Difference Avera	between ages			
County	(over 2015-2019)	(over 2010- 2019)	Amount	%	GW Avail	GW Limit?	Revision?
BOWIE	9,762	10,067	305	3%	14,859	Ν	Yes
САМР	5	3	-2	-40%	5,456	Ν	No
CASS	0	0	0	0	30,121	Ν	No
DELTA	3,049	2,722	-327	-11%	631	Y	No
FRANKLIN	138	100	-38	-28%	5,762	Ν	No
GREGG	27	33	6	22%	8,584	Ν	Yes
HARRISON	419	560	141	34%	12,633	Ν	Yes
HOPKINS	3,051	3,910	859	28%	5,959	Ν	Yes
HUNT	277	316	39	14%	4,772	Ν	Yes
LAMAR	8,097	9,112	1,015	13%	583	Y	No
MARION	5	5	0	0%	9,355	Ν	No
MORRIS	10	8	-2	-20%	5,849	Ν	No
RAINS	56	60	4	7%	1,412	Ν	Yes
RED RIVER	3,698	3,783	85	2%	4,948	Ν	Yes
SMITH	298	311	13	4%	20,396	Ν	Yes
TITUS	1,192	1,123	-69	-6%	7,536	Ν	No
UPSHUR	116	143	27	23%	18,821	Ν	Yes
VAN ZANDT	311	406	95	31%	9,275	Ν	Yes
WOOD	525	507	-18	-3%	24,412	N	No

Comparison of average irrigation water use over 5- and 10-yr periods by county

• Numerous counties (green) had higher water use during earlier drought conditions, e.g., 2011.

To have a more conservative estimate of projected water demand for irrigation uses during drought conditions, recommend:

- Use of 10-yr average over 2010-2019 as baseline for the identified counties in green.
- Support adjustments in projections for those counties where total groundwater availability over the planning period is projected to be less than the groundwater portion of the baseline water demand projections.
- No change for other counties ROLLO | 27

Comparison of Draft & Revised Region D 2026 Irrigation Projections to 2021 Plan



Livestock

Methodology did not change

Differences in baseline data due to:

 Updates to the water use geographic splits (region/ county/basin) - applied retroactively from 2015 forward.

TWDB category	Subcategory	2021 RWP water use (gal/head/day)	2026 RWP water use (gal/head/day)			
Cattle	Milk	75	55			
Cattle	Fed & other cattle	15	15			
Chickops	Non-broilers	0.086	0.09			
Chickens	Broilers	0.077	0.09			
Turkeys	Turkeys	0.2	0.2			
Equine	Horses, ponies, mules, burros, & donkeys	12	12			
Hogs	Hogs	11	5			
Sheep	Sheep	2	2			
Goats	Milk Meat	0.5	2			
	Angora					

- Changes in the assumed water use parameters for five livestock types
- Changes in broiler chicken inventory estimates

Estimated water use consistent across the planning duration

C A R O L L O 2 9

		10-yr Avg w/Dairy Cattle				
	Draft	at 75	10-yr Avg	Revised 10-yr		
County	Baseline	gal/head/day	Surveyed	Baseline	Diff.	% Diff.
BOWIE	1,259	1,321	0	1,321	62	5%
САМР	1,196	1,448	0	1,448	252	21%
CASS	702	792	0	792	90	13%
DELTA	478	511	0	511	33	7%
FRANKLIN	1,354	1,342	0	1,342	-12	-1%
GREGG	148	179	0	179	31	21%
HARRISON	561	627	0	627	66	12%
HOPKINS	3,909	4,253	0	4,253	344	9%
HUNT	1,222	1,158	0	1,158	-64	-5%
LAMAR	1,628	1,557	0	1,557	-71	-4%
MARION	141	169	0	169	28	20%
MORRIS	519	586	0	586	67	13%
RAINS	503	490	0	490	-13	-3%
RED RIVER	1,592	1,513	0	1,513	-79	-5%
SMITH	417	465	0	465	48	12%
TITUS	1,173	1,130	0	1,130	-43	-4%
UPSHUR	1,089	1,108	0	1,108	19	2%
VAN ZANDT	1,839	1,930	4	1,934	95	5%
WOOD	1,554	1,670	0	1,670	116	7%

Comparison of average livestock water use over 5- and 10-yr periods by county

• Numerous counties (green) had higher water use during earlier drought conditions, e.g., 2011.

To have a more conservative estimate of projected water demand for livestock uses during drought conditions, recommend:

- Revise dairy cattle water use coefficient back up to 75 gal/head/day
- Use of 10-yr average over 2010-2019 as baseline for the identified counties in green.
- No change to adjustments for surveyed livestock facilities.
- No change for other counties.

C A R O L L O 30

Comparison of Draft & Revised Region D 2026 Livestock Projections to 2021 Plan



Demand (acre-feet/year)

Manufacturing

Methodology

- Generate county baseline from highest surveyed use (2015-2019)
- Add estimate for unaccounted water (i.e., missing entities).
- Assume linear demand trend based on
 - WUS data, and
 - County Business Patterns (U.S. Census Bureau) historical rates of change (2010-2019)

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Incorporate Riverbend Water Resources District Request and Approach from 2021 Plan

TexAmericas Center Contract with RWRD

Adopted in 2021 Region D Plan as contractual demands for Riverbend Water Resources District as a Wholesale Water Provider (WWP)

Recommend similar inclusion for purposes of 2026 Region D Plan

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Harrison County Manufacturing

Previous Plans

• Eastman facility use was counted in manufacturing

Draft 2026

• Eastman WUS facility use counted in steam-electric power generation

Information from Eastman indicates:

- 90% manufacturing
- 10% steam-electric power generation
- Growth estimate of 2,500 ac-ft/yr

	Draft Baseline Water Revised Baseline Demand Water Demand			
County	(5-yr)	(10-yr + Unacc'ted)	Diff.	Comment
BOWIE	264	1,674	1,410	Revision to baseline recommended.
САМР	40	40	0	No revision.
CASS	32,985	32,985	0	No revision.
DELTA	0	0	0	No revision.
FRANKLIN	0	5	5	No revision, 10-year declining trend.
GREGG	1,359	1,416	57	Revision to baseline recommended.
HARRISON	11,568	23,486	11,918	Revision to baseline recommended.
HOPKINS	917	951	34	Revision to baseline recommended.
HUNT	349	579	230	Revision to baseline recommended.
LAMAR	4,689	5,027	338	Revision to baseline recommended.
MARION	138	138	0	No revision.
MORRIS	20,599	25,147	4,548	Revision to baseline recommended.
RAINS	1	12	11	No revision.
RED RIVER	3	5	2	No revision.
SMITH	11	17	6	Revision to baseline recommended.
TITUS	3,417	4,065	648	Revision to baseline recommended.
UPSHUR	50	78	28	Revision to baseline recommended.
VAN ZANDT	170	507	337	Revision to baseline recommended.
WOOD	2,657	2,657	0	No revision.

Analysis and Recommendations

Analyzed reported manufacturing use for all Region D counties

- Extended period from 5- to 10-years (2010-2019)
- Corrections for Eastman

Recommend new baseline manufacturing demand for those counties with higher manufacturing uses during drought conditions.

Recommend 2030 growth of 2,500 acft/yr per Eastman.

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Comparison of Draft & Revised Region D 2026 Manufacturing Projections to 2021 Plan



Mining

UT Bureau of Economic Geology (UTBEG) study update.

- Evaluated major mining operations across Texas
- Oil & Gas plays, aggregates, and coal & lignite

2030 Baseline based on average of UTBEG estimates of annual mining water use.

- Demand for aggregates increase in proportion to population growth.
- O&G consistent then tailing off as plays mature starting around 2060.

Comparison of Region D Historic Mining Water Use and Projections



Mining Assessment

Changes driven by:

- Estimated reductions in combined oil & gas and aggregate uses for numerous counties, and
- Increased projections in use for:
 - Bowie County (aggregates),
 - Harrison County (oil and gas, coal), and
 - Wood County (oil and gas, aggregates).

No discrepancies identified

No revisions recommended

Steam-Electric Power Generation

Methodology did not change

- Estimated baseline developed from the highest single-year county surveyed water use between 2015 and 2019
- Adjustments reflecting near-term facility additions and retirements
- Assumed constant projected use through 2080

Fewer proposed facilities compared to previous plan and removal of retired facilities result in decreases in projected demands

Assessment

Analyzed reported uses for steam-electric power generation for all Brazos G counties

- Maintained exclusion of retired facilities
- Identified counties with higher drought period uses over longer 10-year period (2010-2019)
- AEP comments
 - Correction for 2012 use at Pirkey (Harrison County)
 - Correction for 2010 use at Lone Star Power Plan (Morris County)
- Eastman comment
 - Application of 10% split to historical annual use from WUS

Recommend new baseline demand for those counties with higher uses during drought conditions.

Recommended Revisions based on corrections and 10-year maximums

		RV	VPG Revisi	on Request	S		
County	2030	2040	2050	2060	2070	2080	Comment
GREGG	940	940	940	940	940	940	Revised baseline recommended based on 10-year maximum representative of drought conditions
HARRISON	23,145	23,145	23,145	23,145	23,145	23,145	Revised baseline recommended based on 10-year maximum representative of drought conditions. The 2012 amount for Pirkey corrected per AEP, addition of 10% of Eastman Chemical historical annual facility use from WUS per 02/27/2023 email from Eastman Chemical.
HUNT	373	373	373	373	373	373	Revised baseline recommended based on 10-year maximum representative of drought conditions
MARION	4,257	4,257	4,257	4,257	4,257	4,257	Revised baseline recommended based on 10-year maximum representative of drought conditions
MORRIS	50	50	50	50	50	50	Revised baseline recommended based on 10-year maximum representative of drought conditions, 2010 amount corrected per AEP.
TITUS	29,541	29,541	29,541	29,541	29,541	29,541	Revised baseline recommended based on 10-year maximum representative of drought conditions.

C A R O L L O 4 2

Comparison of Draft & Revised Region D 2026 Steam-Electric Power Generation Projections to 2021 Plan



Summary Comparison of Draft and Revised Non-Municipal Demands to 2021 Plan

■ Manufacturing ■ Steam-Electric ■ Irrigation



Action Sought

Action

 Authorize the technical consultant to submit a technical memorandum, populate, and distribute to the TWDB recommended revisions to the draft non-municipal demands for Region D consistent with the information provided in this meeting, and approve for the consultant to work with the Chair to submit further revisions and make responses to revision requests by TWDB by July 14, 2023.

Submittal due July 2023.

 Targeting late-March, with note that any additional submittal (if any input received during municipal discussions) would be before July 14, 2023 deadline. Upcoming:

Recommendations for revisions to Draft municipal population and demand projections

Infeasible Strategies



CAROLLO.COM

MEETING OF THE North East Texas Regional Water Planning Group WEDNESDAY, March 15, 2023

Agenda Item 7 Recommended Revisions to the Region D Non-Municipal Demands

Administrative Summary

Region D is trying to submit these non-municipal revisions earlier than in past cycles, at the request of TWDB, if it was possible. The Technical Consultant will still be surveying and calling Region D WUGs between now and late-June, and there may be some relevant new information about a non-municipal user that may warrant an additional revision. If that were to happen, staff requests the option to work with the Chair and the technical consultant to submit additional revisions to TWDB after this first approved submittal so long as that additional submittal happens before the TWDB's July 14, 2023 deadline.

8911 North Capital of Texas Highway Building 2, Suite 2200 / Austin, Texas 78759 P. 512-453-5383 / F. 512-453-0101



carollo.com

March 15, 2023

Ron Ellis Texas Water Development Board 1700 N. Congress Avenue Austin, TX 78711-3231

Subject: DRAFT Region D – Proposed Revision Request to Draft 2026 Non-Municipal Projections

Dear Mr. Ellis:

The Draft 2026 Region D Water Plan non-municipal projections prepared by the Texas Water Development Board (TWDB) have been reviewed by the Region D Regional Water Planning Group (Region D, RWPG) and its technical consultants. Attached are the required spreadsheets, documenting the proposed modifications to these projections, as well as the supporting documentation as required under the Texas Water Code.

Upon review of the Draft 2026 non-municipal projections, the technical consultant presented recommendations for modifications to these draft projections for the consideration of the RWPG. Consideration was given to each of the non-municipal water use categories utilized for regional water planning: irrigation, livestock, manufacturing, mining, and steam-electric power generation. A summary of the rationale for the recommended revisions for each category is included herein.

Upon receipt of these recommendations, and review and presentation from the consulting team to the RWPG, at its March 15, 2023, meeting the Region D RWPG formally provided unanimous approval authorizing the consultants to populate and distribute to the TWDB the attached recommended demand adjustments consistent with the information provided in this meeting by the consultant, and approved for the consultant to work with the Chair to submit further revisions and make responses to revision requests by TWDB.

If any additional information is necessary, please feel free to give me a call at your convenience, and we will respond as appropriate.

Sincerely, CAROLLO ENGINEERS, INC.

ou

Tony L. Smith, PE Project Manager

TLS:ckt

Enclosures: RegionD_IrrMin_Aug2022.xlsx; RegionD_Non-Municipal_Jan2022.xlsx

cc: Mr. Jim Thompson Mr. Kyle Dooley

200343 / TWDB_RegionD_DRR.docx

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Region D Supporting Analyses

The rationale and supporting analyses for the Region D RWPG's recommended revisions to the Draft Non-Municipal Projections are provided by use category herein. These recommendations ascribe to the contractually required criteria for adjustment identified within the First Amended General Guidelines for Development of the 2026 Regional Water Plans (October 2022), referred to hereafter as the Exhibit C Guidelines. The Texas Administrative Code is referred to herein as TAC, for brevity. All amounts documented herein are in acre-feet, unless otherwise noted.

Irrigation

As reported within the Exhibit C Guidelines, the baseline methodology for the development of the draft irrigation water demand projections is the average of the most recent five-years (2015-2019) of water use estimates held constant between 2030 and 2080. In counties where the total groundwater availability over the planning period is projected to be less than the groundwater-portion of the baseline water demand projections, the draft irrigation water demand projections will begin to decline starting in 2040, or a later decade, commensurate with the decline in the associated groundwater availability.

The second criterion for adjustment identified in the Exhibit C Guidelines for irrigation water demand projections (Section 2.2.2.5, Item 2) is, "[e]vidence that recent (10 years or less) irrigation trends are more indicative of future trends than the draft water demand projections." Water demand is further defined within TAC §357.10 (39) as the "[v]olume of water required to carry out the anticipated domestic, public, and/or economic activities of a Water User Group during drought conditions."

Presented in Table 1 below is a comparative analysis of the 2015-2019 draft baseline average to an extended 10-year average over the 2010-2019 period performed by the Region D RWPG. These extended irrigation water use data were provided by TWDB. It is observed that for a number of counties there was increased water use in the years preceding 2015, predominantly driven by severe drought in the 2010 – 2012 period.

The Region D RWPG agrees that the use of an average is appropriate to capture varying trends in irrigation water use. However, to have a more conservative estimate of projected water demand for irrigation uses representative of drought conditions, the Region D RWPG recommends utilizing the average over the extended 10-year period (2010-2019) for the identified (in green) counties in Table 2. For these counties, use of the extended 10-year period captures higher historical usage during drought conditions, while still accounting for instances where groundwater supply is a limiting factor. The Region D RWPG further supports any necessary adjustment in projections for those counties where total groundwater availability over the planning period is projected to be less than the groundwater portion of the baseline water demand projections.

No change from the draft recommended irrigation projections is recommended for those counties within Region D where use of the extended 10-year period would result in a decreased baseline amount, as the increased use in the more recent 5-year period for these counties reflects a more conservative estimation of recent trends in water demand for irrigation use.

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		Historical Irrigation Use by County (Source: TWDB)									Ave	erage	Difference between Averages				
County	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	(over 2015-201 9)	(over 2010-2019)	Amount	%	GW Avail	GW Limit?	Revision ?
BOWIE	7,889	8,788	12,738	11,084	11,366	6,447	9,302	10,980	11,940	10,139	9,762	10,067	305	3%	14,859	Ν	Yes
CAMP	0	0	0	0	0	0	0	0	14	11	5	3	-2	-40%	5,456	Ν	No
CASS	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	30,121	Ν	No
DELTA	333	438	303	205	10,700	4,766	2,704	2,299	2,617	2,858	3,049	2,722	-327	-11%	631	Y	No
FRANKLIN	0	0	129	93	87	80	99	165	210	135	138	100	-38	-28%	5,762	Ν	No
GREGG	38	50	32	43	35	25	28	28	28	25	27	33	6	22%	8,584	Ν	Yes
HARRISON	765	923	637	637	542	404	404	439	480	370	419	560	141	34%	12,633	Ν	Yes
HOPKINS	7,867	6,315	4,060	970	4,634	2,716	2,591	1,991	3,588	4,367	3,051	3,910	859	28%	5,959	Ν	Yes
HUNT	341	350	349	374	363	201	232	235	381	335	277	316	39	14%	4,772	Ν	Yes
LAMAR	11,579	9,228	11,609	8,108	10,108	6,681	7,632	7,721	9,673	8,777	8,097	9,112	1,015	13%	583	Y	No
MARION	0	0	0	15	9	7	0	0	8	8	5	5	0	0%	9,355	Ν	No
MORRIS	0	0	10	11	11	8	8	9	10	16	10	8	-2	-20%	5,849	Ν	No
RAINS	65	76	53	65	65	40	63	63	67	46	56	60	4	7%	1,412	Ν	Yes
RED RIVER	4,637	2,546	4,305	4,011	3,835	4,089	2,932	3,532	4,166	3,773	3,698	3,783	85	2%	4,948	Ν	Yes
SMITH	334	385	312	284	303	284	318	301	314	274	298	311	13	4%	20,396	Ν	Yes
TITUS	954	1,063	1,000	1,125	1,125	1,250	1,125	1,170	1,220	1,197	1,192	1,123	-69	-6%	7,536	Ν	No
UPSHUR	116	255	136	98	246	185	112	88	142	53	116	143	27	23%	18,821	Ν	Yes
VAN ZANDT	625	558	420	435	463	528	58	39	461	469	311	406	95	31%	9,275	Ν	Yes
WOOD	562	483	365	526	508	487	512	522	593	509	525	507	-18	-3%	24,412	Ν	No

Table 1 Comparison of 5- and 10-year Averages of Historical Irrigation Water Use by County in Region D (2010-2019)

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Table 2 Recommended Revisions to Projected Draft Irrigation Water Demands for Counties in Region D (2030-2080)

					R۱	NPG Revisior	n Requests
County	2030	2040	2050	2060	2070	2080	Comment
BOWIE	10,067	10,067	10,067	10,067	10,067	10,067	Recommended as a more conservative estimate based on greater average use over 2010-2019 period.
CAMP							No revision recommended.
CASS							No revision recommended.
DELTA							No revision recommended.
FRANKLIN							No revision recommended.
GREGG	33	33	33	33	33	33	Recommended as a more conservative estimate based on greater average use over 2010-2019 period.
HARRISON	560	560	560	560	560	560	Recommended as a more conservative estimate based on greater average use over 2010-2019 period.
HOPKINS	3,910	3,910	3,910	3,910	3,910	3,910	Recommended as a more conservative estimate based on greater average use over 2010-2019 period.
HUNT	316	316	316	316	316	316	Recommended as a more conservative estimate based on greater average use over 2010-2019 period.
LAMAR							No revision recommended.
MARION							No revision recommended.
MORRIS							No revision recommended.
RAINS	60	60	60	60	60	60	Recommended as a more conservative estimate based on greater average use over 2010-2019 period.
RED RIVER	3,783	3,783	3,783	3,783	3,783	3,783	Recommended as a more conservative estimate based on greater average use over 2010-2019 period.
SMITH	311	311	311	311	311	311	Recommended as a more conservative estimate based on greater average use over 2010-2019 period.
TITUS							No revision recommended.
UPSHUR	143	143	143	143	143	143	Recommended as a more conservative estimate based on greater average use over 2010-2019 period.
VAN ZANDT	406	406	406	406	406	406	Recommended as a more conservative estimate based on greater average use over 2010-2019 period.
WOOD							No revision recommended.

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Livestock

For projections of water demand for livestock, annual estimates of livestock form the primary source of data. County-level annual inventory estimates are calculated for various livestock categories: cattle, equine, goats, hogs, sheep, and poultry – broiler chickens, non-broiler chickens, and turkeys. Estimations for each livestock category begin with the most recent census or survey from the U.S. Department of Agriculture (USDA) -National Agriculture Statistics Service (NASS). The agricultural census is conducted once every five years. Between these years, surveys are conducted by the USDA to update the annual inventory estimates. These annual inventory estimates are multiplied by species-specific water use per head values, then summed with surveyed water use for non-standard livestock production such as fish hatcheries (e.g., Van Zandt County).

A baseline water use was developed by TWDB using the average of five years of TWDB annual region-county-level estimates over the 2015 – 2019 period. Trend factors for projecting demands through the planning horizon are based on the percent changes from the most recently approved 2021 Regional Water Plan, whereby draft year 2080 projections are held constant from the year 2070 projections. The fourth data requirement for adjustment identified in the Exhibit C Guidelines for livestock water demand projections (Section 2.2.2.6, Item 4) is, "[0]ther data and evidence that the RWPG considers reasonable and adequate to justify an adjustment to the livestock water demand projections." The Region D RWPG again considered planning for water demands during drought conditions as specified in TAC §357.10 (39).

The Region D RWPG has reviewed the methodology for the development of revised statewide water use coefficients for the various categories of livestock, and recommends that efficiencies in water use for dairy cattle at facilities - such as those found in Regions A and O as cited in TWDB's documentation - may not be applicable for use in Region D. The Region D RWPG recommends continued use of the 75 gal/head/day water use coefficient (as used in the 2021 Plan) for estimates of water use for dairy cattle production for counties within Region D, as a more conservative representation of facilities located within the region. Utilizing this revised water use (for all categories) to an extended 10-year average over the 2010-2019 period (Table 3). The livestock inventory data over this extended period were provided by TWDB. It is observed that for numerous counties there was increased water use in the years preceding 2015, predominantly coincident with drought conditions for numerous counties observed in the 2010 – 2011 period.

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(20	10-2013)															
County	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Draft Baseline	10-yr Avg w/Dairy Cattle at 75 gal/head/day	10-yr Avg Surveyed	Revised 10-yr Baseline	Diff.	% Diff.
BOWIE	1,635	1,687	1,080	1,162	1,186	1,221	1,240	1,306	1,343	1,352	1,259	1,321	0	1,321	62	5%
CAMP	1,602	1,594	1,489	1,837	1,884	1,948	2,065	671	691	702	1,196	1,448	0	1,448	252	21%
CASS	1,155	1,159	801	637	652	666	682	705	725	733	702	792	0	792	90	13%
DELTA	528	540	490	479	680	686	681	330	346	345	478	511	0	511	33	7%
FRANKLIN	1,197	1,191	1,127	1,385	1,328	1,335	1,377	1,461	1,488	1,529	1,354	1,342	0	1,342	-12	-1%
GREGG	259	263	189	210	129	131	133	156	162	161	148	179	0	179	31	21%
HARRISON	722	716	636	615	773	615	625	510	529	529	561	627	0	627	66	12%
HOPKINS	3,966	4,016	3,951	4,204	4,170	4,145	4,286	4,455	4,605	4,729	3,909	4,253	0	4,253	344	9%
HUNT	1,145	1,154	835	1,071	1,257	1,248	1,250	1,182	1,217	1,216	1,222	1,158	0	1,158	-64	-5%
LAMAR	1,410	1,407	1,323	1,447	1,518	1,522	1,543	1,757	1,812	1,827	1,628	1,557	0	1,557	-71	-4%
MARION	254	252	149	137	197	197	194	101	105	106	141	169	0	169	28	20%
MORRIS	759	779	550	576	571	596	613	464	474	480	519	586	0	586	67	13%
RAINS	434	435	398	447	461	453	466	590	602	615	503	490	0	490	-13	-3%
RED RIVER	1,637	1,726	1,162	1,268	1,313	1,370	1,399	1,716	1,768	1,774	1,592	1,513	0	1,513	-79	-5%
SMITH	557	559	409	488	548	435	439	395	408	408	417	465	0	465	48	12%
TITUS	1,114	1,096	1,002	1,136	1,081	1,111	1,136	1,187	1,205	1,228	1,173	1,130	0	1,130	-43	-4%
UPSHUR	1,103	1,105	1,005	1,013	1,079	1,074	1,097	1,174	1,206	1,221	1,089	1,108	0	1,108	19	2%
VAN ZANDT	2,033	2,037	1,879	1,660	1,780	1,763	1,805	2,069	2,119	2,159	1,839	1,930	4	1,934	95	5%
WOOD	1,637	1,636	1,563	1,741	1,841	1,825	1,873	1,494	1,529	1,559	1,554	1,670	0	1,670	116	7%

 Table 3
 Comparison of 5- and 10-year Averages of Estimated Historical Livestock Water Use by County (w/revised dairy cattle water use coefficient of 75 gal/head/day (2010-2019)

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The Region D RWPG agrees that the use of an average is appropriate to capture varying trends in livestock water use. However, to have a more conservative estimate of projected water demand for livestock uses representative of drought conditions, the Region D RWPG recommends utilizing the average over the extended 10-year period (2010-2019) for the identified counties in Table 4. For these counties, use of the extended 10-year period as the baseline captures higher estimated uses for inventories during drought conditions. No revision is requested for the adjustment to represent surveyed livestock facilities (i.e., the Waldrop Legacy, LLC., fish hatchery in Van Zandt County), as the 5-year and 10-year averages are equivalent as shown in Table 5. Note that the proposed amount for Van Zandt County shown in Table 4 includes the unrevised surveyed amount. Projected decadal rates of change for Bowie and Harrison Counties remain the same as those utilized by TWDB for the draft projections.

No change from the draft recommended livestock projections is recommended for those counties within Region D where use of the extended 10-year period would result in a decreased baseline amount, as the increased use in the more recent 5-year period for these counties reflects a more conservative estimation of recent trends in water demand for livestock use.

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Table 4 Recommended Revisions to Projected Draft Livestock Water Demands for Counties within Region D (2030-2080)

	RWPG Revision Requests											
County	2030	2040	2050	2060	2070	2080	Comment					
BOWIE	1,321	1,199	1,028	880	821	821	Recommended revision based on 10-year average over 2010-2019 period and revised water use coefficient of 75 gal/head/day for dairy cattle.					
CAMP	1,448	1,448	1,448	1,448	1,448	1,448	Recommended revision based on 10-year average over 2010-2019 period and revised water use coefficient of 75 gal/head/day for dairy cattle.					
CASS	792	792	792	792	792	792	Recommended revision based on 10-year average over 2010-2019 period and revised water use coefficient of 75 gal/head/day for dairy cattle.					
DELTA	511	511	511	511	511	511	Recommended revision based on 10-year average over 2010-2019 period and revised water use coefficient of 75 gal/head/day for dairy cattle.					
FRANKLIN							No revision.					
GREGG	179	179	179	179	179	179	Recommended revision based on 10-year average over 2010-2019 period and revised water use coefficient of 75 gal/head/day for dairy cattle.					
HARRISON	627	658	690	725	764	764	Recommended revision based on 10-year average over 2010-2019 period and revised water use coefficient of 75 gal/head/day for dairy cattle.					
HOPKINS	4,253	4,253	4,253	4,253	4,253	4,253	Recommended revision based on 10-year average over 2010-2019 period and revised water use coefficient of 75 gal/head/day for dairy cattle.					
HUNT							No revision.					
LAMAR							No revision.					
MARION	169	169	169	169	169	169	Recommended revision based on 10-year average over 2010-2019 period and revised water use coefficient of 75 gal/head/day for dairy cattle.					
MORRIS	586	586	586	586	586	586	Recommended revision based on 10-year average over 2010-2019 period and revised water use coefficient of 75 gal/head/day for dairy cattle.					
RAINS							No revision.					
RED RIVER							No revision.					
SMITH	465	465	465	465	465	465	Recommended revision based on 10-year average over 2010-2019 period and revised water use coefficient of 75 gal/head/day for dairy cattle.					

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	RWPG Revision Requests												
County	2030	2040	2050	2060	2070	2080	Comment						
TITUS							No revision.						
UPSHUR	1,108	1,108	1,108	1,108	1,108	1,108	Recommended revision based on 10-year average over 2010-2019 period and revised water use coefficient of 75 gal/head/day for dairy cattle.						
VAN ZANDT	1,934	1,934	1,934	1,934	1,934	1,934	Recommended revision based on 10-year average over 2010-2019 period and revised water use coefficient of 75 gal/head/day for dairy cattle.						
WOOD	1,670	1,670	1,670	1,670	1,670	1,670	Recommended revision based on 10-year average over 2010-2019 period and revised water use coefficient of 75 gal/head/day for dairy cattle.						

 Table 5
 Comparison of Draft 5- and 10-year averages for adjustment based on 2010-2019 Historical Water Use Estimates (in acre-feet) | Livestock by Facility (Water Use Survey)

					Total Net Use (ac-ft)							DRAFT Adj. 5-yr Avg	10yr Avg		
System Name	County	AICS	NAICS Definition	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
WALDROP LEGACY LLC - VAN ZANDT COUNTY	VAN ZANDT	112511	Finfish Farming and Fish Hatcheries					4	4	5	5	2	2	4	4
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Manufacturing

Per the Exhibit C Guidelines, manufacturing water use is defined as water used to produce manufactured goods. Generally, the methodology employed in the development of the draft projections of water demand for manufacturing is to base future demands on historical water use trends and plans for closure, expansion, and/or new construction of manufacturing facilities. This begins with the development of a baseline for each county. This baseline is calculated as the highest county-aggregated manufacturing water use in the most recent five years (2015-2019), plus unaccounted water use. The source of the use data is the reported water use submitted by manufacturing facilities to the TWDB annually through the Water Use Survey (WUS). The unaccounted water use is determined using a combination of information from the U.S. Census Bureau's County Business Patterns (CBP) dataset and the TWDB's WUS data.

Once the baseline volume is established for each county, the draft projection for 2030 is estimated using a statewide production growth proxy representing consistent incremental change to ensure the accommodation of potential near-term economic and manufacturing sector production growth. For the draft projections, this statewide growth rate was determined by TWDB to be 0.96%. Since the first projected decade (2030) is more than ten years from the baseline water use data, the statewide annual historical water use rate of change from 2010-2019 was selected as the proxy to adjust the baseline value to the projected 2030 value.

For each planning decade after 2030 (i.e., 2040-2080), a statewide manufacturing growth proxy was applied annually to project increases in manufacturing water demands. This growth proxy was based on the CBP historical number of establishments in the manufacturing sector from 2010-2019. For the draft projections, this statewide growth rate was determined by TWDB to be 0.37%.

The seventh data requirement for adjustment identified in the Exhibit C Guidelines for manufacturing water demand projections (Section 2.2.2.2, Item 7) is, "[o]ther data and evidence that the RWPG considers reasonable and adequate to justify an adjustment to the manufacturing water demand projections." The Region D RWPG again considered planning for water demands during drought conditions as specified in TAC §357.10 (39).

For the purposes of the 2021 Region D Plan, the Region D RWPG received a request from the Riverbend Water Resources District (RWRD) to increase manufacturing demands in Bowie County for the TexAmericas Center (TAC), which is an industrial center that RWRD has a contractual obligation to deliver approximately 18.41 acre-feet of water per day by May 1, 2026. The Region D RWPG included that request (Attachment 1) within its recommendations for revisions to the draft non-municipal projections for the purposes of the 2021 Region D Plan.

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In response, the TWDB did not recommend including this contract in the manufacturing demands, because the TWDB methodology, as noted above, is to base future demands on historical water use trends and plans for closure, expansion, and/or new construction of manufacturing facilities. The multiple documents submitted by the Region D RWPG identifying TAC as a potential industry development site and a driving force for economic development in the region were determined insufficient to meet the data requirement set by the Exhibit C Guidelines. Instead, the TWDB suggested that the Region D RWPG include the RWRD's future contractual obligation for the TAC as a Wholesale Water Provider demand rather than manufacturing water demands. The 2021 Region D Plan adopted and incorporated this approach by including an analysis of contractual demands for Wholesale Water Providers that included RWRD and its contractual obligation to TAC.

For the purposes of the 2026 Region D Plan, the Region D RWPG will similarly include the RWRD's future contractual obligation for the TAC as a Wholesale Water Provider demand rather than manufacturing water demand. Therefore, no revision to the manufacturing water demands are recommended herein for this specific purpose.

After review of the draft manufacturing projections, the Region D RWPG received information regarding historical annual facility use for manufacturing and steam-electric power generation in Harrison County from Eastman (Attachment 2). While projections for manufacturing in Harrison County developed for the purposes of the 2021 Region D Plan included historical annual uses by Eastman, for the TWDB's development of the draft 2026 projections for manufacturing and steam-electric power generation in Harrison County was based on the entirety of Eastman use being applied to steam-electric power generation in Harrison County, based on a changed EIA reported NAICS code. Communication with Eastman indicates that their facility's historical use should be split, with 90% for manufacturing uses and 10% for steam-electric power generation (varying by +/- 2%). For the purposes of the 2026 Region D Plan, the Region D RWPG recommends correcting the historical annual facility use by application of a split of 90% manufacturing and 10% steam-electric power generation to the reported historical annual facility use for Eastman within Harrison County (as shown in Table 6).

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 Table 6
 Proposed Correction for Split between Manufacturing and Steam-Electric Power Generation for Eastman Historical Annual Facility Use within Harrison County (2010-2019)

Survey No.	County	Facilities	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Comment
		EASTMAN CHEMICAL COMPANY TEXAS OPERATIONS	8,368	13,029	7,523	10,459	7,577	5,315	5,848	6,627	5,780	4,342	Eastman survey was included with manufacturing in 2021 Region D Plan. For Draft 2026 Region D Plan, Eastman was included in Steam-Electric Power Generation as Water Use Survey NAICS changed to reflect EIA reported NAICS code.
851465	HARRISON	EASTMAN MANUFACTURING	7,531	11,726	6,771	9,413	6,819	4,784	5,263	5,964	5,202	3,908	90% split (rounded) per 02/27/2023 Kristen Haney (Eastman Chemical) email.
		EASTMAN STEAM-ELECTRIC POWER GENERATION	837	1,303	752	1,046	758	532	585	663	578	434	10% split (rounded) per 02/27/2023 Kristen Haney (Eastman Chemical) email.

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The Region D RWPG performed a comparative analysis (presented in Table 7 below) based on the historical manufacturing water use over the 2010-2019 period -including the aforementioned correction for Harrison County - using the manufacturing use data provided by TWDB. As noted above, the baseline for the draft projections of manufacturing water use in each county were based on the maximum over the 5-year, 2015-2019 period. This analysis identifies and compares maximum manufacturing water uses by county over the longer 10-year, 2010-2019 period. Noting the importance of capturing more recent trends (particularly when the baseline will be extended another ten years to 2030), attention has been given to downward trends in these use data, such that those instances with significantly declining (or no) manufacturing use are excluded from the Region D RWPG's consideration of modifying the baseline value for each county.

The green highlights in Table 7 below identify those counties recommended by the Region D RWPG to use a revised baseline water demand based on the maximum over the 10-year (2010-2019) period. These revised baselines function as a more conservative representation of manufacturing water demands during drought conditions, such as those experienced by numerous counties within the region during the 2010-2012 period.

The Region D RWPG agrees with the use of the statewide production growth proxies utilized to calculate the projected 2030-2080 water demands for manufacturing uses, as these proxies represent a conservative estimate of growth in the region. However, based on the information provided by Eastman (Attachment 2), the Region D RWPG recommends growth for the near-term 2030 decade equal 2,500 ac-ft/yr, consistent with the estimate provided by Eastman. This amount is 245 ac-ft/yr greater than the estimated draft 2030 amount for Harrison County manufacturing using the 0.96% statewide growth rate. The projections for 2040-2080 for Harrison County are recommended to remain utilizing the 0.37% CBP historical average annual rate of change utilized for generation of the draft manufacturing projection.

Presented in Table 8 are the recommended revisions to the projections for manufacturing water demand for counties in Region D. These revisions reflect use of the statewide growth rate of 0.96% for the estimation of 2030 projections (except Harrison County, as noted above), and 0.37% for the 2040-2080 period, and for the specific counties (identified in green) utilize revised baseline amounts based on the identified maximums over the 10-year (2010-2019) period (with the correction for Harrison County as described above).

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Table 7 Comparative Analysis of Historical Manufacturing Water Use by County in Region D utilizing 5- and 10-year Maximums (2010-2019)

County	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	5-Yr May	Year	10-Yr May	Year	Unacc'ted Water Use	Draft Baseline Water Demand (5-vr)	Revised Baseline Water Demand (10-yr+	Diff	% Diff	Comment
BOWIE	1,611	94	610	1,036	899	121	170	174	201	193	201	2018	1,611	2010	63	264	1,674	1,410	534%	Revision to baseline recommended.
CAMP	33	24	35	29	35	39	37	40	36	39	40	2017	40	2017	0	40	40	0	0%	No revision.
CASS	32,723	30,472	29,849	31,466	31,644	32,982	32,311	31,522	30,921	30,297	32,982	2015	32,982	2015	3	32,985	32,985	0	0%	No revision.
DELTA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	No revision.
FRANKLIN	4	2	5	0	0	0	0	0	0	0	0	0	5	2012	0	0	5	5	100%	No revision, significant 10-year declining trend.
GREGG	1,159	1,235	1,200	1,066	1,043	1,178	791	414	448	499	1,178	2015	1,235	2011	181	1,359	1,416	57	4%	Revision to baseline recommended.
HARRISON	18,529	23,432	18,033	20,541	18,187	16,184	16,681	17,478	16,541	14,962	17,478	2017	23,432	2011	54	11,568	23,486	11,918	103%	Revision to baseline recommended.
HOPKINS	945	916	893	839	909	911	903	862	814	831	911	2015	945	2010	6	917	951	34	4%	Revision to baseline recommended.
HUNT	556	491	554	370	395	326	286	284	285	236	326	2015	556	2010	23	349	579	230	66%	Revision to baseline recommended.
LAMAR	5,026	4,150	3,786	3,721	3,904	4,482	4,688	4,273	4,637	4,293	4,688	2016	5,026	2010	1	4,689	5,027	338	7%	Revision to baseline recommended.
MARION	0	0	0	0	0	0	90	78	82	134	134	2019	134	2019	4	138	138	0	0%	No revision.
MORRIS	25,147	25,116	405	390	24,162	19,688	12,408	15,021	18,216	20,599	20,599	2019	25,147	2010	0	20,599	25,147	4,548	22%	Revision to baseline recommended.
RAINS	12	11	3	3	3	1	0	1	1	1	1	2015	12	2010	0	1	12	11	1100%	No revision.
RED RIVER	3	2	2	1	1	1	1	1	1	1	1	2015	3	2010	2	3	5	2	67%	No revision.
SMITH	9	3	17	17	10	8	11	8	5	3	11	2015	17	2011	0	11	17	6	55%	Revision to baseline recommended.
TITUS	2,886	3,449	4,062	2,834	2,303	2,147	2,807	2,937	3,134	3,414	3,414	2019	4,062	2012	3	3,417	4,065	648	19%	Revision to baseline recommended.
UPSHUR	69	50	54	50	27	22	20	29	39	41	41	2019	69	2010	9	50	78	28	56%	Revision to baseline recommended.
VAN ZANDT	203	274	263	304	507	170	133	67	80	51	170	2015	507	2014	0	170	507	337	198%	Revision to baseline recommended.
WOOD	1,739	1,679	2,532	1,463	1,666	1,732	2,579	2,636	2,470	2,093	2,636	2017	2,636	2017	21	2,657	2,657	0	0%	No revision.

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Table 8 Recommended Revisions to Projected Draft Manufacturing Water Demands for Counties within Region D (2030-2080)

	Baseline				Recom	mended F	Revised Pr	ojection		
County	Water Demand (Revised in Green)	Statewide WUS Average Annual Rate of Change (production growth proxy delta	CBP Historical Average Annual Rate of Change (economic proxy delta)	2030	2040	2050	2060	2070	2080	Comment
BOWIE	1,674	0.96%	0.37%	1,835	1,903	1,974	2,047	2,123	2,202	Revision recommended based on revised 10-year maximum as baseline.
CAMP										No revision recommended.
CASS										No revision recommended.
DELTA										No revision recommended.
FRANKLIN										No revision recommended.
GREGG	1,416	0.96%	0.37%	1,552	1,610	1,670	1,732	1,796	1,863	Revision recommended based on revised 10-year maximum as baseline.
HARRISON	23,486	2,500 ac-ft/yr	0.37%	25,986	26,952	27,954	28,993	30,071	31,189	Revision recommended based on revised 10-year maximum as baseline, inclusion of 90% of Eastman reported WUS amounts and assumed 2030 growth of 2,500 ac-ft/yr per 02/27/2023 Eastman email.
HOPKINS	951	0.96%	0.37%	1,042	1,081	1,121	1,163	1,206	1,251	Revision recommended based on revised 10-year maximum as baseline.
HUNT	579	0.96%	0.37%	635	659	684	709	735	762	Revision recommended based on revised 10-year maximum as baseline.
LAMAR	5,027	0.96%	0.37%	5,510	5,715	5,928	6,148	6,377	6,614	Revision recommended based on revised 10-year maximum as baseline.
MARION										No revision recommended.
MORRIS	25,147	0.96%	0.37%	27,561	28,586	29,649	30,751	31,894	33,080	Revision recommended based on revised 10-year maximum as baseline.
RAINS										No revision recommended.

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	Baseline				Recom	mended R	Revised Pro	ojection		
County	Water Demand (Revised in Green)	Statewide WUS Average Annual Rate of Change (production growth proxy delta	CBP Historical Average Annual Rate of Change (economic proxy delta)	2030	2040	2050	2060	2070	2080	Comment
RED RIVER										No revision recommended.
SMITH	17	0.96%	0.37%	19	20	21	22	23	24	Revision recommended based on revised 10-year maximum as baseline.
TITUS	4,065	0.96%	0.37%	4,455	4,621	4,793	4,971	5,156	5,348	Revision recommended based on revised 10-year maximum as baseline.
UPSHUR	78	0.96%	0.37%	85	88	91	94	97	101	Revision recommended based on revised 10-year maximum as baseline.
VAN ZANDT	507	0.96%	0.37%	556	577	598	620	643	667	Revision recommended based on revised 10-year maximum as baseline.
WOOD										No revision recommended.

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Mining

Per the Exhibit C Guidelines, mining water demand projections include water used for oil and gas development, as well as extraction of coal and lignite, sand aggregate, and other resources. Such projections do not include water use required for the transportation or refining of materials. Data utilized for the development of the mining use projections are derived from both surveyed and non-surveyed entities, and are based on a mining study conducted in partnership with the U.S. Geological Survey and the University of Texas Bureau of Economic Geology.

The changes in the draft projected mining water use in Region D (compared to the projections of the 2021 Region D Plan) appear largely driven by estimated reductions in combined oil & gas and aggregate uses for numerous counties, and increased projections in use for Bowie County (aggregates), Harrison County (oil and gas, coal), and Wood County (oil and gas, aggregates). As no discrepancies have been identified in the reporting and accompanying data, no revisions are recommended to the draft projections of mining water use for the purposes of the 2026 Region D Plan.

Steam-Electric Power Generation

Per the Exhibit C Guidelines, water use for steam-electric power generation is consumptive use reported to the TWDB through the annual WUS. The projections of water use for steam-electric power generation do not include water used in cogeneration facilities (included in manufacturing projections) or facilities which do not require water for production (wind, solar, dry-cooled generation), or hydro-electric generation facilities.

The baseline for the draft water demand projections is based on the highest county-aggregated historical steam-electric power water use in the most recent five years (2015-2019). Subsequent demand projections after 2030 are held constant throughout the planning period. For the identification and characterization of facilities used to develop the draft projections, TWDB staff reviewed information from state and federal reports, as well as information developed from previous water plans. Included in this review is an annual database from the U.S. Energy Information Administration (EIA), called EIA-860, which includes data about power generating facilities and infrastructure across the nation.

For the near-term projected decade (2030), proposed or existing, non-surveyed facilities identified in the EIA-860 reports (or other sources) are added to the baseline amount. TWDB staff estimated the anticipated annual water use based upon the non-surveyed facilities' fuel type, generation capacity, average water use per fuel type, and average operational time.

Anticipated demand from future facilities is then added to the demand projections from the anticipated operation date through 2080, although in practice, no such future facilities have been identified within Region D. Water use of power generation facilities scheduled for retirement in the state and federal reports is subtracted from the baseline or the decade in which they are projected to retire.

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The fifth criteria for adjustment identified in the Exhibit C Guidelines for steam-electric power generation water demand projections (Section 2.2.2.3, Item 5) is, "[e]vidence that a currently operating power generation facility has experienced a higher dry-year water use beyond the most recent five years, within the most recent 10 years." The Region D RWPG again considered planning for water demands during drought conditions as specified in TAC §357.10 (39).

The Region D RWPG performed a comparative analysis (presented in Table 9 below) based on the historical water use for steam-electric power generation over the 2010-2019 period, employing the use data provided by TWDB and information provided by Eastman (Attachment 2) and AEP (Attachment 3).

The information provided by Eastman supports revisions to the estimated annual historical facility uses for steam-electric power generation in Harrison County via application of a 10% split of the reported WUS data for steam-electric power generation (see accompanying discussion on Table 6 above and Attachment 2 for more detail).

The information within Attachment 3 supports several revisions proposed and adopted for the purposes of the 2021 Region D Plan, and are again incorporated herein. These revisions are corrections to historical water use amounts for specific years, as follows:

- Harrison County Steam Electric Maximum reported water use in 2012 for the Pirkey facility should be 21, 112 ac-ft. This is the sum of the 2012 reported steam electric surface water use for Harrison County in TWDB supporting data of 14,980 ac-ft, 4,851 ac-ft of forced evaporative losses (as reported by AEP in Annual Forced Evaporation Report (2012), and 1,281 ac-ft of industrial reuse as reported by the City of Longview (Longview Email 1).
- Morris County Steam Electric Incorrect value for 2010 use as identified by AEP, should be corrected to 50 ac-ft as reflected in AEPRequest_Email2 and ' water2011 wgc.xlsx' workbook, "Forced Evaporation Losses" worksheet for Lone Star Power Plant.

As noted above, the baseline for the draft projections of water use in each county were based on the maximum over the 5-year, 2015-2019 period. The Region D RWPG's analysis utilizes the TWDB data (with the above corrections incorporated), and compares maximum steam-electric power generation water uses by county over a longer 10-year (2010-2019) period.

Noting the importance of capturing trends in use and in the retirement of facilities, the analysis performed by the Region D RWPG excludes historical uses over the 2010-2019 period that were reported by facilities that are presently retired. With the retired facilities excluded, 10-year maximums have been calculated and compared (shown in green highlights in Table 9) to identify those counties recommended by the Region D RWPG to use a revised baseline water demand based on the maximum over the 10-year (2010-2019) period. These revised baselines function as a more conservative representation of water demands for steam-electric power generation during drought conditions.

The recommended revisions to the projections of steam-electric power generation water demand are shown in Table 10.

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Table 9 Comparative Analysis of 5- and 10-year Maximum Historical Facility Use by County within Region D (2010-2019)

				Histo	rical Facil	ity Use by	County (S	Source: T\	WDB)				Droft		Max 5-yr Max 1		ax 5-yr Max 10-yr Revised 10-yr			
County	Facilities	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Non- Surveyed Estimate	Comment	Draft Baseline	(excluding retired facilities)	(excluding retired facilities)	Baseline including Non-Surveyed Estimate	Diff	% Diff.	Comment
GREGG	SOUTHWESTERN ELECTRIC POWER COMPANY-KNOX LEE PLANT	825	940	915	767	412	362	361	195	220	198	0		362	362	940	940	578	160%	Revised baseline recommended based on 10-year maximum representative of drought conditions
HARRISON	EAST TEXAS ELECTRIC COOP INC-HARRISON COUNTY POWER PROJECT, EASTMAN CHEMICAL COMPANY TEXAS OPERATIONS, SOUTHWESTERN ELECTRIC POWER COMPANY-SWEPCO PIRKEY POWER PLANT	13,030	19,042	23,145	18,996	16,642	14,818	13,688	12,754	11,302	7,315	0	Eastman Chemical survey was included with Draft MFG in 2022, WUS NAICS changed to reflect EIA reported NAICS code in 2027. Revised to 10% of WUS amount per 02/27/2023 email from Eastman Chemical. 2012 corrected to 21,112 ac-ft for Pirkey = 14980 surf. Water (TWDB) + 4,851 ac-ft forced evap losses (AEP Annual Frced Evap Report 2012)+ 1,281 ac-ft Ind. Reuse (Longview Data)	19,601	14,818	23,145	23,145	3,544	18%	Revised baseline recommended based on 10-year maximum representative of drought conditions. The 2012 amount for Pirkey corrected per AEP, addition of 10% of Eastman Chemical historical annual facility use from WUS per 02/27/2023 email from Eastman Chemical.
HUNT	GREENVILLE ELECTRIC UTILITY-POWERLANE PLANT	343	373	299	207	303	218	191	67	55	124	0		218	218	373	373	155	71%	Revised baseline recommended based on 10-year maximum representative of drought conditions
LAMAR	LUMINANT GENERATION COMPANY LLC-LA FRONTERA HOLDINGS LLC-LAMAR POWER PLANT, PARIS ENERGY CENTER	336	364	360	272	415	5,511	4,708	4,515	5,706	5,538	0	Luminant purchased ca. 2015.	5,706	5,706	5,706	5,706	0	0%	No revision.
MARION	SOUTHWESTERN ELECTRIC POWER COMPANY-WILKES POWER PLANT	2,659	2,290	4,257	2,378	1,661	2,310	1,992	914	1,394	1,898	0		2,310	2,310	4,257	4,257	1,947	84%	Revised baseline recommended based on 10-year maximum representative of drought conditions
MORRIS	SOUTHWESTERN ELECTRIC POWER COMPANY-LONE STAR POWER PLANT	50	2	2	2	2	6	5	1	6	1	0	2010 amount of 3,421 ac-ft incorrect, should be 50 ac-ft per AEP.	6	6	50	50	44	733%	Revised baseline recommended based on 10-year maximum representative of drought conditions, 2010 amount corrected per AEP.
TITUS	SOUTHWESTERN ELECTRIC POWER COMPANY-WELSH POWER PLANT	24,693	29,541	25,101	21,561	19,104	14,645	12,782	11,788	12,273	6,834	0	Confirmed Monticello facility retirement after 2018, Monticello removed.	14,645	14,645	29,541	29,541	14,896	102%	Revised baseline recommended based on 10-year maximum representative of drought conditions.

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RWPG Revision Requests 2030 2040 2070 2080 2050 2060 County Comment BOWIE No revision recommended. CAMP No revision recommended. CASS No revision recommended. DELTA No revision recommended. FRANKLIN No revision recommended. Revised baseline recommended based on 10-year maximum representative of GREGG 940 940 940 940 940 940 drought conditions Revised baseline recommended based on 10-year maximum representative of drought conditions. The 2012 amount for Pirkey corrected per AEP, addition of 10% of HARRISON 23,145 23.145 23.145 23.145 23.145 23.145 Eastman Chemical historical annual facility use from WUS per 02/27/2023 email from Eastman Chemical. HOPKINS No revision recommended. Revised baseline recommended based on 10-year maximum representative of HUNT 373 373 373 373 373 373 drought conditions LAMAR No revision recommended. Revised baseline recommended based on 10-year maximum representative of MARION 4,257 4,257 4,257 4.257 4,257 4,257 drought conditions Revised baseline recommended based on 10-year maximum representative of MORRIS 50 50 50 50 50 50 drought conditions, 2010 amount corrected per AEP. RAINS No revision recommended. **RED RIVER** No revision recommended. SMITH No revision recommended. Revised baseline recommended based on 10-year maximum representative of TITUS 29,541 29.541 29.541 29.541 29,541 29.541 drought conditions. UPSHUR No revision recommended. VAN ZANDT No revision recommended. WOOD No revision recommended.

Table 10 Recommended Revisions to Projected Draft Steam-Electric Power Generation Water Demands for Counties within Region D (2030-2080)

MEETING OF THE North East Texas Regional Water Planning Group WEDNESDAY, March 15, 2023

> Agenda Item 8 Financial Report



October 14, 2022

Mr. Kyle Dooley, P.E. Executive Director/CEO 228 Texas Ave., Suite A New Boston, TX 75570

RE: September 2022 Invoice – 2026 Region D Water Planning (TWDB Contract No. 2148302556 / Carollo # 200343)

Dear Mr. Dooley:

Please find the attached invoice for services performed in September 2022, under the above referenced contract. The Carollo Team has been working on the following items for the 2026 Region D Regional Water Plan:

		Current	Future	Problems
Task No.	Task Description	Progress	Progress	Encountered/Resolution
1	Planning Area Description	n/a	n/a	n/a
2A	Non-Municipal Water Demand Projections	Continued review of draft irrigation and mining projections, methodology and application to Region D counties.	Continued engagement and analyses.	None.
2В	Population and Municipal Water Demand Projections	Evaluation of per capita water usage at WUG level.	Continued engagement and analyses.	None.
8	Recommendations Regarding Unique Stream Segments and/or Reservoir Sites and Legislative & Regional Policy Issues	n/a	n/a	n/a
10	Public Participation and Plan Adoption	Internal project coordination and preparation for NETRWPG meeting.	Continued internal project coordination, preparation and participation in Oct. 19 NETRWPG meeting.	None.

Should you have any questions regarding this matter, please don't hesitate to contact me.

Sincerely,

Carollo Engineers, Inc.

14 au

Tony L. Smith, P.E. Project Manager

TLS;

Enclosures

200343 | 2026 Region D Progress Rpt September 2022.docx







Attn: Mr. Kyle Dooley, P.E., Executive Director/CEO 228 Texas Ave., Suite A New Boston, TX 75570
 October 14, 2022

 Project No.:
 200343

 Invoice No.:
 FB28651

Regional Water Plan for the North East Texas Regional Water Planning Group (Region D RWPG) Total Contract: \$200,691

Professional Servic	es from Septe	<u>mber 01, 2022 to Sep</u>	tember 30, 2022			
Task 2A Professional Person	00002A	Non-Municipa	al Water Demand Pr	ojections		
			Hours	Rate	Amount	
Project Professiona	al					
	Smith, Tony		4.0	86.05	344.23	
		Totals	4.0		344.23	
			Fringe	344.23	516.34	
			Overhead	516.34	1,023.05	
		Total Labor				1,023.05
					02.05	
FIOIL		Total Additional Fee	96		92.95	02.05
			5		92.95	52.55
Billing Limits Total Billings Limit		Current 1,116.00	Prior 7,393.46	To Date 8,509.46 24,152.00		
Remaining				15,642.54		
			Task Tota	<u> </u>	\$	1,116.00
Task 2B Professional Persor	00002B	Population a	nd Municipal Water I	Demand Projections		
			Hours	Rate	Amount	
Project Professiona	al					
	Smith, Tony		3.0	86.05	258.17	
		Totals	3.0	250.47	258.17	
			Fringe	258.17	387.25	
		Total Labor	Overnead	387.25	/0/.28	767 28
Additional Fees						707.20
Profit					69.71	
		Total Additional Fee	es		69.71	69.71
Billing Limits		Current	Prior	To Date		
Total Billings		836.99	4,860.99	5,697.98		
Limit				42,734.00		
Remaining				37,036.02		
			Task Tota	<u> </u>	\$	836.99

Task 10	000100	Public Participation and Plan Adoption										
Professional Persoi	nnei		Hours		Rate	Amount						
Project Profession	al Smith, Tony	Totals	4.0 4.0	Fringe Overhead	86.05 344.23 516.34	344.23 344.23 516.34 1,023.05		1 000 05				
Additional Fees		Total Labor						1,023.05				
Profit Travel - Company <i>Mileage</i>	Vehicle	<u>Quantity</u> 0 Total Additional Fe	ees		<u>Rate</u> 0.585	92.95 0.00 92.95		92.95				
Billing Limits Total Billings Limit Remaining		Current 1,116.00	:	Prior 17,361.95	To Date 18,477.95 56,750.00 38,272.05	9 5 0						
				Task Tota	l		\$	1,116.00				
				Project To	 		\$					
	200343.05			2026 Regio	n D - SUBS		_					
TASK 2A Consultants Sub-Consultants	00002A	Non-Municiț	oal Water	Demand Pr	ojections							
	8/23/2022	HEI Total Cons	ultants	VO1040190)	2,932.50 2,932.50	\$	2,932.50				
				Task Tota Subconsu	l Itant Total		\$ \$	2,932.50 2,932.50				
Billing Limits Total Billings Limit Remaining			Curren 2,932.50	t I	Prior 0.00	To-Date 2,932.50 52,611.00 49,678.50						
				Project To			\$					
Retainage Current Retainage Prior Retainage Retainage To-Date	2	300.07 (5% of 6,001 1,480.81 1,780.88	1.49)					- 300.07				
					Please Pay	This Amount	\$	5,701.42				
Budget Category B	reakdown Salaries & Wages Fringe Overhead Profit Travel Other Expenses ontractor Services Total Retainage Total		946.63 473.30 1,393.45 255.61 0.00 2,932.50 6,001.49 - 300.07 5,701.42									

Project Summary

Contract Amount	200,691.00
Less Current Invoice	5,701.42
Less Total Retainage to Date	1,780.88
Less Prior Amount Invoiced	28,135.59
Balance Remaining	165,073.11

Remit To: P.O. Box 30835 | Salt Lake City, UT 84130-0835 | United States Phone: 1-800-523-5822

Outstanding Invoices

Number	Date	Balance	Retainage	Now Due
FB21748	4/12/2022	3,180.59	167.40	3,180.59
FB24512	7/1/2022	3,217.64	169.35	3,217.64
FB25172	7/22/2022	7,913.02	416.47	7,913.02
FB25906	8/5/2022	3,691.67	194.30	3,691.67
FB27290	9/22/2022	2,385.44	125.55	2,385.44
Total		20,388.36	1,073.07	20,388.36

For any questions regarding this invoice please contact us at ClientInvoicing@carollo.com.

PROGRESS BILLING Please submit invoice in one pdf format to: <u>accountspayable@carollo.com</u>

CAROLLO ENGINEERS, INC.	HAYES ENGINEERING, INC (SUBCONSULTANT)
If mailing invoice, send to:	2126 Alpine Rd.
4600 W. Washington St., Ste. 500	Longview, TX 75601-3401
Phoenix, AZ 85034	(903) 758-2010
Attn: Acounts Payable	Sent by: Paula Coleman, Ext. 23
Subject: <u>Region D Water Plan</u>	Date sent: 8/31/22
Carollo Project Number: <u>200343</u>	Hayes Engineering Invoice Number: 1
Professional Services Period Ending:8/31/202	22 Hayes Engineering Invoice Date: 8/31/2022

Acct'g Item No	Task Summary	Current Period	Previous Billings	Job to Date	Contract Limits	% of Budget
	1		\$ -	\$ **	\$1,435.00	0.00%
	2A	\$ 2,932.50	\$ -	\$ 2,932.50	\$4,262.00	68.81%
	2B		\$ -	\$ -	\$4,748.00	0.00%
	10		\$ -	\$ -	\$39,000.00	0.00%
	Total Amounts	\$ 2,932.50	\$0.00	\$2,932.50	\$49,445.00	

\$

5.93%

Prior Billings Not Paid

Progress Percent Complete (based on completed work)

NOTE: SUBCONSULTANT's Current Period Invoice attached.

2126 ALPINE RD. LONGVIEW, TX 75601 (903) 758-2010 paula@hayesengineering.net www.hayesengineering.net



INVOICE

BILL TO Carollo Engineers, Inc. 8911 Capital of Texas Hwy. North, Bldg. 2, Ste. 2200 Austin, TX 78759

INVOICE #	DATE	TERMS	r	DUE DATE
10939	08/31/2022	Net 30		09/30/2022
AMOUNT BILLED TO DATE \$2,932.50		PROJECT NAME Region D Round 6 #200343		

	DESCRIPTION	QTY	RATE	AMOUNT
Task 1	Planning Area Description	0	1,435.00	0.00
Task 2A	Non-Municipal Water Demand Projections	0.688058	4,262.00	2,932.50
Task 2B	Population and Municipal water Demand Projections	0	4,748.00	0.00
Task 10	Public Participation and Plan Adoption	0	39,000.00	0.00
				Subtotal: 2,932.50
40 Less Previous Invoices		1	0.00	0.00
				\$2 932 50

Thank you for your business.

BALANCE DUE

\$2,932.50



November 18, 2022

Mr. Kyle Dooley, P.E. Executive Director/CEO 228 Texas Ave., Suite A New Boston, TX 75570

RE: October 2022 Invoice – 2026 Region D Water Planning (TWDB Contract No. 2148302556 / Carollo # 200343)

Dear Mr. Dooley:

Please find the attached invoice for services performed in October 2022, under the above referenced contract. The Carollo Team has been working on the following items for the 2026 Region D Regional Water Plan:

		Current	Future	Problems
Task No.	Task Description	Progress	Progress	Encountered/Resolution
1	Planning Area Description	n/a	n/a	n/a
2A	Non-Municipal Water Demand Projections	Analyses of underlying methodologies for irrigation and mining as applied to counties in Region D.	Analysis and development of recommendations for potential revisions to draft non-municipal water demand projections.	None.
2В	Population and Municipal Water Demand Projections	n/a	n/a	None.
8	Recommendations Regarding Unique Stream Segments and/or Reservoir Sites and Legislative & Regional Policy Issues	n/a	n/a	n/a
10	Public Participation and Plan Adoption	Internal project coordination, preparation and participation in Oct. 19, 2022 NETRWPG meeting.	Continued internal project coordination and engagement.	None.

Should you have any questions regarding this matter, please don't hesitate to contact me.

Sincerely,

Carollo Engineers, Inc.

au

Tony L. Smith, P.E. Project Manager

TLS;

Enclosures

200343 | 2026 Region D Progress Rpt October 2022.docx







Attn: Mr. Kyle Dooley, P.E., Executive Director/CEO 228 Texas Ave., Suite A New Boston, TX 75570 November 18, 2022Project No.:200343Invoice No.:FB29512

- -

Regional Water Plan for the North East Texas Regional Water Planning Group (Region D RWPG) Total Contract: \$200,691

Professional Services from October 01, 2022 to October 31, 2022

Task 2A Professional Person	00002A I nel	Non-Municipal Water Demand Projections						
		H	ours	Rate	Amount			
Project Professiona	I							
-	Smith, Tony		2.0	86.05	172.11			
Professional								
	Pinckney, Michael		8.0	73.72	589.76			
	Totals		10.0		761.87			
			Fringe	761.87	1,142.80			
			Overhead	1,142.80	2,264.27			
	Total	Labor					2,264.27	
Additional Fees							-	
Profit					205.73			
	Total	Additional Fees			205.73		205.73	
Billing Limits		Current	Prior	To Date				
Total Billings		2,470.00	8,509.46	10,979.46				
Limit				24,152.00				
Remaining				13,172.54				
			Task Tota	al		\$	2,470.00	

Task 10	000100	Public Partic	cipation a	and Plan Ad	option				
Professional Perso	nnel		Hours		Dat	٥	Amount		
Project Profession	al		nours		Rat	C	Amount		
.,	Smith, Tony		16.0)	86.0	5	1,376.92		
		Totals	16.0)			1,376.92		
				Fringe	1,376.9	2	2,065.37		
			(Overhead	2,065.3	7	4,092.19		4 9 9 9 4 9
Additional Fees		lotal Labor							4,092.19
Profit							371 80		
Tone		Total Additional Fe	ees				371.80		371.80
Billing Limits Total Billings Limit Remaining		Current 4,463.99	:	Prior 18,477.95		To Date 22,941.94 56,750.00 33,808.06			
				Task Tota	al			\$	4,463.99
				Project T	otal			\$	6,933.99
			==						
Project	200343.0S			2026 Regi	on D - Sl	<u>JBS</u>		<u> </u>	
TASK 2A Consultants Sub-Consultants	00002A	Non-Municiț	oal Wate	r Demand P	Projection	S			
				Task Tota Subconsi	al ultant To	otal		\$ \$	-
Billing Limits Total Billings Limit Remaining			Curren 0.00)	Prior 2,932.5	0	To-Date 2,932.50 52,611.00 49,678.50		
				Project T	otal			\$	
Retainage									
Current Retainage Prior Retainage Retainage To-Date	2	346.70 (5% of 6,933 1,780.88 2,127.58	3.99)						- 346.7
					Ple	ease Pay T	<mark>his Amount</mark>	\$	6,587.29
Budget Category B	reakdown								
	Salaries & Wages		2,138.79)					
	Fringe		1,009.38 3 148 70)					
	Profit		577.53	, }					
	Travel		0.00)					
	Other Expenses		0.00)					
Subco	ontractor Services		0.00)					
	Total		6,933.99)					
	Retainage		- 346.7	7					
	Total		6,587.29)					

Project Summary

-	
Contract Amount	200,691.00
Less Current Invoice	6,587.29
Less Total Retainage to Date	2,127.58
Less Prior Amount Invoiced	33,837.01
Balance Remaining	158,139.12

Remit To: P.O. Box 30835 | Salt Lake City, UT 84130-0835 | United States Phone: 1-800-523-5822

Outstanding Invoices

Number	Date	Balance	Retainage	Now Due
FB21748	4/12/2022	3,180.59	167.40	3,180.59
FB24512	7/1/2022	3,217.64	169.35	3,217.64
FB25172	7/22/2022	7,913.02	416.47	7,913.02
FB25906	8/5/2022	3,691.67	194.30	3,691.67
FB27290	9/22/2022	2,385.44	125.55	2,385.44
FB28651	10/14/2022	5,701.42	300.07	5,701.42
Total		26,089.78	1,373.14	26,089.78

For any questions regarding this invoice please contact us at ClientInvoicing@carollo.com.



December 16, 2022

Mr. Kyle Dooley, P.E. Executive Director/CEO 228 Texas Ave., Suite A New Boston, TX 75570

RE: November 2022 Invoice – 2026 Region D Water Planning (TWDB Contract No. 2148302556 / Carollo # 200343)

Dear Mr. Dooley:

Please find the attached invoice for services performed in November 2022, under the above referenced contract. The Carollo Team has been working on the following items for the 2026 Region D Regional Water Plan:

		Current	Future	Problems
Task No.	Task Description	Progress	Progress	Encountered/Resolution
1	Planning Area Description	n/a	n/a	n/a
2A	Non-Municipal Water Demand Projections	Analysis and development of recommendations for potential revisions to draft non-municipal water demand projections.	Continued analysis and preparation of draft recommendations.	None.
2В	Population and Municipal Water Demand Projections	n/a	Review of county-level population projections.	None.
8	Recommendations Regarding Unique Stream Segments and/or Reservoir Sites and Legislative & Regional Policy Issues	n/a	n/a	n/a
10	Public Participation and Plan Adoption	Continued internal project coordination and engagement.	Continued internal project coordination and engagement.	None.

Should you have any questions regarding this matter, please don't hesitate to contact me.

Sincerely,

Carollo Engineers, Inc.

au

Tony L. Smith, P.E. Project Manager

TLS;

Enclosures

200343 | 2026 Region D Progress Rpt November 2022.docx







Attn: Mr. Kyle Dooley, P.E., Executive Director/CEO 228 Texas Ave., Suite A New Boston, TX 75570
 December 16, 2022

 Project No.:
 200343

 Invoice No.:
 FB30633

Regional Water Plan for the North East Texas Regional Water Planning Group (Region D RWPG) Total Contract: \$200,691

Professional Services from November 01, 2022 to November 30, 2022										
Task 2A Professional Perso	00002A D nnel	Non-Municipal Water Demand Projections								
			Hours	Rate	Amount					
Project Profession	nal									
-	Smith, Tony		2.0	86.05	172.11					
		Totals	2.0		172.11					
			Fringe	172.11	258.17					
			Overhead	258.17	511.52					
		Total Labor					511.52			
Additional Fees										
Profit					46.48					
		Total Additional Fee	S		46.48		46.48			
Billing Limits		Current	Prior	To Date						
Total Billings		558.00	10,979,46	11,537,46						
Limit			-,	24,152.00						
Remaining				12,614.54						
			Task Tota	I		\$	558.00			
— — — — — — —	000100	Public Particin						. –		
Professional Perso	onnel			,p						
		Hours		Rate	Amount					
Project Profession	nal									
,	Smith, Tony		1.0	86.05	86.05					
		Totals	1.0		86.05					
			Fringe	86.05	129.08					
			Overhead	129.08	255.76					
		Total Labor					255.76			
Profit					23 24					
Trone		Total Additional Fee	S		23.24		23.24			
Billing Limits		Current	Prior	To Date						
Total Billings		279.00	22,941.94	23,220.94						
Limit				56,750.00						
Remaining				33,529.06						
			Task Tota	I		\$	279.00			
			Project To	otal 		\$	837.00			
<u> </u>	 200343.0S		2026 Regio	<u> </u>				-		
2			Subconsu	Itant Total		\$	-			

Billing Limits Total Billings Limit Remaining		Current 0.00	Prior 2,932.50	To-Date 2,932.50 52,611.00 49,678.50		
		F	Project Total		\$	837.00
Retainage						
Current Retainage Prior Retainage Retainage To-Date	41.85 (5% of 837.00 2,127.58 2,169.43)				- 41.85
			Please	e Pay This Amount	\$	795.15
Budget Category Breakdown						
Salaries & Wages		258.16				
Fringe		129.09				
Overhead		380.03				
Profit		69.72				
Travel		0.00				
Other Expenses		0.00				
Subcontractor Services		0.00				
Total		837.00				
Retainage		- 41.85				
Total		795.15				
Project Summary						
Contract Amount	200	0,691.00				
Less Current Invoice		795.15				
Less Total Retainage to Date		2,169.43				
Less Prior Amount Invoiced	40),424.30				
Balance Remaining	157	7,302.12				
Remi	t To: P.O. Box 3083	5 Salt L Phone: 1	.ake City, UT 84130 L-800-523-5822	-0835 United Sta	tes	

Outstanding Invoices

Number	Date	Balance	Retainage	Now Due
FB28651	10/14/2022	5,701.42	300.07	5,701.42
FB29512	11/18/2022	6,587.29	346.70	6,587.29
Total		12,288.71	646.77	12,288.71

For any questions regarding this invoice please contact us at ClientInvoicing@carollo.com.



January 9, 2023

Mr. Kyle Dooley, P.E. Executive Director/CEO 228 Texas Ave., Suite A New Boston, TX 75570

RE: December 2022 Invoice – 2026 Region D Water Planning (TWDB Contract No. 2148302556 / Carollo # 200343)

Dear Mr. Dooley:

Please find the attached invoice for services performed in December 2022, under the above referenced contract. The Carollo Team has been working on the following items for the 2026 Region D Regional Water Plan:

		Current	Future	Problems
Task No.	Task Description	Progress	Progress	Encountered/Resolution
1	Planning Area Description	n/a	n/a	n/a
2A	Non-Municipal Water Demand Projections	Continued analysis and preparation of draft recommendations.	Analysis and preparation of draft recommendations and documentation.	None.
2В	Population and Municipal Water Demand Projections	n/a	Continued review of county-level population projections, engagement.	None.
8	Recommendations Regarding Unique Stream Segments and/or Reservoir Sites and Legislative & Regional Policy Issues	n/a	n/a	n/a
10	Public Participation and Plan Adoption	Continued internal project coordination and engagement.	Continued internal project coordination and engagement.	None.

Should you have any questions regarding this matter, please don't hesitate to contact me.

Sincerely,

Carollo Engineers, Inc.

14 au

Tony L. Smith, P.E. Project Manager

TLS;

Enclosures

200343 | 2026 Region D Progress Rpt December 2022.docx







Attn: Mr. Kyle Dooley, P.E., Executive Director/CEO 228 Texas Ave., Suite A New Boston, TX 75570
 January 12, 2023

 Project No.:
 200343

 Invoice No.:
 FB31587

Regional Water Plan for the North East Texas Regional Water Planning Group (Region D RWPG) Total Contract: \$200,691

Professional Services from December 01, 2022 to December 31, 2022											
Task 2A Professional Perso	00002A	Non-Municipal Water Demand Projections									
			Hours	Rate	Amount						
Project Profession	nal										
	Smith, Tony		2.0	86.05	172.11						
		Totals	2.0		172.11						
			Fringe	172.11	258.17						
			Overhead	258.17	511.52						
		Total Labor					511.52				
Additional Fees					46.40						
Profit		Total Additional Fe		46.48 46.48		46.48					
Billing Limits Total Billings Limit Remaining		Current 558.00	Prior 11,537.46	To Date 12,095.46 24,152.00 12,056.54							
			Task Tota	I		\$	558.00				
Task 10	000100	Public Participation and Plan Adoption									
Protessional Perso	onnei		Haura	Data	Amount						
Project Professional		Hours		Kale	Amount						
rioject riolessio	Smith, Tony		1.0	86.05	86.05						
Professional											
Troressional	Pinckney, Micha	ael	1.0	73.72	73,72						
		Totals	2.0	, 0 17 E	159.77						
			Fringe	159.77	239.66						
			Overhead	239.66	474.85						
		Total Labor					474.85				
Additional Fees											
Profit					43.14						
		Total Additional Fe	es		43.14		43.14				
Billing Limits		Current	Prior	To Date							
Total Billings Limit Remaining		517.99	23,220.94	23,738.93 56,750.00 33,011.07							
			Task Tota		\$	517.99					
			Project To		\$	1,075.99					

Project 200343.0S		2026 Region D - SUBS Subconsultant Total			\$	-
Billing Limits Total Billings Limit Remaining	Curren 0.00	t P	rior 2,932.50	To-Date 2,932.50 52,611.00 49,678.50		
		Project Tot	al		\$	1,075.99
Retainage						
Current Retainage Prior Retainage Retainage To-Date	53.80 (5% of 1,075.99) 2,169.43 2,223.23					- 53.8
			Please Pa	y This Amount	\$	1,022.19
Budget Category Breakdown						
Salaries & Wages	331.88					
Fringe	165.95					
Overhead	488.54					
Profit	89.62					
Travel	0.00					
Other Expenses	0.00					
Subcontractor Services	0.00					
Total	1,075.99					
Retainage	- 53.8					
Total	1,022.19					
Project Summary						
Contract Amount	200,691.00					
Less Current Invoice	1,022.19					
Less Total Retainage to Date	2,223.23					
Less Prior Amount Invoiced	41,219.45					
Balance Remaining	156,226.13					
Remit	t To: P.O. Box 30835 Salt Phone:	Lake City, 1 1-800-523	JT 84130-08 ·5822	35 United Sta	tes	
Outstanding Invoices						
Number	Date	Balance	Retaina	ae		
FR28651	10/14/2022	5,701 42	300	9~ .07		5,701 42
FR20512	11/18/2022	6.587 29	346	.70		6.587.29
FR30633	12/16/2022	795 15	41	.85		795 15
CC0059 I	12/ 10/ 2023	, , , , , , , , , , , , , , , , , , , ,	11.			, 55.15
Total	1	13,083.86	688.	62		13,083.86

For any questions regarding this invoice please contact us at ClientInvoicing@carollo.com.