

The Texas Natural Resource Conservation Commission (commission) adopts new §§294.60 - 294.63 *without changes* to the proposed text as published in the October 26, 2001 issue of the *Texas Register* (26 TexReg 8489) and will not be republished.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE ADOPTED RULES

This adopted rulemaking adds new §§294.60 - 294.63 to designate a new groundwater management area (GMA) in the eastern portion of the state that would include all of Anderson, Angelina, Bowie, Camp, Cass, Cherokee, Franklin, Gregg, Harrison, Henderson, Hopkins, Houston, Marion, Morris, Nacogdoches, Panola, Rains, Rusk, Sabine, San Augustine, Shelby, Smith, Titus, Trinity, Upshur, Van Zandt, and Wood Counties. The purpose of the adopted rulemaking is to provide the most suitable boundary for the management of the groundwater resources. The rulemaking is made in response to a petition requesting a designation of a GMA submitted on February 8, 2001 by Save Our Springs of North East Texas, Inc. on behalf of 57 landowners in Wood County and a March 21, 2001 commission decision regarding the petition to initiate rulemaking.

Landowner Petition and Commission Decision

The February 8, 2001 petition requested that the commission designate a GMA to include all of Wood County and that the GMA be designated with the objective of providing the most suitable area for the management of groundwater resources by a groundwater conservation district. The petition included resolutions supporting commission designation of a GMA from the Wood County Commissioners Court, City of Hawkins, City of Winnsboro, Hawkins Area Chamber of Commerce, and the Upshur County Commissioners Court.

In January 2001, the commission received copies of similar resolutions supporting the commission designation of a GMA in the area for the Carrizo-Wilcox Aquifer. Similar resolutions were submitted by the Wood Soil and Water Conservation District (S&WCD) Number 444 (Wood County), the Upshur-Gregg Water S&WCD Number 417 (Upshur and Gregg Counties), the Sulphur-Cypress S&WCD Number 419 (Camp, Franklin, Morris, and Titus Counties), and the Hopkins-Rains S&WCD Number 445 (Hopkins and Rains Counties).

On March 21, 2001, the commission considered the petition and instructed the executive director's staff to study whether a GMA should be designated in the area, and if they determined that one was appropriate, to propose a rule that would designate and delineate the area as a GMA. Because of the regional nature of the groundwater resources that occur in Wood and the surrounding counties, the commission also instructed the executive director's staff to evaluate the most suitable boundaries for the delineation of a GMA for the regional groundwater resources.

The petition was processed by the executive director's staff under the Administrative Procedure Act (APA), Texas Government Code, §2001.021 and 30 TAC §20.15 and §§294.21 - 294.23. The petition was found to meet the requirements of Texas Water Code (TWC), §35.005 (Pre-Senate Bill (SB) 2, 2001) and §294.22, which provide for the landowner petition process for the designation of a GMA.

Prior to September 1, 2001, TWC, §35.004, Designation of Groundwater Management Areas, provided that the commission on its own motion, or in response to receiving a petition, may designate a GMA. Texas Water Code, §35.004 also provided that to the extent feasible, GMAs shall coincide with the

boundaries of a groundwater reservoir (aquifer) or subdivision of an aquifer. However, the statute allows the commission to consider other factors such as the boundaries of political subdivisions to delineate and designate GMAs to provide for the most suitable area to accomplish groundwater management.

Senate Bill 2, 77th Legislature, 2001, made significant changes to TWC, Chapter 35 that became effective on September 1, 2001. As amended by SB 2, the designation of GMAs will be under the jurisdiction of the Texas Water Development Board (TWDB). Texas Water Code, §35.004(a) as amended by SB 2, provides that the TWDB shall complete the initial designation of GMAs for all of the state's major and minor aquifers by September 1, 2003. Texas Water Code, §35.004(b) as amended by SB 2, however, provides that the commission may designate a GMA after September 1, 2001 for a petition filed and accepted by the commission according to its rules in effect before September 1, 2001, and that the commission shall act on the designation in accordance with §35.004 as amended. Texas Water Code, §35.005 and §35.006 were repealed.

Reason for the Rules and Purpose of GMA Designation

The commission adopts this rulemaking to meet the commission's responsibility under TWC, Chapter 35 to designate GMAs. The designation of the GMA would facilitate both the creation of locally managed groundwater conservation districts and regional cooperation by newly created districts to manage regional groundwater resources.

The purpose for designation of a GMA is two-fold. First, a GMA is a prerequisite for the creation of a groundwater conservation district through TWC, Chapter 36 landowner petition process. A GMA must be designated before a groundwater conservation district can be created administratively by the commission in response to a landowner district-creation petition. Groundwater management is accomplished by groundwater conservation districts as created and authorized under TWC, Chapter 36, or by special law. A GMA is only an identified geographic area and as such does not provide any entity with groundwater management authority. The designation of a GMA by the new rules would simplify future landowner petitions for the creation of new groundwater conservation districts in the identified area. Secondly, the designation would facilitate joint management planning among groundwater conservation districts that share the same aquifers. Groundwater conservation districts that are located in a common GMA are required under TWC, §36.108 to coordinate groundwater management planning for conservation of the common groundwater resources. The adopted new rules define an area where future groundwater conservation districts will be required to coordinate groundwater management planning for the Carrizo-Wilcox Aquifer and other aquifers.

Previous GMA Designations for the Carrizo-Wilcox Aquifer

The Carrizo-Wilcox Aquifer is exposed on the land surface in a belt from Mexico northeasterly across Texas into Arkansas and Louisiana and dips toward the Gulf of Mexico. The commission, or its predecessors, have designated four regional GMAs for the Carrizo-Wilcox Aquifer, all of which are south and west of the Trinity River. In the southwestern part of the state, the Texas Board of Water Engineers designated Subdivisions 1 and 2 of the Underground Water Reservoir of the Carrizo-Wilcox Sands in 1957. Subdivision 1 includes the Carrizo-Wilcox Aquifer in all or portions of Dimmit, Frio,

La Salle, Medina, Maverick, Uvalde, and Zavalla Counties. Subdivision 2 includes the Carrizo-Wilcox Aquifer in all or portions of Atascosa, Bexar, McMullen, and Wilson Counties. In 1987, the Texas Water Commission designated Management Areas 3 and 4 of the Carrizo-Wilcox Aquifer.

Management Area 3 includes the Carrizo-Wilcox Aquifer in portions of Bastrop, Caldwell, DeWitt, Fayette, Gonzales, Guadalupe, and Lavaca Counties. Management Area 4 includes the Carrizo-Wilcox Aquifer in all or portions of Bastrop, Brazos, Burleson, Falls, Fayette, Freestone, Grimes, Lee, Leon, Limestone, Madison, Milam, Navarro, Robertson, Walker, and Williamson Counties.

The adopted rules do not include the previously designated areas. The adopted GMA includes all of Anderson, Angelina, Bowie, Camp, Cass, Cherokee, Franklin, Gregg, Harrison, Henderson, Hopkins, Houston, Marion, Morris, Nacogdoches, Panola, Rains, Rusk, Sabine, San Augustine, Shelby, Smith, Titus, Trinity, Upshur, Van Zandt, and Wood Counties.

General Stratigraphy

The geologic units that contain groundwater resources in the adopted GMA are the Tertiary-age Midway Group, Wilcox Group, Claiborne Group, and Jackson Group. The Claiborne Group of the Eocene Epoch includes the major water-bearing formations in the east Texas area. These are the Carrizo Sand, Queen City Formation, Sparta Formation, and Yegua Formation. The lower portion of the Carrizo-Wilcox Aquifer includes units of the Wilcox Group and the upper portions consists of the Carrizo Sands of the Claiborne Group. The Queen City and Sparta Aquifers include the Queen City and Sparta Formations of the Claiborne Group, respectively. The Yegua-Jackson Aquifer includes the

upper unit of the Claiborne Group, the Yegua Formation, and the overlying Jackson Group of the Eocene Epoch. The Jackson Group includes the Witsett, Manning, Wellborn, and Cadell Formations.

Rock units to the north and west of the adopted GMA are older, Cretaceous-age rocks that are not geologically or hydrologically associated with those in the adopted GMA. The primary Cretaceous Aquifers to the northwest include the Trinity Group, Woodbine, Nacatoch, and Blossom Aquifers.

Rock units to the south are younger Tertiary-age (Oligocene-Miocene Epoch) rocks where the primary major aquifer is the Gulf Coast Aquifer. The lower most (oldest) unit of the Gulf Coast Aquifer is the Catahoula Formation that acts as a restrictive confining system, separating the aquifer from the underlying Jackson Group.

Geologic Controls

Rock units including the Tertiary-age Aquifers east of the Balcones Fault System in central Texas generally dip toward the Gulf of Mexico. The northern portion of the Carrizo-Wilcox Aquifer is more complex structurally than it is in its southern extent in existing Management Areas 1 - 4. The aquifer crops out in two distinct bands (where the aquifer units are exposed at the surface), one extending from Management Area 4 at the Trinity River northeasterly through Henderson, Van Zandt, Rains, Wood, Hopkins, Franklin, Titus, Morris, Cass, and Bowie Counties; the other, caused by the Sabine Uplift to the southeast, in Marion, Harrison, Gregg, Rusk, Panola, Shelby, Nacogdoches, San Augustine, and Sabine Counties. Between these two outcrop areas lies the East Texas structural basin, a trough into which sediments of the aquifer dip from both sides. South of Anderson, Cherokee, Nacogdoches, San

Augustine, and Sabine Counties, the aquifer dips toward the Gulf Coast. The Queen City Aquifer outcrops southeast of the western Carrizo-Wilcox outcrop and overlies the downdip portion of the Carrizo-Wilcox Aquifer in the East Texas structural basin. South of Cherokee and Anderson Counties, the sediments dip to the south. The outcrop of the Sparta Aquifer is southeast of the outcrop of the Queen City Aquifer and overlies the downdip portion of the Queen City Aquifer in Houston, Anderson, Cherokee, Angelina, and Nacogdoches Counties. The sediments that make up the aquifer dip to the south and southeast toward the Gulf Coast. The outcrop of the Yegua-Jackson Aquifer occurs south of the outcrop of the Sparta Aquifer. This aquifer crops out in an east to west direction across Trinity, Angelina, San Augustine, and Sabine Counties and dips south-southeast toward the Gulf Coast.

Groundwater Use

Based on 1997 estimated groundwater pumpage data maintained by the TWDB, the Carrizo-Wilcox, Queen City, Sparta, and Yegua-Jackson Aquifers are the primary aquifers utilized within the adopted GMA. Pumpage of groundwater from the Carrizo-Wilcox Aquifer alone accounted for greater than 70% of the total groundwater pumpage in 20 of the 27 counties (Anderson, Angelina, Camp, Cass, Cherokee, Franklin, Harrison, Henderson, Hopkins, Morris, Nacogdoches, Panola, Rains, Rusk, Shelby, Smith, Titus, Upshur, Van Zandt, and Wood) and greater than 50% of the total groundwater pumpage in two additional counties, Gregg and Marion. Combined groundwater pumpage from the Carrizo-Wilcox, Queen City, and Sparta Aquifers accounted for greater than 95% of the total groundwater pumpage in all of these counties except for Angelina (87%), Hopkins (87%), Rains (80%), and Titus (94%).

Significant groundwater pumpage from the Yegua-Jackson Aquifer occurs in five of the counties in the southern part of the adopted GMA. The 1997 estimated groundwater pumpage from the Yegua-Jackson Aquifer in Angelina, Houston, Sabine, San Augustine, and Trinity Counties accounted for 12%, 43%, 78%, 52%, and 97%, respectively, of the total groundwater pumpage in these counties. Combined groundwater pumpage from the Yegua-Jackson Aquifer and the Carrizo-Wilcox, Queen City, and Sparta Aquifers accounted for greater than 95% of the total groundwater pumpage in all five of these counties.

Groundwater pumpage from other aquifers delineated by the TWDB also occurs in the adopted GMA. The 1997 estimated groundwater pumpage from the Gulf Coast Aquifer accounted for three percent of the total pumpage in Trinity County. Pumpage from the Nacatoch Aquifer accounted for 44% and 11% of the total groundwater pumpage in Bowie and Hopkins Counties, respectively. Pumpage from the Blossom Aquifer accounted for five percent of the total pumpage in Bowie County.

Regional Assessment of Groundwater Resources

The Carrizo-Wilcox Aquifer is the primary groundwater resource in the adopted GMA. This aquifer is identified as a major aquifer by the TWDB because it supplies large quantities of water to a large area of the state. The Queen City and Sparta Aquifers are also important groundwater resources in the adopted GMA. These aquifers are identified by the TWDB as minor aquifers because they supply large quantities of water in small areas of the state or small quantities of water in large areas of the state. The Yegua-Jackson Aquifer has not been delineated by the TWDB to date; however, this aquifer is also an important resource in the southern part of the adopted GMA. The Trinity Group Aquifer is the

major aquifer to the northwest, and the Gulf Coast Aquifer is the major aquifer to the south of the adopted GMA.

The Carrizo-Wilcox, Queen City, Sparta, and Yegua-Jackson Aquifers are regional aquifers. They extend from the Arkansas and Louisiana borders into south Texas. The Carrizo-Wilcox and Yegua-Jackson Aquifers extend to the Rio Grande and the Queen City and Sparta Aquifers extend into Frio and La Salle Counties to the south. Both the Carrizo-Wilcox and Queen City Aquifers underlie Wood and surrounding counties and the Sparta and Yegua Formation-Jackson Group Aquifers are regionally and geologically associated with the other two aquifers. The designation of the GMA by the adopted new rules delineates an area where regional groundwater management planning for these overlapping aquifers can be coordinated by existing and any future groundwater conservation districts.

Although the Nacatoch Aquifer occurs in parts of Bowie, Franklin, Hopkins, Morris, Rains, and Titus Counties and the Blossom Aquifer occurs in Bowie County, the Carrizo-Wilcox Aquifer is the primary major aquifer in this six-county area. The commission determined that all of the territory in these counties should be included in the adopted GMA because of the shared primary major aquifer, but that other counties to the north and west that do not share the Carrizo-Wilcox Aquifer should not. Regional groundwater management planning for the Trinity Group Aquifer and the other minor Cretaceous Aquifers outside of the adopted GMA would be better accomplished through a separate designation of a different GMA.

In the adopted GMA, the Gulf Coast Aquifer occurs only in the extreme southern part of Angelina, Sabine, and Trinity Counties. Again, the commission determined that all of the territory in these three counties should be included in the adopted GMA due to the shared Carrizo-Wilcox major aquifer, but that other counties to the south should not. Regional groundwater management planning for the Gulf Coast Aquifer to the south would be better accomplished through a separate designation of a different GMA.

Adopted Boundaries

The commission considered numerous factors to develop these rules. The commission considered the purpose of a GMA for aquifers in Wood and the surrounding counties. This purpose is to delineate the most suitable area for the management of groundwater resources. To delineate the GMA, the commission evaluated the regional nature, extent, and use of the aquifers shared by Wood and the surrounding counties. The commission reviewed and evaluated the extent and delineation of the previously designated GMAs to the south and west for the Carrizo-Wilcox Aquifer. The commission also evaluated the extent, location, and relationship of other major and minor aquifers to the north and west and to the south of the adopted area and the extent, location, and relationship of the aquifers within the area. The commission considered the directions given to the TWDB in SB 2 to designate GMAs for all of the state's major and minor aquifers. The commission also considered other factors such as political subdivision boundaries because such boundaries are often recognized and preferred during locally-initiated groundwater conservation district creation efforts.

Texas Water Code, Chapter 35 provides that to the extent feasible, boundaries of aquifers shall be considered when designating GMAs. Chapter 35 also provides that other factors, including the boundaries of political subdivisions, may be considered. Previous GMA designations by the commission or its predecessors have been delineated by hydrological boundaries or by a combination of hydrological and political subdivision (county) boundaries. While designating GMAs by hydrological boundaries is the preferred practice, political boundary considerations are often major considerations in establishing groundwater conservation district boundaries. Generally, the political boundaries preferred by petitioners or by citizens initiating district creation do not coincide with hydrogeologic boundaries.

Texas Water Code, Chapter 35 provides that each GMA shall be designated with the objective of providing the most suitable area for management of the groundwater resources, and TWC, Chapter 36 provides that groundwater conservation districts are the state's preferred method of groundwater management. There are presently 87 groundwater conservation districts created in the state; 64 are presently established and the other 23, created by special Acts of the 77th Legislature, 2001, will require confirmation of the voters to be established. Of the 87 districts, the citizens that have initiated district creation have preferred strict county boundaries for 68 (78%) of the districts. A combination of county boundaries and other types of boundaries account for an additional 12 (14%) of the districts. Therefore, county boundaries have been a primary consideration for 92% of all groundwater conservation districts created to date. Only seven of the 87 (8%) districts were created strictly on hydrological boundaries. The East Texas Groundwater Management Area (ETGMA) is adopted to be delineated to include full counties because it is most likely that these types of boundaries would be recognized and preferred by citizens in future groundwater conservation district creation efforts.

The commission considered the boundaries of major and minor aquifers, pumpage from aquifers, and political subdivision boundaries that would facilitate groundwater conservation district creation in developing the adopted GMA delineation. The commission determined that the delineated boundaries are the most suitable boundaries for management of the regional groundwater resources that occur in the east Texas area.

Of the 27 counties in the GMA, 19 (Anderson, Angelina, Camp, Cass, Cherokee, Gregg, Harrison, Houston, Marion, Morris, Nacogdoches, Panola, Rusk, Sabine, San Augustine, Shelby, Smith, Upshur, and Wood) are entirely underlain or almost entirely underlain by the Carrizo-Wilcox, Queen City, Sparta, or Yegua-Jackson Aquifers. The location of the aquifers were the primary considerations for inclusion of these counties.

In addition to the location of the aquifers, the commission considered groundwater use in evaluating whether the full extent of a county should be included in the adopted area. Part of Trinity County, on the southern boundary of the adopted GMA, is underlain by the Gulf Coast Aquifer. However, the 1997 estimated groundwater pumpage from the Yegua-Jackson Aquifer in Trinity County accounted for 97% of the total groundwater use, while pumpage from the Gulf Coast Aquifer accounted for only three percent of the total groundwater use. Based on this percentage of groundwater pumpage, the commission has determined that all of Trinity County be included within the adopted GMA.

Seven of the northern counties (Henderson, Van Zandt, Rains, Hopkins, Franklin, Titus, and Bowie) in the adopted GMA are partially underlain by the Carrizo-Wilcox Aquifer or both the Carrizo-Wilcox and

Queen City Aquifers and partially underlain by other aquifers that are primarily located outside of the adopted area. Again, the commission considered groundwater use in evaluating whether the full extent of these counties should be included in the adopted area. In six of the counties (Henderson, Van Zandt, Rains, Hopkins, Franklin, and Titus), groundwater pumpage from either the Carrizo-Wilcox Aquifer or both the Carrizo-Wilcox and Queen City Aquifers accounted for greater than 80% of the total pumpage and exceeded 95% of the total groundwater pumpage in Henderson, Van Zandt, and Franklin Counties. Based on these percentages of groundwater pumpage, the commission has determined that all of these six counties be included within the adopted GMA.

Bowie County is underlain by one major aquifer, the Carrizo-Wilcox Aquifer; two minor aquifers, the Nacatoch and Blossom Aquifers; and other undifferentiated sources. The commission considered groundwater use in evaluating whether the full extent of the county should be included in the adopted area. The 1997 TWDB estimated groundwater pumpage data for the county indicated that pumpage from the Carrizo-Wilcox Aquifer accounted for 38% of the total pumpage. Pumpage from the Nacatoch and Blossom Aquifers accounted for 44% and five percent, respectively, of the total groundwater pumpage. Groundwater pumpage from undifferentiated sources, that is not from a major or minor aquifer specifically identified in the TWDB data set, accounted for 14% of the total pumpage in the county. Since groundwater pumpage in Bowie County relies heavily upon both the Carrizo-Wilcox and Nacatoch Aquifers, the commission also considered other issues related to political subdivision boundaries and groundwater management.

The commission considered three possible GMA delineation scenarios for Bowie County: 1.) include the full extent of the county in the GMA; 2.) divide the county hydrologically and only including the area underlain by the Carrizo-Wilcox Aquifer in the GMA; or 3.) exclude the full extent of the county from the GMA.

Under the first option, inclusion of all of Bowie County in the GMA, the area would include the full extent of the regional Carrizo-Wilcox Aquifer and would recognize boundaries that are generally preferred in groundwater conservation district creation efforts. While estimated groundwater pumpage from the Carrizo-Wilcox Aquifer in Bowie County does not represent the majority of total pumpage, it does represent a significant percentage of the pumpage. Including the full county in the GMA would assure groundwater conservation district coordination if more than one district is created in the east Texas area. The disadvantage of full-county inclusion would be the limitation placed on coordinated management planning for the Nacatoch Aquifer should a GMA be designated specifically for this minor aquifer.

The commission considered a second option, dividing Bowie County hydrogeologically and only including the area underlain by the Carrizo-Wilcox Aquifer in the GMA. Based on review of district creations, this option may be problematic for groundwater conservation district creation. Historically, landowners that have initiated groundwater conservation district creation efforts, either under TWC, Chapter 36 or through special law, have preferred recognizable or politically standing boundaries. If only part of the county were included in the area, the commission could not, in response to a landowner district creation petition, create a district that would include all of the county. Furthermore, the

commission must consider financial information in the proceedings to create a groundwater conservation district. An application to create a groundwater conservation district must include estimates for projected revenue and expense for the proposed district. If only a portion of the county was included in the area, it may be likely that there would not be sufficient revenue to finance district operation and maintenance or that revenue rates would have to be established at levels that would be unacceptable to the voters. Either of these situations would potentially lead to a proposed district the commission could not create, or a proposed district that would likely fail to be confirmed by the voters. Under this scenario, the only alternative for the creation of a county-wide groundwater conservation district would be through special law.

The commission considered a third option, excluding the full extent of Bowie County from the GMA. This option would not provide for the most suitable area for management of the Carrizo-Wilcox Aquifer in east Texas. This option would isolate a single part of the Carrizo-Wilcox Aquifer from the remaining part of the regional aquifer, and thus would inhibit coordinated groundwater management for the regional resource and remove the ability of a groundwater conservation district to redress the failure of coordinated management with the commission under TWC, §36.108 and §36.3011.

The commission determined that the full extent of Bowie County should be included in the adopted ETGMA. The commission determined that including the full extent of the county would be beneficial to the citizens of Bowie County should they choose, in the future, to petition the commission for the creation of a groundwater conservation district. Furthermore, the inclusion of the county in the adopted

GMA would assure that coordinated management of the Carrizo-Wilcox Aquifer would be accomplished if such a district were created either by the commission or by the legislature.

SECTION BY SECTION DISCUSSION

Adopted new §294.60, Purpose and Scope, provides the purpose and scope of the adopted rules. The adopted section provides that the purpose of the rule is to designate the ETGMA. The adopted new section reiterates that the rules do not empower any entity with groundwater management authority; that designation of a GMA is a prerequisite for the creation of a groundwater conservation district through the TWC, Chapter 36 landowner petition process; and that groundwater conservation districts within the management area will be subject to the management planning provisions of TWC, §36.108.

Adopted new §294.61, Definitions, provides definitions for certain words and terms. The adopted section is included to clearly define these words and terms as used in the adopted rules. The definitions provided for the Carrizo-Wilcox, Queen City, and Sparta Aquifers are based on previous aquifer-delineation work of the TWDB (Ashworth, J.B. and Flores, R.R., Texas Water Development Board Report LP-212, June 1991 and Ashworth, J.B. and Hopkins, J., Texas Water Development Board Report 395, November 1995). The definition of the Yegua-Jackson Aquifer is based on ongoing aquifer evaluation work of the TWDB and previously published TWDB reports (Anders, R.B., Texas Water Development Board Report 37, January 1967 and Guyton, W.F. and Associates, Texas Water Development Board Report 110, March 1970). Groundwater management area is given the same definition as provided by TWC, §35.002(11). The definition of other aquifers identifies additional groundwater resources that are located in the adopted GMA.

Adopted new §294.62, Designation of East Texas Groundwater Management Area (ETGMA), provides for the designation of the ETGMA and provides that the area is designated for the management of the Carrizo-Wilcox Aquifer, Queen City Aquifer, Sparta Aquifer, Yegua-Jackson Aquifer, and other aquifers.

Adopted new §294.63, Boundaries, provides the boundaries for the ETGMA. The ETGMA will have boundaries that are coterminous with, that is having the same boundaries, and include all territory within Anderson, Angelina, Bowie, Camp, Cass, Cherokee, Franklin, Gregg, Harrison, Henderson, Hopkins, Houston, Marion, Morris, Nacogdoches, Panola, Rains, Rusk, Sabine, San Augustine, Shelby, Smith, Titus, Trinity, Upshur, Van Zandt, and Wood Counties.

FINAL REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed the rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined the rulemaking is not subject to §2001.0225 because it does not meet the definition of a “major environmental rule.” “A major environmental rule” means a rule, the specific intent of which, is to protect the environment or reduce risks to human health from environmental exposure and that may adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a section of the state. While the purpose of the rules is ultimately, if a groundwater conservation district is created, to promote coordination of groundwater management within the area which could provide protection to the environment, the rules do not adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and

safety of the state or a section of the state. The designation of a GMA in itself does not have any regulatory effect. The subsequent creation of a groundwater conservation district within the GMA would have a regulatory effect.

The commission solicited comments on the draft regulatory impact analysis determination. No comments were received on the draft regulatory impact analysis determination.

TAKINGS IMPACT ASSESSMENT

The commission conducted a takings impact assessment for this rule under Texas Government Code, §2007.043, the Texas Private Real Property Rights Preservation Act. This rulemaking is intended to designate an area as a GMA under TWC, §35.004. This section provides that pursuant to a petition filed and accepted by the commission before September 1, 2001, the commission can designate by rule GMAs to provide the most suitable area for the management of groundwater. This rulemaking does not impact any person's private real property because the designation of a GMA does not, in itself, lead to any regulatory requirements on the land in the area.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM (CMP)

The commission reviewed the rulemaking and found that it is neither identified in the Coastal Coordination Act Implementation Rules, 31 TAC §505.11, relating to Actions and Rules Subject to the Texas Coastal Management Program nor does it affect any action or authorization identified in §505.11. This rulemaking concerns only the designation of a GMA. Therefore, the rulemaking is not subject to the CMP.

The commission solicited comments on the consistency determination. No comments were received on the consistency determination.

HEARING AND COMMENTERS

The proposed rules were published in the October 26, 2001 issue of the *Texas Register* (26 TexReg 8489). The commission held three public hearings on this rulemaking. The first two hearings were on November 12, 2001 in Quitman and Tyler. The third hearing was in Nacogdoches on November 13, 2001. The comment period closed on December 10, 2001.

A total of 15 commenters provided comments on the proposed rules: C. Miller Water Well Drilling Company (MWWD); Mr. George Campbell, Chairman, Regional Water Planning Group I (RWPG I); Cypress Springs Water Supply Corporation (CSWSC); Fair Management (FM); Greater Lake Palestine Council (GLPC); Mr. J. C. Hughes, City Manager, City of Nacogdoches (City of Nacogdoches); the Honorable Sue Kennedy, County Judge, Nacogdoches County; Larry's Water Well Drilling (LWWD); Northeast Territory Management (NTM); Northeast Texas Municipal Water District (NTMWD); Smith County Water District No. 1 (SCWD#1); the Honorable Jerry Yost, former Texas State Representative; and three individuals.

Of these, two individuals and GLPC commented that they were generally in favor of the proposal. One individual, FM, CSWSC, NTMWD, the Honorable Jerry Yost, SCWD#1, LWWD, the Honorable Sue Kennedy, RWPG I, and the City of Nacogdoches provided general comments, but did not comment in

favor of, or in opposition to the proposal. These commenters did not suggest any changes. MWWD and NTM commented that they were generally opposed to the proposal but did not suggest any changes.

RESPONSE TO COMMENTS

Many comments were related to the creation, management, or decision making of a groundwater conservation district or the designation of a priority groundwater management area (PGMA). The commission attributes most of these comments to confusion between the designation of a GMA, which is the subject of this rulemaking, and the designation of a PGMA and/or the creation of a groundwater conservation district which are separate processes and are not part of this rulemaking. The commission further emphasizes that the designation of the ETGMA by these adopted sections does not create a groundwater conservation district, force the creation of a groundwater conservation district, or designate or set a path to designate a PGMA.

Comment

FM, from Smith County, commented that it was opposed to the formation of a groundwater conservation district by the proposal. FM also noted that “the formation of the proposed district” by the proposal was contrary to, and circumvented the direction of the legislature as set forth in SB 1. NTM commented it was strongly opposed to the proposed rules because they basically created another taxing entity. LWWD was opposed to groundwater conservation district well spacing rules that would be more restrictive than state standards. MWWD commented that the benefits versus the burden of groundwater management and creation of a groundwater conservation district should be answered before any are created.

Response

The commission acknowledges these comments and responds that these sections designate a GMA. They do not create a groundwater conservation district. The commission cannot on its own motion, create a groundwater conservation district or require a groundwater conservation district be created in a GMA. Landowners would have to petition the commission under TWC, Chapter 36 or pursue special law through the legislative process to create a groundwater conservation district, or petition an existing groundwater conservation district to be added to the district. No change has been made to the rules as a result of these comments.

Comment

CSWSC and NTMWD, water providers in Franklin, Wood, Hopkins, and Titus Counties and Camp, Cass, Gregg, Harrison, Marion, Morris, and Upshur Counties, respectively, and MWWD commented on concerns about the potential cost of groundwater conservation districts in the proposed ETGMA.

The water providers commented on the varying reliance on surface water and groundwater throughout the proposed ETGMA and noted that the cost to fund the operational expenses of a groundwater conservation district could vary greatly because of the different levels of dependence. Both commented that the designation of the proposed ETGMA would not limit the financial options available to potential groundwater conservation districts. The water suppliers noted they would be opposed to the proposed rules if they would cause groundwater conservation districts to sustain additional cost or suffer other financial consequences.

Response

The commission acknowledges these comments and responds that designation of the ETGMA by these sections will not limit financial options available to potential groundwater conservation districts or cause future districts to suffer additional costs or financial consequences. (See previous response to comments.) No change has been made to the rules as a result of these comments.

Comment

Judge Kennedy, RWPG I, and the City of Nacogdoches commented that the recent creation of the Pineywoods Groundwater Conservation District in Angelina and Nacogdoches Counties had been overwhelmingly supported at the local level to manage groundwater resources in the area. Judge Kennedy noted the new district did not want to have too many restrictions placed upon it for continuing to work with other counties in the area to preserve groundwater resources. RWPG I made similar comments about the recent creation of the Neches and Trinity Valleys Groundwater Conservation District in Anderson, Henderson, and Cherokee Counties. The City of Nacogdoches commented that local efforts have worked hard to control their own groundwater management destiny, and its destiny should not be controlled from Wood County.

Response

The commission agrees with these comments and recognizes that groundwater management is accomplished by groundwater conservation districts. (See previous response to comments.) The commission notes that TWC, Chapter 36 is structured so that each groundwater conservation

district is authorized to develop and adopt the programs and rules that will be applicable and acceptable for groundwater management for that district. The commission notes that under Chapter 36, groundwater conservation districts are governed by locally elected boards of directors who are responsible, through a public forum, for adopting the policies, plans, and rules for the district.

The commission notes that designation of the ETGMA by these sections does not authorize or empower any groundwater conservation district or county to dictate groundwater management to any other such entity. Groundwater conservation districts within a common GMA are required to forward of copy of their certified groundwater management plans to other districts in the GMA. The level of groundwater management coordination within a GMA is determined by the groundwater conservation districts within the area. Texas Water Code, §36.108 provides that a groundwater conservation district with just cause may request an inquiry by the commission into another district's plan implementation and sets a high threshold for such commission review. However, no groundwater conservation district can exercise groundwater management authority or control over another district. No change has been made to the rules as a result of these comments.

Comment

CSWSC and NTMWD commented that the local area should remain in a position of control to determine whether or when to form a groundwater conservation district and noted that the designation of the ETGMA would not alter the rights of the local areas to make such decisions. CSWSC,

NTMWD, and RWPG I commented that they would be opposed to the proposed rules if they would limit local control or decisions to form a groundwater conservation district. Similarly, former Rep. Yost commented that local concerns and interests should control their own destiny. Judge Kennedy commented on the importance of local, regional, and state partnerships in managing groundwater but stressed the importance of addressing groundwater management issues at the local level. RWPG I noted that there were counties within its area (Smith, part of Trinity, Shelby, Sabine, San Augustine, Rusk, Panola, and Houston) that have not had the opportunity or are not aware of what may need to be done with respect to groundwater management. RWPG I commented that citizens of counties without a groundwater conservation district should have a choice to participate either as individual counties or collectively as multiple counties and should have a choice on how local groundwater conservation districts are structured and authorized.

Response

The commission agrees with these comments and acknowledges that TWC, Chapter 36 is structured to ensure local control in making groundwater management decisions. The delineation and designation of the ETGMA by these sections do not force or compel any county or counties to create a groundwater conservation district. However, the commission notes that designation of the ETGMA by these sections will facilitate the creation of a groundwater conservation district if pursued through landowner petition - local initiative process. No change has been made to the rules as a result of these comments.

Comment

CSWSC and NTMWD commented that local decisions to form groundwater conservation districts is limited by the commission in PGMA. The water providers commented that if the proposed ETGMA becomes a PGMA, then the commission has statutory directives to be involved and to potentially assert involuntary management by creation or annexation of a groundwater conservation district. Former Rep. Yost commented that the commission could designate an area as a PGMA which could trigger a series of events leading to the creation of a groundwater conservation district that would not be ratified by the citizens.

Response

The commission responds that these adopted rules only designate a GMA, they do not designate a PGMA. Designation of a PGMA is a separate and statutorily different procedure. The commission disagrees that local decisions to form groundwater conservation districts is limited by the commission in a PGMA. The procedure for PGMA designation is to identify, study, and delineate areas of the state that are experiencing or are expected to experience critical groundwater problems within a 25-year planning horizon, and to recommend groundwater management strategies to address the identified critical groundwater problems. Texas Water Code, Chapter 35 requires significant stakeholder involvement, an evidentiary hearing, and educational programming in the PGMA designation process. After a PGMA has been designated, the statute requires educational programming fostered by county commissioner-appointed steering committees and provides up to a two-year time frame for local decision making regarding creation of a groundwater conservation district or addition of the PGMA to an existing groundwater

conservation district. The commission is mandated to establish groundwater conservation districts in designated PGMA's only if it finds that such districts are necessary and critical groundwater management decisions are disregarded at the local level. No change has been made to the rules as a result of these comments.

Comment

Former Rep. Yost commented that designation of the ETGMA would not prevent the commission from later designating the area as a PGMA, at which time the state would take control and local groundwater management options would be lost. Former Rep. Yost commented that the State of Texas does not control groundwater unless a PGMA is designated.

Response

The commission agrees that designation of the ETGMA would not prevent the commission from later designating the area as a PGMA. However, the commission notes such a PGMA designation would have to occur through a separate statutory process as outlined in the previous response. The commission disagrees that the state controls groundwater once a PGMA is designated. The commission has no statutory authority to directly or indirectly manage groundwater resources. Groundwater management is accomplished at the local level by groundwater conservation districts. Even if the commission were required to create a groundwater conservation district in a PGMA because local groundwater management decisions have not been made to address identified critical groundwater problems, TWC, Chapter 35 requires county commissioners courts to appoint temporary directors for the district, and the subsequent district directors would be

elected. It is this local board of directors that would develop and adopt the policies, plans, and rules for the district to manage groundwater resources, and not the state. No change has been made to the rules as a result of these comments.

Comment

An individual from Rusk County commented that many oil wells in the East Texas Oil Field were not completed with surface casing extending below the base of the Carrizo-Wilcox Aquifer. He noted that insufficient plugging of such wells allows for contamination by the co-mingling of fresh groundwater with groundwater from poorer-quality zones. He recognized the authority, jurisdiction, and rules of the Railroad Commission of Texas (RCT) and requested the commission to assist landowners in protecting groundwater supplies.

Response

The commission acknowledges this comment regarding the protection of groundwater resources. As noted by the commentor, the protection of groundwater quality for oil, gas, and other mineral exploration activities is the responsibility of the RCT. The commission assists the RCT by providing letters of recommendation as to the occurrence and depth of usable-quality groundwater in conjunction with approval of various activities regulated by the RCT. These activities include underground injection of oil and gas wastes, plugging and testing of inactive wells, and exploration and productions of oil, gas, and other minerals. The commission historically provides over 10,000 such surface casing recommendations annually to the RCT and the energy industry.

These recommendations are available to the public upon request. No change has been made to the rules as a result of this comment.

Comment

An individual from Cherokee County supported establishment of the proposed ETGMA, noted the importance and need for water conservation education and prevention of waste of water resources, and supported the eventual establishment of a groundwater conservation district. A second individual from Smith County supported the proposal. This individual favored doing everything within her power to protect groundwater resources and supported local decision making by landowners on groundwater management issues. SCWD#1 did not comment for, or against the proposal but supported the eventual formation of a groundwater conservation district to protect the groundwater resources of the area. GLPC from Anderson, Cherokee, Henderson, and Smith Counties commented that they supported the proposal and supported the recent creation and confirmation of the Neches and Trinity Valleys Groundwater Conservation District.

Response

The commission acknowledges these comments. The commission notes that TWC, §36.0015 provides that groundwater conservation districts are the state's preferred method of groundwater management. Through the authority vested to such districts, groundwater conservation, protection, waste prevention, and educational outreach programs are developed and implemented through local groundwater management decision making. No change has been made to the rules as a result of these comments.

Comment

RWPG I commented that the proposed rules state that a GMA is necessary for the creation of a groundwater conservation district, but the commission should clarify that other methods of groundwater conservation district creation are available.

Response

The commission recognizes this comment and notes that §294.60(b) states: “A groundwater management area is a prerequisite for the creation of a groundwater conservation district through the TWC, Chapter 36 landowner petition process.” The commission may not administratively create a groundwater conservation district if it is not within a GMA (TWC, §36.012(c)).

Groundwater conservation districts may also be created by the legislature and territory may be added to existing groundwater conservation districts by petition processes. However, both of these types of groundwater conservation district creation are outside of the commissions jurisdiction and therefore reference to these creation options should not be included the commission rules. No changes to the rule were made in response to this comment.

Comment

Judge Kennedy, RWPG I, and the City of Nacogdoches commented that a petition came out of a single county but resulted in the 27-county proposal. The City of Nacogdoches commented this was disturbing because of locally initiated efforts spanning two years to take action in Nacogdoches and Angelina Counties to manage groundwater resources. Judge Kennedy, RWPG I, and the City of Nacogdoches commented that the proposed ETGMA may be too large and questioned whether the

commission had taken an action upon itself that was greater than requested of the petitioners. They questioned why input was not sought from the other counties.

Response

The commission responds that it is required to delineate a GMA with the objective of providing the most suitable area for the management of groundwater resources (TWC §35.004(a)). The commission considered the available information relating to the geology and groundwater resources of the area, and determined that a GMA in Wood County alone would not meet this objective. The commission believes that the most suitable area for management of groundwater resources is the 27-county area which the commission is designating as a GMA. The reasons for this analysis is discussed in detail in this preamble under the headings: “General Stratigraphy,” “Geologic Controls,” “Groundwater Use,” and “Regional Assessment of Groundwater Resources.”

The commission, through the publication of the proposal, did seek comment and input from the public. The commission published this proposed GMA in the *Texas Register* as a rulemaking under the APA. The commission requested public comment on the proposal, providing an opportunity for any interested person to provide comment on the extent of the GMA. The standard notification for such rule projects is to accept public comments for a 30-day period; however, the commission decided to accept public comments for a 45-day period for this proposal. Under the rulemaking provisions of the APA, the commission has the option to hold a public hearing in Austin if requested by 25 or more individuals. For this proposal, the commission

decided without receiving any formal requests, to hold three public hearings in the area affected by the rulemaking. The commission sent press releases that contained all the pertinent data regarding the hearings, location for obtaining the proposal, and information on how to provide comments to the newspapers, mayors, and county judges in the area. The commission also sent press releases to all newspapers, radio stations, and television stations in every county that might be affected by the proposal and to the State Senators and Representatives from the area. No change has been made to the rules as a result of these comments.

Comment

Judge Kennedy commented that state law governing groundwater management has expanded the authorities of state agencies at the expense of local areas over the last few legislative sessions. The City of Nacogdoches and RWPG I commented that future legislation could take the proposed ETGMA and create a new set of rules that may supercede local decision-making actions that have already been taken. Former Rep. Yost commented that residents should be cautious and aware of future legislation and commission rules and how such future actions may affect “groundwater rights”.

Response

The commission disagrees that state law has expanded groundwater authority of state agencies at the expense of local residents. Texas Water Code, Chapter 36 contemplates local management of groundwater in that landowners may petition the commission for creation of a groundwater conservation district in a GMA. Landowners may also go to the legislature to create a district by special law with the powers they believe are most relevant to the area. These districts, not the

commission, are authorized and responsible for managing groundwater resources within their boundaries. The commission agrees that laws can change in the future. If the laws are changed, the commission rules will be changed to reflect those new laws. However, no change has been made to the rules as a result of these comments.

Comment

MWWD commented it was opposed to the development of the proposed ETGMA for a number of reasons. MWWD noted that Ozarka Natural Spring Water Company (Ozarka) had proposed developing well sites in Wood County and that this proposed groundwater production was perceived as exploitation by many citizens. MWWD commented that this proposed activity made citizens aware of groundwater management options and led to the petition for the GMA.

Response

The commission responds that it cannot consider the reason landowners petition for the designation of a GMA. It is required by TWC, Chapter 35, to consider the February 8, 2001 landowner petition and the evidence prepared by the executive director for the designation of the GMA. The petition was found to meet the requirements of TWC, §35.005 (Pre-SB 2) and §294.22, which provide for the landowner petition process for the designation of a GMA. Additionally, SB 2 transfers the jurisdiction for the designation of all future GMAs to the TWDB. Senate Bill 2 mandates that the TWDB designate GMAs for all of the state's major and minor aquifers by September 1, 2003. No change has been made to the rules as a result of these comments.

Comment

MWWD commented that the proposed Ozarka well sites would be completed in the Sparta Aquifer.

MWWD commented that the Sparta Aquifer locally occupies topographic highs in Wood County; was

recharged by precipitation; and was discharged by wells, springs, and evaporation. MWWD

commented that the Sparta Aquifer does not cover the entire northeast Texas area. MWWD

commented that the Sparta Aquifer was a water-table aquifer, not an artesian aquifer.

Response

The commission agrees that the Sparta Aquifer occupies topographic highs in Wood County; is recharged by precipitation; and is discharged by wells, springs, and evaporation. The commission agrees that the Sparta Aquifer does not cover the entire northeast Texas area. (See analysis in this preamble under the headings: “General Stratigraphy,” “Geologic Controls,” and “Regional Assessment of Groundwater Resources.”) However, the commission disagrees that the Sparta Aquifer is solely a water-table aquifer. The Sparta Aquifer is an unconfined aquifer in areas, both locally and regionally, where the Tertiary-age Sparta Formation of the Claiborne Group is exposed at the surface. In areas, both locally and regionally, where the Sparta Formation is overlain by confining sediments or geologic units, the Sparta Aquifer is artesian. As discussed earlier in the preamble, the Sparta Aquifer is also an important groundwater resource within the geographic area contained in the adopted GMA and to leave this resource out of the area would not facilitate the comprehensive management of groundwater resources within the area. The designation of the GMA by the adopted new rules delineates an area where regional groundwater management planning for these overlapping aquifers can be coordinated by existing and any

future groundwater conservation districts. No change has been made to the rules as a result of these comments.

Comment

MWWD commented that the Sparta Aquifer does not offer recharge to the Carrizo-Wilcox Aquifer.

LWWD did not comment for or against the proposed rules, but did comment that there was little migration of water between the different aquifers. LWWD also commented that the recharge zones of the Carrizo-Wilcox Aquifer were distant to the “main part” of the aquifer.

Response

The commission agrees that the recharge zones of the Carrizo-Wilcox Aquifer can be distant from the artesian portion of the aquifer in and on the flanks of the East Texas structural basin.

Precipitation primarily recharges the aquifer in areas where it crops out to the northeast and west of the East Texas structural basin. The commission partially agrees with the comments related to

the movement of water between the aquifers. The commission notes that the Weches Formation

of the Claiborne Group acts as a restrictive barrier between the Sparta Aquifer and the

underlying Queen City Aquifer and the Reklaw Formation of the Claiborne Group acts as a

restrictive barrier between the Queen City Aquifer and the underlying Carrizo-Wilcox Aquifer.

However, existing data are not sufficient to quantify the movement or volume of water that

migrates between the aquifers. The Queen City and Sparta Aquifers are also important

groundwater resources within the geographic area contained in the adopted GMA and to leave

these resources out of the area would not facilitate the comprehensive management of

groundwater resource within the area. The designation of the GMA by the adopted new rules delineates an area where regional groundwater management planning for these overlapping aquifers can be coordinated by existing and any future groundwater conservation districts. No change has been made to the rules as a result of these comments.

Comment

MWWD noted that the Carrizo-Wilcox Aquifer was not a high-producing aquifer in any one location and it was unusual to find a Carrizo-Wilcox well that could produce over 400 gallons per minute in northeast Texas. MWWD noted that irrigation agriculture was not economically feasible in Wood County because the aquifer could not support such activity. MWWD commented that it would be uneconomical for Dallas or any other large municipality to transport groundwater out of the area because the aquifers would not yield water fast enough. MWWD commented that the aquifers would not be attractive for exploitation because pumping cost and well construction cost are too high.

Response

The commission disagrees with these comments and responds that existing data shows significant use is already being made of the groundwater resources in the ETGMA. Significant pumpage from the aquifers provides groundwater for various uses both locally and regionally. The commission must only consider what is the best area for the management of groundwater resources when designating a GMA, not whether some wells produce or do not produce large amounts of water, the feasibility for irrigated agriculture, groundwater pumpage costs, or the economics of utilizing groundwater supplies. The purpose of the adopted rulemaking is to provide

the most suitable boundary for the management of the groundwater resources. Groundwater conservation districts that are located in a common GMA are required under TWC, §36.108 to coordinate groundwater management planning for conservation of the common groundwater resources. The designation would facilitate joint management planning among groundwater conservation districts that share the same aquifers. Also, a GMA is a prerequisite for the creation of a groundwater conservation district through the TWC, Chapter 36 landowner petition process. No change has been made to the rules as a result of these comments.

STATUTORY AUTHORITY

The new sections are adopted under TWC, §5.012, which provides that the commission is the agency responsible for implementing the constitution and laws of the state relating to conservation of natural resources and protection of the environment; §5.013, which establishes the commission's authority over various statutory programs; §5.103 and §5.105, which establish the commission's general authority to adopt rules; and §35.004, which gives the commission authority to designate GMAs after September 1, 2001 if a petition has been filed and accepted prior to the date.

SUBCHAPTER F: EAST TEXAS GROUNDWATER MANAGEMENT AREA

§§294.60 - 294.63

§294.60. Purpose and Scope.

(a) The purpose of this subchapter is to designate the East Texas Groundwater Management Area (ETGMA) as a geographic area that is suitable for groundwater management.

(b) The designation of the ETGMA does not provide any entity with the powers and authorities conferred upon a groundwater conservation district under Texas Water Code (TWC), Chapter 36. A groundwater management area is a prerequisite for the creation of a groundwater conservation district through the TWC, Chapter 36 landowner petition process.

(c) All groundwater conservation districts in the ETGMA are required to coordinate groundwater management planning under TWC, §36.108.

§294.61. Definitions.

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context indicates otherwise.

(1) **Carrizo-Wilcox Aquifer** -- An aquifer which extends as an arcuate belt from Mexico northeasterly across Texas into Arkansas and Louisiana. The lower portion of the aquifer includes units of the Wilcox Group; the upper portion consists of the Carrizo Sand of the Claiborne Group. The northwest boundary of the Carrizo-Wilcox Aquifer is the western updip edge of the outcrop of the Wilcox Group. The southeastern boundary is the downdip extent of the aquifer that contains water with dissolved solids concentrations of less than 3,000 milligrams per liter.

(2) **Groundwater management area** -- An area that is suitable for management of groundwater resources.

(3) **Queen City Aquifer** -- An aquifer which extends as a belt from the Frio River in south Texas northeastward into Louisiana. The aquifer includes the Queen City Formation of the Claiborne Group. The northwest boundary of the Queen City Aquifer is the western updip edge of the outcrop of the Queen City Formation. The southeastern boundary is the downdip extent of the aquifer that contains water with dissolved solids concentrations of less than 3,000 milligrams per liter.

(4) **Sparta Aquifer** -- An aquifer which extends as a narrow band from the Frio River in south Texas northeastward into Louisiana. The aquifer includes the Sparta Formation of the Claiborne Group. The northwest boundary of the Sparta Aquifer is the western updip edge of the outcrop of the Sparta Formation. The southeastern boundary is the downdip extent of the aquifer that contains water with dissolved solids concentrations of less than 3,000 milligrams per liter.

(5) **Yegua-Jackson Aquifer** -- An aquifer that extends as a narrow band from the Rio Grande in south Texas northeastward across the state to the Sabine River and Louisiana. The aquifer includes the Yegua Formation of the Claiborne Group and the Whitsett, Manning, Wellborn, and Cadell Formations of the Jackson Group. The northwest boundary of the Yegua-Jackson Aquifer is the western updip edge of the outcrop of the Yegua Formation and the southwestern boundary is the western updip edge of the outcrop of the younger Catahoula Formation. The aquifer does not include the Catahoula Formation or other younger formations deposited along the Gulf Coast.

(6) **Other aquifers** -- Other aquifers would include, but not be limited to:

(A) the Nacatoch Aquifer that is located in portions of Bowie, Franklin, Hopkins, Morris, Rains, and Titus Counties;

(B) the Blossom Aquifer that is located in a portion of Bowie County;

(C) the Gulf Coast Aquifer that is located in portions of Angelina, Sabine, and Trinity Counties; and

(D) any other undifferentiated groundwater resources that are utilized in the groundwater management area.

§294.62. Designation of East Texas Groundwater Management Area (ETGMA).

The ETGMA, as described in §294.63 of this title (relating to Boundaries), is designated as a groundwater management area. The ETGMA is designated for the management of the Carrizo-Wilcox Aquifer, Queen City Aquifer, Sparta Aquifer, Yegua-Jackson Aquifer, or other aquifers.

§294.63. Boundaries.

The boundaries of the East Texas Groundwater Management Area (ETGMA) are coterminous with and include all territory within Anderson, Angelina, Bowie, Camp, Cass, Cherokee, Franklin, Gregg, Harrison, Henderson, Hopkins, Houston, Marion, Morris, Nacogdoches, Panola, Rains, Rusk, Sabine, San Augustine, Shelby, Smith, Titus, Trinity, Upshur, Van Zandt, and Wood Counties. The boundaries of the ETGMA are shown in the following figure.

Figure: 30 TAC §294.63

Figure: 30 TAC §294.63

EAST TEXAS GROUNDWATER MANAGEMENT AREA

