

Groundwater Conservation District Recommendation
for Dallam County Priority Groundwater
Management Area

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EXECUTIVE SUMMARY

The Dallam County Priority Groundwater Management Area (PGMA) was delineated and designated by the Texas Water Commission in 1990. The territory that was in the Dallam County Underground Water Conservation District No. 1 (DCUWCD) was not included in the Dallam County PGMA (Figure 1). Under the 1990 designation process, the commission was not required to make a formal recommendation for the creation of groundwater management.

Today, the Texas Commission on Environmental Quality (TCEQ or Commission) is required to make a recommendation on whether to create one or more groundwater conservation districts (GCDs), or to add all or part of the PGMA to an existing GCD, or both, if landowners within the area have not acted to establish a GCD. Texas Water Code (TWC) §35.012(a), (b); Title 30 Texas Administrative Code (30 TAC) §294.44(d). TCEQ is also required to prepare a report. 30 TAC §293.19(b). In accordance with these requirements, this report conveys the Executive Director's petition to the Commission for actions to establish groundwater management in identified areas in the Dallam County PGMA that have neither created nor joined an existing GCD.

Three noncontiguous areas in the Dallam County PGMA or Areas (Figure 2) have neither created nor joined a GCD since the area was designated. The rest of Dallam County is now within the boundaries of the North Plains Groundwater Conservation District (NPGCD). A uniform groundwater management program to conserve, preserve, and protect the groundwater resources is necessary for the Dallam County PGMA, both for the Dallam County PGMA landowners that are presently within the NPGCD, and for those landowners who are not.

If the Commission finds that a PGMA should be added to an existing GCD, it shall issue an order recommending this action. 30 TAC §293.19(d). The Executive Director recommends that the Commission find that all remaining areas of the Dallam County PGMA should be added to the NPGCD, pursuant to 30 TAC, Chapters 293 and 294. The Executive Director recommends that the Commission find that adding the three noncontiguous areas to NPGCD is the most feasible, practicable, and economic means to achieve groundwater management within the Dallam County PGMA.

BACKGROUND

Groundwater management in Dallam County has been in a dynamic state since the Texas Groundwater Act of 1949 first authorized the formation of groundwater conservation districts and established the process for designating underground water reservoirs (now called groundwater management areas or GMAs). In 1950, the Texas Board of Water Engineers subdivided the underground water reservoir located north of the Canadian River into Subdivisions One and Two. In 1953, the Dallam County Commissioners Court created DCUWCD with boundaries coterminous to Subdivision One (Appendix 1-a). County records from 1955 indicate that DCUWCD altered its boundary to exclude the "Sneed Estate". The Sneed Estate covers approximately 28 square miles (sq mi) in

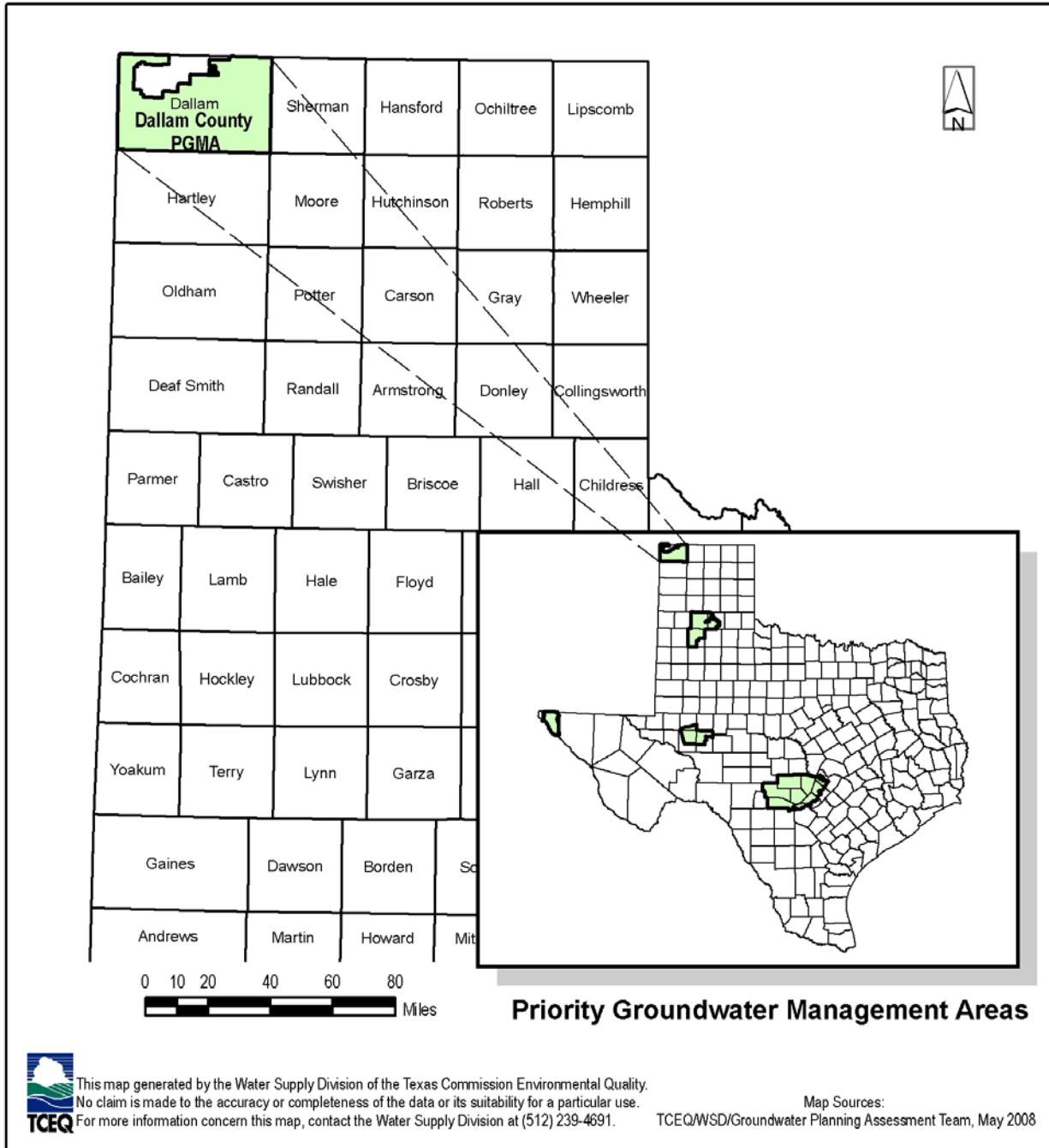


Figure 1 Location of Dallam County Priority Groundwater Management Area

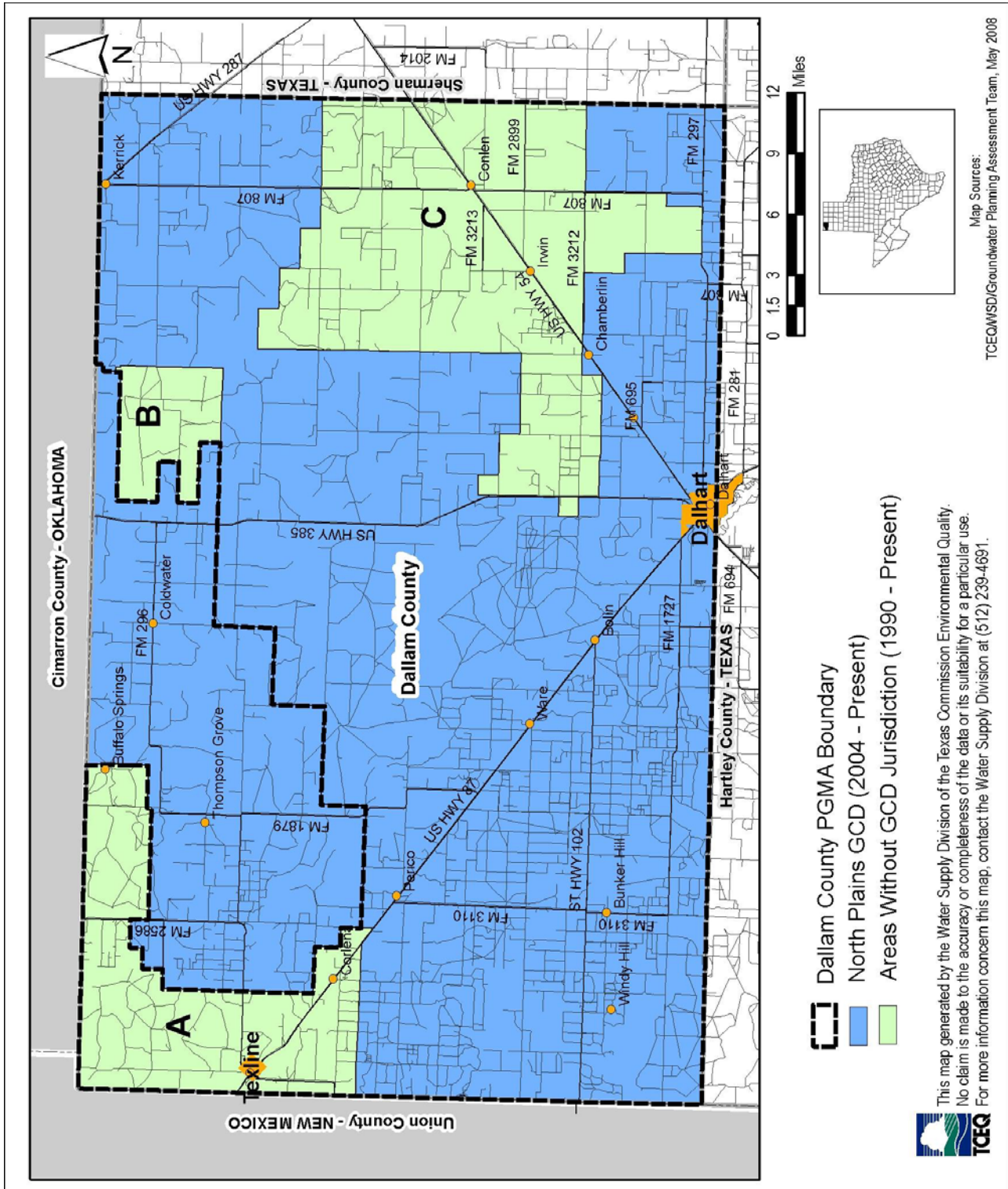


Figure 2 – Dallam County PGMA Areas (A, B and C) without GCD jurisdiction. Map shows the extent of NPGCD after consolidation with DCUWCD.

Northeastern Dallam County and is referred to as Area B in this report (Appendix 1-b and Figure 2).

In 1985, the Legislature authorized the Texas Board of Water Resources to study, delineate, and designate areas of the state that were experiencing or expected to experience critical groundwater problems within the next 25 years. In 1987 Dallam County was identified by the Texas Water Commission and the Texas Water Development Board (TWDB) for a Critical Area Study. The TWDB (Christian, 1989) prepared an evaluation report and the Texas Water Commission completed a Study with recommendations (Hart, 1990).

The 1990 Study concluded that the Dallam County area, excluding DCUWCD, was experiencing and was expected to experience critical groundwater problems in the next two decades and should be designated as a Critical Area. The Study noted that between 1960 and 1980 there were significant reductions of saturated thickness of the Ogallala aquifer in the northern, eastern and southern portions of Dallam County.

The Study also concluded that this Critical Area would face continued lowering of water levels, decreasing saturated thickness of the Ogallala aquifer, and had limited options for acquiring new surface or groundwater resources. Data presented in the Study indicated that the water table had been declining since the 1930s and that there was no evidence that this trend was changing or would change in the next 20 years. The 1990 data projected that groundwater demand was expected to decrease from 233,840 acre-feet in 1990 to 192,842 acre-feet in 2010.

In response to the Study's conclusions and recommendations, the Texas Water Commission adopted rules in June 1990 designating the portion of Dallam County outside of the DCUWCD as a Critical Area. Official designation of the Dallam County Critical Area was set out in 30 TAC §294.22 and published in the June 29, 1990 edition of the *Texas Register* (15 TexReg 3743).

In response to 1992 landowner petitions, the DCUWCD expanded to include the northeastern corner of the county, as shown in Appendix 1-c. In 1993, also in response to landowner petitions, the NPGCD added portions of Dallam and Hartley counties to its existing District composed of Sherman, Hansford, Ochiltree, Lipscomb, and parts of Moore and Hutchinson counties. The portion of Dallam County added to NPGCD is shown in Appendix 1-d.

In 1997, Senate Bill (SB) 1 renamed the previously designated Critical Areas as PGMA's and changed the process for PGMA designation and studies. In 1999, the Commission renumbered 30 TAC §294.22 to §294.32 for the delineation and designation of the Dallam County PGMA. These rules were published in the February 12, 1999 edition of the *Texas Register* (24 TexReg 965-969).

In 2001, SB 2 mandated that the Commission create GCDs in designated PGMA's, or recommend that the PGMA be added to an existing GCD, or both, if landowners within

the area had not acted to establish a GCD. TWC §35.012(a) and (b); 30 TAC §294.44(d). The Commission adopted its rules for GCD creation procedures in 30 TAC Chapters 293 and 294, published in the August 23, 2002 edition of the *Texas Register* (27 TexReg 7942-7954). Also in response to SB 2, the TWDB, in November 2002, adopted boundaries for 16 groundwater management areas that covered the entire state. Dallam County is included with 17 other Texas Panhandle counties in GMA #1 (Appendix 1-e) primarily for joint GCD management planning for the Ogallala aquifer. Finally, DCUWCD was consolidated into the NPGCD in November 2004 (Figure 2).

In 2005, House Bill 1763 required joint planning between GCDs in a common GMA. *See* TWC §36.108. Joint planning for the Ogallala aquifer is ongoing between NPGCD and the other members of GMA #1, which include the Hemphill County UWCD, the Panhandle GCD, and part of the High Plains UWCD No. 1.

The 2006 Regional Water Plan for the Panhandle Water Planning Area (Freese and Nichols, Inc., 2006) reported that 2000 Dallam County annual groundwater use was estimated to be 328,011 acre-feet, and was projected to decrease by 1,550 acre-feet by 2010. The report also stated that Dallam County had the highest projected water demand of any county in GMA #1. The 2010 Dallam county projected groundwater demand estimate in the 1990 report is 133,619 acre feet less than the 2007 State Water Plan estimate.

Chapter 36 provides that local or regional GCDs are the state's preferred method of managing groundwater resources. TWC §36.0015. They are also the only entities in Texas explicitly granted the power to regulate spacing of water wells and groundwater withdrawals. TWC §36.101(a). These districts are charged with managing groundwater by conserving, preserving, protecting, recharging, and preventing waste of the groundwater resources within their jurisdiction. They are required to register and permit water wells, to adopt a comprehensive groundwater management plan, and to adopt rules to implement the management plan. TWC §§ 36.117, 36.1071, 36.107(f).

GCDs are governed by a locally elected board of directors who serve staggered four-year terms. TWC §36.051. The board is responsible for managing the district as well as the adoption of district policies, plans, rules, and procedures. TWC §36.061. The development of GCD management plans must be coordinated with surface water management entities on a regional basis, and with other GCDs that manage the same aquifer. TWC §36.1071. The GCD management plans are provided to the regional water planning groups for use in their five-year regional water planning process. TWC §36.1072(e).

AREAS IN THE DALLAM COUNTY PGMA NOT IN A GCD

Of the 1,505 sq mi in Dallam County, 1,075 lie within the NPGCD, leaving 430 (about 28% of the county) with no means of groundwater management (NPGCD, 2007). The 430 sq mi is contained in three separated Areas of the county. These Areas have not

established or joined a GCD; they are shown on Figure 2 and are identified herein as follows.

- Area A is in northwestern Dallam County and includes the City of Texline.
- Area B is in north-central Dallam County and is about 28 sq mi. Area B is also known as the Sneed Estate.
- Area C is the largest of the three areas and is located in eastern Dallam County and includes the community of Conlen.

Groundwater resources in the rest of Dallam County are managed by the NPGCD. Boundary descriptions for Areas A, B and C are provided in Appendix 2.

FINANCING GROUNDWATER MANAGEMENT IN DALLAM COUNTY PGMA

GCDs finance their operations through either taxes paid by all residents, well production fees paid by large groundwater users, or a combination of both taxes and production fees. TWC §§ 36.172 and 36.205. GCDs are required to operate from an annual budget. TWC §36.154. District directors are not entitled to receive a salary and spending GCD revenue is limited to budgeted items. Present GCDs range in size from as large as all or part of 15 counties, to as small as a part of a single county (Appendix 1-f).

Budgets for existing operational GCDs range from under \$100,000, for single-county districts with limited permitting and monitoring programs, to several million dollars for special-law type districts with specific statutory groundwater management responsibilities or regional-scale GCDs. Present budgets for GCDs in GMA #1 are as follows (personal communications 2/4/08):

Table 1 - Present budgets for GCDs in GMA #1

GCD Name	Annual Budget	Tax Rate
Hemphill UWCD	\$ 354,808	0.0197
High Plains UWCD No.1	\$2,014,823	0.0079
North Plains GCD	\$1,323,243	0.0192
Panhandle GCD	\$1,203,805	0.0100

A budget of \$250,000 per year is considered the lowest amount of revenue needed to finance a functional GCD. This is based on review of:

- GCD financial audits filed with the TCEQ;
- reports from the Texas Alliance of Groundwater Districts (TAGD, 2004) and State Auditor’s Office (2000 and 2001);
- personal communication with existing GCD managers and board members;
- other considerations of best professional judgment.

Ad Valorem Taxes

A GCD may levy an ad valorem tax at a rate not to exceed \$0.50 cents per \$100 assessed valuation to pay for maintenance and operating expenses. TWC §36.201(b). However, most GCDs have lower ad valorem tax caps. Most existing GCDs currently have tax rates ranging from \$0.004 to \$0.0775 per \$100 assessed valuation (TAGD, 2004). Single-county districts tend to have higher tax rates than multi-county districts, which have tax rates averaging around \$0.01 per \$100 assessed valuation. Before any GCD can levy and collect an ad valorem tax, the district must obtain voter approval. TWC §36.180(c).

In Dallam County, the total appraised value for county taxation in the Areas for 2008 is \$71,287,942 (personal communication, 2007). If the Areas are consolidated with the NPGCD in 2008, which already has adequate funding, the current tax rate of \$0.0192, would be assessed per \$100 of valuation for total ad valorem tax impact of \$13,687.28. If, on the other hand, a single district were created for the three Areas, the tax rate needed to generate the estimated \$250,000 annual GCD budget would be about \$0.35 per \$100 of valuation.

Production Fees

GCDs may also generate revenue through the assessment and collection of well production fees on permitted wells. TWC §36.205(c). Production fees are capped at \$1 per acre-foot/year for agricultural use, and \$10 per acre-foot/year for other uses. TWC §36.205(c). Based on year 2002 groundwater use, an estimated 141,053 acre-feet (503,761 acre feet x 28% of Dallam County not in NPGCD), of groundwater was produced for irrigation in the Areas. The data from 2002 was used because it reflects the highest historical water use in Dallam County. The City of Texline's water use for year 2000 was 191 acre-feet according to TWDB 2000 – 2060 water use projections (Freese and Nichols, Inc., 2006).

The potential revenue from production fees for a GCD in the identified Areas, would be \$142,963 (141,053 ac ft x \$1 plus 191 ac ft x \$10). This amount is short of the \$250,000 minimum needed to fund a functional GCD.

Combination

A combination of ad valorem taxes and production fees could be used to finance groundwater management. With \$250,000 as the estimated minimum, minus the potential production fee revenues of \$142,963 estimated above, \$107,037 would remain to be funded by ad valorem taxes. This would require a tax of \$0.1501 per \$100 of property value. Using this combination of production fees and ad valorem taxes, the resulting tax rate is still higher than would be assessed if the Areas joined NPGCD. The NPGCD does not assess well production fees to finance its operations.

GCD OPTIONS IN THE DALLAM COUNTY PGMA

The Commission's options for Dallam County PGMA groundwater management are: to create a GCD for the Areas of Dallam County not currently in a GCD; to recommend that

the Areas join an existing GCD; or to do a combination of these two options. TWC §35.012(b).

New GCD Creation for the Areas

As stated above, about 72% of Dallam County is in an operational GCD. The remainder of the county is split into three noncontiguous Areas, as shown in Figure 2.

The Areas would not be able to generate the \$250,000 GCD operational cost by well production fees alone. The GCD could be funded by ad valorem taxes, with voter approval, or a combination of production fees and ad valorem taxes, but both options would result in a tax rate that would be disproportionately higher than the tax rate currently assessed by NPGCD.

Creating a new district would also require constituting a board of directors to run the district. The number of directors on the board for most GCDs range from five to 11. TWC §36.051. Under general law, directors are elected to serve staggered four-year terms. If a single district is created, a board of willing directors would need to be identified and appointed to serve until regular directors were elected.

Addition of Areas in to a Existing GCD

The Areas could join NPGCD. This would be done through procedures generally outlined in Subchapter J, Chapter 36, of the Texas Water Code. If NPGCD accepts and pursues a Commission recommendation to add territory, Area landowners would then vote on whether to join the NPGCD, and thereby assume the financial obligations of the district. The Areas would be provided reasonable representation on the receiving district's board of directors. TWC §35.013(g). The advantage of joining an existing district include access to the district's established regulations, programs, and infrastructure, and joining a tax base that is less burdensome on the taxpayers in the Areas. All of the Areas or parts of the Areas, down to individually owned tracts of land, could be added to the adjacent district.

If the landowners in the Areas do not vote to join NPGCD, or the GCD does not pursue addition of the Areas, Section 294.44 requires that TCEQ create a GCD in the PGMA or recommend action by the legislature to address the need for groundwater management in the Areas within one year.

Other

Any of the three Areas in Figure 2 could create separate GCDs. However, the revenue generated from production fees or ad valorem taxes would impose an excessive economic burden on landowners. This is the least favorable of the three options.

Public Comment

On August 11, 2008 TCEQ mailed a report notice to solicit comments on the draft report: *Groundwater Conservation District Recommendation in the Dallam County PGMA*. The notice was sent to 80 stakeholders in the Dallam County PGMA and included county officials, municipalities, planning entities, groundwater conservation districts and river authorities. Other notified stakeholders included state legislators, selected federal and state agencies, and other environmental and occupational interest groups.

Stakeholders were given 45 days to comment on the report. Four comments were received. Respondents were the North Plains Groundwater Conservation District, the United States Department of Agriculture (USDA), Bickerstaff Heath Delgado Acosta, LLP and Thornhill Group, Inc.

North Plains GCD responded with a corrected 2008 tax rate from \$0.0100 to \$0.0192 per \$100 of valuation. The report was changed to reflect the correct tax rate for 2008. The USDA wrote in support of the Rita Blanca National Grasslands being part of a groundwater conservation district. Bickerstaff Heath Delgado Acosta LLP felt that the area should be reevaluated as a PGMA and Thornhill Group, Inc. supported Bickerstaff Heath Delgado Acosta LLP in that view.

CONCLUSION AND RECOMMENDATION

The Dallam County Critical Area was delineated and designated by the Texas Water Commission in 1990, and renamed and reaffirmed a Priority Groundwater Management Area by the Texas Legislature in 1997. Changes to state law in 2001 mandated that the Commission create GCDs in designated PGMAs, or recommend that the PGMA be added to an existing GCD, or both, if landowners within the area had not acted to establish a GCD. In accordance with state law and TCEQ rules, this report conveys the Executive Director's petition to the Commission for actions to establish groundwater management in identified areas in the Dallam County PGMA that have neither created nor joined an existing GCD.

The Ogallala aquifer is the primary source of water in the Texas Panhandle and managing this resource is essential to the growth and sustainability of the ecology and economy of the region. The Areas in the Dallam County PGMA that are not currently part of a GCD affect NPGCD's ability to manage the groundwater resources within its jurisdiction. Dallam County's groundwater problems will continue without county and region-wide GCD management.

The Executive Director recommends the Commission issue an order recommending that all of the Areas be added to the NPGCD in accordance with 30 TAC Chapters 293 and 294. Creating a new GCD for a small territory would be cost prohibitive for individual landowners. Adding the Areas to a historically successful district like the NPGCD appears to be the most cost-effective and practicable option for the landowners in the Areas. More importantly, a uniform groundwater management strategy is essential to the conservation of the finite groundwater resource and to the future of all the residents in Dallam County.

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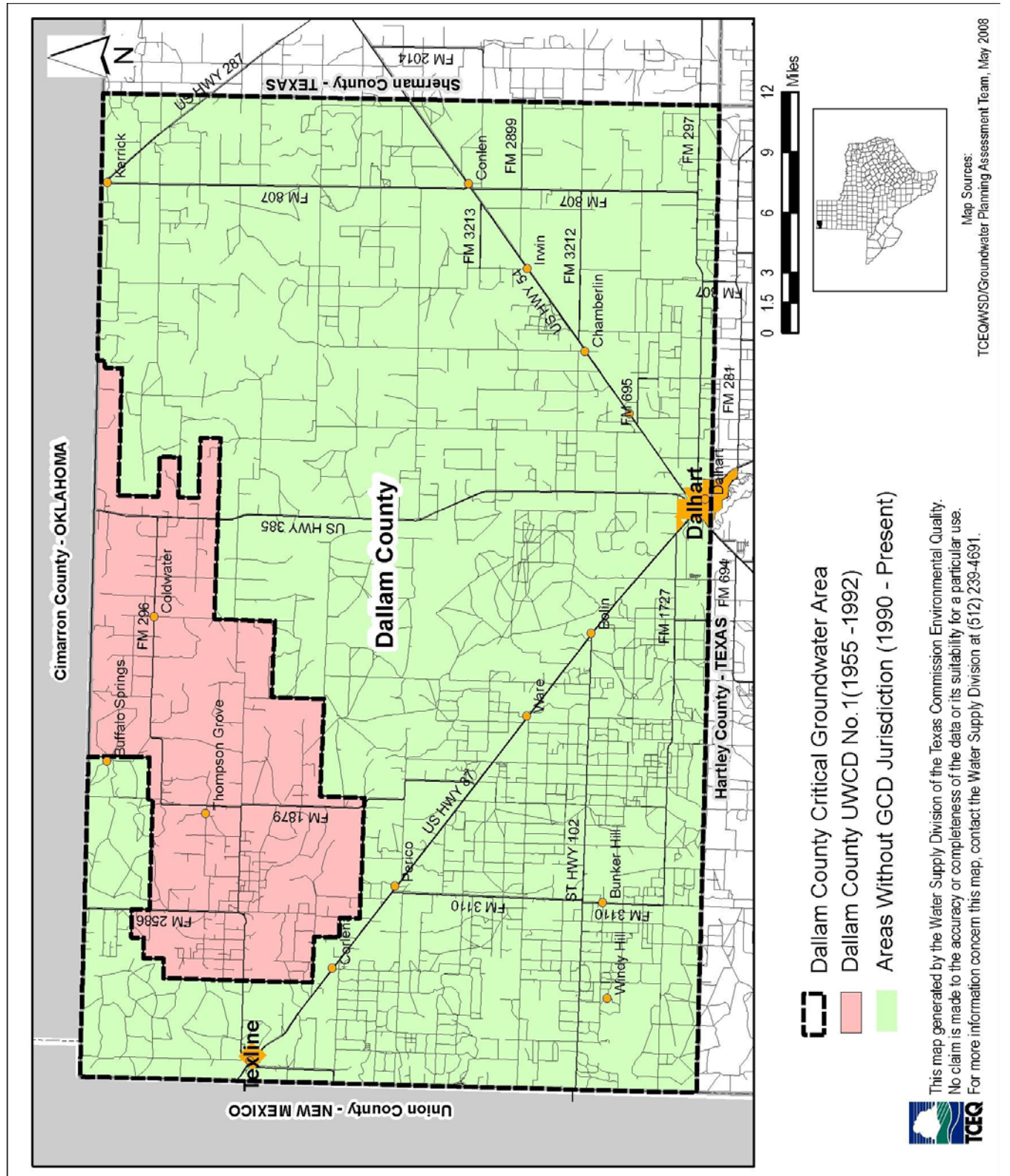
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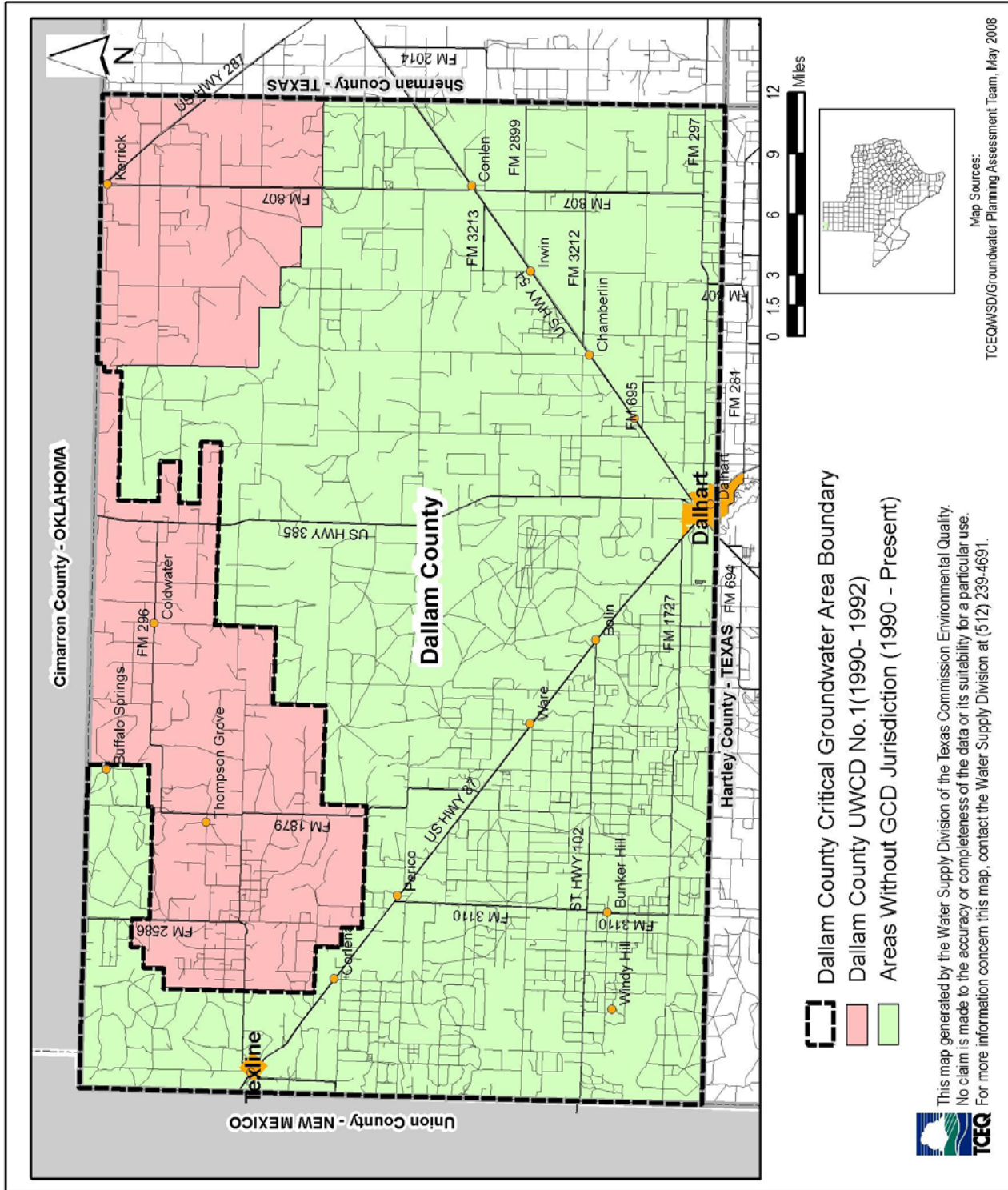
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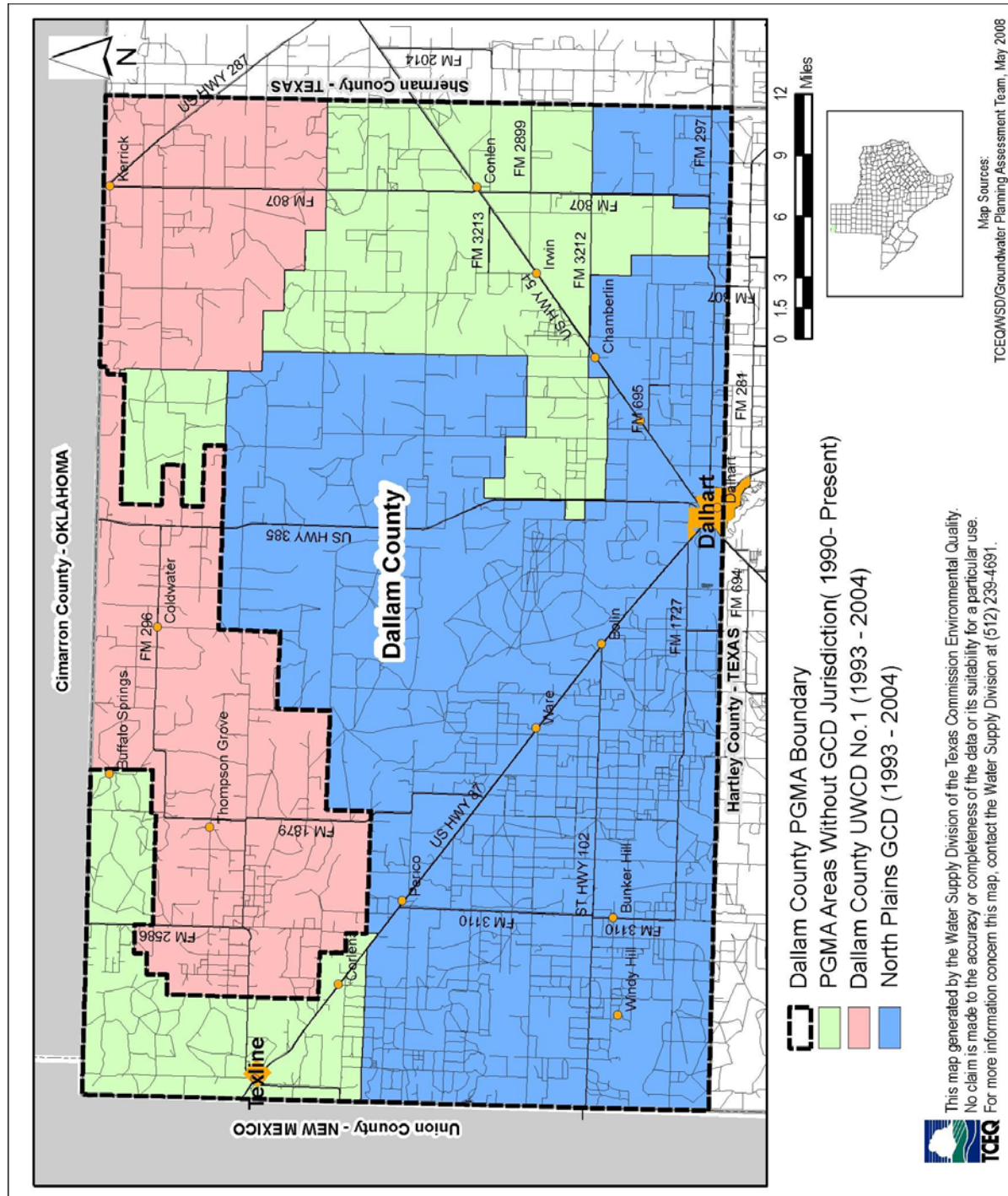
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Appendix 1-b Boundary of Dallam County PGMA designated in 1990

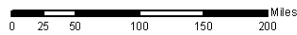
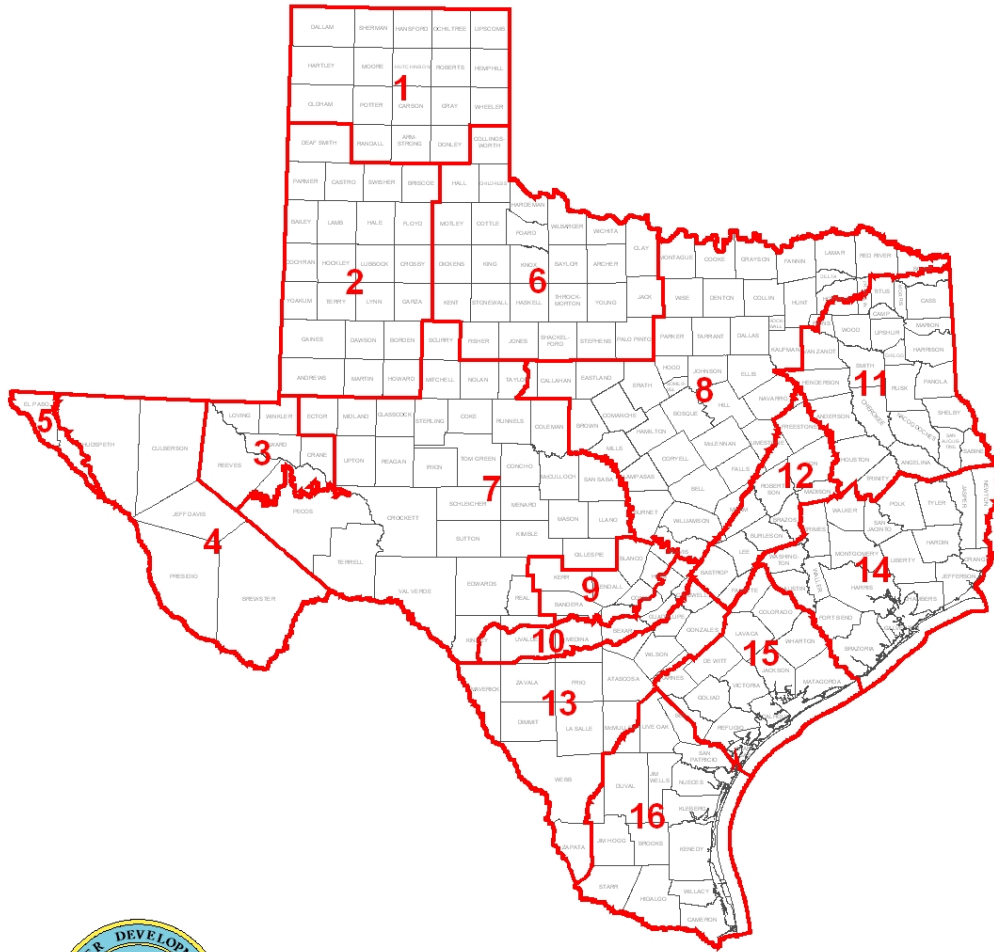


Appendix 1-c map of DCUWCD consolidated with northeast territory 1992-2004)



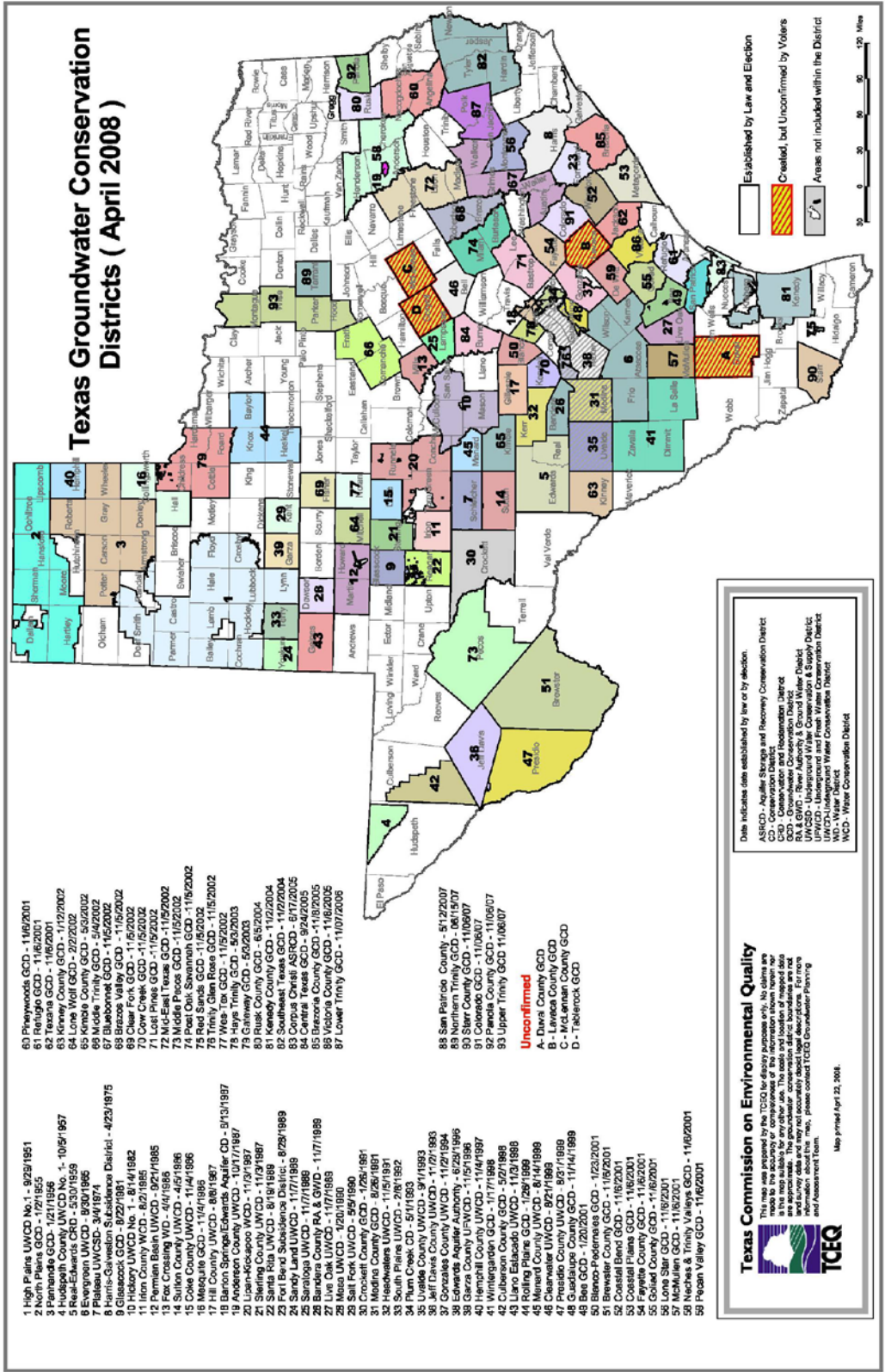
Appendix 1-d Map showing portion of Dallam County added to NPGCD in 1993

Groundwater Management Areas in Texas



DISCLAIMER
 This map was generated by the Texas Water Development Board using GIS
 (Geographical Information Systems) software. No claims are made by the
 accuracy or completeness of the information shown herein nor to its suitability
 for a particular use. The scale and location of all mapped data are approximate.
 Map updated by Mark Hayes, ESQ
 (Mark.Hayes@twdb.state.tx.us) 110-056-0828
 August 2007

Appendix 1-e Groundwater Management Areas in Texas



Appendix 1-f Texas Groundwater Conservation Districts

Appendix 2. Boundary Description of Dallam County PGMA

AREA A

Beginning at the northwest corner of Dallam County, Texas, which point is also the northwest corner of the Panhandle, State of Texas, and a point in the east boundary line of the State of New Mexico;

Thence eastward along the north boundary line of Dallam county, Texas, and the south boundary line of Cimarron County, Oklahoma, to a point on said boundary line which is the northeast corner of Section 2, Block No. 17,C. S. S. Survey;

Thence south along the east section line Sections 2, 5 and 20, to a point in the southeast corner of Section 20, Block No. 17, C. S. S. Survey;

Thence west along the south section line of Sections 20 and 21, to the southwest corner of Section 21, Block No. 17, C. S. S. Survey, continuing west on the south section lines of Sections 18, 17, 16, 15, 14 and 13, of Block No. 1, F.D.W. Subdivision;

Thence north approximately 0.8 miles along the east section line of Fractional Sections 27 B and 27, to a point in Fractional Section 27, of the M. E. Hays Subdivision;

Thence west to a point on the east section line of Section 25 approximately 0.8 miles north of the southeast corner of Section 25, M. E. Hays Subdivision;

Thence south along the east section line of Section 25, to the southeast corner of section 25, of the M.E. Hays Subdivision;

Thence west along the south section line of Section 25, to the southwest corner of Section 25 of the M.E. Hays Subdivision;

Thence south along the east section line of Section 33, to the southeast corner of Section 33 of the M.E. Hay Subdivision;

Thence west along the south section line of Section 33 to the southeast corner of Section 32 all in the M.E. Hays;

Thence south along the east section line of Sections 41, 50, 59, 68, 75, 82, 88 and Fractional Section 93, to the southeast corner of Fractional Section 93, all in the M. E. Hays Subdivision, said line being also the north boundary line of the Block No. 7 C. S. S. Survey;

Thence east along the boundary line of the M. E. Hays Subdivision and Block No. 7, C. S. S. Survey, to the northeast corner of Section 79, which point is also the northwest corner of Section 80, both sections being in Block No.7, C. S. S. Survey;

Thence south along the east section line of Section 79 to the southeast corner of the Section 79 of Block No. 7, C. S. S. Survey;

Thence east along the north section line of Section 62 to the northeast corner of Section 62, of Block No. 7, C. S. S. Survey;

Thence south along the east section line of Section 62, to the southwest corner of Section 60, Block No. 7, C. S. S. Survey;

Thence northwest along the east section line of Section 59 and 58, to the northeast corner of Section 58, all in Block No. 7, C. S. S. Survey;

Thence west along the north section line of Sections 58, 57, 56, 55, 54, 53, 52, 51, to a point on the northwest corner of Section 51, all in Block No. 7, C. S. S. Survey;

Thence north along said state line to the northwest corner of Dallam County, Texas, the point of the beginning of this survey.

AREA B

Beginning at the northeast corner of Section 13, Block 18, C. S. S. Survey which point is also the most southerly west corner of Section 16, Block M-27, T. C. R.R. Co Survey;

Thence west along the north section line of Sections 13, 12, 11, 10, 9, 8 and 7 to the northwest corner of Section 7, all in Block 18, C. S. S. Survey;

Thence south along the west section line of Sections 7 and 20, to the southwest corner of Section 20 all in Block 18, C. S. S. Survey;

Thence east along the south section line of Sections 20 and 19 to the southeast corner of Section 19, all in Block 18, C. S. S. Survey;

Thence south along the west section line of Section 35, to the northeast corner of Section 35, of Block 18, C. S. S. Survey;

Thence west along the north section line of Sections 45 and 46, to the northwest corner of Section 46, of Block 18, C. S. S. Survey;

Thence south along the west section line of Section 46 to the southwest corner of Section 46, of Block 18, C. S. S. Survey;

Thence east along the south section line of Sections 46, 45 and 44, to the southeast corner of Section 44, all in Block 18, C. S. S. Survey;

Thence south along the west section line of Section 62, to the southwest corner of Section 62, of Block 18, C. S. S. Survey,

Thence east along the south section line of Sections 62, 63 and Fractional Sections 64 and 65, to the southeast corner of Fractional Section 65, all in Block 18, C. S. S. Survey;

Thence north along the boundary line of Block 18, C. S. S. Survey and Block M-27, T. C. R.R. Co Survey, to the west section line of Section 1, Block M-27, T. C. R.R. Co. Survey, said point being the northeast corner Section 13 of Block 18, C. S. S. Survey, the point of the beginning of this survey.

AREA C

Beginning at a point which is the southeast corner of Section 159, which point is also the northeast corner of Section 184 all in Block No. 1-T, T. & N. O. RR. Co Survey;

Thence west along the south section line of Sections 159, 158, 157, 156 and 155 in Block No. 1-T, T. & N. O. RR. Co Survey, and continuing west along the south section line of Sections 7 and 8 to the southwest corner of Section 8, in Block No. 1, I. & G. N. RR. Co Survey,

Thence north along the west section line of Section 8 to the northwest corner of Section 8 in Block No. 1, I. & G. N. RR. Co Survey;

Thence west along the south section line of Sections 94 and 93 to the southwest corner of Section 93 in Block No. 47 1/2, H. T. C. RR. Co. Survey,

Thence north along the west section line of Section 93 to the northwest corner of Section 93 in Block No. 47 1/2, H. & T. C. RR. Co. Survey;

Thence west along the south section line of Sections 97 and 98 to the southwest corner of Section 98 in Block No. 47 1/2, H. & T. C. RR. Co. Survey;

Thence north along the west section line of Section 98 to the northwest corner of Section 98 in Block No. 47 1/2, H. & T. C. RR. Co. Survey;

Thence west along the south section line of Sections 104 and 103 to the southwest corner of Section 103, which point is also the northeast corner of section 101, all in Block No. 47 1/2, H. & T. C. RR. Co. Survey

Thence south along the east section line of sections 101, 88, 87, 74, 63, 50, 39, 25, 16 and 5 of Block No. 47 1/2, H. & T. C. RR. Co. Survey and continuing south along the east section line of sections 1, 8, and 9 of Block 1, B. S. & F. Survey to the southeast corner of section 9, Block 1, B. S. & F. Survey;

Thence west along the south section line of section 9 and continuing west along the south section line of sections 21, 20, and 19, to the southwest corner of section 19, all in Block 1, Brooks & Burleson Survey;

Thence north along the west section line of section 19 to the northwest corner of section 19 all in the Block 1, Brooks & Burleson Survey;

Thence west along the south section line of sections 13 and 14 to the southwest corner of section 14 all in Block 1, Brooks & Burleson Survey;

Thence north along the west section line of section 14 to the northwest corner of section 14 of Block 1, Brooks & Burlison Survey;

Thence west along the south section line of section 1 to the southwest corner of section 1 of Block 1, Brooks & Burlison Survey;

Thence south along the east section line of sections 3, 15, 28 and 29 to the southeast corner of section 29 all in Block 1, Brooks & Burlison Survey;

Thence west along the south section line of section 29 of Block 1, Brooks & Burlison Survey and along the south line of D B Hill Survey, to the northeast corner of section 31 of Block 1, C. S. S. Survey;

Thence south along the east section line of section 31 to the southeast corner of section 31 of Block 1, C. S. S. Survey;

Thence east along the north section line of section 25 to the northeast corner of section 25 of Block 1, C. S. S. Survey;

Thence south along the east section line of section 25 to the southeast corner of section 25 of Block 1, C. S. S. Survey;

Thence east along the north section line of sections 21 and 22 of Block 1, C. S. S. Survey and continuing east along the north section line of Section 7 of Block Z, O K Mapes Survey and continuing east along the north section line of sections 47, 46, 45 and 44 of Block 1, Brooks & Burlison Survey to the northeast corner of section 44 of Block 1, Brooks & Burlison Survey;

Thence north along the west section line of section 19 to the northwest corner of section 19 of Block 1. B. S. & F. Survey;

Thence east along the north section line of sections 19 and 20 of Block 1, B. S. & F. Survey and continuing east along the north section line of sections 6, 5 and 4 of Block SUB, W. H. Pardue Survey also being a common point with the northwest corner of Section 7 of Block 1 A, C. T. R. R. Survey;

Thence south along the west section line of Sections 7 and 6 to the southwest corner of Section 6 of block 1 A, C. T. R. R. Survey;

Thence east along the south section line of section 6 to the southeast corner of Section 6 of Block 1 A, C. T. R. R. Survey;

Thence south along the west section line of Sections 4, and 1 of Block 1, A, C. T. R. R. Survey and continuing south along the west section line of Section 1A, J. A. Ritchey Survey to the southwest corner of section 1A, J. A. Ritchey Survey;

Thence east along the south section line of Section 1A, J. A. Ritchey Survey and continuing east along the south line of Section 2 of the S. Clark Survey to the southeast corner of Section 2 of the S. Clark Survey;

Thence north along the east section line of Section 2, S. Clark Survey to a point this line intersects with the south section line of section 1 of Block 7T, T. N. O. R. R. Survey;

Thence east along the south section line of Section 1 to the southeast corner of Section 1 of Block 7T, T. N. O. R. R. Survey;

Thence north along the east section line of Section 1, 4, 5 and 8 to the northeast corner of Section 8 of Block 7T, T. N. O. R. R. Survey, also being a common point with the northwest corner of Section 393 of Block 1T, T. & N. O. R. R. Survey;

Thence east along the north section line of Sections 393, 394, 395, 396 and 397 of Block 1T, T. & N. O. R. R. Survey until this line intersects with the common section of Dallam County and Sherman County in Texas;

Thence north along the east boundary of Dallam County which line is also the west boundary of Sherman County to a point which is the southeast corner of Section 159, in Block No. 1-T, T. & N. O. RR. Co Survey, the point of the beginning of this survey.