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**Priority Groundwater Management Areas
and Groundwater Conservation Districts**
Report to the 89th Texas Legislature

Water Availability Division

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Priority Groundwater Management Areas and Groundwater Conservation Districts

Report to the 89th Texas Legislature

Prepared by

Texas Commission on Environmental Quality

Texas Water Development Board

SFR-53/24

January 2025

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I. Executive Summary

The Texas Commission on Environmental Quality (TCEQ), in conjunction with the Texas Water Development Board (TWDB), prepares and submits this report to fulfill the requirements of Texas Water Code (TWC), Section 35.018. This 2022-2024 biennial report describes state agency efforts to implement the groundwater management provisions of TWC Chapters 35 and 36.

Acts of the 88th Legislature

Five acts passed by the 88th Legislature, Regular Session, made changes to TWC Chapter 36, as discussed in this report:

- **House Bill (HB) 1971** provides procedures for Groundwater Conservation Districts (GCDs) to act on a permit or permit amendment application.
- **HB 2443** adds TWC 36.1025, which allows individuals with real property interests in a GCD to petition the GCD to adopt or modify certain rules, and requires GCDs to develop rules regarding the petition process.
- **HB 3059** grants taxed-based and fee-based GCDs the ability to impose a separate export fee or surcharge on groundwater exports in certain cases.
- **HB 3278** requires GCDs to submit any supporting materials, such as new or revised groundwater availability model run results, to the district representatives in the groundwater management area after the public comment period for proposed desired future conditions, and that information must be available to be considered at a future joint planning meeting.
- **Senate Bill (SB) 1746** requires GCDs to grant a permit exemption for a temporary water well used to supply a rig that is actively engaged in drilling a groundwater production well permitted by the district.

Three Acts of the 88th Legislature, Regular Session made changes to authorities and responsibilities of existing GCDs. These acts amended the Special District Local Laws Code or the district's enabling legislation for Barton Springs-Edwards Aquifer Conservation District (**SB 1745**), Bandera County River Authority and Groundwater District (**HB 3731**), and Evergreen Underground Water Conservation District (**HB 1699**).

Two Acts of the 88th Legislature, Regular Session, required TCEQ to initiate rulemaking:

- **SB 2440** amended the Local Government Code (LGC), Sections 212.0101(a) and 232.0032(a), to make groundwater availability certification a mandatory part of the plat application and approval process for proposed subdivisions when the groundwater beneath the land serves as the source of water supply. The bill also added established specific circumstances under which a municipal or county authority may waive the certification requirements. TCEQ amended 30 Texas Administrative Code (TAC), Chapter 230, which establishes the form and

content of a groundwater availability certification and requires the transmittal of specific information to TWDB and the applicable GCD. The amendments were adopted Nov. 20, 2024, effective Dec. 12, 2024.

- **HB 4256** amended TWC, Chapter 28, adding Subchapter E that requires TCEQ to establish and administer a Leaking Water Wells Grant Program in certain counties. TCEQ proposed to amend 30 TAC, adding Chapter 353 to establish the program. The proposed rules would implement requirements in HB 4256 including the establishment of criteria for prioritizing projects and criteria for ensuring that wells are permanently plugged. Rule adoption is expected in the summer of 2025.

Priority Groundwater Management Areas

Texas has seven priority groundwater management areas (PGMAs), which together include all or part of 35 counties. Local, legislative, or TCEQ administrative actions to establish GCDs are still authorized in two PGMAs; however, during the 2022-2024 biennium, no actions were taken to create a GCD within either PGMA. In addition, no new PGMA studies were initiated during the biennium.

District Management Plans and Joint Planning Activities

District Management Plans are adopted by GCDs every five years. These plans align with joint planning activities within each Groundwater Management Area (GMA), where GCDs adopt Desired Future Conditions (DFCs) for shared aquifers.

District representatives held 66 joint planning meetings within GMAs between Sept. 1, 2022, and Aug. 31, 2024. See Appendix A, Table 1, for a list of planning meetings within each GMA.

District Management Plan Performance Review

Between Nov. 1, 2022, and Oct. 31, 2024, TWDB's executive administrator (EA) approved 43 full management plans and 25 amended plans. Two of the plans (South Plains UWCD and North Plains GCD) were previously denied and achieved compliance in this biennium. From Nov. 1, 2024, to Oct. 31, 2026, 49 groundwater management plans will be due.

As of Oct. 31, 2024, the Blanco Pedernales and Gonzales County GCDs were in the pre-review of their resubmitted management plans, initially rejected by the TWDB for being administratively incomplete.

Petitions for Inquiry

One petition for inquiry was received during the reporting period. On June 11, 2024, a landowner filed a petition pursuant to TWC 36.3011 and 30 TAC 293.23, seeking a review of Lone Star GCD. The petition alleged that groundwater in the management area

is not adequately protected by the rules adopted by the GCD. On Aug. 28, 2024, after evaluating the petition and considering the responses from Lone Star GCD, TCEQ's ED, and the TCEQ Office of Public Interest Counsel, TCEQ's commission dismissed the petition according to TWC 36.3011 and 30 TAC 293.23. The petitioner filed a motion for rehearing on Sept. 23, 2024, which was overruled by operation of law on Oct. 29, 2024.

Groundwater Management Issues and Recommendations

Petition for Inquiry Process

TCEQ received three petitions for inquiry from 2019 to 2024. A petition review panel process was conducted for Starr County GCD (2019-2020) and the other two petitions were dismissed. During the petition review process for Starr County GCD, TCEQ identified two challenges.

First, TCEQ recognized a challenge directly related to the review panel process. The petition review panel, which was comprised of district general managers, did not have access to legal counsel nor to funding. Panel members spent an estimated 100 to 300 hours of their own time to serve on the panel. In addition, there was no statutory guidance for the review panel specific to the purpose and procedures of the public hearings and notice responsibilities.

Second, the review process highlighted a gap in how TCEQ reviews management plans after DFCs are adopted. Currently, the only remedy for TCEQ to address whether a GCD amended their management plan following DFC adoption is to receive and review an incoming petition from an affected party. TWC 36.108 does not specify the steps a GCD must take following their adoption of the DFCs. TWC 36.3011 enables TCEQ to consider a petition for several reasons, including if a GCD does not amend its management plan within two years of DFC adoption or if the GCD does not adopt rules within a year after adoption of the new plan. However, it is not clear if there is another mechanism that TCEQ may use to determine if a GCD has updated their management plan after DFC adoption, other than the petition process.

TCEQ recommends amendments to TWC 36.3011(d), related to review panels, to improve the review panel process, procedure, and counsel. Additionally, if the Legislature would prefer TCEQ take a more proactive approach to reviewing GCD management plans, statutory guidance could be added to TWC 36.108 to clarify GCD responsibilities related to adopted DFCs, and to clarify TCEQ performance review actions allowed in TWC 36.3011.

Groundwater Management Plan DFCs and Modeled Available Groundwater (MAG)

TWC 36.1071(c) requires TWDB to assist GCDs in their development of groundwater management plans. However, there is no statutory guidance on which DFCs and MAG volumes should be included in a groundwater management plan, where either (1) an aquifer was previously relevant for joint planning purposes but is subsequently not, or (2) a DFC is deemed no longer reasonable through a petition process. This issue affects

GCDs who are developing plans and TWDB when assisting districts and reviewing plans for administrative completeness.

In order to improve the efficiency of the management plan development process, **TWDB recommends clarifying in statute which DFCs and MAG volumes need to be included and considered in a plan if an aquifer is declared non-relevant during joint groundwater planning or if a DFC is considered no longer reasonable.**

PGMAs and GCDs

At present, TCEQ does not recommend any statutory changes to TWC Chapters 35 and 36 related to designating PGMAs or creating and operating GCDs.

II. Acts of the 88th Legislature

This section identifies the Acts of the 88th Legislature that affected GCDs. The first subsection lists and describes legislation that affected the general law authority, and therefore all GCDs. The second subsection addresses two Acts that resulted in rulemaking at TCEQ that affected one or more GCDs. The final subsection outlines legislation that amended existing GCDs. Figure 1 illustrates the location of all GCDs within the state.

Changes to Texas Water Code, Chapter 36, Affecting All GCDs

Five Acts passed by the 88th Legislature made changes to TWC Chapter 36, as discussed below. Unless noted otherwise, the Acts are identified by House Bill (HB) number or Senate Bill (SB) number and by the chapter number for the 88th Legislature, Regular Session Laws.

- **HB 1971 (Chapter 436)** – The Act amended TWC 36.053, 36.058, 36.409, 36.411, and 36.412, by adding procedures for a GCD to act on a permit application or permit amendment application. The bill added a provision that a GCD board with ten or more directors may decide on permit applications with a majority vote of eligible directors. The bill also states that directors with a substantial interest in a matter, who are required to file an affidavit under LGC 171.004(a), may not participate in related closed meetings nor vote unless a majority of directors share a similar interest on the same action. The bill provides that if a hearing is continued, the GCD board must adhere to the time limit for issuing a final decision on permit applications. In addition, parties involved in contested hearings have the right to appeal the board's decision in writing, and while the district must consolidate multiple rehearing requests, only one rehearing per matter may be considered. The board's final decision must be in writing, either adopting proposed findings of fact and conclusions of law proposed by the administrative law judge, or by providing revised findings and conclusions. The board must issue a final decision within 180 days of receiving the State Office of Administrative Hearing's final proposal for decision (PFD), with the possibility of an extension by mutual agreement. If a motion for rehearing is made and granted, the board must make a final decision within 90 days of the original decision. If the board fails to issue a final decision within 181 days, the administrative law judge's PFD becomes the final order. An adopted PFD is considered final, immediately appealable, and not subject to rehearing.
- **HB 2443 (Chapter 504)** – The Act added TWC Section 36.1025, "Petition to Change Rules," granting individuals with real property interests in a GCD the ability to petition the GCD to adopt or modify certain rules. The Act requires the GCD to establish rules regarding the petition process, including the required form and procedure. Within 90 days of receiving a petition, the GCD may either deny the petition and provide an explanation, or proceed with rulemaking per the granted petition.

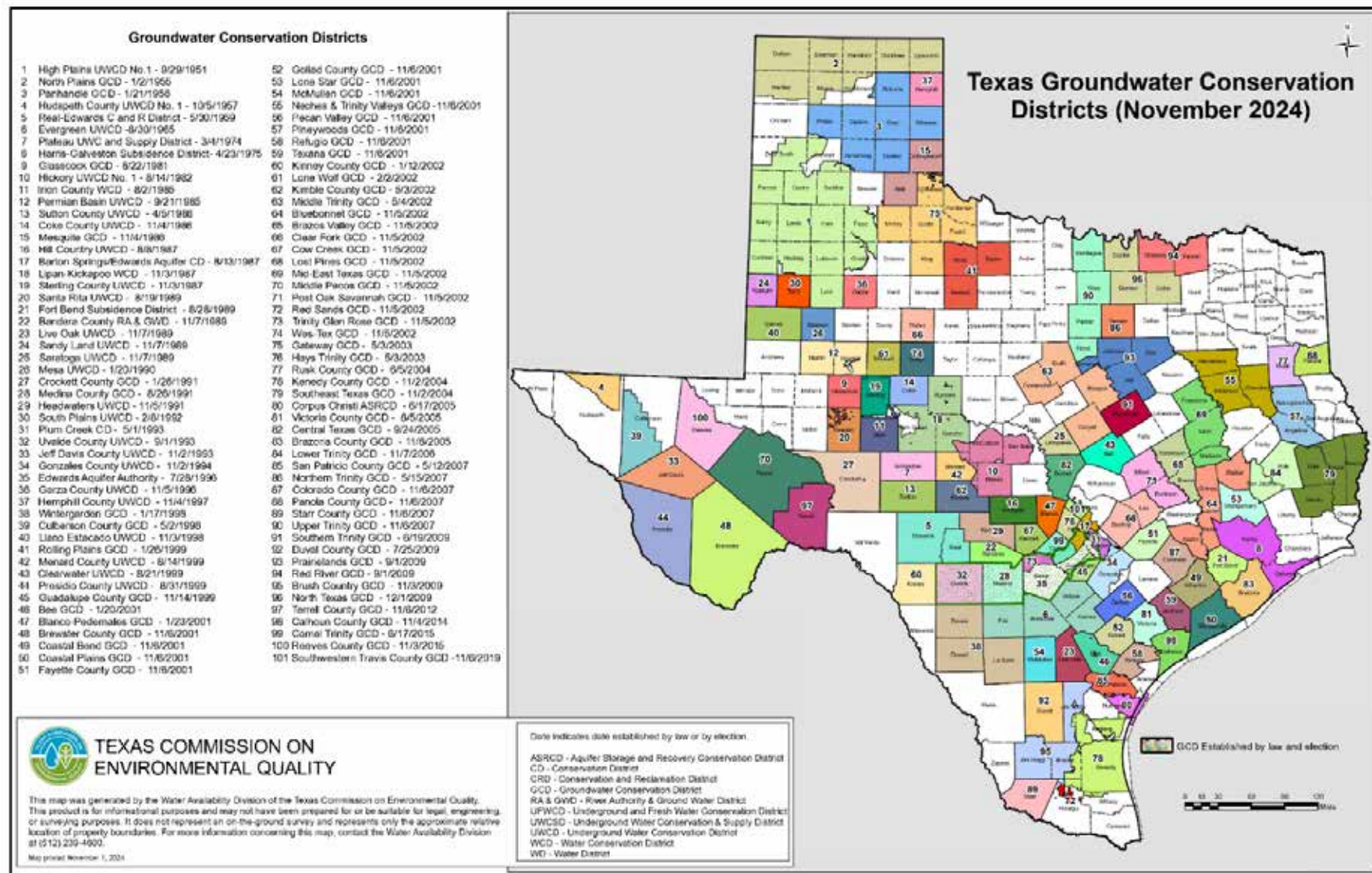


Figure 1. Map of Texas Groundwater Conservation Districts

- **HB 3059 (Chapter 773)** – The Act amended TWC 36.122, granting tax-based GCDs the authority to impose an export fee or surcharge on groundwater exports, up to a maximum rate of 20 cents per thousand gallons. Fee-based GCDs may also impose this fee in addition to their production fee. Starting Jan. 1, 2024, and annually thereafter, the maximum rate of 20 cents per thousand gallons automatically increases by three percent. GCDs governed by a special law regarding export fees may charge fees according to that law or Chapter 36. Any imposed or increased export fee requires board approval after a public hearing. The amended statute allows a GCD to use funds obtained from an increase in an export fee to maintain the operability of wells significantly affected by groundwater development to allow for the highest practicable level of groundwater production while achieving the DFCs. An export fee, when increased on or after Jan. 1, 2024, may only be allocated towards costs associated with assessing and mitigating the impacts related to groundwater development, including maintaining the operability of wells affected by groundwater development, developing or distributing alternative water supplies, and conducting activities such as aquifer monitoring, data collection, and aquifer science.
- **HB 3278 (Chapter 559)** – The Act amended TWC 36.108 to require a GCD, after the public comment period for proposing DFCs, to submit to the district representatives in the groundwater management area a summary of comments received, suggested revisions to the proposed DFCs, and any supporting materials, including new or revised groundwater availability model run results. This information must be made available online for at least 30 days on a generally accessible internet website maintained on behalf of the GMA. GCD representatives must reconvene for a joint planning meeting to review the information provided, consider any district’s suggested revisions to the proposed DFCs, receive public comment, and then adopt the DFCs. The Act also requires that the DFC explanatory report include an explanation for incorporating or not incorporating recommendations from advisory committees and public comments received by the GCDs during the public comment period or at the joint planning meeting.
- **SB 1746 (Chapter 951)** – The Act amended TWC 36.117 by requiring a GCD to grant an exemption from the district requirement to obtain a permit for drilling a water well used to temporarily supply water for a rig that is actively engaged in drilling a groundwater production well permitted by the district. However, the Act allows the GCD to cancel the exemption and require an operating permit or restrict production from the well and assess appropriate fees if the exempted groundwater withdrawals are no longer solely used to supply a rig actively engaged in drilling a district-permitted groundwater production well. The Act specified that the exemption may not exceed 180 days in length; however, the GCD may extend the exemption until the well is completed.

Legislation Resulting in TCEQ Rulemaking

- **SB 2440, 30 TAC Chapter 230** – Sections 212.0101 and 232.0032 of the LGC establish groundwater availability certification requirements in the municipal and county plat application and approval process for proposed subdivisions

when the groundwater beneath the land serves as the source of water supply. SB 2440 amended LGC 212.0101(a) and 232.0032(a) to make groundwater availability certification a mandatory part of the plat application and approval process. The bill also added LGC 212.0101(a)(1) and (a)(2), and 232.0032(a)(1) and (a)(2), which established specific circumstances under which a municipal or county authority may waive the certification requirements. SB 2440 became effective on Jan. 1, 2024, and required that existing commission rules continue in effect for plat applications filed before Jan. 1, 2024.

To implement the amended statute, TCEQ adopted amendments to 30 TAC 230, related to Groundwater Availability Certification for Platting on Nov. 20, 2024, effective Dec. 12, 2024. The charge to TCEQ under LGC, 212.0101(b) and (c) and 232.0032(b) and (c) was to adopt rules establishing the form and content of a groundwater availability certification and to require transmittal of specific information to TWDB and the applicable GCD. Prior to the rulemaking, 30 TAC 230.1 and 230.3 through 230.11 included references to applicability and contained embedded forms. Because applicability is addressed by LGC 212.0101(a), (a)(1), and (a)(2), and 232.0032(a), (a)(1), and (a)(2), and TCEQ was not charged by statute with further defining applicability, the adopted rulemaking replaced applicability provisions with general provisions that identify the purpose of the rule. The adopted rulemaking also removed the embedded forms and replaced those with references to TCEQ forms so that the format of the forms can be updated as technology changes.

- **HB 4256, 30 TAC Chapter 353** – HB 4256 amended TWC, Chapter 28, adding Subchapter E to require TCEQ to establish and administer a Leaking Water Wells Grant Program (Program). On Dec. 18, 2024, TCEQ proposed rulemaking under a new 30 TAC Chapter 353 to establish the Program and its associated requirements and criteria. The proposed rules would implement requirements in HB 4256 which includes the establishment of criteria for prioritizing projects and criteria for ensuring that wells are permanently plugged. Rule adoption is expected in the summer of 2025.

Legislative Amendments for Specific GCDs

According to TWC Chapter 36 and the Texas Constitution, Article XVI, Section 59, TCEQ evaluates legislation that creates a new GCD or modifies existing GCDs. TCEQ provides Legislative Budget Board Water Development Policy Impact Statements and Governor's Letters to state leadership.

Three Acts of the 88th Legislature made changes to authorities and responsibilities of existing GCDs. These Acts amended the Special District Local Laws Code (SDLLC) or the district's enabling legislation.

- **HB 1699 (Chapter 371)** – The Act allows Evergreen Underground Water Conservation District's board of directors to impose a combined production and export fee on water exported from a district in an amount not to exceed 20 cents per thousand gallons of water exported from the district, as well as other fees as authorized by TWC Chapter 36. The fee may only be used to maintain

- the operability of wells significantly affected by groundwater export projects and as authorized by the TWC.
- **HB 3731 (Chapter 240)** – The Act amended SDLLC, Title 6, Subtitle H, by adding Chapter 8850, the Bandera County River Authority and Groundwater District. The Act codifies the enabling legislation of the district as Chapter 8850 and repeals the former enabling legislation of the district (General and Special Laws of Texas, Chapter 629, Acts of the 62nd Legislature, Regular Session, 1971). The Act also removes the applicability of a review of the district by the Sunset Advisory Commission under LGC 325.025. Finally, the Act repeals subsequent amendments to the district’s enabling legislation (General and Special Laws of Texas, Chapter 654, Acts of the 71st Legislature, Regular Session, 1989; Chapter 302, Acts of the 84th Legislature, Regular Session, 2015; and Chapter 763, Acts of the 85th Legislature, Regular Session, 2017).
 - **SB 1745 (Chapter 926)** – The Act modified SDLLC 8802.1045(g) to allow the Barton Springs-Edwards Aquifer Conservation District to raise the annual production fee for non-agricultural water permits. The increase was limited to a maximum of 10 cents per thousand gallons per year, starting Sept. 1, 2023. The goal is to gradually reach the maximum amount stated in SDLLC 8802.1045(b), which is currently the greater of 38 cents per 1,000 gallons, or the cost of raw surface water.

III. Priority Groundwater Management Areas

This section describes agency activities for priority groundwater management areas (PGMAs) during 2023 and 2024. The first subsection describes TCEQ and TWDB activities and collaborations, and the second subsection describes the status of the seven PGMAs in Texas.

Agency Collaboration on the Need for Additional PGMA Studies

In accordance with TWC 35.007(a), TCEQ evaluates the need for additional PGMA studies, using data from the regional water planning process, groundwater management areas, GCDs, and other available information. The statute also requires TCEQ's executive director (ED) to meet annually with TWDB's executive administrator (EA) to review the potential need for new PGMA studies.

For fiscal 2024, TCEQ evaluated the 78 counties in Texas that are not part of a confirmed GCD nor within the boundaries of a PGMA. Staff evaluated groundwater pumping data listed in the TWDB Water Use Surveys for 2009–2021 and compared it to the MAG values and groundwater availability from the *2022 State Water Plan* for the aquifers in those counties. Some counties do not have MAG values because the aquifers are determined to be non-relevant for the purposes of joint planning. Regional water planning groups assign groundwater availability volumes that must be consistent with adopted desired future conditions in counties with no official MAG values. TCEQ's evaluation of the 78 counties identified the following:

- In one county (Williamson), the volume of groundwater pumped from at least one aquifer exceeds that aquifer's groundwater availability and the total groundwater pumped exceeds the combined groundwater availability in all aquifers. Although this evaluation showed groundwater pumping greater than the groundwater availability, municipal water sources in the county have shifted to surface water. Remaining use of groundwater is primarily for domestic and livestock purposes, and because GCDs are limited in how they may enforce groundwater withdrawals from domestic and livestock wells, additional PGMA studies would not be helpful for this area. Additionally, Williamson County and other local entities are exploring options regarding the management of the county's groundwater resources and the county is financing a groundwater study.

- In seven counties (Cameron, Dallas, Jones, Lamar, Palo Pinto, Scurry, and Taylor), either the groundwater pumped from at least one aquifer exceeds that aquifer's groundwater availability or the total groundwater pumped is greater than the combined groundwater availability in all aquifers. TCEQ is not recommending additional PGMA studies in these seven counties at this time. Most groundwater used within the counties is for agricultural purposes, while municipal water use is nearly all surface water. The relative amount of groundwater used in the counties is small compared to surface water use.
- In the remaining 70 counties, groundwater pumping from each aquifer is less than that aquifer's groundwater availability and the total groundwater pumped is less than the combined groundwater availability in all aquifers.

On Jan. 23, 2025, TCEQ's ED met with TWDB's EA representative and discussed the above evaluation. At this meeting, no new PGMA studies were recommended for the counties without a GCD, and both parties recommended the completion and delivery of this report to the 89th Legislature.

Status of Existing PGMAs and Recommendations for GCDs

Currently there are seven PGMAs in Texas, which include all or part of 35 counties (Figure 2). Local, legislative, or TCEQ administrative actions to establish GCDs are still authorized in two of the seven PGMAs. During 2023-2024, no local, legislative, or TCEQ administrative action was taken to create a GCD in the Reagan, Upton, Midland PGMA territory in Upton and Midland counties; nor in the North-Central Texas Trinity and Woodbine Aquifers PGMA territory in Dallas County. Additional detail is provided in the following subsections.

Reagan, Upton, and Midland County PGMA

TCEQ designated the Reagan, Upton, and Midland County PGMA in 1990 and the PGMA includes portions of each county. Currently a portion of the PGMA located in Reagan County is included in the Glasscock GCD and the other portion of the PGMA in Reagan County is included in the Santa Rita UWCD.

In 2016, TCEQ's ED prepared a report that evaluated five options for groundwater management. Of those, the agency recommended adding the portions of the PGMA within Upton County and Midland County to the Glasscock GCD. This was seen as the most feasible, practicable, and economic means to achieve groundwater management in the PGMA. However, no further local, legislative, or TCEQ administrative action was taken to make this change.

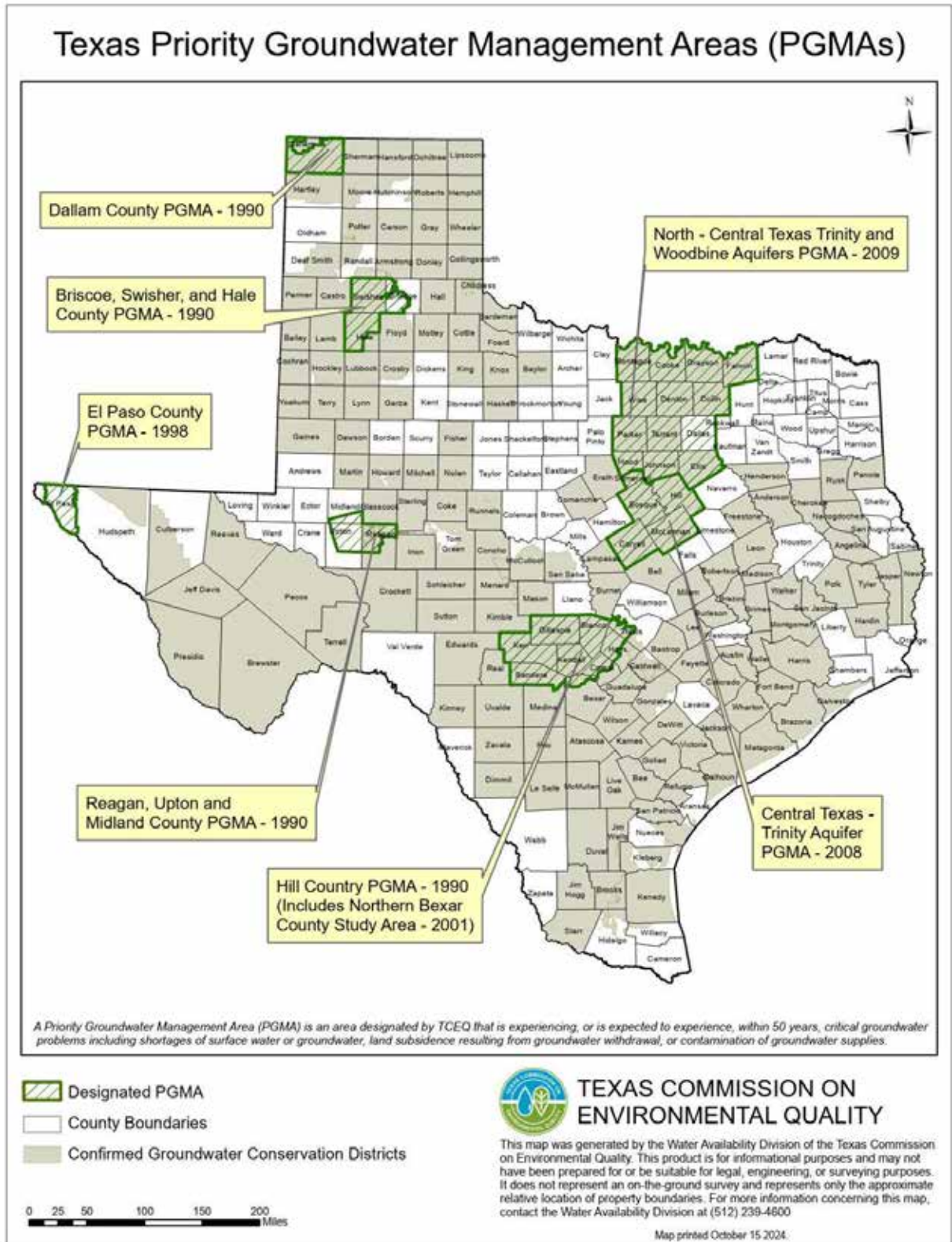


Figure 2. Map of Priority Groundwater Management Areas

Subsequently, during 2021–2022, TCEQ evaluated groundwater availability and use data for Upton and Midland counties. Since the PGMA’s original designation in 1990, groundwater use in the area has shifted significantly from mostly irrigation to mostly oil and gas exploration activity, and this share of oil and gas activity increases each year. A GCD is not authorized to regulate groundwater used for oil and gas activities under the Texas Water Code, Chapter 36. Given this situation, establishing a GCD may not be an effective approach for managing groundwater resources in the Reagan, Upton, and Midland County PGMA.

North-Central Texas Trinity and Woodbine Aquifers PGMA

TCEQ designated the 13-county North-Central Texas Trinity and Woodbine Aquifers PGMA in February 2009. Through subsequent local and legislative efforts, all counties except for Dallas County are now included in a GCD.

Historically, TCEQ was not authorized to create a GCD for Dallas County because TWC 36.0151 (effective Sept. 1, 2015) prohibited TCEQ from creating a GCD before Sept. 1, 2021, within a PGMA county that had a population greater than 2.3 million and where the annual amount of surface water used is more than 50 times the annual amount of groundwater produced. Evaluating groundwater use across the area shows reported usage as relatively low. Some areas even show signs of water level recovery, with groundwater withdrawals remaining minimal compared to the widespread reliance on surface water. Given this situation, establishing a GCD may not be an effective approach for managing groundwater resources in Dallas County. Thus, TCEQ has not taken further administrative action to create a GCD for Dallas County nor recommended adding Dallas County to an existing GCD in this biennium.

IV. District Management Plans and Joint Planning Activities

This section provides an overview of TWDB rules and GCD management planning and joint planning activities from Sept. 1, 2022, to Aug. 31, 2024. It also describes recent TWDB rule amendments, the development and adoption of management plans by GCDs, TWDB review of the management plans, changes to GMA boundaries, joint planning activities conducted by GCDs within GMAs, the development of total estimated recoverable storage (TERS), and the development of MAG values for GCD planning and permitting purposes.

TWDB Rule Amendments

In December 2024, TWDB adopted amendments to 31 TAC Chapter 356, Groundwater Management, to modernize, update, and clarify rule language to facilitate groundwater management in the state and to clarify requirements for GCDs. The amended rule language adds more specificity and clarity regarding DFC packages, including non-relevant aquifer documentation, required elements of groundwater management plans, and brackish groundwater production zones. Additionally, TWDB added definitions to the rule for conservation, brackish groundwater, groundwater management areas, and non-relevant aquifers.

District Management Plan Adoption and TWDB Review

Under TWC 36.1072, TWDB reviews groundwater management plans (plans) developed by GCDs under TWC 36.1071. TWDB also offers technical assistance through plan pre-reviews before districts adopt and submit plans for administrative review and approval.

As of Nov. 1, 2024, there are 98 confirmed GCDs subject to statutory groundwater management plan requirements. Between Nov. 1, 2022, and Oct. 31, 2024, 53 GCDs were required to submit plans to TWDB for the determination of administrative completeness. All of these plans had due dates within this period.

As this report was prepared, the executive administrator received plans from 55 GCDs and determined that 43 of these plans were administratively complete (Table 2 of Appendix A). Of these 43 plans, 41 plans were due between Nov. 1, 2022, and Oct. 31, 2024. Two GCDs, Calhoun County GCD, due June 10, 2027, and Texana GCD, due Sep. 29, 2026, submitted their final plans ahead of schedule during this reporting period.

Table 2 in Appendix A lists the remaining twelve plans due between Nov. 1, 2022, and Oct. 31, 2024, that have not yet been determined to be administratively complete at the time this report was prepared. Eight plans are in the pre-review stage, and two are in the final review stage. Two plans (Blanco Pedernales GCD and Gonzales Co. UWCD) submitted for final review were determined to be administratively incomplete. Those districts have submitted revised plans for re-review.

From Nov. 1, 2022, to Oct. 31, 2024, the executive administrator approved 25 amended plans that added MAG values and adopted DFCs from the 2021 round of joint planning (Table 4 of Appendix A). GCDs must update plans within two years of the adoption of DFCs by the groundwater management area. These updates are typically made in the form of amended plans.

Table 4 of Appendix A lists the 28 management plans with due dates between Nov. 1, 2024, and Oct. 31, 2026.

Groundwater Management Areas Boundary Changes

A GMA is an area delineated by TWDB as most suitable for managing groundwater resources. The primary purpose for the delineation is to facilitate joint planning by GCDs that manage the same aquifer.

In 2002, TWDB adopted boundaries for 16 GMAs, which cover the entire state (Figure 3). These boundaries were delineated primarily using the boundaries of the major aquifers in Texas. In areas with multiple major aquifers, TWDB placed a preference on the shallowest aquifer. TWDB divided several of the major aquifers into multiple GMAs. These divisions were made based on variations in hydrogeologic characteristics and current water-use patterns, and they coincided with natural features as much as possible. Where possible, TWDB aligned GMA boundaries with those of counties and existing GCDs.

TWDB may alter GMA boundaries as required by future conditions and as justified by factual data (TWC 35.004). GMAs may request amendments to the boundaries, either as administrative adjustments or substantive changes. During the current biennium, no GMA boundaries have been adjusted or changed. See Table 1 (Appendix A) for GMA boundaries that have been changed since January 2021.

Currently, TWDB is reviewing a request for administrative GMA boundary changes made by GMAs 7 and 8. The proposed changes would place the entire Edwards-Trinity (Plateau) Aquifer within GMA 7 and the entire Trinity Aquifer within GMA 8, specifically within Taylor County.

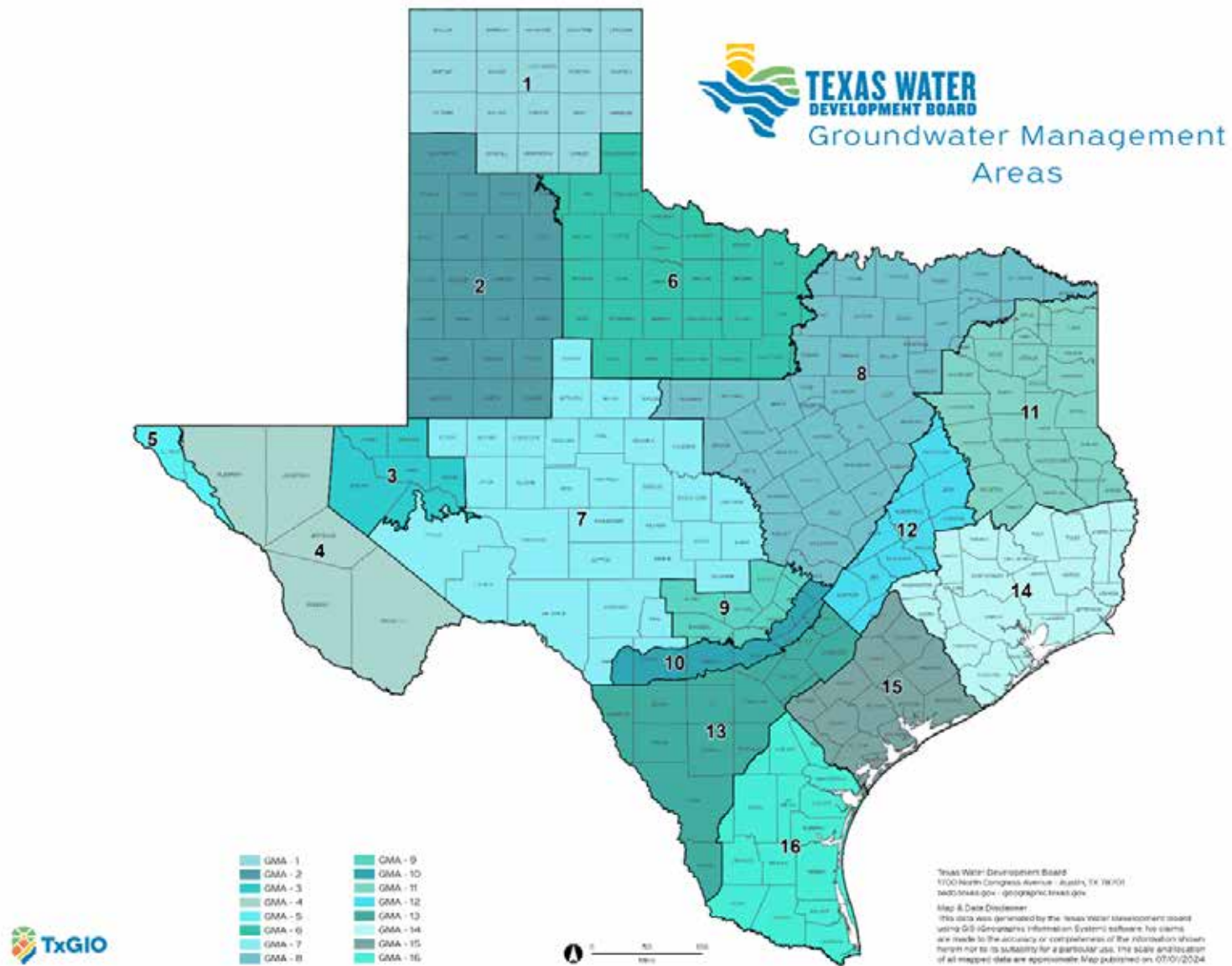


Figure 3. Map of Groundwater Management Areas

Joint Planning Activities

Districts within each GMA meet at least once a year to engage in the joint groundwater planning process; coordinate on regional groundwater issues; and review GCD management plans, the accomplishments of the GMA, and proposals to adopt new or amend existing DFCs. Between Sept. 1, 2022, and Aug. 31, 2024, 66 GMA meetings were held (Table 6, Appendix A).

The major joint planning task for districts within a GMA is to adopt DFCs for common, shared aquifers. A DFC is the desired, quantified condition of groundwater resources (such as water levels, spring flows, volumes, or subsidence) within a GMA at one or more specified future times. For the 2026 joint planning (fourth round), all GMAs have a requirement to propose DFCs by May 1, 2026. After public review and comment on the proposed DFCs, the districts will reconvene and finally adopt DFCs by Jan. 5, 2027. GMAs typically meet more frequently as the deadline to propose DFCs approaches, which explains fewer joint planning meetings this biennium as compared to the last.

TWDB supports joint planning by outlining the overall process and providing reference materials and guidance documents for developing DFCs. TWDB developed [a flow chart outlining the 2026 joint groundwater planning process](#).¹ TWDB staff also attend GMA meetings, present information, and answer questions from GMA member districts.

Total Estimated Recoverable Storage

TWDB calculates the total estimated recoverable storage (TERS) volume for each aquifer within a GMA, [TWC 36.108(d)(3)]. This volume represents the estimated amount of groundwater within an aquifer that accounts for recovery scenarios that range between 25% and 75% of the porosity-adjusted aquifer volume. TERS are a component of one of nine factors GMAs must consider during DFC development.

TERS volumes provided by TWDB are primarily estimated with groundwater availability models. TWDB completed 15 initial TERS reports and one supplemental TERS report for GMAs between March 2013 and June 2014. By June 2014, districts in all GMAs had received TERS reports covering the major and minor aquifers in their areas. A supplemental aquifer TERS report for GMA 10 was issued on December 9, 2016.

Initial TERS reports have not been updated since 2014 (except for the supplemental TERS report for GMA 10). These reports can be viewed on the [TWDB Total Estimated Recoverable Storage webpage](#).²

Modeled Available Groundwater

After adopting DFCs by the statutory deadline, district representatives within a GMA must submit adopted DFCs and an explanatory report to TWDB for administrative review (TWC 36.108). TWDB staff then calculate modeled available groundwater volumes for each aquifer deemed relevant for joint planning purposes by the GMA. Modeled

¹ www.twdb.texas.gov/groundwater/docs/DFCFlowchart_December2023.pdf

² www.twdb.texas.gov/groundwater/management_areas/TERS.asp

available groundwater (MAG) is the amount of water that may be produced on an average annual basis to achieve a DFC established under TWC 36.108.

To view DFCs or MAG reports from the current and previous rounds of joint planning, please visit the [TWDB Groundwater Management Areas webpage](#),³ select the GMA of interest, and then query the table at the bottom of the webpage.

³ www.twdb.texas.gov/groundwater/management_areas/index.asp

V. District Management Plan Performance Review

This chapter describes noncompliance issues related to GCD management plans. These issues might have been initiated by the ED of TCEQ, reported by the State Auditor's Office, or petitioned to TCEQ during the biennium.

TCEQ Performance Review

Per TWC 36.301–36.303, TCEQ is responsible for GCD performance review and action if any of the following occur:

- A GCD management plan is not adopted, readopted, or submitted to the executive administrator of TWDB within statutory deadlines.
- The executive administrator denies approval of a submitted management plan and the GCD either does not address and obtain management plan approval within statutory deadlines, or has exhausted all appeals of the denial.
- The State Auditor determines that a GCD is not operational.
- A review panel has submitted a report and recommendation to TCEQ in response to a petition for inquiry of a GCD.

TCEQ rules that pertain to these review actions are in 30 TAC 293.22 and 293.23. During the 2023-2024 biennium, the following issues with management plan deadlines were identified by TCEQ, all of which were resolved or are currently on a path to resolution.

In fiscal 2022 (July 2022), TWDB's executive administrator determined that the Kennedy County GCD plan was not administratively complete. The district submitted a revised plan to TWDB, which was approved in February 2023.

In fiscal 2024, TWDB's executive administrator determined that two GCDs (North Plains and South Plains GCDs) submitted plans that were not administratively complete. Both districts submitted revised plans that were approved on April 5, 2024, and June 20, 2024, respectively. The plans submitted by Blanco-Pedernales GCD and Gonzales County UWCD plan were both denied by TWDB, but both districts are working with TWDB to have their plans approved.

State Auditor's Office Reviews

GCDs are subject to review by the State Auditor's Office (SAO) to determine whether the GCD is actively engaged in achieving the objectives of its management plan. TCEQ must take appropriate action if the SAO determines that a district is not operational (TWC 36.302). Such action, described in TWC 36.303, includes any of the following:

- Requiring a district to take or refrain from certain actions.

- Dissolving the GCD's board and calling for an election to form a new board.
- Requesting the Office of the Attorney General to appoint a receiver for the district to collect the GCD's assets and perform the GCD's business.
- Dissolving the district.

TCEQ may also make recommendations to the legislature for actions that it deems necessary to accomplish comprehensive management in the district.

Since 1999, SAO has filed 16 reports with TCEQ, including 142 GCD audit reviews, with some GCDs being audited multiple times. SAO has not conducted audits of GCDs for compliance with selected requirements of TWC Chapter 36 during the 2023-2024 biennium.

Petitions for GCD Inquiry

TWC 36.3011 allows an affected person within a GMA to file a petition with TCEQ requesting a review of specific actions of a GCD. Specifically, a person who owns land in the management area; who holds or is applying for a permit from a GCD within the management area; or a person with a legally defined interest in groundwater in the management area may file a petition with TCEQ to request an inquiry for any of the following reasons:

- A GCD fails to perform one of the following:
 - Submit its management plan to the executive administrator of TWDB.
 - Participate in the joint planning process under TWC 36.108.
 - Adopt rules.
 - Adopt the applicable DFCs by resolution.
 - Update its management plan before the second anniversary of the adoption of DFCs for the management area.
 - Update its rules to implement the applicable DFCs before the first anniversary of the date that the district updated its management plan with the applicable DFCs.
- The rules adopted by a GCD are not designed to achieve the applicable DFCs adopted for the management area during the joint planning process.
- The groundwater in the management area is not adequately protected by the rules adopted by a GCD.
- The groundwater in the management area is not adequately protected due to the failure of a GCD to enforce substantial compliance with its rules.

Lone Star GCD

On June 11, 2024, a landowner filed a petition pursuant to TWC 36.3011 and 30 TAC 293.23, seeking a review of Lone Star GCD. The petitioner alleged that the groundwater in the management area is not adequately protected by the rules adopted by the Lone Star GCD.

The petitioner provided copies of the petition to the following GCDs and the two nearby subsidence districts, which are within and adjacent to GMA 14: Bluebonnet GCD; Brazoria County GCD; Lone Star GCD; Lower Trinity GCD; Southwest Texas GCD; Harris-Galveston Subsidence District; Fort Bend Subsidence District; Pineywoods GCD; Mid-East Texas GCD; Brazos Valley GCD; Lost Pines GCD; Post Oak Savannah GCD; Fayette County GCD; Colorado County GCD; Coastal Bend GCD; and Coastal Plains GCD.

The commission received a response to the petition from Lone Star GCD on July 16, 2024. No other responses were received from the other GCDs.

On July 30, 2024, the ED filed a response recommending the petition be dismissed. The ED reviewed both the Petition for Inquiry as well as Lone Star GCD's response, and based on the information contained in these filings, the ED found that Lone Star GCD demonstrated that it was in compliance with its rules as well as the applicable TCEQ rules and TWC statutes. Additionally, the petition for inquiry did not provide documentation or evidence to indicate that the groundwater in GMA 14 was not being protected by Lone Star GCD's rules. The ED determined that the groundwater in the management area is being adequately protected, as required by both rule and statute. TCEQ's Office of the Public Interest Counsel also filed a response recommending the petition be dismissed.

On August 28, 2024, after evaluating the petition, considering the responses, and considering the replies, TCEQ's commission dismissed the petition according to TWC 36.3011 and 30 TAC 293.23. The petitioner filed a motion for rehearing on September 23, 2024, which was overruled by operation of law on October 29, 2024.

VI. Groundwater Management Issues and Recommendations

Issue 1: Challenges for Groundwater Conservation District Petition Review Panels

According to TWC 36.3011, an affected person may file a petition with TCEQ requesting an inquiry of a GCD for any of nine reasons related to its required groundwater management responsibilities. If the commission approves the petition, they will appoint a panel that will review the petition and any evidence relevant to the petition. In a public meeting, the review panel will consider and adopt a report to be submitted to the commission.

TCEQ appointed the first GCD review panel in October 2019 consisting of five GCD managers and one non-voting TCEQ staff member as recording secretary. The panel encountered several challenges. First and foremost, there is no statutory guidance specific to the purpose and procedures for the panel's public hearings and notice responsibilities. Members of the 2019-2020 review panel were volunteers who were solicited by TCEQ's ED. They did not have access to legal counsel or funding, and they each served at the expense of their own GCD. The members of the panel estimate they each provided between 100 to 300 hours of service.

The review panel did an excellent job, and TCEQ greatly appreciated their service to the state. However, based on the challenges they endured, the ED had concerns that it may be difficult in the future to solicit members and seat a review panel. This concern was validated in April 2022 when TCEQ's ED was unable to solicit a full five-member panel for the commission's consideration.

During consideration of the recent Lone Star GCD petition, TCEQ acted proactively to identify panel members in the event the petition was granted. Five volunteers for the potential review panel were identified, but only after two rounds of solicitation.

Statutory guidance would be useful to improve the review panel process, procedure, and counsel, which could be accomplished by amendments to TWC Chapter 36.

Issue 2: Unclear GCD Duties and TCEQ Performance Review Actions

Following review of the petition for inquiry regarding the Starr County GCD, TCEQ discovered a potential gap in how GCD activities are reviewed after the GCD adopts DFCs. TWC 36.108 does not specify the steps that a GCD must take related to DFCs following their adoption, such as when the management plan needs to be updated. Therefore, the only remedy for TCEQ to address the question of whether a GCD amended their management plan following DFC adoption is to receive and review an incoming petition. TWC 36.3011 enables TCEQ to consider a petition for several reasons, including if a GCD does not amend its management plan within two years of DFC

adoption or if the GCD does not adopt rules within a year after adoption of the new plan; however, there is currently no mechanism for TCEQ to review this requirement as it occurs.

Statutory guidance in TWC 36.108 could be provided to clarify GCD responsibilities related to adopted DFCs. In addition, it would be helpful to clarify TCEQ performance review actions in TWC 36.3011.

Issue 3: Desired Future Conditions and Modeled Available Groundwater in Groundwater Management Plans

Statute requires TWDB to assist GCDs in their development of groundwater management plans. Under TWC 36.1072, the executive administrator must approve a management plan submitted by a GCD if it is administratively complete. TWC 36.1071 defines the information required for a management plan to be considered administratively complete. Specifically, the statute requires that districts address DFCs and include MAG in management plans. DFCs and MAG are determined on five-year joint planning cycles by GCDs within groundwater management areas and are subject to change or petition each planning cycle.

There is no statutory guidance on which DFCs and MAG volumes should be included in a groundwater management plan in circumstances where (1) an aquifer was previously relevant for joint planning purposes but is subsequently not, or (2) a DFC is deemed no longer reasonable through a petition process. This issue affects GCDs who are developing plans and TWDB when assisting districts and reviewing plans for administrative completeness. Lack of guidance results in confusion for districts and TWDB on which DFCs and MAG volumes considered in a plan meet the standards for administrative completeness. TWDB has encountered both circumstances while assisting districts in developing plans.

To better assist GCDs during plan development, it would be useful for the statute to clarify which DFCs and MAG volumes need to be included and considered in a plan if an aquifer is declared non-relevant during joint groundwater planning or if a DFC is deemed no longer reasonable. A statutory clarification would make the management plan development process more efficient for GCDs and TWDB.

VII. Recommendations

PGMA and GCD Creation and Operation

TWC 35.018(b)(6) requires that this report include recommendations for changes to TWC Chapters 35 and 36 that would facilitate the creation of PGMAs and the creation and operation of GCDs. At this time, TCEQ does not recommend any additional statutory changes to these chapters to facilitate the designation of PGMAs and the creation and operation of GCDs.

Additional Recommendations

TWC 35.018(b)(8) requires that this report include any other recommendations TCEQ considers relevant. TCEQ recommends the following statutory changes be considered:

1. TCEQ recommends amendments to TWC 36.3011(d), related to review panels, to improve the review panel process, procedure, and counsel.
2. Should the Legislature desire for TCEQ to take a more proactive approach in how GCD actions are reviewed, statutory guidance could be added to TWC 36.108 to clarify GCD responsibilities related to adopted DFCs and clarify TCEQ performance review actions in TWC 36.3011.
3. TWDB recommends clarifying in statute which DFCs and MAG volumes need to be included and considered in a plan if an aquifer is declared non-relevant during joint groundwater planning or if a DFC is considered no longer reasonable.

Appendix A – Tables

Table 1. Number of Joint Planning Meetings in GMAs During the 2023-2024 Biennium

GMA	Number of Joint Planning Meetings
1	3
2	2
3	2
4	4
5	N/A – No GCDs in this GMA
6	2
7	4
8	3
9	10
10	7
11	3
12	7
13	4
14	6
15	6
16	3
Total	66

Table 2. Management Plan Approvals

District Name	Plan Due Date	Approval Date
Bandera County (Co.) River Authority and Groundwater District (RA & GD)	03/15/23	01/20/23
Barton Springs / Edwards Aquifer Conservation District (BSEACD)	11/21/22	12/19/22
Bee GCD	10/31/23	02/09/24
Bluebonnet GCD	10/31/23	10/12/23
Brazos Valley GCD	05/13/24	12/20/23

District Name	Plan Due Date	Approval Date
Brush Country GCD	12/18/22	12/09/22
Calhoun Co. GCD	06/10/27	07/17/23
Comal Trinity GCD	04/25/23	04/20/23
Crockett Co. GCD	11/14/23	07/26/24
Duval Co. GCD	12/14/22	08/25/23
Fayette Co. GCD	11/16/23	03/22/24
Goliad Co. GCD	06/08/23	10/10/23
Guadalupe Co. GCD	12/29/22	12/09/22
Hickory Underground Water Conservation District (UWCD) #1	01/29/24	06/13/24
Hill Country UWCD	10/18/23	02/05/24
Hudspeth Co. UWCD	12/28/23	07/11/24
Irion Co. WCD	06/20/23	07/13/23
Jeff Davis Co. UWCD	12/12/23	03/22/24
Kenedy Co. GCD	07/18/22	02/23/23
Kinney Co. GCD	04/11/23	02/09/23
Lipan-Kickapoo WCD	04/25/23	05/26/23
Lost Pines GCD	01/24/23	07/26/23
McMullen GCD	01/04/24	06/26/24
Mesquite GCD	12/20/23	05/16/24
Mid-East Texas GCD	09/03/24	08/13/24
North Plains GCD	04/18/23	04/05/24
Panhandle GCD	09/17/24	08/08/24
Panola Co. GCD	07/02/23	06/21/23
Pecan Valley GCD	03/15/24	02/20/24
Pineywoods GCD	10/18/23	09/04/23
Plum Creek CD	12/18/22	02/20/23
Post Oak Savannah GCD	12/29/22	01/11/23
Prairielands GCD	05/31/24	04/12/24
Red Sands GCD	04/25/23	10/23/23
Reeves Co. GCD	08/15/23	11/29/23
Refugio GCD	06/28/24	07/17/23
Rusk Co. GCD	12/14/23	11/13/23

District Name	Plan Due Date	Approval Date
South Plains UWCD	07/16/24	06/28/24
Sterling UWCD	06/27/23	08/07/23
Sutton Co. UWCD	12/12/23	03/22/24
Terrell Co. GCD	10/12/23	09/04/23
Texana GCD	09/29/26	07/17/23
Victoria Co. GCD	07/24/23	07/14/23

Table 3. Management Plans Due and Not Approved

District Name	Plan Due Date	Status
Blanco Pedernales GCD	01/23/24	In new pre-review process after non-approval of final plan
Coke Co. UWCD	03/19/24	In pre-review process
Corpus Christi Aquifer Storage and Recovery Conservation District (ASRCD)	07/12/24	In pre-review process
Garza Co. UWCD	09/18/24	In pre-review process
Gonzales Co. UWCD	01/29/24	In new final review process after non-approval of final plan
Kimble Co. GCD	07/12/24	In final review process
Lone Wolf GCD	09/18/24	In pre-review process
Mesa UWCD	03/19/24	In pre-review process
Neches and Trinity Valleys GCD	09/12/24	In pre-review process
Plateau Underground Water Conservation and Supply District (UWCSD)	05/09/24	In final review process
Sandy Land UWCD	05/15/24	In pre-review process

Table 4. Management Plan Amendment Approvals

District Name	Plan Due Date	Approval Date
BSEACD	10/26/24	08/15/24
Central Texas GCD	11/04/23	12/12/23
Clearwater UWCD	11/04/23	08/30/24
Coastal Bend GCD	10/14/23	09/08/24
Coastal Plains GCD	10/14/23	09/06/24

District Name	Plan Due Date	Approval Date
Colorado Co. GCD	10/14/23	04/10/24
Cow Creek GCD	11/15/23	08/20/24
Evergreen UWCD	10/14/23 and 11/19/23	08/20/24
Headwaters GCD	11/15/23	04/10/24
Hemphill Co. UWCD	08/26/23	04/08/24
High Plains UWCD No. 1	08/17/23 and 8/26/23	04/04/24
Live Oak UWCD	11/23/23	06/28/23
Llano Estacado UWCD	08/17/23	12/08/23
Lone Star GCD	01/05/24	07/06/23
Lower Trinity GCD	01/05/24	04/04/24
Middle Trinity GCD	11/04/23	12/12/23
Northern Trinity GCD	11/04/23	02/23/24
Panhandle GCD	08/26/23	08/22/23
Plum Creek Conservation District (CD)	11/19/23 and 10/26/24	12/08/23
Post Oak Savannah GCD	11/04/23 and 11/30/23	08/30/24
Rolling Plains GCD	11/18/23	08/22/23
San Patricio Co. GCD	11/23/23	06/28/23
Southeast Texas GCD	01/05/24	05/12/23
Trinity Glen Rose GCD	11/15/23	07/27/23
Upper Trinity GCD	11/04/23	05/29/23

Table 5. Management Plans Due for Re-Approval in the 2025-2026 Reporting Period

District Name	Plan Due Date	Approval Date
BSEACD	10/26/24	08/15/24
Central Texas GCD	11/04/23	12/12/23
Clearwater UWCD	11/04/23	08/30/24
Coastal Bend GCD	10/14/23	09/08/24
Coastal Plains GCD	10/14/23	09/06/24
Colorado Co. GCD	10/14/23	04/10/24
Cow Creek GCD	11/15/23	08/20/24
Evergreen UWCD	10/14/23 and 11/19/23	08/20/24

District Name	Plan Due Date	Approval Date
Headwaters GCD	11/15/23	04/10/24
Hemphill Co. UWCD	08/26/23	04/08/24
High Plains UWCD No. 1	08/17/23 and 8/26/23	04/04/24
Live Oak UWCD	11/23/23	06/28/23
Llano Estacado UWCD	08/17/23	12/08/23
Lone Star GCD	01/05/24	07/06/23
Lower Trinity GCD	01/05/24	04/04/24
Middle Trinity GCD	11/04/23	12/12/23
Northern Trinity GCD	11/04/23	02/23/24
Panhandle GCD	08/26/23	08/22/23
Plum Creek CD	11/19/23 and 10/26/24	12/08/23
Post Oak Savannah GCD	11/04/23 and 11/30/23	08/30/24
Rolling Plains GCD	11/18/23	08/22/23
San Patricio Co. GCD	11/23/23	06/28/23
Southeast Texas GCD	01/05/24	05/12/23
Trinity Glen Rose GCD	11/15/23	07/27/23
Upper Trinity GCD	11/04/23	05/29/23

Table 6. GMA Boundary Changes Since January 2021

GMA Boundary	Type of change	Explanation of change	Date TWDB approved
GMA 6/8	Substantive	<ul style="list-style-type: none"> · The Trinity Aquifer is fully within GMA 8 in Jack, Palo Pinto, and Shackelford counties. · The Cross Timbers Aquifer is primarily within GMA 6. · This change was requested by district representatives in the GMAs. 	03/10/21

GMA Boundary	Type of change	Explanation of change	Date TWDB approved
GMA 8/9/10	Administrative	<ul style="list-style-type: none"> · Aligned boundaries between GMAs 8 and 9 to coincide with Southwestern Travis County GCD boundaries along the Colorado River, such that the district is fully within GMA 9. · Aligned boundaries between GMAs 8 and 10 along the Colorado River. · Aligned boundaries between GMAs 9 and 10 to coincide with the Barton Springs/Edwards Aquifer Conservation District, such that the district is fully within GMA 10. This change resembles a closer approximation of the actual boundary formed by the outcrop of the Trinity Aquifer to the northwest in GMA 9 and the outcrop of the Edwards (Balcones Fault Zone) Aquifer to the southeast in GMA 10. · The change between GMAs 8 and 10 were made at the discretion of TWDB. · The changes between GMAs 8 and 9 and GMAs 9 and 10 were requested by district representatives within the GMA. 	05/19/21