July 2010
Groundwater Conservation District Recommendation Report

Groundwater Conservation District Recommendation for Hill Country Priority Groundwater Management Area

– Western Comal and Southwestern Travis Counties –

Water Supply Division

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Groundwater Conservation District Recommendation for Hill Country Priority Groundwater Management Area
─ Western Comal and Southwestern Travis Counties ─

Prepared by

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EXECUTIVE SUMMARY

Recognizing the groundwater supply limitations of the Trinity aquifer, the Texas Water Commission designated the Hill Country Priority Groundwater Management Area (PGMA) in June 1990 to include Bandera, Blanco, Gillespe, Kendall, and Kerr counties; and parts of Comal, Hays, and Travis counties. In 2001, the Commission added the Trinity aquifer outcrop portion of northern Bexar County to the Hill Country PGMA. To date, groundwater conservation districts (GCDs) are established in all of the Hill Country PGMA counties except for the western Comal and southwestern Travis territories. Local efforts to establish a GCD for the western Comal territory were defeated by the voters in 1995 and 2001, and no formal efforts to establish a GCD for the southwestern Travis territory have succeeded.

In accordance with Texas Water Code, Chapters 35 and 36, and Title 30 Texas Administrative Code, §293.19(b) and §294.44, the Executive Director respectfully petitions the Texas Commission on Environmental Quality for actions to establish groundwater management in the Hill Country PGMA territories that have not created a GCD or joined an existing GCD. The purpose of this report is to identify and evaluate the areas in the Hill Country PGMA not included in a GCD and evaluate and recommend whether one or more GCDs be created, whether the identified areas be added to an existing GCD, or whether a combination of these actions be taken.

There are several GCD creation options for the Hill Country PGMA. The Executive Director concludes that creating a new western Comal territory GCD and new southwestern Travis territory GCD, or creating a noncontiguous Comal and Travis territories GCD would not establish district boundaries that provide effective management of the Trinity aquifer. These options would require voter-approved tax revenue to finance GCD operations and maintenance, a proposition that has been twice defeated in the Comal territory. The Hays Trinity GCD is the most logical option for adding both of the non-GCD territories to an existing district. However, under the Hays Trinity GCD's present authority, the Executive Director concludes that adding the two territories neither provides for effective management of the groundwater resources, nor adequate funding to manage the groundwater resources. The Executive Director concludes that adding the western Comal County territory to the Trinity Glen Rose GCD and the southwestern Travis County territory to the Barton Springs/Edwards Aquifer Conservation District (BS/EACD) would provide for effective boundaries for the management of the groundwater resources and adequate funding to finance required or authorized groundwater management planning, regulatory, and district operation functions under the authorities of the existing GCDs. However, the Trinity Glen Rose GCD does not support adding the western Comal territory at this time and the BS/EACD does not support adding all of the southwestern Travis territory.

The Executive Director concludes and recommends that the most feasible and practicable solution would be for the Commission to issue an order to create a groundwater conservation district in the Hill Country PGMA with boundaries that include the western Comal County territory, the southwestern Travis County territory, and the portion of the Hill Country PGMA in Hays County that is presently the Hays Trinity GCD. This recommended action provides for the most effective boundaries for the management of the groundwater resources under the authorities provided in Water Code, Chapter 36, and adequate funding to finance required or authorized groundwater management planning, regulatory, and district operation functions under Water Code, Chapter 36. The commissioners courts of Comal, Hays, and Travis counties have filed resolutions supporting the creation of a new multi-county GCD for the Trinity aquifer in the Hill Country PGMA.

PURPOSE AND SCOPE

This report was undertaken to identify the areas in the Hill Country Priority Groundwater Management Area (PGMA), shown in Figure 1 that are not included in a groundwater conservation district (GCD), and to evaluate and recommend whether one or more GCDs should be created, whether the identified areas should be added to an existing GCD or GCDs, or whether a combination of these actions should be taken. More specifically the report provides a brief background and chronology of actions related to the Hill Country PGMA and local actions to establish or try to establish GCDs in and adjacent to the Hill Country PGMA. The report evaluates the feasibility and practicability of the various GCD creation options and provides recommendations for Commission consideration and action. In accordance with Texas Water Code (TWC), Chapters 35 and 36, and Title 30 Texas Administrative Code (30 TAC) §293.19(b), and §294.44, this report conveys the Executive Director's petition to the Commission for actions to establish groundwater management in Hill Country PGMA territories that have not created a GCD nor joined an existing GCD.

BACKGROUND

The PGMA process provided in Chapter 35 of the Texas Water Code is implemented by TCEQ rules. The rules outline procedures for the designation of PGMAs and address issues related to the creation of GCDs in areas that have been designated as PGMAs. These TCEQ rules are contained in 30 TAC, §293.19 and §§294.41 - 294.44.

The Trinity aquifer Hill Country area (Figures 1 and 2) was initially studied by the Texas Water Commission and documented in a Critical Area report (Cross and Bluntzer 1990). The purpose of the report was to determine if the area was experiencing critical groundwater problems, or was likely to experience them in the next 20 years, and whether a GCD should be created to address the problems.

The 1990 report recommended that the Hill Country of Bandera, Blanco, Gillespe, Kendall, and Kerr counties; and parts of Comal, Hays, and Travis counties be designated as a Critical Area because of existing and projected groundwater shortages and contamination. This report indicated that historical water levels show the water table has been declining since the 1920s and projected that the trend would not change in the next 20 years. The report concluded the area's groundwater demand would exceed availability. Groundwater demand was projected to increase from 39,334 acre-feet in 1990 to 57,690 acre-feet in 2010. Unusually high and increasing nitrate concentrations were documented in some of the Hill Country's shallow groundwater. The report also recommended that single county GCDs be established in response to local initiatives. A Technical Summary of the 1990 report is included as Appendix I.

In response to the 1990 study's conclusions and recommendations, the Texas Water Commission adopted rules in June 1990 designating the Hill Country Critical Area. The designation and delineation of the eight-county area was set out in 30 TAC §294.24 and published in the June 29, 1990 edition of the *Texas Register* (15 TexReg 3741-3751).

In 1997, Senate Bill (SB) 1 renamed the previously designated Critical Areas as PGMAs and changed the PGMA designation and studies process. In 1999, the Commission renumbered 30 TAC §294.24 as §294.34 for the delineation and designation of the Hill Country PGMA. These rules were published in the February 12, 1999 edition of the *Texas Register* (24 TexReg 965-969).

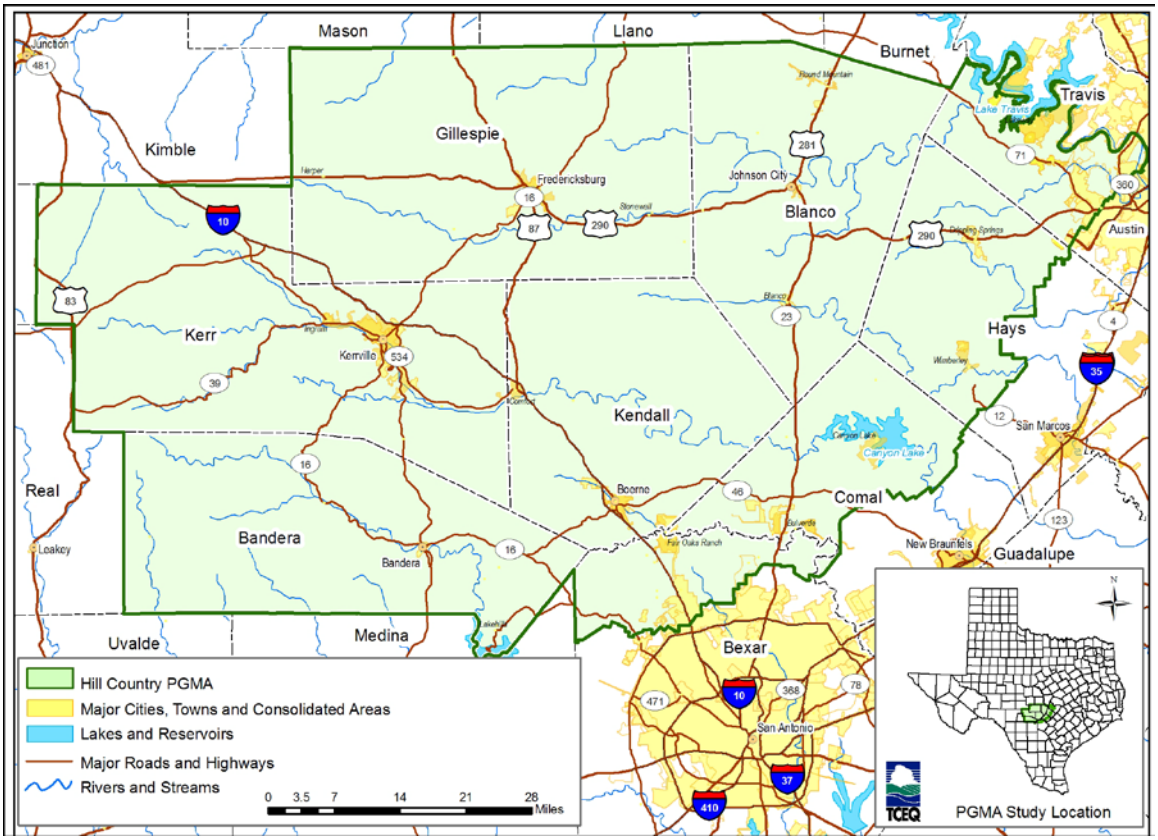

Figure 1. Location of the Hill Country Priority Groundwater Management Area.

In response to several petitions, the TCEQ started a PGMA study in July 1999 to evaluate the Trinity aquifer in northern Bexar County (Figures 1 and 2). The Executive Director's report was completed in May 2000 and recommended that northern Bexar County be designated as a PGMA and added to the Hill Country PGMA (Kalaswad and Mills, 2000). After evidentiary and public hearings, the Commission ordered that northern Bexar County overlying the Trinity aquifer be designated as a PGMA and added to the Hill County PGMA, and recommended that a GCD should be created to include the area. This Commission order was issued on February 1, 2001.

The Legislature in 2001 mandated in SB 2 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. 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 7942-7958). As part of this rule package, the Commission repealed 30 TAC §294.34 relating to the Hill Country PGMA because the Commission's February 2001 designation order had effectively replaced the old rule.

TERRITORIES IN THE HILL COUNTRY PGMA NOT IN A GCD

Between 1987 and 2003, seven GCDs were created through local initiatives in the designated Hill Country PGMA counties. Table 1 shows a summary of the formation and status of the GCDs in and adjacent to the Hill Country PGMA. Details of GCD creation in and around the Hill Country PGMA can be found in a series of PGMA/GCD reports to the 70th – 81st Texas Legislatures (TWC 1987-1993; TNRCC 1995-2001; TCEQ 2003-2009).

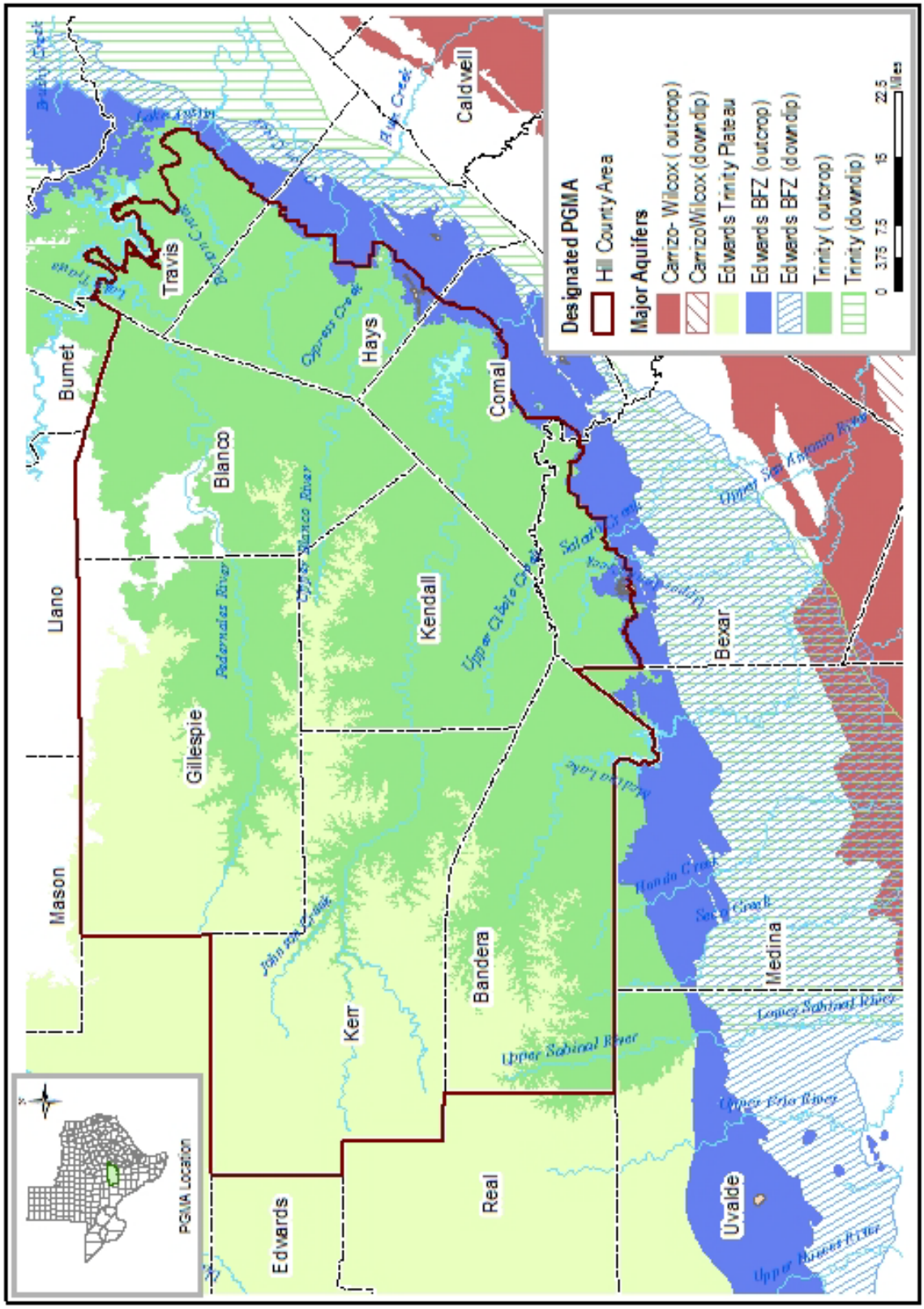

Figure 2. Major Aquifers in and Adjacent to the Hill Country PGMA

Table 1. Status of Groundwater Conservation Districts Within and Adjacent to the Hill Country PGMA

GROUNDWATER CONSERVATION DISTRICTS WITHIN THE HILL COUNTRY PGMA					
Groundwater Conservation District	**County (s)**	**Enabling Legislation or Actions**	**Confirmation Election**		**Management Authority**
			Date	**Vote Status For/Against**	
Bandera River Authority & GWD	Bandera	Ch. 654, 71st Leg., 1989 (SB 1636)	11/07/1989	Confirmed 86/14	All aquifers
Blanco-Pedernales	Blanco	Petition to TNRCC/ TNRCC Order	01/23/2001	Confirmed 495/372	All aquifers
Cow Creek	Kendall	Ch. 1330, 76th Leg., 1999 (SB 1911) Ratified, 77th Leg., 2001 [Chaps. 966 (SB 1) & 1349 (HB 3544)]	11/05/2002	Confirmed 3,782/3,277	All aquifers
Hays Trinity	Hays	Ch. 1330, 76th Leg., 1999 (SB 1911)Ratified, 77th Leg., 2001 [Chap. 966 (SB 1)]	05/03/2003	Confirmed 1,702/883	All aquifers
Headwaters	Kerr	Ch. 693, 72nd Leg., 1991 (HB 1463)	11/05/1991	Confirmed 73/27	All aquifers
Hill Country UWCD	Gillespe	Ch. 865, 70th Leg., 1987 (HB 792)	08/08/1987	Confirmed 90/10	All aquifers
Comal County UWCD	Western Part of Comal	Petition to TNRCC/ TNRCC Order	05/06/1995	Defeated 8/92	NA
Southeast Trinity	Western Part of Comal	Ch. 1330, 76th Leg., 1999(SB 1911) Ratified, 77th Leg., 2001 [Chaps. 966 (SB 1) & 1335 (HB 2855)]	11/06/2001 Enabling Act Repealed 06/20/2003	Defeated 1,390/2,782	NA
Trinity Glen Rose	Portions of Bexar, Comal, and Kendall	Ch. 1312, 77th Leg., 2001 (HB 2005)	11/05/2002	Confirmed 13,318/6,320	Trinity aquifer
GROUNDWATER CONSERVATION DISTRICTS ADJACENT TO THE WESTERN COMAL AND SOUTHWESTERN TRAVIS TERRITORIES					
Barton Springs /Edwards Aquifer CD	Portions of Bastrop, Caldwell, Hays, and Travis	Ch. 8802, 70th Leg., 1987 (HB 988)	08/08/1987	Confirmed 83/17	All aquifers
Central Texas	Burnet	Ch. 8810, 79th Leg., 2005 (SB 967)	09/24/2005	Confirmed 2,259/214	All aquifers
Edwards Aquifer Authority	Portion of Comal, Guadalupe, and Hays. All of Bexar, Medina, Uvalde, Atascosa, & Caldwell	Ch. 626, 73rd Leg., 1993 (SB 1477)	Not Required	NA	Edwards aquifer

There are two noncontiguous territories in the Hill Country PGMA that have not established or joined a GCD (Figure 3). Western Comal County and southwestern Travis County comprise the two areas that are not part of a GCD.

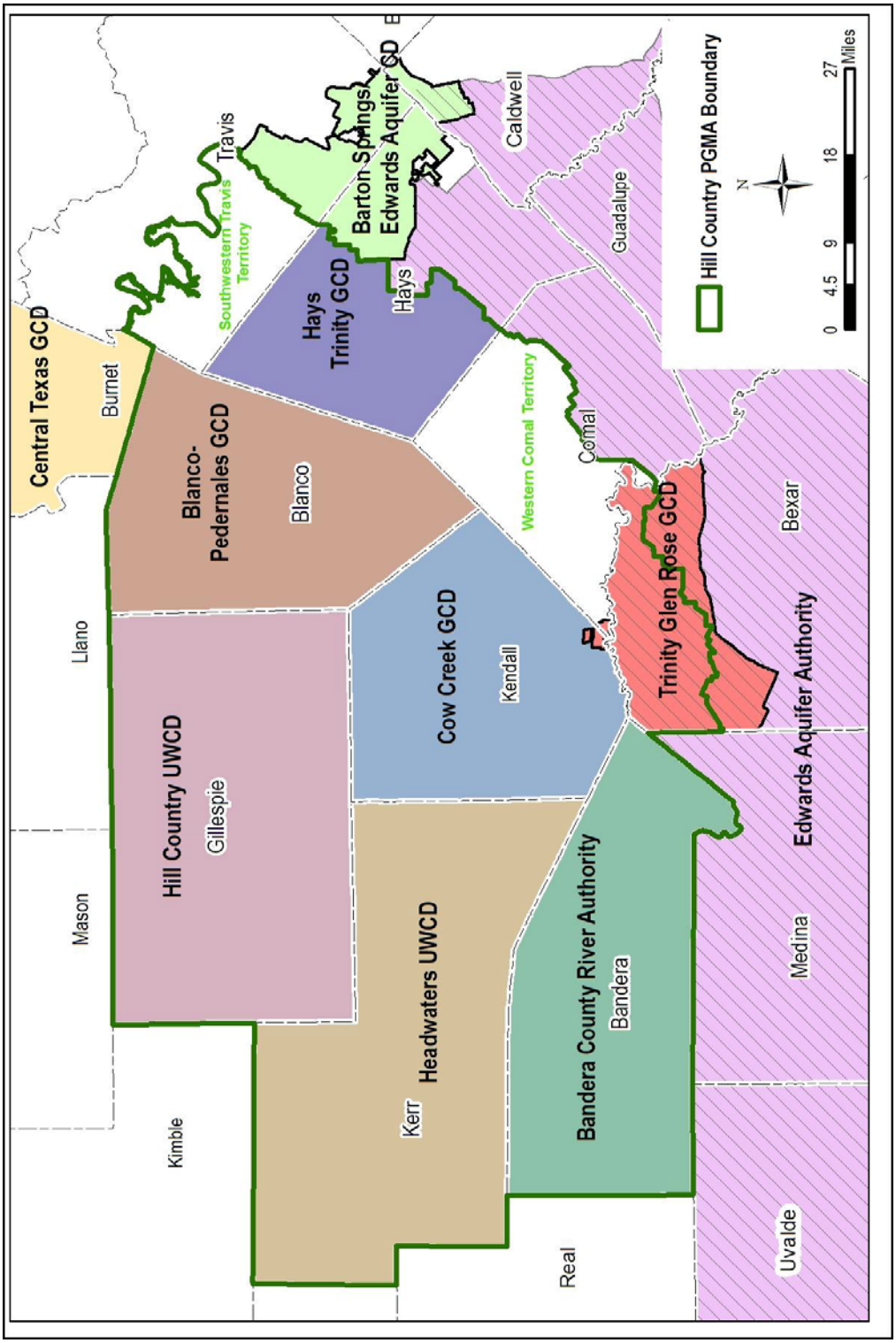

Figure 3. Location of Groundwater Conservation Districts Within the Hill Country PGMA or Adjacent to Either the Western Comal Territory or the Southwestern Travis Territory.

Western Comal Territory

The western Comal territory is located in the northwest half of Comal County and is bound to the south by Bexar County, west by boundary of the Trinity Glen Rose GCD, northwest by Kendall and Blanco counties, and northeast by Hays County. The western Comal territory is also bound by the Edwards Aquifer Authority's (EAA) northwest boundary delineating the southeastern extent of the Hill Country PGMA in Comal County (Figures 3 and 4).

In February 1993, landowners in the Hill Country Critical Area part of Comal County petitioned the Commission administratively to create a GCD. After staff review and evidentiary hearings, the Commission order creating the Comal County Underground Water Conservation District (UWCD) was issued on November 30, 1994. The District was subject to confirmation by the voters and was given full authority under the general law for GCDs. In May 1995, the voters of the western Comal territory defeated the creation of the Comal County UWCD and a maintenance tax at a rate not to exceed $0.05 per $100 valuation (Table 1).

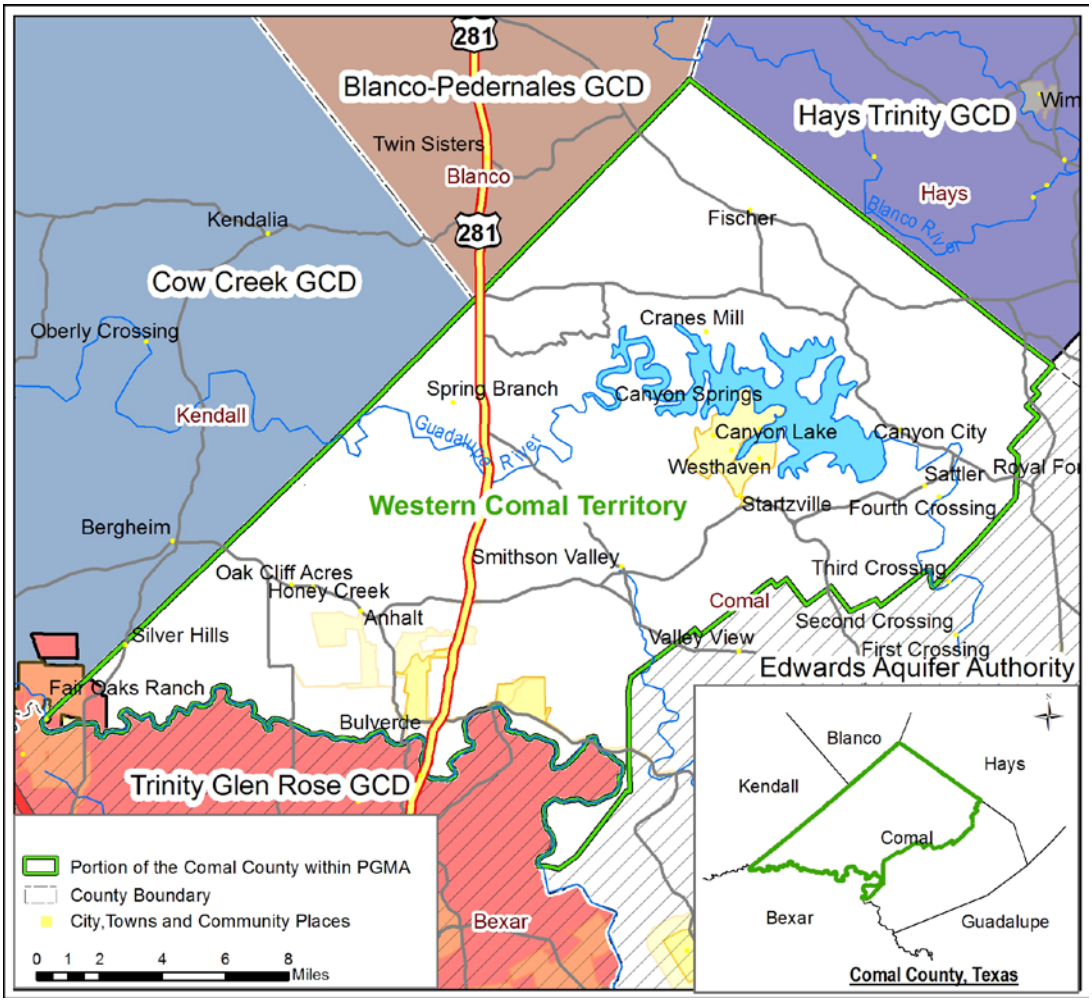

Figure 4. Location of Western Comal Territory Boundaries and Adjacent GCDs

In 1999, the Southeast Trinity GCD was one of three temporary districts created by Chapter 1330, Acts of the 76th Legislature, Regular Session. The boundaries of the Southeast Trinity GCD included the Hill Country PGMA portion of Comal County. The three temporary districts were

not authorized to hold elections, adopt management plans, levy taxes, issue bonds, or alter their boundaries unless they were subsequently ratified by the Legislature in 2001 and confirmed by the voters. The creation of the Southeast Trinity GCD was ratified by Chapters 966 and 1335, Acts of the 77th Legislature, Regular Session, 2001, subject to confirmation by the voters. In November 2001, creation of the Southeast Trinity GCD in the western Comal territory and a tax proposition of $0.02 per $100 valuation were defeated (Table 1). The Southeast Trinity GCD was dissolved and its enabling Acts repealed effective June 20, 2003 (Chapter 666, 78th Legislature, Regular Session, 2003).

A small part of the Hill Country PGMA in Comal County within the city limits of the City of Fair Oaks Ranch (Figure 4) was added to northern Bexar County's Trinity Glen Rose GCD on July 20, 2008. During the 81st Legislature, Regular Session, 2009, House Bill (HB) 1518 was enacted into law to provide that any land that is subsequently annexed by the City of Fair Oaks Ranch would be added to the Trinity Glen Rose GCD and removed from any other GCD.

Southwestern Travis Territory

The southwestern Travis territory is located in the southwestern quarter of Travis County (Figures 3 and 5). The southwestern Travis territory is bound to the west by Blanco and Burnet counties, southwest by Hays County, and southeast by the northwestern boundary of the Barton Springs/Edwards Aquifer Conservation District (BS/EACD). The northern boundary of the southwestern Travis territory is the Colorado River (Lake Travis, Lake Austin, and Lady Bird Lake).

The landowners of southwestern Travis territory have not been successful in attempts to create a GCD or join an existing GCD. Upon request, Texas Natural Resources Conservation Commission (TNRCC) staff presented GCD information to the Capital Area Planning Council's (CAPCO) Executive Committee in July 2000 and discussed the mandate for a district to be established in the PGMA portion of Travis County. Texas Water Development Board (TWDB) and Texas AgriLife Extension Service (TAES) staff also presented information at the CAPCO meeting on the groundwater resources of the area and on the powers and authorities of groundwater districts, respectively. The Travis County Commissioners Court discussed GCD creation in a work session on May 7, 2001 and held a public meeting in Manor on July 26, 2001 to gage interest. On June 3, 2002 the court noted that it did not anticipate taking any further action on the issue due to insufficient public interest.

In May 2006 the Hill Country Alliance, in coordination with Travis County, facilitated a GCD creation education meeting in Bee Cave with presentations from the TCEQ, BS/EACD, Hays Trinity GCD, and Lower Colorado River Authority. TCEQ provided additional resource information to Travis County in December 2006. TCEQ staff also attended a March 2007 meeting facilitated by Senator Kirk Watson and Representative Valinda Bolton to discuss GCD creation options for southwestern Travis County. In attendance were commissioners and representatives from Travis County; mayors and representatives from the western Travis County cities of Bee Cave, Lakeway, The Hills, and Oak Hill; directors and staff from the BS/EACD and Hays Trinity GCD; and other state agency and legislative staff.

In late 2008, the BS/EACD hosted two town-hall meetings in southwestern Travis County and a joint director and managers meeting in Wimberley with the Hays Trinity GCD and Blanco Pedernales GCD. The TCEQ was invited to attend and monitored the meetings. The BS/EACD presented a proposal for public consideration to add most of the southwestern Travis territory to the BS/EACD. During the presentations, attendees and BS/EACD representatives openly

exchanged questions and answers. In general, there was no spoken opposition to the BS/EACD proposal.

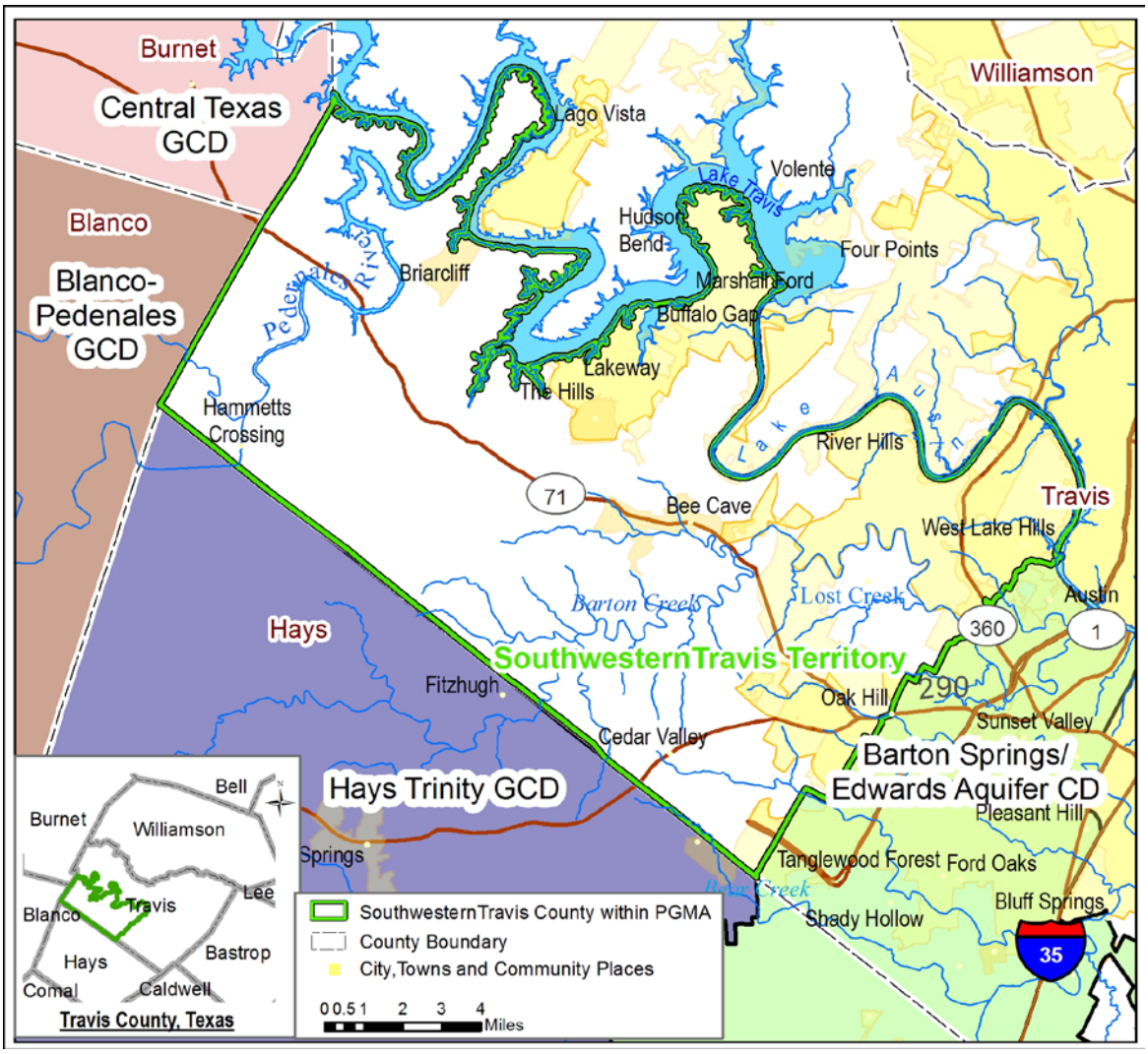

Figure 5. Location of the Southwestern Travis Territory Boundaries and Adjacent GCDs.

On January 22, 2009, the BS/EACD published notice of intent to introduce a bill relating to changes in the District's territory and board of directors. Senator Watson filed SB 2474 on March 27, 2009, and Representative Bolton filed an identical companion, HB 4729, on March 30, 2009. The bills proposed to amend Chapter 8802, Special District Local Laws Code for the BS/EACD, described Hays County territory that has been added by BS/EACD and territory along the I-35 corridor in central Austin and in southwestern Travis County that would be added to BS/EACD upon confirmation by the voters of those areas (Figure 6). If the voters approve adding the territory to the BS/EACD, the bills provided for a seven-member board of directors representing single-member districts and serving staggered four-year terms. If the majority of voters did not approve adding the territory to the BS/EACD, the bills provided the board an opportunity to hold a second ratification election. SB 2474 was not passed.

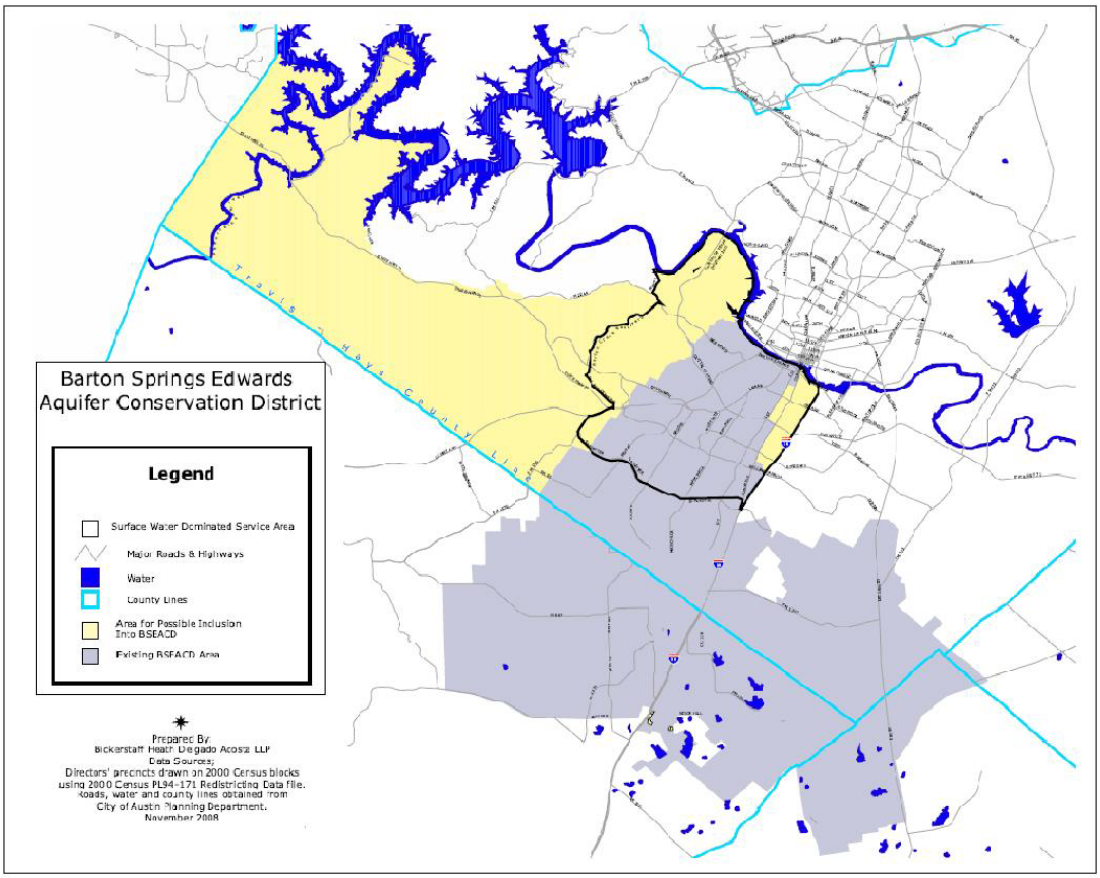

Figure 6. Map of Area Proposed for Addition to BS/EACD through Legislation (81st Legislature)

DISTRICT CREATION OPTIONS AND CONSIDERATIONS

In accordance with 30 TAC §293.19(b), the Executive Director identifies the following GCD creation options for the Hill Country PGMA:

- create two new GCDs – one for the western Comal territory and one for the southwestern Travis territory;
- create a single new GCD combining the noncontiguous western Comal and southwestern Travis territories into one GCD;
- add both the western Comal and southwestern Travis territories to the same existing GCD;
- add each of the western Comal and southwestern Travis territories to a separate GCD; or
- create a single new GCD combining the western Comal and the southwestern Travis territories and adding the PGMA territory in Hays County that is presently within the Hays Trinity GCD.

When evaluating these options, the Executive Director must consider the purpose, feasibility, and practicability of a recommended GCD creation action, and

- whether a recommended GCD creation action will result in a GCD that can manage the groundwater resources effectively under the authority of TWC, Chapter 36,

- whether the boundaries for a recommended GCD creation action will provide for the effective management of groundwater resources, and
- whether the recommended GCD creation action will result in a GCD that can be adequately funded to finance required or authorized groundwater management planning, regulation, and district operation under TWC, Chapter 36.

When considering adding territory to an existing GCD, the Executive Director must also evaluate and understand the existing GCD's specific management authority, method/ability to finance groundwater management programs, and director representation method. Other considerations include the likelihood of a GCD accepting a recommendation to add all or part of the PGMA; past GCD creation actions in a recommended area; and potential election costs. The evaluation of new GCD creation options shall center more on the ability of the new GCD to manage groundwater resources effectively and to fund the necessary groundwater management programs adequately as authorized by TWC, Chapter 36.

Approximately half of Comal County is in an operational GCD - the EAA - and outside the Hill Country PGMA. The extreme western tip of Comal County, within the boundaries of the City of Fair Oaks Ranch, is within the Trinity Glen Rose GCD. GCDs adjacent to the western Comal territory and within the Hill Country PGMA are as follow:

- the Trinity Glen Rose GCD (the northern quarter of Bexar County and the City of Fair Oaks Ranch, including a small portion of southeastern Kendall County and the extreme tip of western Comal County),
- the Cow Creek GCD (Kendall County),
- the Blanco-Pedernales GCD (Blanco County), and
- the Hays Trinity GCD (northwestern Hays County).

The southwestern quarter of Travis County is bound on the northeast by the Colorado River (Lake Travis, Lake Austin, and Lady Bird Lake), northwest by Burnet and Blanco counties, southwest by Hays County, and southeast by the BS/EACD. GCDs adjacent to the southwestern Travis territory and within the Hill Country PGMA are the Blanco-Pedernales GCD (Blanco County) and the Hays Trinity GCD (northwestern Hays County). GCDs adjacent to the southwestern Travis territory and outside of the Hill Country PGMA are the Central Texas GCD (Burnet County) and the BS/EACD.

Regarding the existing GCDs in and adjacent to the western Comal and southwestern Travis territories of the Hill Country PGMA and recent state groundwater management directives, the Executive Director notes the following relevant items that also warrant consideration.

- The BS/EACD has management authority over both the Edwards and Trinity aquifers within its boundaries.
- The EAA has management authority only for the Edwards aquifer; it does not have authority to regulate the Trinity aquifer.
- The Hays Trinity GCD has management authority for the Trinity and any other aquifer within its boundaries.
- The Trinity Glen Rose GCD's management authority is specific to the Trinity aquifer and it manages some of the down dip portions of the Trinity aquifer (not in the Hill Country PGMA) in Bexar County.
- TWC, §36.117 provides that a GCD may not require any permit for a well used solely for domestic or livestock on a tract of land larger than 10 acres and that is not capable of producing more than 25,000 gallons of water per day. This is considered

the “floor-of-regulation”. Wells below this threshold are exempt from GCD permits and fees.

- The “floor-of-regulation” for exempt wells is lower for the BS/EACD and Trinity Glen Rose GCD than for other area GCDs and TWC, Chapter 36. BS/EACD and Trinity Glen Rose GCD can generally require permits for wells that produce greater than 10,000 gallons per day.
- The “floor-of-regulation” for exempt wells is higher for the Hays Trinity GCD than TWC, Chapter 36 because exemption definitions are broader.
- Some public water suppliers are exempt from Trinity Glen Rose GCD permits or fees.
- BS/EACD, Hays Trinity GCD, and Trinity Glen Rose GCD each have directors that represent single-member director districts.
- Since 2005, legislative and other state directives have preferred multi-county, regional groundwater management initiatives and solutions over single-county groundwater management approaches.
- All of the Hill Country PGMA except for Gillespie County is included in Groundwater Management Area #9 for joint GCD management planning for the Trinity aquifer (Appendix II).
- BS/EACD and EAA are in Groundwater Management Areas #9 and #10 for joint GCD management planning for the Edwards aquifer (Appendix II).

FINANCING GROUNDWATER MANAGEMENT PROGRAMS

To finance its operations, a GCD must generate revenue that is generally done either through property taxes collected from all residents within the district or from well production fees collected from major water users. Collection of tax to operate a district places an additional financial burden on all property owners within the district, and the collection of well production fees adds a financial burden to the users of water with permitted wells.

For the purposes of this report, estimated budgets of $250,000 and $500,000 per year will be considered the lowest amount of revenue needed to finance a functional GCD. The lower estimate is based on review of the average annual budgets of GCDs within the Hill Country PGMA (Figure 3), personal communication with existing GCD managers and board members, and other considerations of best professional judgment. The BS/EACD provided comments for the draft report related to a minimum budget for an operational single county GCD for Travis County. BS/EACD estimates $450,000 per year is needed to implement groundwater management programs. The higher estimate, $500,000 per year, is based on this comment.

Table 2 lists all of the GCDs in the Hill Country PGMA along with the annual budget, number of employees, and sources of revenue. Table 3 includes similar information for GCDs adjacent to the western Comal and southwestern Travis territories.

Potential Tax Revenues for Identified Areas

Under TWC, Chapter 36, a GCD may levy an ad valorem tax at a rate not to exceed 50 cents per $100 assessed valuation to pay for maintenance and operating expenses. In fact, most GCDs have lower ad valorem tax caps established either by their enabling legislation or by voters. As noted in Table 2, most of the GCDs within the Hill Country PGMA are funded with ad valorem taxes. Present rates for these GCDs range from $0.005 to $0.029 per $100 assessed valuation with an average of $0.0155 per $100. Before any GCD can levy and collect an ad valorem tax, the proposition must first be offered to and approved by the voters.

Table 2. Financial Information for GCDs in the Hill Country PGMA

GCD Name	Annual Budget	Total Staff	Revenue Source		
			Ad Valorem Tax Rate(Cap)/$100	Permit Fees	Production Fees
Bandera River Authority and GCD	$471,400	5	$0.0290(NA)	NA	NA
Blanco-Pedernales GCD	$248,798	3	$0.0248($0.05)	Administrative (varies)	NA
Cow Creek GCD	$301,367	3	$0.0050($0.03)	Operating - $500-$1,000 Annual Well - $20-$200	Agriculture $0.0030698/1000 gal Other $0.030689/1000 gal
Hays Trinity GCD	$182,495*	3	No Taxing Authority	New Connection - $300 Other(varies)	No Production Fees
Headwaters GCD	$552,501	4	$0.010(NA)	Administrative (varies) Other (varies)	No Production Fees
Hill Country UWCD	$226,316	2	$0.0089(NA)	Application $200-$350	No Production Fees
Trinity-Glen Rose GCD	$128,550	2	No Tax ($0.03)	Application $200-$350	Agriculture - $0.0030698/1000 gal Other $0.030689/1000 gal
Averaged Annual Budget $301,632					

* Maximum Sustainable Budget $60,000 (Hays Trinity GCD), Source: Personal Communications (July-October-November 2008).

Table 3. Financial Information for GCDs Adjacent to the Western Comal and Southwestern Travis Territories

GCD Name	Annual Budget	Total Staff	Revenue Source		
			Ad Valorem Tax Rate(Cap)/$100	Permit Fees	Production Fees
Central Texas GCD	$235,940	5	$0.0137($0.05)	Application $35 Other (varies)	NA
Barton Springs/Edwards Aquifer CD	$1,480,000	12	No Taxing Authority	Application Other (varies)	Agriculture (NA) Other $0.17/1000 gal
Edwards Aquifer Authority	$2,241,427	72	No Taxing Authority	Application $25 Other (varies)	Agriculture $2/acft Other (varies)
Averaged Annual Budget $1,319,122					

Source: Personal Communications (July-October-November 2008).

The 2008 appraised value for the western Comal territory is $4,197,268,033 (Comal Appraisal District). If the residents had approved an ad valorem tax at a rate of $0.01 per $100 ($10 per $100,000) of valuation, a single area GCD would have generated $419,727 in 2008 (Table 4).

The 2008 appraised value for the northwestern Hays territory is $3,400,000,000 (Hays Trinity GCD, June 2009). If the residents had approved an ad valorem tax at a rate of $0.01 per $100 ($10 per $100,000) of valuation, a single area GCD would have generated $340,000 in 2008.

The 2008 appraised value for the southwestern Travis territory is $16,699,000,000 (Travis Appraisal District). If the residents had approved an ad valorem tax at a rate of $0.01 per $100 ($10 per $100,000) of valuation, a single area GCD would have generated $1,669,900 in 2008.

Table 4 summarizes 2008 appraised tax evaluations for the portions of Comal, Hays, and Travis counties within the Hill Country PGMA and the revenue that could be generated at a tax rate of 1 cent per $100 valuation. Table 4 also provides estimates for tax rates to provide $250,000 and $500,000 per year.

Table 4. Appraised Value and Potential Ad Valorem Tax Rates for the Hill Country PGMA Territories

Territory	2008 Appraised Evaluation for Area Taxation*	Revenue Generated@ $0.01/$100	Tax Rate Needed to Generate $250,000	Tax Rate Needed to Generate $500,000
Western Comal	$4,197,000,000	$419,700	$0.00596/$100	$0.01192/$100
Northwestern Hays	$3,400,000,000	$340,000	$0.00735/$100	$0.01470/$100
Southwest Travis	$16,699,000,000	$1,669,900	$0.00149/$100	$0.00298/$100
TOTAL	$24,296,000,000	$2,429,600	$0.00103/$100	$0.00206/$100

Source: Comal County and Travis Central Appraisal Districts (September and October 2008) Hays Trinity GCD (June 2009).
*Rounded to nearest million.

Potential Production Fee Revenues for Identified Areas

GCDs may also generate revenue through the assessment and collection of well production fees on permitted wells as established in TWC, Chapter 36. Unless otherwise addressed by a district's enabling legislation, the production fees are capped by state law at $1 per acre-foot/year for agricultural use, and $10 per acre-foot/year for other uses. Based on groundwater use data (personal communication, TWDB 2008), about 2,036 acre-feet of groundwater for non-agricultural uses and 294 acre-feet/year of groundwater for irrigation are used in the western Comal territory of the designated PGMA. The southwestern Travis territory, based on the same data, produced about 355 acre-feet/year of groundwater for non-agricultural uses and 297 acre-feet/year of groundwater for agricultural irrigation.

If a single GCD was created for each territory and funded by using only production fees, the potential revenue would equal $20,654 and $3,847/year for the western Comal and southwestern Travis territories, respectively. Both estimates are well below the assumed minimal funds of $250,000 for annual GCD operational expenses (Table 5). A combination of ad valorem taxes and production fees could be used to finance a GCD in both territories. Using the $250,000 estimated minimum, minus the potential production fee revenues estimated above, $229,346 and $246,153/year for the western Comal and southwestern Travis territories, respectively would need to be funded by ad valorem taxes of $0.00546 and $0.00147 per $100 of property value for the western Comal and southwestern Travis territories, respectively.

Table 5. Potential Revenue from Territory Well Production Fees

Territory	Trinity Aquifer				Total Fee Revenue
	Non-Agriculture Use		Agriculture Use		
	Subject to GCD Fees	Potential Fee Revenue[3]	Subject to GCD Fees	Potential Fee Revenue[4]	
Western Comal[1]	2,036 ac-ft/yr	$20,360.00	294 ac-ft/yr	$294.00	$20,654.00
Northwestern Hays[2]	1,647 ac-ft/yr	$16,470.00	152 ac-ft/yr	$152.00	$16,622.00
Southwestern Travis[1]	355 ac-ft/yr	$3,550.00	297 ac-ft/yr	$297.00	$3,847.00
Totals		$40,380.00		$743.00	$41,123.00

Notes: 1. Upper and Middle Trinity aquifers.
2. Upper, Middle, and Lower Trinity.
3. Potential revenue generated at maximum fee rate of $10 per acre-foot per year.
4. Potential revenue generated at maximum fee rate of $1 per acre-foot per year.
Source: Volumes based on TWDB's Report 353 (2000), GAM Run 08-15 (07/2008), HTGCD Management Plan (2005), and TWDB pumpage reports, only 30% of the water utility groups reported (11/2008)

Other Fee Revenue Sources of Area Districts

Two GCDs within, and the two Edwards aquifer GCDs adjacent to the Hill Country PGMA are funded by fees that differ from TWC, Chapter 36 (Tables 2 and 3). Within the Hill Country PGMA, the Hays Trinity GCD is prohibited from assessing taxes or fees under Chapter 36 and instead is financed through a $300 new well construction or new utility service connection fee. These sources of fees limit the annual Hays Trinity GCD revenue stream to about $50,000 to $60,000. The Hays Trinity GCD has accepted grants from Hays County Commissioners Court, Texas State University, and a local church, which are one-year grants that temporarily provide additional funding. The current funding and grants do not provide a guaranteed or sustainable level of funding for adequate long term funding and maintenance of the Hays Trinity GCD and the Trinity aquifer (Hays Trinity GCD, November 2009).

The Trinity Glen Rose GCD is authorized to assess taxes or production fees, but not both. To date, the Trinity Glen Rose GCD has not offered a tax proposition to the voters and has financed operations through well production fees consistent with TWC, Chapter 36. The 81st Legislature, Regular Session, 2009, passed HB 1518. The Act became effective June 19, 2009, and sets well production fee caps for the Trinity Glen Rose GCD at $1 per acre-foot (≈$0.003 per 1,000 gallons) for water used for agricultural purposes and $40 per acre-foot (≈$0.12 per 1,000 gallons) of water used for any other purpose. Currently the Trinity Glen Rose GCD is charging a fee of $22 per acre-foot of water used for purposes other than agriculture (personal communication, George Wissman March 2010).

The BS/EACD generates most of its revenue through the assessment of water use fees. In accordance with the BS/EACD's Fiscal Year 2009 Fee Schedule, the present fee rates are:

- $0.17 per 1,000 gallons for annual permitted or authorized pumpage for water to be withdrawn from a well or aggregate of wells by a Historical Permit, Conditional Class A Permit, or Conditional Class B Permit not authorized by material amendment
- $0.38 per 1,000 gallons for annual permitted or authorized pumpage for water to be withdrawn from a well or aggregate of wells by a new Conditional Class B Permit or Conditional Class B Permit authorized by material amendment

- $1.00 per acre-foot for Agricultural Wells for annual permitted pumpage for water to be withdrawn from a well or aggregate of wells

BS/EACD water use fees are assessed annually based on the current permitted pumpage volume of certain non-exempt wells. Permits are issued annually for non-exempt wells and are explicit as to the volume of water permitted to be withdrawn from a well or aggregate of wells over a specific period (http://www.bseacd.org/files/file/BSEACD_Fee_Schedule_fy09.pdf last accessed July 2009).

Funding for EAA programs comes primarily from an aquifer management fee charged to agricultural and non-agricultural users of the Edwards aquifer. The aquifer management fee for non-agricultural use is assessed based on the total groundwater authorized to be used in the current year. EAA's 2010 aquifer management fee for non-agricultural users was $39 per acre-foot. The aquifer management fee for agricultural use is assessed on groundwater actually used during the preceding year. In accordance with the EAA Act, the aquifer management fee for agricultural use is $2.00 per acre-foot (last accessed January 2010 http://www.edwardsaquifer.org/pdfs/Budget/2010_Adopted_Budget_Final.pdf).

CONCLUSIONS ON THE GCD CREATION OPTIONS

The first option is a TCEQ order that recommends creation of a new GCD, which would provide for the purpose of the district, the district's boundary, and the estimated minimum maintenance tax or production fee necessary to support the district. The TCEQ order would also provide for the appointment of temporary directors by the county commissioners court(s). No confirmation election would be required for the newly created district. However, the temporary directors would call and schedule an election to authorize the district to assess taxes and to elect permanent directors. The new GCD would be responsible for the cost of the election and if the tax proposition is defeated, the new GCD would be financed though well production fees.

Another option is a TCEQ order that recommends it is more feasible and practicable to add an identified area(s) in a PGMA to an existing GCD(s). The board of directors of the GCD must vote on the addition of the PGMA territory to a district. If they vote to accept the addition of the PGMA territory, the GCD must call an election within the PGMA territory to determine if it will be added to the district. If the election passes, the GCD must provide reasonable representation on the board of directors for the added area that is compatible with the district's existing director representation scheme. If the voters approve adding the PGMA territory, the GCD is responsible for the election costs. If the proposition to add the PGMA territory to the GCD fails, the TCEQ is responsible for paying for the election.

The Commission will have two options if a GCD board of directors votes against accepting the PGMA territory into the district or if the voters defeat the proposition to add the PGMA to the district. The first option is for the TCEQ to create a GCD for the PGMA territories that do not have one. If it is not feasible for the creation of a GCD in a particular area, the second option is for the TCEQ to include a recommendation for the future management of the PGMA in the biennial report to the Texas Legislature required by TWC, §36.018.

Considering these 'end' actions and the other relevant issues, the Executive Director makes the following conclusions for the five GCD creation options that are evident for the western Comal and southwestern Travis territories of the Hill County PGMA.

Create Two New GCDs

The TCEQ could create two new GCDs, one for the western Comal territory and one for the southwestern Travis County territory. This action would most closely match historic local initiatives to create single county GCDs in the Hill Country PGMA. Each GCD would have sufficient authority to manage the groundwater resources under TWC, Chapter 36.

However, creating two new GCDs does not provide for the most effective or cost efficient management of the groundwater resources because it would require duplicative management programs be established. In addition, the boundaries would not provide for the most effective management program because each GCD would manage only a limited, politically delineated portion of the Trinity aquifer.

Lastly, the two new GCDs would have to be predominantly funded by ad valorem taxes because revenue from production fees authorized under TWC, Chapter 36 would not be sufficient to finance GCD operations (Table 5). A new GCD in either the western Comal or southwestern Travis territories could easily finance district operation with an approved tax rate under $0.01 per $100 assessed valuation (Table 4). In the western Comal territory, the voters have previously rejected propositions to fund GCD operations through ad valorem taxes in 1995 and 2001.

While this option represents the highest level of local control, it has been rejected twice in one of the two territories and does not provide an effective or cost efficient method of groundwater management.

Is there effective management under Water Code, Chapter 36?	Yes
Do boundaries provide for effective management of Trinity aquifer?	No
Is there adequate funding for operation and maintenance expenses?	No

Create a Single New GCD for the Noncontiguous Territories

The TCEQ could create a single, new GCD to include the western Comal and southwestern Travis territories. This GCD would also have sufficient authority to manage the groundwater resources under TWC, Chapter 36. This option would be more effective than creating two new GCDs because it would require that only one management program be developed and implemented.

However, the GCD boundaries would not provide for the most effective management program because of the planning and regulatory challenges presented by the noncontiguous portions of the Trinity aquifer. In addition, a noncontiguous GCD would require extensive coordination and cooperation with the Hays Trinity GCD.

This noncontiguous GCD would also have to be funded by ad valorem taxes because revenue from production fees authorized under TWC, Chapter 36 would not be sufficient to finance GCD operations (Table 5). Ad valorem taxes applied at a rate of $0.00103 and $0.00206 per $100 assessed valuation could raise $250,000 and $500,000, respectively. These sums indicate the minimum amount of money required for starting up a GCD versus having adequate funds to finance district operation and maintenance (Table 4).

It is concluded that this option would provide neither effective nor cost efficient groundwater management primarily because of the challenges to manage separate parts of a single groundwater resource uniformly.

Is there effective management under Water Code, Chapter 36?	Yes
Do boundaries provide for effective management of Trinity aquifer?	No
Is there adequate funding for operation and maintenance expenses?	No

Add Both Territories to the Same Existing GCD

The TCEQ could recommend both of the territories be added to an existing GCD. The Hays Trinity GCD is the most obvious choice for this option. Other choices under this option make less sense because they present noncontiguous groundwater management challenges. The other options would be to recommend the western Comal and southwestern Travis territories be added to the Trinity Glen Rose GCD in Bexar County, the Cow Creek GCD in Kendall County, the Blanco-Pedernales GCD in Blanco County, the Central Texas GCD in Burnet County, or the BS/EACD in parts of Travis, Hays, Caldwell, and Bastrop counties.

The boundaries of a GCD that include the PGMA in Comal and Travis counties joined with the Hays Trinity GCD would allow for effective management of the groundwater resources. A single GCD program to manage the Trinity aquifer along the IH-35 Hill Country growth corridor is preferred over two or three programs that would be largely duplicative.

However, the Hays Trinity GCD is not authorized to exercise the full authority of TWC, Chapter 36. Predominant statutory prohibitions that challenge the district's ability to function are its limited source of revenue ($300 new well construction or new utility service connection fee) and more liberal well exemptions than provided by TWC, §36.117. Under the Hays Trinity GCD's present authority, it is concluded that adding the two territories to the district would neither provide for effective management of the groundwater resources, nor provide for adequate funding to manage the groundwater resources.

Is there effective management under Water Code, Chapter 36?	No
Do boundaries provide for effective management of Trinity aquifer?	Yes
Is there adequate funding for operation and maintenance expenses?	No

The Executive Director did not consider the option of the two territories being added to the EAA because the EAA has management authority only for the Edwards aquifer. The EAA does not have authority to regulate the Trinity aquifer.

Add Each Territory to a Separate GCD

The TCEQ could recommend that the western Comal territory be added to an existing GCD and the southwestern Travis territory be added to a second GCD. Adding either territory to the Hays Trinity GCD is not considered a viable option for the same reasons as stated above.

<u>Western Comal Territory</u>

Under this scenario, the best option would be to add the western Comal territory to the Trinity Glen Rose GCD of northern Bexar County. The boundary of a western Comal/northern Bexar

GCD would provide for effective management of the Trinity aquifer in the PGMA. Likewise, the authority of the Trinity Glen Rose GCD is sufficient to provide for the effective management of the groundwater resources. The lower "floor-of-regulation" relating to exempt wells authorized for the Trinity Glen Rose GCD would benefit management of the groundwater resources in the PGMA.

With changes made by the 81st Legislature, 2009, the Trinity Glen Rose GCD has an adequate fee structure to finance required GCD planning and permitting programs. The other GCDs have an ad valorem tax and as noted previously, the residents of the western Comal territory have twice voted against a tax as a revenue source for groundwater management.

Is there effective management under Water Code, Chapter?	Yes
Do boundaries provide for effective management of Trinity aquifer?	Yes
Is there adequate funding for operation and maintenance expenses?	Yes

Southwestern Travis Territory

Options for the southwestern Travis territory are to join the Blanco-Pedernales GCD, the BS/EACD, or the Central Texas GCD. The rural Blanco-Pedernales and Central Texas GCDs have incorporated a taxing method for raising revenue, and water use fees finance the urban BS/EACD. Based on observations from various meetings over the past few years, it is concluded that the southwestern Travis territory residents in the population cores that are served by surface water sources would be unlikely to support any additional tax to finance groundwater management operations.

In addition, in 2008 and during the 81st Texas Legislature, 2009, the BS/EACD facilitated significant educational outreach in the territory and supported proposed legislation to add most of the territory to the district. Although the proposed legislation did not pass, public interest for moving in the direction to add the southwest Travis territory to the BS/EACD has been voiced.

Adding the southwestern Travis territory to the BS/EACD is a viable option that would provide for effective management of the groundwater resources in the PGMA. The BS/EACD has sufficient authority to provide for the effective management of the Trinity aquifer, both in the PGMA and down dip. The BS/EACD's lower "floor-of-regulation" relating to exempt wells would benefit management of the groundwater resources in the PGMA. Lastly, the water use fees assessed by the BS/EACD provide adequate funding to finance needed groundwater management programs.

Is there effective management under Water Code, Chapter 36?	Yes
Do boundaries provide for effective management of Trinity aquifer?	Yes
Is there adequate funding for operation and maintenance expenses?	Yes

The Executive Director notes that both of these options cause some financial risk for the TCEQ to pay for election cost if the actions to add the territories to an existing GCD are eventually defeated by the voters.

Create a New GCD to Include Both Territories and the PGMA Portion of Hays County

The final option would be for the TCEQ to create a new GCD to include the western Comal territory, the southwestern Travis territory, and the portion of the PGMA in Hays County that is in the Hays Trinity GCD. The boundaries of a GCD that includes the PGMA in Comal, Hays, and Travis counties would provide for the most effective management of the groundwater resources under TWC, Chapter 36. The boundaries of the new GCD would allow a single program to be developed and implemented to manage the Trinity aquifer along the Hill Country IH-35 growth corridor.

The new GCD would have to be predominantly funded by ad valorem taxes because revenue from production fees (estimated in Table 5 to be about $41,123 per year) authorized under TWC, Chapter 36 would not be adequate to finance full GCD operations. However, the GCD in this high-growth corridor would have a tremendous tax base (about $24.3 billion, Table 4) and would be able to cover operation and expenses with a tax rate at about $0.002 per $100 ($2.00 per $100,000 valuation).

Is there effective management under Water Code, Chapter 36?	Yes
Do boundaries provide for effective management of Trinity aquifer?	Yes
Is there adequate funding for operation and maintenance expenses?	Yes

The TCEQ's authority to create a new GCD in an area where a GCD already exists is not clear, but this option warrants consideration because it would provide for the most effective groundwater management program for the IH-35 Hill Country corridor part of the PGMA. The Executive Director notes that this option would create dual groundwater management entities in the Hays County portion of the PGMA and anticipates that this option would require the initial support of the Hays Trinity GCD and subsequent legislative action to dissolve the Hays Trinity GCD. Neither the TCEQ, nor the Hays Trinity GCD is authorized to dissolve the existing district for establishing a new district.

EXECUTIVE DIRECTOR'S DRAFT REPORT & RECOMMENDATIONS, STAKEHOLDER COMMENTS, AND CHANGES TO THE FINAL REPORT

Public notice and input for this report was requested at the beginning of the process (April 2008) and when a draft of this report was released (September 2009). This chapter summarizes the primary and alternative recommendations of the Executive Director's September 2009 draft report and summarizes the comments and information provided by the study area respondents. The writers acknowledge and greatly appreciate the time and diligence of these stakeholders.

Executive Director Notices

On April 10, 2008, the Executive Director mailed a notice to inform over 120 stakeholders within and adjacent to the western Comal and southwestern Travis territories of the Hill Country PGMA of his statutory responsibility to identify areas within the PGMA, which have not been incorporated into a GCD through local initiative, and to initiate procedures to create GCDs. The majority of the stakeholders are county officials, municipalities, water supply corporations, river authorities, planning entities, groundwater conservation districts, and other entities that supply public drinking water. Other notified stakeholders included state legislators, selected federal and state agencies, and other environmental and occupational interest groups.

On September 29, 2009, the Executive Director mailed notice to the stakeholders to announce the availability of the draft report and the opportunity to provide comments on the draft report through November 12, 2009. The Executive Director mailed a third notice to the stakeholder on November 12, 2009 noting the comment period on the draft report would be extended through January 11, 2010. The stakeholder notices and draft report were made available on the TCEQ's website.

Executive Director's Recommended GCD Creation Options in the Draft Report

The Executive Director's September 2009 draft report put forward two recommendations for the western Comal and southwestern Travis territories of the Hill Country PGMA that would provide for: effective management under TWC, Chapter 36, boundaries for effective management of the Trinity aquifer, and adequate funding for GCD operation and maintenance expenses.

- The primary recommendation was for the Commission to issue an order or orders recommending that the western Comal County territory be added to the Trinity Glen Rose GCD and the southwestern Travis County territory be added to the BS/EACD in accordance with 30 TAC Chapters 293 and 294.

- The alternate recommendation was for the Commission to issue an order creating a new GCD with boundaries that include the western Comal County territory, the southwestern Travis County territory, and the portion of the Hill Country PGMA in Hays County; provide for the appointment of temporary directors by the commissioners courts of Comal, Hays, and Travis counties; and direct the temporary directors to call and schedule an election to authorize the district to assess taxes and to elect permanent directors.

Stakeholder Response and Comments

In response to the September 29, 2009 notice, 14 written comments were received. Respondents included Senator Jeff Wentworth, Comal County Commissioners Court, Hays County Commissioners Court, Travis County Commissioners Court, officials from the Travis County Transportation and Natural Resources (TNR) Department, Comal County Engineer, Barton Springs/Edwards Aquifer Conservation District (Travis County), Hays Trinity Groundwater Conservation District (Hays County), Trinity Glen Rose Groundwater Conservation District (Bexar County), public water supply interests including Paleface Pedernales Water Supply Corporation (Travis County) and Canyon Lake Water Service Company (Comal County), and three concerned citizens – Suzi Collins, Michael Maurer, and Larry Williamson.

None of the stakeholders favored the primary recommendation to add the two PGMA territories to the two existing GCDs. Two stakeholders, Mr. Maurer, and Mr. Williamson, commented they were against the primary recommendation. A third stakeholder, the Trinity Glen Rose GCD, commented it does not support adding western Comal County at this time.

Two stakeholders commented they were neutral but could possibly support the primary recommendation under certain scenarios. The BS/EACD commented it would be more amenable to addition of the PGMA if the Travis County lakeside municipalities were removed from the recommended area. The Canyon Lake WSC commented the addition of the western Comal territory to the Trinity Glen Rose GCD was acceptable only if a single-Comal County GCD was not possible.

Five of the stakeholders provided comments that were in favor of the alternate recommendation. The commissioners courts of Comal, Hays, and Travis counties provided resolutions supporting

the joining of areas of Hays Trinity GCD with the Hill Country PGMA areas of southwest Travis and western Comal counties. The BS/EACD commented that the interests of the groundwater users in the Hill Country PGMA that currently do not have TWC, Chapter 36 protection would be best served by a new multi-county GCD established by TCEQ, covering the PGMA territory in both Hays and Travis counties, or in Comal, Hays, and Travis counties. The Hays Trinity GCD suggested that TCEQ pursue the creation of a multi-county district to include the southwestern Travis territory, the western Comal territory, and the portion of the Hill Country PGMA in Hays County.

The Travis County TNR is in favor of TCEQ action for the Hill Country PGMA and commented that the TCEQ should choose the alternative that has the clearest and most widespread support.

The remaining comments that were provided did not relate to the primary, alternative, or any of the other GCD creation options that were discussed in the Executive Director's draft report. Senator Wentworth noted Hill Country constituents concerns with the draft report and short-term TCEQ actions, and water items presently being evaluated by the Senate Natural Resources Committee. The Commissioners Court of Comal County provided information to clarify the rate of the November 2001 Southeast Trinity GCD tax proposition. The Comal County Engineer sought answers to procedural and director representation questions for different scenarios. Mr. Maurer, Mr. Williamson, and the Paleface Pedernales WSC are against GCD creation in the western part of Comal and the southwestern part of Travis counties. They voiced opposition to any additional taxes or layers of government. Mr. Maurer suggested TCEQ action violated private property constitutional rights. Ms. Collins commented that she is concerned about future water shortages, rapid growth in Comal County, and the export of groundwater and we should do whatever is necessary to ensure water for the future.

Changes to the Executive Director's Report and Recommendations

The Executive Director updated the draft report based on comments and new information provided by the stakeholders. The draft report's primary recommendation – for the Commission to issue an order or orders recommending that the western Comal County territory be added to the Trinity Glen Rose Groundwater Conservation District and the southwestern Travis County territory be added to the Barton Springs/Edwards Aquifer Conservation District (Figure 8) – has been changed to the alternative recommendation.

The draft report's alternative recommendation – for the Commission to issue an order creating a new GCD with boundaries that include the western Comal County territory, the southwestern Travis County territory, and the portion of the Hill Country PGMA in Hays County (Figure 7) is now selected as the Executive Director's primary recommendation. The Executive Director has made this change based on the significant stakeholder resolutions and comments in favor of this groundwater management approach and because this recommendation provides for the most effective management of the Trinity aquifer groundwater resources under TWC, Chapter 36.

RECOMMENDATION FOR COMMISSION ACTION

The Executive Director recommends that Commission action is required under TWC, §35.012 and 30 TAC §293.19 in the western Comal and southwestern Travis territories of the Hill Country PGMA because local efforts to create a groundwater conservation district have not succeeded. Upon consideration of the stakeholder comments received regarding the draft report published by the Executive Director the following recommendation is proposed.

The Executive Director recommends that the best solution to address groundwater management in the Hill County PGMA is for the Commission to issue an order creating a new GCD with boundaries that include the western Comal County territory, the southwestern Travis County territory, and the portion of Hays County in the Hill Country PGMA that is presently the Hays Trinity GCD (Figure 7). The Executive Director concludes that this action will provide for the most effective boundaries for the management of the groundwater resources under the authorities provided in TWC, Chapter 36, and adequate funding to finance required or authorized groundwater management planning, regulatory, and district operation functions under TWC, Chapter 36. A Commission order to create a GCD must provide the name and purpose of the district, the district's boundary, and the estimated minimum maintenance tax necessary to support the district. The TCEQ order must also provide for the appointment of temporary directors by the commissioners courts of Comal, Hays, and Travis counties, and direct the temporary directors to call and schedule an election to authorize the district to assess taxes and to elect permanent directors. Appendix III outlines recommended GCD information.

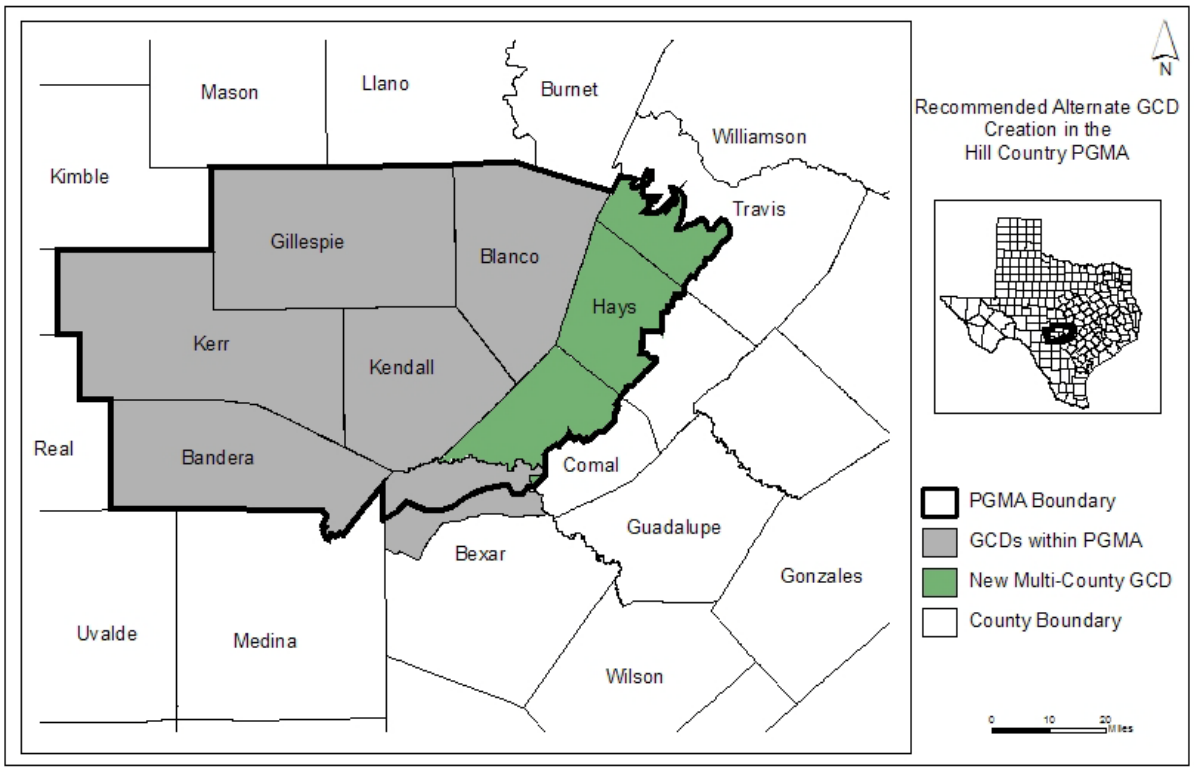

Figure 7. Recommended GCD Creation in the Hill Country PGMA.

Alternatively the Executive Director recommends the next best solution to address groundwater management in the Hill County PGMA would be for the Commission to issue an order or orders recommending that the western Comal County territory be added to the Trinity Glen Rose Groundwater Conservation District and the southwestern Travis County territory be added to the Barton Springs/Edwards Aquifer Conservation District in accordance with 30 TAC Chapters 293 and 294 (Figure 8). The Executive Director concludes that this recommended action will provide for effective boundaries for the management of the groundwater resources under the authorities of the Trinity Glen Rose GCD and the BS/EACD, and adequate funding to finance required or authorized groundwater management planning, regulatory, and district operation functions under the authorities of the Trinity Glen Rose GCD and the BS/EACD.

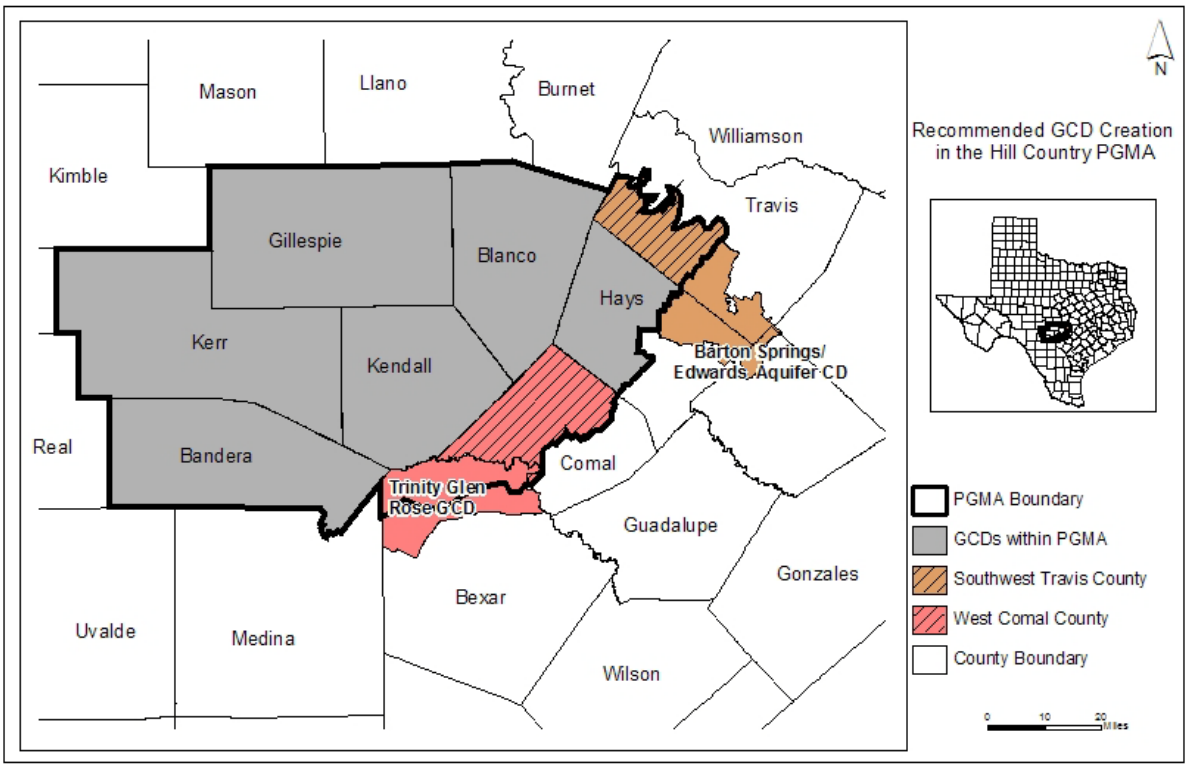

Figure 8. Recommended Alternative GCD Creation in the Hill Country PGMA.

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APPENDIX I

1990 Critical Area Report Summary For Texas Water Commission

GROUNDWATER PROTECTION AND MANAGEMENT STRATEGIES FOR THE HILL COUNTRY AREA
(A Critical Area Groundwater Study)
Chapter 52, Subchapter C, Texas Water Code

TECHNICAL SUMMARY

The Hill Country Area was identified as a potential critical area and nominated for detailed study by the Commission and the Water Development Board in a joint press release dated January 13, 1987. The critical are study and reports are a joint effort of the Commission and the Board. The area of investigation includes the southern edge of the Edwards Plateau and extends southeastward into the Balcones Fault Zone. It includes all of Bandera, Blanco, Gillespie, Kendall, and Kerr Counties as well as portions of Comal, Hays, Medina, and Travis Counties. The southeast boundary coincides with that of the Edwards Underground Water District and the Barton Springs-Edwards Aquifer Conservation District. A Critical Area Report has been prepared recommending designation of the Hill Country area as critical, delineating the boundaries of the critical area, proposing a ground water management strategy for the critical area, and providing information about the area in support of the recommendations.

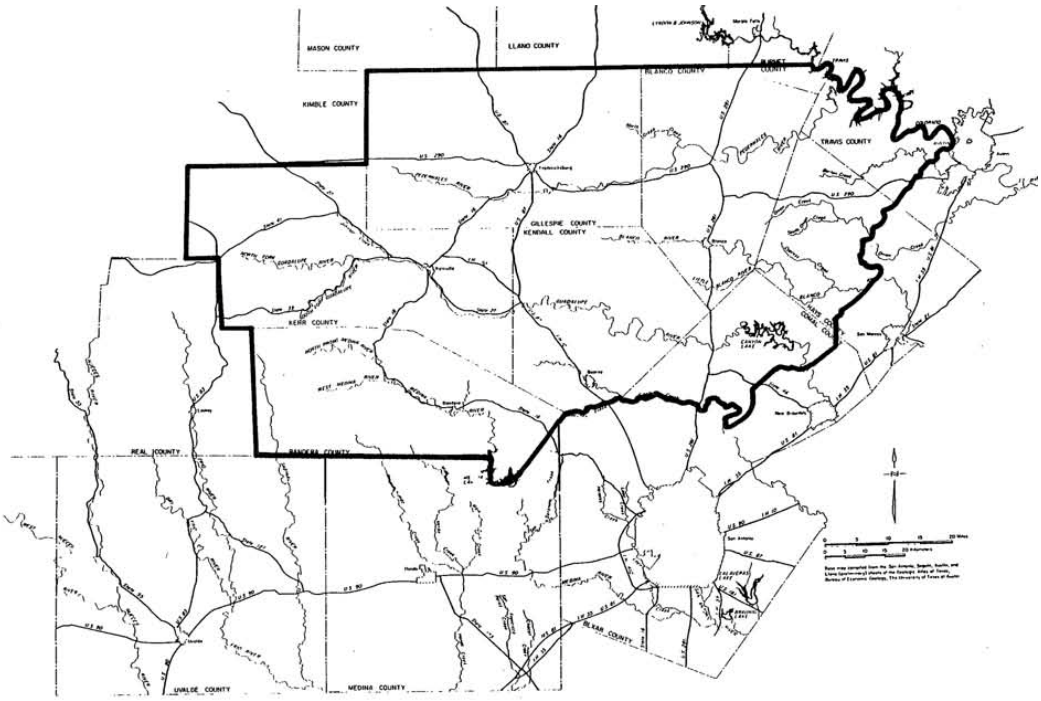
The primary hydrologic problems facing the study area are the continuing decline in water levels of the Cretaceous and Paleozoic aquifers, and the potential over the next 20 years (1990-2010), for ground water shortages. Additionally, ground water quality problems are significantly increasing within the study area. The conjunctive use of ground and surface water is practiced on a relatively small scale in the study area. Regional surface water resources are very limited and water rights are already committed. Artificial recharge is in the experimental stages in Kerr County and is not yet a reliable source of water.

Although water level rises occurred in some areas, water level declines significantly out-weighed water level rises. Throughout the Hill Country area, very significant, long-term net water level declines have occurred at and near centers of ground water withdrawals used for municipal (public) water supplies. The largest declines include 108 feet from 1953 to 1986 in the Hickory aquifer near Fredericksburg, 26 feet from 1939 to 1986 in the Ellenburger-San Saba aquifer near Fredericksburg, 271 feet from 1953 to 1987 in the Lower Trinity aquifer at Bandera, 105 feet from 1962 to 1983 in the Middle Trinity and Hickory aquifers at Fredericksburg, 108 feet from 1975 to 1986 in the Middle Trinity aquifer near Dripping Springs, 98 feet from 1947 to 1987 in the Middle Trinity aquifer at Comfort, 101 feet from 1940 to 1987 in the Middle Trinity aquifer at Boerne, 208 feet from 1923 to 1987 in the Lower Trinity aquifer at Kerrville, and 154 feet from 1949 to 1986 at St. Stephens School near Austin. This trend of water level declines is projected to continue for the next 20 years.

There are no existing entities, other than the Hill Country Underground Water Conservation District in Gillespie County and the Springhills Water Management District in Bandera County, to properly manage and protect the ground water resources in the Hill Country area. It is felt that district creation within the Hill Country area would be administratively feasible and would have relatively small impacts on the residents of the Hill Country area. Voters in Gillespie and Bandera Counties have overwhelmingly approved district creation. Additionally, there has been interest shown for district creation in Kendall and Blanco Counties.

Beginning in April 1987, interviews were conducted with individuals in the study area who were familiar with the ground-water problems of the area. Nominations for an advisory committee were solicited and a fifteen member committee was jointly approved by both the Texas Water Commission and Texas Water Development Board jointly approved a fifteen-member committee. The advisory committee consists of representatives from each of the counties within the study area and also includes representatives of those economic sectors that are significant water users in the area. The advisory committee has edited the Critical Area Report and agrees with the conclusions and recommendations contained therein.

It is recommended that the Texas Water Commission designate a Critical Area and delineate the boundaries of the Critical Area as given in the attached map (Figure 1). It is further recommended that action by the Commission on district creation be held in abeyance until the conclusion of the next regular session of the Texas Legislature in 1991 to see if other districts are created within the Hill Country area.



Location Map
Hill Country Critical Area Study

FIGURE I

Prepared by: Brad Cross, Geologist Date: 02/26/1990

Approved by: Bill Klemt, Chief Date: 02/26/1990
Ground Water Conservation Section

APPENDIX II

Joint GCD Management Planning Considerations

Before September 1, 2010, and every five years thereafter, the GCDs within a common groundwater management area (GMA) must consider groundwater availability models and other data and establish the desired future conditions (DFCs) for relevant aquifers within the GMA. The TWDB is responsible for calculating or verifying the managed available groundwater based on the submitted desired future conditions. The TWDB then provides the managed available groundwater to the individual GCDs and the regional water planning groups.

Each GCD must then ensure that its management plan contains goals and objectives consistent with achieving the DFCs of the relevant aquifers as adopted in this joint planning process. Through these cooperative efforts, local GCDs can effectively provide coordinated regional management of a shared groundwater resource.

Status of Adopted Desired Future Conditions (TWDB, 2009).

Groundwater Management Area 7

- Desired future conditions have not been adopted for the Edwards-Trinity (Plateau), Trinity, Ellenburger-San Saba, Hickory, and Marble Falls aquifers.

Groundwater Management Area 8

- Desired Future Conditions adopted on 9/17/2008:
    - Trinity aquifer
- Desired Future Conditions adopted on 5/19/2008:
    - Ellenburger-San Saba aquifer
    - Hickory aquifer
    - Marble Falls aquifer
- Desired Future Conditions adopted on 12/17/2007.
    - Edwards (Balcones Fault Zone) aquifer

Groundwater Management Area 9

- Desired Future Conditions adopted on 8/29/2008:
    - Edwards Group of the Edwards-Trinity (Plateau) aquifer
    - Ellenburger-San Saba aquifer
    - Hickory aquifer
    - Marble Falls aquifer
- Desired future conditions have not been adopted for the Trinity Group of the Edwards-Trinity (Plateau), Edwards (Balcones Fault Zone), and Trinity aquifers.

Groundwater Management Area 10

- Desired future conditions have not been adopted for the Edwards (Balcones Fault Zone) and Trinity aquifers.

All of the Hill Country PGMA except for the Hill Country UWCD (Gillespie County) which is in GMA #7 is included in GMA #9 for joint GCD management planning for the Trinity aquifer (Figure II-1).

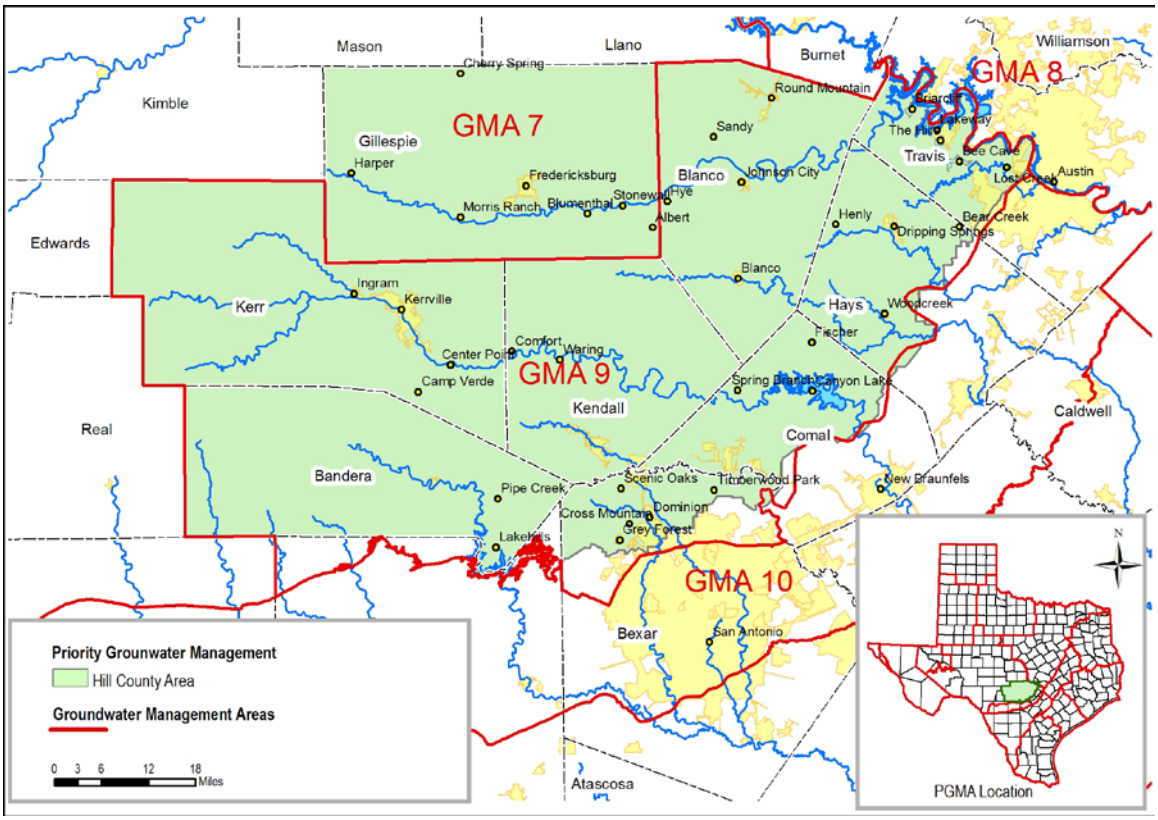


Figure II.-1 Location of Groundwater Management Area boundaries in the study area.

The Hill Country UWCD (Gillespie County, GMA #7) joint GCD management is predominantly for the Edwards-Trinity Plateau aquifer. The BS/EACD and EAA are included in GMA #10 where joint GCD management is predominantly for the Edwards-Balcones Fault Zone (BFZ) aquifer. Part of the BS/EACD is in GMA #9. The Central Texas GCD (Burnet County) is in GMA #8 for joint GCD management planning for the central and northern Trinity aquifers (Figure II-1).

APPENDIX III. RECOMMENDED REGIONAL GROUNDWATER CONSERVATION DISTRICT

Recommended Name for the Groundwater Conservation District

Hill Country Trinity Aquifer Conservation District

Purpose for District

The purpose of the District is to provide for the conservation, preservation, protection, recharging, and prevention of waste of groundwater in the Trinity aquifer under the authority of Texas Water Code, Chapter 36. The primary problems identified in the District at this time include: 1) the historic and continued overdevelopment of the Trinity aquifer, 2) recommended and projected mining of groundwater from aquifer storage to meet existing and future demands, and 3) the potential for competing interest between historic rural groundwater users and urbanizing interests' intent on using the common resource.

The District would implement the following groundwater management programs and goals for the benefit of the residents to help address identified problems and issues:

- quantify groundwater availability and quality, understand aquifer characteristics, and identify groundwater problems that should be addressed (both quantity and quality) through aquifer- and area-specific research, monitoring, data collection, and assessment programs;

- quantify aquifer impacts from pumpage and establish an overall understanding of groundwater use through a comprehensive water well inventory, registration, and permitting program;

- evaluate and understand aquifers sufficiently to establish spacing regulations to minimize drawdown of water levels and to prevent interference from neighboring wells;

- cooperate and work with the TCEQ, TWDB, TDLR, and other state agencies to inventory sites, wells, boreholes, or other man-made structures that could potentially impact groundwater supplies;

- quantify aquifer and other contributing characteristics sufficiently to evaluate the feasibility and practicability for weather enhancement and aquifer recharge projects in the outcrop areas;

- establish school and public educational programs to increase awareness of the finite water resources and actions that can be taken to conserve the resources;

- protect water quality by encouraging water well construction to be protective of fresh-water zones and by administering a program to locate and plug abandoned water wells; and

- participate in the Groundwater Management Area #9 and regional water planning processes, groundwater availability model refinements, and regional groundwater management and protection programs with other entities.

Recommended Area and Boundaries

The District's boundaries would be coterminous with the boundaries of Comal, Hays, and Travis counties that lie within the boundaries of the Hill Country PGMA.

Recommended Board of Directors

The District would be governed by a board of five elected directors. Pursuant to 30 TAC §293.19(c)(2) "…the commission shall apportion the number of temporary directors to each county based on each county's proportionate amount, to the nearest whole number, of the total estimated groundwater use within the district. The total estimated groundwater usage within the district for each county shall be based on information and data contained in the most current version of the Texas State Water Plan as adopted by the Texas Water Development Board and other information developed under §294.41…." Table III-1 provides the most recent groundwater use data available (2003) which is maintained by the TWDB.

Table III-1. Historic Groundwater Pumpage Summary by County

Historical (2003) Groundwater Pumpage Summary by County Unit: Acre Feet (ACFT)								
Aquifer	**Municipal**	**Manufacturing**	**Steam Electric**	**Irrigation**	**Mining**	**Livestock**	**Total**	**Percent**
COMAL COUNTY								
TRINITY	2,337	0	0	45	0	82	2,464	37
HAYS COUNTY								
TRINITY	2,353	0	0	0	173	74	2,600	39
TRAVIS COUNTY								
TRINITY	1,425	11	68	0	0	99	1,603	24
Total	**6,115**	**11**	**68**	**45**	**173**	**255**	**6,667**	**100**

Source: http://www.twdb.state.tx.us/wushistorical/DesktopDefault.aspx?PageID=2

The commissioners courts of the three counties shall, within 90 days of receiving notification from the Commission, appoint temporary directors to the District and notify the Commission of the appointments.

The District would be governed by a board of five elected directors.

- The commissioners court of each county will appoint at least one temporary director.
- The Commission shall apportion the remaining two temporary directors based on each county's proportionate amount, to the nearest whole number, of the total estimated Trinity aquifer use in the District.
- The total estimated Trinity aquifer usage within the District for each county is based on information and data contained in or supporting the most current version of the Texas State Water Plan as adopted by the Texas Water Development Board.
- The Texas Water Development Board maintains Historic Groundwater Pumpage data by county at: http://www.twdb.state.tx us/wushistorical/DesktopDefault.aspx?PageID=2.
- The 2003 Trinity aquifer Historic Pumpage values for the three counties are as follows:
    - Comal County - 2,464 acre feet
    - Hays County - 2,600 acre feet

    - Travis County - 1,603 acre feet (value includes Trinity aquifer pumpage for all of Travis County)
- The 2003 Trinity aquifer Historic Pumpage values for the three counties total 6,667 acre feet:
    - Comal County accounts for 37% of the 2003 Trinity aquifer historic use
    - Hays County accounts for 39% of the 2003 Trinity aquifer historic use
    - Travis County accounts for 24% of the 2003 Trinity aquifer historic use.
- Based on these 2003 Trinity Aquifer Historic Pumpage values, the commissioners courts of Comal and Hays counties will each appoint a second temporary director.
- The temporary directors shall call and schedule an election to authorize the District to assess taxes and to elect initial directors. The temporary directors serve until the initial directors are elected and have qualified for office.
- One initial director from Comal County and one initial director from Hays County would serve two-year terms.
- The other three initial directors, one from each county, would serve four-year terms.
- As initial director terms expire, permanent directors would be elected to serve four-year terms.

Recommended Revenue for District

An estimated tax rate of $0.00206 per $100 assessed valuation ($2.06 per $100,000) assessed valuation would generate $500,000 to finance District operations and maintenance expenses. The Executive Director suggests that a tax rate of $0.003 to $0.004 per $100 assessed valuation might be needed for start-up of a GCD in this area. District revenue needs may decrease once administrative start-up actions such as well inventory, registration, and permitting programs are completed. If the tax were not approved, the District would have to find alternative methods to finance fully its operations. It is estimated that only $41,123 can be generated by the well production fees authorized by TWC, Chapter 36.