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Groundwater Conservation Districts Report to the 75th Legislature

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Water Planning and Assessment Division

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Groundwater Conservation Districts Report to the 75th Legislature

Prepared by
Water Planning and Assessment Division

SFR-053
February 1997



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EXECUTIVE SUMMARY

This report is prepared and submitted to the 75th Texas Legislature by the Texas Natural Resource Conservation Commission (TNRCC). The report is prepared in accordance with §5.02 of House Bill 2, passed by the 69th Legislature (Chapter 133, General and Special Laws of the Regular Session, 69th Legislature, 1985). The report provides the status and activities of new groundwater conservation districts, discusses significant activities of the existing groundwater conservation districts, and contains recommendations for legislative consideration regarding suggested changes to Chapter 35 (Groundwater Studies) and Chapter 36 (Groundwater Conservation Districts) of the Texas Water Code. The report further summarizes other legislative acts of the 74th Legislature that affect groundwater conservation districts; discusses the status of activities related to the delineation of, or amendment of groundwater management areas; and discusses issues on groundwater management, groundwater management areas, critical area studies, and critical area designations as required.

Actions of the 74th Legislature

The 74th Texas Legislature created the Garza County Underground and Fresh Water Conservation District, the Hemphill County Underground Water Conservation District (UWCD), and the Oldham County UWCD and validated the creation of the Gonzales County UWCD. The Garza County district was confirmed through election on November 5, 1996. The Hemphill and Oldham County districts have not held confirmation elections to date. In addition, the Edwards Underground Water District was abolished and replaced by the Edwards Aquifer Authority (EAA) on the Texas Supreme Court's unanimous June 28, 1996, decision. The court's decision upheld the constitutionality of the law which created the EAA (Senate Bill 1477, 73rd Legislature, 1993). House Bill 3189 (74th Legislature, 1995) established a temporary board of directors, and subsequently, elected initial and permanent boards for the EAA. Board elections were held on November 5, 1996.

The 74th Legislature passed four other bills that affect groundwater districts. House Bill (HB)1989 authorized the storage of state water in aquifers. HB 2294 provided for the recodification of state law relating to groundwater regulation by groundwater conservation districts. This Act made amendments to, and moved, Chapter 52 of the Water Code into new Chapters 35 and 36. HB 3215 added two additional members to the Harris-Galveston Coastal Subsidence District's board of directors. Senate Bill (SB) 626 indirectly affected groundwater conservation districts. SB 626, referred to as the "Recodification Bill," combined most of the

administrative provisions of the Water Code relating to water districts (Chapters 50 through 66) into new Chapter 49 of the Water Code (Provisions Applicable to All Districts).

The amendment and recodification of Chapter 52 of the Water Code into new Chapters 35 and 36 of the Water Code (House Bill 2294) has separated groundwater conservation districts from the Commission's oversight provided for other water districts under Chapter 49 of the Water Code. Section 52.101 had provided, that to the extent applicable, groundwater conservation districts were governed by Chapter 50 of the Water Code (now Chapter 49 as recodified by Senate Bill 626, 74th Legislature) regarding general reporting requirements and financial reporting requirements. Section 36.052 provides that other laws governing the administration or operations of districts created under Section 52, Article III, or Section 59, Article XVI, Texas Constitution, shall not apply to any district governed by Chapter 36. The Commission no longer has the authority to require the filing of essential financial information and, thus, the Commission's ability to address citizen concerns regarding district operations has been restricted.

Status of Groundwater Districts

Five groundwater conservation districts created since 1989 have failed to schedule or hold confirmation elections to date. These districts include the Haskell/Knox County and the Presidio County districts, created by the 73rd Legislature; the Llano-Estacado (Gaines County) and the Menard County districts, created by the 72nd Legislature; and the Clearwater district, created by the 71st Legislature. The Clearwater district's enabling legislation allows the Bell County Commissioners Court to appoint temporary directors to schedule and hold a confirmation election to create the district. The commissioners court has not appointed temporary directors to date.

With the establishment of the Edwards Aquifer Authority and the Garza County district, there are now 40 groundwater districts created and confirmed (by law or election). These districts are shown in Figure 1. The Panhandle district annexed additional territory during 1996, and the Hickory district narrowly failed to annex Mason County in 1996. No land was withdrawn from any district during the 1995 - 1996 biennium. Four groundwater conservation districts have failed confirmation elections since 1989. These districts included the Central Texas (Burnet County), Comal County, Llano-Uplift (Llano County), and Rolling Plains (Borden, Mitchell, and Scurry Counties) districts. The Comal County district failed its confirmation election on May 6, 1995.

Groundwater Management Issues

Groundwater districts are required to file comprehensive management plans with the Commission; however, the Commission has no authority to approve or take any other action regarding the management plans. Thirty of the 40 established districts have filed management plans to date. From available information, Commission staff can only verify that three of the management plans are current. Also, statute requires districts located in a common management area to coordinate their management plans. Statute does not require the districts to report to the Commission on such coordinated management planning.

An overlap of management jurisdiction exists between the Edwards Aquifer Authority and the Barton Springs/Edwards Aquifer Conservation District. Upon creation, the northern boundary of the Authority overlapped the southern boundary of the Barton Springs district. The Barton Springs district encompasses the hydrologically discrete Barton Springs/Edwards Aquifer Management Area, which is separated hydrologically from Subdivision Number 1 of the Edwards Limestone, Balcones Fault Zone (groundwater management area).

The exceptions and limitations from district authority (permitting certain types of water wells) allowed in Chapter 36 of the Water Code can interfere with a district's authority to manage groundwater resources. The districts have noted that the statutory language can be confusing; difficult to administer; and inconsistent with uniform, local management of groundwater resources.

Under current statute, the critical area process, which authorizes the Commission to initiate creation of a district in a critical area if local initiatives fail, is burdensome and administratively duplicative. The process for Commission-initiated district creation requires extensive Commission action before and after, the established time frame for local actions to create a district.

In response to a petition, the Commission proposed rules in 1995 to alter the boundaries of Subdivision Number 4 of the Ogallala Formation (groundwater management area). The rules proposed to expand the existing boundaries of the area to include the full southern extent of the Ogallala aquifer. Upon consideration of oral testimony, written comments, and further research, the Executive Director's staff proposed removing the southern and western portions of Andrews County and the area in Ector and Midland Counties from the proposed designation. The petitioners did not support the staff's proposed changes. The proposed rule expired after the 180-day limit for filing adopted rules. No other groundwater management area delineations, critical area studies, or critical area designations were conducted during 1995 or 1996.

Legislative Recommendations

- ▶ The Commission recommends the amendment of Chapter 36 of the Water Code to allow general and financial reporting requirements for groundwater conservation districts, which are provided for other districts under Chapter 49 of the Water Code.
- ▶ The Commission recommends the amendment of Chapter 36 of the Water Code to ensure that confirmation and directors' elections for newly created districts are held in a timely manner.
- ▶ The Commission recommends the amendment of Chapter 36 of the Water Code to provide for district comprehensive management plan reporting requirements and coordinated management planning reporting requirements.
- ▶ The Commission recommends the Legislature address the issue of dual management jurisdiction between the Edwards Aquifer Authority and the Barton Springs/Edwards Aquifer Conservation District.
- ▶ The Commission recommends the amendment of Chapter 36 of the Water Code to provide groundwater conservation districts with the flexibility to determine the level of exemptions necessary for their jurisdictions.
- ▶ The Commission recommends the amendment of Chapter 35 of the Water Code to simplify creation of districts in designated critical areas. The Commission also recommends the amendment of Chapter 35 of the Water Code to clarify the equivalency of critical areas as groundwater management areas.

INTRODUCTION

Purpose and Scope

The purpose of this report is to provide updated information on groundwater conservation districts and groundwater management issues for legislative consideration. The report provides information on the activities of recently created and established groundwater conservation districts and highlights major activities of previously existing districts. In addition, groundwater management area activities and issues are discussed, and current activities associated with the state's critical area program are detailed. The report further provides recommended changes to Chapters 35 and 36 of the Water Code.

This is the fifth such report prepared by the Commission, spanning a 10-year period. The previous reports regarding groundwater conservation districts and groundwater management issues have been presented biennially to the 70th (1987) through 74th (1995) Legislatures.

Background/Historical Perspective

The creation of groundwater conservation districts and the designation of "underground reservoirs" for the purpose of groundwater management was first made possible by House Bill 162 (51st Legislature, 1949), codified then as Article 7880-3c, Vernon's Civil Statutes. This law was incorporated into the Water Code in 1971 as Chapter 52, Underground Water Conservation Districts. House Bill 162 authorized the petition process for management area designation and district creation. The law also outlined the powers, duties, and responsibilities for district operation; provided procedures for elections and duties of boards of directors; and allowed procedures for annexation, consolidation, and dissolution of districts.

Groundwater district law has been amended numerous times since originally enacted. House Bill 2 (69th Legislature, 1985) made substantial changes to Chapter 52, including replacing the concept of an "underground reservoir" with that of a "water management area" and authorizing the Commission to designate critical areas. Senate Bill 1212 (71st Legislature, 1989) further modified "underground water management area" provisions and required the Commission to use procedures in accordance with agency rulemaking when designating underground water

management areas. House Bill 2294 (74th Legislature, 1995) provided for a full recodification of Chapter 52 into new Chapters 35 (Groundwater Studies) and 36 (Groundwater Conservation Districts).

Fifty-four groundwater conservation districts have been created within the state since 1951. Most of the districts (43) were created by acts of the Texas Legislature. Seven districts were created in the 1950s and 1960s by the Texas Board of Water Engineers and county commissioners' courts under statutory provisions that have since been repealed. Six of these seven districts were validated at a later date by the Texas Legislature (the seventh district failed confirmation). Four districts have been created by the Commission through the petition process allowed in Chapter 36 of the Water Code.

The Legislature, the Commission or its predecessor agencies, or county commissioners courts (since validated by the Legislature) have created 54 groundwater conservation districts: 40 districts have been confirmed through local elections, 7 districts have not held confirmation elections to date, 5 districts have failed confirmation elections, and 2 districts have been abolished by the Legislature. The 40 groundwater conservation districts that have been created, confirmed, or otherwise validated are shown in Figure 1. These districts have been created under the authority of Section 52, Article III, or Section 59, Article XVI, Texas Constitution; confirmed through local election or otherwise validated or established by the Legislature; and, are operational under the authority of Chapter 36 of the Water Code.

The seven districts that have not held confirmation elections since 1989 include the Clearwater (Bell County), the Llano-Estacado (Gaines County), and the Haskell/Knox, Hemphill, Menard, Oldham, and Presidio County districts. The four districts that have failed confirmation elections since 1989 include the Central Texas district in Burnet County, Comal County district, Llano Uplift district in Llano County, and Rolling Plains district in Borden, Mitchell, and Scurry Counties. These districts are shown in Figure 2. The fifth district, the South Plains UWCD Number 4, failed confirmation in 1966.

The two districts that were abolished by the Legislature include the Martin County UWCD Number 1 (dissolved in 1985) and the Edwards Underground Water District (abolished in 1996). The Martin County district was effectively replaced by the Permian Basin Underground Water Conservation District. The Edwards Underground Water District was replaced by the Edwards Aquifer Authority.

Recodification of Groundwater District Law

House Bill 2294 (Chapter 933, Acts of the 74th Legislature, Regular Session, 1995) provided for a full recodification of Chapter 52 into new Chapters 35 and 36. HB 2294 replaced the terminology of “underground water conservation district,” “underground water reservoir,” and “underground water management area” with “groundwater conservation district,” “groundwater reservoir,” and “groundwater management area”; repealed provisions requiring district actions under Chapter 50 of the Water Code (Provisions Generally Applicable to Districts); and repealed Chapter 52. The bill recodified the portions of Chapter 52 that addressed groundwater management areas and critical areas into new Chapter 35, Groundwater Studies. The Act also recodified the majority of Chapter 52, dealing specifically with district powers, authorities, and administration, into new Chapter 36, Groundwater Conservation Districts.

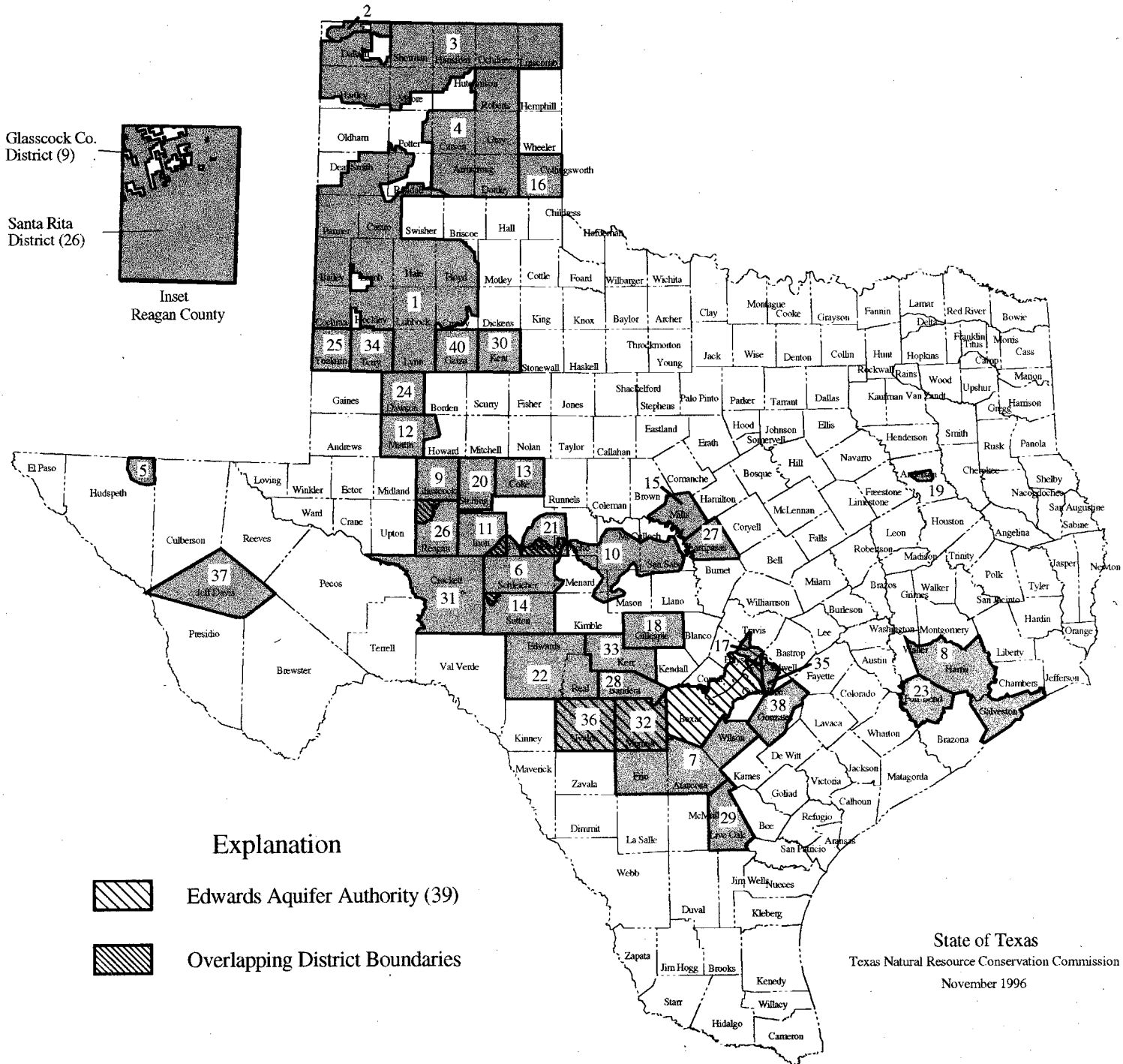
The language throughout HB 2294 was amended from the original language of Chapter 52; however, the language generally followed previous statute. A notable exception to this was the amendment of §52.101, General Provisions and Requirements Applicable to All Districts and Authorities, which was amended and recodified as §36.052, Other Laws Not Applicable. Section 52.101 had provided, that to the extent applicable, groundwater conservation districts were governed by Chapter 50 of the Water Code regarding general reporting requirements and financial reporting requirements. Section 36.052 provides that other laws governing the administration or operations of districts created under Section 52, Article III, or Section 59, Article XVI, Texas Constitution, shall not apply to any district governed by Chapter 36. This amendment effectively removed groundwater districts from mandatory reporting of essential financial information to the Commission as required of other water districts.

In addition, the definition of groundwater in §36.001 was significantly amended from the previous definition of underground water in §52.001. The definition of groundwater in §36.001 is given as water percolating below the surface of the earth. The definition of underground water in §52.001 stipulated the water percolating below the surface of the earth be suitable for agricultural, gardening, domestic, or stock raising purposes and excluded subterranean streams and the underflow of rivers.

Recodification added several new sections to groundwater district law and repealed several sections of Chapter 52. Some of the language of the repealed sections was amended into other sections in Chapter 36, but not always. Numerous sections of Chapter 52 were amended into singular sections of Chapters 35 and 36 to provide lucidity.

Figure 1

Groundwater Conservation Districts



Groundwater Conservation Districts - Map Explanation

- 1 High Plains Underground Water Conservation District No. 1 (1951)
- 2 Dallam County Underground Water Conservation District No. 1 (1953)
- 3 North Plains Ground Water Conservation District No. 2 (1954)
- 4 Panhandle Ground Water Conservation District No. 3 (1955)
- 5 Hudspeth County Underground Water Conservation District No. 1 (1957)
- 6 Plateau Underground Water Conservation and Supply District (1955)
- 7 Evergreen Underground Water Conservation District (1965)
- 8 Harris-Galveston Coastal Subsidence District (1975)
- 9 Glasscock County Underground Water Conservation District (1981)
- 10 Hickory Underground Water Conservation District No. 1 (1982)
- 11 Irion County Water Conservation District (1985)
- 12 Permian Basin Underground Water Conservation District (1985)¹
- 13 Coke County Underground Water Conservation District (1986)
- 14 Sutton County Underground Water Conservation District (1986)
- 15 Fox Crossing Water District (1986)
- 16 Collingsworth County Underground Water Conservation District (1987)
- 17 Barton Springs/Edwards Aquifer Conservation District (1987)
- 18 Hill Country Underground Water Conservation District (1987)
- 19 Anderson County Underground Water Conservation District (1987)
- 20 Sterling County Underground Water Conservation District (1987)
- 21 Lipan-Kickapoo Water Conservation District (1987)
- 22 Real-Edwards Conservation and Reclamation District (1959)
- 23 Fort Bend Subsidence District (1989)
- 24 Mesa Underground Water Conservation District (1989)
- 25 Sandy Land Underground Water Conservation District (1989)
- 26 Santa Rita Underground Water Conservation District (1989)
- 27 Saratoga Underground Water Conservation District (1989)
- 28 Springhills Water Management District (1989)
- 29 Live Oak Underground Water Conservation District (1989)²
- 30 Salt Fork Underground Water Conservation District (1989)
- 31 Emerald Underground Water Conservation District (1989)
- 32 Medina Underground Water Conservation District (1991)
- 33 Headwaters Underground Water Conservation District (1991)
- 34 South Plains Underground Water Conservation District (1992)
- 35 Plum Creek Conservation District (1993)
- 36 Uvalde County Underground Water Conservation District (1993)
- 37 Jeff Davis County Underground Water Conservation District (1993)
- 38 Gonzales County Underground Water Conservation District (1994)
- 39 Edwards Aquifer Authority (1996)³
- 40 Garza County Underground and Fresh Water Conservation District (1996)

Notes: Districts are numbered in order in which they were established (year in parentheses). Districts listed are created and confirmed either through election or statute.

1. Replaced the Martin County Underground Water Conservation District No. 1, established in 1951.

2. Renamed from Brush Country Underground Water Conservation District in 1993.

3. Replaced the Edwards Underground Water District, established in 1959.

New sections in Chapter 36 include:

- ▶ §36.058, Conflicts of Interest, subjecting directors to the provisions of Chapter 171, Local Government Code;
- ▶ §36.066, Suits, allowing districts to sue and be sued in the courts of the state;
- ▶ §36.205, Authority to Set Fees, allowing districts to set fees for administrative acts of the district; and,
- ▶ §36.352, Terms and Conditions of Consolidation, providing the terms and conditions for district consolidation.

Repealed sections of Chapter 52 include:

- ▶ §52.004, Application of Chapter and District Rules, providing that district rules are applicable only within a districts' jurisdiction;
- ▶ §52.005, Applicability to Underground Water Conservations Districts Generally, addressed in other provision of Chapter 36;
- ▶ §52.107, Application to Get on Ballot, addressed by reference to Election Code in Chapter 36;
- ▶ §52.255, Notice; Hearing; Adoption of Budget, providing that the district's budget is approved at board meetings open to the public; and,
- ▶ §52.258, Sworn Statement, addressed by audit requirements in Chapter 36.

DISTRICT ACTIVITIES

New Districts Created by the 74th Legislature

Five bills related to groundwater conservation district creation were introduced and four bills passed during the Regular Session of the 74th Texas Legislature. Three groundwater conservation districts were created (Garza County Underground and Fresh Water Conservation District, Hemphill County UWCD, and Oldham County UWCD); and one groundwater conservation district was validated (Gonzales County UWCD). Confirmation elections were required in the enabling legislation for the three newly created districts. Table 1 gives information, including the enabling legislation and current status, for the newly created and validated districts. HB 3221 proposed to create the Culberson County Underground Water Conservation District covering the southwestern half of Culberson County. The creation of the district failed to pass during the Regular Session of the 74th Legislature.

Garza County Underground and Fresh Water Conservation District. House Bill 846 (Chapter 188, Acts of the 74th Legislature, Regular Session, 1995) created the Garza County Underground and Fresh Water Conservation District covering all of Garza County. The district has the rights, powers, privileges, authority, functions, and duties provided by the general law of the state. The Act named a temporary board of five directors and requires, by election, the confirmation of district creation and the election of permanent directors. One director is elected at large from the county, and the remainder of the directors are elected from the county's four precincts. HB 846 became effective on May 23, 1995.

Garza County, located in the northwestern portion of the state, overlies portions of the Ogallala and Dockum aquifers. Western portions of Garza County are included within Subdivision Number 1 of the Ogallala Formation, South of the Canadian River (groundwater management area). The Garza County Underground and Fresh Water Conservation District held its confirmation and directors election on November 5, 1996. The district was confirmed by a margin of over 3 to 1 (76 percent for; 24 percent against). The district's board reported that it had worked closely with county officials in public education and in efforts to schedule and hold the confirmation election. The board reported it was planning to coordinate with existing districts to establish the actions it will need to take to get the district up-and-running (Wheeler, 1996). The Garza County district is shown on Figure 1.

Table 1. Groundwater Conservation Districts Created/Validated by the 74th Legislature

Legislative Act 74th Legislature¹	District	County	Confirmation Election	Vote (%) For/Against	Tax Rate per \$100	Board
H.B. 846 (Ch. 188)	Garza County Underground and Fresh Water CD	Garza	11/05/96	76/24	---	Permanent
H.B. 1493 (Ch. 157)	Hemphill County UWCD	Hemphill	not to date	---	---	Temporary
S.B. 1693 (Ch. 368)	Gonzales County UWCD ²	majority of Gonzales ³	not required (held 5/07/94)	72/18	not to exceed \$0.05	Permanent
S.B. 1714 (Ch. 720)	Oldham County UWCD	Oldham	not to date	---	---	Temporary

1. Number in parentheses indicates Chapter giving text of the bill in the Acts of the 74th Texas Legislature, Regular Session, 1995.
2. Created by Commission October 27, 1993; confirmed through election May 7, 1994. SB 1693 validated District effective June 8, 1995.
3. District includes portion of Gonzales County within Subdivision Number 3 of the Carrizo-Wilcox Underground Water Management Area.

Hemphill County Underground Water Conservation District. House Bill 1493 (Chapter 157, Acts of the 74th Legislature, Regular Session, 1995) created the Hemphill County UWCD covering all of Hemphill County. The district has the powers and duties provided by general law. The Act provides for the appointment of temporary directors and, by election, the confirmation of district creation and the election of permanent directors. The Act prohibits the district from exercising the power of eminent domain. HB 1493 became effective on August 28, 1995.

Hemphill County is located in the eastern Texas Panhandle and overlies the Ogallala aquifer. The Hemphill County district's temporary board reported that it was currently educating itself concerning the necessary steps for the district's creation. The district's board reported that it was planning to hold public meetings in November and December, 1996, and conduct educational initiatives in Hemphill County about the district. The board worked with the Hemphill County Clerk and Commissioners Court in an unsuccessful effort to schedule the confirmation and directors' election on the uniform election date in January of 1997. The board is continuing to work with the county clerk and commissioners court to schedule an election in 1997 (Gober, 1997). The Hemphill County district is shown on Figure 2.

Oldham County Underground Water Conservation District. Senate Bill 1714 (Chapter 720, Acts of the 74th Legislature, Regular Session, 1995) created the Oldham County UWCD covering all of Oldham County. The district has the powers and duties provided by general law. The Act named five temporary directors and, by election, calls for the confirmation of district creation and the election of permanent directors. SB 1714 became effective on June 15, 1995.

Oldham County, located in the western Texas Panhandle, overlies the Ogallala and Dockum aquifers. The southeastern corner of Oldham County is included in Subdivision Number 1 of the Ogallala Formation, South of the Canadian River (groundwater management area). The Oldham County district's temporary board reported it was working on efforts to provide public education about to groundwater district roles and responsibilities. The district's board reported it was going to provide information on the district and groundwater districts in general at an October meeting of the local soil and water conservation district. The board was planning to bring in managers from other nearby groundwater districts to assist them with their educational efforts at the meeting. The board has been working with the Oldham County Clerk and indicated the possibility of holding the confirmation and director's election during a uniform election date in mid-1997 (Jacobson, 1996). The Oldham County district is shown on Figure 2.

Gonzales County Underground Water Conservation District. Senate Bill 1693 (Chapter 368, Acts of the 74th Legislature, Regular Session, 1995) validated the creation and the actions of the Gonzales County UWCD. The district was created by the Commission, through the petition process authorized in Chapter 36 of the Water Code, on October 27, 1993 and confirmed through election on May 7, 1994. The Commission created the district within the area delineated by Management Area Number 3 of the Carrizo-Wilcox Aquifer. The Act further authorized the division of the district into five single-member precincts of substantially equal population for the purpose of electing directors. SB 1693 became effective on June 8, 1995. The Gonzales County district is shown on Figure 1.

SB 1693 addressed issues relating to how board members were selected which were raised by the U.S. Justice Department in October 1994. These issues regarded board member elections from single-member districts based on the precinct method rather than on population. The U.S. Justice Department did not object to the confirmation election or tax proposition which were voted on at-large in the district. The standing board created an escrow account to hold revenue collected from ad valorem taxes, resigned en masse on November 8, 1994, and reverted authority to the original appointed temporary board. Following the effective date of SB 1693, permanent directors were elected on August 28, 1996.

Edwards Aquifer Authority

With the passage of Senate Bill 1477 in 1993 (Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993), the 73rd Legislature declared the Edwards aquifer (Balcones Fault Zone segment) a unique and complex hydrological system, with diverse economic and social interests dependent on the aquifer for water supplies, and declared this portion of the Edwards aquifer to be a distinctive natural resource. In addition, the 73rd Legislature found that to sustain the diverse interest and the natural resource, a special regional management district was required for the effective control of the resource to protect terrestrial and aquatic life, domestic and municipal water supplies, the operation of existing industries, and the economic development of the state. Use of water in the district for beneficial purposes required that all reasonable measures be taken to conserve water use.

Senate Bill 1477 addressed the creation, administration, powers, duties, operation, and financing of the Edwards Aquifer Authority (EAA) and the management of the Edwards aquifer; granted the power of eminent domain; authorized the issuance of bonds; and provided civil and administrative penalties. The EAA was created in all of Bexar, Medina, and Uvalde Counties and

parts of Atascosa, Caldwell, Comal, Guadalupe, and Hays Counties. A confirmation election was not required for creation of the EAA. SB 1477 provided that the EAA be governed by a board of nine appointed directors. The U.S. Justice Department did not pre-clear the new EAA and its appointment of directors with respect to Voting Rights Act issues.

In 1995, the 74th Legislature enacted House Bill 3189 (Chapter 261, Acts of the 74th Legislature, Regular Session, 1995). HB 3189 amended the governing board of the EAA as authorized under SB 1477. HB 3189 established a temporary board of directors and provided for subsequent, elected initial and permanent boards for the EAA. HB 3189 changed the governing board from a 9-member appointed board to a 15-member elected board; provided that the board be elected by single-member districts (established in the bill), with two additional nonvoting directors appointed by the South Central Texas Water Advisory Committee (1 member) and the County Commissioners Court of either Medina or Uvalde County (1 member alternating between the two counties). HB 3189 established the temporary board until December 1, 1996 and provided that the temporary board had all of the authorities of the permanent board to be elected on the uniform election date in November of 1996. The EAA held its first meeting on July 2, 1996, and the temporary board of directors called and subsequently held an election for permanent directors on November 5, 1996.

Senate Bill 1477 also addressed issues with regard to the effect of the creation of the EAA on three previously established districts. The Edwards Underground Water District (in portions of Bexar, Comal, and Hays Counties overlying the Edwards aquifer) was abolished and all files, records, real and personal property, leases, rights, contracts, staff, obligations, rules, and liabilities were transferred to the EAA. The Medina County UWCD and Uvalde County UWCD (both coextensive with the county boundaries) were authorized to manage and control water that is a part of the Edwards aquifer to the extent that those management activities do not conflict with and are not duplicative of the EAA's responsibilities under SB 1477 or the rules and orders of the EAA. Additionally, groundwater conservation districts were allowed to be created in any county affected by the creation of the EAA as provided by Chapter 36 of the Water Code. No new districts have been proposed or created in the area since the passage of SB 1477.

In August 1995, the Medina and Uvalde County districts and the Texas and Southwest Cattle Raiser's Association filed suit in Medina County challenging the constitutionality of SB 1477. The suit contested that the law deprived farmers and ranchers of a property right by restricting their pumpage from the aquifer. In October 1995, the state district court ruled that the law creating the EAA took property rights without compensation, abridged private contracts, and violated

equal protection provisions of the Texas Constitution. On appeal, the Texas Supreme Court unanimously upheld the law creating the EAA on June 28, 1996.

Unconfirmed Districts (Since 1989)

Five groundwater conservation districts created during the 73rd, 72nd, and 71st Texas Legislatures have not scheduled or held confirmation elections. Groundwater conservation districts that have been created but have not held confirmation elections to date are shown in Figure 2 and listed in Table 2.

Two groundwater conservation districts created during the Regular Session of the 73rd Texas Legislature, 1993, have not held confirmation elections. Neither the Presidio County Underground Water Conservation District nor the Haskell/Knox County Underground Water Conservation District has held confirmation elections to date. The Presidio County district's boundaries are coextensive with the county boundaries. The Presidio County district is governed by five initial directors appointed by the Commissioners Court of Presidio County.

The Haskell/Knox County district's boundaries are coextensive with the boundaries of Haskell and Knox Counties. The Haskell/Knox district is governed by a board of 10 directors (temporary and appointed). The Haskell/Knox temporary board reported that only 3 of the original 10 temporary directors named in the enabling legislation (Chapter 1028, Acts of the 73rd Legislature, 1993) were still around. The temporary board also reported the following issues: (1) questions remained regarding the constitutionality of the enabling legislation which allowed the chairman two votes; (2) there were inherent problems for the two county commissioners courts meeting outside of their jurisdiction to address successors for the temporary board; and (3) the district's creation was not a priority issue with one of the county judges (Perdue, 1997).

There has been little activity in two groundwater conservation districts created by the Regular Session of the 72nd Texas Legislature, 1991. Confirmation elections have not been held to date in the Llano-Estacado Underground Water Conservation District in Gaines County or the Menard County Underground Water District. Both districts are still governed by temporary boards of directors. The Llano-Estacado district is coextensive with the Gaines County boundaries. The Menard County district is coextensive with the county boundaries, with the exclusion of the portion of Menard County within the boundaries of the Hickory Underground Water Conservation District No. 1 and the Plateau Underground Water Conservation and Supply District.

The enabling legislation for the creation of the Clearwater Underground Water Conservation District (Chapter 524, Acts of the 71st Legislature, Regular and First Called Sessions, 1989) allows for the Bell County Commissioners Court to call for the creation of the district and hold a confirmation and directors' election. To date, the Commissioners Court has not called for holding such an election.

Failed District Elections (Since 1989)

Three legislatively created groundwater conservation districts and one Commission-created district have failed confirmation elections since 1989. They are listed in Table 2 and shown in Figure 2.

Two districts created by the 73rd Legislature failed to be confirmed. The Llano-Uplift Underground Water Conservation District, which encompassed most of Llano County, failed an August 30, 1993, confirmation election. The Rolling Plains Underground Water Conservation District, encompassing all of Borden, Mitchell, and Scurry Counties, failed a June 19, 1994, confirmation election. The Central Texas Underground Water Conservation District was created by the 71st Legislature in 1989. The Central Texas district, which encompassed all of Burnet County, failed an August 28, 1989, confirmation election.

Landowners in Comal County petitioned the Commission in February of 1993 for the creation of the Comal County Underground Water Conservation District. After staff review and evidentiary hearings, the Commission created the district in the northwestern half of Comal County on November 30, 1994. Within Comal County, the district encompassed the area overlying the Trinity aquifer as designated in the Hill Country Critical Area (Chapter 294, Administrative Code). The district failed a May 6, 1995, confirmation election by a vote of greater than 10-to-1 against.

There are several common reasons for the failure to confirm these districts. The lack of a sufficient educational effort, coordinated with the state water agencies, may be a major factor. Temporary directors may be at a loss when the time arrives to educate the public on the benefits and necessities of district creation. While the state agencies have readily supported creation of districts to provide local populations with the authority to preserve, conserve, and protect their groundwater resources, for the most part the agencies are only involved as requested by the temporary board. The temporary directors may not yet have a full understanding of the potential benefits of district creation. Existing single-county districts have reported it was not until

Figure 2

Unconfirmed/Failed Groundwater Conservation Districts (Since 1989)

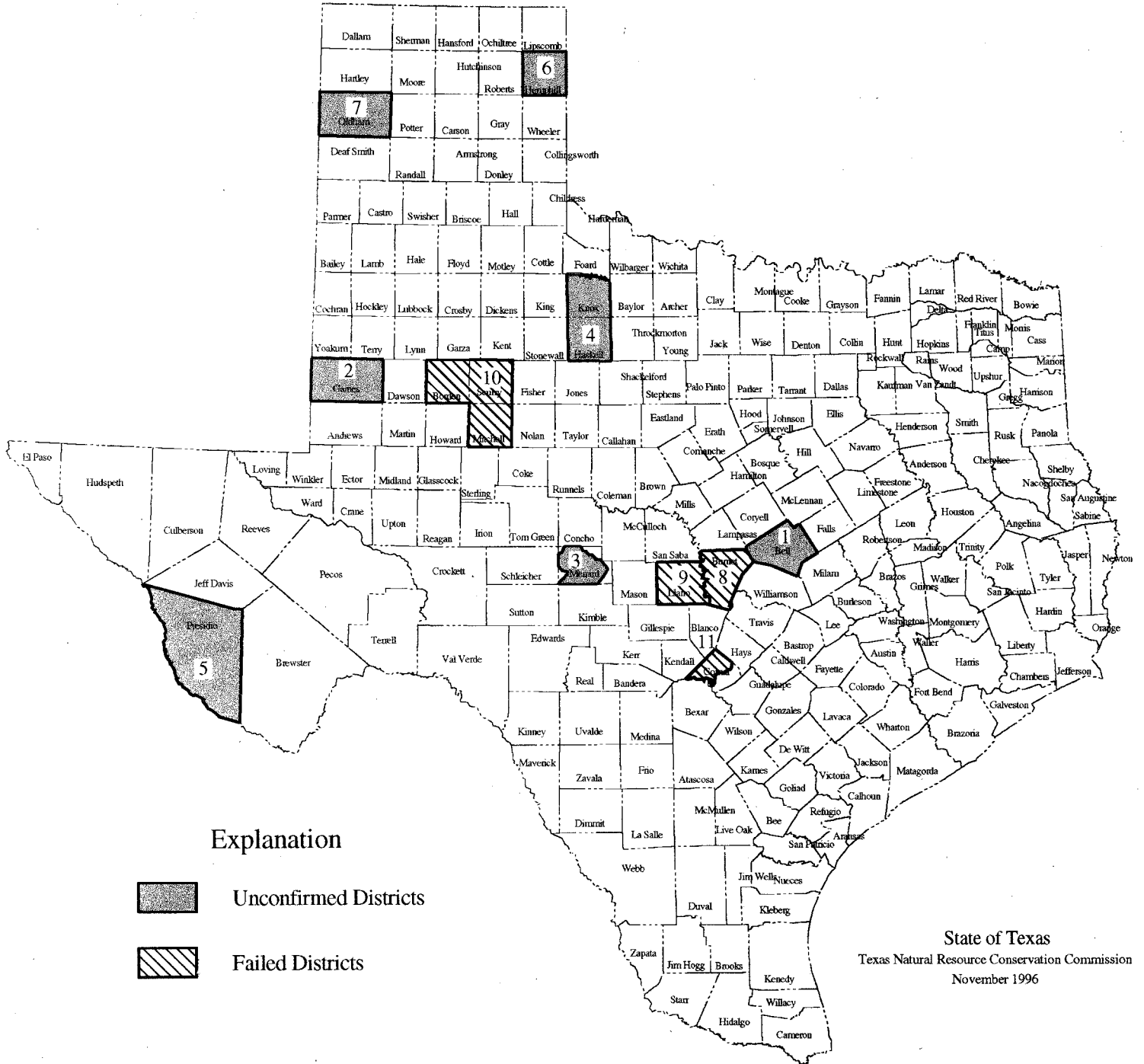


Table 2. Unconfirmed/Failed Groundwater Conservation Districts (Since 1989)

(Figure 2 Map Explanation)

District	Map Reference	Method of Creation¹	County(s)	Comments
Clearwater UWCD	1	71st Leg., 1989 (Ch. 524)	Bell	Legislation allows Commissioners Court to appoint directors to call election - No election to date
Llano-Estacado UWCD	2	72nd Leg., 1991 (Ch. 183)	Gaines	No confirmation election to date
Menard County UWCD	3	72nd Leg., 1991 (Ch. 180)	majority of Menard	No confirmation election to date
Haskell/Knox County UWCD	4	73rd Leg., 1993 (Ch. 1028)	Haskell and Knox	No confirmation election to date
Presidio County UWCD	5	73rd Leg., 1993 (Ch. 453)	Presidio	No confirmation election to date
Hemphill County UWCD	6	74th Leg., 1995 (Ch. 157)	Hemphill	No confirmation election to date
Oldham County UWCD	7	74th Leg., 1995 (Ch. 720)	Oldham	No confirmation election to date
Central Texas UWCD	8	71st Leg., 1989 (Ch.)	Burnet	Failed 1/20/90 election - 12% for/88% against
Llano Uplift UWCD	9	73rd Leg., 1993 (Ch. 301)	majority of Llano	Failed 5/14/94 election - 15% for/85% against
Rolling Plains UWCD	10	73rd Leg., 1993 (Ch. 1027)	Borden, Mitchell, and Scurry	Failed 6/7/94 election - 25% for/75% against
Comal County UWCD	11	Petition process by Commission, 1994	portion of Comal within the Hill Country Critical Area	Failed 5/6/95 election - 8% for/92% against

Number in parentheses indicates Chapter giving text of bill in Acts of the: 71st Legislature, Regular and First Called Sessions, 1989; 72nd Legislature, Regular Session, 1991; 73rd Legislature, Regular Session, 1993; and, 74th Legislature, Regular Session, 1995.

permanent directors were elected and the district's priorities were established that the district's value was understood and appreciated. The unwillingness of the local populace to be subject to more taxes and another layer of government and mistrust of government in general are also issues. In most of these elections, the temporary directors fought against misinformation campaigns (stressing more government and more taxes) waged by opponents to district creation. Two of the districts (Comal County and Llano Uplift) failed because a large portion of the tax burden would have been borne by citizens who utilized available alternative (surface) water supplies and would not have directly benefited from the creation of the district.

Existing Districts

By January 1995, 39 groundwater conservation districts had been created and confirmed (by law or election). The Edwards Aquifer Authority had been created in 1993, but was not pre-cleared by the U.S. Justice Department with respect to Voting Rights Act issues. During the 1995-96 biennium, the 74th Legislature (1995) enacted House Bill 3189 establishing a temporary board of directors and providing for subsequent, elected initial and permanent boards for the Edwards Aquifer Authority. The Texas Supreme Court unanimously upheld the law creating the EAA and abolishing the Edwards Underground Water District on June 28, 1996. Also during the 1995-96 biennium, the Garza County Underground and Fresh Water Conservation District was confirmed through election on November 5, 1996.

With the establishment of the Edwards Aquifer Authority and the Garza County Underground and Fresh Water Conservation District, and the abolishment of the Edwards Underground Water District, there are now 40 districts that have been created and confirmed. The locations of the groundwater conservation districts, confirmed before the publication of this report, are shown in Figure 1. Appendix 1 contains a listing of the current addresses, telephone numbers, and contacts for each of the districts.

Annexations and Withdrawals

Chapters 35 and 36 of the Water Code authorize and provide procedures for annexation of territory to existing groundwater conservation districts. These procedures, except for Commission-initiated annexation in designated critical areas (Chapter 35), are initiated by a petition to a district by 50 or more landowners in the area seeking annexation. The procedures

include acceptance of the petition by the board of the existing district, public hearings, and voter confirmation in the area to be annexed. Individual parcels of land contiguous to a district and proposed for annexation by a landowner may be added by vote of the board of directors. Statute also allows that landowners not contiguous to an existing district may petition for annexation if both are located within the same groundwater management area.

The Panhandle Ground Water Conservation District No. 3 was petitioned for annexation by an individual landowner adjacent to the district in Hutchinson County. The Panhandle district annexed the landowner's parcel on November 8, 1995. The Hickory Underground Water Conservation District No. 1 was petitioned by landowners in the remainder of Mason County for annexation on May 3, 1996. The Hickory district's board approved the petition on May 9, 1996, and scheduled an election in the area for August 10, 1996. The election to annex the remaining area in Mason County into the Hickory district failed by a vote of 46 percent for; 54 percent against. No petitions for withdrawal of land or counties from existing districts were reported by the districts during the 1995-96 biennium.

Required Duties and Authorized Powers

In Chapter 36 of the Water Code, Subchapters C, H, I, and K address administrative and procedural provisions for district organization. These subchapters apply to all groundwater conservation districts to the extent that those provisions do not conflict with any special act of the legislature relating to a particular district (Water Code, §36.052).

Districts are provided with powers and duties that can be categorized as either required or authorized. These authorities enable and empower a district to manage its groundwater resources. Required duties are stipulated as being mandatory in Chapter 36 of the Water Code. Each district must perform these duties. Authorized powers in Chapter 36 enable districts to perform actions at the discretion of the board. These actions are considered necessary to accomplish the goals and management plans of the district; however, each district is given great flexibility to determine which powers they will exercise.

Subchapters D through G of Chapter 36 address these duties and powers. A brief list of required duties appears in Table 3. Subchapters D through G also describe authorized powers and activities for districts, allowing the flexibility to provide services as needed by a district. Table 4 contains a brief list of authorized district powers.

Table 3. Required Duties of Groundwater Conservation Districts

▶ <i>Develop a comprehensive management plan for the most efficient use of groundwater, for controlling and preventing waste of groundwater, and for controlling and preventing subsidence, specifying in the management plan the acts, procedures, performance, and avoidance measures to effect the plans</i>
▶ <i>Adopt necessary rules to implement the management plan</i>
▶ <i>File management plan and rules with the Commission</i>
▶ <i>File management plan with other districts within a common management area</i>
▶ <i>By resolution of the boards of directors of districts in a common management area, call for a joint meeting to review management plans and accomplishments in the management area</i>
▶ <i>Require records to be kept of the drilling, equipping, and completion of water wells and the production and use of groundwater</i>
▶ <i>Require that water well driller's logs and electric logs be kept and filed with the district</i>
▶ <i>Require permits for drilling, equipping, or completing wells which produce more than 25,000 gallons per day or for alterations to well size or well pumps (Districts must promptly consider and pass on permit applications; all wells producing at least 25,000 gallons per day in existence prior to the district's creation must be automatically granted a permit)</i>
▶ <i>Make information on groundwater resources available to the Commission and the Texas Water Development Board upon request</i>
▶ <i>Operate on the basis of a fiscal year</i>
▶ <i>Hold regular board meetings at least quarterly</i>
▶ <i>Prepare and approve an annual budget</i>
▶ <i>Name one or more banks to serve as the depository for district funds</i>
▶ <i>Have an audit of financial accounts prepared annually</i>
▶ <i>Keep a complete account of all meetings and proceedings and preserve minutes, contracts, records, notices, accounts, receipts, and other records</i>
▶ <i>Submit bonds and notes issued by the district to the Attorney General for examination</i>
▶ <i>Register board members with the Commission</i>

Table 4. Authorized Powers of Groundwater Conservation Districts

▶ <i>Adopt rules to conserve, preserve, protect, recharge, and prevent waste of groundwater and control land subsidence</i>
▶ <i>Enforce rules by injunction, mandatory injunction, or other appropriate remedy in a court of competent jurisdiction</i>
▶ <i>Acquire land to erect dams or to drain lakes, draws, and depressions; construct dams; drain lakes, depressions, draws, and creeks; install pumps and other equipment necessary to recharge the groundwater reservoir; and provide facilities for the purchase, sale, transportation, and distribution of water</i>
▶ <i>Make surveys of the groundwater reservoir or subdivision and facilities for development, production, transportation, distribution, and use of groundwater</i>
▶ <i>Purchase, sell, transport, and distribute surface water or groundwater for any purpose</i>
▶ <i>Exercise the power of eminent domain to acquire by condemnation a fee simple or other interest in property located inside the district if the property interest is necessary to the exercise of the authority conferred by Chapter 36</i>
▶ <i>Carry out research projects and collect information regarding the use of groundwater, water conservation, and the practicability of recharging a groundwater reservoir</i>
▶ <i>Provide for the spacing of water wells and regulate the production of wells</i>
▶ <i>Require the owner or lessee of land on which an open or uncovered well is located to keep the well permanently closed or capped</i>
▶ <i>Levy taxes on an annual basis to pay bonds, operation, and maintenance expenses</i>
▶ <i>Set fees for administrative acts of the district and services provided outside of the district</i>
▶ <i>Apply for and receive grants or donations from local, state, or federal agencies, private individuals, companies, or corporations for specific projects or research</i>
▶ <i>Issue and sell bonds and notes in the name of the district</i>

Existing District Activities

Groundwater conservation districts are involved in a wide range of activities related to the conservation and protection of groundwater. While the scope of this report does not allow for a full discussion of the history of each district and its activities, a brief discussion of some of the districts' recent activities is included. A more complete discussion, prepared and published by the

Texas Alliance of Groundwater Districts (TAGD), is entitled *Texas Alliance of Groundwater Districts, Membership Directory and District Activities* (TAGD, 1995). This document is currently being revised by the TAGD.

Groundwater conservation districts have the legislative authority to monitor groundwater quality. A large majority of the districts exercise this authority. Over 900 water wells were reported as being monitored for ambient groundwater quality and changes over time by the member districts of the Texas Alliance of Groundwater Districts during 1995 (TGPC, 1996a). District groundwater monitoring programs are primarily of a reconnaissance nature. Most programs are designed to track water-quality trends and identify possible contaminants with minimal expenditure of resources. Generally, the sampling and analytical procedures and equipment employed are less sophisticated and accurate than the sampling and laboratory procedures required to document or prove contamination. However, some districts have monitoring programs with highly accurate and sophisticated laboratory procedures and sampling methods similar to those of the Texas Water Development Board, in which changes in ambient or natural water quality conditions are monitored on a long-term basis. Existing districts continue to work in conjunction with the Texas Water Development Board's groundwater quality monitoring network and share their sampling results for inclusion in the Board's Ground-Water Data System.

Groundwater studies of specific areas, contaminants, or constituents are also conducted by some districts. For example, the Hill Country Underground Water Conservation District sponsors graduate students from the University of Texas at San Antonio and Texas A&M University to conduct regional geohydrologic studies of the Hensell and Hickory aquifers. The Coke, Emerald, Glasscock, Lipan-Kickapoo, Plateau, Santa Rita, and Sterling districts have dedicated water well networks to monitor groundwater quality conditions proximal to activities related to oil and gas such as salt-water disposal, secondary recovery, and concentrated petroleum production. The Barton Springs/Edwards Aquifer, Glasscock County, and Sandy Land districts conduct monitoring for pesticides. District groundwater quality monitoring can identify problems that may then be referred to appropriate state agencies for more detailed investigation and analysis as necessary.

A large number of the districts have programs and have developed rules for the spacing of water wells and groundwater production. Nineteen of the 26 districts that provided information for the *Texas Alliance of Groundwater Districts, Membership Directory and District Activities* (TAGD, 1995) reported that they have established rules regulating the spacing of water wells. Additionally, 14 of the 26 reporting districts indicated they had established rules regulating production from water wells. Nearly all of the districts perform annual groundwater level measurements to give an

indication of groundwater quantity. The Hickory Underground Water Conservation District No. 1 is working to determine the total amount of water available within the Hickory aquifer and to develop a water budget for the aquifer.

The majority of the districts administer programs to conserve groundwater resources. The Harris-Galveston and Fort Bend districts administer programs to conserve groundwater to prevent subsidence. The Evergreen, Glasscock, Hickory, Lipan-Kickapoo, Mesa, North Plains, Panhandle, High Plains, Sandy Land, and South Plains districts administer programs stressing agricultural water conservation. The majority of these programs promote water use efficiency for agricultural irrigation. The Barton Spring/Edwards Aquifer Conservation District and Edwards Aquifer Authority, with large urban populations within their boundaries, actively encourage conservation through promotion of Xeriscape and other conservation practices.

Several districts cooperate with municipalities and counties within their jurisdictions on other groundwater related projects. The Emerald, Evergreen, Lipan-Kickapoo, Mesa, North Plains, Sterling, and Sutton districts have been instrumental in developing wellhead protection programs with cities within their boundaries. The Sandy Land Underground Water Conservation District has worked closely with Yoakum County officials in the management and oversight of the county's municipal solid waste landfill facility. The Sterling County Underground Water Conservation District, as authorized by the Sterling County Commissioners Court, is the agent responsible for the county's on-site sewage licensing program.

Dormant/Inactive Districts

Section 36.301 of the Water Code provides that a groundwater conservation district is considered active if it has a board of directors that holds regularly scheduled meetings; has developed a management plan and filed it with the Commission; and has minutes of meetings, copies of drillers' logs, well permits issued by the district, and annual audits on file. The Commission is granted the authority of dissolving districts (after notice and hearing) that have been inactive for a period of three consecutive years.

Ten districts have not filed management plans with the Commission. To date, the Anderson, Fox Crossing, Garza, Gonzales, Hudspeth, Jeff Davis, Plum Creek, Real-Edwards, Salt Fork, and Saratoga districts have not filed management plans. The activity status for these districts in filing meeting minutes, drillers' logs, well permits, and annual audits is unknown. Financial activity also

serves as an indicator of district activity. Commission records indicate the Anderson, Fox Crossing, Gonzales, and Salt Fork districts have all filed financial dormancy records.

Texas Alliance of Groundwater Districts

The Texas Alliance of Groundwater Districts (TAGD), formerly the Texas Groundwater Conservation Districts Association, was formed on May 12, 1988. Its membership is restricted to groundwater conservation districts that have the powers and duties to manage groundwater as defined in Chapter 36 of the Water Code. The TAGD is organized exclusively for charitable, educational, or scientific purposes within the meaning of Section 501 (c) (3) of the Internal Revenue Code. As such it can accept tax-exempt donations and use them to educate the public to the growing need for water conservation and groundwater protection. The purpose of the TAGD is to educate the public, to further groundwater conservation and protection activities, and to provide for the exchange of information among districts. The TAGD maintains contact with members of the private sector and various local, state, and federal officials and their agencies in order to obtain timely information on activities and issues relevant to groundwater districts. To date, there are 28 district members of the Texas Alliance of Groundwater Districts. The members and officers of the TAGD are identified in Appendix 1.

Texas Groundwater Protection Committee

The Texas Groundwater Protection Committee (TGPC) was created by the 71st Texas Legislature in 1989 as a means to bridge gaps between existing state groundwater programs and to optimize water quality protection by improving coordination among agencies involved in groundwater activities. House Bill 1458 (codified as Sections 26.401 through 26.407 of the Texas Water Code) established the TGPC and outlined the powers, duties, and responsibilities of the TGPC. Major responsibilities of the TGPC are:

- ▶ to improve interagency coordination in the area of groundwater protection;
- ▶ to develop and update a comprehensive groundwater protection strategy for the state;
- ▶ to study and recommend to the Legislature groundwater protection programs for areas in which groundwater is not protected by current regulation;

- ▶ to publish an interagency groundwater monitoring and contamination report; and
- ▶ to file with the governor, lieutenant governor, and speaker of the House of Representatives a report of the committee's activities during the biennium preceding each regular legislative session, including any recommendations for legislation on groundwater protection.

The TGPC's membership is composed of the following individuals or their designated representative:

- ▶ the executive director of the Texas Natural Resource Conservation Commission;
- ▶ the executive administrator of the Texas Water Development Board;
- ▶ a representative selected by the Railroad Commission of Texas;
- ▶ the commissioner of health of the Texas Department of Health;
- ▶ the deputy commissioner of the Department of Agriculture;
- ▶ the executive director of the Texas State Soil and Water Conservation Board;
- ▶ a representative selected by the Texas Alliance of Groundwater Districts;
- ▶ the director of the Texas Agriculture Experiment Station; and
- ▶ the director of the Bureau of Economic Geology, University of Texas at Austin.

The Commission chairs the interagency Texas Groundwater Protection Committee. The TGPC has routinely provided information on groundwater conservation districts and their activities in its publications. The Commission published and distributed the *Texas Ground Water Protection Strategy* (GWPC, 1988), compiled by the Groundwater Protection Committee (the TGPC's predecessor), which set out a blueprint for groundwater protection activities by state agencies. This document discussed the important role of groundwater conservation districts in helping to protect the groundwater resources in Texas. Member districts of the Texas Alliance of Groundwater Districts (TAGD) have contributed groundwater monitoring program descriptions annually for inclusion in the joint groundwater monitoring and contamination reports produced by the Texas Groundwater Protection Committee (TGPC, 1995 & 1996a).

Many efforts of the TGPC have been greatly enhanced by the participation of the TAGD. Members of the TAGD have served in the continued development a comprehensive state groundwater protection program; participated in the development of the TGPC's draft *Texas State Management Plan for the Prevention of Pesticide Contamination of Ground Water* (TGPC, 1996b) and *Texas Ground-Water Data Dictionary* (TGPC, 1996c); assisted in developing the TGPC's groundwater classification system; and have served in developing educational outreach materials and programs. These are all major efforts of the Texas Groundwater Protection Committee.

Commission Assistance

The Commission maintains files pertaining to groundwater conservation districts, including files on district creation, supervision, bonds, and audits. The Commission also maintains files of its actions (and predecessor agencies) in delineating and designating groundwater reservoirs, groundwater management areas, and critical areas. These records are housed at the Commission's offices in Austin at 12015 Park 35 Circle, in Rooms 1301 and 1305, Building F.

The Commission is given responsibilities in Chapters 35 and 36 of the Water Code to evaluate and designate groundwater management areas and create groundwater districts in response to landowner petitions. The Commission also reviews legislation creating groundwater districts or altering groundwater conservation district law and provides technical comments as required. The Commission has adopted rules applicable to groundwater district creation and groundwater management area designation. These rules are published as Title 30, Texas Administrative Code, Chapters 293 and 294. Chapter 293 contains procedures and requirements applicable to the creation of groundwater conservation districts and delineation of groundwater management areas. Chapter 294 delineates the groundwater management areas and critical areas the Commission has designated since 1987.

The Commission has limited oversight in the supervision of groundwater conservation districts. The Commission provides guidance to districts on requirements for financial reporting, bond review, board member responsibilities, and in technical areas. Several Commission publications are available to groundwater conservation districts providing guidance on district administration and educational information. Among the publications are *A Handbook for Board Members of Water Districts in Texas* (TNRCC, 1996), which provides basic information to guide new board members in district administration and management, and an educational brochure entitled *What is a Water District?* (TNRCC, 1995), which gives general information about water districts. The Commission has cooperated with the Texas Alliance of Groundwater Districts to update the *Groundwater Conservation District Operations Manual*, originally prepared by Jonish et al. in 1989. Previous versions of the manual have served as the Commission's general guidance for the operation and management of groundwater districts. The manual compiles detailed information on groundwater conservation district start-up and day-to-day operations. In the past, it has proven to be an excellent guide for newly created districts.

The Commission is active in public education, and sponsors an annual conference for local government officials on groundwater protection. The 10th Annual Ground-Water Protection Seminar was held in San Antonio in August 1995. In addition, the Commission annually sponsors

an Environmental Trade Fair Seminar each spring. Several presentations are generally given on issues that concern groundwater conservation districts. The Texas Alliance of Groundwater Districts, as well as the districts individually, have participated in these seminars. Commission staff are often requested to speak at meetings about groundwater conservation districts and Chapters 35 and 36 of the Water Code. Numerous presentations of this nature were made during the 1995-96 biennium.

The Commission has worked with individual groundwater conservation districts in cooperative projects to identify and manage point and nonpoint sources of groundwater contamination. The Commission has been involved with several groundwater conservation districts participating in the statewide Wellhead Protection (WHP) Program. The WHP program is designed to allow communities to take an active role in maintaining the quality of their municipal groundwater supply. The WHP program provides technical assistance and public education to local governments (towns, cities, water supply corporations, groundwater conservation districts, and investor owned utilities) to protect groundwater by identifying sources of contamination within designated wellhead protection areas surrounding public water supply wells.

A second groundwater protection initiative in the WHP arena is the Regional Aquifer Protection Program administered by the Commission. This program involves the determination of aquifer vulnerability, the identification of contamination sources, and the development of wellhead protection areas for public water supply wells on a regional and aquifer-wide scale. The Commission has worked with the Barton Springs/Edwards Aquifer Conservation District, the Edwards Underground Water District, and the Medina County Underground Water Conservation District in implementing the Edwards Aquifer Ground-Water Protection Project and the Evergreen Underground Water Conservation District on portions of the Carrizo-Wilcox Regional Aquifer Protection Project.

Other Legislative Acts Affecting Districts

In addition to acts related to district creation, validation, and amendment of the boards of directors for the Edwards Aquifer Authority and the Gonzales County district (all previously discussed), the 74th Legislature passed three other bills that affect groundwater conservation districts. One bill amended the board of directors for the Harris-Galveston Coastal Subsidence District; and two bills affect, or could potentially affect, groundwater conservation districts in general.

House Bill 3215 (Chapter 964, Acts of the 74th Legislature, Regular Session, 1995) added two additional members to the Harris-Galveston Coastal Subsidence District's board of directors. The Act changed the number of members serving staggered two-year terms from 17 to 19. HB 3215 became effective on August 28, 1995.

The passage of Senate Bill 626 (Chapter 715, Acts of the 74th Legislature, Regular Session, 1995), effective September 1, 1995, has indirectly affected groundwater conservation districts. SB 626, referred to as the "Recodification Bill," combined most of the administrative provisions of the Water Code relating to water districts (Chapters 50 through 66) into new Chapter 49 of the Water Code (Provisions Applicable to All Districts).

While groundwater conservation districts are generally excluded from provisions in new Chapter 49, SB 626 indirectly affected groundwater districts by necessitating the Commission to amend its water district rules in Title 30, Administrative Code, Chapter 293. As amended, Subsection 293.11 (a) contains rules applicable to all water districts' applications (petitions), and Subsection 293.11 (b) provides rules specific to groundwater conservation districts' applications. The rules were adopted by the Commission and became effective on October 21, 1996. Subsections 293.11 (a) and 293.11 (b) of the Administrative Code are included as Appendix 2.

House Bill 1989 (Chapter 309, Acts of the 74th Legislature, Regular Session, 1995) authorized the storage of state water in aquifers. The underground storage of state water in an aquifer where withdrawals are generally subject to the right of capture will have effects on the approaches and techniques used by districts to manage groundwater in their jurisdictions. HB 1989 requires the Commission to investigate the feasibility of storing appropriated water in various types of aquifers around the state by encouraging the issuance of temporary or term permits for pilot demonstration projects for the storage of appropriated water in aquifers. The Act allows an applicant, on conclusion of the pilot project, to apply for a permit, and requires the Commission, in reviewing an application for a permit, to consider whether groundwater quality will be significantly altered and whether an unreasonable loss of state water will occur. The Act further prohibits the issuance of a final permit before June 1, 1999. HB 1989 became effective on June 5, 1995.

GROUNDWATER MANAGEMENT AREAS

Background

The creation of groundwater conservation districts and the designation of underground reservoirs for the purpose of groundwater management was first authorized by House Bill 162 (51st Legislature, 1949), codified then as Article 7880-3c, Vernon's Civil Statutes. This law was subsequently incorporated into the Water Code as Chapter 52, Underground Water Conservation Districts. Article 7880-3c (amended in 1955) authorized the Texas Board of Water Engineers (one of TNRCC's predecessor agencies) to designate underground reservoirs and subdivisions by its own motion or upon landowner petition.

With the enactment of House Bill 2, the 69th Legislature (1985) made substantial changes to Chapter 52. The concept of an underground reservoir was changed to that of a management area. Prior to 1985, Chapter 52 required that the boundaries of groundwater conservation districts be coterminous with a designated underground reservoir. Changes also included allowing the consideration of political subdivision boundaries, in addition to aquifer boundaries, for management area delineations.

House Bill 2 also authorized the Commission to designate critical areas, defined as those areas experiencing or likely to experience critical groundwater problems within the next 20 years. Critical areas are intended to function as management areas for Commission-initiated groundwater conservation districts and can function as management areas for landowner-initiated groundwater conservation districts. Critical areas may fall within or overlap management areas or underground reservoirs previously delineated by the Commission or its predecessor agencies.

Senate Bill 1212, passed by the 71st Legislature in 1989, further modified management area provisions. The law changed the name "management area" to "underground water management area" and required the Commission to use procedures in accordance with agency rulemaking when designating underground water management areas. SB 1212 required that boundaries of districts created under Chapter 52 be coterminous with or within the boundaries of designated underground management areas or critical areas. In addition, the requirement for delineation of an underground water management area for district creation was not extended to legislatively created districts as in the old law. SB 1212 also modified several provisions regarding critical area

designations as set forth in Chapter 52. One of these changes required the Commission to use rulemaking procedures in designating and delineating critical areas.

House Bill 2294 (74th Legislature, 1995) provided for a full recodification of Chapter 52 into new Chapters 35 and 36, replaced the terminology of “underground water conservation district,” “underground water reservoir,” and “underground water management area” with “groundwater conservation district,” “groundwater reservoir,” and “groundwater management area,” and repealed old Chapter 52. HB 2294 effectively recodified the portions of old Chapter 52 which addressed groundwater management areas and critical areas into new Chapter 35, Groundwater Studies. The Act also effectively recodified the majority of old Chapter 52, dealing specifically with district powers, authorities, and administration, into new Chapter 36, Groundwater Conservation Districts.

Status

Under Article 7880-3c, the Texas Board of Water Engineers designated and delineated the first groundwater reservoir in 1950. Between 1950 and 1985 the Board and succeeding agencies, under Article 7880-3c or Chapter 52 (now Chapter 35), have designated 15 groundwater reservoirs or subdivisions thereof. Since 1985, the TNRCC or its predecessors have designated four groundwater management areas and four critical areas under Chapter 52 (now Chapter 35). Groundwater management areas designated since 1985 are delineated in Title 30 of the Administrative Code, Chapter 294. Figure 3 shows the state's groundwater reservoirs, groundwater management areas, and designated critical areas. The Commission did not designate any new, or modify any existing, groundwater management or critical areas during the 1995-96 biennium.

Petition Process for Creation or Alteration

Title 30, §§293.21 through 293.25 of the Administrative Code applies to the process for the designation of groundwater management areas. In accordance with the Water Code, §35.004, on its own motion or on receiving a petition, the Commission, after notice and hearing, determines whether to designate a groundwater management area. The Commission determines the boundaries of such a management area with the objective of providing the most suitable area for managing groundwater resources in the part of the state where a groundwater conservation

district is or may be located. To the extent feasible, the management area should coincide with the boundaries of a groundwater reservoir or a hydrologic subdivision of a reservoir. The Commission can also consider other factors in determining the boundaries of the management area, such as the boundaries of other political subdivisions and the appropriateness of the size and configuration of the management area to a groundwater conservation district's performance of its duties under Chapter 36 of the Texas Water Code.

Upon the request of the Commission or any person interested in a petition to designate a groundwater management area, the executive director prepares available evidence relating to the configuration of the management area. The executive director's evidence includes information about the existence and characteristics of a groundwater reservoir or a hydrologic subdivision of a reservoir. The Commission considers the evidence prepared by the executive director and all other evidence admitted in the proceeding in deciding whether to designate a groundwater management area as well as the boundaries of such a management area. The designation of a groundwater management area is a separate proceeding from that for creation of a groundwater conservation district.

Activities During the Biennium

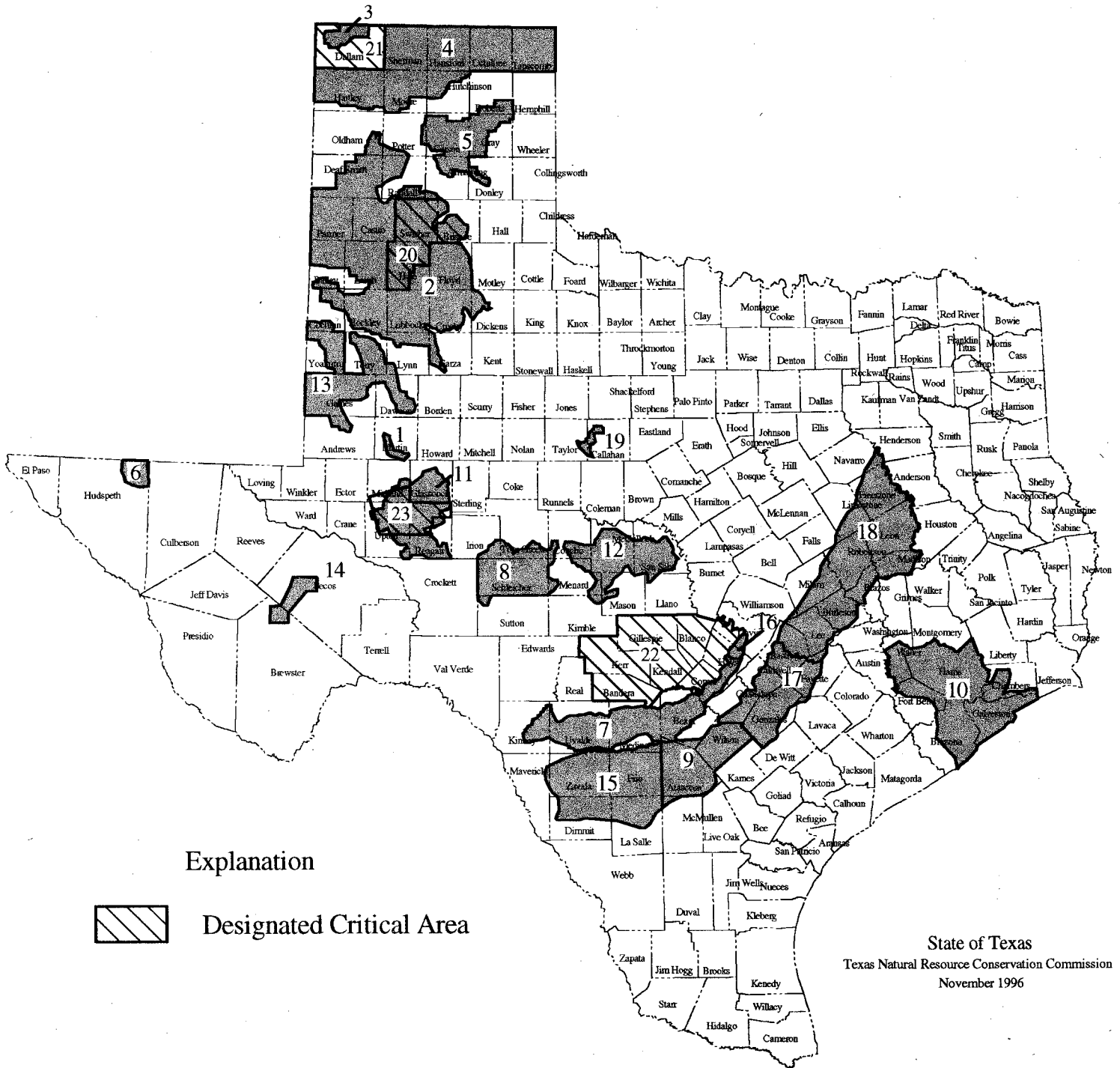
Proposed Alteration of the Boundaries of Subdivision No. 4 of the Ogallala

On August 4, 1993, the TNRCC received a landowner petition for the alteration of the boundaries of Subdivision No. 4. of the Underground Water Reservoir in the Ogallala Formation, South of the Canadian River (hence Subdivision No. 4). The petition, requesting the Commission consider the necessity to preserve, conserve, and protect groundwater resources on a regional basis, was presented by the Mesa (Dawson County), Permian Basin (Martin and a portion of Howard County), Sandy Land (Yoakum County), and South Plains (Terry County) districts.

The Texas Board of Water Engineers had delineated Subdivision No. 4 in a portion of the area lying in Cochran, Dawson, Gaines, Lynn, Terry, and Yoakum Counties on May 8, 1956. The petition requested that the delineation of Subdivision No. 4 be expanded to include all of the southern portion of the Ogallala aquifer in Andrews, Borden, Dawson, Ector, Gaines, Howard, Martin, Midland, Terry, and Yoakum Counties. The petition proposed alteration of Subdivision No. 4 based upon the boundaries of the Ogallala aquifer as delineated by the Texas Water Development Board.

Figure 3

Groundwater Reservoir, Groundwater Management Area and Critical Area Delineations



Map Explanation

(Figure 3)

GROUNDWATER RESERVOIR DELINEATIONS

- 1 - Subdivision No. 2 of the Underground Water Reservoir in the Ogallala Formation, South of the Canadian River (1950)
- 2 - Subdivision No. 1 of the Underground Water Reservoir, High Plains Area, Ogallala Formation, South of the Canadian River (1950)
- 3 - Subdivision No. 1 of the Underground Water Reservoir in the Ogallala Formation, North of the Canadian River (1950)
- 4 - Subdivision No. 2 of the Underground Water Reservoir in the Ogallala Formation, North of the Canadian River (1954)
- 5 - Subdivision No. 3 of the Underground Water Reservoir, High Plains Area, in the Ogallala Formation, South of the Canadian River (1955)
- 6 - Subdivision No. 1 of the Underground Water Reservoir in Hudspeth County (1955)
- 7 - Subdivision No. 1 of the Underground Water Reservoir in the Edwards Limestone, Balcones Escarpment Area (1957)
- 8 - Plateau Underground Water Reservoir (1974)
- 9 - Subdivision No. 2 of the Underground Water Reservoir in the Carrizo-Wilcox Sands (1957)
- 10 - Subdivision No. 1 of the Gulf Coast Underground Water Reservoir (1975)
- 11 - Subdivision No. 1 of the Underground Water Reservoir in the Edwards-Trinity Formation (1970)
- 12 - Subdivision of the Hickory Aquifer Underground Reservoir (1975)
- 13 - Subdivision No. 4 of the Underground Water Reservoir in the Ogallala Formation, South of the Canadian River (1956)
- 14 - Subdivision No. 1 of the Pecos Underground Water Reservoir (1959)
- 15 - Subdivision No. 1 of the Underground Water Reservoir in the Carrizo-Wilcox Sands (1957)

GROUNDWATER MANAGEMENT AREAS

- 16 - Barton Springs/Edwards Aquifer Management Area (1986)
- 17 - Management Area 3 of the Carrizo-Wilcox Aquifer (1987)
- 18 - Management Area 4 of the Carrizo-Wilcox Aquifer (1987)
- 19 - Union Hill Underground Water Management Area of the Antlers Sand Aquifer (1989)

CRITICAL AREA DESIGNATIONS

- 20 - Briscoe, Hale, and Swisher County Critical Area (1990)
- 21 - Dallam County Critical Area (1990)
- 22 - Hill Country Critical Area (1990)
- 23 - Reagan, Upton, and Midland County Critical Area (1990)

Note: Number in parentheses indicates year of delineation/determination.

The proposed rule and notice of hearing were published in the *Texas Register* on August 4, 1995. The proposed rule considered political subdivisions, proximity to other management areas, and aquifer boundaries as determined by the Texas Water Development Board. Cochran, Glasscock, and Lynn Counties were excluded from the proposed boundaries as there were significant portions of these counties in other delineated management areas and existing groundwater conservation districts within those counties. The proposed boundaries included all of the area in Andrews, Dawson, Gaines, Martin, Terry, and Yoakum Counties and the portion of the area overlying the Ogallala aquifer in Borden, Ector, Howard, and Midland Counties.

In preparing final rules, Commission staff considered written and oral comments from the August 23, 1995, public hearing and additional public meetings. Staff concluded that the water planning objectives in the urban areas differed significantly from the rural areas, thus warranting the exclusion of portions of Ector and Midland Counties from the proposed delineation. In addition, Commission staff considered several comments that groundwater resources did not exist in sufficient quantities in southern and western Andrews County to warrant inclusion within the proposed delineation. Upon further research, staff concluded that low saturated thickness and generally low transmissive properties of the Ogallala aquifer in this area did not warrant inclusion in the proposed delineation. Commission staff considered opposing comments regarding the inclusion of Gaines County within the proposed delineation. Based on the 72nd Legislature's creation of the Llano-Estacado Underground Water Conservation District (unconfirmed), technical data, and demonstrated support, staff concluded that Gaines County should be included in the delineation.

The petitioners did not support the staff's proposed changes, and would not support continued rulemaking that did not include the entire southern extent of the Ogallala aquifer. The petitioners believed that regional management of the southern Ogallala aquifer would be impossible without the inclusion of the entire aquifer as delineated by the Texas Water Development Board. The petitioners effectively ceased the petition process by taking the position to not assume the financial burden for providing the required notification for the final rule. Without the support of the petitioners, Commission rulemaking efforts effectively ceased, and the proposed rule expired after the 180-day limit for filing adopted rules (February 4, 1996).

Updated Commission Rules

Following the adjournment of the 74th Legislature, the Commission proposed and adopted new rules to incorporate the new references and new requirements relating to the administration of water districts and the Commission's supervision over their actions as provided by Senate Bill 626. This bill repealed and reorganized several administrative provisions in the Water Code, repealing Chapters 50 through 66 and adding Chapters 49 and 59. These amendments also incorporated new procedural requirements for designating groundwater management areas pursuant to House Bill 2294. The amended rules, including Designation of Groundwater Management Areas, were proposed in the April 5, 1996, *Texas Register*. No comments were received on the proposed Groundwater Management Area provisions, and the Commission adopted the sections as proposed on August 28, 1996. The final rules were filed with the *Texas Register* on September 30, 1996, and became effective on October 21, 1996. Sections 293.21 through 293.25 of Title 30, Administrative Code are included in Appendix 3.

Section 293.21, relating to Designation of Groundwater Management Area, was adopted to amend the language from "underground water management areas" to "groundwater management areas" and to reference new Chapter 35 of the Water Code. New §§293.22 through 293.25 were adopted as follows:

- ▶ new §293.22, relating to Petition for Adoption of Rules Designating a Groundwater Management Area, clarifies that groundwater management areas are designated through the rulemaking process, as prescribed by §35.005 of the Water Code, and not through the former evidentiary hearing process;
- ▶ new §293.23, relating to Commission Consideration of Petition for Adoption of Rules Designating a Groundwater Management Area, reflects the requirements in the Administrative Procedures Act (Subchapter B, Chapter 2001, Government Code) prescribing a time frame for Commission response to petitions to initiate rulemaking proceedings;
- ▶ new §293.24, relating to Notice of Commission Consideration of Final Adoption of Rules Designating a Groundwater Management Area, describes the notice requirements as prescribed by §35.006 of the Water Code; and
- ▶ new §293.25, relating to Alteration of Groundwater Management Area, incorporates language from the former §293.23 for improved clarity and organization, and updates statutory citations to §35.004 of the Water Code.

CRITICAL AREA PROGRAM

Background

The critical area program was established by House Bill 2 of the 69th Legislature, 1985, which amended Chapter 52 of the Water Code. The 69th Legislature recognized that certain areas of the state are experiencing, and may experience in the future, critical groundwater problems. House Bill 2 authorized the state's water agencies to study, identify, and delineate critical areas and to initiate the creation of groundwater conservation districts within these areas.

Critical areas were defined as being likely to experience critical groundwater problems that include water shortages, land subsidence, significant water level declines, groundwater contamination (including saltwater intrusion), and waste of groundwater supplies. It was the intent of the 69th Legislature to establish a procedure through which the state's water agencies could monitor and study, on a continuing basis, groundwater conditions within these critical areas and aid local citizens in addressing groundwater problems that might arise within the next 20 years.

The 71st Legislature, 1989, made major changes in the critical area process with the passage of Senate Bill 1212. Senate Bill 1212 amended Chapter 52 of the Water Code and streamlined the critical area process. The needed changes became evident during state agency implementation of the existing program. The amendments clarified the roles of the Texas Water Development Board and the Commission; clarified the procedures for conducting critical area studies, designating critical areas, and creating districts in critical areas; provided for the consolidation of existing districts; established a relationship between management area boundaries and district boundaries; and, placed time-schedules on the agencies for the development and submission of critical area reports.

House Bill 1744, passed by the 72nd Texas Legislature, 1991, further amended and clarified the critical area provisions of Chapter 52. The amendments provide the opportunity for local action in lieu of Commission-initiated action. Provisions were added to encourage local action to create groundwater conservation districts within designated critical areas. The provisions allow landowners in designated critical areas, within a certain time frame, to create one or more districts through the petition or legislative process or have the area annexed to an existing district. Any area failing to establish a district either through the petition or legislative process or through

annexation would be subject to inclusion in a proposed delineation of a district(s) for Commission consideration in accordance with Subchapter B, Chapter 36.

House Bill 2294 (74th Legislature, 1995) provided for a full recodification of Chapter 52 into new Chapters 35 and 36. HB 2294 effectively recodified the portions of old Chapter 52 which addressed groundwater management areas and critical areas into new Chapter 35, Groundwater Studies. Some language in the critical area process was amended by HB 2294, but no major changes were made in the process.

Status of Critical Area Studies

The role of the Commission and the Texas Water Development Board in delineating and performing critical area studies and designating critical areas is to educate local citizens, encourage them to address critical groundwater issues, and encourage the local creation of groundwater conservation districts. In the past, the critical area program has served as a driving force for making the public aware of groundwater problems and focusing attention on areas of the state where groundwater resources were most threatened.

Sixteen critical area studies were initiated and 15 of them were completed from 1987 to 1991. In January of 1992, the Texas Water Development Board filed its report with the Commission on the sixteenth study area, the North Plains Alluvium and Paleozoic Outcrops. A lack of dedicated resources has prevented the Commission from finalizing the study. Table 5 summarizes the current status of the critical area studies. The 16 study areas are shown in Figure 4. Critical area reports completed by the Commission and the Texas Water Development Board are listed in Appendix 4 and Appendix 5, respectively.

Staff of the Commission and the Texas Water Development Board met in August and September of 1996, in accordance with §35.007 of the Water Code, to discuss the critical area process and any areas of the state with potential groundwater problems. The discussions centered on the status of monitoring of groundwater conditions and local action addressing identified problems in previous study areas, and on new areas with potential problems that may require future studies. Additional topics of discussion included the status of groundwater conservation districts, issues related to groundwater monitoring, and concerns in various program areas related to the interaction of surface and groundwater. The agencies' staffs concluded and recommended that no new critical area studies should be undertaken at that time.

Status of Designated Critical Areas

Four study areas were designated as critical areas by the Commission. The designated critical areas and their delineations are given in Title 30 of the Texas Administrative Code, Chapter 294. Designated critical areas, shown in Figure 3, are:

- ▶ Briscoe, Hale, and Swisher County Critical Area;
- ▶ Dallam County Critical Area;
- ▶ Hill Country Critical Area; and
- ▶ Reagan, Upton, and Midland County Critical Area.

A fifth proposed designation, the El Paso County study area, was placed under advisement pending the completion of a regionally initiated water planning study. Five of the remaining 10 study areas (Williamson and Parts of Adjacent Counties, Central Texas (Waco) Area, East Texas Area, Trans-Pecos Area, and North-Central Texas Area) were not designated as critical areas, but the Texas Water Development Board and the Commission were to continue monitoring groundwater levels and local groundwater management initiatives over the following five years, and determine whether groundwater problems were being mitigated. Due to a lack of resources for the Commission's water programs, the Commission has not pursued any additional monitoring activities or administrative action regarding these five study areas. While the water planning study for the El Paso area was completed, the lack of resources prevented further Commission review and administrative action. The Board continues to monitor in some areas but has not been able to adequately monitor all of the problem areas.

Through local initiatives since 1987, four new districts have been created by the legislature (and confirmed through election) in two of the designated critical areas; a fifth district, created through the provisions of Chapter 36 of the Water Code, failed confirmation. Landowners within the other two designated critical areas have petitioned and had large portions of the areas annexed into existing districts. In the seven other study areas, four groundwater conservation districts (two confirmed through election) have been created, and annexations of three areas to existing districts have also taken place.

Figure 4

Locations of Critical Area Groundwater Studies

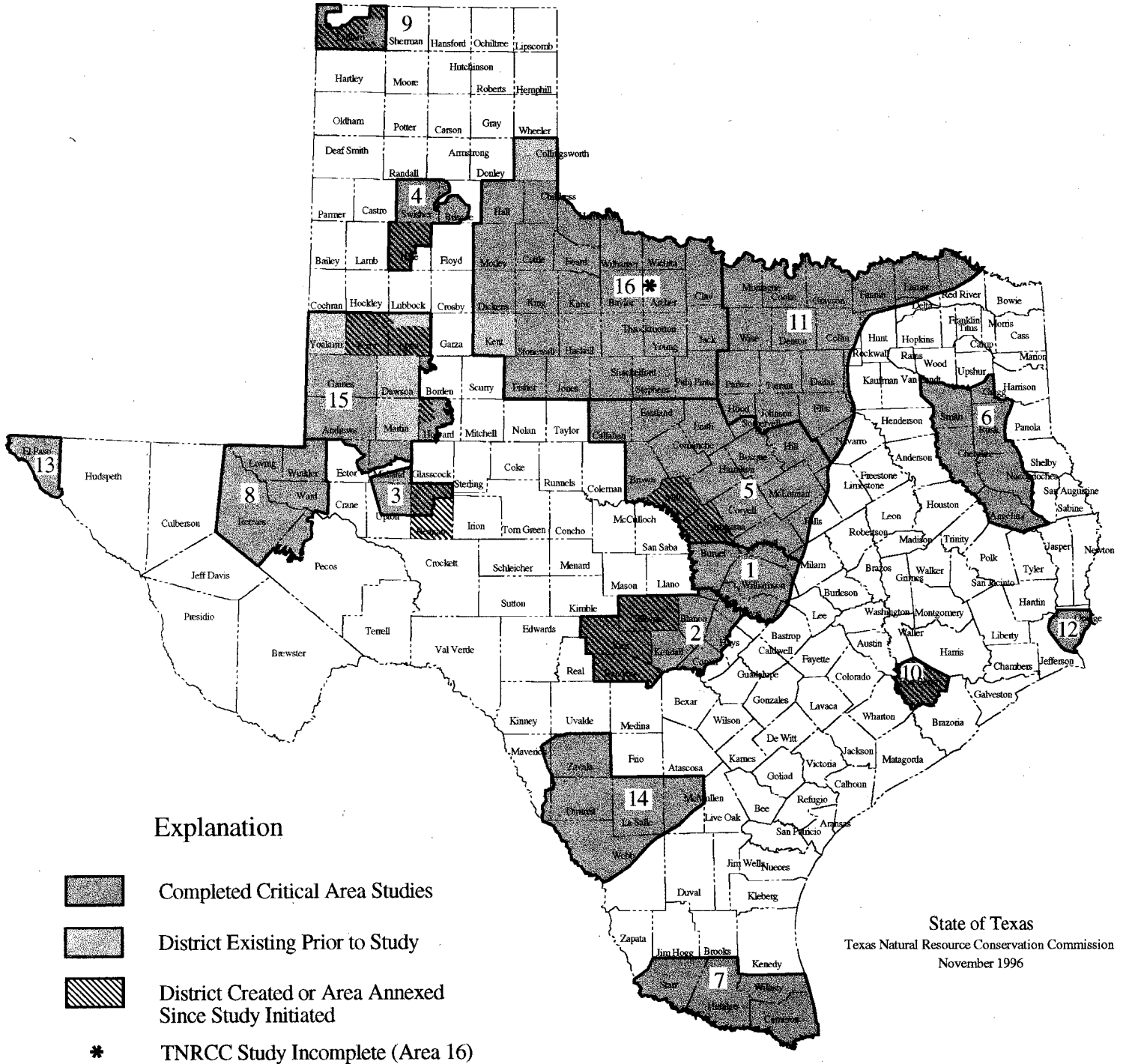


Table 5. Status of Critical Area Ground Water Studies

Area	Aquifer	Starting Date	TWDB ¹ Report	TNRCC Report ² Filing Date	TNRCC Action	Status
Area 1 - Williamson and Parts of Adjacent Counties	Edwards (BFZ) Trinity Group	04/01/87	R326	04/02/90	Remanded 10/17/90	c
Area 2 - Hill Country Area	Trinity Group	04/01/87	(in review)	02/26/90	Designation 06/06/90	d
Area 3 - Upton-Midland-Reagan Counties Area	Edwards-Trinity Plateau	10/01/87	R312	02/22/90	Designation 06/13/90	d
Area 4 - Hale-Swisher-Briscoe Counties Area	High Plains (Ogallala)	01/01/88	R313	02/22/90	Designation 06/06/90	d
Area 5 - Central Texas (Waco) Area	Trinity Group	09/01/89	R319	03/30/90	10/17/90	c
Area 6 - East Texas Area	Carrizo-Wilcox	09/01/89	R327	03/30/90	10/17/90	c
Area 7 - Lower Rio Grande Valley Area	Gulf Coast	09/01/89	R316	03/12/90	09/19/90	b
Area 8 - Trans-Pecos Area	Cenozoic Pecos Alluvium	09/01/90	R317	03/30/90	10/17/90	c
Area 9 - Dallam County Area	High Plains (Ogallala)	09/01/89	R315	02/22/90	Designation 06/06/90	d
Area 10 - Fort Bend County Area	Gulf Coast	09/01/89	R321	03/12/90	09/19/90	b
Area 11 - North-Central Texas Area	Trinity Group	09/01/89	R318	03/27/90	10/17/90	c
Area 12 - Orange-Jefferson Counties Area	Gulf Coast	09/01/89	R320	03/12/90	09/19/90	b
Area 13 - El Paso County Area	Hueco-Mesilla Bolson	09/01/89	R324	02/22/90	06/20/90	a
Area 14 - Winter Garden Area	Carrizo-Wilcox	10/04/90	R334	05/06/91	----	b
Area 15 - Southernmost High Plains Area	High Plains (Ogallala)	01/07/91	R330	08/05/91	----	b
Area 16 - North Texas Alluvium and Paleozoic Outcrops	Seymour Paleozoic Outcrops	10/16/91	R337	----	----	c

¹ Texas Water Development Board (TWDB) Critical Area Status - R326 signifies published report in the Board's numbered Report Series.

² Texas Natural Resource Conservation Commission (TNRCC) Critical Area Reports are Listed in Appendix 2 by area number.

Status: a) Study and report completed, awaiting Commission action; b) Determined not to be a critical area, no further study; c) Determined not to be a critical area, ongoing monitoring of the area; d) Critical area designation, Commission initiation of district creation postponed; e) TWDB report received, TNRCC has not initiated study.

Briscoe, Hale, and Swisher County Critical Area

Within the Briscoe, Hale, and Swisher County Critical Area, Hale County landowners petitioned for annexation into the High Plains Underground Water Conservation District No. 1. The district's board accepted the petition, and on August 14, 1993, approximately three-quarters of Hale County was accepted into the district. The confirmation election carried with 88 percent of those voting in favor of the annexation. Following the annexation, all of Hale County was included within the boundaries of the High Plains district.

Landowners in all of Swisher County and portions of Briscoe and Hale Counties had previously petitioned the High Plains district in 1988. After holding local hearings in November of 1988, the district's board decided not to accept the petitions. The board's reasons for not accepting the petitions included low attendance and interest at the public meetings, the cost of conducting elections, and the high cost of setting up and providing services in the petitioning counties versus the low revenue projected to be generated in the counties. No local action resulting in annexation or district creation has since occurred in either Briscoe or Swisher Counties.

Dallam County Critical Area

Landowners in the northeastern portion of the Dallam County Critical Area petitioned the Dallam County Underground Water Conservation District No. 1 for annexation into the district. The petition was accepted by the district's board, and a September 19, 1992, confirmation election passed with 100 percent of those voting in favor of annexation. The North Plains Ground Water Conservation District No. 2 was petitioned by landowners in Dallam and Hartley Counties for annexation into the district. With the board's acceptance of the petition, a large portion of both counties was annexed into the district. The May 1, 1993 confirmation election passed with 58 percent of those voting in favor of annexing into the North Plains district.

These two annexations have incorporated most of the area in the Dallam County Critical Area into existing districts. To date, two small parcels of land in the northwestern part and northern part of Dallam County have not been incorporated into an existing district. In addition, a large portion in the eastern part of Dallam County has not been incorporated into an existing district.

Hill Country Critical Area

The Hill Country Critical Area includes all of Bandera, Blanco, Gillespie, Kendall, and Kerr Counties as well as portions of Comal, Hays, and Travis Counties. Groundwater conservation districts have been created in three of the eight counties. The Hill Country Underground Water Conservation District, encompassing Gillespie County, was created by the 70th Legislature in 1987. A confirmation election passed on August 8, 1987, with 90 percent of those voting in favor of the district. The Springhills Water Management District, encompassing Bandera County, was created by the 71st Legislature in 1989. The Springhills district was confirmed on November 7, 1989, by a vote of six to one. The Headwaters Underground Water Conservation District, encompassing Kerr County, was created by the 72nd Legislature in 1991, and confirmed on November 5, 1991, by 73 percent of the voters.

Landowners in Comal County petitioned the Commission in 1993 for the creation of a groundwater conservation district. The preliminary hearing for the creation of the Comal County Underground Water Conservation District were held on March 31, 1994, and evidentiary hearings were held on July 21 and 22, 1994. By order, the Commission created the district on November 30, 1994. The confirmation election for the creation of the district was held on May 6, 1995, and failed. Ninety-two percent of the voters were against the creation of the district. The failed district would have encompassed all of the area within Comal County in the Hill Country Critical Area. While this district creation failed, landowner interest in creating a district has continued.

The Commission was contacted several times during 1996 by landowners and local officials from Blanco County concerning the district creation process as outlined in Chapter 36 of the Water Code and the agency's rules. The Commission is aware of interest for district creation in the county, but to date the Commission has not been approached from Blanco County landowners to initiate district creation proceedings. The Commission is also aware of some actions taken in Kendall County to address concerns identified in the critical area report. The Commission is unaware of any other local actions to initiate district creations or annexations in the remaining areas (western Hays and Travis Counties) within the critical area.

In the Hill Country Critical Area, the following counties are not within a district: Blanco, Kendall, and the western portions of Comal, Hays, and Travis Counties. When considering creation of a district in these areas, several concerns arise. One concern is that the western areas of the individual counties are generally too small for the operation of economically viable districts, and efforts toward a regional district have not been forthcoming. The portions of these counties within the critical area do not have a population or tax base large enough to support several small

districts, and landowners are not likely to favor the high tax rates needed for small groundwater districts. Another concern is that the highly publicized problems with the Edwards aquifer overshadow equally serious problems with the Trinity Group aquifer and efforts to address these problems in the critical area.

The exemption from regulation of domestic wells and wells producing less than 25,000 gallons per day (Water Code, §36.117) produces yet another concern for potential districts within the Hill Country Critical Area. Many shallow wells completed in the area's tight aquifers cannot produce 25,000 gallons per day under the best of conditions. This "floor-of-regulation" has discouraged the creation of groundwater conservation districts in the Hill Country Critical Area because most of the wells would be outside a potential district's authority.

Reagan, Upton, and Midland County Critical Area

The Reagan, Upton, and Midland County Critical Area encompasses portions of these three counties. The 71st Legislature, 1989, created the Santa Rita Underground Water Conservation District, encompassing all of the area in Reagan County that was not currently within the Glasscock County Underground Water Conservation District (refer to insert on Figure 1). The Santa Rita district was confirmed through election on August 19, 1989.

Landowners in Midland County petitioned the Permian Basin Underground Water Conservation District for annexation in 1991. The district's board approved the annexation and ordered a confirmation election for November 5, 1991. However, the election to annex to the district failed by a margin of 1.5 to 1. The Commission is unaware of any other local efforts to initiate district creation or annexation in Midland County. No local action resulting in district creation or annexation has occurred in Upton County.

GROUNDWATER MANAGEMENT ISSUES

District Management Planning

Section 36.107 of the Water Code requires groundwater conservation districts to develop, following notice and hearing, a comprehensive management plan for the most efficient use of groundwater; for the control and prevention of waste of groundwater; and for the control and prevention of subsidence. Each district's board of directors is responsible for identifying and determining the district's short- and long-range goals through the development of the comprehensive management plan. Each district's management plan, at a minimum, is required to specify in detail the acts, procedures, performance, and avoidance that are or may be necessary to implement the plan, including specifications and proposed rules.

Section 36.107 further requires each district to adopt rules to implement the management plan; encourages the district's board to annually review the plan; and, requires the district's board to review the plan at least once every five years. Before the recodification of §36.107 in 1995, each district's board was required to review management plans at least once every two years. Each groundwater conservation district is required to file a copy of the district's comprehensive management plan and district rules with the Commission. Section §36.107 does not specify when district management plans and rules must be filed with the Commission; however, it is implied that both management plans and rules should be filed upon any amendment or change from their prior status. No provisions for TNRCC approval or any other actions with respect to the management plans are provided in §36.107.

A comprehensive district management plan should serve several purposes. The plan should identify groundwater problems and concerns within the district and should identify and propose possible short- and long-term solutions to those problems. Management plans should serve as a framework in establishing, guiding, and budgeting for district programs and activities to address the district's groundwater concerns. These concerns, in general, are to conserve, preserve, and protect groundwater resources, and prevent subsidence due to groundwater withdrawals. The management plan should represent the district's objectives and goals, and should be reviewed annually by the district's board to evaluate how effective the district's programs and activities are in achieving its objectives and goals. Of the 40 existing districts, 30 have management plans currently filed with the Commission. From available information, Commission staff can only verify that management plans are current and comply with §36.107 for 3 districts (Barton Springs, Hill

Country, and Evergreen). Available information is insufficient for Commission staff to verify compliance with §36.107 for management plans that span more than five years. The 10 districts that have failed to file management plans include the Anderson, Fox Crossing, Garza, Gonzales, Hudspeth, Jeff Davis, Plum Creek, Real-Edwards, Salt Fork, and Saratoga districts. A listing of the district management plan filing status is shown in Table 6.

Table 6. Filing Status of Management Plans

District	Management Plan Submitted	Date of Plan
Anderson County UWCD	No	
Barton Springs/Edwards Aquifer CD	Yes	1995 - 1997
Coke County UWCD	Yes	1989 - 1999
Collingsworth County UWCD	Yes	1994
Dallam County UWCD No. 1	Yes	1993
Edwards Aquifer Authority	Yes	1994 - 2004 ¹
Emerald UWCD	Yes	None
Evergreen UWCD	Yes	1992 - 1997
Fort Bend Subsidence District	Yes	1990
Fox Crossing Water District	No	
Garza County U&FWCD	No	
Glasscock County UWCD	Yes	1991 - 1992
Gonzales County UWCD	No	
Harris-Galveston Coastal Subsidence District	Yes	1992
Headwaters UWCD	Yes	1993
Hickory UWCD No.1	Yes	1989 - 1999
High Plains UWCD No. 1	Yes	1980 - 1990
Hill Country UWCD	Yes	1996 - 2000
Hudspeth County UWCD No. 1	No	
Irion County WCD	Yes	1992
Jeff Davis County UWCD	No	
Lipan-Kickapoo WCD	Yes	1989 - 1999
Live Oak UWCD	Yes	1990
Medina County UWCD	Yes	1994

Table 6 - Continued

District	Management Plan Submitted	Date of Plan
Mesa UWCD	Yes	1991 - 1995
North Plains GWCD No. 2	Yes	1991
Panhandle GWCD No. 3	Yes	1992
Permian Basin UWCD	Yes	1991
Plateau UWC & SD	Yes	1992
Plum Creek CD	No	
Real-Edwards C & RD	No	
Salt Fork UWCD	No	
Sandy Land UWCD	Yes	1991 - 1996
Santa Rita UWCD	Yes	1992
Saratoga UWCD	No	
South Plains UWCD	Yes	1993 - 2003
Springhills Water Management District	Yes	1990 - 2000
Sterling County UWCD	Yes	1988
Sutton County UWCD	Yes	1991
Uvalde County UWCD	Yes	1994

1. Management plan submitted by Edwards Underground Water District

Coordinated Management Planning

Section 36.108 of the Water Code (also in §52.160 before recodification in 1995) requires that if two or more districts are located within the boundaries of a groundwater management area designated by the Commission, the district management plans must be coordinated. Each district is required to forward a copy of its management plan or revised plan to the other district or districts. The boards of directors of the districts are required to meet jointly to review the management plans and accomplishments under the plans within the management area. Before the recodification of §36.108 in 1995, statute had required the boards of directors to meet jointly in each even-numbered year to review the management. As amended and recodified, §36.108 does not specify when or how often the boards of directors should meet.

Section 36.108 further provides that a district in the management area may initiate a review of the adequacy of another district's rules in protecting groundwater resources within the same

management area. The process allows a district in the management area to file a petition with the Commission regarding another district's failure to adopt or adequately enforce rules or adequately protect groundwater within the management area. After review of the petition (within 90 days), the Commission either dismisses the petition or appoints a panel to review it. The review panel (within 120 days after appointment) is charged to review the petition, gather any additional evidence (e.g., public hearing) as needed, and prepare a report to the Commission. The review panel's report is to include a summary of collected evidence, a list of findings and recommendations appropriate for Commission action, and the reasons the recommended actions are considered appropriate.

Table 7 lists eight groundwater management areas and the districts whose boundaries lie within all or some part of the management areas. Some cooperative activities of districts within certain management areas were brought to the Commission's attention during the 1995-96 biennium. The main activity, as previously discussed, was the effort of the districts in Subdivision No. 4 of the Underground Water Reservoir in the Ogallala Formation, South of the Canadian River (Figure 3, Number 13) to modify the boundaries of the management area to include the full southern extent of the Ogallala aquifer. In addition, the Commission is aware of the cooperative efforts of the Fort Bend Subsidence District and the Harris-Galveston Coastal Subsidence District in Subdivision No. 1 of the Gulf Coast Underground Water Reservoir (Figure 3, Number 10).

Overlap of Management Jurisdiction

The northern boundary of the Edwards Aquifer Authority, as delineated in Senate Bill 1477 (Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993), overlaps some of the territory in the Barton Springs/Edwards Aquifer Management Area (Figure 3, No. 16). The Barton Springs/Edwards Aquifer Conservation District encompasses the hydrologically discrete Barton Springs/Edwards Aquifer Management Area. This management area is separated hydrologically by a groundwater divide from Subdivision Number 1 of the Underground Water Reservoir in the Edwards Limestone, Balcones Escarpment Area (Figure 3, No.7), which represents most of the area intended to be under the Edwards Aquifer Authority's jurisdiction. To date, no action has been taken to address the issue of dual management jurisdiction in this area.

Table 7. Groundwater Management Areas Encompassing More Than One District

Management Areas ¹	Districts within the Management Area
(7) ² Subdivision No. 1 of the Underground Water Reservoir in the Edwards Limestone, Balcones Escarpment Area (1957) ³	Medina Underground Water Conservation District (1991) ⁴ Uvalde County Underground Water Conservation District (1993) Edwards Aquifer Authority (1996) ⁵
(8) Plateau Underground Water Reservoir (1974)	Plateau Underground Water Conservation & Supply District (1955) Irion County Water Conservation District (1985) Sutton County Underground Water Conservation District (1986) Lipan-Kickapoo Water Conservation District (1987)
(10) Subdivision No. 1 of the Gulf Coast Underground Water Reservoir (1975)	Harris-Galveston Coastal Subsidence District (1975) Fort Bend Subsidence District (1989)
(11) Underground Water Reservoir in the Edwards-Trinity Formation (1970)	Glasscock County Underground Water Conservation District (1981) Santa Rita Underground Water Conservation District (1989)
(13) Subdivision No. 4 of the Underground Water Reservoir in the Ogallala Formation, South of the Canadian River (1956)	High Plains Underground Water Conservation District No. 1 (1951) Mesa Underground Water Conservation District (1989) Sandy Land Underground Water Conservation District (1989) South Plains Underground Water Conservation District (1992)
(2) Dallam County Critical Area (1990)	Dallam County Underground Water Conservation District No. 1 (1953) North Plains Ground Water Conservation District No. 2 (1954)
(3) Hill Country Critical Area (1990)	Hill Country Underground Water Conservation District (1987) Springhills Water Management District (1989) Headwaters Underground Water Conservation District (1991)
(4) Reagan, Upton, and Midland County Critical Area (1990)	Glasscock County Underground Water Conservation District (1981) Santa Rita Underground Water Conservation District (1989)

1. Includes designations for; Underground Water Reservoirs, Underground Water Management Areas, and Critical Areas.
2. Number in parentheses (7) indicates management area located on Figure 3.
3. Date in parentheses (1957) indicates date of designation for the management area.
4. Date in parentheses (1959) indicates the date of district establishment.
5. Edwards Aquifer Authority effectively replaced the Edwards Underground Water District, established in 1959

Exceptions from District Authority

Most groundwater districts are created through the efforts of local citizens, whose expectations of the district are to manage the groundwater resources for the benefit of all within its jurisdiction. Fulfilling this expectation often falls short in any given district because of the exceptions that are provided in §36.117 of the Water Code. Section 36.117 provides exceptions and limitations to groundwater conservation district authority in permitting certain types of water wells. Exceptions from district permitting generally include wells incapable of producing more than 25,000 gallons per day, domestic wells supplying 10 or fewer households, livestock wells, hydrocarbon production wells and other activities permitted by the Railroad Commission, and jet wells used for domestic need. This section of the Water Code has been amended over numerous sessions as the powers and duties of groundwater conservation districts have evolved.

The groundwater conservation districts have noted that the current language of §36.117 is confusing; difficult to administer; and obstructs uniform, local management of groundwater resources. Section 36.117 provides exceptions and limitations on wells incapable of producing 25,000 gallons per day. A number of aquifers within the state are not capable of producing this volume of water, and this restriction often prevents the protective measures that local districts have been created to address. This “floor-of-regulation” has also discouraged the creation of groundwater conservation districts in some parts of the state (in the Hill Country Critical Area for example) since most of the wells would be outside a potential district’s authority to protect, conserve, and preserve the groundwater resource. The benefits of district regulation regarding spacing and production requirements can help to deter local well interference and overdrafting of the groundwater resource.

Problems are also encountered in association with the exemption of single-family residential wells. In some districts, single-family residential wells are completed in area subdivisions by the hundreds. This has dramatic short- and long-term effects on the groundwater resource that are totally outside a district’s management authority. A more indicative and divisive condition occurs where neighborhoods, basically in the same subdivision or area, develop at a different times and have differing water supplies. Neighbors on a water system must pay fees to the district, follow the rules of the water system, and limit water use as required. The neighbors with exempt private wells pay no fees, use water at will and without consequences, and enjoy the benefit of the water conserved by their neighbors.

Section 36.117 allows exemptions for rig-supply wells (wells supplying water for drilling or exploration activities) used for activities under the jurisdiction of the Railroad Commission of

Texas (RCT). Rig-supply wells are generally used to extract water for a short time, usually continuously for the duration of the drilling activity. These short-term withdrawals have a less significant impact on groundwater resources than long-term pumping operations. Long-term pumping, such as conversion to use for the landowner or commercial supply, can pose significant impacts to area groundwater resources. The Commission is concerned that, if allowed an exemption, long-term pumping operations can hinder the district's ability to manage the groundwater resource.

In addition, the language in §36.117 is ambiguous in regard to the location of rig-supply wells, which are allowed an exemption from district permitting. This ambiguity has allowed for the exemption of wells that are drilled by commercial enterprises for the purpose of selling water for the support of mineral extraction, regardless of where the wells may be located. To allow the district to manage the groundwater resource, it is suggested that the §36.117 be amended to make the exemption valid only for water-supply wells located on property covered by the mineral lease where mineral exploration or development is occurring.

Review of District Activities

With the recodification of groundwater district law in 1995, the language in Chapter 36 of the Water Code generally followed what had previously existed. A notable exception was the amendment of §52.101, General Provisions and Requirements Applicable to All Districts and Authorities, which was amended and recodified as §36.052, Other Laws Not Applicable. Section 52.101 had required, that to the extent applicable, groundwater conservation districts were governed by Chapter 50 of the Water Code regarding general reporting requirements and financial reporting requirements. Section 36.052 provides that other laws governing the administration or operations of districts created under Section 52, Article III, or Section 59, Article XVI, Texas Constitution, shall not apply to any district governed by Chapter 36.

Section 36.052 separates groundwater conservation districts from the Commission's oversight provided for all other water districts under Chapter 49 (General Law Districts). No other provisions addressing Commission oversight of groundwater districts were included in the recodification of Chapter 36. Section 36.052 appears to remove groundwater districts from Commission oversight. The Commission no longer has the authority to require the filing of essential financial information and, thus, the Commission's ability to respond to citizen concerns about district operations is jeopardized.

Unconfirmed and Failed District Creations

Five groundwater conservation districts created during the 73rd, 72nd, and 71st Texas Legislatures have not scheduled or held confirmation elections. By failure to bring the confirmation elections before the local populace, for a determination of whether the district is to be confirmed, the districts are essentially in limbo--created yet unconfirmed. The unconfirmed districts cannot carry out the intention of their enabling legislation, to fulfill the mandate to protect, conserve, and preserve local groundwater resources. Several possibilities may account for the inaction of these districts. There may not be sufficient resources to dedicate toward an appropriate educational effort about the purpose and programs of the district. Issues involved in delineating precincts by population or land use may be a factor. Misinformation and the fear of state government intervention may be an issue.

In addition, three legislatively created (Central Texas, Llano Uplift, and Rolling Plains) and one Commission-created (Comal County) groundwater conservation districts have failed confirmation elections since 1989. The failure of these elections can be attributed to several factors. The lack of a sufficient education effort about the benefit of the districts and the necessity of protecting the groundwater resource played a certain role. Temporary directors may be unaware of the full range of benefits that are authorized for a locally controlled district. The unwillingness of the local populace to be subject to more taxes and another layer of government and mistrust of government in general were also issues. Temporary directors commonly fight against misinformation campaigns (emphasizing more bureaucracy and more taxes) waged by opponents to district creation. The resources and information available to temporary directors limit their ability to counter misinformation. Two of the districts (Comal County and Llano Uplift) failed because a large portion of the tax burden would have been borne by citizens who utilize available alternative (surface) water supplies and would not have benefited from the creation of the district.

Critical Area Issues

Chapter 35 of the Water Code provides that the Commission initiate district creation if local initiatives fail to create a groundwater conservation district within a designated critical area. In the event of a Commission-initiated district creation, voters within the district, through confirmation election and board member election, are assured the opportunity to confirm the district creation and locally manage groundwater resources.

The critical area program was actively pursued from 1987 to 1991, and can be viewed as a success even though there have been no Commission-initiated district creations. From 1987 to 1991, 16 critical area studies were initiated and 15 studies were completed. The Commission designated 4 of the study areas as critical areas in 1990. Through local initiatives since 1987, four new districts were created by the legislature (and confirmed through election) in 2 of the designated critical areas and a fifth district, created through the provisions of Chapter 36 of the Water Code, failed confirmation. Significant portions of the other 2 designated critical areas have petitioned and annexed into existing districts.

Significant portions of the 4 designated critical areas have not taken the needed actions (creating districts or annexing to existing districts) to address identified groundwater problems. As written, Chapter 35 requires the Commission to provide evidence for critical area designation through rulemaking procedures. Further, the Commission is required to conduct evidentiary hearings pertaining to district creation following designation. Following these time- and labor-intensive procedures, the Commission must wait until one year after the close of the next regular session of the legislature to observe landowner/local government action within the critical area.

If landowners do not take the necessary actions leading to the creation of districts within their area, the Commission is then required to intervene and initiate a second district creation proceeding under Chapter 36. As written, the statute procedurally requires a burdensome and administratively duplicative step to the process of district creation. Requiring two sets of resource-intensive studies and evidentiary hearings to be conducted for the Commission-initiated creations is not only expensive and redundant but administratively interferes with the intent to create groundwater conservation districts in designated critical areas where local action has not been taken.

During the past six years, the critical area process has not received state funding. Resources have not been allocated for the continued implementation of the critical area program. Other than holding cooperative meetings, lack of resources has prevented the Texas Water Development Board (TWDB) and the Commission from administering and implementing the program. Sufficient resources are required to allow:

- ▶ TNRCC to complete the 16th critical area study;
- ▶ TNRCC to initiate district creation proceedings in the designated critical areas;
- ▶ TNRCC to take further actions in the El Paso study area;

- ▶ TNRCC and TWDB to perform follow-up monitoring in 5 previously identified study areas; and,
- ▶ TNRCC and TWDB to identify and initiate, on a continuing basis, new critical area studies.

Groundwater management areas are designated with the objective of providing the most suitable area for the management of groundwater resources. Critical areas are designated with the same purpose, the only difference being the severity of groundwater problems. It is hoped the local actions taken in management areas conserve and preserve groundwater resources for the future. Local actions to conserve and preserve groundwater resources in designated critical areas are necessary to ensure groundwater resources are available for future use.

RECOMMENDED CHANGES TO CHAPTERS 35 and 36

General Recommendations

Clarifying District General and Financial Reporting Requirements. The amendment and recodification of §52.101 of the Water Code (General Provisions and Requirements Applicable to All Districts and Authorities) as §36.052 (Other Laws not Applicable) removed certain general and financial reporting requirements of groundwater conservation districts, which are not provided in Chapter 36 of the Water Code. The Commission suggests the language of §36.153 and §36.154 should be amended to require groundwater conservation districts to file annual audit and budget information with the Commission.

Ensuring Confirmation and Directors' Elections Are Held. The language of §36.017 should be amended to require the temporary board to call for and hold a confirmation and directors' election within a reasonable time frame. Alternatively, time frames for holding confirmation and directors' elections could be outlined in a district's enabling legislation.

The Commission suggests a time frame of 18 months to hold a confirmation election. The Commission believes this would allow sufficient time for the temporary board of directors to organize, schedule, and conduct the required confirmation and directors' election. Additionally, this time frame would allow the next Regular Session of the Legislature the opportunity to review actions, or lack of actions, taken in a newly created district, and allow action by local representatives as necessary.

Since 1989, six districts (Haskell/Knox, Hemphill, Llano-Estacado, Menard, Oldham, and Presidio) have been created that have not held any confirmation and/or directors' elections to date. In 1989, the Bell County Commissioners Court was given authority, by the Legislature, to appoint temporary directors to call for an election and create a seventh district (Clearwater).

The Hemphill and Oldham County districts (created by the 74th Legislature) have indicated they are taking the necessary actions to lead to an election. The Haskell/Knox, Llano-Estacado, Menard, and Presidio districts have not shown any indication that elections are planned, and the Bell County Commissioners Court has not appointed a temporary board of directors. The

Commission suggests that if an 18-month time frame is acceptable to the Legislature, it should be made retroactive to include these unconfirmed districts upon amendment.

Public education is the initial challenge that faces a newly created district's temporary board of directors. Sufficient time is needed to allow the district's board to organize and to educate local citizens on the purpose and benefit of the district and the necessity of protecting the groundwater resource. The Commission, the Texas Alliance of Groundwater Districts, and individual groundwater conservation districts readily provide assistance in these regards to newly created districts upon request. In addition, the Elections Division of the Secretary of State and local county clerks and commissioners courts also provide assistance as requested.

Clarifying Exceptions from District Permitting. The existing groundwater conservation districts have noted that the current language of §36.117 is confusing, difficult to administer, and creates unnecessary burdens for districts to manage groundwater resources. The Commission suggests that §36.117 of the Water Code be amended to provide the districts with the flexibility to determine the level of exemptions necessary for their jurisdictions while providing the districts with sufficient authority to fully manage the groundwater resources in their area.

Management Issue Recommendations

Clarifying District Comprehensive Management Plan Reporting Requirements. The language of §36.107 should be amended to require groundwater conservation districts to develop and submit comprehensive management plans and rules whenever the district's board of directors takes action to update, amend, change, or approve the management plan or rules. Amendment is needed to provide clarity in the management plan and rule reporting requirement to ensure that plans and rules, and any substantial amendment to them, are developed and filed with the Commission for review and comment or approval.

The language of §36.108 should be amended to require the boards of directors of districts within a common groundwater management area, upon holding a joint meeting for the discussion of management planning and objectives in the management area, file records of such meetings with the Commission. As there are no provisions for filing such records, the Commission is often unaware of comprehensive district efforts when more than one district is located in a management area.

Addressing the Dual Management Issue between the Edwards Aquifer Authority and the Barton Spring/Edwards Aquifer Conservation District. The northern boundary of the Edwards Aquifer Authority, as delineated in Senate Bill 1477 (Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993), should be amended to be coextensive with the northern boundary of Subdivision No. 1 of the Underground Water Reservoir in the Edwards Limestone, Balcones Escarpment Area. Amendment is needed to address the issue of dual management jurisdiction that the northern boundary of the Edwards Aquifer Authority has created by overlapping into the Barton Springs/Edwards Aquifer Management Area, under the management of the Barton Springs/Edwards Aquifer Conservation District.

Critical Area Recommendations

Simplifying District Creation in Designated Critical Areas. Chapter 35 of the Water Code requires two sets of resource-intensive studies and evidentiary hearings to be conducted in order to create a groundwater conservation district in a critical area. This requirement is not only expensive and redundant but interferes with the intent: to create groundwater conservation districts in areas where critical groundwater problems exist. The critical area district creation process could be easily simplified through amendments of §35.007 through §35.012 of the Water Code.

Amendments should allow the Commission a single notice and a concurrent determination of whether to designate a critical area and create a groundwater conservation district(s). This would shorten the time frame from approximately four years under the current statute to less than two years.

Clarifying the Equivalency of Critical Areas as Groundwater Management Areas. Chapters 35 and 36 are not clear about the equivalency of designated critical areas and groundwater management areas (including delineated groundwater reservoirs and subdivisions thereof). The definitions for “management area” in §35.002 and §36.001 should be amended to clarify that, for purposes under Chapters 35 and 36, management areas include designated critical areas and delineated groundwater reservoirs or subdivisions thereof.

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Appendix 1. Groundwater Conservation District Contacts

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Dallam County Underground Water Conservation District No. 1
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Mr. Dale Henry, Chairman
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(Member - Texas Alliance of Groundwater Districts)

Created but Unconfirmed Districts

Clearwater Underground Water Conservation District

(Enabled during the 71st Legislature, 1989 - Statute allows Bell County Commissioners Court to create district)

Mr. David Perdue

Haskell/Knox Underground Water Conservation District

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(Created during the 73rd Legislature, 1993)

Mr. Mark Meek, Member

Hemphill County Underground Water Conservation District

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(Created during the 74th Legislature)

Mr. Phil Wallace, Temporary Director

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(Created during the 72nd Legislature, 1991)

Menard County Underground Water Conservation District

(Created during the 72nd Legislature, 1991)
(Temporary Directors - Carl A. Martin, Murph M. Compton, Mark W. Jones, A.B. Williams, & Bill Austin)

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Appendix 2. Texas Administrative Code, §293.11 (a) & (b)

CREATION OF WATER DISTRICTS

The sections are adopted under the Texas Water Code, §§5.103, 5.105, and 5.235, which provide the Texas Natural Resource Conservation Commission (commission) with the authority to adopt any sections necessary to carry out its powers and duties under the Texas Water Code and other laws of the State of Texas, to establish and approve all general policy of the commission, and to collect statutory fees from persons filing various applications with the commission.

§293.11. Information Required to Accompany Applications for Creation of Districts.

(a) Creation applications for all types of districts shall contain the following:

(1) \$700 non refundable filing fee;

(2) if a proposed district's purpose is to supply fresh water for domestic or commercial use or to provide wastewater services, roadways, or drainage, a certified copy of the action of the governing body of any municipality in whose extraterritorial jurisdiction the proposed district is located, consenting to the creation of the proposed district, pursuant to Local Government Code, §42.042. If the governing body of any such municipality fails or refuses to grant consent, the petitioners must show that the provisions of Local Government Code, §42.042 have been followed.

(3) if city consent was obtained pursuant to paragraph (2) of this subsection, provide the following:

(A) evidence that the application conforms substantially to the city consent; provided, however, that nothing herein shall prevent the commission from creating a district with less land than included in the city consent;

(B) evidence that the city consent does not place any conditions or restrictions on a district other than those permitted by Texas Water Code, §54.016(e);

(4) a statement by the appropriate secretary or clerk that a copy of the petition for creation of the proposed district was received by any city in whose corporate limits any part of the proposed district is located;

(5) evidence of filing creation petition and report with appropriate agency regional office;

(6) if substantial development is proposed, a market study and a developer's financial statement;

(7) if the petitioner is a corporation, trust, partnership, or joint venture, a certificate of corporate authorization to sign the petition, a certificate of the trustee's authorization to sign the petition, a copy of the partnership agreement or a copy of the joint venture agreement as appropriate to evidence that the person signing the petition is authorized to sign the petition on behalf of the corporation, trust, partnership, or joint venture;

(8) a vicinity map;

(9) unless waived by the executive director, for districts where substantial development is proposed, a certification by the petitioning landowners that those lienholders who signed the petition or a separate document consenting to the petition, or who were notified by certified mail, are the only persons holding liens on the land described in the petition;

(10) other related information as required by the executive director.

(b) Creation applications for Chapter 36, Texas Water Code, Groundwater Conservation Districts shall contain the items listed in subsection (a) of this section and the following items:

(1) a petition containing the matters required by Texas Water Code, §36.013, signed by the majority of the landowners in the proposed district, or if there are more than 50 landowners, at least 50 of those landowners. The petition shall include the following:

(A) the name of the proposed district;

(B) the area and boundaries of the proposed district, including a map generally outlining the boundaries of the proposed district;

(C) the purpose or purposes of the proposed district;

(D) a statement of the general nature of any projects proposed to be undertaken by the district, the necessity and feasibility of the work, and the estimated cost of those projects according to the petitioners if the projects are to be funded by the issuance of bonds or notes; and

(E) any additional terms or conditions that limit the powers of the proposed district from those authorized in Chapter 36, Texas Water Code.

(2) evidence that the boundaries are coterminous with or inside the boundaries of a delineated groundwater management area, critical area, or underground water reservoir or subdivision thereof. A groundwater conservation district may include all or part of one or more counties, cities, districts, or other political subdivision and may consist of separate bodies of land within a groundwater management area, critical area, or underground water reservoir or subdivision thereof separated by land not included in the proposed district. Evidence shall show:

(A) a rule adopted by the commission designating a groundwater management area as provided in the Texas Water Code, §35.004, and §§293.21-293.25 of this title (relating to Designation of Groundwater Management Areas), designating a critical area as provided under the Texas Water Code, §§35.007-35.012, or an order designating delineation of an underground water reservoir or subdivision thereof; or

(B) if part of the proposed district is not included within either a delineated groundwater management area, critical area, or underground water reservoir or a subdivision thereof, the petition may also contain a request (meeting the requirements of the Texas Water Code, §35.005 and §§293.21 - 293.25 of this title) to create or alter the boundaries of a management area. If such a request is made, it may be acted upon separately by the commission from the petition for the creation of the proposed district;

(3) a map showing the proposed district's boundaries, metes and bounds, area, physical culture, and computation sheet for survey closure;

(4) a vicinity map (22-24 inches by 36 inches or in a digital data electronic format) showing as appropriate the location of municipalities, highways, roads, and other improvements, together with the areal extent of groundwater aquifers, reservoirs, or subdivisions thereof, and showing the location of known recharge (i.e., outcrops of aquifer units, karst features, etc.) or discharge (i.e., known seeps, springs, etc.) features, and any other information pertinent to the creation of the proposed district;

(5) a geologic/hydrologic report including as appropriate:

(A) the purpose or purposes of the proposed district and its management planning objectives/goals;

(B) a description of the existing area, conditions, topography, economic endeavors which rely heavily upon groundwater, and any proposed improvements;

(C) a description of the groundwater resources, including the characteristics (i.e., recharge/discharge features, depth of usable groundwater, etc.) of individual aquifers within the proposed district;

(D) complete justification for the creation of the proposed district supported by evidence that the district is feasible, practicable, necessary, and will benefit all of the land to be included in the district;

(E) if the proposed district is located in a designated critical area, a description of how the proposed projects will address issues identified within the critical area;

(F) the existing and projected land use in the proposed district;

(G) the existing and projected groundwater quality, quantity, availability, and usage within the proposed district, including any foreseeable quality, quantity, availability, and usage issues as identified by the petitioners;

(H) the existing and projected population;

(I) an evaluation of the effect the proposed district and its programs will have within the district on the following:

(i) land elevation;

(ii) subsidence;

(iii) groundwater levels;

(iv) groundwater conservation and availability;

(v) groundwater quality;

(vi) monitoring of ambient groundwater conditions;

(vii) groundwater educational initiatives;

(J) financial information including the following:

(i) the projected maintenance tax rate, under Texas Water Code, §36.020, which should not exceed 50 cents on each \$100 of assessed valuation;

(ii) the proposed budget of revenues and expenses for the district;

(iii) an evaluation of the effect the district and its programs will have on the total tax assessments on all land within the district, including a discussion of current and projected tax rates;

(iv) tentative itemized cost estimates of the proposed projects and itemized cost summary for anticipated bond issue requirements;

(K) if water supply utility services are proposed:

(i) an evaluation of the availability of comparable service from other entities, including, but not limited to, water districts, water supply corporations, municipalities, and regional authorities;

(ii) complete justification, supported by evidence, for the necessity and feasibility of the proposed district to provide water supply services;

(iii) the current and projected water rates in the proposed district;

(iv) tentative itemized cost estimates of the proposed capital improvements and itemized cost summary for anticipated bond issue requirements; and

(v) any other related technical information as required by the executive director;

(6) a certificate by the county tax assessor(s) indicating the owners and tax valuation of land within the proposed district as reflected on the county tax rolls as of the date of the petition. If the tax rolls do not show the petitioners to be the majority of the landowners within the proposed district, then the petitioners shall file with the executive director a certified copy of the deed(s) tracing title from the person(s) listed on the county tax rolls as owners of the land to the

petitioners and any additional information required by the executive director necessary to show accurately the ownership of the land to be included in the proposed district;

(7) affidavits by those persons desiring appointment by the commission as temporary directors, showing compliance with applicable statutory requirements of qualifications and eligibility for temporary directors, and in accordance with Texas Water Code, §§36.051(b), 36.058, and 36.059(b) for appointment of directors; and

(8) any other data as the executive director may require.

Appendix 3. Texas Administrative Code, §§293.21 - 293.25

DESIGNATION OF GROUNDWATER MANAGEMENT AREAS

The sections are adopted under the Texas Water Code, §§5.103, 5.105, and 5.235, which provide the Texas Natural Resource Conservation Commission (commission) with the authority to adopt any sections necessary to carry out its powers and duties under the Texas Water Code and other laws of the State of Texas, to establish and approve all general policy of the commission, and to collect statutory fees from persons filing various applications with the commission.

§293.21. Designation of Groundwater Management Area Through Rulemaking.

(a) These sections only apply to the designation of groundwater management areas as authorized by Water Code, §35.004, but shall not apply to proceedings for the designation of groundwater management areas in progress on the effective date of these sections.

(b) Designation of a groundwater management area is a separate proceeding from that for creation of a groundwater conservation district.

(c) In accordance with Water Code, §35.004, on its own motion or on receiving a petition, the commission may initiate a rulemaking to designate a groundwater management area. Through the rulemaking process, the commission will determine the boundaries of such a management area with the objective of providing the most suitable area for the management of the groundwater resources of the part of the state where a groundwater conservation district is or may be located. To the extent feasible, the management area will coincide with the boundaries of a groundwater reservoir or a subdivision thereof. The commission may also consider other factors in determining the boundaries of the management area, such as the boundaries of other political subdivisions and the appropriateness of the size and configuration of the management area to a groundwater conservation district's performance of its duties under Water Code, §§36.101-36.121.

(d) Upon the request of the commission or any person interested in a petition to designate a groundwater management area, the executive director will prepare available evidence relating to the configuration of a groundwater management area. The evidence prepared by the executive director shall include information concerning the existence, configuration, and characteristics of a groundwater reservoir or subdivision thereof. The evidence prepared by the executive director shall be made part of the rulemaking record.

(e) The commission shall designate groundwater management areas using the procedures applicable to rulemaking under the Administrative Procedure Act (Subchapter B, Chapter 2001, Government Code) except where such procedures conflict with those set forth in the Texas Water Code, Chapter 35.

(f) A petition for designation of an underground water management area must be filed with the executive director and be accompanied by a \$100 filing fee and petition recording fee of \$1.00 per page.

§293.22. Petition for Adoption of Rules Designating a Groundwater Management Area.

(a) A petition may be submitted to the executive director for the sole purpose of requesting that the commission designate a management area for all or part of one or more counties.

(b) A petition filed pursuant to this section must be signed by:

(1) a majority of the landowners in the proposed management area, or

(2) if there are more than 50 landowners in the proposed management area, the petition must be signed by at least 50 of those landowners.

(c) A petition filed pursuant to this section must contain the following statement: "Petitioners request that the Texas Natural Resource Conservation Commission designate a groundwater management area to include all or part of _____ County (Counties). The management area shall be designated with the objective of providing the most suitable area for the management of groundwater resources of the part of the state in which a district is to be located. Petitioners understand that this petition requests only the designation of a management area, but that all or part of the land in the management area designated may later be added to an existing groundwater conservation district or become a new groundwater conservation district as provided by Chapter 36 of the Texas Water Code."

(d) A petition shall include a map that shows the location of the proposed management area and may include any other information desired by the petitioners concerning the proposed management area.

(e) The petitioners shall file the petition with the executive director.

(f) The petitioners shall supply any additional information requested by the commission or the executive director.

§293.23. Commission Consideration of Petition for Adoption of Rules Designating a Groundwater Management Area.

Within 60 days of the receipt of a Petition To Designate a Groundwater Management Area the commission shall initiate a rulemaking proceeding or deny the petition. If the commission denies the petition, it shall issue an order which sets forth the reasons for denying the petition.

§293.24. Notice of Commission Consideration of Final Adoption of Rules Designating a Groundwater Management Area.

(a) In addition to the notice prescribed by the Administrative Procedure Act (Subchapter B, Chapter 2001, Government Code), the petitioners shall have notice published in at least one newspaper with general circulation in the county or counties in which the proposed management area is to be located. Notice must be published not later than the 30th day before the date set for the commission to consider the final adoption of the rules designating the management area.

(b) The notice must include:

(1) a statement of the general purpose and effect of designating the proposed management area;

(2) a map generally outlining the boundaries of the proposed management area or notice of the location at which a copy of the map may be examined or obtained; and

(3) the time and place at which the commission will consider the final adoption of rules designating the management area.

(c) If the commission initiates the rulemaking proceeding on its own motion, the chief clerk shall give the same notice as required to be given by the petitioner under this section.

§293.25. Alteration of Groundwater Management Area.

In accordance with Water Code, §35.004, on its own motion or on receiving a petition, the commission, after notice and hearing, may initiate a rulemaking proceeding to alter the boundaries of a designated management area as required by changed or future conditions and as justified by factual data. A petition for alteration of management area boundaries must allege in detail the facts and circumstances making alteration necessary and be accompanied by a \$100 filing fee and petition recording fee of \$1.00 per page.

Appendix 4. Texas Natural Resource Conservation Commission Critical Area Reports

Area 1

Duffin, Gail L., and S.P. Musick, 1989, *Critical Area 1, Part 1: Evaluation of Ground-Water Resources Within Bell, Burnet, Travis, Williamson and Parts of Adjacent Counties, Texas*; Texas Water Development Board and Texas Water Commission joint file report, August 1989, 57 pp.

Area 2

Cross, Brad L., and B. Bluntzer, 1990, *Ground Water Protection and Management Strategies for the Hill Country Area: A Critical Area Ground Water Study*; Texas Water Commission and Texas Water Development Board joint file report, February 1990, 18 pp.

Area 3

Kohler, Dale P., 1990, *Ground Water Protection and Management Strategies for Reagan, Upton, and Midland Counties*; Texas Water Commission file report, March 1990, 28 pp.

Area 4

Hart, Margaret, 1990, *Briscoe, Hale, and Swisher Counties, Texas: A Critical Area Ground Water Study*; Texas Water Commission file report, February 1990, 34 pp.

Area 5

Nelson, Katherine H., and S.P. Musick, 1990, *Ground Water Protection and Management Strategies for the Central Texas (Waco) Area*; Texas Water Commission file report, March 1990, 39 pp.

Area 6

Weegar, Mark A., 1990, *Ground Water Protection and Management Strategies for East Texas*; Texas Water Commission file report, March 1990, 34 pp.

Area 7

Russell, Jimmie N., 1990, *Ground Water Protection and Management Strategies for Cameron, Hidalgo, Starr, and Willacy Counties: A Critical Area Ground Water Study*; Texas Water Commission file report, March 1990, 32 pp.

Area 8

Williamson, John A., 1990, *Ground Water Protection and Management Strategies for the Trans-Pecos Area*; Texas Water Commission file report, March 1990, 65 pp.

Area 9

Hart, Margaret A., 1990, *Dallam County: A Critical Area Ground Water Study*; Texas Water Commission file report, February 1990, 35 pp.

Area 10

Williamson, John A., 1990, *Ground Water Protection and Management Strategies for Fort Bend County*; Texas Water Commission file report, March 1990, 54 pp.

Area 11

Ambrose, Mary L., 1990, *Ground-Water Protection and Management Strategies for North-Central Texas: A Critical Area Ground-Water Study*; Texas Water Commission file report, March 1990, 45 pp.

Area 12

Weegar, Mark, 1990, *Ground Water Protection and Management Strategies for Orange and Jefferson Counties*; Texas Water Commission file report, March 1990, 27 pp.

Area 13

Estep, John D., 1990, *Ground Water Protection and Management Strategies for El Paso County: A Critical Area Ground Water Study*; Texas Water Commission file report, February 1990, 32 pp.

Area 14

Stengl, Burgess, 1991, *Ground Water Protection and Management Strategies for the Winter Garden Area*; Texas Water Commission file report, May 1991, 56 pp.

Area 15

Oswalt, Jack, 1991, *Ground Water Protection and Management Strategies for the Southernmost High Plains Area, Texas*; Texas Water Commission file report, August 1991, 55 pp.

Appendix 5. Texas Water Development Board Critical Area Reports

Area 1

Duffin, G., and S. Musick, 1991, *Evaluation of Ground-Water Resources in Bell, Burnet, Travis, Williamson and Parts of Adjacent Counties, Texas*; Texas Water Development Board Report 326, January 1991, 105 pp.

Area 2

Bluntzer, Robert L., 1992, *Evaluation of the Ground-Water Resources of the Paleozoic and Cretaceous Aquifers in the Hill Country of Central Texas*; Texas Water Development Board Report 339, 130 pp.

Area 3

Ashworth, J.B. and P.C. Christian, 1989, *Evaluation of Ground-Water Resources in Parts of Midland, Reagan, and Upton Counties, Texas*; Texas Water Development Board Report 312, February 1989, 52 pp.

Area 4

Nordstrom, Phil L. and J.A.T. Fallin, 1989, *Evaluation of Ground-Water Resources in Briscoe, Hale, and Swisher Counties, Texas*; Texas Water Development Board Report 313, February 1989, 33 pp.

Area 5

Baker, Bernard, Duffin, G., Flores, R., and T. Lynch, 1990, *Evaluation of Water Resources in Part of Central Texas*; Texas Water Development Board Report 319, January 1990, 67 pp.

Area 6

Preston, Richard, and S. Moore, 1991, *Evaluation of Ground-Water Resources in the Vicinity of the Cities of Henderson, Jacksonville, Kilgore, Lufkin, Nacogdoches, Rusk, and Tyler in East Texas*; Texas Water Development Board Report 327, February 1991, 51 pp.

Area 7

McCoy, T. Wesley, 1990, *Evaluation of Ground-Water Resources in the Lower Rio Grande Valley, Texas*; Texas Water Development Board Report 316, January 1990, 48 pp.

Area 8

Ashworth, John B., 1990, *Evaluation of Ground-Water Resources in Parts of Loving, Pecos, Reeves, Ward, and Winkler Counties, Texas*; Texas Water Development Board Report 317, January 1990, 51 pp.

Area 9

Christian, Prescott, 1989, *Evaluation of Ground-Water Resources in Dallam County, Texas*; Texas Water Development Board Report 315, March 1989, 27 pp.

Area 10

Thorkildsen, David, 1990, *Evaluation of Water Resources of Fort Bend County, Texas*; Texas Water Development Board Report 321, January 1990, 21 pp.

Area 11

Baker, Bernard, Duffin, G., Flores, R., and T. Lynch, 1990, *Evaluation of Water Resources in Part of North Central Texas*; Texas Water Development Board Report 318, January 1990, 67 pp.

Area 12

Thorkildsen, David and R. Quincy, 1990, *Evaluation of Water Resources of Orange and Eastern Jefferson Counties, Texas*; Texas Water Development Board Report 320, January 1990, 34 pp.

Area 13

Ashworth, John B., 1990, *Evaluation of Ground-Water Resources in El Paso County, Texas*; Texas Water Development Board Report 324, March 1990, 25 pp.

Area 14

McCoy, T. Wesley, 1991, *Evaluation of the Ground-Water Resources of the Western Portion of the Winter Garden Area, Texas*; Texas Water Development Board Report 334, October 1991, 64 pp.

Area 15

Ashworth, J.B., Christian, P.C., and T.C. Waterreus, 1991, *Evaluation of Ground-Water Resources in the Southernmost High Plains of Texas*; Texas Water Development Board Report 330, July 1991, 39 pp.

Area 16

Duffin, Gail L., and Barbara E. Beynon, 1992, *Evaluation of Water Resources in Parts of the Rolling Prairies Region of North Central Texas*, Texas Water Development Report 337, March 1992, 93 pp.

