

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



**AN ORDER** Designating the Central Texas - Trinity Aquifer - Priority Groundwater Management Area and Approving the Executive Director's Recommendations Regarding Groundwater Conservation Districts in the PGMA, TCEQ Docket No. 2008-0099-MIS; SOAH Docket No. 582-08-1502

On October 22, 2008, the Texas Commission on Environmental Quality (Commission or TCEQ) considered Executive Director's Petition for Designation of the Central Texas – Trinity Aquifer – Priority Groundwater Management Area (PGMA) and the Executive Director's recommendations for creation of Groundwater Conservation Districts (GCDs) in the PGMA. The Administrative Law Judge (ALJ) with the State Office of Administrative Hearings (SOAH), presented a Proposal for Decision (PFD) which recommended that the Commission designate the Central Texas PGMA and approve the Executive Director's recommendations for creation of GCDs in the PGMA. After considering the ALJ's PFD, the Commission adopts the following Findings of Fact and Conclusions of Law:

## FINDINGS OF FACT

### Procedural History

1. In 1990, the Executive Director (ED) wrote a report concerning critical area designation in McLennan, Coryell, Bosque, Hill, Somervell, Brown, Erath, Callahan, Falls, Hamilton, Eastland, Bell, Lampasas, Mills, Comanche, Limestone, and Milam Counties. The Texas Water Commission decided not to designate the area at that time, but determined that the area should be restudied in the future.

2. In 1998, the ED reinitiated the study and requested reports from the Texas Water Development Board (TWDB) and Texas Parks & Wildlife Department (TPWD). The TWDB and TPWD prepared reports and sent them to the ED in 1999.
3. On October 18, 2004, the Executive Director sent notice of the initiation of the study to approximately 532 stakeholders. These stakeholders included area legislators, planning entities, county officials, municipalities, river authorities, groundwater conservation districts, water districts, entities supplying public drinking water, agricultural interest groups, selected federal and state agencies, and environmental interest groups. Seven comments were received.
4. The Executive Director mailed notice of its draft report, "Updated Evaluation for the Central Texas – Trinity Aquifer – Priority Groundwater Management Study Area," (the report) to the same stakeholders. Three stakeholders provided written comment after this notice was given.
5. When the report was final, notice of the final report was sent to the same stakeholders and notice was placed in the *Texas Register*. A copy of the draft report was placed in the county clerk's offices in the proposed PGMA, libraries and public places in the 16-county study area, and all GCDs adjacent to or in the study area.
6. Notice of the hearing was mailed on February 8, 2008, to all the stakeholders, governing bodies of each county, adjacent GCDs, river authorities, municipalities, water authorities or other entities that supply public drinking water, including each holder of a CCN, and irrigation districts in the proposed PGMA.
7. Notice of the hearing was published in the following newspapers:

*The Clifton Record*, Bosque County, February 29, 2008  
*Bosque County News*, Bosque County, February 22, 2008  
*Gatesville Messenger*, Coryell County, February 27, 2008  
*The Copperas Cove Leader*, Coryell County, February 22, 2008  
*The Mart Messenger*, Coryell County, February 22, 2008  
*The Hillsboro Reporter*, Hill County, February 25, 2008  
*Waco Tribune Herald*, McLennan County, February 27, 2008

*The Lonestar Iconoclast*, McLennan County, February 22, 2008  
*The McGregor Mirror*, McLennan County, February 26, 2008  
*The Glen Rose Reporter*, Somervell County, February 26, 2008

8. The ALJ conducted a preliminary hearing and took jurisdiction of this matter on April 3, 2008 in Waco, Texas.
9. Hearing on the merits was held May 1, 2008, in Waco, Texas.
10. At the Evidentiary Hearing, parties were allowed to present evidence and cross examine the Executive Director's witnesses.

**Designation of the Central Texas – Trinity Aquifer – PGMA**

11. Water needs throughout the study area are primarily met with surface water. Despite that fact, almost constant quantities of groundwater are being used in the study area.
12. The Trinity Group aquifer is the only major aquifer in the study area.
13. The Trinity Aquifer supplies about 52.9 percent of the groundwater available in the study area.
14. The Trinity Aquifer provides all of the groundwater in Callahan, Comanche, Coryell, Eastland, Erath, Hamilton, Mills, and Somervell Counties.
15. The major portion of groundwater used in Bell, Brown, and Hill counties is from the Trinity Aquifer.
16. The Trinity Aquifer supplies water to Bosque and McLennan Counties.
17. The population of the study area will increase by approximately 32.5 percent from 2000 to 2030.
18. Bosque, Coryell, and Somervell Counties will experience an increase in population from 2000 to 2030 of more than 30% percent.
19. Major water level declines occur in areas of high groundwater usage in the study area.

20. Groundwater declines occur only in the confined portion of the Trinity aquifer and not in the outcrop or recharge zones. In the outcrop area the water levels fluctuate according to the amount of rainfall. Counties in the outcrop area are in the western part of the study area, and include Erath, Comanche, Lampasas, and Hamilton, Callahan, Brown, Eastland, and Mills counties
21. More groundwater is being withdrawn than is effectively recharged to aquifers in the Central Texas PGMA study area.
22. Historically, pumpage in the study area has exceeded effective recharge resulting in declining water levels, removal of water from aquifer storage, and possible deterioration of chemical quality.
23. The greatest groundwater level declines in the study area are from wells completed in the Trinity Aquifer Hosston Formation in the Waco metropolitan area in McLennan County with declines of over 400 feet. The Trinity Aquifer Hensell Formation has also recorded significant water-level declines with well over 200 feet of decline in Coryell County. Declines from 171 feet have been shown in Somervell County, and 337 feet in Bosque County.
24. The 2004 GAM Report for the Northern Trinity/Woodbine Aquifer indicates that the model runs predict future water-level drawdown and recovery in the study area. Up to 100 feet of drawdown is predicted to occur in Bosque, Falls, Limestone, and McLennan counties. Although the report indicates that artesian pressure could recover due to reduction in pumping, the predictive simulation very likely underestimated future pumping and future pumping would likely be at the same or greater levels.
25. The 2006 Region G Water Plan states that the present use of groundwater exceeds or is near the estimate of long-term reliable groundwater supply in many counties in the study area. The pumping in Bell, Bosque, Callahan, Coryell, Eastland, Erath, Falls, Hill, Lampasas, Limestone, McLennan and Somervell counties is at or above the estimated long term sustainable supply.

26. The 2007 State Water Plan (draft at the time of the report) illustrates that the most significant historical water-level declines in the state have occurred in the Trinity aquifer in the study area centered in McLennan County. Also, there are water level declines of between 50 and 250 feet from 1994 to 2004 in Bell, Bosque, Falls, Hill and McLennan counties
27. The "Assessment of Groundwater Use in the Northern Trinity Aquifer Due to Urban Growth and Barnett Shale Development" (the Barnett Shale report) was prepared because the TWDB was concerned about the effects of growth and gas exploration on groundwater resources in the area. These effects were not considered in the Region G Plan.
28. Bell County has a GCD, the Clearwater Underground Water Conservation District.
29. Falls and Limestone County do not anticipate new groundwater users or significant new demands on the Trinity Aquifer through the year 2030.
30. The Barnett Shale report finds that water use for the study area is likely to increase to 2.1 million acre feet of water by 2025; Barnett Shale use may rise from about 10,000 to about 25,000 acre feet per year; and groundwater modeling results suggest that water levels may decline from less than 10 to more than 150 feet.
31. Barnett Shale water use and demand projections could push Trinity aquifer use above the regional water plan estimates of sustainable supply for Bosque, Comanche, Erath, Hamilton, Hill, and Somervell counties.
32. There is no historical use of groundwater from Hamilton County for exploration or production in the Barnett Shale.
33. Erath and Comanche are already in confirmed GCDs.
34. Water quality has been impacted by long-term urbanization of the region and other activities such as confined animal feeding operations.

35. Groundwater use can decrease groundwater reserves, which impacts the springs, which in turn impacts species that rely on surface water. Long term decreases in groundwater can exacerbate water quality and impact these species.
36. Designation of the area as a PGMA could lead to more efficient use of existing water resources of the area.
37. Coryell, Hill, Bosque, McLennan, and Somervell Counties are experiencing or are expected to experience critical groundwater problems in the next 25 years.
38. The other eleven counties in the study area, except Eastland County, are not experiencing critical groundwater problems within the next 25 years.
39. Eastland County, which has experienced and may continue to experience water shortages for irrigation, does not appear to have any long term water level declines in the Trinity aquifer. This indicates that there has been no significant mining of the aquifer in Eastland County.

#### **Groundwater Conservation District Recommendations**

40. There are no federal or state agencies that have the authority to regulate groundwater in this area, and local governments cannot provide the type of groundwater regulation required to protect these resources.
41. GCDs are statutorily charged and authorized to manage groundwater resources within their jurisdiction. They have many powers, such as enacting rules requiring well permits, regulating spacing of wells, and regulating transfers of groundwater out of the districts.
42. GCDs must adopt management plans and join other districts in a Groundwater Management Area (GMA) in joint planning, including determining "desired future conditions" for the aquifers in the GMA.
43. Management through a GCD or GCDs would be the best management option for the five counties in the PGMA.

44. GCDs are the preferred method of groundwater management in the State.
45. The proposed PGMA could benefit from GCD monitoring, assessment, planning, and permitting programs as well as water well spacing and well closure programs for the Trinity Aquifer.
46. A GCD must generate revenue, usually through a property tax or from well production fees.
47. The feasibility of a GCD is dependent upon many factors, including the size and total tax base of the GCD, the quantity of water that is subject to production fees, and the scale and scope of the programs undertaken by the GCD.
48. Creation of a GCD or GCDs in the PGMA is feasible and practicable.
49. A minimum of about \$250,000 in revenue must be generated annually to operate a single-county GCD and fund meaningful groundwater management programs.
50. Under Chapter 36 of the Texas Water Code, a GCD may not levy a tax at a rate exceeding 50 cents per \$100 assessed valuation to pay for maintenance and operating expenses.
51. Within the proposed PGMA, only McLennan County could generate tax revenue to support a single-county GCD if the rate was less than \$0.01 per \$100 valuation.
52. Counties in the PGMA other than McLennan would require higher tax rates, but it is feasible to create a GCD with tax powers in those counties.
53. A multi-county GCD would be more economical, have the money to perform more regulatory functions, and would cover a larger area of the aquifer.

54. It is doubtful that any of the counties in the PGMA study area would be able to finance meaningful single-county GCD operation through well production fees alone.
55. Funding of a GCD by both property taxes and production fees is the best option for the PGMA counties.
56. One GCD in all five counties is the most feasible, economic, and practicable option for protection and management of the groundwater resources. This would also avoid duplication of administrative and groundwater management programs and would cover the largest area of the aquifer. Local committees could be established for localized input.
57. Two GCDs have already been created in the proposed PGMA by legislation. These two districts are the McLennan County GCD and the Tablerock GCD in Coryell County. The legislation for both GCDs requires that by September 1, 2011, both of the GCDs' boundaries must include one adjacent county, or the districts shall be dissolved by the TCEQ. Neither GCD has been confirmed as yet.
58. If both GCDs are confirmed and a county is added to both GCDs, two multi-county GCDs in the proposed PGMA would be the best option for the PGMA. One GCD would consist of Bosque, Somervell, and Coryell Counties, and the other would consist of McLennan and Hill Counties.

## **CONCLUSIONS OF LAW**

### **Jurisdiction and Notice**

1. Texas Water Code § 35.008(a) gives the Commission authority to designate a PGMA in the Central Texas Trinity Aquifer Area.
2. SOAH has jurisdiction over matters related to the hearing in this matter, including the authority to issue a proposal for decision with Findings of Fact and Conclusions of Law, under Tex. Gov't Code Chapter 2003; Tex. Water Code § 35.008.

3. SOAH obtained jurisdiction of this matter on April 3, 2008.
4. The Executive Director provided notice of the commencement of his PGMA study as required by Tex. Water Code § 35.007(c) and Tex. Admin. Code Chapter 294.
5. The Executive Director provided notice of this PGMA report as required by Tex. Water Code § 35.007(g) and Tex. Admin. Code Chapter 294.
6. The Executive Director provided notice of the evidentiary hearing as required by Tex. Water Code § 35.009 and Tex. Admin. Code Chapter 294.

### **Hearing**

1. An evidentiary hearing concerning the creation of a PGMA was held in one of the counties in which the PGMA would be located as required by Tex. Water Code § 35.008(c).
2. The evidentiary hearing concerning creation of the PGMA complied with Tex. Water Code § 35.008.

### **PGMA Designation**

1. The hearing on the petition to designate the Central Texas – Trinity Aquifer – PGMA was conducted in accordance with Water Code Chapter 35 and the Commission's and SOAH's applicable procedural rules.
2. Under Tex. Water Code § 35.007(a), PGMA's are those areas of the State that are experiencing or are expected to experience, within the immediately following 25-year period, critical groundwater problems, including shortages of surface water or groundwater, land subsidence resulting from groundwater withdrawal, and contamination of groundwater supplies.

3. The five counties of Bosque, McLennan, Hill, Coryell, and Somervell are experiencing or are expected to experience, within the immediately following 25-year period, critical groundwater problems, including shortages of surface water or groundwater.

### **Creation of a District**

1. Tex. Water Code § 35.008(b) and (g) require the TCEQ to consider and recommend whether one or more GCDs should be created over all or part of a PGMA, whether all or part of the land in the PGMA should be added to an existing district, or whether a combination of these actions should be taken.
2. Tex. Water Code § 35.008(b) requires the TCEQ to determine whether a GCD is feasible and practicable.
3. GCDs are the best management tool for the PGMA.
4. GCDs are feasible and practicable in the five-county PGMA.
5. If elections do not confirm McLennan County GCD and Tablerock GCD, the most practicable and feasible GCD option for the five-county PGMA is one GCD that covers all five counties.
6. Because two GCDs, McLennan County and Tablerock GCD, have been legislatively created in the PGMA, and both GCDs are required to add a county by September 1, 2011, and, if either or both GCDs add a county by September 1, 2011, and are confirmed by September 1, 2012, then the most feasible and practicable option for GCD creation is two GCDs. One GCD would consist of Bosque, Somervell, and Coryell Counties, and the other would consist of McLennan and Hill Counties.
7. The enabling legislation of the McLennan District and the Tablerock District allow those districts to have until September 1, 2012, to be confirmed at a confirmation election.

## EXPLANATION OF CHANGES TO ALJ'S OCTOBER 24, 2005 ORDER

During its October 22, 2008, open meeting, the Commission adopted all but one of the revisions to the proposed Order recommended by the ALJ in his September 9, 2008 letter, as thereafter revised by the ALJ during his presentation during the October 22, 2008 meeting. The ALJ during his presentation read during the open meeting a revised Conclusion of Law No. 6, which he requested replace the version that he earlier recommended in his September 9, 2008 letter. By letter dated October 22, 2008, and distributed to all parties, the ALJ states how Conclusion of Law No. 6 was revised by the ALJ and read at the open meeting. However, while the ALJ recommended on page 5 of his September 9, 2008 letter the addition of proposed Conclusion of Law No. 9 as recommended by the Executive Director in his response to McLennan County Groundwater Conservation District's exceptions, the Commission did not adopt that recommendation and voted to deny the recommendation to add Conclusion of Law No. 9 to its order. Accordingly, this Order contains the revisions the ALJ recommended to Finding of Fact Nos. 27, 28, 41, 57, and 58, and to Conclusions of Law Nos. 3 and 6. It also contains new Conclusion of Law No. 7 as requested by McLennan GCD and recommended by the ALJ on page four of his September 9, 2008 letter.

The Commission also adopted the two minor revisions to Finding of Fact No. 1 and Finding of Fact No. 20 recommended by the Executive Director during the October 22, 2008 open meeting. Thus, revised Finding of Fact No. 1 in this Order includes a reference to Milam County along with the references to the other 16 counties that were included in the 1990 report, and the third sentence in Finding of Fact No. 20 is revised to refer to the western part of the study area and not to the eastern part of the study area as requested by the Executive Director. The Commission also determined to add a new Ordering Provision, which is Ordering Provision

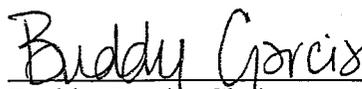
No. 5 in this Order, which requires the Commission's Chief Clerk to forward a copy of this order to all persons on the mailing list for this matter.

**NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:**

1. The Central Texas – Trinity Aquifer – PGMA be created to cover Bosque, McLennan, Coryell, Hill, and Somervell Counties.
2. All other motions, requests for entry of specific findings of fact or conclusions of law and any other requests for general or specific relief not expressly granted herein are hereby DENIED for want of merit.
3. The effective date of this Order is the date the Order is final as provided by Tex. Gov't Code § 2001.144.
4. If any provision, sentence, clause, or phrase of this Order is for any reason held to be invalid, the invalidity of any portion shall not affect the validity of the remaining portions of the Order.
5. The Chief Clerk of the Texas Commission on Environmental Quality shall forward a copy of this order to all persons on the mailing list for this matter.

Issue Date: **OCT 31 2008**

TEXAS COMMISSION ON  
ENVIRONMENTAL QUALITY

  
Buddy Garcia, Chairman