

# **Middle Trinity Groundwater Conservation District**

## **Groundwater Management Plan**

Originally Adopted - April 29, 2004

Approved by Texas Water Development Board - July 1, 2004

Re-Adopted – April 2, 2009

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Re-Adopted – March 5, 2012

Approved by Texas Water Development Board – May 14, 2012

Re-Adopted – October 6, 2016

Approved by Texas Water Development Board – [INSERT DATE]

# **Middle Trinity Groundwater Conservation District**

## **Groundwater Management Plan**

### **I. District Mission**

The mission of the Middle Trinity Groundwater Conservation District is to conserve, preserve and protect the quality and quantity of the groundwater resources for the citizens of Comanche, Erath, Bosque, and Coryell Counties. To accomplish its mission, the District will work to minimize the drawdown of the water table, prevent the waste of groundwater, prevent interference between wells, protect the existing and historic use of groundwater, prevent the degradation of the quality of groundwater, use public education to promote water conservation, give consideration to the service needs of municipal water utilities and the agricultural community, and carry out the powers and duties conferred under Chapter 36 of the Texas Water Code. The District believes that the economy, environment, and quality of life will all be positively impacted by the achievement of its mission.

### **II. Purpose of Management Plan**

The 75<sup>th</sup> Texas Legislature in 1997 enacted Senate Bill 1 (“SB 1”)<sup>1</sup> to establish a comprehensive statewide water planning process. In particular, SB 1 contained provisions that required groundwater conservation districts to prepare management plans to identify the water supply resources and water demands that will shape the decisions of each district. SB 1 designed the management plans to include management goals for each district to manage and conserve the groundwater resources within their boundaries. In 2001, the Texas Legislature enacted Senate Bill 2 (“SB 2”)<sup>2</sup> to build on the planning requirements of SB 1 and to further clarify the actions necessary for districts to manage and conserve the groundwater resources of the state of Texas.

The Texas Legislature enacted significant changes to the management of groundwater resources in Texas with the passage of House Bill 1763 (“HB 1763”)<sup>3</sup> in 2005 and Senate Bill 660 (“SB 660”) in 2011.<sup>4</sup> Both HB 1763 and SB 660 made significant revisions to the existing long-term planning process known as the Groundwater Management Area (GMA) process. Based on the language established in Chapter 36 by HB 1763 and SB 660, groundwater conservation districts (“GCDs”) in each GMA were required to meet and determine the Desired Future Conditions (“DFCs”) for the groundwater resources within their boundaries by September 1, 2010 and to propose for re-adoption the desired future conditions for the relevant aquifers every five years.

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<sup>1</sup> Act of June 2, 1997, 75<sup>th</sup> Leg., R.S., ch. 1010, 1997 Tex. Gen. Laws 3610.

<sup>2</sup> Act of May 27, 2001, 77<sup>th</sup> Leg., R.S., ch. 966, 2001 Tex. Gen. Laws 1991.

<sup>3</sup> Act of May 30, 2005, 79<sup>th</sup> Leg., R.S. ch. 970, 2005 Tex. Gen. Laws 3247.

<sup>4</sup> Act of May 29, 2011, 82<sup>nd</sup> Leg., R.S. ch. 1233, 2011 Tex. Gen. Laws 3287.

In addition, HB 1763 required GCDs, like the District, to provide each GCDs' management plans with the other GCDs in the GMA for review by the other GCDs.

The Middle Trinity Groundwater Conservation District's management plan satisfies the requirements of SB 1, SB 2, HB 1763, SB 660, and the statutory requirements of Chapter 36 of the Texas Water Code, and the administrative requirements of the Texas Water Development Board's ("TWDB") rules.

### **III. District Information**

#### **A. Creation of District and Annexation of Bosque and Coryell Counties**

The District was created in 2001 pursuant to the authorization provided by the 77<sup>th</sup> Texas Legislature in House Bill 3665.<sup>5</sup> The voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code.<sup>6</sup> The District received a petition requesting the annexation of Bosque County on June 30, 2008, and the District Board of Directors (Board) voted to add Bosque County to the territory of the District on March 5, 2009. The voters of Bosque County approved annexation into the District on May 9, 2009. The District received a petition requesting the annexation of Coryell County on June 29, 2009, and the Board voted to add Coryell County to the territory of the District on August 6, 2009. The voters of Coryell County approved annexation into the District on November 3, 2009. In compliance with Section 36.1072(e) of the Texas Water Code and 31 TAC § 356.3, this management plan was re-adopted on April 2, 2009 within five years of the original adoption of the management plan and again reviewed and re-adopted on March 5, 2012, within five years of April 2, 2009 – the first re-adoption of the management plan.<sup>7</sup> This management plan has also been updated within two years of the adoption of DFCs by GMA 8 pursuant to Section 36.3011(5) of the Texas Water Code.<sup>8</sup>

#### **B. Location and Extent**

The District is located in the North Central Texas counties of Comanche, Erath, Bosque, and Coryell Counties. The boundaries of the District are coterminous with the boundaries of Comanche, Erath, Bosque, and Coryell Counties. The District is bordered by Palo Pinto County on the north, Hood, Somervell, Johnson, Hill, and McLennan Counties on the east, Mills and Bell Counties on the south and Brown, Hamilton, Lampasas, and Eastland Counties on the west. The District covers an area of approximately 4079 square miles.<sup>9</sup>

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<sup>5</sup> Act of May 25, 2001, 77<sup>th</sup> Leg. R.S., ch. 1362, 2001 Tex. Gen. Laws 3371.

<sup>6</sup> TEX. WATER CODE ANN. §§36.321-.331 (West 2008).

<sup>7</sup> TEX. WATER CODE §36.1072(e); 31 TEX. ADMIN. CODE § 356.3.

<sup>8</sup> TEX. WATER CODE §36.3011(5).

<sup>9</sup> Texas Almanac, 2008-2009, The Dallas Morning News.

### **C. Background**

The Board currently consists of 12 (twelve) members. The existing Board is made up of 3 (three) directors from each of the counties in the District.

### **D. Authority / Regulatory Framework**

In the process of creating and re-adopting its management plan, the District has complied with all procedures and met all requirements established by Chapter 36 of the Texas Water Code and Chapter 356 of the TWDB rules contained in Title 31 of the Texas Administrative Code.<sup>10</sup> The District exercises the authority and powers that it was granted by and through the special and general laws that govern it, including Chapter 1362, Acts of the 77<sup>th</sup> Texas Legislature, Regular Session, 2001; Chapter 893, Acts of the 78<sup>th</sup> Texas Legislature, Regular Session, 2003; Chapter 521, Acts of the 81<sup>st</sup> Texas Legislature, Regular Session, 2009; and Chapter 36 of the Texas Water Code.

### **E. Groundwater Resources of the District**

Comanche and Erath Counties are located primarily over the outcrop of the Trinity Aquifer while Bosque and Coryell Counties are located over both the outcrop and the subcrop of the Trinity Aquifer. A Texas Water Development Board diagram of the Trinity Aquifer can be found at Appendix A. The Texas Water Development Board describes the groundwater resources of the Trinity Aquifer as follows:

“The Trinity aquifer consists of early Cretaceous age formations of the Trinity Group where they occur in a band extending through the central part of the state in all or parts of 55 counties, from the Red River in North Texas to the Hill Country of South-Central Texas. Trinity Group deposits also occur in the Panhandle and Edwards Plateau regions where they are included as part of the Edwards-Trinity (High Plains and Plateau) aquifers.

Formations comprising the Trinity Group are (from youngest to oldest) the Paluxy, Glen Rose, and Twin Mountains-Travis Peak. Updip, where the Glen Rose thins or is missing, the Paluxy and Twin Mountains coalesce to form the Antlers Formation. The Antlers consists of up to 900 feet of sand and gravel, with clay beds in the middle section. Water from the Antlers is mainly used for irrigation in the outcrop area of North and Central Texas.

Forming the upper unit of the Trinity Group, the Paluxy Formation consists of up to 400 feet of predominantly fine-to-coarse-grained sand interbedded with clay and shale. The formation pinches out downdip and does not occur south of the Colorado River.

Underlying the Paluxy, the Glen Rose Formation forms a gulfward-thickening wedge of marine carbonates consisting primarily of limestone. South of the Colorado River, the Glen Rose is the upper unit of the Trinity Group and is divisible into an upper and lower

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<sup>10</sup> 31 TEX. ADMIN. CODE §§ 356.

member. In the north, the downdip portion of the aquifer becomes highly mineralized and is a source of contamination to wells that are drilled into the underlying Twin Mountains.

The basal unit of the Trinity Group consists of the Twin Mountains and Travis Peak formations, which are laterally separated by a facies change. To the north, the Twin Mountains formation consists mainly of medium- to coarse-grained sands, silty clays, and conglomerates. The Twin Mountains is the most prolific of the Trinity aquifers in North-Central Texas; however, the quality of the water is generally not as good as that from the Paluxy or Antlers Formations. To the south, the Travis Peak Formation contains calcareous sands and silts, conglomerates, and limestones. The formation is subdivided into the following members in descending order: Hensell, Pearsall, Cow Creek, Hammett, Sligo, Hosston, and Sycamore.

Extensive development of the Trinity aquifer has occurred in the Fort Worth-Dallas region where water levels have historically dropped as much as 550 feet. Since the mid-1970s, many public supply wells have been abandoned in favor of a surface-water supply, and water levels have responded with slight rises. Water-level declines of as much as 100 feet are still occurring in Denton and Johnson counties. The Trinity aquifer is most extensively developed from the Hensell and Hosston members in the Waco area, where the water level has declined by as much as 400 feet.”<sup>11</sup>

#### **IV. Technical District Information Required by Texas Water Development Board Rules and Chapter 36 of the Texas Water Code**

##### **A. Estimate of Modeled Available Groundwater in District Based on Desired Future Conditions– 31 TAC § 356.52(a)(5)(A) / 36.1071(e)(3)(A)**

Section 36.001 of the Texas Water Code defines modeled available groundwater (“MAG”) as “the amount of water that the executive administrator determines may be produced on an average annual basis to achieve a desired future condition established under Section 36.108.” HB 1763 adopted by the 79th Legislature in 2005 provided that the DFCs of the aquifer may only be determined through the joint planning process and must be adopted prior to the statutory deadline of September 1, 2010, and every five years thereafter.

The joint planning process set forth in Texas Water Code § 36.108 must be collectively conducted by all groundwater conservation districts within the same GMA. The District is a member of GMA 8. GMA 8 adopted DFCs for the northern segment of the Trinity Aquifer on September 17, 2008. The adopted DFCs were then forwarded to the TWDB for development of the MAG calculations. The District received the MAG calculations from the Texas Water Development Board and the MAGs for the Trinity aquifer were approved by resolution by the GMA 8 members on March 16, 2009. GMA 8 re-adopted DFCs for the Trinity Aquifer on April 27, 2011.

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<sup>11</sup> Aquifers of Texas, Texas Water Development Board, Report 345, by Ashworth and Hopkins, November 1995.

The District received MAG values for the Brazos River Alluvium Aquifer on December 9, 2011 after adopting DFCs for the Brazos River Alluvium Aquifer on April 27, 2011. Of the four counties located within the District’s jurisdiction, only Bosque County contains a portion of the Brazos River Alluvium Aquifer. The DFC for this aquifer in Bosque County is expressed in terms of remaining percentage of saturated thickness after 50 years and the DFC that was adopted would maintain approximately ninety (90) percent of the estimated saturated thickness over 50 years in Bosque County. The DFC for the Brazos River Alluvium Aquifer remains unchanged from the 2007 Joint Planning Process, and thus the MAG from TWDB for the Brazos River Alluvium Aquifer remains the same at 830 acre-feet per year.<sup>12</sup> **See Appendix K.**

The DFCs adopted by the District and GMA 8 represent the quantified, measurable conditions of the groundwater resources of the District in 50 years. Section 36.001(30) defines desired future condition as “a quantitative description, adopted in accordance with Section 36.108, of the desired condition of the groundwater resources in a management area at one or more specified future times.” The District’s DFCs are comprehensive tools that indicate how the District intends to monitor and manage its groundwater resources. Overall, the District’s DFCs give the amount of water level declines that the District does not want to exceed over a 50 year planning period.

As additional technical and hydrogeological information is gathered by the District, the District will revise and update its management plan and the information contained therein to include the most up-to-date data available.

**TABLE 1:  
DESIRED FUTURE CONDITIONS SUBMITTED TO TEXAS WATER DEVELOPMENT BOARD  
MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT<sup>13</sup>**

**BOSQUE COUNTY**

Aquifer (Trinity subdivisions)	Amount average draw down should not exceed after 50 years (in ft.)
Paluxy	26
Glen Rose	33
Hensell	201
Hosston	220

<sup>12</sup> GTA Aquifer Assessment 10-18 MAG, TWDB, Bradley, December 9, 2011 (**Appendix K**).

<sup>13</sup> GAM Run 10-063 MAG, TWDB, Oliver, December 14, 2011 (**Appendix L**).

**COMANCHE COUNTY**

Aquifer (Trinity subdivisions)	Amount average draw down should not exceed after 50 years (in ft.)
Paluxy	0
Glen Rose	0
Hensell	2
Hosston	11

**CORYELL COUNTY**

Aquifer (Trinity subdivisions)	Amount average draw down should not exceed after 50 years (in ft.)
Paluxy	15
Glen Rose	15
Hensell	156
Hosston	179

**ERATH COUNTY**

Aquifer (Trinity subdivisions)	Amount average draw down should not exceed after 50 years (in ft.)
Paluxy	1
Glen Rose	1
Hensell	11
Hosston	27

Based on the DFC estimates submitted to the Texas Water Development Board, the MAG estimates represent the amount of groundwater that is available from the aquifers located within the District's boundaries in terms of acre-feet per year.

**TABLE 2: MODELED AVAILABLE GROUNDWATER ESTIMATES  
MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT<sup>14</sup>**

**BOSQUE COUNTY**

<b>Aquifer (Trinity subdivisions)</b>	<b>Modeled Available Groundwater Totals (in acre-ft. per year)</b>
Paluxy	1,013
Glen Rose	258
Hensell	1,749
Hosston	2,829
<b>Total</b>	<b>5,849</b>

**COMANCHE COUNTY**

<b>Aquifer (Trinity subdivisions)</b>	<b>Modeled Available Groundwater Totals (in acre-ft. per year)</b>
Paluxy	2,292
Glen Rose	0
Hensell	2,995
Hosston	26,948
<b>Total</b>	<b>32,235</b>

**CORYELL COUNTY**

<b>Aquifer (Trinity subdivisions)</b>	<b>Modeled Available Groundwater Totals (in acre-ft. per year)</b>
Paluxy	254
Glen Rose	784
Hensell	1,765
Hosston	913
<b>Total</b>	<b>3,716</b>

<sup>14</sup>GAM Run 10-063 MAG, TWDB, Oliver, December 14, 2011 (Appendix L).

**ERATH COUNTY**

<b>Aquifer (Trinity subdivisions)</b>	<b>Modeled Available Groundwater Totals (in acre-ft. per year)</b>
Paluxy	13,614
Glen Rose	41
Hensell	6,745
Hosston	12,526
<b>Total</b>	<b>32,926</b>

**MODELED AVAILABLE GROUNDWATER TOTALS FOR ALL FOUR COUNTIES**

<b>Aquifer (Trinity subdivisions)</b>	<b>Modeled Available Groundwater Totals For All Four Counties (in acre-ft. per year)</b>
Paluxy	17,173
Glen Rose	1,083
Hensell	13,254
Hosston	43,216
<b>Total</b>	<b>74,726</b>

**B. Amount of Groundwater Being Used within the District on an Annual Basis - 31 TAC §356.52(a)(5)(B) / TWC § 36.1071(e)(3)(B)**

**See Appendix B**

**C. Annual Amount of Recharge From Precipitation to the Groundwater Resources within the District – 31 TAC § 356.52(a)(5)(C) / TWC 36.1071(e)(3)(C)**

The estimated total amount of annual recharge from precipitation within the District from the Trinity Aquifer is 74,335 acre-feet. The estimated amount of recharge was derived from information provided in the Texas Water Development Board GAM Run 17-026. As additional technical and hydrogeological information is gathered by the District, the District will revise and update its management plan and the information contained therein to include the most up-to-date data available. Texas Water Development Board GAM Run 17-026 is attached as Appendix J.

**See Appendix J**

**D. Water Supply Needs - TWC § 36.1071(e)(4)**

**See Appendix C**

**E. Projected Surface Water Supply within the District – 31 TAC § 356.52(a)(5)(F) / TWC § 36.1071(e)(3)(F)**

**See Appendix D**

**F. Projected Water Demand within the District – 31 TAC § 356.52(a)(5)(G) / TWC § 36.1071(e)(3)(G)**

**See Appendix E**

**G. Annual Volume of Water that Discharges from the Aquifer to Springs and Surface Water Bodies – 31 TAC § 356.52(a)(5)(D) / TWC § 36.1071(e)(3)(D)**

The estimated total annual volume of water that discharges to springs and any surface water body including lakes, streams, and rivers is 98,449 acre-feet per year from the Trinity Aquifer and 845 acre-feet per year from the Brazos River Alluvium Aquifer. These amounts were derived from GAM Run 17-026 provided to the District by TWDB staff.

**See Appendix J**

**H. Estimate of the Annual Volume of Flow into the District, out of the District, and Between Aquifers in the District – 31 TAC § 356.5(a)(5)(E) / TWC § 36.1071(e)(3)(E)**

- Per GAM Run 17-026, the estimate of the Annual Volume of Flow in the District is 29,682 acre-feet from the Trinity Aquifer and 236 acre-feet from the Brazos River Alluvium Aquifer.
- Per GAM Run 17-026, the estimate of the Annual Volume of Flow out of the District is 33,741 acre-feet from the Trinity Aquifer and 238 acre-feet from the Brazos River Alluvium Aquifer.
- Per GAM Run 17-026, the estimate of the Net Annual Volume of Flow is 29,006 acre-feet from the Washita Group of the Cretaceous System to the Trinity Aquifer and 82 acre-feet from the Washita Group of the Cretaceous System to the Brazos River Alluvium Aquifer.

**NOTE:** The amounts provided in Section H reflect the most recent information available from the Texas Water Development Board. As additional technical and hydrogeological information is gathered by the District, the District will revise and update its management plan and the information contained therein to include the most up-to-date data available.

**See Appendix J**

**I. Projected Water Management Strategies – TWC § 36.1071(e)(4)**

**See Appendix F**

**V. Management of Groundwater Supplies –TWC § 36.1071(e)(4)**

The Texas Legislature has established that groundwater conservation districts (“GCDs”), such as the Middle Trinity Groundwater Conservation District (“District”), are the state’s preferred method of groundwater management. The Texas Legislature codified its policy decision in Section 36.0015 of the Texas Water Code, which establishes that GCDs will manage groundwater resources through rules developed and implemented in accordance with Chapter 36 of the Texas Water Code (“Chapter 36”). Chapter 36 gives directives to GCDs and the statutory authority to carry out such directives, so that GCDs are given the proper tools to protect and manage the groundwater resources within their boundaries.

The District has used and will continue to use in the future the regulatory tools it has been provided by Chapter 36 and the Texas Legislature to address the many challenges facing the District including the significant threats to the water quality of the groundwater resources of the District. The District places a major priority on prevention of the contamination of its groundwater resources through abandoned and deteriorated water wells. Wells that have been abandoned or not properly maintained provide direct conduits or pathways that allow contamination from the surface to quickly reach the groundwater resources of the District. To address the threats to the water quality of its groundwater resources, the District has taken steps to increase the number of abandoned or deteriorated water wells that are plugged and intends to take additional action to plug wells in the future. The District has created a well plugging grant program with District funds which provides funding on an as-available basis for residents of the District to plug the abandoned and deteriorated wells that are located on their property. In addition, the District requires, through the District’s rules that all abandoned, deteriorated, or replaced wells be plugged in compliance with the Water Well Drillers and Pump Installers Rules of the Texas Department of Licensing and Regulation. The District has also places a priority on the capping of water wells which will be used a later date in order to eliminate waste, prevent pollution, and prevent further deterioration of the well casing.

It has also been the practice of the District to use the regulatory tools granted to GCDs by Chapter 36 to preserve and protect the existing and historic users of groundwater in the District. The legislature empowered the District to protect existing users of groundwater, which are those individuals or entities currently invested in and using groundwater or the groundwater resources within the District for a beneficial purpose, and preserve historic use by historic users, which are those individuals or entities who used groundwater beneficially in the past. The District strives

to protect and preserve such use to the extent practicable under the goals and objectives of this management plan.

The District has created a permitting process for groundwater use that preserves and protects the existing and historic use of groundwater in the District. Pursuant to legislative authority, such as Section 36.113(e) of the Texas Water Code, the District protects existing use by imposing more restrictive permit conditions on new permit applications and increased use by historic users. In protecting existing users, the District has established limitations that apply to all subsequent new permit applications and increased use by historic users, regardless of type or location of use, which bear a reasonable relationship to this management plan; and are reasonably necessary to protect existing use. In accordance with Section 36.116(b), Water Code, the District has also preserved historic use when developing and implementing rules which limit groundwater production to the maximum extent practicable consistent with this management plan. Under the District's permitting process, non-exempt groundwater users who have existing or historic use receive Grandfather Permits, while all new groundwater users and those existing and historic users who need an increased amount of groundwater production through new wells or modifications to existing wells obtain Operating Permits.

The Grandfather Permits issued by the District under the District's rules have an important role as part of the District's overall permitting process because those wells that operate under Grandfather Permits issued by the District are authorized to produce water in an amount that the well was capable of producing before May 11, 2004 for Comanche and Erath Counties, which was the date of the original adoption of the District rules, before November 19, 2009, for wells located in Bosque County, and before June 15, 2010 for wells located in Coryell County. The District's rules provide that the District can only reduce the amount of groundwater allocated to Grandfather Permits after groundwater allocated to Operating Permits has been reduced and further reduction is required to achieve the goals and objectives of the District management plan or to make water available for the issuance of new Operating Permits or to account for groundwater use from exempt wells.

The District issues Operating Permits for the water wells in the District that are considered to be non-exempt, including those non-exempt wells that have not received a Grandfather Permit. In accordance with § 36.116 of the Texas Water Code, the rules of the District regulate the production of groundwater under Operating Permits issued by the District through spacing and production limits.

The District also has the authority in its rules to establish management zones by resolution of the District Board if, using the best hydrogeologic and geographic data available, the Board determines that management zones are necessary for the administration of groundwater management and regulation in the District. Any management zones created by the District will serve as areas for which the District will determine water availability if necessary to avoid impairment of and consistency with the achievement of the applicable Desired Future Conditions established for the aquifers located in whole or in part within the boundaries of the District, authorize total production, establish proportional reduction of production amongst classes of permittees, and within which the District may allow the transfer of wells and/or the right to produce groundwater. If the District creates management zones, the District's rules provide that

the management zones will be delineated along boundaries that, to the extent practicable, will promote fairness and efficiency in the management of groundwater resources, while considering hydrogeologic conditions, and the ability of the public to identify the boundaries based upon land surface features.

In managing its groundwater supplies, the District has taken into account the water management strategies contained in the 2017 State Water Plan which can be found in Appendix F. . There are nineteen strategies for Bosque County, six strategies for Comanche County, thirteen strategies for Coryell County, and two strategies for Erath County. These strategies include development of surface water supplies, voluntary re-distribution of surface water supplies and water conservation.

**VI. Methodology to Track District Progress in Achieving Management Goals – 31 TAC § 356.52(a)(4)**

An annual report (“Annual Report”) is created by the General Manager and staff of the District and provided to the members of the Board of the District. The Annual Report covers the activities of the District including information on the District’s performance in regards to achieving the District’s management goals and objectives. The Annual Report is delivered to the Board within ninety (90) days following the completion of the District’s fiscal year, and began with the fiscal year that started on January 1, 2005. A copy of the Annual Report is kept on file and available for public inspection at the District’s offices upon adoption.

**VII. Actions, Procedures, Performance, and Avoidance for District Implementation of Management Plan – 31 TAC § 356.52(a)(2); 31 TAC § 356.52(a)(3); 31 TAC § 356.52(a)(4) / § 36.1071(e)(1) and § 36.1071(e)(2)**

The District has acted on the goals and directives established in this management plan. The District has also used the objectives and provisions of the management plan as a guideline in its policy-implementation and decision-making. In both its daily operations and long term planning efforts, the District continuously strives to comply with the initiatives and standards created by the management plan for the District.

After receiving public input, the District adopted rules in accordance with Chapter 36 of the Texas Water Code and all rules must be followed and enforced. The District may amend the District rules as necessary to comply with changes to Chapter 36 of the Texas Water Code and to insure the best management of the groundwater within the District. The continued development and enforcement of the rules of the District has been and will continue to be based on the best scientific and technical evidence available to the District. A copy of the District’s rules can be found at <http://middletrinitygcd.org/storm.cfm?funnelaction=184>.

The District has encouraged and will continue to encourage public cooperation and coordination in the implementation of the management plan for the District, as it is amended. All operations and activities of the District have been and will be performed in a manner that best encourages cooperation with the appropriate state, regional or local water entity. The meetings of the Board of the District are noticed and conducted at all times in accordance with the Texas Open Meetings Law. The District has also made available for public inspection all official documents,

reports, records and minutes of the District pursuant with the Texas Public Information Act and will continue to do so in the future.

## **VIII. Management Goals**

### **A. Providing the Most Efficient Use of Groundwater – 31 TAC § 356.52(a)(1)(A) / TWC § 36.1071(a)(1)**

- A. 1. **Objective** – Annually, the District will require all new water wells that are constructed within the boundaries of the District to be registered with the District pursuant to the District rules.
- A. 1. **Performance Standard** – The number of water wells registered by the District for each year will be included in the Annual Report submitted to the Board of Directors of the District.
- A. 2. **Objective** – The District will annually require all water wells subject to the District’s permitting requirements to be permitted pursuant to the District rules.
- A. 2. **Performance Standard** – The number of water wells permitted by the District for each year will be included in the Annual Report submitted to the Board of Directors of the District.
- A. 3. **Objective** – The District will annually regulate the production of groundwater by maintaining a system of permitting which authorizes the use and production of groundwater within the boundaries of the District pursuant to the District rules.
- A. 3. **Performance Standard** – The District will annually accept and process applications for the permitted use of groundwater in the District in accordance with the permitting system established by the District rules. The number and type of applications made for the permitted use of groundwater in the District, and the number and type of permits issued by the District, will be included in the Annual Report given to the Board of Directors.
- A.4. **Objective** – The District will annually attempt to increase the public awareness regarding the purpose, objectives, and mission of the District.
- A.4. **Performance Standard** – The District will provide at least two of the following on annual basis: informational presentations to public service organizations or community groups; informational radio spots; or manned kiosks at public expositions.

**B. Controlling and Preventing Waste of Groundwater – 31 TAC § 356.52(a)(1)(B) / TWC § 36.1071(a)(2)**

- B. 1. Objective** – At least once each year, the District will evaluate the District rules to identify whether any amendments are needed to reduce the amount of waste of groundwater within the boundaries of the District.
- B. 1. Performance Standard** – The District will include a discussion of the annual evaluation of the District rules and the determination of whether any amendments to the rules are needed to prevent the waste of groundwater in the Annual Report of the District provided to the Board of Directors.
- B. 2. Objective** – The District will annually provide information to the public on eliminating and reducing wasteful practices in the use of groundwater by publishing information on groundwater waste reduction on the District’s website at least once a year.
- B. 2. Performance Standard** – A copy of the information on groundwater waste reduction will be provided on the District’s website and the information on the published on the website will be included in the District’s Annual Report to be provided to the District’s Board of Directors.
- B.3. Objective** – The District will require the plugging of at least one (1) deteriorated or abandoned well identified by the District in accordance with the Texas Department of Licensing and Regulation, Water Well Drillers and Pump Installers Rules (16 Texas Administrative Code, Chapter 76).
- B.3. Performance Standard** – At least once each year, the District will produce a report that describes the activities of the District in plugging a deteriorated or abandoned water well identified by the District and the report will be included in the Annual Report given to the Board of Directors of the District. If the District is not able to identify a deteriorated or abandoned well within its boundaries in a particular year, the District will include a discussion in the Annual Report that no deteriorated or abandoned well was identified in the District for the applicable year.
- B.4. Objective** – The District will provide at least one request each year to the Texas Railroad Commission which asks whether any new salt water or waste disposal injection wells have been permitted by the Texas Railroad Commission to operate within the District within the most recent fiscal year.

**B.4. Performance Standard** – A copy of each request provided to the Texas Railroad Commission each year requesting information regarding the location of any new salt water or waste disposal wells permitted to operate within the District will be included in the Annual Report submitted to the Board of Directors of the District.

**B.5. Objective** – The District will transmit at least one request each year to the Texas Railroad Commission which asks that the Commission provide a copy of the results of integrity tests performed on salt water or waste disposal injection wells permitted by the Texas Railroad Commission to operate within the District.

**B.5. Performance Standard** – A copy of each letter sent to the Texas Railroad Commission each year requesting the results of the integrity testing performed on salt water or waste disposal injection wells permitted by the Texas Railroad Commission to operate within the District will be included in the Annual Report submitted to the Board of Directors of the District.

**C. Addressing Conjunctive Surface Water Management Issues – 31 TAC § 356.52(a)(1)(D) / TWC § 36.1071(a)(4)**

**C. 1. Objective** – Each year, the District will participate in the regional planning process by attending at least 25 percent of the Region G (Brazos G) – Regional Water Planning Group meetings to encourage the development of surface water supplies to meet the needs of water user groups in the District.

**C. 1. Performance Standard** – The attendance of a District representative at the Region G Regional Water Planning Group meeting(s) will be noted in the Annual Report presented to the District Board of Directors and will provide the total number of meetings conducted by the Region G Regional Water Planning Group for that year and will indicate how many of the meetings were attended by the District.

**D. Addressing Natural Resource Issues – 31 TAC § 356.52(a)(1)(E) / TWC § 36.1071(a)(5)**

**D. 1. Objective** – The District will monitor water quality on an annual basis within the District by obtaining water quality samples from at least one well in each of the counties in the District.

**D. 1. Performance Standard** – The District’s Annual Report will include a summary of the number of water quality samples obtained and the results of the water quality tests for each well sampled.

**E. Addressing Drought Conditions – 31 TAC § 356.5(a)(1)(F) / TWC § 36.1071(a)(6)**

- E. 1. Objective** – The District will monitor drought conditions in the Trinity Aquifer each year through the process established in the District’s Drought Contingency Plan adopted by the District Board of Directors.
- E. 1. Performance Standard** – The District’s Annual Report will include a summary of the District’s monitoring of drought conditions in the Trinity Aquifer and any implementation measures taken in accordance with the District’s Drought Contingency Plan. The District will make an assessment of the status of drought and will prepare a quarterly briefing to the Board of Directors that includes a discussion of whether the District has declared any drought stages set forth in its Drought Contingency Plan for the previous quarter.
- E. 2. Objective** – The District will download the updated Palmer Drought Severity Index (PDSI) maps and review soil moisture index readings for the area within the District’s boundaries on a quarterly basis.
- E. 2. Performance Standard** – The District will review the PDSI maps and soil moisture index readings and will prepare a quarterly briefing to the Board of Directors that includes a discussion of the PDSI maps and soil moisture index readings. The downloaded PDSI maps and soil moisture index readings will be included with copies of the quarterly briefing in the District’s Annual Report.

**F. Conservation, Recharge Enhancement, Rainwater Harvesting, and Brush Control – 31 TAC § 356.5(a)(1)(G) / TWC § 36.1071(a)(7)**

- F. 1. Objective** – The District will submit at least one article regarding water conservation for publication each year to at least one newspaper of general circulation in the District.
- F. 1. Performance Standard** – A copy of the article submitted by the District for publication to a newspaper of general circulation in the District regarding water conservation will be included in the Annual Report given to the Board of Directors.
- F. 2. Objective** – The District will present a pre-existing educational program for use in public or private schools in the District at least once each year to educate students on the importance of water conservation.
- F. 2. Performance Standard** – A description of the educational program presentation(s) by the District for use in the public and private schools in the District will be included in the Annual Report to the Board of Directors each year.

- F. 3. **Objective** – On an annual basis, the District will distribute an informational flier on water conservation during at least two public events that occur within the District’s boundaries..
- F. 3. **Performance Standard** – The District’s Annual Report will include a copy of the most recent informational flier on water conservation and will also include information on the public events where the flier was distributed.
- F. 4. **Objective** – The District will provide information relating to recharge enhancement on the District web site at least once each year.
- F. 4. **Performance Standard** – The District’s Annual Report will include a copy of the information provided on the District web site related to recharge enhancement.
- F. 5. **Objective** – The District will provide information on rainwater harvesting each year by offering new information about rainwater harvesting on the District web site at least once each year.
- F. 5. **Performance Standard** – The District’s Annual Report will provide a copy of the information on rainwater harvesting which has been posted on the District web site in the previous year.
- F. 6. **Objective** – The District will evaluate the State Brush Control Plan as it is revised from time to time at least once each year to determine whether projects within the District will increase the groundwater resources of the District.
- F. 6. **Performance Standard** – Upon review of a newly revised State Brush Control Plan, the District’s Annual Report will include a copy of the most recent brush control information pertaining to the District.

**G. Addressing the Desired Future Conditions – 31 TAC § 356.5(a)(1)(H) / TWC § 36.1071(a)(8)**

- G. 1. **Objective** – The District will review and calculate its permit and well registration totals in light of the Desired Future Conditions of the groundwater resources within the boundaries of the District to assess whether the District is on target to meet the Desired Future Conditions estimates submitted to the TWDB.
- G. 1. **Performance Standard** – The District’s Annual Report will include a discussion of the District’s permit and well registration totals and will evaluate the District’s progress in achieving the Desired Future Conditions

of the groundwater resources within the boundaries of the District and whether the District is on track to maintain the Desired Future Conditions estimates over the 50 year planning period.

- G. 2. **Objective** – The District will annually measure the water levels in at least five monitoring wells in each of the counties within the District and will determine the five-year water level averages based on the measurements taken. The District will compare the five-year water level averages to the corresponding five-year increment of its Desired Future Conditions in order to track its progress in achieving the Desired Future Conditions.
  
- G. 2. **Performance Standard** – The District's Annual Report will include the water level measurements taken each year for the purpose of monitoring water levels to assess the District's progress towards achieving its Desired Future Conditions. Once the District has obtained water level measurements for five consecutive years and is able to calculate water level averages over five-year periods thereafter, the District will include a discussion of its comparison of water level averages to the corresponding five-year increment of its Desired Future Conditions in order to track its progress in achieving its Desired Future Conditions.

**IX. Management Goals Not Applicable to District**

- A. Controlling and Preventing Subsidence – 31 TAC § 356.5(a)(1)(C) / TWC § 36.1071(a)(3)** – The District has not been advised as to any issues with subsidence that exist within the boundaries of the District. Therefore, this management goal is not applicable.
  
- B. Addressing Precipitation Enhancement – 31 TAC § 356.5(a)(1)(G) / TWC § 36.1071(a)(7)** – Precipitation enhancement is not a cost effective or appropriate program for the District at this time since there are no precipitation enhancement programs in nearby counties or groundwater conservation districts that the District could participate with and allocate expenses for precipitation enhancement projects. Therefore, this management goal is not applicable.

**X. Action Required for Plan Approval – 31 TAC § 356.53**

- A. Certified Copy of District’s Resolution Re-Adopting Management Plan – 31 TAC § 356.53(a)(3)**

A certified copy of the District’s resolution re-adopting the plan is located in Appendix G – District Resolution.

**B. Evidence of Management Plan Adoption After Notice and Hearing – 31 TAC § 356.52(a)(3) / TWC § 36.1071(a)**

Evidence, such as public notices, that the management plan was re-adopted following applicable public meetings and hearings is located in Appendix H - Notice of Meetings.

**C. Coordination with Surface Water Management Entities – 31 TAC § 356.6(a)(4) / TWC § 36.1071(a)**

Evidence, such as correspondence with regional water planning groups and/or other surface water authorities or management entities, which demonstrates that the District coordinated with surface water management entities in regards to re-adopting the District's management plan is located in Appendix I.

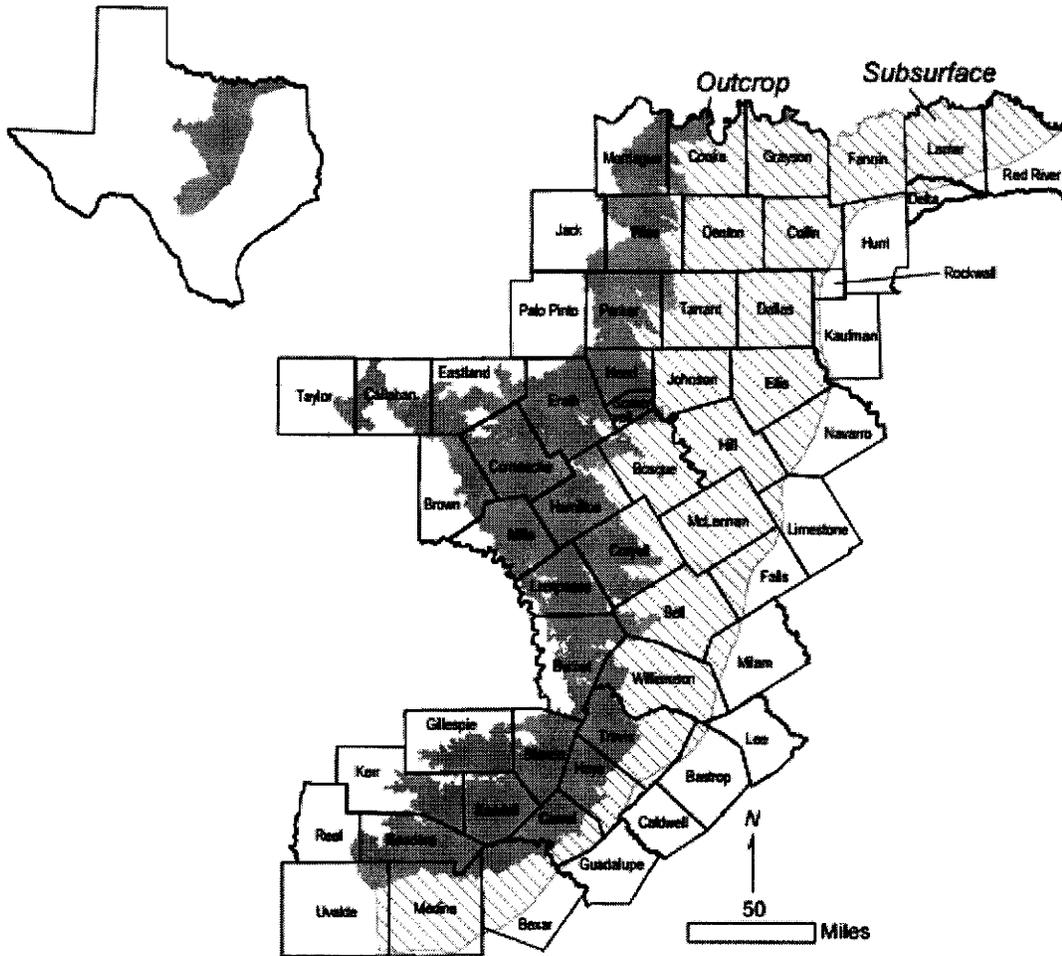
### **References**

1. 2017 State Water Planning Database. Contact Wendy Barron ([wendy.barron@twdb.texas.gov](mailto:wendy.barron@twdb.texas.gov) or 512-936-0886).
2. *Aquifers of Texas*, Texas Water Development Board, Report 380, by George, Mace and Petrossian, July 2011.
3. Texas Almanac 2008-2009, The Dallas Morning News.

**APPENDIX A**

**Trinity Aquifer Diagram**

# Trinity Aquifer



**APPENDIX B**

**Amount of Groundwater Being Used within the District on an  
Annual Basis**

# Estimated Historical Water Use

## TWDB Historical Water Use Survey (WUS) Data

Groundwater and surface water historical use estimates are currently unavailable for calendar year 2015. TWDB staff anticipates the calculation and posting of these estimates at a later date.

### BOSQUE COUNTY

All values are in acre-feet

Year	Source	Municipal	Manufacturing	Mining	Steam Electric	Irrigation	Livestock	Total
2014	GW	2,546	2	0	0	1,431	219	4,198
	SW	313	7	0	0	1,934	511	2,765
2013	GW	2,887	2	0	0	650	205	3,744
	SW	284	6	0	0	2,473	479	3,242
2012	GW	3,043	2	1	0	1,937	218	5,201
	SW	314	5	3	0	2,668	509	3,499
2011	GW	3,388	1	647	0	0	419	4,455
	SW	454	5	677	0	3,500	976	5,612
2010	GW	2,735	1	1,166	0	458	407	4,767
	SW	433	4	1,221	0	2,836	950	5,444
2009	GW	2,488	250	877	0	56	285	3,956
	SW	283	704	919	1,589	2,054	665	6,214
2008	GW	2,293	251	589	0	1,334	269	4,736
	SW	295	703	617	1,589	1,151	628	4,983
2007	GW	2,391	252	0	0	321	317	3,281
	SW	244	705	0	1,589	2,362	741	5,641
2006	GW	2,626	253	0	0	687	319	3,885
	SW	473	703	0	1,589	1,500	744	5,009
2005	GW	3,436	704	0	0	625	293	5,058
	SW	365	3	0	2,106	713	683	3,870
2004	GW	2,749	704	0	0	615	499	4,567
	SW	255	3	0	1,603	1,823	499	4,183
2003	GW	2,804	704	0	0	100	503	4,111
	SW	528	3	0	1,871	2,451	503	5,356
2002	GW	2,932	728	0	0	66	522	4,248
	SW	616	4	0	2,185	2,149	522	5,476
2001	GW	2,691	732	0	41	50	533	4,047
	SW	3	0	0	772	1,623	533	2,931
2000	GW	2,777	794	0	0	73	524	4,168
	SW	2	0	0	0	2,470	524	2,996

**COMANCHE COUNTY**

All values are in acre-feet

Year	Source	Municipal	Manufacturing	Mining	Steam Electric	Irrigation	Livestock	Total
2014	GW	438	3	0	0	23,785	786	25,012
	SW	707	14	0	0	5,524	2,358	8,603
2013	GW	516	7	0	0	23,598	747	24,868
	SW	736	7	0	0	7,845	2,244	10,832
2012	GW	638	5	0	0	25,815	827	27,285
	SW	744	7	0	0	12,788	2,481	16,020
2011	GW	699	7	90	0	25,617	852	27,265
	SW	820	11	23	0	10,413	2,555	13,822
2010	GW	686	4	475	0	10,278	840	12,283
	SW	748	8	120	0	14,923	2,521	18,320
2009	GW	603	6	238	0	19,620	979	21,446
	SW	759	13	60	0	8,798	2,937	12,567
2008	GW	535	8	1	0	17,077	962	18,583
	SW	827	7	0	0	11,068	2,888	14,790
2007	GW	516	3	0	0	18,013	855	19,387
	SW	769	23	0	0	4,373	2,566	7,731
2006	GW	609	3	0	0	18,931	1,053	20,596
	SW	894	23	0	0	12,010	3,159	16,086
2005	GW	566	4	0	0	16,853	1,020	18,443
	SW	849	22	0	0	11,984	3,058	15,913
2004	GW	534	3	0	0	16,455	700	17,692
	SW	665	18	0	0	8,168	3,006	11,857
2003	GW	574	3	0	0	14,104	690	15,371
	SW	875	17	0	0	11,466	2,961	15,319
2002	GW	599	3	0	0	12,254	689	13,545
	SW	891	19	0	0	19,994	2,956	23,860
2001	GW	583	2	0	0	17,265	746	18,596
	SW	912	21	0	0	28,168	3,201	32,302
2000	GW	610	2	0	0	13,515	851	14,978
	SW	883	24	0	0	22,454	3,403	26,764

**CORYELL COUNTY**

All values are in acre-feet

Year	Source	Municipal	Manufacturing	Mining	Steam Electric	Irrigation	Livestock	Total
2014	GW	430	0	0	0	215	170	815
	SW	9,966	2	0	0	0	965	10,933
2013	GW	1,208	0	0	0	254	168	1,630
	SW	11,536	2	0	0	5	957	12,500
2012	GW	1,788	0	0	0	516	146	2,450
	SW	11,979	4	0	0	0	829	12,812
2011	GW	1,717	0	163	0	89	184	2,153
	SW	12,295	4	168	0	56	1,044	13,567
2010	GW	2,056	0	195	0	144	180	2,575
	SW	12,311	3	202	0	271	1,023	13,810
2009	GW	1,765	0	150	0	238	134	2,287
	SW	13,338	0	155	0	8	759	14,260
2008	GW	1,373	0	105	0	240	183	1,901
	SW	13,518	0	108	0	33	1,034	14,693
2007	GW	1,285	0	0	0	46	232	1,563
	SW	12,196	0	0	0	100	1,312	13,608
2006	GW	1,431	0	0	0	154	291	1,876
	SW	12,024	0	0	0	28	1,651	13,703
2005	GW	1,364	0	0	0	171	264	1,799
	SW	11,735	0	0	0	50	1,494	13,279
2004	GW	1,272	0	0	0	188	683	2,143
	SW	12,114	0	0	0	0	683	12,797
2003	GW	1,325	0	0	0	117	725	2,167
	SW	11,562	0	0	0	279	725	12,566
2002	GW	1,307	0	0	0	0	657	1,964
	SW	10,825	0	0	0	0	657	11,482
2001	GW	799	0	0	0	0	645	1,444
	SW	10,428	0	0	0	0	645	11,073
2000	GW	827	0	0	0	0	670	1,497
	SW	11,423	0	0	0	0	670	12,093

**ERATH COUNTY**

All values are in acre-feet

Year	Source	Municipal	Manufacturing	Mining	Steam Electric	Irrigation	Livestock	Total
2014	GW	4,236	54	0	0	7,245	1,507	13,042
	SW	637	0	0	0	156	3,516	4,309
2013	GW	4,305	57	0	0	6,396	1,583	12,341
	SW	665	0	0	0	396	3,694	4,755
2012	GW	4,468	74	5	0	6,881	1,791	13,219
	SW	693	0	4	0	582	4,180	5,459
2011	GW	4,952	69	125	0	7,288	1,885	14,319
	SW	629	1	149	0	750	4,397	5,926
2010	GW	4,188	60	1,007	0	4,867	1,842	11,964
	SW	447	1	1,205	0	571	4,298	6,522
2009	GW	3,998	38	579	0	4,608	2,021	11,244
	SW	439	8	693	0	406	4,717	6,263
2008	GW	3,967	69	151	0	6,177	1,981	12,345
	SW	444	9	180	0	859	4,623	6,115
2007	GW	3,583	69	0	0	4,829	1,650	10,131
	SW	427	5	0	0	276	3,849	4,557
2006	GW	4,218	40	0	0	6,923	2,267	13,448
	SW	413	30	0	0	766	5,290	6,499
2005	GW	4,048	31	0	0	6,988	2,134	13,201
	SW	417	27	0	0	559	4,978	5,981
2004	GW	3,811	31	0	0	6,395	3,604	13,841
	SW	434	19	0	0	969	3,604	5,026
2003	GW	4,022	26	0	0	6,407	3,686	14,141
	SW	474	6	0	0	881	3,686	5,047
2002	GW	3,972	28	0	0	9,578	3,908	17,486
	SW	464	6	0	0	504	3,908	4,882
2001	GW	4,291	39	0	0	6,739	4,470	15,539
	SW	581	7	0	0	355	4,470	5,413
2000	GW	4,339	43	0	0	10,261	4,660	19,303
	SW	579	9	0	0	555	4,660	5,803

**APPENDIX C**

**Water Supply Needs**

# Projected Water Supply Needs

## TWDB 2017 State Water Plan Data

Negative values (in red) reflect a projected water supply need, positive values a surplus.

### BOSQUE COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
G	CHILDRESS CREEK WSC	BRAZOS	38	12	2	-5	-11	-16
G	CLIFTON	BRAZOS	334	289	271	259	248	206
G	COUNTY-OTHER, BOSQUE	BRAZOS	248	162	124	99	79	66
G	CROSS COUNTRY WSC	BRAZOS	37	29	26	-127	-132	-138
G	IRRIGATION, BOSQUE	BRAZOS	-536	-502	-468	-438	-407	-377
G	LIVESTOCK, BOSQUE	BRAZOS	0	0	0	0	0	0
G	MANUFACTURING, BOSQUE	BRAZOS	-1,868	-2,187	-2,501	-2,772	-3,088	-3,431
G	MERIDIAN	BRAZOS	265	253	249	246	243	241
G	MINING, BOSQUE	BRAZOS	-1,843	-1,942	-1,763	-1,743	-1,704	-1,692
G	STEAM ELECTRIC POWER, BOSQUE	BRAZOS	312	-861	-2,262	-3,943	-5,965	-8,344
G	VALLEY MILLS	BRAZOS	41	22	14	8	2	-2
G	WALNUT SPRINGS	BRAZOS	98	94	93	92	90	89
<b>Sum of Projected Water Supply Needs (acre-feet)</b>			<b>-4,247</b>	<b>-5,492</b>	<b>-6,994</b>	<b>-9,028</b>	<b>-11,307</b>	<b>-14,000</b>

### COMANCHE COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
G	COMANCHE	BRAZOS	159	152	147	96	70	38
G	COUNTY-OTHER, COMANCHE	BRAZOS	-149	-144	-135	-144	-163	-183
G	COUNTY-OTHER, COMANCHE	COLORADO	0	0	0	0	0	0
G	DE LEON	BRAZOS	84	85	85	64	55	42
G	IRRIGATION, COMANCHE	BRAZOS	-893	-1,962	-1,823	-463	-757	-968
G	LIVESTOCK, COMANCHE	BRAZOS	0	0	0	0	0	0
G	LIVESTOCK, COMANCHE	COLORADO	0	0	0	0	0	0
G	MANUFACTURING, COMANCHE	BRAZOS	0	0	0	0	0	0
G	MINING, COMANCHE	BRAZOS	-418	-499	-337	-250	-162	-102
<b>Sum of Projected Water Supply Needs (acre-feet)</b>			<b>-1,460</b>	<b>-2,605</b>	<b>-2,295</b>	<b>-857</b>	<b>-1,082</b>	<b>-1,253</b>

# Projected Water Supply Needs TWDB 2017 State Water Plan Data

Negative values (in red) reflect a projected water supply need, positive values a surplus.

## CORYELL COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
G	COPPERAS COVE	BRAZOS	4,550	4,039	3,444	2,528	1,867	1,145
G	CORYELL CITY WATER SUPPLY DISTRICT	BRAZOS	203	211	219	214	211	206
G	COUNTY-OTHER, CORYELL	BRAZOS	870	594	234	-93	-171	-515
G	ELM CREEK WSC	BRAZOS	13	8	2	-5	-12	-19
G	FORT HOOD	BRAZOS	1,652	1,530	1,403	1,228	1,054	875
G	GATESVILLE	BRAZOS	28	-629	-1,406	-2,356	-3,152	-3,995
G	IRRIGATION, CORYELL	BRAZOS	556	556	556	556	556	556
G	KEMPNER WSC	BRAZOS	-113	-173	-236	-298	-365	-431
G	LIVESTOCK, CORYELL	BRAZOS	0	0	0	0	0	0
G	MANUFACTURING, CORYELL	BRAZOS	0	0	0	0	0	0
G	MINING, CORYELL	BRAZOS	-1,510	-1,072	-491	-363	-398	-437
G	MULTI-COUNTY WSC	BRAZOS	-80	-100	-127	-153	-184	-217
<b>Sum of Projected Water Supply Needs (acre-feet)</b>			<b>-1,703</b>	<b>-1,974</b>	<b>-2,260</b>	<b>-3,268</b>	<b>-4,282</b>	<b>-5,614</b>

## ERATH COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
G	COUNTY-OTHER, ERATH	BRAZOS	692	477	291	93	-116	-315
G	DUBLIN	BRAZOS	139	116	97	73	44	15
G	IRRIGATION, ERATH	BRAZOS	641	733	825	915	1,004	1,088
G	LIVESTOCK, ERATH	BRAZOS	0	0	0	0	0	0
G	MANUFACTURING, ERATH	BRAZOS	0	0	0	0	0	1
G	MINING, ERATH	BRAZOS	6	-25	135	207	279	334
G	STEPHENVILLE	BRAZOS	3,522	3,293	3,085	2,776	2,535	2,285
<b>Sum of Projected Water Supply Needs (acre-feet)</b>			<b>0</b>	<b>-25</b>	<b>0</b>	<b>0</b>	<b>-116</b>	<b>-315</b>

## **APPENDIX D**

### **Projected Surface Water Supply within the District**

# Projected Surface Water Supplies

## TWDB 2017 State Water Plan Data

### BOSQUE COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
G	CLIFTON	BRAZOS	CLIFTON LAKE/RESERVOIR	565	565	565	565	565	565
G	IRRIGATION, BOSQUE	BRAZOS	BRAZOS RUN-OF-RIVER	132	132	132	131	131	131
G	LIVESTOCK, BOSQUE	BRAZOS	BRAZOS LIVESTOCK LOCAL SUPPLY	989	989	989	989	989	989
G	MANUFACTURING, BOSQUE	BRAZOS	CLIFTON LAKE/RESERVOIR	1	1	1	1	1	1
G	STEAM ELECTRIC POWER, BOSQUE	BRAZOS	BRAZOS RIVER AUTHORITY MAIN STEM LAKE/RESERVOIR SYSTEM	6,500	6,374	6,248	6,122	5,996	5,870
<b>Sum of Projected Surface Water Supplies (acre-feet)</b>				<b>8,187</b>	<b>8,061</b>	<b>7,935</b>	<b>7,808</b>	<b>7,682</b>	<b>7,556</b>

### COMANCHE COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
G	COMANCHE	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	680	671	662	618	605	586
G	COUNTY-OTHER, COMANCHE	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	9	9	9	9	9	9
G	DE LEON	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	307	305	301	283	279	272
G	IRRIGATION, COMANCHE	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	4,968	3,616	3,474	4,557	3,988	3,511
G	LIVESTOCK, COMANCHE	BRAZOS	BRAZOS LIVESTOCK LOCAL SUPPLY	3,774	3,774	3,774	3,774	3,774	3,774
G	LIVESTOCK, COMANCHE	COLORADO	COLORADO LIVESTOCK LOCAL SUPPLY	121	121	121	121	121	121

Estimated Historical Water Use and 2017 State Water Plan Dataset:

Middle Trinity Groundwater Conservation District

October 19, 2016

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# Projected Surface Water Supplies

## TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
G	MANUFACTURING, COMANCHE	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	26	29	31	33	36	39
<b>Sum of Projected Surface Water Supplies (acre-feet)</b>				<b>9,885</b>	<b>8,525</b>	<b>8,372</b>	<b>9,395</b>	<b>8,812</b>	<b>8,312</b>

### CORYELL COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
G	COPPERAS COVE	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	8,816	8,694	8,577	8,114	7,989	7,811
G	CORYELL CITY WATER SUPPLY DISTRICT	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	1,012	1,110	1,225	1,315	1,419	1,522
G	COUNTY-OTHER, CORYELL	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	820	818	815	800	1,055	1,043
G	ELM CREEK WSC	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	57	56	56	53	52	51
G	FORT HOOD	BRAZOS	BRAZOS RUN-OF- RIVER	5,324	5,209	5,030	4,850	4,671	4,491
G	GATESVILLE	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	4,452	4,310	4,126	3,710	3,506	3,258
G	IRRIGATION, CORYELL	BRAZOS	BRAZOS RUN-OF- RIVER	530	530	530	530	530	530
G	KEMPNER WSC	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	428	429	438	440	445	451
G	LIVESTOCK, CORYELL	BRAZOS	BRAZOS LIVESTOCK LOCAL SUPPLY	1,471	1,471	1,471	1,471	1,471	1,471

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## Projected Surface Water Supplies TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
G	MANUFACTURING, CORYELL	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	10	11	12	13	14	15
G	MULTI-COUNTY WSC	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	198	202	206	209	212	214
<b>Sum of Projected Surface Water Supplies (acre-feet)</b>				<b>23,118</b>	<b>22,840</b>	<b>22,486</b>	<b>21,505</b>	<b>21,364</b>	<b>20,857</b>

### ERATH COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
G	COUNTY-OTHER, ERATH	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	72	72	72	72	72	72
G	COUNTY-OTHER, ERATH	BRAZOS	PALO PINTO LAKE/RESERVOIR	75	75	75	75	75	75
G	DUBLIN	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	521	519	518	517	516	514
G	IRRIGATION, ERATH	BRAZOS	BRAZOS RUN-OF- RIVER	101	100	100	99	99	98
G	LIVESTOCK, ERATH	BRAZOS	BRAZOS LIVESTOCK LOCAL SUPPLY	6,702	6,702	6,702	6,702	6,702	6,702
G	MANUFACTURING, ERATH	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	5	7	8	9	10	12
G	STEPHENVILLE	BRAZOS	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM	1,862	1,847	1,826	1,717	1,690	1,646
<b>Sum of Projected Surface Water Supplies (acre-feet)</b>				<b>9,338</b>	<b>9,322</b>	<b>9,301</b>	<b>9,191</b>	<b>9,164</b>	<b>9,119</b>

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**APPENDIX E**

**Projected Water Demand within the District**

# Projected Water Demands

## TWDB 2017 State Water Plan Data

Please note that the demand numbers presented here include the plumbing code savings found in the Regional and State Water Plans.

### BOSQUE COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
G	CHILDRESS CREEK WSC	BRAZOS	410	436	446	453	459	464
G	CLIFTON	BRAZOS	700	745	763	775	786	793
G	COUNTY-OTHER, BOSQUE	BRAZOS	1,271	1,357	1,395	1,420	1,440	1,453
G	CROSS COUNTRY WSC	BRAZOS	124	132	135	138	139	141
G	IRRIGATION, BOSQUE	BRAZOS	2,128	2,094	2,060	2,029	1,998	1,968
G	LIVESTOCK, BOSQUE	BRAZOS	989	989	989	989	989	989
G	MANUFACTURING, BOSQUE	BRAZOS	2,739	3,058	3,372	3,643	3,959	4,302
G	MERIDIAN	BRAZOS	222	234	238	241	244	246
G	MINING, BOSQUE	BRAZOS	1,972	2,071	1,892	1,872	1,833	1,821
G	STEAM ELECTRIC POWER, BOSQUE	BRAZOS	6,188	7,235	8,510	10,065	11,961	14,214
G	VALLEY MILLS	BRAZOS	259	276	284	288	293	295
G	WALNUT SPRINGS	BRAZOS	97	101	102	103	105	106
<b>Sum of Projected Water Demands (acre-feet)</b>			<b>17,099</b>	<b>18,728</b>	<b>20,186</b>	<b>22,016</b>	<b>24,206</b>	<b>26,792</b>

### COMANCHE COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
G	COMANCHE	BRAZOS	521	519	515	522	535	548
G	COUNTY-OTHER, COMANCHE	BRAZOS	795	790	781	790	808	828
G	COUNTY-OTHER, COMANCHE	COLORADO	10	10	10	10	11	11
G	DE LEON	BRAZOS	223	220	216	219	224	230
G	IRRIGATION, COMANCHE	BRAZOS	27,458	27,175	26,894	26,617	26,342	26,076
G	LIVESTOCK, COMANCHE	BRAZOS	3,774	3,774	3,774	3,774	3,774	3,774
G	LIVESTOCK, COMANCHE	COLORADO	121	121	121	121	121	121
G	MANUFACTURING, COMANCHE	BRAZOS	36	39	41	43	46	49
G	MINING, COMANCHE	BRAZOS	444	525	363	276	188	128
<b>Sum of Projected Water Demands (acre-feet)</b>			<b>33,382</b>	<b>33,173</b>	<b>32,715</b>	<b>32,372</b>	<b>32,049</b>	<b>31,765</b>

# Projected Water Demands

## TWDB 2017 State Water Plan Data

Please note that the demand numbers presented here include the plumbing code savings found in the Regional and State Water Plans.

### CORYELL COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
G	COPPERAS COVE	BRAZOS	4,266	4,655	5,133	5,586	6,122	6,666
G	CORYELL CITY WATER SUPPLY DISTRICT	BRAZOS	809	899	1,006	1,101	1,208	1,316
G	COUNTY-OTHER, CORYELL	BRAZOS	564	838	1,195	1,507	1,840	2,172
G	ELM CREEK WSC	BRAZOS	44	48	54	58	64	70
G	FORT HOOD	BRAZOS	3,672	3,679	3,627	3,622	3,617	3,616
G	GATESVILLE	BRAZOS	4,424	4,939	5,532	6,066	6,658	7,253
G	IRRIGATION, CORYELL	BRAZOS	214	214	214	214	214	214
G	KEMPNER WSC	BRAZOS	541	602	674	738	810	882
G	LIVESTOCK, CORYELL	BRAZOS	1,471	1,471	1,471	1,471	1,471	1,471
G	MANUFACTURING, CORYELL	BRAZOS	10	11	12	13	14	15
G	MINING, CORYELL	BRAZOS	1,510	1,072	491	363	398	437
G	MULTI-COUNTY WSC	BRAZOS	278	302	333	362	396	431
<b>Sum of Projected Water Demands (acre-feet)</b>			<b>17,803</b>	<b>18,730</b>	<b>19,742</b>	<b>21,101</b>	<b>22,812</b>	<b>24,543</b>

### ERATH COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
G	COUNTY-OTHER, ERATH	BRAZOS	2,665	2,880	3,066	3,264	3,472	3,671
G	DUBLIN	BRAZOS	382	403	421	444	472	499
G	IRRIGATION, ERATH	BRAZOS	6,383	6,290	6,198	6,107	6,018	5,933
G	LIVESTOCK, ERATH	BRAZOS	6,702	6,702	6,702	6,702	6,702	6,702
G	MANUFACTURING, ERATH	BRAZOS	80	88	96	103	112	122
G	MINING, ERATH	BRAZOS	505	536	376	304	232	177
G	STEPHENVILLE	BRAZOS	2,659	2,867	3,047	3,241	3,448	3,645
<b>Sum of Projected Water Demands (acre-feet)</b>			<b>19,376</b>	<b>19,766</b>	<b>19,906</b>	<b>20,165</b>	<b>20,456</b>	<b>20,749</b>

**APPENDIX F**

**Projected Water Management Strategies**

# Projected Water Management Strategies

## TWDB 2017 State Water Plan Data

### BOSQUE COUNTY

WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
<b>CHILDRESS CREEK WSC, BRAZOS (G )</b>							
BOSQUE COUNTY REGIONAL PROJECT	CLIFTON LAKE/RESERVOIR [RESERVOIR]	203	203	203	203	203	203
TRINITY AQUIFER DEVELOPMENT	TRINITY AQUIFER [BOSQUE]	0	0	0	161	161	161
		<b>203</b>	<b>203</b>	<b>203</b>	<b>364</b>	<b>364</b>	<b>364</b>
<b>CLIFTON, BRAZOS (G )</b>							
BOSQUE COUNTY REGIONAL PROJECT	CLIFTON LAKE/RESERVOIR [RESERVOIR]	397	397	397	397	397	397
MUNICIPAL WATER CONSERVATION (URBAN) - CLIFTON	DEMAND REDUCTION [BOSQUE]	21	74	77	71	71	71
		<b>418</b>	<b>471</b>	<b>474</b>	<b>468</b>	<b>468</b>	<b>468</b>
<b>CROSS COUNTRY WSC, BRAZOS (G )</b>							
MUNICIPAL WATER CONSERVATION (SUBURBAN) - CROSS COUNTRY WSC	DEMAND REDUCTION [BOSQUE]	5	6	4	3	2	2
TRINITY - MCLENNAN COUNTY ASR	TRINITY AQUIFER ASR [MCLENNAN]	0	0	0	124	130	136
		<b>5</b>	<b>6</b>	<b>4</b>	<b>127</b>	<b>132</b>	<b>138</b>
<b>IRRIGATION, BOSQUE, BRAZOS (G )</b>							
IRRIGATION WATER CONSERVATION	DEMAND REDUCTION [BOSQUE]	64	105	144	142	140	138
TRINITY AQUIFER DEVELOPMENT	TRINITY AQUIFER [BOSQUE]	475	475	475	475	475	475
		<b>539</b>	<b>580</b>	<b>619</b>	<b>617</b>	<b>615</b>	<b>613</b>
<b>MANUFACTURING, BOSQUE, BRAZOS (G )</b>							
BRA SYSTEM OPERATION MAIN STEM	BRAZOS RIVER AUTHORITY MAIN STEM LAKE/RESERVOIR SYSTEM [RESERVOIR]	1,035	1,280	1,510	1,765	2,060	2,375
CLIFTON REDUCTION TO BOSQUE MANUFACTURING	TRINITY AQUIFER [BOSQUE]	426	426	426	426	426	426
INDUSTRIAL WATER CONSERVATION	DEMAND REDUCTION [BOSQUE]	82	153	236	255	277	301
MERIDIAN REDUCTION TO BOSQUE MANUFACTURING	TRINITY AQUIFER [BOSQUE]	330	330	330	330	330	330
		<b>1,873</b>	<b>2,189</b>	<b>2,502</b>	<b>2,776</b>	<b>3,093</b>	<b>3,432</b>

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# Projected Water Management Strategies

## TWDB 2017 State Water Plan Data

WUG, Basin (RWPG)		All values are in acre-feet					
Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
<b>MERIDIAN, BRAZOS (G)</b>							
BOSQUE COUNTY REGIONAL PROJECT	CLIFTON LAKE/RESERVOIR [RESERVOIR]	224	224	224	224	224	224
		<b>224</b>	<b>224</b>	<b>224</b>	<b>224</b>	<b>224</b>	<b>224</b>
<b>MINING, BOSQUE, BRAZOS (G)</b>							
INDUSTRIAL WATER CONSERVATION	DEMAND REDUCTION [BOSQUE]	59	104	132	131	128	127
		<b>59</b>	<b>104</b>	<b>132</b>	<b>131</b>	<b>128</b>	<b>127</b>
<b>STEAM ELECTRIC POWER, BOSQUE, BRAZOS (G)</b>							
BRA SYSTEM OPERATION MAIN STEM	BRAZOS RIVER AUTHORITY MAIN STEM LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	500	1,670	3,240	5,130	7,350
INDUSTRIAL WATER CONSERVATION	DEMAND REDUCTION [BOSQUE]	0	362	596	705	837	995
		<b>0</b>	<b>862</b>	<b>2,266</b>	<b>3,945</b>	<b>5,967</b>	<b>8,345</b>
<b>VALLEY MILLS, BRAZOS (G)</b>							
BOSQUE COUNTY REGIONAL PROJECT	CLIFTON LAKE/RESERVOIR [RESERVOIR]	179	177	177	176	175	174
MUNICIPAL WATER CONSERVATION (URBAN) - VALLEY MILLS	DEMAND REDUCTION [BOSQUE]	10	30	47	45	46	46
		<b>189</b>	<b>207</b>	<b>224</b>	<b>221</b>	<b>221</b>	<b>220</b>
<b>WALNUT SPRINGS, BRAZOS (G)</b>							
BOSQUE COUNTY REGIONAL PROJECT	CLIFTON LAKE/RESERVOIR [RESERVOIR]	64	64	64	64	64	64
		<b>64</b>	<b>64</b>	<b>64</b>	<b>64</b>	<b>64</b>	<b>64</b>
<b>Sum of Projected Water Management Strategies (acre-feet)</b>		<b>3,574</b>	<b>4,910</b>	<b>6,712</b>	<b>8,937</b>	<b>11,276</b>	<b>13,995</b>

### COMANCHE COUNTY

WUG, Basin (RWPG)		All values are in acre-feet					
Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
<b>COUNTY-OTHER, COMANCHE, BRAZOS (G)</b>							
TRINITY AQUIFER DEVELOPMENT	TRINITY AQUIFER [COMANCHE]	159	159	159	159	239	239
		<b>159</b>	<b>159</b>	<b>159</b>	<b>159</b>	<b>239</b>	<b>239</b>

# Projected Water Management Strategies

## TWDB 2017 State Water Plan Data

WUG, Basin (RWPG)		All values are in acre-feet					
Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
<b>COUNTY-OTHER, COMANCHE, COLORADO (G )</b>							
TRINITY AQUIFER DEVELOPMENT	TRINITY AQUIFER [COMANCHE]	2	2	2	2	3	3
		<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>
<b>IRRIGATION, COMANCHE, BRAZOS (G )</b>							
IRRIGATION WATER CONSERVATION	DEMAND REDUCTION [COMANCHE]	824	1,359	1,883	1,863	1,844	1,825
TRINITY AQUIFER DEVELOPMENT	TRINITY AQUIFER [COMANCHE]	69	603	0	0	0	0
		<b>893</b>	<b>1,962</b>	<b>1,883</b>	<b>1,863</b>	<b>1,844</b>	<b>1,825</b>
<b>MINING, COMANCHE, BRAZOS (G )</b>							
INDUSTRIAL WATER CONSERVATION	DEMAND REDUCTION [COMANCHE]	14	26	26	19	13	9
TRINITY AQUIFER DEVELOPMENT	TRINITY AQUIFER [COMANCHE]	404	473	311	320	149	93
		<b>418</b>	<b>499</b>	<b>337</b>	<b>339</b>	<b>162</b>	<b>102</b>
<b>Sum of Projected Water Management Strategies (acre-feet)</b>		<b>1,472</b>	<b>2,622</b>	<b>2,381</b>	<b>2,363</b>	<b>2,248</b>	<b>2,169</b>

### CORYELL COUNTY

WUG, Basin (RWPG)		All values are in acre-feet					
Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
<b>CORYELL CITY WATER SUPPLY DISTRICT, BRAZOS (G )</b>							
MUNICIPAL WATER CONSERVATION (SUBURBAN) - CORYELL CITY WATER SUPPLY DISTRICT	DEMAND REDUCTION [CORYELL]	29	18	8	1	0	0
		<b>29</b>	<b>18</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>0</b>
<b>COUNTY-OTHER, CORYELL, BRAZOS (G )</b>							
TRINITY AQUIFER DEVELOPMENT	TRINITY AQUIFER [CORYELL]	0	0	0	100	200	525
		<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>200</b>	<b>525</b>
<b>ELM CREEK WSC, BRAZOS (G )</b>							
BRA SYSTEM OPERATIONS-LITTLE RIVER	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	5	12	19
		<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>12</b>	<b>19</b>

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# Projected Water Management Strategies

## TWDB 2017 State Water Plan Data

WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
<b>FORT HOOD, BRAZOS (G )</b>							
MUNICIPAL WATER CONSERVATION (SUBURBAN) - FORT HOOD	DEMAND REDUCTION [CORYELL]	141	410	671	948	1,040	1,039
		<b>141</b>	<b>410</b>	<b>671</b>	<b>948</b>	<b>1,040</b>	<b>1,039</b>
<b>GATESVILLE, BRAZOS (G )</b>							
BRA SYSTEM OPERATIONS-LITTLE RIVER	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	29	86	386	461	580
CORYELL COUNTY OCR	CORYELL COUNTY OFF-CHANNEL LAKE/RESERVOIR [RESERVOIR]	0	2,835	2,835	2,835	2,835	2,835
MUNICIPAL WATER CONSERVATION (SUBURBAN) - GATESVILLE	DEMAND REDUCTION [CORYELL]	208	610	1,097	1,644	2,261	2,462
		<b>208</b>	<b>3,474</b>	<b>4,018</b>	<b>4,865</b>	<b>5,557</b>	<b>5,877</b>
<b>KEMPNER WSC, BRAZOS (G )</b>							
BRA SYSTEM OPERATIONS-LITTLE RIVER	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM [RESERVOIR]	855	864	882	926	936	955
MUNICIPAL WATER CONSERVATION (SUBURBAN) - KEMPNER WSC	DEMAND REDUCTION [CORYELL]	21	51	49	49	53	57
		<b>876</b>	<b>915</b>	<b>931</b>	<b>975</b>	<b>989</b>	<b>1,012</b>
<b>MINING, CORYELL, BRAZOS (G )</b>							
INDUSTRIAL WATER CONSERVATION	DEMAND REDUCTION [CORYELL]	45	54	34	25	28	31
TRINITY AQUIFER DEVELOPMENT	TRINITY AQUIFER [CORYELL]	1,500	1,500	500	500	500	500
		<b>1,545</b>	<b>1,554</b>	<b>534</b>	<b>525</b>	<b>528</b>	<b>531</b>
<b>MULTI-COUNTY WSC, BRAZOS (G )</b>							
CORYELL COUNTY OCR	CORYELL COUNTY OFF-CHANNEL LAKE/RESERVOIR [RESERVOIR]	0	247	252	256	259	262
HAMILTON REDUCTION TO MULTI WSC	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE/RESERVOIR SYSTEM [RESERVOIR]	81	82	0	0	0	0
		<b>81</b>	<b>329</b>	<b>252</b>	<b>256</b>	<b>259</b>	<b>262</b>
<b>Sum of Projected Water Management Strategies (acre-feet)</b>		<b>2,880</b>	<b>6,700</b>	<b>6,414</b>	<b>7,675</b>	<b>8,585</b>	<b>9,265</b>

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# Projected Water Management Strategies

## TWDB 2017 State Water Plan Data

### ERATH COUNTY

WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
<b>COUNTY-OTHER, ERATH, BRAZOS (G )</b>							
TRINITY AQUIFER DEVELOPMENT	TRINITY AQUIFER [ERATH]	0	0	0	0	121	363
		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>121</b>	<b>363</b>
<b>MINING, ERATH, BRAZOS (G )</b>							
INDUSTRIAL WATER CONSERVATION	DEMAND REDUCTION [ERATH]	0	27	0	0	0	0
		<b>0</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Sum of Projected Water Management Strategies (acre-feet)</b>		<b>0</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>121</b>	<b>363</b>

**APPENDIX G**

**District Resolution of Adoption of Management Plan**

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE MIDDLE TRINITY  
GROUNDWATER CONSERVATION DISTRICT READOPTING  
DISTRICT GROUNDWATER MANAGEMENT PLAN**

THE STATE OF TEXAS

MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT

§  
§  
§

**WHEREAS**, the Middle Trinity Groundwater Conservation District ("District") was created by the Texas Legislature, pursuant to the authority of Article XVI, § 59 of the Texas Constitution, through Act of May 25, 2001, 77<sup>th</sup> Leg., R.S., ch. 1362, 2001 Tex. Gen. Laws 3371, as amended ("the Act"), as a groundwater conservation district operating under Chapter 36, Texas Water Code, Section 59, Article XVI of the Texas Constitution, and the Act;

**WHEREAS**, the Board of Directors of the District ("Board") originally adopted its Management Plan in accordance with Sections 36.1071 and 36.1072 of the Texas Water Code and 31 Texas Administrative Code Chapter 356, on April 29, 2004, which was approved by the Texas Water Development Board ("TWDB") on July 1, 2004, and thereafter revised and readopted its Management Plan within five years as required by Section 36.1072(c) of the Texas Water Code on April 2, 2009, which was then approved by TWDB on June 5, 2009;

**WHEREAS**, as Bosque and Coryell counties were added to the District's territory in May and November of 2009 through the annexation process provided under Subchapter J, Chapter 36 of the Texas Water Code, the District found it necessary to add technical information for Bosque and Coryell Counties into the District's Management Plan, and thus the District added this technical information and other certain updates to the District's Management Plan by resolution on March 5, 2012, which was then approved by TWDB on May 14, 2012.

**WHEREAS**, pursuant to Section 36.1072 of the Texas Water Code and 31 Texas Administrative Code Section 356.51, the District is required to re-adopt its Management Plan, with or without revisions, at least once every five years and must thereafter re-submit the revised plan for TWDB approval pursuant to 31 Texas Administrative Code Sections 356.52 and 356.53;

**WHEREAS**, the District has made timely revisions to its Management Plan for re-adoption by the Board prior to the expiration of the five-year period;

**WHEREAS**, as part of the process of re-adopting its Management Plan, the District requested and received the assistance of the TWDB and worked with the TWDB staff to obtain the staff's recommendations and comments on the revisions to its Management Plan;

**WHEREAS**, the Board and the staff of the District, as well as the District's legal counsel and geoscientist, reviewed and analyzed the District's revised Management Plan and the technical information received from TWDB related to the Management Plan;

**WHEREAS**, the District issued notice in the manner required by state law and held a public hearing on October 6, 2016, to receive public and written comments on the Management Plan at the District's office located at 930 N Wolfe Nursery Rd, Stephenville, Texas;

**WHEREAS**, the District will coordinate with the appropriate surface water management entities after the public hearing and re-adoption of its Management Plan to afford surface water management entities within the boundaries of the District the opportunity to review and provide comments to the District on its Management Plan;

**WHEREAS**, the Board finds that the revised Management Plan meets all of the requirements of Chapter 36, Texas Water Code, and 31 Texas Administrative Code Chapter 356;

**WHEREAS**, while the Board finds that the re-adoption of the District's Management Plan at its October 6, 2016 meeting will restart the five-year statutory time period by which the District must readopt its Management Plan, the District intends to revise its Management Plan in 2017 when TWDB releases the latest technical data and modeled available groundwater upon the adoption of the Desired Future Conditions by Groundwater Management Area 8; and

**WHEREAS**, the Board of Directors met in a public meeting on October 6, 2016, properly noticed in accordance with appropriate law, after holding a public hearing on the attached revised Management Plan, considered the re-adoption of the Management Plan, and considered approval of this resolution.

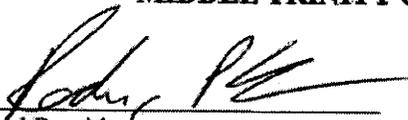
**NOW, THEREFORE, BE IT ORDERED BY THE BOARD OF DIRECTORS OF MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT THAT:**

1. The above recitals are true and correct.
2. The Board of Directors hereby re-adopts the attached Management Plan as the Management Plan of the District, including any revisions made based on comments received from the public at the public hearing or Board meeting, or based on recommendations from the District Board, staff, legal counsel, geoscientist, or TWDB;
3. The Board of Directors, the District staff, and the District's legal counsel are further authorized to take all steps necessary to implement this resolution and submit the revised Management Plan to the TWDB for its approval; and
4. The Board of Directors, the District staff, and the District's legal counsel and geoscientist are further authorized to take any and all action necessary to coordinate with the TWDB as may be required in furtherance of TWDB's approval pursuant to the provisions of Section 36.1072 of the Texas Water Code.

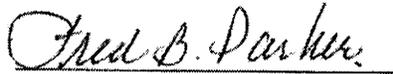
**AND IT IS SO ORDERED.**

**PASSED AND ADOPTED** on this 6 day of October, 2016.

**MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT**

By:   
Board President

ATTEST:

  
Board Secretary

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE MIDDLE TRINITY  
GROUNDWATER CONSERVATION DISTRICT READOPTING  
DISTRICT GROUNDWATER MANAGEMENT PLAN**

THE STATE OF TEXAS

§  
§  
§

MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT

**WHEREAS**, the Middle Trinity Groundwater Conservation District ("District") was created by the Texas Legislature, pursuant to the authority of Article XVI, § 59 of the Texas Constitution, through Act of May 25, 2001, 77<sup>th</sup> Leg., R.S., ch. 1362, 2001 Tex. Gen. Laws 3371, as amended ("the Act"), as a groundwater conservation district operating under Chapter 36, Texas Water Code, Section 59, Article XVI of the Texas Constitution, and the Act;

**WHEREAS**, the Board of Directors of the District ("Board") originally adopted its Management Plan in accordance with Sections 36.1071 and 36.1072 of the Texas Water Code and 31 Texas Administrative Code Chapter 356, on April 29, 2004, which was approved by the Texas Water Development Board ("TWDB") on July 1, 2004, and thereafter revised and readopted its Management Plan within five years as required by Section 36.1072(c) of the Texas Water Code on April 2, 2009, which was then approved by TWDB on June 5, 2009;

**WHEREAS**, as Bosque and Coryell counties were added to the District's territory in May and November of 2009 through the annexation process provided under Subchapter J, Chapter 36 of the Texas Water Code, the District found it necessary to add technical information for Bosque and Coryell Counties into the District's Management Plan, and thus the District added this technical information and other certain updates to the District's Management Plan by resolution on March 5, 2012, which was then approved by TWDB on May 14, 2012.

**WHEREAS**, pursuant to Section 36.1072 of the Texas Water Code and 31 Texas Administrative Code Section 356.51, the District is required to re-adopt its Management Plan, with or without revisions, at least once every five years and must thereafter re-submit the revised plan for TWDB approval pursuant to 31 Texas Administrative Code Sections 356.52 and 356.53;

**WHEREAS**, the District has made timely revisions to its Management Plan for re-adoption by the Board prior to the expiration of the five-year period;

**WHEREAS**, as part of the process of re-adopting its Management Plan, the District requested and received the assistance of the TWDB and worked with the TWDB staff to obtain the staff's recommendations and comments on the revisions to its Management Plan;

**WHEREAS**, the Board and the staff of the District, as well as the District's legal counsel and geoscientist, reviewed and analyzed the District's revised Management Plan and the technical information received from TWDB related to the Management Plan;

**WHEREAS**, the District issued notice in the manner required by state law and held a public hearing on October 6, 2016, to receive public and written comments on the Management Plan at the District's office located at 930 N Wolfe Nursery Rd, Stephenville, Texas;

**WHEREAS**, the Board of Directors met in a public meeting on October 6, 2016, properly noticed in accordance with appropriate law, after holding a public hearing on the attached revised Management Plan, considered the re-adoption of the Management Plan, and approved a resolution to re-adopt the Management Plan;

**WHEREAS**, since the date of the October hearing, the District's General Manager and legal counsel submitted the re-approved plan to the TWDB and have had continued correspondence with TWDB staff;

**WHEREAS**, upon final review of the District's Management Plan, TWDB staff realized that one of the aquifer models used to provide technical data in support of the Manager Plan had a minor, but important, omission;

**WHEREAS**, TWDB staff were immediately directed to provide an updated and corrected model, and have submitted that new model to the District so as to allow the Board of Directors to approve the insertion of the new model into the Management Plan and take action to signify their final approval of the Management Plan;

**WHEREAS**, the District will coordinate with the appropriate surface water management entities after the public hearing and re-adoption of its Management Plan to afford surface water management entities within the boundaries of the District the opportunity to review and provide comments to the District on its Management Plan;

**WHEREAS**, the Board finds that the revised Management Plan meets all of the requirements of Chapter 36, Texas Water Code, and 31 Texas Administrative Code Chapter 356;

**WHEREAS**, while the Board finds that the readoption of the District's Management Plan at its March 9, 2017 meeting will restart the five-year statutory time period by which the District must readopt its Management Plan, the District intends to revise its Management Plan again at some point before that five-year timeline when TWDB releases the latest technical data and modeled available groundwater upon the adoption of the Desired Future Conditions by Groundwater Management Area 8; and

**WHEREAS**, the Board of Directors met in a public meeting on March 9, 2017, properly noticed in accordance with appropriate law, after holding a public hearing on the attached revised Management Plan, considered the re-adoption of the Management Plan including the most recent and correct TWDB aquifer model reflecting the inclusion of a part of the Brazos River aquifer, and approved a resolution to finally re-adopt the Management Plan;

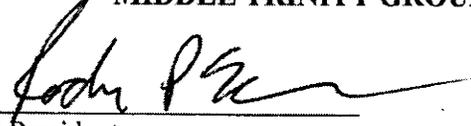
**NOW, THEREFORE, BE IT ORDERED BY THE BOARD OF DIRECTORS OF MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT THAT:**

1. The above recitals are true and correct.
2. The Board of Directors hereby re-adopts the attached Management Plan as the Management Plan of the District, including any revisions made based on comments received from the public at the public hearing or Board meeting, or based on recommendations from the District Board, staff, legal counsel, geoscientist, or TWDB;
3. The Board of Directors, the District staff, and the District's legal counsel are further authorized to take all steps necessary to implement this resolution and submit the revised Management Plan to the TWDB for its approval; and
4. The Board of Directors, the District staff, and the District's legal counsel and geoscientist are further authorized to take any and all action necessary to coordinate with the TWDB as may be required in furtherance of TWDB's approval pursuant to the provisions of Section 36.1072 of the Texas Water Code.

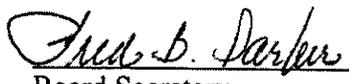
**AND IT IS SO ORDERED.**

**PASSED AND ADOPTED** on this 9<sup>th</sup> day of March, 2017.

**MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT**

By:   
Board President

ATTEST:

  
Board Secretary

**APPENDIX H**

**Notice of Meetings**

**MTGCD WEBSITE POSTING OF MEETING AGENDA**

**(see agenda item # 16)**

The MTGCD is committed to compliance with the Americans with Disabilities Act (ADA). Reasonable accommodations and equal opportunity for effective communications will be provided upon request. Please call 254-965-6705 at least 24 hours in advance if accommodation is needed.

For more information about the public hearing or the  
MTGCD Contact: Joe Cooper, General Manager at 254-965-6705

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## NOTICE OF PUBLIC HEARING and DISTRICT BOARD MEETING

The Middle Trinity Groundwater Conservation District, Board of Directors will hold a PERMIT HEARING and Board Meeting on Thursday October 6, 2016 at 930 N. Wolfe Nursery Rd, Stephenville, Texas. Permit Hearing begins after the Hearing on Proposed re-adoption of the Management plan which starts at 1:00 p.m. The Board Meeting will begin immediately upon adjournment of the Permit Hearing. All interested parties are invited to attend.

### PERMIT HEARING AGENDA:

Adam Hampton (2 wells)      GPM 50 ea.      Acres 200      Use: Irrigation  
1121 CR 486  
DeLeon, TX 76444  
**Well Site**  
1121 CR 486  
DeLeon, TX 76444

David Spatieier      GPM 20-24      Acres 150      Use: Irrigation  
5140 CR 127  
Gatesville, TX 76528  
**Well Site**  
5140 CR 127  
Gatesville, TX 76528

Adjourn permit hearing.

The following agenda items will be discussed.

1. Call to order
2. Invocation

3. Roll Call of Members
4. Pledge of Allegiance
5. Recognize Guests
6. Public Comments
7. Approve/Ratify Minutes
8. Approve/Ratify Payment of Bills
9. Income/Expense Comparison
10. Office Manager Report- Sharon West. Office updates.
11. Field Tech Report- Johnny Wells - water levels, reports on wells plugged, water tests and water meter reading
12. Managerys Report- Joe Cooper
13. Quarterly Drought Report
14. Quarterly Investment Report
15. GMA 8 Update
16. Discussion / possible approval of re- adoption of District Management Plan
17. Discusaion/possible action on hiring of new office employee
18. Agenda items for November Board meeting
19. Adjourn

**CERTIFICATION**

I, the undersigned authority, do hereby certify that on September 26, 2016 before 5:00PM, I posted and filed the above notice of meeting on the MITGCD website and on the doors of the MITGCD office in Erath Counties in a place convenient and readily accessible to the general public at all times and that it will remain so posted continuously for at least 72 hours preceding the scheduled time of said meeting in accordance with the Texas Government Code, Chapter 551.

By: \_\_\_\_\_

Joe Cooper, MTGCD General Manager

The Middle Trinity Groundwater Conservation District is committed to compliance with the Americans with Disabilities Act (ADA). Reasonable accommodations and equal opportunity for effective communications will be provided upon request. Please contact the President of the District at 254-965-6705 at least 24 hours in advance if accommodation is needed.

At any time during the meeting and in compliance with the Texas Open Meetings Act, Chapter 551, Government Code, Vernon's Texas Codes, Annotated, the Middle Trinity Groundwater Conservation District Board may meet in executive session on any of the above agenda items for consultation concerning attorney-client matters (551.071); deliberation regarding real property (551.072); deliberation regarding prospective gift (551.073); personnel matters (551.074); and deliberation regarding security devices (551.076). Any subject discussed in executive session may be subject to action during an open meeting.

**For more information about the public hearing on the Management Plan, permit hearing, Board meeting or the Middle Trinity Groundwater**

**Conservation District contact:**

**JOE B. COOPER, GENERAL MANAGER**

**254-965-6705**

[Board of Directors/Staff](#) | [Kids Page](#) | [MTGCD Rules \(Updated 8-6-2015\)](#) | [Management Plan \(2012 update\)](#) | [Forms](#) | [Public Notices](#) | [Newsletter](#) | [Maps](#) | [Compliance Policy](#) | [Search for Protocols](#) | [Links](#) | [Shopping Card](#) | [Questions?](#) | [Home](#)

©2016 All Rights Reserved Middle Trinity Groundwater Conservation District e-mail: [info@middletrinitygcd.org](mailto:info@middletrinitygcd.org)  
[Privacy Policy](#) | [Terms of Use](#) | [Contact Us](#)

Proud Member of the [WE LOVE TEXAS](#) Network. Supporting Texas-based Small businesses!

**MTGCD WEBSITE POSTING OF HEARING NOTICE**



- Home
- About Us
- Board of Directors
- Board Meetings
- Public Notices
- Financials
- Conservation Programs
- Water Quality
- Water Conservation
- Water Rights
- Water Use
- Water Quality
- Water Conservation
- Water Rights
- Water Use
- Water Quality
- Water Conservation
- Water Rights
- Water Use

**Public Notices**

**POSTING DEADLINES FOR 2016**

MEETING DATE	AGENDA ITEMS DUE	POSTING DEADLINE
October 6, 2016	September 23, 2016	September 26, 2016
November 3, 2016	October 21, 2016	October 23, 2016
December 8, 2016	November 23, 2016	November 28, 2016
January 5, 2017	December 22, 2016	December 23, 2016

\*\*\*ALL POSTING DEADLINES AND MEETING DATES ARE SUBJECT TO CHANGE DUE TO THE AVAILABILITY OF THE BOARD. PLEASE CHECK BACK PERIODICALLY FOR ANY CHANGES. UPDATES WILL BE HIGHLIGHTED IN YELLOW

**Dates of District closings**

<b>Monday, January 1</b>	<b>New Year's Day</b>
<b>Monday, January 18</b>	<b>MLK Day</b>
<b>Monday, February 15</b>	<b>President's Day</b>
<b>Monday, March 25</b>	<b>Good Friday</b>
<b>Monday, May 30</b>	<b>Memorial Day</b>
<b>Monday, July 4</b>	<b>Independence Day</b>
<b>Monday, September 5</b>	<b>Labor Day</b>
<b>Friday, November 11</b>	<b>Veterans Day</b>
<b>Thursday, November 24</b>	<b>Thanksgiving Holiday</b>
<b>Friday, November 25</b>	<b>Thanksgiving Holiday</b>
<b>Friday, December 23</b>	<b>Christmas Holiday</b>
<b>Monday, December 26</b>	<b>Christmas Holiday</b>

**NOTICE OF MEETING**

**GROUNDWATER MANAGEMENT AREA 8**

Notice is hereby given that the groundwater conservation districts located wholly or partially within Groundwater Management Area (GMA) 8, as designated by the Texas Water Development Board (TWDB), consisting of the Central Texas Groundwater Conservation District, Clearwater Underground Water Conservation District, Middle Trinity Groundwater Conservation District, North Texas Groundwater Conservation District, Northern Trinity Groundwater Conservation District, Post Oak Savannah Groundwater Conservation District, Prairielands Groundwater Conservation District, Red River Groundwater Conservation District, Saratoga Underground Water Conservation District, Southern Trinity Groundwater Conservation District, and Upper Trinity Groundwater Conservation District will hold a *Joint Planning meeting at 10:00 A.M. on Thursday, September 29, 2016*, at the *Liberty Event Center* located at 305 S. Anglin, Cleburne, TX 76033. The meeting will be open to the public. The following items of business will be discussed and potentially acted upon:

1. Invocation
2. Call meeting to order and establish quorum.
3. Welcome and introductions.
4. Public comment.
5. Approve minutes of April 1, 2016, GMA 8 meeting.
6. Presentation of DFC summary reports by each district representative.

7. Discussion and consideration of any changes requested to proposed DFC.
8. Consider and act upon authorizing LBG Guyton Associates to perform work associated with drafting memo for Model Run 10 for inclusion in explanatory report.
9. Discussion and consideration of authorizing GMA 8 consultant to continue drafting explanatory report.
10. Discussion of possible agenda items and dates for next GMA 8 meeting.
11. Closing comments.
12. Adjourn.

Dated this 1st day of September, 2016.

Eddy Daniel, Chair  
Groundwater Management Area 8

*The above agenda schedules represent an estimate of the order for the indicated items and is subject to change at any time. These public meetings are available to all persons regardless of disability. If you require special assistance to attend the meeting, please call (855) 426-4433 at least 24 hours in advance of the meeting to coordinate any special physical access arrangements.*

*For questions regarding this notice, please contact Velma Stravis at (855) 426-4433, at [elc@middletrinitygcd.org](mailto:elc@middletrinitygcd.org), or at 5109 Airport Drive, Denison, TX 75020.*

*At any time during the meeting or work session and in compliance with the Texas Open Meetings Act, Chapter 551, Government Code, Vernon's Texas Codes, Annotated, the Groundwater Management Area 8 may meet in executive session on any of the above agenda items or other lawful items for consultation concerning attorney-client matters (§551.071); deliberation regarding real property (§551.072); deliberation regarding prospective gifts (§551.073); personnel matters (§551.074); and deliberation regarding security devices (§551.076). Any subject discussed in executive session may be subject to action during an open meeting.*

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**MIDDLE TRINITY GROUNDWATER CONSERVATION  
DISTRICT**

**NOTICE OF PUBLIC HEARING ON  
PROPOSED RE-ADOPTION OF DISTRICT MANAGEMENT PLAN**

The Middle Trinity Groundwater Conservation District (MTGCD) will hold a public hearing on the proposed re-adoption of the MTGCD's Groundwater Management Plan on Thursday, October 6, 2016 at 1:00 p.m. at the District office located at 930 N. Wolfe Nursery Road, Stephenville, Texas 76401. All interested parties are invited to attend.

**PUBLIC HEARING AGENDA:**

1. Call to Order.
2. Summary presentation of the proposed revisions to the MTGCD Management Plan as required by Chapter 36 of the Texas Water Code and Chapter 336 of the Texas Water Development Board's (TWDB) rules contained in Title 30 of the Texas Administrative Code.
3. Public Comment on the Groundwater Management Plan proposed for re-adoption.
4. Adjourn

At the conclusion of the hearing or any time or date thereafter, the proposed management plan may be adopted in the form presented or as amended based upon comments received from the public, the Texas Water Development Board, District staff, attorneys, geoscientists, or members of the Board of Directors without any additional notice.

Copies of the proposed MTGCD Management Plan will be available as of September 12, 2016 at the MTGCD office located at 930 N. Wolfe Nursery Road, Stephenville, Texas or on the MTGCD's website at [www.middletrinitygcd.org](http://www.middletrinitygcd.org).

FILE MARKED POSTINGS

**MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT  
NOTICE OF PUBLIC HEARING ON  
PROPOSED RE-ADOPTION OF DISTRICT MANAGEMENT PLAN**

The Middle Trinity Groundwater Conservation District (MTGCD) will hold a public hearing on the proposed re-adoption of the MTGCD's Groundwater Management Plan on Thursday, October 6, 2016 at 1:00 p.m. at the District office located at 930 N. Wolfe Nursery Road, Stephenville, Texas 76401. All interested parties are invited to attend.

**PUBLIC HEARING AGENDA:**

1. Call to Order.
2. Summary presentation of the proposed revisions to the MTGCD Management Plan as required by Chapter 36 of the Texas Water Code and Chapter 356 of the Texas Water Development Board's (TWDB) rules contained in Title 30 of the Texas Administrative Code.
3. Public Comment on the Groundwater Management Plan proposed for re-adoption.
4. Adjourn

At the conclusion of the hearing or any time or date thereafter, the proposed management plan may be adopted in the form presented or as amended based upon comments received from the public, the Texas Water Development Board, District staff, attorneys, geoscientists, or members of the Board of Directors without any additional notice.

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**For more information about the public hearing or the  
MTGCD Contact: Joe Cooper, General Manager at 254-965-6705**

FILED  
AT 2:45 O'CLOCK P.M.

SEP 6 2016

*[Signature]*  
Clerk, County Court, Comanche Co. Texas

**MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT  
NOTICE OF PUBLIC HEARING ON  
PROPOSED RE-ADOPTION OF DISTRICT MANAGEMENT PLAN**

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1. Call to Order.
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3. Public Comment on the Groundwater Management Plan proposed for re-adoption.
4. Adjourn

At the conclusion of the hearing or any time or date thereafter, the proposed management plan may be adopted in the form presented or as amended based upon comments received from the public, the Texas Water Development Board, District staff, attorneys, geoscientists, or members of the Board of Directors without any additional notice.

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**For more information about the public hearing or the  
MTGCD Contact: Joe Cooper, General Manager at 254-965-6705**

POSTED

\_\_\_\_\_ A.M. 2:26 P.M.

SEP 06 2016

GWINDA JONES, COUNTY CLERK  
ERATH COUNTY, TEXAS  
By \_\_\_\_\_ AW Deputy

**MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT  
NOTICE OF PUBLIC HEARING ON  
PROPOSED RE-ADOPTION OF DISTRICT MANAGEMENT PLAN**

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1. Call to Order.
2. Summary presentation of the proposed revisions to the MTGCD Management Plan as required by Chapter 36 of the Texas Water Code and Chapter 356 of the Texas Water Development Board's (TWDB) rules contained in Title 30 of the Texas Administrative Code.
3. Public Comment on the Groundwater Management Plan proposed for re-adoption.
4. Adjourn

At the conclusion of the hearing or any time or date thereafter, the proposed management plan may be adopted in the form presented or as amended based upon comments received from the public, the Texas Water Development Board, District staff, attorneys, geoscientists, or members of the Board of Directors without any additional notice.

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**For more information about the public hearing or the  
MTGCD Contact: Joe Cooper, General Manager at 254-965-6705**

FILED  
AT 3:00 O'CLOCK PM

SEP 06 2016

*Shelley Simpson*  
COUNTY CLERK, CORYELL CO., TEXAS

**PROOF OF NEWSPAPER POSTINGS**

**(Comanche Chief, Gatesville Messenger, Dublin Citizen, Meridian Messenger & Clifton Record)**



Comanche Chief, Inc.  
 Comanche, TX 76442  
 P.O. Box 927  
 325-356-2636

# Statement

Date  
 9/30/2016

Middle Trinity Grnd Conservation Dist  
 930 N. Wolfe Nursery Rd  
 Stephenville, TX 76401

Amount Due  
 \$135.00

Date	Transaction	Amount	Balance
08/31/2016	Balance forward		390.00
09/08/2016	Display ad - 3x7.5 Hearing Readoption Management Plan	135.00	525.00
09/09/2016	PMT #8412.	-390.00	135.00

editor@thecomanchechief.com  
 www.thecomanchechief.com

*Thank you for your business*

Amount Due
\$135.00

# LAKE PROCTOR FISHING REPORT

TEXAS PARKS & WILDLIFE

• **Reported August 31, 2016** catfish are fair on shrimp and hitting some deeper primary and secondary points. Largemouth bass will be feeding at this water temperature but will be much harder to catch. On Sunny Proctor Lake at 48 degree water warm afternoons its a great time to throw a crank bait, jigs or minnows. Channel and blue slow roll a spinnerbait at 5-10

Water murky; 85-89 degrees; 0.68' low. Black bass are slow. Striped bass are fair on chartreuse striper jigs. White bass are good on slabs and pet spoons. Crappie are fair on minnows. Channel and blue

stinkbait. Yellow catfish are slow.

**Tips for Current Conditions**  
**Largemouth Bass:** With Proctor Lake at 48 degree water temperature this is a great time to get out on the water and try

## MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT NOTICE OF PUBLIC HEARING ON PROPOSED RE-ADOPTION OF DISTRICT MANAGEMENT PLAN

The Middle Trinity Groundwater Conservation District (MTGCD) will hold a public hearing on the proposed re-adoption of the MTGCD's Groundwater Management Plan on Thursday, October 6, 2016 at 1:00 p.m. at the District office located at 930 N. Wolfe Nursery Road, Stephenville, Texas 76401. All interested parties are invited to attend.

### PUBLIC HEARING AGENDA:

1. Call to Order.
2. Summary presentation of the proposed revisions to the MTGCD Management Plan as required by Chapter 36 of the Texas Water Code and Chapter 356 of the Texas Water Development Board's (TWDB) rules contained in Title 30 of the Texas Administrative Code.
3. Public Comment on the Groundwater Management Plan proposed for re-adoption.
4. Adjourn

At the conclusion of the hearing or any time or date thereafter, the proposed management plan may be adopted in the form presented or as amended based upon comments received from the public, the Texas Water Development Board, District staff, attorneys, geoscientists, or members of the Board of Directors without any additional notice.

Copies of the proposed MTGCD Management Plan will be available as of September 12, 2016 at the MTGCD office located at 930 N. Wolfe Nursery Road, Stephenville, Texas or on the MTGCD's website at [www.middletrinitygcd.org](http://www.middletrinitygcd.org).

The MTGCD is committed to compliance with the Americans with Disabilities Act and equal opportunity for effective

**THE STATE OF TEXAS**  
**COUNTY OF CORYELL**

Before me, the undersigned authority, on this date, personally appeared Marshall Day, known to me, being by me duly sworn, on his oath deposes and says that he is the assistant publisher of THE GATESVILLE MESSENGER & STAR FORUM, a newspaper in said county; and that a copy of the hereunto attached notice was printed in said newspaper on the following dates:

September 10, 2016

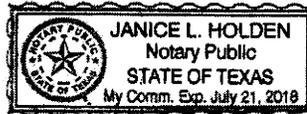
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Marshall Day  
Marshall Day

Sworn to and subscribed before me, this 30 day of Sept., A.D., 2016

Janice L. Holden

Janice LeeAnn Holden  
Gatesville, Coryell County, Texas



se past Jonesboro ISD. d Saturday.  
rand womens, mens girls clothing & shoes. > 3, 2 dining room ed.  
00024901

rw, Sat., Sept. 10, 8am- wborn baby clothes, 1 new, girls & boys to 8 years old, a little rthing. After 12, a lot /2 price.  
00024904

**LOTS**

**HER'S NOTICE:**  
al estate advertising ewspaper is subject Fair Housing Act akes it illegal to ad- "any preference, n or discrimination n race, color, reli- , handicap, familial national origin, or tion, to make any ference, limitation mination." Familial cludes children un- ge of 18 living with r legal custodians, women and people custody of children

ewspaper will not y accept any adver- real estate which tion of the law. Our re hereby informed wellings advertised wspaper are avail- equal opportunity

lain of discrimina- IUD toll-free at 1- 9777. The toll-free e number for the mpaired is 1-800-

Equal Housing Opportunity logo

**FOR SALE**

house, 3 bedroom, r home with 35x45 Levita, Texas.

**APARTMENTS**

2BR, 1BA, stove, refrigerator, CH/A, water paid. \$525/mo., \$425 deposit. 301 Regal #8. No pets. 254-865-8779.  
00024850

2 & 3 Bedroom town homes and houses for rent. Call RealSmart Inc. 254-865-4100.  
00024855

**COMMERCIAL FOR RENT**

Commercial building for rent, \$1,200 rent with \$1,000 deposit. Located at 105 Memorial Dr. 2,400 sq. ft. Call RealSmart, Inc. at 254-865-4100.  
00024854

**PUBLIC NOTICES**

Notice is hereby given by 116 Storage of the sale of contents, by public auction, of the follow- ing units, pursuant to the asser- tion of a manager's possessory lien against them in order to col- lect the amounts due on them:

Unit 30 Cory Currence  
Unit 32 Tiffany Boyd  
Unit 33 Janice Campbell  
Unit 76 All State Medical  
Unit 78 All State Medical  
Unit 88 All State Medical

The auction will be held at 10:00 a.m. Saturday, September 10, 2016 (weather permitting) at 116 Storage, 244 S. Hwy. 116, Gatesville, TX.

Terms: Cash  
00024814

**PUBLIC NOTICES**

**MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT NOTICE OF PUBLIC HEARING ON PROPOSED RE-ADOPTION OF DISTRICT MANAGEMENT PLAN**

The Middle Trinity Groundwater Conservation District (MTGCD) will hold a public hearing on the proposed re-adoption of the MTGCD's Groundwater Management Plan on Thursday, October 6, 2016 at 1:00 p.m. at the District office located at 930 N. Wolfe Nursery Road, Stephenville, Texas 76401. All interested parties are invited to attend.

- PUBLIC HEARING AGENDA:**
1. Call to Order.
  2. Summary presentation of the proposed revisions to the MTGCD Management Plan as required by Chapter 36 of the Texas Water Code and Chapter 356 of the Texas Water Development Board's (TWDB) rules contained in Title 30 of the Texas Administrative Code.
  3. Public Comment on the Groundwater Management Plan proposed for re-adoption.
  4. Adjourn

At the conclusion of the hearing or any time or date thereafter, the proposed management plan may be adopted in the form presented or as amended based upon comments received from the public, the Texas Water Development Board, District staff, attorneys, geoscientists, or members of the Board of Directors without any additional notice.

Copies of the proposed MTGCD Management Plan will be available as of September 12, 2016 at the MTGCD office located at 930 N. Wolfe Nursery Road, Stephenville, Texas or on the MTGCD's website at [www.middletrinitygcd.org](http://www.middletrinitygcd.org).

The MTGCD is committed to compliance with the Americans with Disabilities Act (ADA). Reasonable accommodations and equal opportunity for effective communications will be provided upon request. Please call 254-965-6705 at least 24 hours in advance if accommodation is needed.

For more information about the public hearing or the MTGCD Contact: Joe Cooper, General Manager at 254-965-6705

Commercial Bu 36,000 sq. ft. of sq #3/2 Brick House, #514 ac on Leon F get-away. Some o #1 +/- ac. in Pearl #1.21 ac. lot on W #1.306 ac. 3/2 Bric workshop/garage. #1.391 ac. 2/1 Ho barn, pole barn, ba #4.522 ac. 4/4 2-st 2 gas fireplaces, la #10 ac. 3/2 brick, large porch. Some #12 ac. Lampasas rolling terrain with through property. #145 ac. Gatesville, space, 45 ft. x 60' barn, 1 tank and 1 #48.144 ac. near P views, rolling terrai #48 ac. 3/1 home, south of event on C #58 ac. 3/2 brick h and storage buildi \$445,000. #59 ac. 4/4 2-story scattered tree cove #88 ac. Hamilton C \$2975/ac. #90 ac. Hamilton C \$2975/ac. #98 ac. with 3/2 roc 2 tanks, workshop lots of change in ell #102 ac. Coryell C cover, 1 stock tank. #104 ac. Coryell Co cover, 1 tank. \$309. #130 ac. Hamilton C good fences, Multi- #157 ac. Purnela, T cover. \$3275/ac. #184 +/- ac. Hamilt land, rolling terrain w #198 ac. Hamilton C coastal field, 48 acn #203.49 ac. 3/2 Roc sional creek, pipe ca with good tree cove #210.542 ac. Hamil river running throu concrete floor, 30' x good tree cover with #229 ac. Hamilton t with scattered tree #322 ac. east of the some remodeling ad 2 tanks, rolling terrai #511.446 ac. on Cov building, 20 ft x 30 House Creek and rot \$2,750,000. #614.82 ac. 2/1 barr and 1 well. Rolling b fences, 38 acres of l

**HOUSTON**  
ANTIQUES + ART + DESIGN SHOW  
Formerly NADA Antiques Show

SEPTEMBER 9-11, 2016  
PREVIEW PARTY BENEFITING

**LOOK IN THE CLASSIFIEDS**

You never know what you might

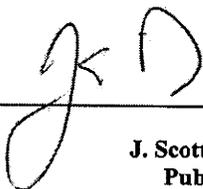
**MESO**

may occur 30 to 60 exposure to asbestos ers were exposed through the 1970s construction works their families (sex sure) are among th mesothelioma link

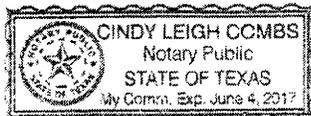
**AFFIDAVIT OF PUBLICATION**

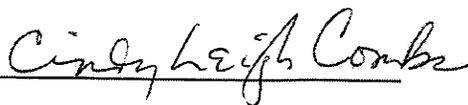
**THE STATE OF TEXAS:  
COUNTY OF ERATH:**

**BEFORE ME, a notary public in and for the above named County, on this day personally appeared the person whose name is subscribed below, who having been duly sworn, says upon oath that he or she is a duly authorized office or employee of *The Dublin Citizen*, which is a newspaper of general circulation in the above named County, devoting no less that 25% of its total column lineage to the carrying of items of general interest, published, and having been published regularly and continuously for not less than 12 months prior to the making of any publication; and that a true and correct copy of the NOTICE TO THE PUBLIC a clipping of which is attached to the affidavit, was published in said Newspaper on September 8, 2016.**

  
\_\_\_\_\_  
**J. Scott Dykowski  
Publisher**

**SUBSCRIBED AND SWORN TO BEFORE ME on the 8th  
day of SEPTEMBER, 2016.**



  
\_\_\_\_\_  
**Notary Public**

Advertise your Business or Event  
Statewide in OVER 240 Newspapers



ONE CALL,  
ONE LOW PRICE!

Contact this newspaper  
for more information  
254-445-2515

food and housing. Litt said  
the average annual income of  
a payday loan customer is  
about \$27,000.

"We're talking about people  
who are already working to  
make ends meet and then,  
they get stuck in a debt trap,"  
he added.

The public comment period  
on the new rule ends on  
October 7.

## Public Notice

### MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT NOTICE OF PUBLIC HEARING ON PROPOSED RE-ADOPTION OF DISTRICT MANAGEMENT PLAN

The Middle Trinity Groundwater Conservation District (MTGCD) will hold a public hearing on the proposed re-adoption of the MTGCD's Groundwater Management Plan on Thursday, October 6, 2016 at 1:00 p.m. at the District office located at 930 N. Wolfe Nursery Road, Stephenville, Texas 76401. All interested parties are invited to attend.

#### PUBLIC HEARING AGENDA:

1. Call to Order.
2. Summary presentation of the proposed revisions to the MTGCD Management Plan as required by Chapter 36 of the Texas Water Code and Chapter 336 of the Texas Water Development Board's (TWDB) rules contained in Title 30 of the Texas Administrative Code.
3. Public Comment on the Groundwater Management Plan proposed for re-adoption.
4. Adjourn

At the conclusion of the hearing or any time or date thereafter, the proposed management plan may be adopted in the form presented or as amended based upon comments received from the public, the Texas Water Development Board, District staff, attorneys, geoscientists, or members of the Board of Directors without any additional notice.

Copies of the proposed MTGCD Management Plan will be available as of

*DUBIN  
CITIZEN*



**PUBLISHER'S AFFIDAVIT**

**THE STATE OF TEXAS}**

**COUNTY OF BOSQUE}**

Before me, the undersigned authority, this day personally appeared Laura Yeakey after being by me duly sworn, says that she is office assistant in charge of tearsheets and affidavits of the Meridian Tribune and The Clifton Record, newspapers published in Bosque County, Texas and that the Hearing for Middle Trinity Ground Water Conservation District of which is hereto a Copy attach, was published in Said Newspapers on the following

Date(s):  
September 14<sup>th</sup>, 2016

*Laura Yeakey*  
Name

SUBSCRIBED AND SWORN before me, this 12 day of Jan, 2017.

*Marie Garland*  
Notary Public



**PUBLISHER'S AFFIDAVIT**

**THE STATE OF TEXAS}**

**COUNTY OF BOSQUE}**

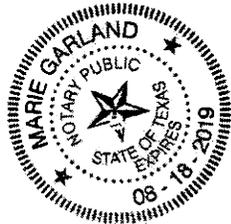
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Date(s):  
September 14<sup>th</sup>, 2016

Laura Yeakey  
Name

SUBSCRIBED AND SWORN before me, this 15 day of Sept, 2016.

Marie Garland  
Notary Public



ANS  
IANA  
EYED

3	5	7	9	8	1	2	4	6
4	6	1	2	7	5	8	3	9

## PUBLIC HEARING NOTICE AS COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM

City of Clifton will hold a public hearing at 5:05 p.m. on September 19, 2016 at Clifton City Hall, 403 W. Third, regarding the submission of an application to the Texas Department of Agriculture for a Texas Community Development Block Grant Program (TxCDBG) grant. The purpose of this meeting is to allow citizens an opportunity to discuss the citizen participation plan, the development of local housing and community development needs, the amount of TxCDBG funding available, all eligible TxCDBG activities, and the use of past TxCDBG funds. The County encourages citizens to participate in the development of this TxCDBG application and to make their views known at this public hearing. Citizens unable to attend this meeting may submit their views and proposals to the City Administrator at Clifton City Hall. Persons with disabilities that wish to attend this meeting should contact City Hall to arrange for assistance. Individuals who require auxiliary aids or services for this meeting should contact City Hall at least two days before the meeting so that appropriate arrangements can be made. Para más información en español, comuníquese con administrador de la ciudad al 254-675-3337.

## MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT NOTICE OF PUBLIC HEARING ON PROPOSED RE-ADOPTION OF DISTRICT MANAGEMENT PLAN

The Middle Trinity Groundwater Conservation District (MTGCD) will hold a public hearing on the proposed re-adoption of the MTGCD's Groundwater Management Plan on Thursday, October 6, 2016 at 1:00 p.m. at the District office located at 930 N. Wolfe Nursery Road, Stephenville, Texas 76401. All interested parties are invited to attend.

### PUBLIC HEARING AGENDA:

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3. Public Comment on the Groundwater Management Plan proposed for re-adoption.
4. Adjourn.

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The MTGCD is committed to compliance with the Americans with Disabilities Act (ADA). Reasonable accommodations and equal opportunity for effective communications will be provided upon request. Please call 254-965-6705 at least 24 hours in advance if accommodation is needed.

For more information about the public hearing or the  
MTGCD Contact: Joe Cooper, General Manager at 254-965-6705

**OFFICIAL MINUTES OF HEARING**

MINUTES OF THE MIDDLE TRINITY  
GROUNDWATER CONSERVATION DISTRICT  
PUBLIC HEARING ON PROPOSED RE-ADOPTION OF  
DISTRICT MANAGEMENT PLAN  
HELD: October 6, 2016

THE STATE OF TEXAS  
COUNTY OF ERATH

On this the 6th day of October 2016, the Board of Directors of the Middle Trinity Groundwater Conservation District convened in a PERMIT HEARING at 930 Wolfe Nursery Rd. Stephenville, Texas at 1:00 p.m. with the following members present:

Rodney Stephens- Chairman  
Fred Parker- Director/Secretary  
Barbara Domel- Vice Chairman  
W.B. Maples- Director

Kenneth Bullington- Director  
Jerry Hinshaw- Director  
Charles Ferguson- Director  
Shane Tucker- Director

Members absent – Four were absent Frank Volleman, Robert Payne, Gary Kafer and Joe Altebaumer. The District Manager Joe Cooper was also absent

Also present were Sharon West, Johnny Wells, and audience members

Chairman Rodney Stephens called the hearing to order declared a quorum present and that the hearing was duly convened and ready to transact business.

Notice of the hearing was given, stating the time, place and purpose, all as required by Chapter 551 of the Government Code.

1. Roll Call of members was given –4 were absent
2. Troupe Brewer reviewed the changes that had been made to the District Management plan and requested a motion to approve
3. After a brief discussion, motion was made by W.B. Maples, second by Jerry Hinshaw to approve the re-adoption of the District Management Plan with proposed revisions. All members present voted yes. Plan was re-adopted
4. Motion to adjourn permit hearing made by Fred Parker, second by Charles Ferguson. All members present voted yes.
5. Chairman Stephens adjourned the hearing.

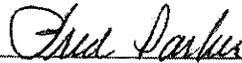
MINUTES approved this 3rd day of November 2016.



Rodney P. Stephens, Chairman  
Comanche Co.



Joe Altebaumer  
Erath Co.



Fred Parker, Secretary-Treasurer  
Erath Co.

Jerry Hinshaw, Director –  
Erath Co.



Shane Tucker,  
Comanche Co.

*F. Volle*

---

Frank Volleman-  
Comanche Co.

*Charles E. Ferguson*

---

Charles E. Ferguson  
Bosque Co.

*Barbara Domel*

---

Barbara Domel- Vice Chairman  
Bosque Co.

*Robert Payne*

---

Robert Payne  
Bosque Co.

---

W.B. Maples  
Coryell Co.

---

Gary Kafer  
Coryell Co.

*Kenneth Bullington*

---

Kenneth Bullington  
Coryell Co.

**OFFICIAL MINUTES OF MEETING**

MINUTES OF THE  
PERMIT HEARING AND MEETING OF  
THE BOARD OF DIRECTORS OF THE  
MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT  
HELD: October 6, 2016

THE STATE OF TEXAS  
COUNTY OF ERATH

On this the 6th day of October 2016, the Board of Directors of the Middle Trinity Groundwater Conservation District convened in a PERMIT HEARING at 930 Wolfe Nursery Rd. Stephenville, Texas at 1:00 p.m. with the following members present:

Rodney Stephens- Chairman	Kenneth Bullington- Director
Fred Parker- Director/Secretary	Jerry Hinshaw- Director
Barbara Domel- Vice Chairman	Charles Ferguson- Director
Shane Tucker- Director	W.B. Maples- Director

Members absent – Four were absent members- Frank Volleman, Robert Payne, Gary Kafer and Joe Altebaumer. The District Manager Joe Cooper was also absent

Also present were Sharon West, Johnny Wells, and audience members

Chairman Rodney Stephens called the hearing to order declared a quorum present and that the hearing was duly convened and ready to transact business.

Notice of the hearing was given, stating the time, place and purpose, all as required by Chapter 551 of the Government Code.

1. Roll Call of members was given –4 were absent
2. Sharon West stated that all operating permits were administratively complete and ready to be heard.
3. After a brief discussion, motion was made by Charles Ferguson second by Kenneth Bullington to approve all operating permits. All members present voted yes. Permits were approved
4. Motion to adjourn permit hearing made by Fred Parker, second by Charles Ferguson. All members present voted yes.
5. Chairman Stephens adjourned the permit hearing.

THE STATE OF TEXAS  
COUNTY OF ERATH

On this the 6th day of October 2016, the Board of Directors of the Middle Trinity Groundwater Conservation District convened in a STATED SESSION at 930 Wolfe Nursery Rd. Stephenville, Texas, with the following members present:

Rodney Stephens- Chairman	Kenneth Bullington- Director
Jerry Hinshaw- Director	Fred Parker- Director/Secretary
Barbara Domel- Vice Chairman	Shane Tucker- Director
Charles Ferguson- Director	W.B. Maples-Director

Members absent – 4 members were absent Frank Volleman, Robert Payne, Gary Kafer, and Joe Altebaumer. The District Manager, Joe Cooper was also absent

Also present were Sharon West, Johnny Wells, and audience members

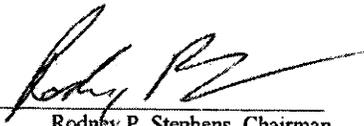
Chairman Stephens called the meeting to order declared a quorum present and that the hearing was duly convened and ready to transact business.

Notice of the hearing was given, stating the time, place and purpose, all as required by Chapter 551 of the Government Code.

1. Invocation was given by Jerry Hinshaw
2. Pledge of Allegiance was conducted
3. Board recognized Troupe Brewer as a guest

4. After reviewing minutes from the September 1st Board meetings, motion was made by Barbara Domei second by Jerry Hinshaw to accept minutes with one correction to the number of members who were absent, changing the word two to three. All members present voted yes. Minutes were approved.
5. After reviewing the check detail report motion was made by Charles Ferguson, second by Shane Tucker to ratify the payment of the bills. All members present voted yes.
6. Board reviewed Income Expense Comparison – no action taken
7. Office Manager Report was given by Sharon West
8. Field Tech report was given by Johnny Wells
9. Managers Report was given by Sharon West in the absence of Joe Cooper
10. Quarterly Drought Report was given by Sharon West
11. Quarterly Investment report given by Sharon West
12. Charles Ferguson and Troupe Brewer gave a brief update on the GMA 8 meeting
13. Board retired into executive session at 1:34 to discuss personnel matters.
14. Board reconvened at 2:42. Motion was made by Barbara Domei, second by Kenneth Bullington to hire Crystal Eberhart as the new Office Assistant. She will begin work with the District on November 1<sup>st</sup> 2016 with her rate of pay to be set by the District Manager, Joe Cooper at a later date. All members present voted yes. Crystal will be notified by Rodney Stephens of the decision.
15. Agenda topics for next month will include all regular agenda items, discussion/approval of one- time salary treatment for employees, December meeting/dinner
16. Motion made by Fred Parker to adjourn, second by Charles Ferguson. All members voted yes
17. Chairman Stephens adjourned the meeting.

MINUTES approved this 3rd day of November 2016.

  
Rodney P. Stephens, Chairman  
Comanche Co.

  
Joe Altebaumer  
Erath Co.

  
Fred Parker, Secretary-Treasurer  
Erath Co.

Jerry Hinshaw, Director –  
Erath Co.

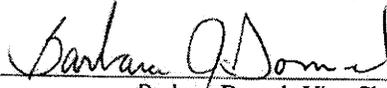
  
Shane Tucker,  
Comanche Co.

  
Frank Volleman-  
Comanche Co.



---

Charles E. Ferguson  
Bosque Co.



---

Barbara Domel- Vice Chairman  
Bosque Co.



---

Robert Payne  
Bosque Co.

---

W.B. Maples  
Coryell Co.



---

Gary Kafer  
Coryell Co.

---

Kenneth Bullington  
Coryell Co.

# **APPENDIX I**

## **Evidence of Coordination with Surface Water Management Entities**

## Troupe Brewer

---

**From:** Troupe Brewer  
**Sent:** Tuesday, March 28, 2017 11:25 AM  
**To:** 'office@ulrmwd.com'; 'ksorells@cctc.net'; 'cliftoncity@cliftontexas.us';  
'cranfillsgap@amaonline.com'; 'cityofiredale@windstream.net';  
'marie.garland@meridiantexas.us'; 'cityofmorgan@valornet.com'; 'citysec@vmtx.us';  
'cityofws@earthlink.net'; 'Billing@HighlandParkWSC.com';  
'karen@mustangvalleywater.org'; 'ddickserson@ci.comanche.tx.us';  
'jeasley@cityofdeleon.org'; 'cityofgustine@verizon.net'; 'ccwater@copperascovetx.gov';  
'Coevant@centex.net'; 'darleen.hodges@ci.gatesville.tx.us'; 'oglesbyclerk@yahoo.com';  
'info@kempnerwsc.com'; 'dublin.pw@ci.dublin.tx.us'; 'cityofgordon@sbcglobal.net';  
'utilitybilling@stephenvilletx.gov'  
**Cc:** Ty Embrey; Hannah Ging; Joe B. Cooper - Middle Trinity Groundwater Conservation District (mtgcd1@centurylink.net)  
**Subject:** Middle Trinity GCD Groundwater Management Plan  
**Attachments:** MTGCD Management Plan for Surface Water Management Entities.pdf

Dear Surface Water Management Entity,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to you pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for your review and comment as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with you to manage the groundwater resources within its boundaries. Please contact myself or the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

Sincerely,

Troupe Brewer  
Attorney for Middle Trinity Groundwater Conservation District

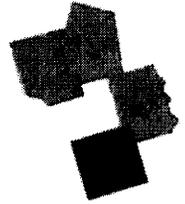
**Troupe Brewer**  
Attorney at Law

T +1 512.322.5858

F +1 512.472.0532



**Middle Trinity  
Groundwater Conservation District**  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
[www.middletrinitygcd.org](http://www.middletrinitygcd.org)



**Bosque \* Comanche \* Coryell \* Erath**

---

March 23, 2017

Brazos River Authority  
P.O. Box 7555  
Waco, TX 76714

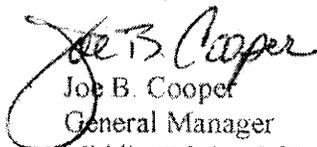
Dear Brazos River Authority,

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The District submits the enclosed Management Plan to the Brazos River Authority pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Brazos River Authority as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with Brazos River Authority to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

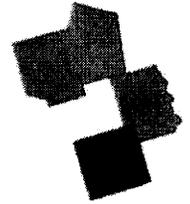
Sincerely,

  
Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



**Middle Trinity  
Groundwater Conservation District**  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque

\*

Comanche

\*

Coryell

\*

Erath

March 23, 2017

Smith Bend WSC  
PO Box 207  
Valley Mills, TX 76689-0207

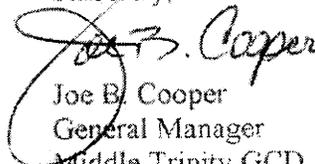
Dear Smith Bend WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Smith Bend WSC pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Smith Bend WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with the Smith Bend WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

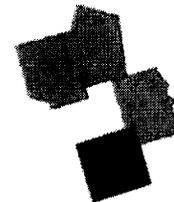
Sincerely,

  
Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



**Middle Trinity  
Groundwater Conservation District**  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



**Bosque \* Comanche \* Coryell \* Erath**

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March 23, 2017

Mountain WSC  
PO Box 1045  
Gatesville, TX 76528

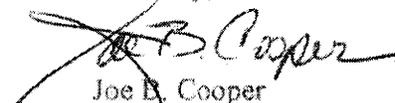
Dear Mountain WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Mountain WSC pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Mountain WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with the Mountain WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

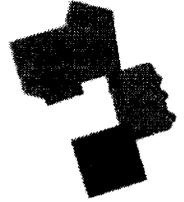
Sincerely,

  
Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



**Middle Trinity  
Groundwater Conservation District**  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque \* Comanche \* Coryell \* Erath

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January 18, 2017

Morgan Mill WSC  
PO Box 7  
Morgan Mill, TX 76465

Dear Morgan Mill WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Morgan Mill WSC pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Morgan Mill WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with the Morgan Mill WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

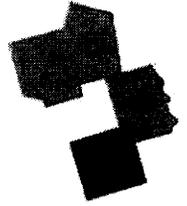
Sincerely,

Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



**Middle Trinity  
Groundwater Conservation District**  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque

\*

Comanche

\*

Coryell

\*

Erath

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March 23, 2017

Lakeside Water Supply District  
128 County Road 1275  
Morgan, TX 76671-3029

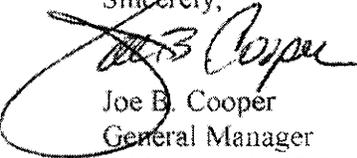
Dear Lakeside Water Supply District,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Lakeside Water Supply District pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Lakeside Water Supply District as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with Lakeside Water Supply District to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

Sincerely,

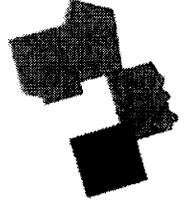


Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



**Middle Trinity  
Groundwater Conservation District**  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque \* Comanche \* Coryell \* Erath

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March 23, 2017

Comanche County WSC  
PO Box 282  
De Leon, TX 76444-0282

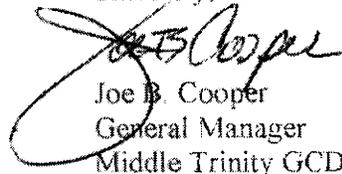
Dear Comanche County WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Comanche County WSC pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Comanche County WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with the Comanche County WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

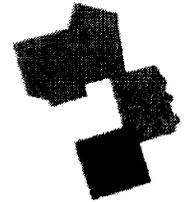
Sincerely,

  
Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



**Middle Trinity  
Groundwater Conservation District**  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque \* Comanche \* Coryell \* Erath

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March 23, 2017

Multi County WSC  
PO Box 1006  
Gatesville, TX 76528

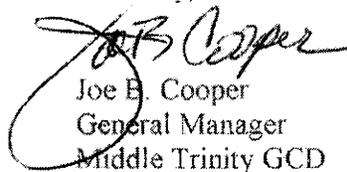
Dear Multi County WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Multi County WSC pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Multi County WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with the Multi County WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

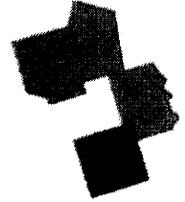
Sincerely,

  
Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



**Middle Trinity**  
**Groundwater Conservation District**  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque \* Comanche \* Coryell \* Erath

March 23, 2017

Coryell City Water Supply District  
9440 FM 929  
Gatesville, TX 76528-3399

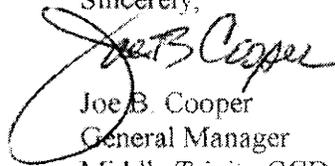
Dear Coryell City Water Supply District,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Coryell City Water Supply District pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Coryell City Water Supply District as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with Coryell City Water Supply District to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

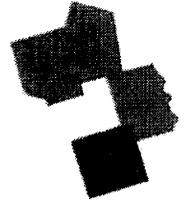
Sincerely,

  
Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



**Middle Trinity  
Groundwater Conservation District**  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque \* Comanche \* Coryell \* Erath

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March 23, 2017

Elm Creek WSC  
PO Box 538  
Moody, TX 76557

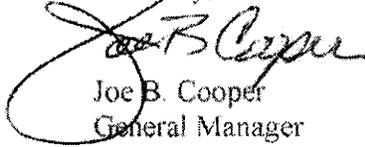
Dear Elm Creek WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Elm Creek WSC pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Elm Creek WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with the Elm Creek WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

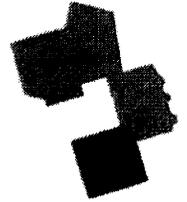
Sincerely,

  
Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



**Middle Trinity  
Groundwater Conservation District**  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque \* Comanche \* Coryell \* Erath

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March 23, 2017

Topsey WSC  
4371 FM 1113  
Copperas Cove, TX 76522

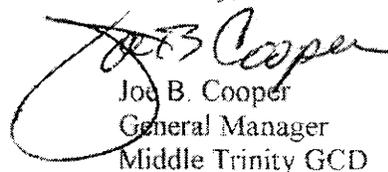
Dear Topsey WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Topsey WSC pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Topsey WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with the Topsey WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

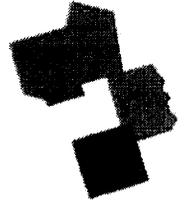
Sincerely,

  
Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



**Middle Trinity  
Groundwater Conservation District**  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque \* Comanche \* Coryell \* Erath

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March 23, 2017

Childress Creek WSC  
255 County Road 3405  
Clifton, TX 76634-3423

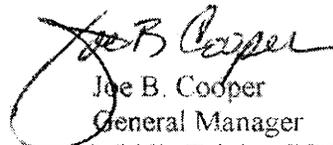
Dear Childress Creek WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Childress Creek WSC pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Childress Creek WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with Childress Creek WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

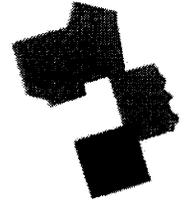
Sincerely,

  
Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



Middle Trinity  
Groundwater Conservation District  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque \* Comanche \* Coryell \* Erath

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March 23, 2017

Flat WSC  
110 North 8<sup>th</sup> St  
Gatesville, TX

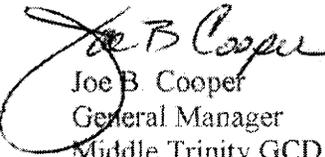
Dear Flat WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Flat WSC pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Flat WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with the Flat WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

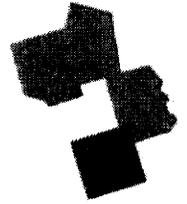
Sincerely,

  
Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



**Middle Trinity  
Groundwater Conservation District**  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque \* Comanche \* Coryell \* Erath

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March 23, 2017

The Grove WSC  
103 Robert H. Evetts Dr.  
Gatesville, TX 76528

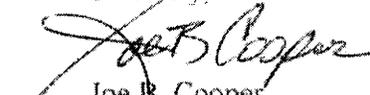
Dear The Grove WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to The Grove WSC pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of The Grove WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with The Grove WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

Sincerely,

  
Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



Middle Trinity  
Groundwater Conservation District  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque \* Comanche \* Coryell \* Erath

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March 23, 2017

King Creek WSC  
PO Box 5459  
Laguna Park, TX 76644

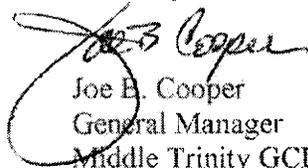
Dear King Creek WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the King Creek WSC pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the King Creek WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with the King Creek WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

Sincerely,

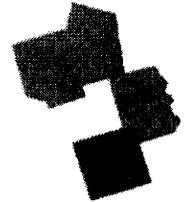


Joe E. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



Middle Trinity  
Groundwater Conservation District  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque \* Comanche \* Coryell \* Erath

---

March 23, 2017

Fort Gates WSC  
103 Gateway Circle  
Gatesville, TX 76528

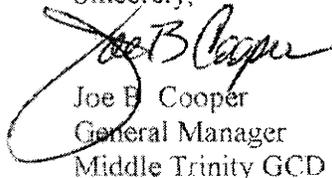
Dear Fort Gates WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Fort Gates WSC pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Fort Gates WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with the Fort Gates WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

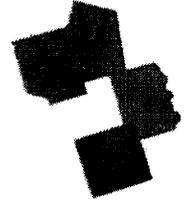
Sincerely,

  
Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



**Middle Trinity**  
**Groundwater Conservation District**  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque \* Comanche \* Coryell \* Erath

---

March 23, 2017

Barton WSC  
P.O. Box 272  
Gordon, TX 76453

Dear Barton WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Barton WSC pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Barton WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with the Barton WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

Sincerely,

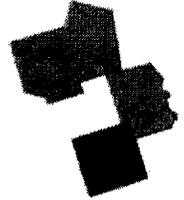
  
Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure

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Middle Trinity  
Groundwater Conservation District  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque \* Comanche \* Coryell \* Erath

---

March 23, 2017

Mosheim WSC  
3067 FM 217  
Valley Mills, TX 76689

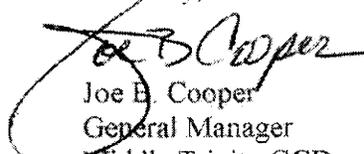
Dear Mosheim WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Mosheim WSC Supply pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Mosheim WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with the Mosheim WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

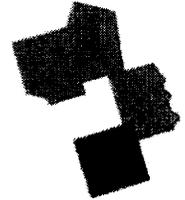
Sincerely,

  
Joe E. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



**Middle Trinity  
Groundwater Conservation District**  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque \* Comanche \* Coryell \* Erath

---

March 23, 2017

Leon Junction WSC  
P.O. Box 215  
Flat, TX 76526

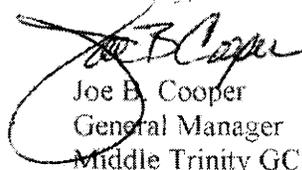
Dear Leon Junction WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Leon Junction WSC pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Leon Junction WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with the Leon Junction WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

Sincerely,

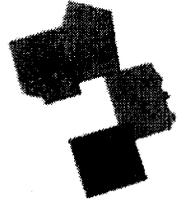


Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



**Middle Trinity**  
**Groundwater Conservation District**  
930 Wolfe Nursery Rd., Stephenville, TX 76401  
Phone: 254-965-6705 Fax: 254-965-6745  
www.middletrinitygcd.org



Bosque \* Comanche \* Coryell \* Erath

---

March 23, 2017

Green Creek WSC  
316 N Patrick St.  
Dublin, TX 76446

Dear Green Creek WSC,

Enclosed please find a copy of the revised Management Plan readopted by the Middle Trinity Groundwater Conservation District (the "District"). The District's mission is to conserve, preserve, and protect the quality and quantity of the groundwater resources for the citizens within its boundaries, which include Bosque, Comanche, Coryell, and Erath Counties. The Texas Legislature created the District in 2001 and the voters of both Comanche and Erath Counties confirmed the creation of the District on May 4, 2002. Bosque and Coryell Counties were later added to the District through the annexation process provided in Subchapter J, Chapter 36 of the Texas Water Code. The voters of Bosque County approved annexation into the District on May 9, 2009 and the voters of Coryell County approved annexation into the District on November 3, 2009.

The District submits the enclosed Management Plan to the Green Creek WSC pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules (Title 31 Texas Administrative Code, Section 356.51). The District asks for the review and comment of the Green Creek WSC as part of the District's effort to coordinate and seek input on the District's comprehensive groundwater management goals. The District Board of Directors ("Board") held a public hearing and subsequently readopted the enclosed Management Plan at its Board meeting on October 6, 2016.

The District is committed to working with the Green Creek WSC to manage the groundwater resources within its boundaries. Please contact the District at (254) 965-6705 if you have any questions regarding the District's Management Plan or its activities.

Sincerely,

Joe B. Cooper  
General Manager  
Middle Trinity GCD

Enclosure



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 City, State, ZIP+4® Moody, TX 76557

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<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00	
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Total Postage and Fees	\$9.18	03/24/2017

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 128 County Road 1275  
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 9440 FM 929  
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<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00	
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 255 County Road 3405  
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<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
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Total Postage and Fees	\$9.18

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Street and Apt. No.: The Grove WSC  
103 Robert H. Evetts Dr.  
City, State, ZIP+4®: Gatesville, TX 76528

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VALLEY MILLS, TX 76688

Certified Mail Fee	\$3.35
Extra Services & Fees (check box, add fee as appropriate)	\$7.75
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
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<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$3.08
Total Postage and Fees	\$9.18

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Street and Apt. No.: Mosheim WSC  
3067 FM 217  
City, State, ZIP+4®: Valley Mills, TX 76689

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LAGUNA PARK, TX 76644

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<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
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Postage	\$3.08
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PO Box 5459  
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<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
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GATESVILLE, TX 76528

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<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$3.08
Total Postage and Fees	\$9.18

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GORDON, TX 76453

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<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$3.08
Total Postage and Fees	\$9.18

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06

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Street and Apt. No.: Barton WSC  
P.O. Box 272  
City, State, ZIP+4®: Gordon, TX 76453

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<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$3.08

Total Postage and Fees \$9.18

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Street and Apt. **4371 FM 1113**

City, State, ZIP+4® **Copperas Cove, TX 76522**

**APPENDIX J**

**Groundwater Availability Model Run 17-026**

# Texas Water Development Board

P.O. Box 13231, 1700 N. Congress Ave.  
Austin, TX 78711-3231, [www.twdb.texas.gov](http://www.twdb.texas.gov)  
Phone (512) 463-7847, Fax (512) 475-2053

March 13, 2017

Mr. Joe B. Cooper, General Manager  
Middle Trinity Groundwater Conservation District  
930 N. Wolfe Nursery Rd.  
Stephenville, TX 76401

Dear Mr. Cooper:

Texas Water Code, Section 36.1071, Subsection (h), states that, in developing its groundwater management plan, a groundwater conservation district shall use groundwater availability modeling information provided by the Executive Administrator of the Texas Water Development Board (TWDB) in conjunction with any available site-specific information provided by the district for review and comment to the Executive Administrator before being used in the plan. Information for your groundwater management plan that was derived from groundwater availability model(s) in the attached report includes:

- (1) the annual amount of recharge from precipitation, if any, to the groundwater resources within the district;
- (2) the annual volume of water that discharges from the aquifer to springs and any surface water bodies, including lakes, streams, and rivers for each aquifer within the district; and
- (3) the annual volume of flow into and out of the district within each aquifer and between aquifers in the district.

The enclosed groundwater availability model run (Part 2 of a two-part package of information from the TWDB to the Middle Trinity Groundwater Conservation District) fulfills the requirements noted above. Part 1 of the 2-part package is the Historical Water Use/State Water Plan data report. The Middle Trinity Groundwater Conservation District will receive this data report from the TWDB Groundwater Technical Assistance Section. Questions about the data report can be directed to Mr. Stephen Allen at [stephen.allen@twdb.texas.gov](mailto:stephen.allen@twdb.texas.gov) or 512- 463-7317. This model run replaces GAM Run 16-002. GAM Run 17-026 was completed using the newly released groundwater availability model for the Brazos River Alluvium Aquifer.

The groundwater management plan for the Middle Trinity Groundwater Conservation District should be adopted by the district on or before February 13, 2017, and submitted to the Executive Administrator of the TWDB on or before March 15, 2017. The current

Our Mission	:	Board Members
To provide leadership, information, education, and support for planning, financial assistance, and outreach for the conservation and responsible development of water for Texas	:	Bech Bruun, Chairman   Kathleen Jackson, Board Member   Peter Lake, Board Member
	:	Jeff Walker, Executive Administrator

Mr. Joe Cooper, General Manager

Page 2

management plan for Middle Trinity Groundwater Conservation District expires on May 14, 2017.

If you have any further questions or concerns about the model run, please feel free to contact Dr. Shirley Wade at [shirley.wade@twdb.texas.gov](mailto:shirley.wade@twdb.texas.gov) or 512- 936-0883 or Ms. Cindy Ridgeway at [cindy.ridgeway@twdb.texas.gov](mailto:cindy.ridgeway@twdb.texas.gov) or 512- 936-2386.

Sincerely,



Jeff Walker

Executive Administrator

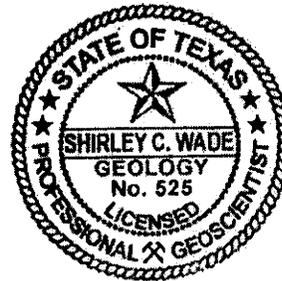
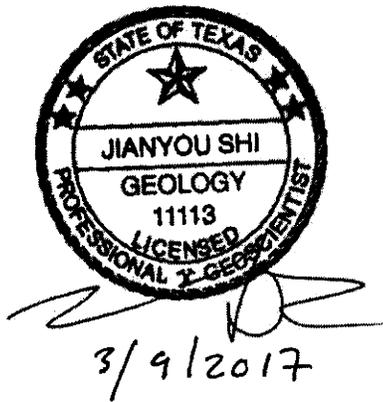
Enclosures

c w/o enc.: Ms. Cindy Ridgeway, Groundwater  
Mr. Stephen Allen, Groundwater  
Dr. Shirley Wade, Groundwater

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# GAM RUN 17-026: MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT GROUNDWATER MANAGEMENT PLAN

by Jerry Jianyou Shi, Ph.D., P.G.  
and Shirley C. Wade, Ph.D., P.G.  
Texas Water Development Board  
Groundwater Division  
Groundwater Availability Modeling Section  
512-936-0883  
March 9, 2017



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# **GAM RUN 17-026: MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT MANAGEMENT PLAN**

by Jerry Jianyou Shi, Ph.D., P.G.  
and Shirley C. Wade, Ph.D., P.G.  
Texas Water Development Board  
Groundwater Division  
Groundwater Availability Modeling Section  
512-936-0883  
March 9, 2017

## ***EXECUTIVE SUMMARY:***

Texas State Water Code, Section 36.1071, Subsection (h) (Texas Water Code, 2015), states that, in developing its groundwater management plan, a groundwater conservation district shall use groundwater availability modeling information provided by the Executive Administrator of the Texas Water Development Board (TWDB) in conjunction with any available site-specific information provided by the district for review and comment to the Executive Administrator. Information derived from groundwater availability models that shall be included in the groundwater management plan includes:

- the annual amount of recharge from precipitation, if any, to the groundwater resources within the district;
- for each aquifer within the district, the annual volume of water that discharges from the aquifer to springs and any surface water bodies, including lakes, streams, and rivers; and
- the annual volume of flow into and out of the district within each aquifer and between aquifers in the district.

This report—Part 2 of a two-part package of information from the TWDB to the Middle Trinity Groundwater Conservation District—fulfills the requirements noted above. Part 1 of the two-part package is the Estimated Historical Water Use/State Water Plan data report. The district will receive this data report from the TWDB Groundwater Technical Assistance Section. Questions about the data report can be directed to Mr. Stephen Allen at [stephen.allen@twdb.texas.gov](mailto:stephen.allen@twdb.texas.gov) or 512-463-7317.

Layer 1 (the surficial outcrop area of the units in layers 2 through 8 and units younger than Woodbine Aquifer), Layer 2 (Woodbine Aquifer), Layer 3 (Washita and Fredericksburg Groups, and the Edwards (Balcones Fault Zone) Aquifer), and Layers 4 through 8 (Trinity Aquifer). Layers 2 through 7 also include pass-through cells.

- Perennial rivers and reservoirs were simulated using the MODFLOW River package. Ephemeral streams, flowing wells, springs, and evapotranspiration in riparian zones along perennial rivers were simulated using the MODFLOW Drain package. For this management plan, groundwater discharge to surface water includes groundwater leakage to all of the river and drain boundaries except for the groundwater loss along the riparian zone.
- The model was run using MODFLOW-NWT (Niswonger and others, 2011).

### ***Brazos River Alluvium Aquifer***

- We used version 1.01 of the groundwater availability model for the Brazos River Alluvium Aquifer released on December 16, 2016. See Ewing and Jigmond (2016) for assumptions and limitations of the model.
- The groundwater availability model for the Brazos River Alluvium Aquifer contains three layers. Layers 1 and 2 represent the Brazos River Alluvium Aquifer and Layer 3 represents the surficial portions of the Carrizo-Wilcox, Queen City, Sparta, Yegua-Jackson, and Gulf Coast aquifers as well as various geologic units of the Cretaceous System.
- Perennial rivers and streams were simulated using the MODFLOW Streamflow-Routing package and ephemeral streams, were simulated using the MODFLOW River package. Springs were simulated using the MODFLOW Drain package.
- The model was run with MODFLOW-USG (unstructured grid; Panday and others, 2013).

### ***RESULTS:***

A groundwater budget summarizes the amount of water entering and leaving the aquifer according to the groundwater availability model. Selected groundwater budget components listed below were extracted from the model results for the Trinity and Brazos River Alluvium aquifers located within the district and averaged over the duration of the calibration and verification portion of the model run in the district, as shown in Tables 1 and 2.

**TABLE 1: SUMMARIZED INFORMATION FOR THE TRINITY AQUIFER THAT IS NEEDED FOR MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT'S GROUNDWATER MANAGEMENT PLAN. ALL VALUES ARE REPORTED IN ACRE-FEET PER YEAR AND ROUNDED TO THE NEAREST 1 ACRE-FOOT.**

Management Plan requirement	Aquifer or confining unit	Results
Estimated annual amount of recharge from precipitation to the district	Trinity Aquifer	74,335
Estimated annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, rivers, springs, and flowing wells	Trinity Aquifer	98,449
Estimated annual volume of flow into the district within each aquifer in the district	Trinity Aquifer	29,682
Estimated annual volume of flow out of the district within each aquifer in the district	Trinity Aquifer	33,741
Estimated net annual volume of flow between each aquifer in the district	From the Washita Group of the Cretaceous System to the Trinity Aquifer	29,006

**TABLE 2: SUMMARIZED INFORMATION FOR THE BRAZOS RIVER ALLUVIUM AQUIFER THAT IS NEEDED FOR MIDDLE TRINITY GROUNDWATER CONSERVATION DISTRICT'S GROUNDWATER MANAGEMENT PLAN. ALL VALUES ARE REPORTED IN ACRE-FEET PER YEAR AND ROUNDED TO THE NEAREST 1 ACRE-FOOT.**

Management Plan requirement	Aquifer or confining unit	Results
Estimated annual amount of recharge from precipitation to the district	Brazos River Alluvium Aquifer	516
Estimated annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, rivers, springs, and flowing wells	Brazos River Alluvium Aquifer	845
Estimated annual volume of flow into the district within each aquifer in the district	Brazos River Alluvium Aquifer	236
Estimated annual volume of flow out of the district within each aquifer in the district	Brazos River Alluvium Aquifer	238
Estimated net annual volume of flow between each aquifer in the district	From the Washita Group of the Cretaceous System to the Brazos River Alluvium Aquifer	82

### ***LIMITATIONS:***

The groundwater models used in completing this analysis are the best available scientific tools that can be used to meet the stated objectives. To the extent that this analysis will be used for planning purposes and/or regulatory purposes related to pumping in the past and into the future, it is important to recognize the assumptions and limitations associated with the use of the results. In reviewing the use of models in environmental regulatory decision making, the National Research Council (2007) noted:

*"Models will always be constrained by computational limitations, assumptions, and knowledge gaps. They can best be viewed as tools to help inform decisions rather than as machines to generate truth or make decisions. Scientific advances will never make it possible to build a perfect model that accounts for every aspect of reality or to prove that a given model is correct in all respects for a particular regulatory application. These characteristics make evaluation of a regulatory model more complex than solely a comparison of measurement data with model results."*

A key aspect of using the groundwater model to evaluate historic groundwater flow conditions includes the assumptions about the location in the aquifer where historic pumping was placed. Understanding the amount and location of historic pumping is as important as evaluating the volume of groundwater flow into and out of the district, between aquifers within the district (as applicable), interactions with surface water (as applicable), recharge to the aquifer system (as applicable), and other metrics that describe the impacts of that pumping. In addition, assumptions regarding precipitation, recharge, and interaction with streams are specific to particular historic time periods.

Because the application of the groundwater models was designed to address regional-scale questions, the results are most effective on a regional scale. The TWDB makes no warranties or representations related to the actual conditions of any aquifer at a particular location or at a particular time.

It is important for groundwater conservation districts to monitor groundwater pumping and overall conditions of the aquifer. Because of the limitations of the groundwater model and the assumptions in this analysis, it is important that the groundwater conservation districts work with the TWDB to refine this analysis in the future given the reality of how the aquifer responds to the actual amount and location of pumping now and in the future. Historic precipitation patterns also need to be placed in context as future climatic conditions, such as dry and wet year precipitation patterns, may differ and affect groundwater flow conditions.

**APPENDIX K**

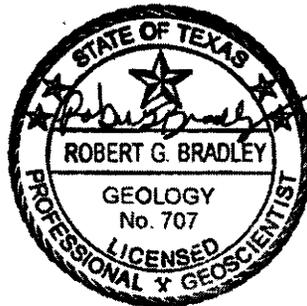
**TWDB GTA Aquifer Assessment 10-18 MAG**

GTA Aquifer Assessment 10-18 MAG  
Groundwater Management Area 8  
Brazos River Alluvium Aquifer  
Modeled Available Groundwater estimates  
December 9, 2011

# GTA Aquifer Assessment 10-18 MAG

by Robert G. Bradley, P.G.

Texas Water Development Board  
Groundwater Technical Assistance Section  
(512) 936-0870



Robert G. Bradley, P.G. 707, authorized the seal appearing on this document on  
December 9, 2011

GTA Aquifer Assessment 10-18 MAG  
Groundwater Management Area 8  
Brazos River Alluvium Aquifer  
Modeled Available Groundwater estimates  
December 9, 2011

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**EXECUTIVE SUMMARY:**

The estimated modeled available groundwater from the Brazos River Alluvium Aquifer that achieves the desired future condition adopted by members of Groundwater Management Area 8 is approximately 33,169 acre-feet per year and is summarized by county, regional water planning area, and river basin as shown in Tables 1-5. The modeled available groundwater estimates for the groundwater conservation districts within Groundwater Management Area 8 for the aquifer is approximately 16,485 acre-feet per year between 2010 and 2060 and are shown in Table 5.

**REQUESTOR:**

Mr. Eddy Daniel of the North Texas Groundwater Conservation District acting on the behalf of Groundwater Management Area 8.

**DESCRIPTION OF REQUEST:**

In a letter dated August 31, 2011, Mr. Eddy Daniel provided the Texas Water Development Board (TWDB) with the desired future condition of the Brazos River Alluvium Aquifer that were adopted in a resolution, dated April 27, 2011, by the members of Groundwater Management Area 8. This resolution referenced the previously adopted desired future conditions for Brazos River Alluvium Aquifer, as described in a resolution adopted December 17, 2007 by the groundwater conservation districts in Groundwater Management Area 8.

However, following readopting the previous desired future conditions, the Groundwater Management area 8 representatives, in a resolution dated June 23, 2011, made that the portion of the Brazos River Alluvium Aquifer in Milam County non-relevant for joint planning purposes. Therefore, the current desired future conditions are:

- Maintain approximately 100 percent of the saturated thickness after 50 years in Falls County.
- Maintain approximately 82 percent of the estimated saturated thickness after 50 years in McLennan County.
- Maintain approximately 90 percent of the estimated saturated thickness after 50 years in Hill and Bosque counties.

Because the desired future conditions were identical to the previous submission, the modeled available groundwater estimates in this report are identical to the previously released "managed available groundwater" estimates that were in GTA Aquifer Assessment 07-05mag.

#### **METHODS:**

Groundwater Management Area 8, located in central Texas, includes part of the Brazos River Alluvium Aquifer (Figure 1). The desired future condition requested for the Brazos River Alluvium Aquifer was based on the desired future condition adopted by Groundwater Management Area 8. The pumping results presented here for Groundwater Management Area 8 are taken directly from GTA Aquifer Assessment 07-05mag.

#### **PARAMETERS AND ASSUMPTIONS:**

- Parameters, assumptions, volumetric calculations, and areas were obtained from GTA Aquifer Assessment 07-05mag (Bradley, 2008).

#### **MODELED AVAILABLE GROUNDWATER AND PERMITTING:**

As defined in Chapter 36 of the Texas Water Code, "modeled available groundwater" is the estimated average amount of water that may be produced annually to achieve a desired future condition. This is distinct from "managed available groundwater," shown in the draft version of this report dated January 25, 2011, which was a permitting value and accounted for the estimated use of the aquifer exempt from permitting. This change was made to reflect changes in statute by the 82<sup>nd</sup> Texas Legislature, effective September 1, 2011. The previous version of this report was completed prior to the readopting of the desired future conditions.

Groundwater conservation districts are required to consider modeled available groundwater, along with several other factors, when issuing permits in order to manage groundwater production to achieve the desired future condition(s). The other factors districts must consider include annual precipitation and production patterns, the estimated amount of pumping exempt from permitting, existing permits, and a reasonable estimate of actual groundwater production under existing permits. The estimated amount of pumping exempt from permitting, which the Texas Water Development Board is now required to develop after soliciting input from applicable groundwater conservation districts, will be provided in a separate report.

**RESULTS:**

The estimated modeled available groundwater from the Brazos River Alluvium Aquifer in Groundwater Management Area 8 that achieves the adopted desired future condition is approximately 33,169 acre-feet per year. This pumping has been divided by county, regional water planning area, and river basin for each decade between 2010 and 2060 for use in the regional water planning process (Table 1).

The modeled available groundwater estimates are also summarized by county, regional water planning area, river basin, and groundwater conservation district and are shown in tables 2, 3, 4, and 5, respectively.

Table 1. Estimated modeled available groundwater by decade for the Brazos River Alluvium Aquifer in Groundwater Management Area 8. Results are in acre-feet per year and are divided by county, regional water planning area, and river basin.

County	Regional Water Planning Area	River Basin	Year					
			2010	2020	2030	2040	2050	2060
Bosque	G	Brazos	830	830	830	830	830	830
Falls	G	Brazos	16,684	16,684	16,684	16,684	16,684	16,684
Hill	G	Brazos	632	632	632	632	632	632
McLennan	G	Brazos	15,023	15,023	15,023	15,023	15,023	15,023
<b>Total</b>			<b>33,169</b>	<b>33,169</b>	<b>33,169</b>	<b>33,169</b>	<b>33,169</b>	<b>33,169</b>

Table 2. Estimated modeled available groundwater for the Brazos River Alluvium Aquifer summarized by county in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

County	Year					
	2010	2020	2030	2040	2050	2060
Bosque	830	830	830	830	830	830
Falls	16,684	16,684	16,684	16,684	16,684	16,684
Hill	632	632	632	632	632	632
McLennan	15,023	15,023	15,023	15,023	15,023	15,023
<b>Total</b>	<b>33,169</b>	<b>33,169</b>	<b>33,169</b>	<b>33,169</b>	<b>33,169</b>	<b>33,169</b>

Table 3. Estimated modeled available groundwater for the Brazos River Alluvium Aquifer summarized by regional water planning area in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

Regional Water Planning Area	Year					
	2010	2020	2030	2040	2050	2060
G	33,169	33,169	33,169	33,169	33,169	33,169

Table 4. Estimated modeled available groundwater for the Brazos River Alluvium Aquifer summarized by river basin in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

Basin	Year					
	2010	2020	2030	2040	2050	2060
Brazos	33,169	33,169	33,169	33,169	33,169	33,169

Table 5. Estimated modeled available groundwater for the Brazos River Alluvium Aquifer summarized by groundwater conservation district in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

Groundwater Conservation District	Year					
	2010	2020	2030	2040	2050	2060
Middle Trinity GCD	830	830	830	830	830	830
Prairielands GCD	632	632	632	632	632	632
Southern Trinity GCD	15,023	15,023	15,023	15,023	15,023	15,023
<b>Total (excluding non-district areas)</b>	<b>16,485</b>	<b>16,485</b>	<b>16,485</b>	<b>16,485</b>	<b>16,485</b>	<b>16,485</b>
No district	16,684	16,684	16,684	16,684	16,684	16,684
<b>Total (including non-district areas)</b>	<b>33,169</b>	<b>33,169</b>	<b>33,169</b>	<b>33,169</b>	<b>33,169</b>	<b>33,169</b>

**LIMITATIONS:**

The water budget used by Bradley (2008) was determined to be the best method to calculate estimates of modeled available groundwater; however, this method has limitations and should be replaced with better tools, including groundwater models and additional data that are not currently available, whenever possible.

This analysis assumes homogeneous and isotropic aquifers; however, aquifer conditions may not be uniform. The analysis further assumes that precipitation is the only source of aquifer recharge that lateral inflow to the aquifer is equal to lateral outflow from the aquifer, and that future pumping will not alter this balance. In addition, certain assumptions have been made regarding future precipitation, recharge, and streamflow in developing modeled available groundwater estimates. These assumptions need to be considered and compared to actual future data when evaluating achievement of the desired future condition.

Given these limitations, users of this information are cautioned that the modeled available groundwater numbers should not be considered a definitive, permanent description of the amount of groundwater that can be pumped to meet the adopted desired future condition. The TWDB makes no warranties or representations relating to the actual conditions of any aquifer at a particular location or at a particular time.

It is important for groundwater conservation districts to monitor future groundwater pumping and water levels to know if they are achieving their desired future conditions. Because of the limitations and assumptions in this analysis, it is important that the groundwater conservation districts work with the TWDB to refine these modeled available groundwater numbers given the reality of how the aquifer responds to the actual amount and location of pumping now and in the future.

#### **REFERENCES:**

Bradley, R. G., 2008, GTA Aquifer Assessment 07-05mag: Texas Water Development Board, GTA Aquifer Assessment Report, 8 p.

GTA Aquifer Assessment 10-18 MAG  
Groundwater Management Area 8  
Brazos River Alluvium Aquifer  
Modeled Available Groundwater estimates  
December 9, 2011

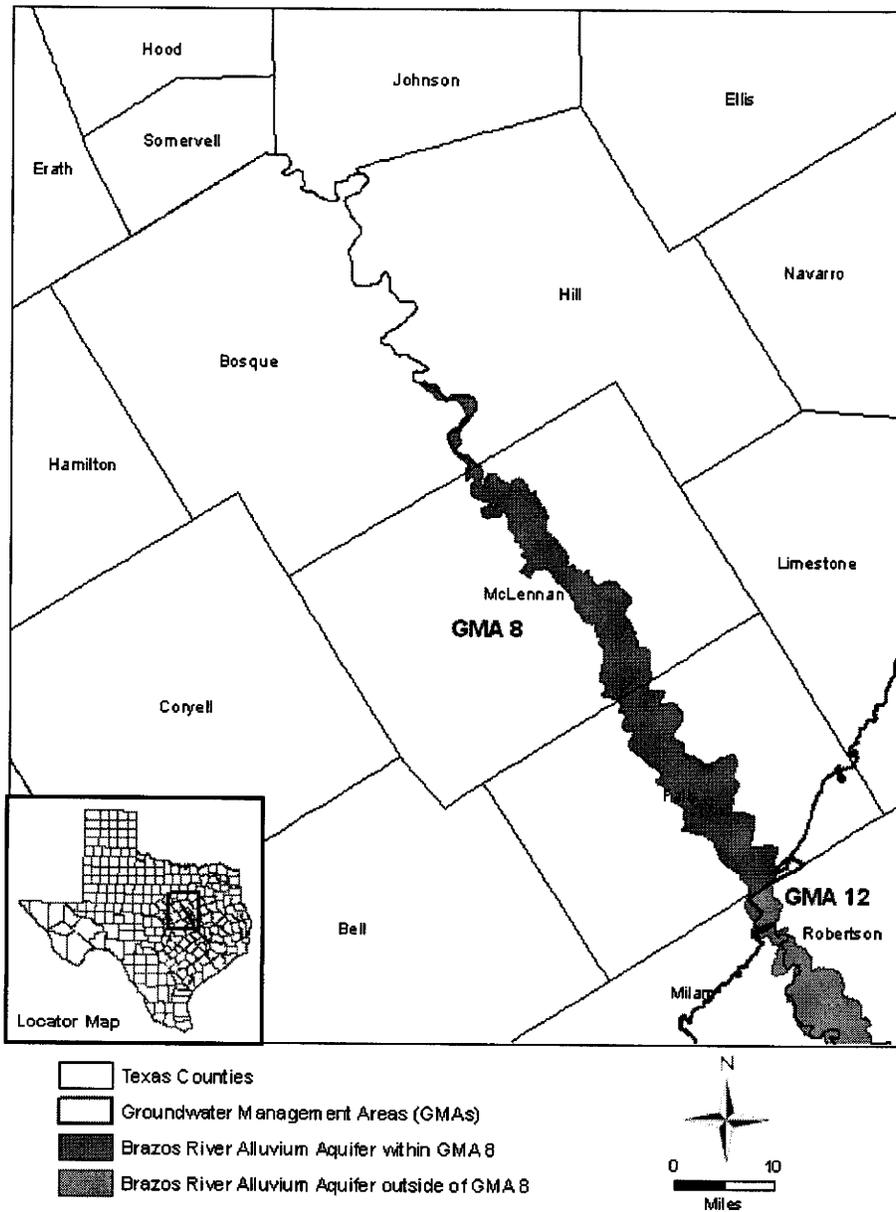


Figure 1. Map showing the area covered by the Brazos River Alluvium Aquifer in Groundwater Management Area 8.

GTA Aquifer Assessment 10-18 MAG  
 Groundwater Management Area 8  
 Brazos River Alluvium Aquifer  
 Modeled Available Groundwater estimates  
 December 9, 2011

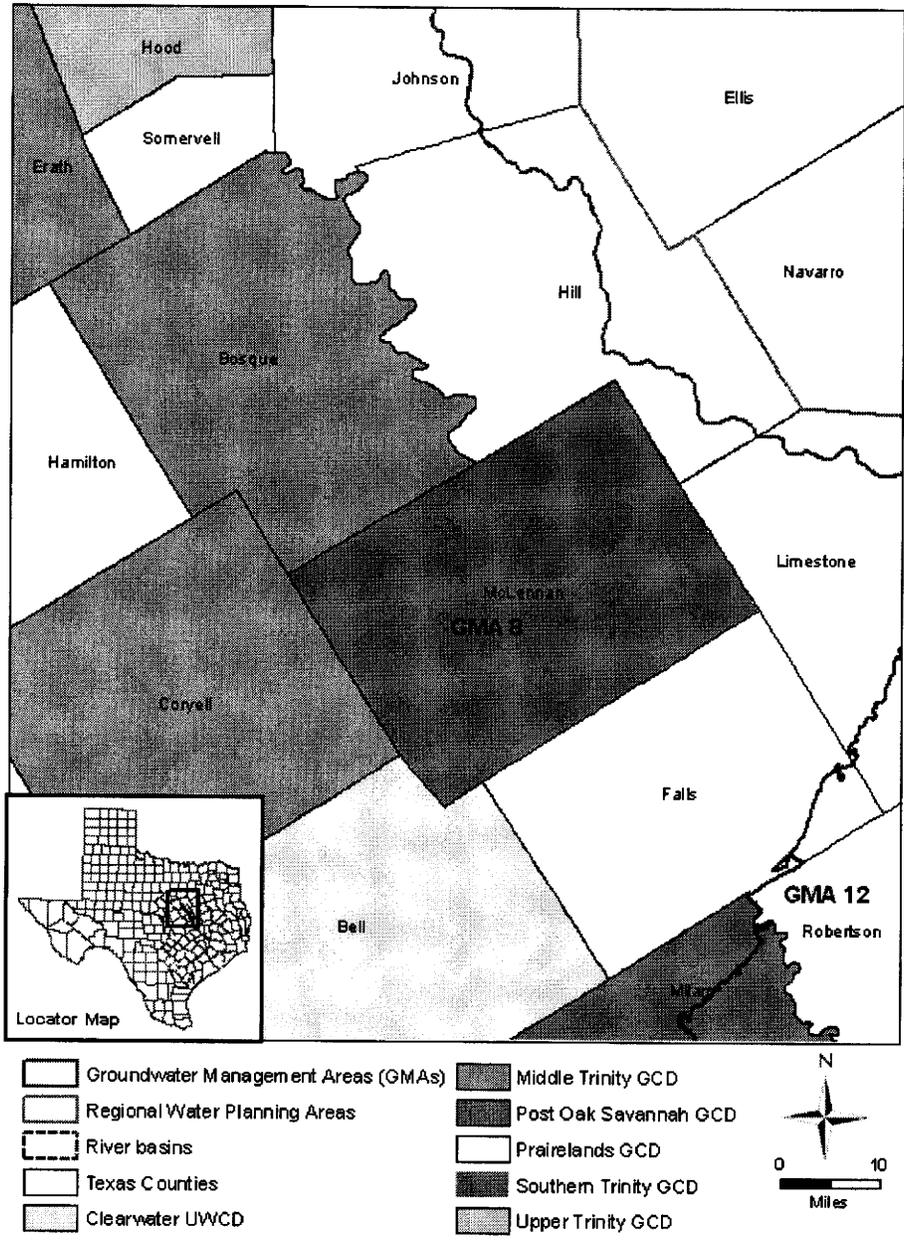


Figure 2. Map showing regional water planning areas, river basins, groundwater conservation districts and counties in and neighboring the Groundwater Management Area 8 assessment area. GCD = Groundwater Conservation District, UWCD = Underground Water Conservation District.

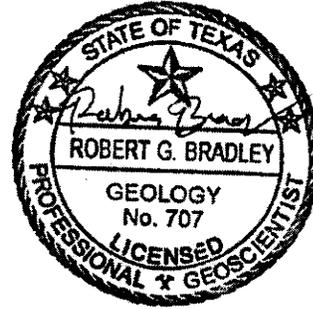
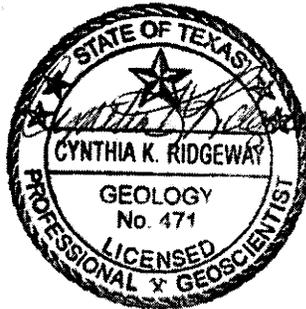
**APPENDIX L**

**Groundwater Availability Model Run 10-063 MAG**

# GAM Run 10-063 MAG

by Mr. Wade Oliver and Mr. Robert G. Bradley, P.G.

Texas Water Development Board  
Groundwater Availability Modeling Section  
(512) 463-3132  
December 14, 2011



Cynthia K. Ridgeway, the Manager of the Groundwater Availability Modeling Section and Interim Director of the Groundwater Resources Division, is responsible for oversight of work performed by employees under her direct supervision. The seal appearing on this document was authorized by Cynthia K. Ridgeway, P.G. 471 on December 14, 2011.

Robert G. Bradley, P.G. is responsible for the water budget approach for Comanche and Erath counties within Middle Trinity Groundwater Conservation District. The seal appearing on this document was authorized by Robert G. Bradley, P.G. 707 on December 14, 2011.

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**EXECUTIVE SUMMARY:**

In response to receiving the adopted desired future conditions for the Trinity Aquifer in Groundwater Management Area 8, the Texas Water Development Board completed Groundwater Availability Model (GAM) Run 08-84mag, which reported the “managed available groundwater” that achieves the adopted desired future conditions. Subsequent to the release of GAM Run 08-84mag, the Middle Trinity Groundwater Conservation District requested that the Texas Water Development Board reevaluate the “managed available groundwater” for Comanche and Erath counties. This resulted in the completion of Aquifer Assessment 09-07, which addressed these counties. In April 2011, the groundwater conservation districts in Groundwater Management Area 8 readopted the desired future conditions for the Trinity Aquifer previously adopted in September 2008.

This report, an update to GAM Run 08-84mag and Aquifer Assessment 09-07, incorporates the changes above and addresses the readopted desired future conditions. In addition, the pumping estimates previously reported as “managed available groundwater” in the above reports are reported here as “modeled available groundwater” to reflect changes in statute effective September 1, 2011. The modeled available groundwater for the Trinity Aquifer as a result of the desired future conditions adopted by the members of Groundwater Management Area 8 is approximately 261,000 acre-feet per year.

**REQUESTOR:**

Mr. Eddy Daniel of North Texas Groundwater Conservation District on behalf of Groundwater Management Area 8

**DESCRIPTION OF REQUEST:**

In a letter dated August 31, 2011, Mr. Eddy Daniel provided the Texas Water Development Board (TWDB) with the desired future conditions of the Trinity Aquifer adopted in a resolution, dated April 27, 2011, by the members of Groundwater Management Area 8. This resolution referenced the desired future conditions previously adopted for the aquifer on September 17, 2008 by the groundwater conservation districts within Groundwater Management Area 8. These are summarized in Table 1.

In response to receiving the initially adopted desired future conditions from September 2008, the Texas Water Development Board completed Groundwater Availability Model (GAM) Run 08-84mag, which reported the “managed available groundwater” that achieves the above desired future conditions (Wade, 2009). On June 12, 2009, the general manager and consultants for the Middle Trinity Groundwater Conservation District met with Texas Water Development Board staff to discuss issues they had concerning GAM Run 08-84mag. After discussion, staff reevaluated pumping estimates using a water-budget approach based on the desired future conditions for Comanche and Erath counties and released this analysis as Aquifer Assessment 09-07 on November 22, 2010 (Bradley, 2010). This report, an update to GAM Run 08-84mag and Aquifer Assessment 09-07, incorporates the two changes above. In addition, the pumping estimates previously reported as “managed available groundwater” in the above reports are

reported here as “modeled available groundwater” to reflect changes in statute effective September 1, 2011.

## **METHODS:**

Groundwater Management Area 8 contains the Trinity Aquifer, a major aquifer in Texas as defined in the 2007 State Water Plan (TWDB, 2007). The location of Groundwater Management Area 8, the Trinity Aquifer, and the groundwater availability model cells that represent the aquifer are shown in Figure 1.

### **Modeled Available Groundwater and Permitting**

As defined in Chapter 36 of the Texas Water Code, “modeled available groundwater” is the estimated average amount of water that may be produced annually to achieve a desired future condition. This is distinct from “managed available groundwater,” shown in the draft version of this report dated December 20, 2010, which was a permitting value and accounted for the estimated use of the aquifer exempt from permitting. This change was made to reflect changes in statute by the 82<sup>nd</sup> Texas Legislature, effective September 1, 2011.

Groundwater conservation districts are required to consider modeled available groundwater, along with several other factors, when issuing permits in order to manage groundwater production to achieve the desired future condition(s). The other factors districts must consider include annual precipitation and production patterns, the estimated amount of pumping exempt from permitting, existing permits, and a reasonable estimate of actual groundwater production under existing permits. The estimated amount of pumping exempt from permitting, which the Texas Water Development Board is now required to develop after soliciting input from applicable groundwater conservation districts, will be provided in a separate report.

## **PARAMETERS AND ASSUMPTIONS:**

The groundwater availability model for the northern portion of the Trinity Aquifer was used for the results presented in this report outside of Comanche and Erath counties. In those counties, a water budget approach was used. The parameters and assumptions for developing the modeled available groundwater are described below:

### *Groundwater Availability Model for the Northern Portion of the Trinity Aquifer*

- The results for modeled available groundwater presented here are based on the results reported as “managed available groundwater” in GAM Run 08-84mag (Wade, 2009) for all areas except Comanche and Erath counties. See GAM Run 08-84mag for a full description of the methods and assumptions associated with the model simulation. Because GAM Run 08-84mag presented constant pumping from 2000 to 2050, it was assumed for the purposes of this analysis that pumping from 2051 to 2060 was also constant at the same level. As summarized in Table 1, desired future conditions were defined by the groundwater conservation districts in Groundwater Management Area 8 for 2050. It is expected that pumping from 2051 to 2060 would cause additional

drawdown, but this analysis does not estimate drawdown in 2060. Pumping estimates for 2060 were important to include for purposes of regional water planning.

- Version 1.01 of the groundwater availability model for the northern portion of the Trinity Aquifer was used for this analysis. See Bené and others (2004) for assumptions and limitations of the model.
- The model includes seven layers which generally correspond to the Woodbine Aquifer (Layer 1), the Washita and Fredericksburg Groups (Layer 2), the Paluxy Formation (Layer 3), the Glen Rose Formation (Layer 4), the Hensell Formation (Layer 5), the Pearsall/Cow Creek/Hammett/Sligo Members (Layer 6), and the Hosston Formation (Layer 7).
- The mean absolute error (a measure of the difference between simulated and measured water levels during model calibration) for the four main aquifers in the model (Woodbine, Paluxy, Hensell, and Hosston) for the calibration and verification time periods (1980 to 2000) ranged from approximately 38 to 75 feet. The root mean squared error was less than ten percent of the maximum change in water levels across the model (Bené and others, 2004).
- Average annual recharge conditions based on climate data from 1980 to 1999 were assumed for the first 47 years of the simulation. The last three years of the simulation drought-of-record recharge conditions were assumed, which were defined as the years 1954 to 1956.
- Groundwater conservation district boundaries were updated since the release of GAM Run 08-84mag. The results presented here correspond to the official district boundaries as of the date of this report.

#### *Water Budget Approach for Comanche and Erath Counties*

- The modeled available groundwater presented for Comanche and Erath counties is based on Aquifer Assessment 09-07 (Bradley, 2010). See Aquifer Assessment 09-07 for a full description of the methods and assumptions associated with the water budget calculations.
- The Hensell and Hosston members were grouped as the Twin Mountains Formation in Aquifer Assessment 09-07. To be consistent with the desired future conditions, however, it was necessary to split the pumping in Aquifer Assessment 09-07 into the Hensell and Hosston members. In Comanche County, 10 percent of the pumping in the Twin Mountains Formation was assigned to the Hensell member while 90 percent was assigned to the Hosston. In Erath County, 35 percent of the pumping in Aquifer Assessment 09-07 was assigned to the Hensell with the remaining 65 percent assigned to the Hosston. These percentages were developed after a preliminary review of available pumping information and discussion with Joe Cooper of Middle Trinity Groundwater Conservation District.

## **RESULTS:**

The modeled available groundwater for the Trinity Aquifer in Groundwater Management Area 8 as a result of the desired future conditions is approximately 261,000 acre-feet per year between 2010 and 2060. This pumping has been divided by county, regional water planning area, and river basin for each decade between 2010 and 2060 for use in the regional water planning process (Table 2). These areas are shown in Figure 2.

Since the desired future conditions are specified for individual units of the Trinity Aquifer (Paluxy, Glen Rose, Hensell, and Hosston) based on the layering used in the model, the modeled available groundwater is shown for each unit in the subsequent tables. Tables 3, 4, 5, and 6 show the modeled available groundwater summarized by county in the Paluxy, Glen Rose, Hensell, and Hosston units of the Trinity Aquifer, respectively. Tables 7, 8, 9, and 10 show the modeled available groundwater summarized by regional water planning area for the same units, respectively. Tables 11, 12, 13, and 14 show the modeled available groundwater summarized by river basin for each of the above units, respectively. The modeled available groundwater summarized by groundwater conservation district is shown for the Paluxy, Glen Rose, Hensell, and Hosston units in tables 15, 16, 17, and 18, respectively. Notice that the pumping is totaled both excluding and including areas outside of a groundwater conservation district.

## **LIMITATIONS:**

The groundwater model used in developing estimates of modeled available groundwater is the best available scientific tool that can be used to estimate the pumping that will achieve the desired future conditions. Although the groundwater model used in this analysis is the best available scientific tool for this purpose, it, like all models, has limitations. In reviewing the use of models in environmental regulatory decision-making, the National Research Council (2007) noted:

“Models will always be constrained by computational limitations, assumptions, and knowledge gaps. They can best be viewed as tools to help inform decisions rather than as machines to generate truth or make decisions. Scientific advances will never make it possible to build a perfect model that accounts for every aspect of reality or to prove that a given model is correct in all respects for a particular regulatory application. These characteristics make evaluation of a regulatory model more complex than solely a comparison of measurement data with model results.”

A key aspect of using the groundwater model to develop estimates of modeled available groundwater is the need to make assumptions about the location in the aquifer where future pumping will occur. As actual pumping changes in the future, it will be necessary to evaluate the amount of that pumping as well as its location in the context of the assumptions associated with this analysis. Evaluating the amount and location of future pumping is as important as evaluating the changes in groundwater levels, spring flows, and other metrics that describe the condition of the groundwater resources in the area that relate to the adopted desired future condition(s).

Given these limitations, users of this information are cautioned that the modeled available groundwater numbers should not be considered a definitive, permanent description of the amount

of groundwater that can be pumped to meet the adopted desired future condition. Because the application of the groundwater model was designed to address regional scale questions, the results are most effective on a regional scale. The TWDB makes no warranties or representations relating to the actual conditions of any aquifer at a particular location or at a particular time.

It is important for groundwater conservation districts to monitor future groundwater pumping as well as whether or not they are achieving their desired future conditions. Because of the limitations of the model and the assumptions in this analysis, it is important that the groundwater conservation districts work with the TWDB to refine the modeled available groundwater numbers given the reality of how the aquifer responds to the actual amount and location of pumping now and in the future.

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Table 1. Desired future conditions (in feet of drawdown) for each unit of the Trinity Aquifer adopted by members of Groundwater Management Area 8.

County	Average water level decrease (feet)			
	Paluxy	Glen Rose	Hensell	Hosston
Bell	134	155	286	319
Bosque	26	33	201	220
Brown	0	0	1	1
Burnet	1	1	11	29
Callahan	n/a	n/a	0	2
Collin	298	247	224	236
Comanche	0	0	2	11
Cooke	26	42	60	78
Coryell	15	15	156	179
Dallas	240	224	263	290
Delta	175	162	162	159
Denton	98	134	180	214
Eastland	0	0	0	0
Ellis	265	283	336	362
Erath	1	1	11	27
Falls	279	354	459	480
Fannin	212	196	182	181
Grayson	175	161	160	165
Hamilton	0	2	39	51
Hill	209	253	381	406
Hood	1	2	16	56
Hunt	286	245	215	223
Johnson	37	83	208	234
Kaufman	303	286	295	312
Lamar	132	130	136	134
Lampasas	0	1	12	23
Limestone	328	392	475	492
McLennan	251	291	489	527
Milam	252	294	337	344
Mills	0	0	3	12
Montague	0	1	3	12
Navarro	344	353	399	413
Parker	5	6	16	40
Red River	82	77	78	78
Rockwall	346	272	248	265
Somervell	1	4	53	113
Tarrant	33	75	160	173
Taylor	n/a	n/a	n/a	3
Travis	124	61	98	116
Williamson	108	88	142	166
Wise	4	14	23	53

Table 2. Modeled available groundwater in acre-feet for the Trinity Aquifer in Groundwater Management Area 8 by county, regional water planning area, and river basin.

County	Regional Water Planning Area	Basin	Year					
			2010	2020	2030	2040	2050	2060
Bell	G	Brazos	7,068	7,068	7,068	7,068	7,068	7,068
Bosque	G	Brazos	5,849	5,849	5,849	5,849	5,849	5,849
Brown	F	Brazos	28	28	28	28	28	28
		Colorado	2,017	2,017	2,017	2,017	2,017	2,017
Burnet	K	Brazos	2,723	2,723	2,723	2,723	2,723	2,723
		Colorado	823	823	823	823	823	823
Callahan	G	Brazos	1,792	1,792	1,792	1,792	1,792	1,792
		Colorado	1,985	1,985	1,985	1,985	1,985	1,985
Collin	C	Sabine	0	0	0	0	0	0
		Trinity	2,104	2,104	2,104	2,104	2,104	2,104
Comanche	G	Brazos	32,115	32,115	32,115	32,115	32,115	32,115
		Colorado	120	120	120	120	120	120
Cooke	C	Red	1,284	1,284	1,284	1,284	1,284	1,284
		Trinity	5,566	5,566	5,566	5,566	5,566	5,566
Coryell	G	Brazos	3,716	3,716	3,716	3,716	3,716	3,716
Dallas	C	Trinity	5,458	5,458	5,458	5,458	5,458	5,458
Delta	D	Sulphur	362	362	362	362	362	362
Denton	C	Trinity	19,333	19,333	19,333	19,333	19,333	19,333
Eastland	G	Brazos	4,489	4,489	4,489	4,489	4,489	4,489
		Colorado	231	231	231	231	231	231
Ellis	C	Trinity	3,959	3,959	3,959	3,959	3,959	3,959
Erath	G	Brazos	32,926	32,926	32,926	32,926	32,926	32,926
Falls	G	Brazos	169	169	169	169	169	169
Fannin	C	Red	617	617	617	617	617	617
		Sulphur	0	0	0	0	0	0
		Trinity	83	83	83	83	83	83
Franklin	D	Sulphur	0	0	0	0	0	0
Grayson	C	Red	7,722	7,722	7,722	7,722	7,722	7,722
		Trinity	1,678	1,678	1,678	1,678	1,678	1,678
Hamilton	G	Brazos	2,144	2,144	2,144	2,144	2,144	2,144
Hill	G	Brazos	3,086	3,086	3,086	3,086	3,086	3,086
		Trinity	61	61	61	61	61	61
Hood	G	Brazos	11,081	11,081	11,081	11,081	11,081	11,081
		Trinity	64	64	64	64	64	64
Hunt	D	Sabine	0	0	0	0	0	0
		Sulphur	0	0	0	0	0	0
		Trinity	551	551	551	551	551	551
Johnson	G	Brazos	4,940	4,940	4,940	4,940	4,940	4,940
		Trinity	7,931	7,931	7,931	7,931	7,931	7,931
Kaufman	C	Sabine	45	45	45	45	45	45
		Trinity	1,136	1,136	1,136	1,136	1,136	1,136

Table 2. Continued.

County	Regional Water Planning Area	Basin	Year					
			2010	2020	2030	2040	2050	2060
Lamar	D	Red	1,320	1,320	1,320	1,320	1,320	1,320
		Sulphur	2	2	2	2	2	2
Lampasas	G	Brazos	2,925	2,925	2,925	2,925	2,925	2,925
		Colorado	192	192	192	192	192	192
Limestone	G	Brazos	69	69	69	69	69	69
		Trinity	0	0	0	0	0	0
McLennan	G	Brazos	20,690	20,690	20,690	20,690	20,690	20,690
Milam	G	Brazos	288	288	288	288	288	288
Mills	K	Brazos	1,273	1,273	1,273	1,273	1,273	1,273
		Colorado	1,128	1,128	1,128	1,128	1,128	1,128
Montague	B	Brazos	0	0	0	0	0	0
		Red	129	129	129	129	129	129
		Trinity	2,545	2,545	2,545	2,545	2,545	2,545
Navarro	C	Trinity	1,873	1,873	1,873	1,873	1,873	1,873
Parker	C	Brazos	2,799	2,799	2,799	2,799	2,799	2,799
		Trinity	12,449	12,449	12,449	12,449	12,449	12,449
Red River	D	Red	263	263	263	263	263	263
		Sulphur	267	267	267	267	267	267
Rockwall	C	Sabine	0	0	0	0	0	0
		Trinity	958	958	958	958	958	958
Somervell	G	Brazos	2,485	2,485	2,485	2,485	2,485	2,485
Tarrant	C	Trinity	18,747	18,747	18,747	18,747	18,747	18,747
Taylor	G	Brazos	153	153	153	153	153	153
		Colorado	278	278	278	278	278	278
Travis	K	Brazos	8	8	8	8	8	8
		Colorado	3,882	3,882	3,882	3,882	3,882	3,882
Williamson	G	Brazos	1,514	1,514	1,514	1,514	1,514	1,514
		Colorado	68	68	68	68	68	68
	K	Brazos	157	157	157	157	157	157
		Colorado	61	61	61	61	61	61
Wise	C	Trinity	9,282	9,282	9,282	9,282	9,282	9,282
<b>Total</b>			<b>261,061</b>	<b>261,061</b>	<b>261,061</b>	<b>261,061</b>	<b>261,061</b>	<b>261,061</b>

Table 3. Modeled available groundwater for the Paluxy unit of the Trinity Aquifer summarized by county in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

County	Year					
	2010	2020	2030	2040	2050	2060
Bell	96	96	96	96	96	96
Bosque	1,013	1,013	1,013	1,013	1,013	1,013
Brown	18	18	18	18	18	18
Burnet	182	182	182	182	182	182
Collin	1,762	1,762	1,762	1,762	1,762	1,762
Comanche	2,292	2,292	2,292	2,292	2,292	2,292
Cooke	3,528	3,528	3,528	3,528	3,528	3,528
Coryell	254	254	254	254	254	254
Dallas	433	433	433	433	433	433
Delta	0	0	0	0	0	0
Denton	9,822	9,822	9,822	9,822	9,822	9,822
Eastland	4	4	4	4	4	4
Ellis	400	400	400	400	400	400
Erath	13,614	13,614	13,614	13,614	13,614	13,614
Falls	0	0	0	0	0	0
Fannin	288	288	288	288	288	288
Grayson	4,708	4,708	4,708	4,708	4,708	4,708
Hamilton	291	291	291	291	291	291
Hill	1,254	1,254	1,254	1,254	1,254	1,254
Hood	942	942	942	942	942	942
Hunt	551	551	551	551	551	551
Johnson	9,493	9,493	9,493	9,493	9,493	9,493
Kaufman	102	102	102	102	102	102
Lamar	0	0	0	0	0	0
Lampasas	13	13	13	13	13	13
Limestone	0	0	0	0	0	0
McLennan	231	231	231	231	231	231
Milam	0	0	0	0	0	0
Mills	5	5	5	5	5	5
Montague	505	505	505	505	505	505
Navarro	413	413	413	413	413	413
Parker	9,800	9,800	9,800	9,800	9,800	9,800
Red River	473	473	473	473	473	473
Rockwall	958	958	958	958	958	958
Somervell	120	120	120	120	120	120
Tarrant	10,544	10,544	10,544	10,544	10,544	10,544
Travis	3	3	3	3	3	3
Williamson	11	11	11	11	11	11
Wise	2,559	2,559	2,559	2,559	2,559	2,559
<b>Total</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>

Table 4. Modeled available groundwater for the Glen Rose unit of the Trinity Aquifer summarized by county in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

County	Year					
	2010	2020	2030	2040	2050	2060
Bell	880	880	880	880	880	880
Bosque	258	258	258	258	258	258
Brown	0	0	0	0	0	0
Burnet	205	205	205	205	205	205
Collin	0	0	0	0	0	0
Comanche	0	0	0	0	0	0
Cooke	0	0	0	0	0	0
Coryell	784	784	784	784	784	784
Dallas	0	0	0	0	0	0
Delta	0	0	0	0	0	0
Denton	0	0	0	0	0	0
Eastland	0	0	0	0	0	0
Ellis	0	0	0	0	0	0
Erath	41	41	41	41	41	41
Falls	2	2	2	2	2	2
Fannin	0	0	0	0	0	0
Franklin	0	0	0	0	0	0
Grayson	0	0	0	0	0	0
Hamilton	46	46	46	46	46	46
Hill	10	10	10	10	10	10
Hood	4	4	4	4	4	4
Hunt	0	0	0	0	0	0
Johnson	24	24	24	24	24	24
Kaufman	0	0	0	0	0	0
Lamar	0	0	0	0	0	0
Lampasas	773	773	773	773	773	773
Limestone	4	4	4	4	4	4
McLennan	265	265	265	265	265	265
Milam	149	149	149	149	149	149
Mills	66	66	66	66	66	66
Montague	0	0	0	0	0	0
Navarro	0	0	0	0	0	0
Parker	192	192	192	192	192	192
Red River	0	0	0	0	0	0
Rockwall	0	0	0	0	0	0
Somervell	134	134	134	134	134	134
Tarrant	112	112	112	112	112	112
Travis	2,612	2,612	2,612	2,612	2,612	2,612
Williamson	760	760	760	760	760	760
Wise	5	5	5	5	5	5
<b>Total</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>

Table 5. Modeled available groundwater for the Hensell unit of the Trinity Aquifer summarized by county in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

County	Year					
	2010	2020	2030	2040	2050	2060
Bell	1,099	1,099	1,099	1,099	1,099	1,099
Bosque	1,749	1,749	1,749	1,749	1,749	1,749
Brown	79	79	79	79	79	79
Burnet	690	690	690	690	690	690
Callahan	123	123	123	123	123	123
Collin	103	103	103	103	103	103
Comanche	2,995	2,995	2,995	2,995	2,995	2,995
Cooke	1,611	1,611	1,611	1,611	1,611	1,611
Coryell	1,765	1,765	1,765	1,765	1,765	1,765
Dallas	1,121	1,121	1,121	1,121	1,121	1,121
Delta	181	181	181	181	181	181
Denton	3,112	3,112	3,112	3,112	3,112	3,112
Eastland	79	79	79	79	79	79
Ellis	1,142	1,142	1,142	1,142	1,142	1,142
Erath	6,745	6,745	6,745	6,745	6,745	6,745
Falls	22	22	22	22	22	22
Fannin	203	203	203	203	203	203
Grayson	2,345	2,345	2,345	2,345	2,345	2,345
Hamilton	1,109	1,109	1,109	1,109	1,109	1,109
Hill	933	933	933	933	933	933
Hood	3,595	3,595	3,595	3,595	3,595	3,595
Hunt	0	0	0	0	0	0
Johnson	1,065	1,065	1,065	1,065	1,065	1,065
Kaufman	240	240	240	240	240	240
Lamar	661	661	661	661	661	661
Lampasas	885	885	885	885	885	885
Limestone	15	15	15	15	15	15
McLennan	4,190	4,190	4,190	4,190	4,190	4,190
Milam	36	36	36	36	36	36
Mills	946	946	946	946	946	946
Montague	362	362	362	362	362	362
Navarro	256	256	256	256	256	256
Parker	1,441	1,441	1,441	1,441	1,441	1,441
Red River	19	19	19	19	19	19
Rockwall	0	0	0	0	0	0
Somervell	741	741	741	741	741	741
Tarrant	2,535	2,535	2,535	2,535	2,535	2,535
Travis	156	156	156	156	156	156
Williamson	415	415	415	415	415	415
Wise	1,480	1,480	1,480	1,480	1,480	1,480
<b>Total</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>

Table 6. Modeled available groundwater for the Hosston unit of the Trinity Aquifer summarized by county in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

County	Year					
	2010	2020	2030	2040	2050	2060
Bell	4,993	4,993	4,993	4,993	4,993	4,993
Bosque	2,829	2,829	2,829	2,829	2,829	2,829
Brown	1,948	1,948	1,948	1,948	1,948	1,948
Burnet	2,469	2,469	2,469	2,469	2,469	2,469
Callahan	3,654	3,654	3,654	3,654	3,654	3,654
Collin	239	239	239	239	239	239
Comanche	26,948	26,948	26,948	26,948	26,948	26,948
Cooke	1,711	1,711	1,711	1,711	1,711	1,711
Coryell	913	913	913	913	913	913
Dallas	3,904	3,904	3,904	3,904	3,904	3,904
Delta	181	181	181	181	181	181
Denton	6,399	6,399	6,399	6,399	6,399	6,399
Eastland	4,637	4,637	4,637	4,637	4,637	4,637
Ellis	2,417	2,417	2,417	2,417	2,417	2,417
Erath	12,526	12,526	12,526	12,526	12,526	12,526
Falls	145	145	145	145	145	145
Fannin	209	209	209	209	209	209
Franklin	0	0	0	0	0	0
Grayson	2,347	2,347	2,347	2,347	2,347	2,347
Hamilton	698	698	698	698	698	698
Hill	950	950	950	950	950	950
Hood	6,604	6,604	6,604	6,604	6,604	6,604
Hunt	0	0	0	0	0	0
Johnson	2,289	2,289	2,289	2,289	2,289	2,289
Kaufman	839	839	839	839	839	839
Lamar	661	661	661	661	661	661
Lampasas	1,446	1,446	1,446	1,446	1,446	1,446
Limestone	50	50	50	50	50	50
McLennan	16,004	16,004	16,004	16,004	16,004	16,004
Milam	103	103	103	103	103	103
Mills	1,384	1,384	1,384	1,384	1,384	1,384
Montague	1,807	1,807	1,807	1,807	1,807	1,807
Navarro	1,204	1,204	1,204	1,204	1,204	1,204
Parker	3,815	3,815	3,815	3,815	3,815	3,815
Red River	38	38	38	38	38	38
Rockwall	0	0	0	0	0	0
Somervell	1,490	1,490	1,490	1,490	1,490	1,490
Tarrant	5,556	5,556	5,556	5,556	5,556	5,556
Taylor	431	431	431	431	431	431
Travis	1,119	1,119	1,119	1,119	1,119	1,119
Williamson	614	614	614	614	614	614
Wise	5,238	5,238	5,238	5,238	5,238	5,238
<b>Total</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>

Table 7. Modeled available groundwater for the Paluxy unit of the Trinity Aquifer summarized by regional water planning area in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

Regional Water Planning Area	Year					
	2010	2020	2030	2040	2050	2060
B	505	505	505	505	505	505
C	45,317	45,317	45,317	45,317	45,317	45,317
D	1,024	1,024	1,024	1,024	1,024	1,024
F	18	18	18	18	18	18
G	29,628	29,628	29,628	29,628	29,628	29,628
K	190	190	190	190	190	190
<b>Total</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>

Table 8. Modeled available groundwater for the Glen Rose unit of the Trinity Aquifer summarized by regional water planning area in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

Regional Water Planning Area	Year					
	2010	2020	2030	2040	2050	2060
B	0	0	0	0	0	0
C	309	309	309	309	309	309
D	0	0	0	0	0	0
F	0	0	0	0	0	0
G	4,016	4,016	4,016	4,016	4,016	4,016
K	3,001	3,001	3,001	3,001	3,001	3,001
<b>Total</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>

Table 9. Modeled available groundwater for the Hensell unit of the Trinity Aquifer summarized by regional water planning area in Groundwater Management Area 12 for each decade between 2010 and 2060. Results are in acre-feet per year.

Regional Water Planning Area	Year					
	2010	2020	2030	2040	2050	2060
B	362	362	362	362	362	362
C	15,589	15,589	15,589	15,589	15,589	15,589
D	861	861	861	861	861	861
F	79	79	79	79	79	79
G	27,514	27,514	27,514	27,514	27,514	27,514
K	1,839	1,839	1,839	1,839	1,839	1,839
<b>Total</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>

Table 10. Modeled available groundwater for the Hosston unit of the Trinity Aquifer summarized by regional water planning area in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

Regional Water Planning Area	Year					
	2010	2020	2030	2040	2050	2060
B	1,807	1,807	1,807	1,807	1,807	1,807
C	33,878	33,878	33,878	33,878	33,878	33,878
D	880	880	880	880	880	880
F	1,948	1,948	1,948	1,948	1,948	1,948
G	87,271	87,271	87,271	87,271	87,271	87,271
K	5,025	5,025	5,025	5,025	5,025	5,025
<b>Total</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>

Table 11. Modeled available groundwater for the Paluxy unit of the Trinity Aquifer summarized by river basin in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

River Basin	Year					
	2010	2020	2030	2040	2050	2060
Brazos	23,223	23,223	23,223	23,223	23,223	23,223
Colorado	193	193	193	193	193	193
Red	4,943	4,943	4,943	4,943	4,943	4,943
Sabine	4	4	4	4	4	4
Sulphur	267	267	267	267	267	267
Trinity	48,052	48,052	48,052	48,052	48,052	48,052
<b>Total</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>

Table 12. Modeled available groundwater for the Glen Rose unit of the Trinity Aquifer summarized by river basin in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

River Basin	Year					
	2010	2020	2030	2040	2050	2060
Brazos	4,263	4,263	4,263	4,263	4,263	4,263
Colorado	2,753	2,753	2,753	2,753	2,753	2,753
Red	0	0	0	0	0	0
Sabine	0	0	0	0	0	0
Sulphur	0	0	0	0	0	0
Trinity	310	310	310	310	310	310
<b>Total</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>

Table 13. Modeled available groundwater for the Hensell unit of the Trinity Aquifer summarized by river basin in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

River Basin	Year					
	2010	2020	2030	2040	2050	2060
Brazos	29,030	29,030	29,030	29,030	29,030	29,030
Colorado	585	585	585	585	585	585
Red	3,129	3,129	3,129	3,129	3,129	3,129
Sabine	9	9	9	9	9	9
Sulphur	182	182	182	182	182	182
Trinity	13,309	13,309	13,309	13,309	13,309	13,309
<b>Total</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>

Table 14. Modeled available groundwater for the Hosston unit of the Trinity Aquifer summarized by river basin in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

River Basin	Year					
	2010	2020	2030	2040	2050	2060
Brazos	87,971	87,971	87,971	87,971	87,971	87,971
Colorado	7,254	7,254	7,254	7,254	7,254	7,254
Red	3,263	3,263	3,263	3,263	3,263	3,263
Sabine	32	32	32	32	32	32
Sulphur	182	182	182	182	182	182
Trinity	32,107	32,107	32,107	32,107	32,107	32,107
<b>Total</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>

Table 15. Modeled available groundwater for the Paluxy unit of the Trinity Aquifer summarized by groundwater conservation district (GCD) in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year. UWCD refers to Underground Water Conservation District. WD refers to Water District.

Groundwater Conservation District	Year					
	2010	2020	2030	2040	2050	2060
Central Texas GCD	182	182	182	182	182	182
Clearwater UWCD	96	96	96	96	96	96
Fox Crossing WD	5	5	5	5	5	5
Middle Trinity GCD	17,173	17,173	17,173	17,173	17,173	17,173
North Texas GCD	15,112	15,112	15,112	15,112	15,112	15,112
Northern Trinity GCD	10,544	10,544	10,544	10,544	10,544	10,544
Post Oak Savannah GCD	0	0	0	0	0	0
Prairielands GCD	11,267	11,267	11,267	11,267	11,267	11,267
Red River GCD	4,996	4,996	4,996	4,996	4,996	4,996
Saratoga UWCD	13	13	13	13	13	13
Southern Trinity GCD	231	231	231	231	231	231
Upper Trinity GCD	13,806	13,806	13,806	13,806	13,806	13,806
<b>Total (excluding non-district areas)</b>	<b>73,425</b>	<b>73,425</b>	<b>73,425</b>	<b>73,425</b>	<b>73,425</b>	<b>73,425</b>
No District	3,257	3,257	3,257	3,257	3,257	3,257
<b>Total (including non-district areas)</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>	<b>76,682</b>

Table 16. Modeled available groundwater for the Glen Rose unit of the Trinity Aquifer summarized by groundwater conservation district (GCD) in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year. UWCD refers to Underground Water Conservation District. WD refers to Water District.

Groundwater Conservation District	Year					
	2010	2020	2030	2040	2050	2060
Central Texas GCD	205	205	205	205	205	205
Clearwater UWCD	880	880	880	880	880	880
Fox Crossing WD	66	66	66	66	66	66
Middle Trinity GCD	1,083	1,083	1,083	1,083	1,083	1,083
North Texas GCD	0	0	0	0	0	0
Northern Trinity GCD	112	112	112	112	112	112
Post Oak Savannah GCD	149	149	149	149	149	149
Prairielands GCD	168	168	168	168	168	168
Red River GCD	0	0	0	0	0	0
Saratoga UWCD	773	773	773	773	773	773
Southern Trinity GCD	265	265	265	265	265	265
Upper Trinity GCD	201	201	201	201	201	201
<b>Total (excluding non-district areas)</b>	<b>3,902</b>	<b>3,902</b>	<b>3,902</b>	<b>3,902</b>	<b>3,902</b>	<b>3,902</b>
No District	3,424	3,424	3,424	3,424	3,424	3,424
<b>Total (including non-district areas)</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>	<b>7,326</b>

Table 17. Modeled available groundwater for the Hensell unit of the Trinity Aquifer summarized by groundwater conservation district (GCD) in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year. UWCD refers to Underground Water Conservation District. WD refers to Water District.

Groundwater Conservation District	Year					
	2010	2020	2030	2040	2050	2060
Central Texas GCD	690	690	690	690	690	690
Clearwater UWCD	1,099	1,099	1,099	1,099	1,099	1,099
Fox Crossing WD	946	946	946	946	946	946
Middle Trinity GCD	13,254	13,254	13,254	13,254	13,254	13,254
North Texas GCD	4,826	4,826	4,826	4,826	4,826	4,826
Northern Trinity GCD	2,535	2,535	2,535	2,535	2,535	2,535
Post Oak Savannah GCD	36	36	36	36	36	36
Prairielands GCD	3,881	3,881	3,881	3,881	3,881	3,881
Red River GCD	2,548	2,548	2,548	2,548	2,548	2,548
Saratoga UWCD	885	885	885	885	885	885
Southern Trinity GCD	4,190	4,190	4,190	4,190	4,190	4,190
Upper Trinity GCD	6,878	6,878	6,878	6,878	6,878	6,878
<b>Total (excluding non-district areas)</b>	<b>41,768</b>	<b>41,768</b>	<b>41,768</b>	<b>41,768</b>	<b>41,768</b>	<b>41,768</b>
No District	4,476	4,476	4,476	4,476	4,476	4,476
<b>Total (including non-district areas)</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>	<b>46,244</b>

Table 18. Modeled available groundwater for the Hosston unit of the Trinity Aquifer summarized by groundwater conservation district (GCD) in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year. UWCD refers to Underground Water Conservation District. WD refers to Water District.

Groundwater Conservation District	Year					
	2010	2020	2030	2040	2050	2060
Central Texas GCD	2,469	2,469	2,469	2,469	2,469	2,469
Clearwater UWCD	4,993	4,993	4,993	4,993	4,993	4,993
Fox Crossing WD	1,384	1,384	1,384	1,384	1,384	1,384
Middle Trinity GCD	43,216	43,216	43,216	43,216	43,216	43,216
North Texas GCD	8,349	8,349	8,349	8,349	8,349	8,349
Northern Trinity GCD	5,556	5,556	5,556	5,556	5,556	5,556
Post Oak Savannah GCD	103	103	103	103	103	103
Prairielands GCD	7,146	7,146	7,146	7,146	7,146	7,146
Red River GCD	2,556	2,556	2,556	2,556	2,556	2,556
Saratoga UWCD	1,446	1,446	1,446	1,446	1,446	1,446
Southern Trinity GCD	16,004	16,004	16,004	16,004	16,004	16,004
Upper Trinity GCD	17,464	17,464	17,464	17,464	17,464	17,464
<b>Total (excluding non-district areas)</b>	<b>110,686</b>	<b>110,686</b>	<b>110,686</b>	<b>110,686</b>	<b>110,686</b>	<b>110,686</b>
No District	20,123	20,123	20,123	20,123	20,123	20,123
<b>Total (including non-district areas)</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>	<b>130,809</b>

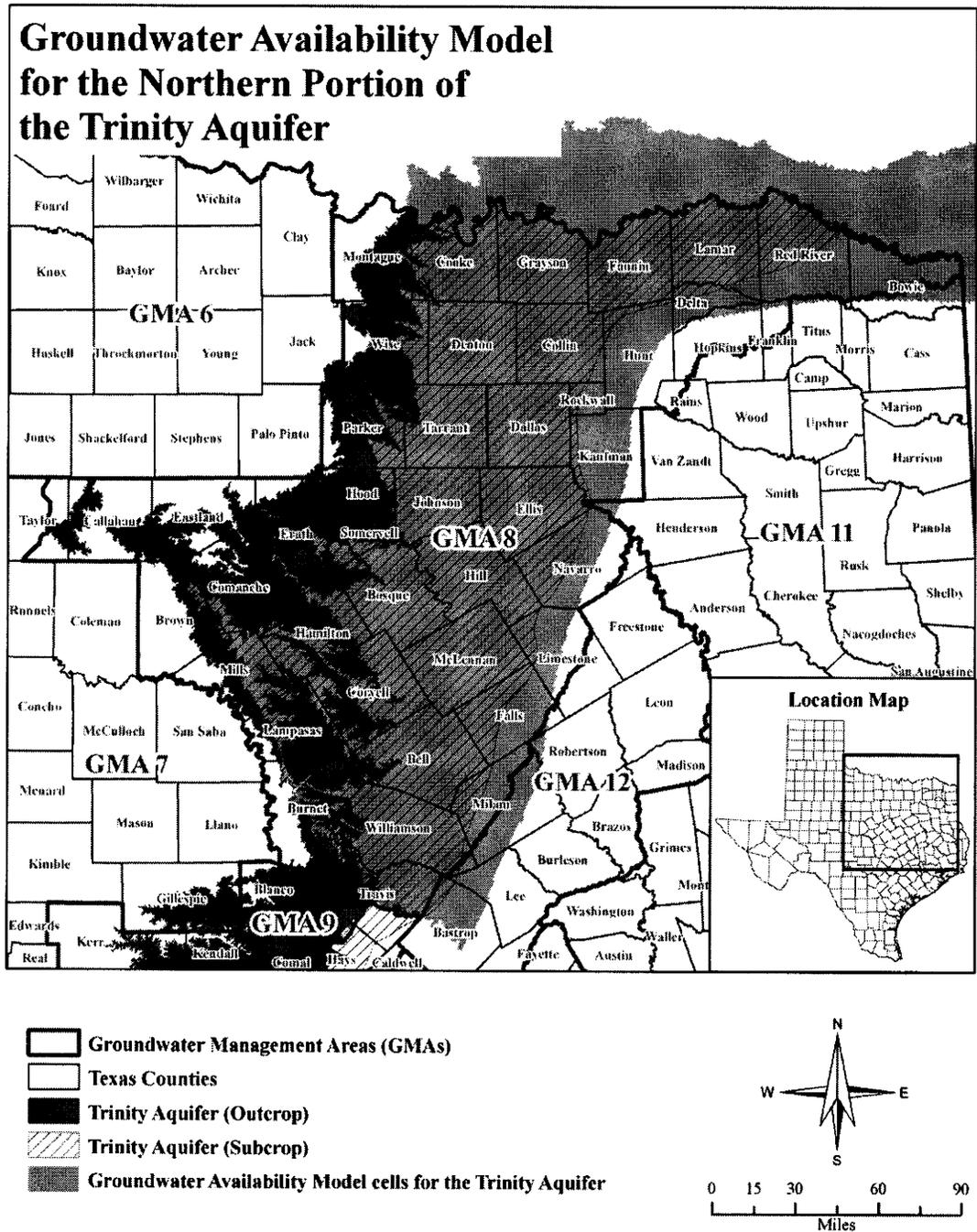


Figure 1. Map showing the areas of the groundwater availability model representing the northern portion of the Trinity Aquifer and the boundary of Groundwater Management Area 8.

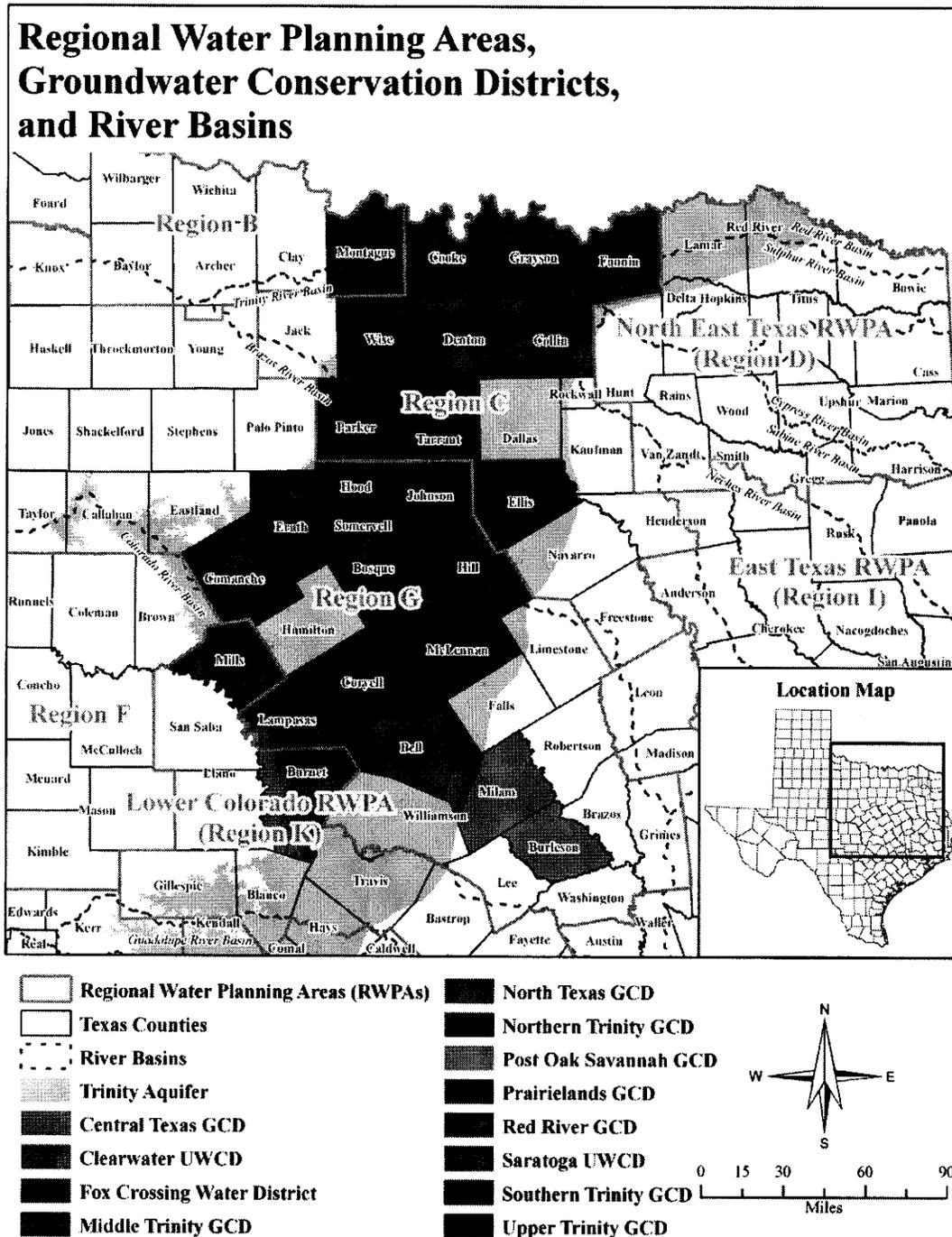


Figure 2. Map showing regional water planning areas (RWPA), groundwater conservation districts (GCD), counties, and river basins in and neighboring Groundwater Management Area 8.