Aquifer Tests from County Availability Studies

Prepared for **Texas Water Development Board**

May 4, 2006

TWDB Contract

 # 2005-483-554

Daniel B. Stephens & Associates, Inc.

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1. Introduction and Purpose

Aquifer parameters obtained from pumping tests, such as transmissivity, storativity, hydraulic conductivity, specific capacity and ambient water levels is lacking in many parts of Texas. The groundwater availability models (GAMs), as well as other groundwater studies in Texas, rely on available aquifer test data to estimate groundwater availability and overall aquifer conditions. In 1999, the 76th Legislature passed Senate Bill 1323 instructing the Texas Natural Resource Conservation Commission (TNRCC), now the Texas Commission of Environmental Quality (TCEQ), to develop rules to guide licensed engineers and geologists on how to conduct Groundwater Availability Studies (GwAS) involving pump tests. Senate Bill 1323 provides cities and counties with the authority to withhold approval of subdivision plats until the developer obtains a certificate indicating that sufficient groundwater exists beneath the property being developed to meet anticipated demand for up to 30 years. Although a municipality or county is not required to exercise this authority, if it does, it must follow the requirements outlined in TCEQ Chapter 230.1 thru 230.11. This purpose of this project was to identify the political entities that require GwAS, and to compile the available aquifer test data from such entities and evaluate the GwAS reports.

The aquifer parameters generated during GwAS studies could be utilized during the development of GAMs and during other groundwater studies and improving the accuracy and reliability of local long-term groundwater resource management. Also, after a representative geographic distribution of GwAS reports have been completed for a county, the local county government and/or groundwater conservation district (GCD) may use this data to provide a geographic guide for identifying areas with higher sustainable well yields for future municipal well development or subdivision locations, or to provide information to drillers and residents in accessing local groundwater well yields. The cost of a pump test for a GwAS report is substantial for the subdivision owner, and the Texas Water Development Board (TWDB) will realize a significant benefit, at a minimal direct cost, in extracting pump test data from these GwAS reports.

The remainder of this report is organized according to the proposed project tasks outlined in DBS&A's proposal; the project tasks are listed below:

Task 1 Identify those counties that require a GwAS as part of their planning process.

Task 2 Determine which GwAS protocols are followed and obtain copies of all county-developed protocols.

Task 3 Obtain copies of GwAS reports done to date.

Task 4 Review the data for possible use in broader studies.

Task 5 Develop a database of the reports and their key content and data.

Task 6 Recommend a procedure for copies (hard and/or electronic) of the reports and raw data to be forwarded from the counties to the TWDB.

Task 7 Prepare final report

2. Results

This section presents the results of each of the primary project tasks. The majority of the project results, however, are provided in the project database and copies of the supporting materials.

2.1 Identification of Counties That Require a GwAS for Planning

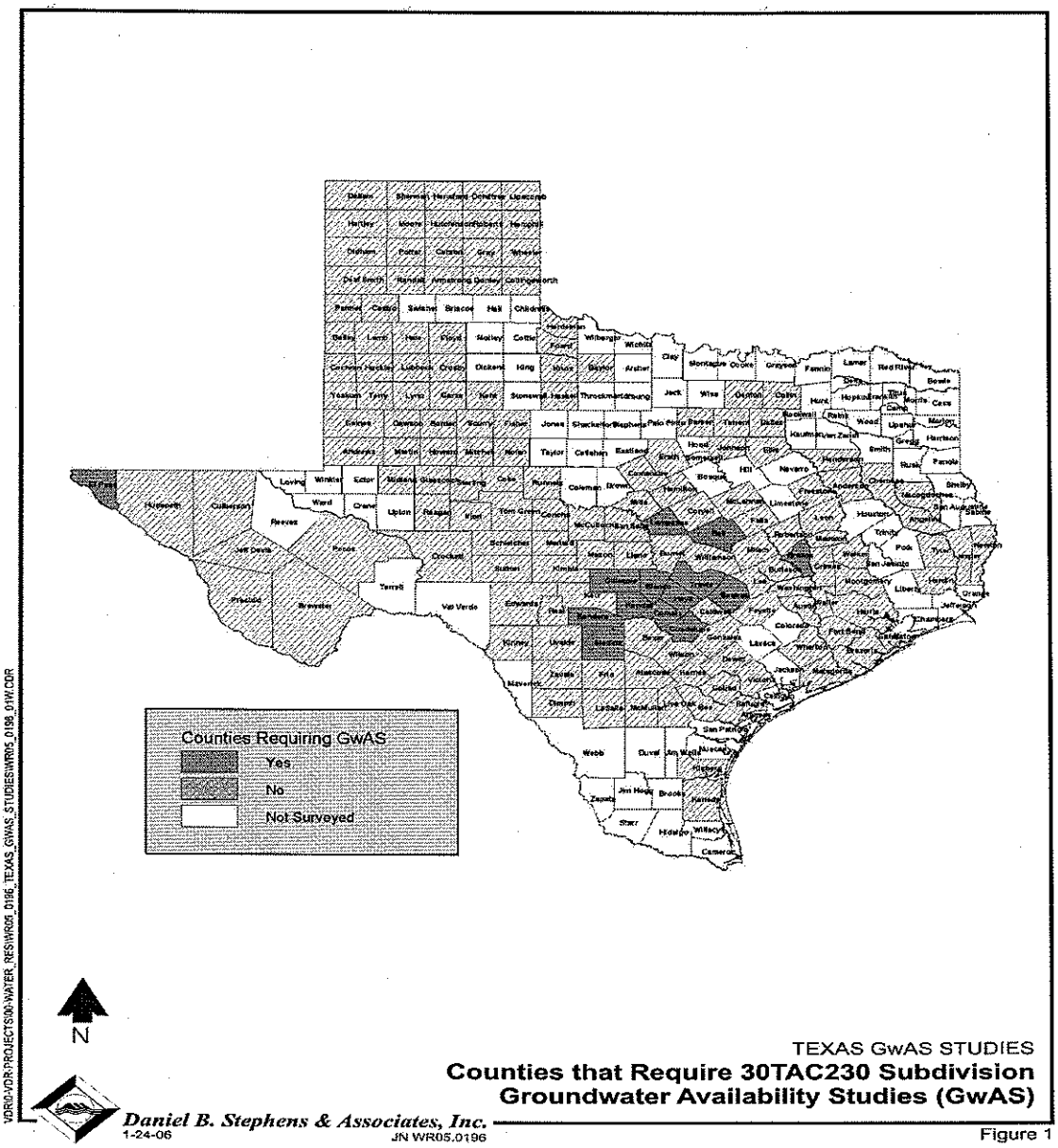
The first task of this project was to attempt to identify which of the 254 counties in Texas that require a GwAS as part of their subdivision platting process. During the kickoff meeting with the TWDB staff (to obtain the TWDB's copies of GwAS reports); the staff was questioned concerning the known counties requiring GwAS. In addition, an internet search was conducted to identify counties with subdivision rules requiring GwAS's, eight perspective counties were identified using the internet. The proposed approach was to obtain county platting authority contact information (e.g., email addresses, website addresses and phone numbers) through county organizations such as the Texas Association of Counties (TAC), County Information Project (CIP), County Information Resources Agency (CIRA), and Texas Association of County Engineers and Road Administrators (TACERA). Unfortunately, most of these organizations would either not relinquish their database of contact information (TACERA), or their databases were very incomplete and/or did not contain the desired information (CIP and CIRA).

The TAC website did, however, provide a list of state organizations that included the County Judges and Commissioners Association of Texas. Our early surveys revealed that very few of the counties have full time engineers and that the county judges and/or commissioners were usually the most informed representatives of their respective county. Internet searches of the Texas judges and commissioners association webpage provided a list of regional officers. An email describing the purpose of the request (GwAS studies, SB 1323) were forwarded to regional presidents and vice presidents throughout Texas. In addition, an email was developed for distribution to all of the groundwater conservation district (GCD) managers, since they are often consulted by county representatives and/or recipients of GwAS reports. Examples of a few of these emails are included in Appendix A. In addition to the emails, phone surveys were

also initiated during August, 2005.

Responses received after repeated emails were few; responses were received for judges in 3 counties and about 12 GCD managers. A decision was made in mid-October to abandon the email approach and to begin a focused calling effort to the remaining GCD managers and county judges and/or commissioners. County clerks were often contacted if contact information was not available for the judges or commissioners. The phone surveys were conducted until early November, 2005 when a meeting was held with the TWDB project managers (Dr. Robert Mace, Rima Petrossian, Brent Christian) to discuss the progress of Task 1. In consideration of time and level-of-effort constraints, an agreement was established concerning the number of remaining counties to be surveyed. Major urban areas that were the most likely to have implemented SB 1323 were surveyed. The tabulated results of phone and/or email surveys are in Appendix B.

A total of 154 counties were surveyed and the final results of the survey are illustrated in Figure 1. A total of 14 counties were identified that are actively requiring groundwater studies under 30TAC230 (Figure 1). Three additional counties (Burnet, Caldwell and Tom Green) implemented a county requirement for GwASs, but local resistance and politics subsequently caused these counties to repeal or abandon the GwAS requirement.



No counties were identified that used a county modified version of 30TAC230 GwAS. The counties that were not surveyed are predominantly rural with minimal potential for subdivision development.

2.2 Determination of GwAS Protocols

This task involved the determination of the GwAS protocols which are followed by the counties (county developed or 30TAC230) and collection of copies of all county-developed protocols (Task 2). Upon identifying counties that require GwAS, the county representative, consultant or local groundwater district manager was contacted to obtain copies of the county's subdivision requirements. As stated above, negotiations with counties known to require a GwAS in the platting process began upon the initiation of this project. Table 1 is a summary of the number of subdivisions GwAS reports collected for each county in this study and the counties that require GwAS in the subdivision platting process (30TAC230 or county subdivision rules).

Table 1. Counties requiring GwAS for subdivision platting and subdivisions with GwAS reports collected in this study

County	Subdivisions reports in this study	Implements 30TAC230?
Bandera	8	Yes
Bell	4	Yes
Blanco	8	Yes
Bastrop	0	Yes
Brazos	0	Yes
Comal	2	Yes
El Paso	0	Yes
Gillespie	4	Yes
Guadalupe	1	Yes
Hays	20	Yes
Kendall	3	Yes
Lampasas	0	Yes
Medina	0	Yes
Travis	1	Yes

A total of 14 counties (Table 1) require GwAS for the subdivision platting process. No cities were identified during the survey that required GwAS for subdivision platting. Hard copies of all

subdivision requirements for the counties are provided in Appendix C; six counties actively post their subdivision regulations on the internet at the addresses provided below.

Comal County Subdivision Rules - http://www.cceo.org/

Bandera County Subdivision Rules - http://www.banderacounty.org/documents/Bandera%20Counrty%20Subdivision%20Regulations.pdf

Hays County Subdivision Rules - http://www.co.hays.tx.us/departments/envirohealth/pdf/sub.pdf

Kendall County Subdivision Rules - http://www.co.kendall.tx.us/RulesPlans/DevelopmentRules2005.doc

Gillespie County Subdivision Rules - http://www.gillespiecounty.org/subdivision_regs.pdf

Travis County Subdivision Rules - http://www.co.travis.tx.us/tnr/subdivision/82_050729/Final_Plat_Review_Form.pdf

2.3 GwAS Reports Completed to Date

A total of 54 GwAS reports completed by consultants were obtained from either the TWDB, or county courthouses, GCDs or consultants (project Task 3). Some of these reports included more than one pump test for a subdivision, and therefore the reports include a total of 68 pump tests. Hard copies of all consultant reports have been provided to the TWDB. The report number listed in Appendix D is the index number for the hard copy reports. If multiple pump tests were conducted within a subdivision, the index number for the additional pump test will have a decimal designation (e.g., 3.1).

2.4 Review GwAS Data for Possible Use in Broader Studies

A total of 54 consultant reports and/or pump test analyses were reviewed and evaluated

(Task 4). Four of the reports obtained were from the TWDB and/or consultants included counties that do not require GwAS. These counties are Johnson (one report, no pump test), Kerr (two reports and pump tests) and Kinney (one report and pump test). Five counties (Bastrop, Brazos, El Paso, Lampasas and Medina) that require GwAS for subdivision plats either have had no subdivision activity requiring GwAS reports (used existing water suppliers) or the county representatives were unable to locate copies of the reports. Travis County initiated the GwAS requirement for subdivisions in August of 2005.

The following data was extracted from the GwAS reports for inclusion in this report:

1. Subdivision information, the name of the consultant that conducted the pump test, and the date of each pump test

2. Aquifer name, aquifer type (confined, unconfined), aquifer thickness, and well completion information (partially or fully penetrating well)

3. Geographic coordinates or state well grid for the test wells

4. Pumping well construction data (well depth, screen interval and diameter)

5. Pump test data (pump rate, duration of test, initial and final water levels, distance from pumping well to monitor wells)

6. Pump test analysis results (T, S, K) and specific capacity and well efficiency, if provided in the report

7. Future drawdown estimated by the consultant and recommended well spacing

8. Water chemistry (total hardness, Ca, Mg, Na, SO_4, Cl, F, TDS and pH) when available.

9. Consultant and DBS&A comments and DBS&A's subjective estimation of GwAS report reliability

A summary of the GwAS subdivision pump tests collected during this study are in a spreadsheet format in Appendix D. All the data entered in this spreadsheet has been through a quality assurance procedure and has been reviewed and verified from the source report. Transmissivity (T) and hydraulic conductivity (K) values from the reports were of the pumping wells and were converted to the standardized requested units of gallons per day per foot (gpd/ft) and gallons per day per foot squared (gpd/ft^2), respectively. Latitude and longitude GPS coordinates were converted to decimal degrees for easy integration into a GIS database. An electronic copy of Appendix D is included on the compact disc provided with this report.

Appendix D includes an estimated reliability of each report based on the subjective ranking of five variables, each worth one point. These variables, and the numeric scoring approach, are as follows:

1. Were latitude and longitude coordinates included in the report? (1=yes, 0=no)

2. Were screen intervals, aquifer characteristics (e.g., thickness) and water quality information included in the report? (1=yes, 0=no),

3. Was the pump test conducted for a time frame longer than 12 hours with drawdown curves suitable for analysis? (1=yes, 0=no)

4. Did the pump test include a monitor well? (1=yes, 0=no)

5. Was the pump test conducted in favorable weather and/or hydrogeologic conditions (e.g. unfavorable conditions would be during intense rainfall events, near faults or significant sources of recharge)? (1=yes, 0=no).

The maximum possible reliability score is 5, and the lowest possible score is 0. Reports with scores below and not including 3 in Appendix D are considered to have questionable reliability.

Most of the available GwAS reports are clustered in Hays, Bandera and Blanco counties. This is because (1) there is a lot of subdivision activity in these three counties, and (2) these counties

are actively maintaining and inventorying GwAS reports, and the reports are usually distributed to the respective local GCD.

Other counties either do not have a designated county engineer or staff member that coordinates the organization of these reports in the county courthouse, or the county does not keep or turn a copy over to the local GCD, or they are unable to locate the reports completed. The consultants that developed the reports are probably the best source for obtaining these "missing" reports. These reports are in the public domain and should be accessible by the state.

2.5 Database Development

The data obtained from the GwAS reports was compiled in Microsoft Excel spreadsheets, and was then converted to an Access database (Task 5). An electronic copy of the GwAS Access Database is included on the CD provided with this report.

2.6 Recommended Procedure for Transfer of GwAS Reports to the TWDB

As part of the project, DBS&A was also requested to recommend a procedure for transferring copies of GwAS reports (either hard copy or electronic) and associated raw data from the counties to the TWDB (Task 6). Present legislation should be amended to require that the local county clerk be responsible to mail a hard copy of each new GwAS report to the TWDB (Groundwater Technical Assistance Office) office within 90 days of completion.

The remainder of this section outlines a proposed procedure for electronic transferal of key GwAS report information from the counties to the TWDB water information integration and dissemination identification (WIID) database.

Each county collecting GwAS studies would obtain a unique data entry only access code from the TWDB to only enter GwAS data into a formatted data entry form created to interface with the TWDB's WIID website. The formatting of this form should be similar to the standardized 30 TAC 230.3 form used by most counties to minimize confusion during data entry. This data entry

form would include GwAS well pump test and aquifer attributes as well as other attributes determined by TWDB staff. Within this entry form, assigned cells would have to be automated to convert latitude, longitude, transmissivity and hydraulic conductivity to standardized units. Once completed and submitted by the county representative, this formatted GwAS data entry form would be temporarily stored on a hard drive until an authorized TWDB staff member has reviewed and approved the GwAS form for integration into the WIID system.

These GwAS wells with pump test data once within the WIID map system could then be easily filtered in the map interface by a specific button or color or by the standard query interface. Additionally, the GwAS wells could be flagged with appropriate code for referral to continuing attribute tables. Expanded attributes might include formation tops picked from electric logs referenced to sea level, interval thicknesses, type and quality of production test or even a plat map or log served up as an Acrobat PDF file.

Advantages of using the WIID structure are that the database and user interface already exist, and the expanded data can be managed by TWDB.

3. Recommendations

There are a number of observations and recommendations for implementing this type of study in the future. In retrospect, the level of effort required to contact informed individuals in the 254 counties in Texas who knew their county's status concerning the implementation of SB1323 and GwAS was significantly underestimated. Bulk emails to county engineers, judges and commissioners yielded very little response, probably the result of pervasive spam emails. By far, the most effective use of time was placing phone calls to the GCD managers, who were generally the most informed regarding groundwater studies and activities within their GCD. Most county governments do not have groundwater expertise on their staff, and they usually communicated with the GCD managers for advice on the GwAS information and the interpretation of pump test results. Large areas of Texas, however, are not included within the boundaries of GCDs. Since the implementation of GwAS studies by a county is usually prompted by rapid growth within the county resulting in new subdivisions, rural counties showing limited growth according to the most recent population census can probably be safely excluded from similar studies in the future.

Secondly, during this study, we compiled a list of about a half a dozen consultants that are probably completing about 80 percent or more of the GwAS reports. Since these studies are completed to meet county subdivision requirements, these GwAS reports should be in the public domain. We contacted most of these consultants during this project, and a few of them were reluctant to provide their reports to another consultant. TWDB staff would probably be more successful than a private consultant in gathering GwAS reports from private firms. A few GCDs (Hays, Blanco and Bandera counties) had excellent records and the consultant's GwAS reports were readily available. The remaining counties requiring GwAS struggled to find one or two reports in a timely manner.

Finally, this project is worth the effort for the additional hydrogeologic information obtained. The TWDB should consider updating this effort on a five year cycle, and incorporate the additional information into WIID.

Standen, Allan

From: Jason Cook [Jason.Cook@teexmail.tamu.edu]
Sent: Wednesday, October 05, 2005 11:48 AM
To: Standen, Allan
Subject: Re: Survey of water resource Groundwater AvailabilityStudies(GwAS)

Allan...You can contact Richard Harbuck at richard.harbuck@teexmail.tamu.edu.

-jason

>>> "Standen, Allan" <astanden@dbstephens.com> 10/5/2005 11:29 AM >>>
Jason,

Do you know if this was sent out by the water/wastewater program person? I have had no responses yet. Could I contact the water/wastewater program person?

Allan Standen

-----Original Message-----
From: Jason Cook [mailto:Jason.Cook@teexmail.tamu.edu]
Sent: Wednesday, September 28, 2005 3:32 PM
To: Standen, Allan
Subject: Re: Survey of water resource Groundwater Availability Studies(GwAS)

E-mail has been received and forwarded to our water/wastewater program.

>>> "Standen, Allan" <astanden@dbstephens.com> 9/28/2005 4:12 PM >>>
Jason, Thanks for your help, please send a return email letting me know that you received this.

Thanks again,
Allan Standen PG

County Engineer;

The state has been very active in determining future water supplies for the different user groups (municipalities, industry, recreation, environmental, utilities, irrigation, etc.) in the state of Texas. Local regional planning has identified many areas of Texas that may have water shortages before 2050. To assist in managing the state's water supplies, the Texas Water Development Board or TWDB has taken the initiative to create surface (Water Availability Model (WAM)) and groundwater (Groundwater Availability Model (GAM)) models to evaluate numerous scenarios of availability, consumption and distribution of these water supplies.

In areas where public water supply services are not available, some developers of subdivisions in the past have sold land and have built homes with no local available groundwater or surface water to meet the needs of the homeowners. To alleviate this problem, in 1999 Senate Bill 1323 was passed which gave cities and counties the authority to withhold approval of subdivision plats until the developer obtains a certificate indicating sufficient groundwater exists under the land being developed. The Texas Commission of Environmental Quality (TCEQ) developed rules to guide licensed engineers in the certification process. The Groundwater Availability Study (GwAS) comprises these rules.

A municipality or county is not required to exercise its authority of this rule, however if it does, the requirements are outlined in TCEQ Chapter 230.1 thru 230.11 must be followed. Pump tests are required in GwAS. The state has not gathered these pump tests and is not sure which counties have initiated the rule. These pump tests are critical to make the future GAMs accurate and applicable for water resource management on a county wide basis.

My name is Allan Standen, PG and I am with Daniel B. Stephens and Associates (DBS&A). William

Gamblin, PE (project manager) and I have recently won a contract from the TWDB (Contract #2005-483-554). This TWDB project is to locate all the pump tests completed to meet GwAS plat construction requirements, review them, and build a database so that the aquifer properties from these pump tests can be used for future updates of the GAMs. The local county engineer is usually responsible for reviewing and approving these GwAS's. Local groundwater districts may also be involved.

Billy and I would appreciate any information regarding if your county has implemented this rule or contact names and/or phone numbers of counties or county officials that require GwAS subdivision plats in your area. The counties we presently know of include Bastrop, Travis, Hays, Comal, Blanco, Bandera, Bell and Gillespie counties. We have less than three months to complete this contract so a timely response would be appreciated.

If your county has not implemented this rule we also need to know this. We need to determine the status of all 254 counties in the state. So please send us an email if you know your county or any of the adjacent counties do or do not require GwAS.

Please contact William Gamblin at wgamblin@dbstephens.com or Allan Standen at astanden@dbstephens.com or call us at 512-821-2765. Any and all help would be appreciated; this pump data will assist your county in making informed water resource decisions in the future. Please make responses by Oct. 7th.

Thank you for your time and effort.

Allan Standen
Director of Texas Water Resources
Daniel B. Stephens and Associates

Standen, Allan

From: Jody Gilliam [jody@fernandezgroupinc.com]

Sent: Thursday, September 22, 2005 3:05 PM

To: Standen, Allan

Subject: RE: Distribution to TAGD members concerning Groundwater Availability Studies (Please confirm with return email)

Thanks for the email, Allan. I have forwarded it the appropriate people.
Best,
Jody

Jody Gilliam
Fernandez Group, Inc.
1300 Guadalupe, Ste. 201
Austin, TX 78701
Phone: 512-477-5445
Fax: 512-477-9490
www.FernandezGroupInc.com

-----Original Message-----
From: Standen, Allan [mailto:astanden@dbstephens.com]
Sent: Thursday, September 22, 2005 3:41 PM
To: jody@fernandezgroupinc.com
Subject: Distribution to TAGD members concerning Groundwater Availability Studies (Please confirm with return email)

Groundwater District Managers of Texas;

My name is Allan Standen and I am with Daniel B. Stephens and Associates (DBS&A). William Gamblin (project manager) and I have recently won a contract from the TWDB (Contract #2005-483-554) to research and gather all the available information in Groundwater Available Studies (GwAS) completed to meet county plat requirements.

As you are probably aware, the recently constructed groundwater models (GAMs) were constructed using the available pump test data for the respective aquifer. There are many areas of Texas that have few pump tests or the geographic distribution or density of the pump tests is not ideal for more detailed modeling. This TWDB project is to locate all the pump tests completed to meet plat construction requirements, review them, and build a database so that these wells can be incorporated into future updates of the GAMs.

However, neither the state nor we know all of the counties that require GwAS. We would really appreciate any information or contact names and/or phone numbers of counties or county officials that require water availability studies for real estate plats in your area. The counties we presently know of include Bastrop, Travis, Hays, Comal, Blanco, Bandera, Bell and Gillespie counties. We have less than three months to complete this contract so a timely response would be appreciated. Negative information is also very helpful, we need to contact and/or determine the status of all 254 counties in the state. So please send us an email if you know your county or any of the adjacent counties do or do not require GwAS.

Please contact William Gamblin at wgamblin@dbstephens.com or Allan Standen at astanden@dbstephens.com or call us at 512-821-2765. Any and all help would be appreciated; this data could help make your GAM more accurate in the future which could assist you in the future management of your aquifer(s). Please make responses by Oct. 14th.

Thank you for your time and effort.

Allan Standen
Director of Texas Water Resources
Daniel B. Stephens and Associates

Standen, Allan

From: Standen, Allan

Sent: Friday, October 07, 2005 3:13 PM

To: 'bordencj@poka.com'

Subject: Texas Water Development Board Project, County required Groundwater Availability Studies (GwAS)

Sir, could you please distribute this email to the other judges within your organization? This is very important in evaluating the long-term water resources of Texas. If you have any questions please contact Allan Standen at 512-821-2765 or astanden@dbstephens.com. Would you please also send me a response email so that I know you received this? Thank you very much for your time from your busy schedule.

Your Honorable Judge Van Lee York;

The state has been very active in determining future water supplies for the different user groups (municipalities, industry, recreation, environmental, utilities, irrigation, etc.) in the state of Texas. Local regional planning has identified many areas of Texas that may have water shortages before 2050. To assist in managing the state's water supplies, the Texas Water Development Board or TWDB has taken the initiative to create surface (Water Availability Model (WAM)) and groundwater (Groundwater Availability Model (GAM)) models to evaluate numerous scenarios of availability, consumption and distribution of these water supplies.

In areas where public water supply services are not available, some developers of subdivisions in the past have sold land and have built homes with no local available groundwater or surface water to meet the needs of the homeowners. To alleviate this problem, in 1999 Senate Bill 1323 was passed which gave cities and counties the authority to withhold approval of subdivision plats until the developer obtains a certificate indicating sufficient groundwater exists under the land being developed. The Texas Commission of Environmental Quality (TCEQ) developed rules to guide licensed engineers in the certification process. The Groundwater Availability Study (GwAS) comprises these rules.

A municipality or county is not required to exercise its authority of this rule, however if it does, the requirements are outlined in TCEQ Chapter 230.1 thru 230.11 must be followed. Pump tests are required in GwAS. The state has not gathered the pump test data and is not sure which counties have initiated the rule. These pump tests are critical to make the future GAMs accurate and applicable for water resource management on a county wide basis.

My name is Allan Standen, PG and I am with Daniel B. Stephens and Associates (DBS&A). William Gamblin, PE (project manager) and I have recently won a contract from the TWDB (Contract #2005-483-554). This TWDB project is to locate all the pump tests completed to meet GwAS plat construction requirements, review them, and build a database so that the aquifer properties from these pump tests can be used for future updates of the GAMs. **The local county judge** is often responsible for reviewing and approving the plat requests that might require a GwAS's. Local groundwater districts may also be involved.

We would appreciate any information regarding if your county has implemented this rule or contact names and/or phone numbers of counties or county officials that require GwAS subdivision plats in your area. The counties we presently know of include Bastrop, Travis, Hays, Comal, Blanco, Bandera, Bell and Gillespie counties. We have less than three months to complete this contract so a timely response is needed.

If your county has not implemented this rule we also need to know this. We need to determine the status of all 254 counties in the state. So please send us an email if you know your county or any of the adjacent counties do or do not require GwAS.

Please contact William Gamblin at wgamblin@dbstephens.com or Allan Standen at astanden@dbstephens.com or call us at 512-821-2765. Any and all help would be appreciated; this pump data will assist your county in making informed water resource decisions in the future. Please make responses by Oct. 14th.

Thank you for your time and effort.

Allan Standen

Gary Walker
Sandy Land
806-456-7885

10/17/2005

Standen, Allan

From: borden [bordencj@poka.com]

Sent: Monday, October 17, 2005 9:30 AM

To: Standen, Allan

Subject: RE: Texas Water Development Board Project, County required Groundwater Availability Studies (GwAS), Please send return email

Mr. Standen

You might get some help in getting this out to the counties through Texas Association of Counties in Austin, Texas. They have the best network for contact with the counties. I am sent this on the Comm. Gilbert Pargmann, DeWitt County. He is the President of the County Judges and Commissioners Association of Texas.

Van York
County Judge
Borden County

-----Original Message-----
From: Standen, Allan [mailto:astanden@dbstephens.com]
Sent: Monday, October 17, 2005 10:10 AM
To: bordencj@poka.com
Subject: Texas Water Development Board Project, County required Groundwater Availability Studies (GwAS), Please send return email

Sir, could you please distribute this email to the other judges within your organization? This is very important in evaluating the long-term water resources of Texas. If you have any questions please contact Allan Standen at 512-821-2765 or astanden@dbstephens.com. Would you please also send me a response email so that I know you received this? Thank you very much for your time from your busy schedule.

Your Honorable Judge Van Lee York;

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If your county has not implemented this rule we also need to know this. We need to determine the status of all 254 counties in the state. So please send us an email if you know your county or any of the adjacent counties do or do not require GwAS.

Please contact William Gamblin at wgamblin@dbstephens.com or Allan Standen at astanden@dbstephens.com or call us at 512-821-2765. Any and all help would be appreciated; this pump data will assist your county in making informed water resource decisions in the future. Please make responses by Oct. 19th.

Thank you for your time and effort.

Allan Standen
Director of Texas Water Resources
Daniel B. Stephens and Associates

Emails & phone calls
email - networks

Standen, Allan

From: Standen, Allan

Sent: Thursday, November 10, 2005 11:05 AM

To: 'rcortese@vvm.com'; 'charles.simmons@co.nacogdoches.tx.us'; 'miguel.acosta@co.zavala.tx.us'; 'clayds@co.ector.tx.us'; 'dnallred@amaonline.com'

Subject: This is not spam? Texas Water Development Board Project, County required Groundwater Availability Studies (GwAS), Please send return email

Your Honor;

Could you please distribute this email to the other judges or commissioners within your region? This is very important in evaluating the long-term water resources of Texas. If you have any questions please contact Allan Standen at 512-821-2765 or astanden@dbstephens.com. Would you please also send me a response email so that I know you received this? Thank you very much for your time from your busy schedule.

The state has been very active in determining future water supplies for the different user groups (municipalities, industry, recreation, environmental, utilities, irrigation, etc.) in the state of Texas. Local regional planning has identified many areas of Texas that may have water shortages before 2050. To assist in managing the state's water supplies, the Texas Water Development Board or TWDB has taken the initiative to create surface (Water Availability Model (WAM)) and groundwater (Groundwater Availability Model (GAM)) models to evaluate numerous scenarios of availability, consumption and distribution of these water supplies.

In areas where public water supply services are not available, some developers of subdivisions in the past have sold land and have built homes with no local available groundwater or surface water to meet the needs of the homeowners. To alleviate this problem, in 1999 Senate Bill 1323 was passed which gave cities and counties the authority to withhold approval of subdivision plats until the developer obtains a certificate indicating sufficient groundwater exists under the land being developed. The Texas Commission of Environmental Quality (TCEQ) developed rules to guide licensed engineers in the certification process. The Groundwater Availability Study (GwAS) comprises these rules.

A municipality or county is not required to exercise its authority of this rule, however if it does, the requirements are outlined in TCEQ Chapter 230.1 thru 230.11 must be followed. Pump tests are required in GwAS. The state has not gathered the pump test data and is not sure which counties have initiated the rule. These pump tests are critical to make the future GAMs accurate and applicable for water resource management on a county wide basis.

My name is Allan Standen, PG and I am with Daniel B. Stephens and Associates (DBS&A). William Gamblin, PE (project manager) and I have recently won a contract from the TWDB (Contract #2005-483-554). This TWDB project is to locate all the pump tests completed to meet GwAS plat construction requirements, review them, and build a database so that the aquifer properties from these pump tests can be used for future updates of the GAMs. **The local county judge** is often responsible for reviewing and approving the plat requests that might require a GwAS's. Local groundwater districts may also be involved.

We would appreciate any information regarding if your county has implemented this rule or contact names and/or phone numbers of counties or county officials that require

GwAS subdivision plats in your area.

If your county has not implemented this rule we also need to know this. We need to determine the status of all 254 counties in the state. So please send us an email if you know your county or any of the adjacent counties do or do not require GwAS.

Please contact William Gamblin at wgamblin@dbstephens.com or Allan Standen at astanden@dbstephens.com or call us at 512-821-2765. Any and all help would be appreciated; this pump data will assist your county in making informed water resource decisions in the future. Please make responses by Oct. 19th.

Thank you for your time and effort.

Allan Standen
Director of Texas Water Resources
Daniel B. Stephens and Associates

Gary Arnold 979-822-2127

(1)

	County Platting Authority	Contact Person	Phone Number	Contacted: Date	Contacted: Time	Require GwAS per 30 TAC Chapter 230?	County Regulations Available Online?	Do we have copy of all plans?	Comments
Anderson	Commisioner's Court	Schelby Wells	(903) 723-7813	10/6/05	13:30	No	No	NA	Schelby faxed over a copy of the County regs regarding platting. A developer has to certify that water is available, but no formal syudy is required.
Andrews	Commisioner's Court	Judge Richard Dalkenter	432-524-1401	10/6/05		No	No	No	Not implemented
Angelina	Commisioner's Court	David Alford	936-630-0582	10/18/05		No	No	No	Pineywood GWCD manager
Aransas	Commisioner's Court								
Archer	Commisioner's Court	~~C.E. Williams~~	~~806-883-2501~~	~~10/17/05~~		N			
Armstrong	Commisioner's Court	Judge Hugh Reed	(806) 226-3221	10/4/05	16:00	No	NA	NA	
Atascosa	" "	Mike Mahoney	830-569-4186	10/17/05		No			Evergreen UWCD manager
Austin	" "	Lloyd Behm	936-825-7303	10/19/05		No	No	No	~~State~~ Interest ~~that~~ County will have responsibility or liability for furnishing subdivision with sanitary services or surface or groundwate
Bailey	Commisioner's Court	Judge Sherri Harrison	(806) 272-3077	10/17/05	11:35	No	NA	NA	
Bandera	County Engineer ??	Ray Rendon	(830) 796-4524	8/12/05		Yes	??	Yes	Bandera County River Authority and Conservation District (David Jeffery - (830) 796-7260) keeps all of the studies for the County. The Conservation District sent all of their studies to the TWDB which we have in our office.
Bastrop	Administrator of Subdivisions and Permits	Dee Czora	(512) 581-7182	9/9/05		Maybe??	??	No	Dee talked at lenght about Availability Studies that were completed. She thought the GWD - Lost Pines (Joe Cooper (512) 581-9056) may have some. We contacted Lost pines and they do not have any. Dee stated that she would look for what she has got and call us (mid September).
Baylor	" "	Mike McGuire	~~940-822~~ 940-1095	10/21/05		No	No	No	Rolling Plains GWCD manager
Bee	" "	Lonnie Stewart	361-449-1151	10/17/05		No	No	No	Bee County GWCD manager
Bell	engineer ??	Tom Barrier (sp?)	(254) 933-5174	9/9/05		Yes	??	Yes	Clearwater Underground Water Conservation District - Cheryl Maxwell (254) 933-0120 handles all of the county's GwASs. We have their copies.
Bexar	" "	David Castrol County Engineer	210-615-5920	11/9/05		No	No	No	County water suppliers provide needs for all subdivisions
Blanco	Commisioner's Court	County Clerk	(830) 868-7357	8/12/05		Yes	?? Probably not	No	Blanco Pedernales GWD (Ron Fieseler - (830) 868-9196) has 4 or 5 copies that he said he would set aside for us when they moved (in August). Ron has not returned phone calls since.
Borden	" "	Judge Van Leo York	806-756-4391	10/17/05		No	No	No	Not Implemented
Bosque									
Bowie									
Brazoria	" "	Jace Houston/ Matt Hanks	281-756-1199	10/18/05		No	No	No	Considering adding regulations Jace is lawyer for Galveston-Harris Subsidence District
Brazos	" No studies done Gary Arnold Co Engineer	Bill Riley/ Gary Arnold	979-279-9350	11/9/05		~~Yes~~ No ?	?	?	Brazos Valley GCD manager, County Engineer 979-822-2127
Brewster	" "	Conrad Arrola	432-837-6235	10/17/05		No	No	No	Brewster County UWCD manager
Briscoe									
Brooks									

Bluebonn GWCD manage

979-777-7158

(1)

	County Platting Authority	Contact Person	Phone Number	Contacted Date	Contacted Time	Require GwAS per 30 TAC Chapter 230?	County Regulations Available Online?	Do we have copy of all plans?	Comments
Brown									
Burleson		Gary Westbrook	512-455-9900	11/07/05		No	No	No	Post Oak Savannah GWCD
Burnet		James Oakley	512-715-5235	12/8/05		No	No	No	Commissioner Precinct #4
Caldwell	"	Joshua Grimes	512-398-2383	10/12/05		~~No~~	No	No	County can request a GwAS, but only when they feel it is necessary. GWCD also requires pump tests if they do not use GwCD passing GwAS. (County has not implemented GwAS repealed) ← Plum Creek UWCD
Calhoun									
Callahan									
Cameron									
Camp									
Carson	"	CE Williams	806-883-2501	10/17/05		No	No	No	Panhandle GWCD manager
Cass									
Castro	"	Judy Reaves	806-762-0181	10/17/05		No	No	No	High Plains UWCD
Chambers									
Cherokee	"	Janet Bryd	903-541-4845	11/07/05		No	No	No	Neches & Trinity Valley GCD manager
Childress									
Clay									
Cochran	"	Judy Reaves	806-762-0181	10/17/05		No	No	No	High Plains UWCD
Coke	"	Winton Milliff	325-453-2232	10/17/05		No	No	No	Coke County GWCD manager
Coleman									
Collin		Ruben Delgado	972-548-3722	11/12/05		No	No	No	County Engineer
Collingsworth	"	Thomas Powell	806-447-2800	9/23/05		No	No	No	Collingsworth UWCD manager
Colorado									
Comal	Subdividion Regulation	Betty Lien	(830) 608-2090	8/8/05		Yes	Yes	Yes	Betty emailed the regulations to us.
Comanche	"	Joe Cooper	254-965-6705	10/18/05		No	No	No	middle Trinity GWCD manager
Concho	"	Allen Largo	325-469-3988	10/12/05		No	No	No	Lipan-Kickapoo WCD manager
Cooke									
Coryell		Jack Wall	254-248-2005	12/8/05		No	No	No	Commissioner Precinct #1
Cottle									
Crane									
Crockett	"	Dennis Clark	325-392-5156	10/30/05		No	No	No	~~Con~~ Emerald UWCD manager, County Judge considering SB 1323 in future

	County Platting Authority	Contact Person	Phone Number	Contacted Date	Contacted Time	Require GwAS per 30 TAC Chapter 230?	County Regulations Available Online?	Do we have copy of all plans?	Comments
Crosby	" "	Judy Reeves	806-762-0181	10/17/05		No	No	No	High Plains UWCD
Culberson	" "	John Jones	432-283-1548	10/11/05		No	No	No	Culberson Co GCD manager
Dallam	" "	~~Jim C~~ Richard Bowers	806-935-6401	~~10/11/05~~ 11/9/05		No	No	No	North Plains GCD manager
Dallas	" "	John Price Commissioner #3	214-653-6671	10/11/05		No	No	No	Surface water supplied by local providers, Commissioner District #3
Dawson	" "	Harvey Everhart	806-872-9205	10/11/05		No	No	No	Mesa UWCD manager
Deaf Smith	" "	Judy Reeves	806-762-0181	10/17/05		No	No	No	High Plains UWCD
Delta									
Denton	" "	Sandy Jacobs Commissioner	972-434-7140	10/17/05		No	No	No	Commissioner (Precinct 2), County considering SB1323 in future
DeWitt		~~Bob McCurdy~~ ~~Ed Walker~~	361-275-8188 ~~830-876-3782~~	11/9/05 ~~11/9/05~~		No	No	No	~~Wintergarden GCD manager~~ Pecan Valley GCD manager
Dickens									
Dimmit	" "	Ed Walker	830-876-3782	11/9/05		No	No	No	Wintergarden GCD manager
Donley	" "	CE Williams	806-883-2501	10/17/05		No	No	No	Panhandle GWCD manager
Duval									
Eastland									
Ector									
Edwards	" "	Lee Sweeten	830-234-3158	10/11/05		No	No	No	Real-Edwards Conservation District Manager
Ellis		Delton Ake	972-825-5202	12/9/05		No	No	No	Ellis Co Director of Development
El Paso	" "	Erich Morales	915-546-2050	11/9/05		Yes			Subchapt B 232 / Chapt
Erath	" "	Joe Cooper	254-965-6705	10/18/05		No	No	No	~~Hood~~ Middle Trinity GWCD manager
Falls		Judge Thomas Schen	254-883-1426	12/8/05		No	No	No	County Judge
Fannin									
Fayette	Commissioners Court	Linda Strecker	979-968-3135	11/3/05		No	No	No	Water District Manage. Fayette Co
Fisher	" "	Belynda Rains	325-776-2730	10/18/05		No	No	No	Clear Fork GCD manager
Floyd	" "	Judy Reeves	806-762-0181	10/17/05		No	No	No	High Plains UWCD
Foard		Johnny Kays	940-663-5722	10/17/05		No	No	No	GWCD manager (Tri County)
Fort Bend	" "	Jace Houston/ Laura Hood	281-633-7510	10/18/05		No	No	No	Jace is lawyer for Harris-Galveston Subsidence District
Franklin									
Freestone		Robert Gresham	979-775-3466	11/11/05		No	No	No	Mid East Texas GCD manager
Frio	" "	Mike Mahoney	830-569-4186	10/17/05		No	No	No	Evergreen UWCD manager

SB 1323 subchapter A

Counties within 50 miles of international boundary — Michael Evans "model Subdivision Rule"

	County Platting Authority	Contact Person	Phone Number	Contacted Date	Contacted Time	Require GwAS per 30 TAC Chapter 230?	County Regulations Available Online?	Do we have copy of all plans?	Comments
Gaines	" "	Clyde Crumley Mike Fitzgerald	432-758-1127	10/18/05		No	No	No	Llano Estacado UWCD manager
Galveston	" "	Jace Houston/	409-770-5549	10/18/05		No	No	No	Jace is lawyer for Harris-Galveston Subsidence District
Garza	" "	Fernol Wheeler	806-495-4425	11/7/05		No	No	No	Personal Commun Garza Co GWCD manager
Gillespie	??	Wayne Wells Ricky Houston	(830) 998-0163	8/25/05		Yes	Yes	No	I left a message with Wayne, but have not received a response.
Glasscock	" "	~~Greg Weatherby~~	~~325-884-2863~~	10/18/05		No	No	No	~~Sandy Beltz UWCD manager~~ Glasscock GWCD manager
Goliad	" "	Barbara Smith	432-354-2430 361-645-1716	10/13/05		No	No	No	Goliad Co UWCD manager
Gonzales	" "	Barry Miller	830-672-1047	10/11/05		No	No	No	Gonzales Co UWCD manager
Gray	" "	CE Williams	806-883-2501	10/17/05		No	No	No	Panhandle GWCD manager
Grayson									
Gregg			873-2111						Paul Malek
Grimes	" "	~~Randy Duke Floyd Dutton~~	936-~~825-7303~~	10/17/05		~~Yes~~ No	~~Yes~~ No	No	No, County Engineer Requires Plats with ~~SB 1333~~ statement Brushy Creek GWCD manager
Guadalupe	" "	Bill Klemt (consultant)	512-837-2115	10/18/05		Yes	?	No	Two known studies (letter from Klemt) see
Hale	" "	Judy Reeves	806-762-0181	10/17/05		No	No	No	High Plains UWCD
Hall									
Hamilton		Jim Boatwright	254-386-8542	12/13/05		No	No	No	Commissioner, Precinct #1
Hansford	" "	Richard Bowers	806-935-6401	11/4/05		No	No	No	North Plains GCD
Hardeman		Johnny Kays	940-663-5722	10/17/05		No	No	No	Tri County GWCD manager
Hardin		John Stover Lawyer Melissa	936-632-3130	12/9/05		No	No	No	Southeast Texas GCD lawyer
Harris	" "	Jace Houston/ Hamous	713-316-3537	10/18/05		No	No		County does require a feasibility study for placement of water wells and septic Jason is lawyer for Harris-Galveston Subsidence District
Harrison									
Hartley	" "	Richard Bowers	806-935-6401	11/4/05		No	No	No	North Plains GCD manager
Haskell	" "	Mike McGuire	940-422-1095	10/21/05		No	No	No	Rolling Plains GWCD manager
Hays	Env. Health Dpt. - Subdivision Planning Division	Craig Richardson	(512) 393-2160	8/8/05		Yes	Yes	Yes	We may copies of "all" of the plans in their files however, our Motal project was not one of them.
Hemphill	" "	Janet Guthrie	806-323-8350	10/17/05		No	No	No	Hemphill UWCD manager
Henderson	" "	Janet Bryd	903-541-4845	11/7/05		No	No	No	Neches & Trinity Valley GCD manager
Hidalgo									
Hill									
Hockley	" "	Jason Coleman	806-637-7467	10/18/05		No	No	No	South Plains UWCD manager

	County Platting Authority	Contact Person	Phone Number	Contacted Date	Contacted Time	Require GwAS per 30 TAC Chapter 230?	County Regulations Available Online?	Do we have copy of all plans?	Comments
Hood									
Hopkins									
Houston									
Howard	" "	Ken Carper	432-756-2136	11/7/05		No	No	No	Permian Basin UWCD manager
Hudspeth		Randy Barker	915-964-2932	12/9/05		No	No	No	Hudspeth Co UGRD #1 manager
Hunt									
Hutchinson	" "	CE Williams	806-883-2501	10/17/05		No	No	No	Panhandle UWCD manager
Irion	" "	Scott Holland	325-835-2015	10/12/05		No	No	No	Irion Co WCD manager
Jack									
Jackson									
Jasper		John Stover	936-632-3130	12/9/05		No	No	No	Southeast Texas GWCD Lawyer
Jeff Davis	" "	Janet Adams	432-426-3441	10/17/05		No	No	No	Jeff Davis UWCD manager
Jefferson									
Jim Hogg									
Jim Wells									
Johnson	" "	Comm Mark Carpenter	817-790-5333	12/13/05		No	No	No	Commissioner, Precinct 3
Jones									
Karnes	" "	Mike Mahoney	830-569-4186	10/17/05		No	No	No	Evergreen UWCD manager
Kaufman									
Kendall	engineer ??	Tom Pahl	(830) 249-9343 ext. 250	8/12/05		?? I think so ??	??	No	I have left several messages for Tom and have not received an answer back.
Kenedy		Leo Villareal	361-592-9347	11/9/05		No	No	No	Kenedy County GWCD Manager
Kent	" "	Jim Guess	806-237-2160	10/15/05		No	No	No	Salt Fork UWCD manager
Kerr	Commissioner's Court	Truby Hardin	(830) 257-2993	8/10/05	16:00	No	NA	NA	Truby has been around for 15 years and there are no GwAS requirements.
Kimble	" "	Jerry Kirby	325-446-4826			No	No	No	Kimble County GWCD
King									
Kinney	" "	Darlene Shahan	830-563-9699	11/9/05	—	No	No	No	Kinney County GCD manager (Personal Commun)
Kleberg		Leo Villareal	361-592-9347	11/9/05		No	No	No	~~Commissioner, Precinct 1~~ GWCD manager Kenedy County
Knox	" "	Mike McGuire	940-422-1095	10/21/05		No	No	No	Rolling Plains GCD Manager

Check with Feather Wilson

Called El Paso Co
11/9/05
Judge Briones

	County Platting Authority	Contact Person	Phone Number	Contacted Date	Contacted Time	Require GwAS per 30 TAC Chapter 230?	County Regulations Available Online?	Do we have copy of all plans?	Comments
Lamar									
Lamb	" "	Judy Reeves	806-762-0181	10/17/05		No	No	No	High Plains UWCD
Lampasas	" "	Judge Virgil Lilley	512-556-8271	11/8/05		Yes	?	?	Contact Randall McGuire - Subdivision Regulation 512-556-4453
La Salle	" "	Ed Walker	830-876-3801	11/9/05		No	No	No	Wintergarden GCD manager
Lavaca									
Lee		Judge Evans Gonzalez	979-542-3178	12/7/05		No	No	No	County Judge
Leon	" "	Robert Gresham	979-775-3466	11/17/05		No	No	No	Mid-East Texas GCD manager
Liberty									
Limestone									
Lipscomb	" "	Richard Bowers	806-935-6401	11/4/05		No	No	No	North Plains GCD manager
Live Oak	" "	Lonnie Stewart	361-449-1151	10/17/05		No	No	No	Live Oak UWCD manager
Llano		~~Duane Stephen~~	325-388-6215	12/8/05		No	No	No	Commissioner Precinct #2
Loving									
Lubbock	" "	Judy Reeves	806-762-0181	10/17/05		No	No	No	High Plains UWCD County plans to implement 1337 in near future
Lynn	" "	Judy Reeves	806-762-0181	10/17/05		No	No	No	High Plains UWCD
McCulloch	" "	David Hurd	325-597-2785	11/4/05		No	No	No	Hickory UWCD manager
McLennan		Luke Lammert	254-757-5028	12/8/05		No	No	No	County Engineer
McMullen	" "	Lonnie Stewart	361-449-1151	10/17/05		No	No	No	Mc Mullen Co UWCD manager
Madison		Robert Gresham	979-775-3466	11/17/05		No	No	No	Mid-East Texas GCD manager
Marion									
Martin		Ken Carver	432-756-2136	11/7/05		No	No	No	Permian Basin UWCD manager
Mason	" "	David Hurd	325-597-2785	11/4/05		No	No	No	Hickory UWCD manager
Matagorda	" "	Neil Hudgins	979-531-1412	10/18/05		No	No	No	Coastal Plains GCD, manager
Maverick									
Medina		Judge Jim Barden	830-741-6000	11/8/05					County Judge, Also spoke to Luana Buckner GWCD manager
Menard	" "	Caroline Runge	325-396-3670	9/26/05		No	No	No	Menard Co UWCD manager
Midland		Randy Prude	432-685-1980	12/12/05		No	No	No	Commissioner Precinct #4
Milam		Gary Westbrook	512-455-9900	11/7/05		No	No	No	Post Oak Savannah GWCD
Mills	" "	John Mann	325-451-7414	12/8/05		No	No	No	Commissioner of Precinct #1

Cell 512-525-1244

	County Platting Authority	Contact Person	Phone Number	Contacted Date	Contacted Time	Require GWAS per 30 TAC Chapter 230?	County Regulations Available Online?	Do we have copy of all plans?	Comments
Mitchell	" "	Sue Young	325-728-2298	10/11/05					Lone Wolf GCD manager
Montague									
Montgomery	" "	Kathy Jones	936-494-3436	10/10/05		No	No	No	Lone Star GCD manager
Moore	" "	C E Williams	806-883-4458	10/17/05		No	No	No	Panhandle GWCD manager County
Morris									
Motley									
Nacogdoches	" "	David Alford	936-630-0588	10/18/05		No	No	No	Pineywoods GWCD manager
Navarro									
Newton		John Stover	936-632-3130	12/9/05		No	No	No	Southeast Texas GCD lawyer
Nolan	" "	Becky Stewart	325-236-6033	11/8/05		No	No	No	West-Tex GWCD manager
Nueces									
Ochiltree	" "	Richard Bowers	806-935-6401	11/4/05		No	No	No	North Plains GCD
Oldham	" "	~~C E Williams~~ Judge Dennis Alford	806 ~~883-4458~~ 267-2007	10/18/05		~~No~~ No	No	No	~~Panhandle GWCD manager~~ ARS County does require water availability study for plats County Judge
Orange									
Palo Pinto									
Panola									
Parker	" "	Robert Mace	personal communication	12/6/05		No	No	No	Personal Communication
Parmer	" "	Judy Reeves	806-762-0181	10/17/05		No	No	No	High Plains UWCD
Pecos	" "	Paul Weatherby	432-336-0698	10/18/05		No	No	No	Middle Pecos GWCD manager
Polk		Roger Ford	383-2273						County Engineer
Potter	" "	~~C E Williams~~	806-~~883-4458~~	10/17/05		~~No~~	No	No	~~Panhandle GWCD manager.~~ County does require water availability study for plats
Presidio	" "	Janet Adams	432-426-3441	10/17/05		No	No	No	Presidio County UWCD manager
Rains									
Randall	" "	Judy Reeves	806-762-0181	10/17/05		No	No	No	High Plains UWCD
Reagan	" "	Cindy Weatherby	325-884-2883	10/19/05		No	No	No	Santa Rita GWCD manager
Real	" "	Lee Swecker	830-234-3158	10/11/05		No	No	No	Real-Edwards Consesonation District manager
Red River									
Reeves									
Refugio	" "	Garrett Engelking	361-526-1483	10/18/05		No	No	No	GCD requires pump test for all wells >250 gpm. Assume water production to meet live-stock needs Refugio GWCD manager, No County regulations

	County Platting Authority	Contact Person	Phone Number	Contacted Date	Contacted Time	Require GwAS per 30 TAC Chapter 230?	County Regulations Available Online?	Do we have copy of all plans?	Comments
Roberts	" "	C. E Williams	806-883-2501	10/17/05		No	No	No	Panhandle GWCD manager
Robertson	" "	Bill Riley	979-279-9350	11/9/05		No	No	No	Brazos Valley GCD manager
Rockwall									
Runnels	" "	Allen Largo	325-469-3988	10/12/05		No	No	No	Lipan-Kickapoo WCD manager
Rusk									
Sabine									
San Augustine									
San Jacinto									
San Patricio									
San Saba	" "	David Hunt	325-597-2785	10/12/05		No	No	No	Hickory UWCD manager
Schleicher	" "	Jon Cartwright	325-853-2121	10/11/05		No	No	No	Plateau UWC manager
Scurry		Jerry House	325-573-7197	11/4/05		No	No	No	Commissioner, Precinct #2
Shackelford									
Shelby									
Sherman	" "	Richard Bowers	806-935-6401	11/4/05		No	No	No	North Plains GCD manager
Smith									
Somervell									
Starr									
Stephens									
Sterling	" "	Scott Holland	325-378-2704	10/12/05		No	No	No	Sterling Co UWCD manager
Stonewall									
Sutton	" No email yet but	Cody Cowley	325-387-2369	10/12/05		No	No	No	Sutton Co UWCD manager
Swisher									
Tarrant		Commissioner Marti Ravensway	817-548-3900	11/4/05		No	No	No	Surface water suppliers provide most needs for county
Taylor									
Terrell									
Terry	" "	Jason Coleman	806-637-7467	10/18/05		No	No	No	South Plains GWCD manager
Throckmorton									
Titus									

	County Platting Authority	Contact Person (County Commissioner Eastinghood)	Phone Number	Contacted Date	Contacted Time	Require GwAS per 30 TAC Chapter 230?	County Regulations Available Online?	Do we have copy of all plans?	Comments
Tom Green		Richard 325-	659-6514	11/16/05		~~Yes~~ No	?	NO	Initiated SB 1323 in 2002 much opposition, removed ordinance
Travis	TNR Planning and Eng	Development Services Program Manager	(512) 854-7561	8/4/05	0:00	Yes	Yes	None available yet	Requirement just promulgated, No Studies submitted yet.
Trinity									
Tyler		John Stover	~~936~~-632-3130	12/9/05		No	No	No	Southeast Texas GCD lawyer
Upshur									
Upton									
Uvalde	" "	Olivia Castillo	830-278-8249	10/27		No	No	No	Uvalde Co GWCD Manager
Val Verde									
Van Zandt									
Victoria		Judge Donald Pozzi	361-~~576~~ 575-4558	12/13/05		No	No	No	County Judge
Walker	" "	Lloyd Behm	936-825-7303	10/19/05		No	No	No	Bluebonnet GWCD Manage However requires statement from developer that water and sanitary services will be available.
Waller		Louis Canales	281-375-5231	10/17/05		No	No	No	County Commissioner
Ward									
Washington		Kirk Hath	979-277-6275	12/7/05		No	No	No	Engineer, uses water district rules
Webb									
Wharton	" "	Neil Hudgins	979-531-1412	10/18/05		No	No	No	Coastal Bend GCD manager
Wheeler	" "	C.E Williams	806-883-2501	10/17/05		No	No	No	Panhandle GWCD manager
Wichita									
Wilbarger									
Willacy									
Williamson	" "	Commiss Greg Boatwright	512-260-4280	12/13/05		No	No	No	Commissioner, Precinct 2
Wilson	" "	Mike Mahoney	830-569-4186	10/17/05		No	No	No	Evergreen UWCD
Winkler									
Wise									
Wood									
Yoakum	" personal communication	for Gary Walker	806-456-2155	10/17/05		No	No	No	Sandy Land UWCD manager
Young									
Zapata									

(10)

	County Platting Authority	Contact Person	Phone Number	Contacted Date	Contacted Time	Require GwAS per 30 TAC Chapter 230?	County Regulations Available Online?	Do we have copy of all plans?	Comments
Zavala	)	Ed Walker	830-876-3801	11/9/05		No	No	No	Winterguarden GCD manager

Bandera County

Bandera County

Subdivision
and
Land Development

Rules & Regulations

Adopted By Bandera County Commissioners' Court

April 21, 2005

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ARTICLE FOUR: WATER AVAILABILITY

4.1. Applicability

4.1.1. The County shall require certification that adequate groundwater is available for a proposed Subdivision if groundwater under that land is to be the source of water supply.

4.1.2. The Applicant and the Texas licensed professional engineer or Texas Licensed professional geoscientist shall use this Article and the attached form to certify that adequate groundwater is available under the land of a proposed Subdivision. These rules do not replace other state and federal requirements applicable to public drinking water supply systems.

4.2. Certification of Groundwater Availability for Platting

4.2.1. Certification. A Texas licensed professional engineer or Texas licensed professional geoscientist must prepare the certification required by this chapter.

4.2.2. Submission information. The plat applicant shall provide to the county authority the certification adequacy of groundwater under the subdivision required by this Article.

4.2.3. This Article and the following form with supporting documents as described in 4.5 thru 4.10 and required Appendix C, Certification Of Groundwater Availability For Platting Form, shall be used and completed if plat applicants are required by the county authority to certify that adequate groundwater is available under the land to be subdivided. Commissioners' Court may from time to time make changes to this form that does not conflict with the requirements of the rules.

4.2.4. In conformance with state rules, if an Applicant submits a plat for the subdivision of a tract of land for which the source of the water supply intended for the subdivision is ground water under that land, the Final Plat application shall have attached to it a form with all attachments and a statement that :

a) is prepared by a Texas licensed professional engineer or Texas licensed professional geoscientist.

b) certifies that adequate groundwater is available for the subdivision.

4.2.5. Upon receipt of the Texas Commission On Environmental Quality Certification of Groundwater Availability for Platting Form, the County shall deliver a copy of said

completed form and attachments to Bandera County River Authority And Groundwater District, for review, comment and BCRAGD recommendations prior to final approval of the subdivision plat by Commissioners' Court. Bandera County relies on the comments and recommendations of BCRAGD on water availability in a subdivision prior to considering granting final approval for the subdivision plat.

4.3. Administrative Information

4.3.1. At a minimum, the following general administrative information shall be provided for a proposed Subdivision for which groundwater is the source of water supply:

- the name of the proposed subdivision;
- any previous owners or names which identifies the tract of land;
- the name, address, phone number, and facsimile number of the property owner or owners;
- the name address phone number, and facsimile number of the person submitting the plat application;
- the name, address, phone number, facsimile number and registration number of the licensed professional engineer or licensed professional geoscientist preparing the certification as required in this chapter;
- the location and legal description of the proposed property; and subdivision;
- the tax assessor parcel control number.

4.4. Proposed Subdivision Information

4.4.1. The following information pertaining to the proposed Subdivision shall be provided, as specified by the state in Chapter 230 of Title 30, Texas Administrative Code (30 TAC 230) and Water Code – Chapter 35 Section 35.109. Water Availability. (a) The commissioners court of a county in a groundwater management area may adopt water availability requirements in an area where platting is required if the court determines that the requirements are necessary to prevent or projected water use in the county from exceeding the safe sustainable yield of the county's water supply.

a) the purpose of the proposed subdivision – for example, single family residential, multi-family residential, non-residential, commercial, or industrial;

b) the size of the proposed subdivision in acres;

c) the number of proposed lots within the proposed subdivision;

d) the average size (in acres) of the proposed lots in the proposed subdivision;

e) the anticipated method of water distribution to the proposed lots in the proposed subdivision including, but not limited to:

e-1) an expansion of an existing public water supply system to serve the proposed subdivision (if groundwater under the subdivision is to be the source of water supply);

e-2) a new public water supply system for the proposed subdivision;

e-3) individual water wells to serve individual lots; or,

e-4) a combination of methods;

f) if the anticipated method of water distribution for the proposed subdivision is from an expansion of an existing public water supply system or from a proposed public water supply system, evidence required under §290.39(c)(1) of 30 TAC (relating to Rules and Regulations for Public Water Systems) which shall be provided demonstrating that written application for service was made to the existing water providers within a ½-mile radius of the subdivision.

4.5. Projected Water Demand Estimate

4.5.1. Residential water demand estimate. Residential water demand estimates at full build out shall be provided as specified in §230.3(c) of 30 TAC (relating to Certification of Groundwater Availability for Platting). Residential demand estimates shall, at a minimum be based on the current demand of any existing residential well including those identified under §230.8(b) of 30 TAC (relating to Obtaining Site-Specific Groundwater Data), or §290.41(c) of 30 TAC (relating to Rules and Regulations for Public Water Systems), and:

a) the number of proposed housing units at full build out;

b) the average number of persons per housing unit;

c) the gallons of water required per person per day;

d) the water demand per housing unit per year (acre feet per year); and

e) the total expected residential water demand per year for the proposed subdivision (acre per feet per year).

4.5.2. Non-residential water demand estimate. Water demand estimates at full building out shall be provided for all non-residential uses as specified in §230.3(c) of 30 TAC. Non-residential uses shall be specified by type of use and groundwater demand per year (acre feet per year) for each type of use. The estimate shall also include the existing non-residential demand of any well including those identified under §230.8(b) of 30 TAC or §290.41(c) of TAC.

4.5.3. Total annual water demand estimate. An estimate of the total expected annual groundwater demand, including residential and non-residential estimates at full build out (acre feet per year), shall be provided as specified in §230.3(c) of 30 TAC.

4.5.4. Submission of information. The sources of information used and calculations performed to determine the groundwater demand estimates as required by this section shall be made available to the county authority if requested. The plat applicant shall provide any additional groundwater demand information required by the county authority as part of the plat application.

4.6. General Groundwater Resource Information

4.6.1. Aquifer identification. Using Texas Water Development Board aquifer names, the aquifer(s) underlying the proposed subdivision which is planned to be used as the source of water for the subdivision shall be identified and generally described as specified in §230.3(c) of 30 TAC (relating to Certification of Groundwater Availability for Platting).

4.6.2. Geologic and groundwater information. To meet the requirements of this chapter, the following geologic and groundwater information shall be considered in planning and designing the aquifer test under §230.8(c) of 30 TAC (relating to Obtaining Site-Specific Groundwater Data):

a) the stratigraphy of the geologic formations underlying the subdivision;
b) the lithology of the geologic strata;
c) the geologic structure;
d) the characteristics of the aquifer(s) and their hydraulic relationships;
e) the recharge to the aquifer(s), and movement and discharge of groundwater from the aquifer(s); and,
f) the ambient quality of water in the aquifer(s).

4.7. Obtaining Site-Specific Groundwater Data

4.7.1. Applicability of Section. This section is applicable to all proposed Subdivisions with individual water wells on individual lots and proposed subdivisions with new public water supply systems or an expansion of an existing public water system. For subdivisions with a proposed public water system or expansion of an existing public water system, site specific groundwater data shall developed under the requirements of Chapter 290, Subchapter D of 30 TAC (relating to Rules and Regulations for Public

Water Systems) and the information developed to meet these requirements shall be attached to the form required under §230.3 of 30 TAC (relating to Certification of Groundwater Availability for Platting) in addition to information required in this section.

4.7.2. Location of existing wells. All known existing, abandoned, and inoperative wells within the proposed subdivision shall be identified, located, and mapped by on-site surveys. Existing well locations shall be illustrated on the plat required by the municipal or county authority.

4.7.3. Aquifer testing. Utilizing the information considered under §230.7(b) of 30 TAC (relating to General Groundwater Resource Information), an aquifer test shall be conducted to characterize the aquifer(s) underlying the proposed subdivision. The aquifer test must provide sufficient information to allow evaluation of each aquifer that is being considered as a source of residential and non-residential water supply for the proposed subdivision. Appropriate aquifer testing shall be based on typical well completions. An aquifer test conducted under this section utilizing established methods shall be reported as specified in §230.3(c) of 30 TAC and shall include, but not be limited to the following items:

a) Test well and observation well(s). For proposed subdivisions with or without a proposed public water system, at a minimum, one test well (i.e., pumping well) and one observation well, shall be required to conduct an adequate aquifer test under this section. For proposed subdivisions with individual water wells on individual lots over 100 acres, test wells and additional observation well(s) shall be completed in the same aquifer or aquifer production zone for each 100 acres. The locations of the test and observation well(s) shall be shown on the plat required by the county authority. Commissioners' Court may grant a variance from this requirement if the applicant demonstrates fewer wells are needed for the evaluation.

b) Location of wells. The test and observation well(s) must be placed within the proposed subdivision and shall be located by latitude and longitude. The observation well(s) shall be located at a radial distance such that the time-

drawdown data collected during the planned pumping period fall on a type curve of unique curvature. In general, observation wells in unconfined aquifers should be placed no farther than 300 feet from the test well, and no farther than 700 feet in thick, confined aquifers. The observation well should also be placed no closer to the test well than two times the thickness of the aquifer's production zone. The optimal location for the observation well(s) can be determined by best professional judgment after completion and evaluation of the test well as provided in paragraph (4) of this subsection.

c) Lithologic and geophysical logs. The test and observation wells shall be lithologically and geophysically logged to map and characterize the geologic formation(s) and the aquifer(s) in which the aquifer test(s) is to be performed.

c-1) A lithologic log shall be prepared showing the depth of the strata, their thickness and lithology (including size, range, and shape of constituent particles as well as smoothness), occurrence of water bearing strata, and any other special notes that are relevant to the drilling process to the understanding of subsurface conditions.

c-2) Geophysical logs shall be prepared which provide qualitative information on aquifer characteristics and groundwater quality. At a minimum, the geophysical logs shall include an electrical log with shallow and deep-investigative curves (e.g., 16-inch short normal/64-inch long normal resistivity curves or induction log) with a spontaneous potential curve and a gamma-ray log.

c-3) The county authority may, on a case-by-case basis, waive the requirement of geophysical logs as required under this section if it can be adequately demonstrated that the logs are not necessary to characterize the aquifer(s) for testing purposes.

d) Well development and performance. The test and observation well(s) shall be developed prior to conducting the aquifer test to repair damage done to the aquifer(s) during the drilling operation. Development shall insure that the

hydraulic properties of the aquifer(s) are restored as much as practical to their natural taste.

d-1) Well development procedures applied to the well(s) may vary depending on the drilling method used and the extent of the damage done to the aquifer(s).

d-2) During well development, the test well shall be pumped for several hours to determine the specific capacity of the well, the maximum anticipated drawdown, the volume of water produced at certain pump speeds and drawdown, and to determine if the observation well(s) are suitably located to provide useful data.

d-3) Water pumped out of the well during well development shall not be allowed to influence initial well performance results.

d-4) Aquifer testing required by this section shall be performed before any acidization or other flow-capacity enhancement procedures are applied to the test well.

e) Protection of groundwater. All reasonably necessary precautions shall be taken during construction of test and observation wells to ensure that surface contaminants do not reach the subsurface environment and that undesirable groundwater (water that is injurious to human health and the environment or water that can cause pollution to land or other waters) if encountered, is sealed off and confined to the zone(s) of origin.

f) Duration of aquifer test and recovery. The duration of the aquifer test depends entirely on local and geologic conditions. However, the test shall be of sufficient duration to observe a straight-line trend on a plot of water level versus the logarithm of time pumped. Water pumped during the test shall not be allowed to influence the test results. Aquifer testing shall not commence until water levels (after well development) have completely recovered to their pre-development level or at least to 90% of that level.

f-1) At a minimum, a 24-hour uniform rate aquifer test shall be conducted. Testing shall continue long enough to observe a straight-line trend on a plot of water level versus the logarithm of time pumped. If necessary, the duration of the test should be extended beyond the 24-hour minimum limit until the straight-line trend is observed.

- If it is impractical to continue the test until a straight-line trend of water level versus the logarithm of time pumped is observed within the 24-hour limit, the test shall continue at least until a consistent pumping-level trend is observed. In such instances, failure to observe the straight-line trend shall be recorded.
- If the pumping rates remain constant for a period of at least four hours and a straight-line trend is observed on a plot of water level versus the logarithm of time pumped before the 24-hour limit has been reached, the pumping portion of the test may be terminated.

f-2) Water-level recovery data shall be obtained to verify the accuracy of the data obtained during the pumping portion of the test. Recovery measurements shall be initiated immediately at the conclusion of the pumping portion of the aquifer test and shall be recorded with the same frequency as those taken during the pumping portion of the aquifer test. Time-recovery measurements shall continue until the water levels have recovered to pre-pumping levels or at least to 90% of that level. If such recovery is not possible, time-recovery measurements should continue until a consistent trend of recovery is observed.

g) Use of existing wells and aquifer test data.

g-1) An existing well may be utilized as an observation well under this section if sufficient information is available for that well to demonstrate that it meets the requirements of this section.

g-2) The county authority may accept the results of a previous aquifer test in lieu of a new test if:

g-3) The previous test was performed on a well located within a ¼-mile radius of the subdivision;

g-4) The previous test fully meets all the requirements of this section;

g-5) The previous test was conducted on an aquifer which is being considered as a source of water supply for the proposed subdivision; and

g-6) Aquifer conditions (e.g., water levels, gradients, etc.) during the previous test were approximately the same as they are presently.

h) Need for additional aquifer testing and observation wells. Best professional judgment shall be used to determine if additional observation wells or aquifer tests are needed to adequately demonstrate groundwater availability. The Theis and Cooper-Jacob non-equilibrium equations, and acceptable modifications thereof, are based on well-documented assumptions. To determine if additional information is needed, best professional judgment shall be used to consider these assumptions, the site-specific information derived from the aquifer test required by this section, the size of the proposed subdivision, and the proposed method of water delivery.

i) Submission of information. The information, data, and calculations required by this section shall be made available to the county authority and BCRAGD, to document the requirements of this section as part of the plat application.

j) After completion of testing, the test/observation wells shall be plugged or completed as water wells according to BCRAGD rules. One well in the subdivision shall be completed with a minimum of 4-in. casing and dedicated to BCRADD for a monitoring well. The well must have access from a public road and a minimum of 10-foot radius around the well for operation by the district.

4.8. Determination of Groundwater Quality.

4.8.1. Water quality analysis. Water samples shall be collected near the end of test of the aquifer for chemical analysis. Samples shall be collected from each aquifer being considered for water supply for the proposed Subdivision and reported as specified. For proposed subdivisions where the anticipated method of water delivery is from an expansion of an existing public water supply system or a new public water supply system, the samples shall be submitted for bacterial and chemical analysis as required by Chapter 290, Subchapter F of this title (relating to Drinking Water Standards Governing Drinking Water Quality and Reporting Requirements for Public Water Supply Systems).

a) For proposed subdivisions where the anticipated method of water delivery is from individual water supply wells on individual lots, samples shall be analyzed for the following:

b-1) chloride;
b-2) conductivity;
b-3) fluoride;
b-4) iron;
b-5) nitrate (as nitrogen);
b-6) manganese;
b-7) pH;
b-8) sulfate;
b-9) total hardness;
b-10) total dissolved solids;
b-11) presence/absence of total coliform bacteria;
b-12) calcium;
b-13) carbonate/bicarbonate; and
b-14) magnesium.

c) Conductivity and pH values may be measured in the field, and the other constituents shall be analyzed in a Texas Department of Health approved laboratory using methods approved by the commission.

Date: Jan. 23, 2006 **Time:** 4:30 p.m. **Total Pages:** 5

Fax Memo

From: Dee Czora
Bastrop County Subdivisions & Permits Dept.
FAX: 512-581-7194

To: Allen Standen **FAX:** 512-821-~~2765~~ 2724

Re: Groundwater Availability Standards adopted by Bastrop County

As you requested.

BASTROP COUNTY SUBDIVISIONS & PERMITS DEPT.
Dee H. Czora, Administrator
(512) 581-7182; FAX 581-7194
dczora@bastropcounty.com
Mailing Address: 804 Pecan, Bastrop TX 78602

STATE OF TEXAS

COUNTY OF BASTROP

BASTROP COUNTY
ORDER
Amendment to Subdivision Rules and Regulations

Standards for Determining Groundwater Availability for New Subdivisions

WHEREAS, The Legislature has enacted legislation amending Subchapter A, Chapter 232, Local Government Code, by adding Section 232.0031, "Additional Requirements: Use of Groundwater," enabling Commissioners Courts to adopt regulations requiring certification that adequate groundwater is available for the subdivision of a tract of land for which the source of the water supply intended for the subdivision is groundwater under that land; and

WHEREAS, the Commissioners Court of Bastrop County, Texas deems it appropriate to exercise its authority by enacting this Order requiring that a plat application have attached to it a statement that:

(1) is prepared by an engineer registered to practice in this state; and
(2) certifies that adequate groundwater is available for the subdivision; and

WHEREAS, the Texas Natural Resource Conservation Commission has established the form and content of the certification as adopted in Title 30, Texas Administrative Code, Chapter 230; and

WHEREAS, the form and Chapter 230 rules do not replace state requirements applicable to public drinking water supply systems or the authority of counties or groundwater conservation districts under either Subchapter 35.019 or Chapter 36 of the Texas Water Code; and

WHEREAS, no person shall drill an exempt water well before filing an application for a drilling registration and receiving the registration or drill a non-exempt water well before filing an application for a drilling permit and receiving the drilling permit from the Lost Pines Groundwater Conservation District as authorized under Senate Bill 1911 (Acts 1999, 76th Legis.).

THEREFORE, BE IT HEREBY RESOLVED that the above amendment of the Bastrop County Subdivision Regulations shall be published and incorporated in said Regulations by virtue of this Order.

AND IT IS SO ORDERED:

PASSED AND APPROVED THIS 9th DAY OF November, 2001.

APPROVED:

Ronnie McDonald
Bastrop County Judge

ATTEST:

Shirley Wilhelm
Bastrop County Clerk

Approved as to form:

Charles D. Penick
Bastrop County District Attorney

FIGURE 30 TAC §230.3(c)
CERTIFICATION OF GROUNDWATER AVAILABILITY FOR PLATTING FORM

Use of this form: If required by a municipal authority pursuant to §212.0101, Local Government Code or a county authority pursuant to §232.0031, Local Government Code, the plat applicant and the Texas licensed professional engineer shall use this form based upon the requirements of Title 30, Texas Administrative Code, Chapter 230 to certify that adequate groundwater is available under the land to be subdivided (if the source of water for the subdivision is groundwater under the subdivision) for any subdivision subject to platting under §§212.004 and 232.001, Local Government Code. The form and Chapter 230 do not replace state requirements applicable to public drinking water supply systems or the authority of counties or groundwater conservation districts under either §35.019 or Chapter 36 of the Texas Water Code.

Administrative Information (30 TAC, §230.4).

1. Name of Proposed Subdivision:_____
2. Any Previous Name Which Identifies the Tract of Land:_____
3. Property Owner's Name(s):_____
   - Address:_____
   - Phone:_____
   - Fax:_____
4. Plat Applicant's Name:_____
   - Address:_____
   - Phone:_____
   - Fax:_____
5. Licensed Professional Engineer's Name:_____
   - Address:_____
   - Phone:_____
   - Fax:_____
   - Certificate Number:_____
6. Location and Property Description of Proposed Subdivision:_____
7. Tax Assessor Parcel Number(s).
   - Book:_____
   - Map:_____
   - Parcel:_____

Proposed Subdivision Information (30 TAC, §230.5).

8. Purpose of Proposed Subdivision (single family/multi-family residential, non-residential, commercial):_____
9. Size of Proposed Subdivision (acres):_____
10. Number of Proposed Lots:_____
11. Average Size of Proposed Lots (acres):_____
12. Anticipated Method of Water Distribution.

Expansion of Existing Public Water Supply System:	Yes	No
New (Proposed) Public Water Supply System:	Yes	No
Individual Water Wells to Serve Individual Lots:	Yes	No
Combination of Methods:	Yes	No

   Description (if needed):_____
13. Additional Information (if required by the municipal or county authority):_____

Note: If public water supply system is anticipated, written application for service to existing water providers within a ½-mile radius should be attached to this form [30 TAC, §230.5(f)].

Projected Water Demand Estimate (30 TAC, §230.6).

14. Residential Water Demand Estimate at Full Build Out (includes both single family and multi-family residential).
    - Number of Proposed Housing Units (single and multi-family):_____
    - Average Number of Persons per Housing Unit:_____
    - Gallons of Water Required per Person per Day:_____
    - Water Demand per Housing Unit per year (acre feet/year):_____
    - Total Expected Residential Water Demand per Year (acre feet/year):_____
15. Non-residential Water Demand Estimate at Full Build Out.
    - Type(s) of Non-residential Water Uses:_____
    - Water Demand per Type per Year (acre feet/year):_____
16. Total Water Demand Estimate at Full Build Out (acre feet/year):_____
17. Sources of Information Used for Demand Estimates:_____

General Groundwater Resource Information (30 TAC, §230.7).

18. Identify and describe, using Texas Water Development Board names, the aquifer(s) which underlies the proposed subdivision:_____

Note: Users may refer to Aquifers of Texas *(Texas Water Development Board Report 345, 1995) to obtain general information pertaining to the state's aquifers. This reference is available via the Internet (www.twdb.state.tx.us).*

Obtaining Site-Specific Groundwater Data (30 TAC, §230.8).

19. Have all known existing, abandoned, and inoperative wells within the proposed subdivision been located, identified, and shown on the plat as required under §230.8(b)? Yes No
20. Were the geologic and groundwater resource factors identified under §230.7(b) considered in planning and designing the aquifer test required under §230.8(c)? Yes No
21. Have test and observation wells been located, drilled, logged, completed, developed, and shown on the plat as required by §230.8(c)(1 though 4)? Yes No
22. Have all reasonable precautions been taken to ensure that contaminants do not reach the subsurface environment and that undesirable groundwater has been confined to the zone(s) of origin (§230.8(c)(5))? Yes No
23. Has an aquifer test been conducted which meets the requirements of §§230.8(c)(1 and 6)? Yes No
24. Were existing wells or previous aquifer test data used? Yes No
25. If yes, did they meet the requirements of §230.8(c)(7)? Yes No
26. Were additional observation wells or aquifer testing utilized? Yes No

Note: If expansion of an existing public water supply system or a new public water supply system is the anticipated method of water distribution for the proposed subdivision, site-specific groundwater data shall be developed under the requirements of 30 TAC, Chapter 290, Subchapter D (related to Rules and Regulations for Public Water Systems) and the applicable information and correspondence developed in meeting those requirements shall be attached to this form pursuant to §230.8(a).

Determination of Groundwater Quality (30 TAC, §230.9).

27. Have water quality samples been collected as required by §230.9? Yes No
28. Has a water quality analysis been performed which meets the requirements of §230.9? Yes No

Determination of Groundwater Availability (30 TAC, §230.10).

29. Have the aquifer parameters required by §230.10(c) been determined? Yes No

30. If so, provide the aquifer parameters as determined.

Rate of yield and drawdown:_____

Specific capacity:_____

Efficiency of the pumped well:_____

Transmissivity:_____

Coefficient of storage:_____

Hydraulic conductivity:_____

Were any recharge or barrier boundaries detected? Yes No

If yes, please describe:_____

_____

Thickness of aquifer(s):_____

31. Have time-drawdown determinations been calculated as required under §230.10(d)(1) Yes No

32. Have distance-drawdown determinations been calculated as required under §230.10(d)(2)? Yes No

33. Have well interference determinations been made as required under §230.10(d)(3)? Yes No NA

34. Has the anticipated method of water delivery, the annual groundwater demand estimates at full build out, and geologic and groundwater information been taken into account in making these determinations? Yes No

35. Has the water quality analysis required under §230.9 been compared to primary and secondary public drinking water standards as required under §230.10(e)? Yes No

Does the concentration of any analyzed constituent exceed the standards? Yes No

If yes, please list the constituent(s) and concentration measure(s) which exceed standards:_____

_____

Groundwater Availability and Usability Statements (30 TAC, §230.11(a)and (b)).

36. Drawdown of the aquifer at the pumped well(s) is estimated to be _____ feet over a 10-year period and _____ feet over a 30-year period.

37. Drawdown of the aquifer at the property boundary is estimated to be _____ feet over a 10-year period and _____ feet over a 30-year period.

38. The distance from the pumped well(s) to the outer edges of the cone(s)-of-depression is estimated to be _____ feet over a 10-year period and _____ feet over a 30-year period.

39. The recommended minimum spacing limit between wells is _____ feet with a recommended well yield of _____ gallons per minute per well.

40. Available groundwater is / is not (circle one) of sufficient quality to meet the intended use of the platted subdivision.

41. The groundwater availability determination does not consider the following conditions (identify any assumptions or uncertainties that are inherent in the groundwater availability determination):_____

_____

_____

_____

Certification of Groundwater Availability (30 TAC, §230.11(c)). Must be signed by a Texas Licensed Professional Engineer.

42. I, _____, Texas Licensed Professional Engineer, certificate number _____, based on best professional judgement, current groundwater conditions, and the information developed and presented in this form, certify that adequate groundwater is available from the underlying aquifer(s) to supply the anticipated use of the proposed subdivision.

Date:_____ (affix seal)

FAX COVER SHEET

BELL COUNTY ENGINEER'S OFFICE
P.O. BOX 264
Belton, Texas 76513
Phone (254) 933-5275
FAX (254) 933 5276

NUMBER OF SHEETS INCLUDING COVER: 25

TO: Billy Dansbet

Fax # 512 821-2724

From: Penny

Regarding: This is all the County requires for Water District - if this isn't what you need I can have Tom give you a Call after lunch.

We found more info for you

"KNOW ALL MEN BY THESE PRESENTS:

THAT I, _____, do hereby certify that I prepared this plat from an on the ground survey of the land and that the corner monuments shown hereon were properly placed, under my personal supervision, in accordance with the Bell County Subdivision Regulations.

Seal of Licensed Surveyor

_____"

Signed

4. **Certificate of the Registered Professional Engineer** who designed the street/roads and drainage shall be placed on the plat as follows: (Or in a form acceptable to the City in an ETJ Subdivision.)

"KNOW ALL MEN BY THESE PRESENTS:

THAT I, _____, do hereby certify that I prepared all drainage calculations and designed all drains, streets/roads and appurtenances in accordance with the Bell County Subdivision Regulations.

Seal of Design Engineer

_____"

Signed

5. **Certification of Water System**:

(a) Where water is to be provided by a public water supply, certification shall be provided by the service area entity (water district) that the proposed water supply and distribution system is adequate to provide water in sufficient quality, quantity, and pressure to serve the proposed subdivision. The certification may be by separate instrument, but may be noted on the plat if signed by the Servicing entity.

Additional Info

(b) Certification that adequate groundwater is available for the Subdivision. If groundwater is the source of water supply for the subdivision, the developer is required to obtain certification, by a licensed professional engineer (or other professionals designated by State law) registered to practice in Texas, that adequate groundwater is available for the subdivision, according to the certification form and content as promulgated by the Texas Natural Resource Conservation Commission. (Lack of certification that suitable and adequate groundwater is available is grounds for denial of plat approval, if groundwater is the proposed source of water). The Certification document shall be recorded as part of the dedication instrument and a note shall be placed on the plat that groundwater is to be the source of water.

6. **Certification for Waste Water**: The plan for sewage (waste water) disposal shall be shown, i.e., municipal sewer service, municipal utility district, privately owned/organized sewer disposal system, individual sewage facilities, etc. If the developer intends that each lot is to be serviced by an on- site sewage system (OSSF), a copy of the Evaluation Letter prepared by the Bell County Health Department shall be provided. All proposed OSSF shall be in accordance with the policies and laws of Bell County. The Bell County Health Department is hereby designated as the final authority regarding the use of private sewage systems.

7. **Certification and approval by city**: Certification must be provided by appropriate representatives of any city having extraterritorial jurisdiction over the area in which the subdivision is located.

8. **Certificate of Approval by the Bell County Commissioners' Court to be shown on the plat:**

"I hereby certify this plat was approved this_____day of, 20____, by the Bell County Commissioners' Court, and may be filed for record in the Deed Records of Bell County by the County Clerk.

_____

County Judge

Witness my hand this _____ day of, 20 ____.

_____"

Notary Public

9. **Road Widening Easements**: Right-of-way easements for widening roadways or improving drainage along the roadways shall be accompanied by the plat note below. No permanent construction, other than fences, shall be permitted within Road Widening Easements. The burden of maintaining such property shall be on the land owner until road or drainage

regulations are adopted as an amendment to Blanco County Subdivision Ordinance ted January 26, 1998.

THE BLANCO COUNTY COMMISSIONERS COURT MAKES NO REPRESENTATION OR WARRANTY, EITHER EXPRESS OR IMPLIED, THAT SUBDIVISIONS THAT COMPLY WITH THESE WATER AVAILABILITY REGULATIONS WILL MEET THE CURRENT AND/OR FUTURE WATER NEEDS OF PURCHASERS OF PROPERTY WITH THE SUBDIVISION.

Definitions.

The following words and terms, when used in these Regulations, shall have the following meanings. Words defined in main body of the Blanco County Subdivision Ordinance, and not defined here, shall have the meanings provided therein.

1. "Full build-out" - means the final expected number of residences, business or dwellings in the proposed subdivision;

2. "Groundwater" - has the meaning assigned to it by the regulations of the Texas Natural Resource Conservation Commission (TNRCC);

3. "Public water supply system" - has the meaning assigned to it by the regulations of the Texas Natural Resource Conservation Commission (TNRCC);

4. "Qualified expert" - means an engineer registered to practice in the Texas of Texas;
5. "Surface water" - has the meaning assigned to it by the regulations of the Texas Natural Resource Conservation Commission (TNRCC);

6. "TNRCC" - means the Texas Natural Resource Conservation Commission;

7. "TWDB" - means the Texas Water Development Board.

Applicabilty.

These Water Availability Regulations apply to all applications for approval of a plat for a subdivision wholly or partially within Blanco County, Texas, pursuant to the Blanco County Subdivision Ordinance, except as exempted hereafter.

Exemptions to Water Availability Regulations:

a. Subdivision of property where platting is not required by the Blanco County Subdivision Ordinance;
b. Subdivision of property in which all lots are 25 acres or greater;

Water Availability data shall be presented to the Commissioners upon submission of the Preliminary Plat.

[redacted]ounty shall have the Water Availability data reviewed by a qualified expert on behalf of [redacted] County.

Requirements for Subdivisions to be served by Private Water Wells–

The Preliminary Plat submission to the Commissioners Court for a proposed subdivision whose water supply will be private water wells shall include Water Availability data. This Water Availability data shall be derived from a minimum of two wells (one test well and one monitor well). There shall be 1 set of Test-Monitor wells for each 100 acres. The use of existing wells is permitted if the existing well complies with these Regulations.

The following Water Availability data is required:

1. Map of the proposed subdivision prepared by a qualified expert identifying:

    a. geological formations;
    b. location of test and monitor wells by longitude and latitude;
    c. available information on wells identified in the files of the Texas Water Development Board and TNRCC and otherwise known to applicant within 1,000 feet of the boundaries of the proposed subdivision (including well depth, depth to water yield and estimated yield).

2. The static water level to the nearest 0.1 foot and equate to the mean sea level elevation.

3. Data resulting from the performance of an aquifer pump test utilizing proven methods recommended by TWDB and TNRCC of the karst aquifer systems of the Texas Hill Country. The pump test shall be supervised by a qualified expert and shall be performed prior to any acidization or other flow capacity treatment of the well. The duration of the pump test shall be for a period of 24 hours or until the water level has stabilized (less than 0.1 fluctuation) in the test well for a period exceeding two hours.

4. Statement by a qualified expert based on the pump test:

    a. estimated yield of wells proposed for the subdivision;
    b. determination of transmissity of the water-bearing formation or strata from which the groundwater will be withdrawn;

5. Certification by a qualified expert that an adequate supply of water of sufficient quantity and quality to supply the subdivision at full build-out based on number of connections. Formula: number of connection x 3.5 x .6 x 100 x 365 days.

llowing statement shall appear on the final plat for an approved subdivision.
s subdivision will be served by individual groundwater wells. Information on the availab le pply of groundwater and its quality is available to prospective purchasers of lots in this subdivision in the office of the County Clerk of Blanco County, Texas."

Requirements for Subdivisions to be served by Existing Public Water Supply System-

The Preliminary Plat submission to the Commissioners Court for a proposed subdivision whose water supply will be an Existing Public Water Supply System shall include Water Availability data.

1. Map of the service area of the Existing Public Water Supply System, showing the location of the proposed subdivision in relationship to the service area of the Existing Public Water Supply System;

2. Name, address, phone number, authorized agent and TNRCC facility number of the Existing Public Water Supply System;

3. Certification by a qualified expert that an adequate supply of water of sufficient quantity and quality to supply the subdivision at full build-out based on water use standards recognized by TNRCC and TWDB.

The following statement shall appear on the final plat for an approved subdivision.
"This subdivision will be served by Name and address of Existing Public Water Supply System. Information on the available Existing Public Water Supply System is available to prospective purchasers of lots in this subdivision in the office of the County Clerk of Blanco County, Texas and be stated in the deed restrictions."

Requirements for Subdivisions to be served by a New Public Water Supply System-

The Preliminary Plat submission to the Commissioners Court for a proposed subdivision whose water supply will be a New Public Water Supply System relying wholly or partially on groundwater or surface water shall include Water Availability data. This Water Availability data shall be derived from a minimum of two wells (one test well and one monitor well).). There shall be 1 set of Test-Monitor wells for each 100 acres. The use of existing wells is permitted if the existing well complies with these Regulations.

1. Map of the proposed subdivision prepared by a qualified expert identifying:

   a. geological formations;
   b. location of test and monitor wells by longitude and latitude;
   c. available information on wells identified in the files of the Texas Water Development Board and TNRCC and otherwise known to applicant within 1,000 feet of the boundaries of the proposed subdivision (including well depth, depth to water yield and estimated yield).

BRAZOS COUNTY ROAD & BRIDGE DEPT.

FACSIMILE TRANSMISSION COVER SHEET

Total number of pages 6 (including cover sheet)

Date: 1-20-06

To: Allen Standen

Fax No: (512) 821-2724

From: Gary Arnold

Brazos County Road and Bridge Department
2617 Highway 21 West
Bryan, Texas 77803
Office # 979-822-2127
Fax # 979-775-0453

Comments: I think what you are looking for is on Page 8 of 41 Item # 3. if this is not it let me know

Yes

SB 1323

No studies have been completed

District. Special attention is called to regulations adopted by the Commissioners Court of Brazos County, Texas relating to private sewage facilities.

ARTICLE IV.
PLATS, PROCEDURE AND REQUIREMENTS

A. Stages of Platting. The provisions of Section 232.0025 of the Local Government Code, shall apply, with respect to obtaining approval from the Commissioners Court before filing the plat with the County Clerk and before conveyances by deed or contract of sale may be made. No subdivision shall be permitted until the Owner has satisfied each of the following steps in the order indicated:

1. (FIRST PHASE/PRELIMINARY PLAN) Owners of Property contemplating the subdividing of raw or other types of lands as defined herein, shall (a) complete an Application For Subdivision form promulgated by the County Engineer's Office; and (b) submit same with all appropriate attachments to the County Engineer. The County Engineer will review the Application form and not later than 10 business days after such form with attachments is filed or submitted to the County Engineer's Office , notify the applicant of missing documents or information.

2. (FINAL PLAT PLAN) Following the procedure outlined in Paragraph IV A.1, above, if the Subdivider decides to continue with his project he shall supply all documents and information identified as missing pursuant to Paragraph A.1 above and, shall submit a Final Plat to the Commissioners Court with the Application for conditional approval. Within 20 business days of such submittal, the Commisioners Court and the County Engineer will grant approval, conditioned upon satisfaction of the requirements set out in Paragraph A(3) below.

3. (THIRD PHASE/FINAL PLAT) After conditional approval of the Final Plat as stated in Paragraph A.2 above, the Owner shall within 30 business days of such conditional approval (a) stake out the tract on the ground in accordance with the conditional approval given to the Final Plat; and (b) post a construction bond or Letter of Credit as set forth in Article IX B hereof to guarantee completion of improvements stipulated, or alternatively, complete all streets and other improvements and obtain acceptance thereof as set forth in Article XI hereof . The Court shall within 10 business days after completion of the above requirements, review the Proposed Final Plat and other material or documents, and grant or reject such final Plat. If the Plat is rejected, the Commissioners Court shall provide a complete list of the reasons for such rejection. After final approval of the plat and acceptance of the bond or Letter of Credit, the Subdivider shall record the approved Final Plat and other documents with the County Clerk and can then proceed with

2. Concurrently with the filing of an application for Final Plat approval which contemplates a Homeowners Association to maintain the streets within the Subdivision, the Owner shall submit the following:

   (a) Ready-for-execution copies of the articles of incorporation and bylaws of the Homeowners Association, which has effective revenue capacity and enforcement procedures to fund the road maintenance contemplated for the subdivision.

   (b) The anticipated cost, per linear foot, of each street proposed to be constructed within the Subdivision;

   (c) The total estimated construction cost of all the streets proposed to be constructed within the Subdivision; and

   (d) The minimum annual assessments that will be imposed upon members of the Homeowners Association.

3. Concurrently with the filing of an application for Final Plat approval in all subdivisions for which the source of water supply intended for the subdivision is groundwater under the Original Tract, the Owner shall as part of and as an attachment to such application include a statement that (I) is prepared by an engineer and (ii) certifies that adequate groundwater is available for the subdivision. Such certification shall be in the form established by the Texas Natural Resources Conservation Commission by rule.

E. Recorded Plat. Within Ten (10) days following approval of the Final Plat, the Owner shall present a Record Plat to the County Engineer for delivery to the County Judge for execution. The Record Plat shall contain, or be submitted with, the following:

1. All revisions necessary to comply with any conditions to approval of the Final Plat stipulated by the Commissioners Court.

2. Final Construction Plans for all streets and drainage improvements, certified under the seal of a professional engineer to be in compliance with these Regulations.

3. Construction and maintenance security required under Articles IX and XII or executed Articles of Incorporation and bylaws for an approved Homeowner's Association, as applicable.

4. All boundaries and dimensions and certified to as to accuracy by the Engineer or Surveyor preparing the same from an actual survey on the ground. It also must show in reasonable detail the location and width of

existing and dedicated streets, lots, and utility and drainage easements, and similar facts regarding all property immediately adjacent thereto.

5. All information shall be prepared at a scale so as to be legible after the reduction and recording process. (maximum 1"=200'; Preferred 1"=100')

6. A location map showing the location of the subdivision in Brazos County.

7. A clear delineation of any property lying below the 100 year flood plain elevation, as established by the Corp of Engineers, or a note to the effect that "Information regarding areas of this property subject to the flooding (100 year flood plain) has not been developed by the U. S. Corps of Engineers. Buyers of property are cautioned to make personal inquiry as to local flood hazards." An outlined note to the effect that a Flood Plain Permit will be required on all tracts prior to the construction of any structure. The permit may be obtained from the County Engineer's office at 2617 Highway 21 West, Bryan, Tx. 77803 (979- 822-2127).

8. A clear delineation of any area within the subdivision known to Owner or Surveyor/Engineer to be subject to frequent flooding.

9. An outlined note to the effect that no private sewage facility may be installed on any lot in this subdivision without the prior issuance of a license by the Brazos County Health District under the provisions of the Private Sewage Facility Regulations adopted by the Commissioners Court of Brazos County, pursuant to the provisions of the Texas Health and Safety Code.

   A Letter of Acknowledgement from the Brazos County Health District shall be required.

10. Certificates and Dedications as follows:

    (a) Certificate of Ownership and Dedication as follows:

    "I (or we) _____ owner(s) of the land shown on this plat and designated herein as _____, a subdivision in Brazos County, Texas, hereby dedicated to the use of the public forever all rights-of-way, easements, and other public places shown herein.

    _____
    Signature

    With appropriate acknowledgement(s).

Comal County

Revisions to
Comal County Subdivision Rules and Regulations

Approved by Order of the Comal County Commissioners Court on December 21, 2000.
This Order takes effect January 1, 2001.

1. Section A, Regulations, Subsection IV. PLATS, Subsection A. Preliminary Plats, Paragraph 6,

Revise item "x" to read as follows:

A person seeking approval of a plat which creates one or more lots or is seeking approval of a revision plat that results in an increase in the total amount of lots shall:

i) if no Public Water System is proposed or exists; and the proposed lots will be served by individual groundwater wells and not utilizing groundwater regulated by the Edwards Aquifer Authority,

Submit a Certification of Groundwater Availability For Platting Form pursuant to Title 30 Texas Administrative Code, Chapters 230, Sections 230.2 through and including 230.11, with the following additional requirements;

All supporting information, data, and calculations necessary to meet the requirements of Sections 230.2 through and including 230.11 shall be attached to the Certification of Groundwater Availability For Platting Form.

§230.3 (c), Form Required, the first sentence is revised as follows;

This chapter and the following form shall be used and completed if the county requires plat applicants to certify that adequate groundwater is available to provide water to the land to be subdivided.

Submit documentation from a Hydrogeologist indicating his/her concurrence with the findings presented within the above Certification of Groundwater Availability For Platting Form.

ii) if no Public Water System is proposed or exists; and the proposed lots will be served by individual groundwater wells utilizing groundwater regulated by the Edwards Aquifer Authority,

Provide an analysis prepared by a registered engineer determining the projected water use of the final expected number of residences, businesses, or other dwellings in the platted area.

Submit documentation from the Edwards Aquifer Authority indicating a permit allocation of groundwater rights to the proposed platted area in an amount adequate to meet the water needs as identified in the above engineering analysis. The permit allocation cannot involve leased water rights.

iii) if the proposed lots are to be served by a new Public Water System utilizing groundwater wells and not using groundwater regulated by the Edwards Aquifer Authority,

Submit a Certification of Groundwater Availability For Platting Form pursuant to Title 30 Texas Administrative Code, Chapters 230, Sections 230.2 through and including 230.11, with the following additional requirements;

All supporting information, data, and calculations necessary to meet the requirements of Sections 230.2 through and including 230.11 shall be attached to the Certification of Groundwater Availability For Platting Form.

§230.3 (c), Form Required, the first sentence is revised as follows;

This chapter and the following form shall be used and completed if the county requires plat applicants to certify that adequate groundwater is available to provide water to the land to be subdivided.

Submit documentation from a Hydrogeologist indicating his/her concurrence with the findings presented within the above Certification of Groundwater Availability For Platting Form.

Submit a copy of the final approval letter and all supporting documentation from the executive director of the Texas Natural Resource Conservation Commission (TNRCC), pursuant to TNRCC Rule 30 TAC Chapter 290.41(c)(3)(A), for each new well and provide a copy of the TNRCC approval letter and supporting documentation for the engineering plans and specifications for the Water Production and Water Distribution Facilities.

Provide a surety, in a form acceptable to the County, in an amount determined by the County Engineer, to ensure the proper completion of any and all Water Distribution Facilities such as water mains, valves, and other necessary water distribution appurtenances.

iv) if the proposed lots are to be served by a new Public Water System utilizing groundwater wells using groundwater regulated by the Edwards Aquifer Authority,

Provide an analysis prepared by a registered engineer determining the projected water use of the final expected number of residences, businesses, or other dwellings in the platted area.

Submit documentation from the Edwards Aquifer Authority indicating a permit allocation of groundwater rights to the proposed platted area in an amount adequate to meet the water needs as identified in the above engineering analysis. The permit allocation cannot involve leased water rights.

Submit a copy of the final approval letter and all supporting documentation from the executive director of the Texas Natural Resource Conservation Commission (TNRCC), pursuant to TNRCC Rule 30 TAC Chapter 290.41(c)(3)(A), for each new well and provide a copy of the TNRCC approval letter and supporting documentation for the engineering plans and specifications for the Water Production and Water Distribution Facilities.

Provide a surety, in a form acceptable to the County, in an amount determined by the County Engineer, to ensure the proper completion of any and all Water Distribution Facilities such as water mains, valves, and other necessary water distribution appurtenances.

v) if the proposed lots are to be served by a new Public Water System utilizing surface water,

Provide a copy of the TNRCC approval letter and supporting documentation for the engineering plans and specifications for any required Water Production and Water Distribution Facilities, pursuant to TNRCC Rule 30 TAC Chapter 290.

Provide an analysis prepared by a registered engineer determining the projected water use of the final expected number of residences, businesses, or other dwellings in the platted area.

Submit a copy of an executed contract, agreement, or commitment letter from the TNRCC or the Guadalupe Blanco River Authority stating surface water, in an amount adequate to meet the water needs as identified in the above engineering analysis, has been committed to the platted area for a period of 20 years or greater. Said document shall identify the amount of surface water committed, the point of diversion, and the term of the commitment.

Provide a surety, in a form acceptable to the County, in an amount determined by the County Engineer, to ensure the proper completion of any and all Water Distribution Facilities such as water mains, valves, and other necessary water distribution appurtenances.

vi) if the proposed lots are to be served by an existing public water system utilizing groundwater and currently providing service to less than 1000 connections,

Provide documentation from the existing Public Water System indicating that the existing system has agreed to provide water service to the platted area.

Provide a copy of the latest TNRCC Public Water Sanitary Survey of the existing Public Water System indicating no alleged violations pertaining to water quality or water production capability.

Provide an engineering analysis of the existing Public Water System showing that the existing system has an adequate Water Supply and adequate Water Production Facilities to serve the final expected number of residences, businesses, or other dwellings in the existing service area in addition to the needs of the final expected number of residences, businesses, or other dwellings in the proposed platted area.

If the existing public water system uses groundwater regulated by the Edwards Aquifer Authority, submit documentation from the Edwards Aquifer Authority indicating the permit allocation of groundwater rights necessary to meet the needs identified to the preceding paragraph. The permit allocation cannot involve leased water rights.

If an expansion to an existing Public Water System is necessary due to the addition of the platted area or due to existing deficiencies in the system, as identified above, submit a copy of the final approval letter and all supporting documentation from the executive director of the Texas Natural Resource Conservation Commission (TNRCC), pursuant to TNRCC rule 30 TAC Chapter 290.41 (c)(3)(A), for any new well, and provide a copy of the TNRCC approval letter and supporting documentation for the engineering plans and specifications for the required Water Production and Water Distribution Facilities.

Provide a surety, in a form acceptable to the County, in an amount determined by the County Engineer, to ensure the proper completion of any and all Water Distribution Facilities such as water mains, valves, and other necessary water distribution appurtenances.

vii) if the proposed lots are to be served by an existing Public Water System utilizing surface water or an existing Public Water System currently providing interconnected water service to 1000 connections or more,

Provide documentation from the existing Public Water System (Utility) indicating that the Utility has agreed to provide water service to the platted area.

Provide documentation from the Utility indicating that the Utility has had a Water Availability Report approved by the Comal County Commissioners Court within the last 36 months.

A Water Availability Report is defined as a document prepared by the Utility to reveal their ability to meet the needs of their existing users and show their preparedness to meet the needs of future water users as their system expands. The report shall include, but is not necessarily limited to, the following:

1. Copy of the latest TNRCC Public Water Sanitary Survey of the Utility's existing water system indicating no alleged violations pertaining to water quality or water production capability.
2. A map or maps of the Utility's service area showing:
    a) the Utility's current service area as define by their existing Certificate of Convenience and Necessity and the projected service area in 20 years.
    b) a schematic of the Utility's existing distribution system with line sizes identified.
    c) locations of water wells and/or surface water plants with capacities.
    d) locations of pump stations and elevated storage tanks with capacities.

3. An analysis of the population and land use development projections for the Utility's estimated service area in 20 years.
4. Copies of documents and/or an engineering analysis showing that the Utility has adequate groundwater rights, surface water rights, existing groundwater production capability, or other proofs of water rights or reservations in an amount sufficient to supply the anticipated water use of the expected population and land use within the projected service area in 20 years.
5. In areas where groundwater withdrawal is not regulated by the Edwards Aquifer Authority, if applicable, provide a report prepared by a registered engineer certifying that adequate groundwater is available from the source aquifer(s) to supply the Utility's anticipated groundwater needs for 20 years.

2. Section A, Regulations, Subsection 1, Authority and Purpose;

Add the following:

5. Plat Requirement

a) The owner of a tract of land located outside the limits of a municipality must have a plat of the subdivision prepared if the owner divides the tract into two or more parts to lay out:
   (1) a subdivision of the tract, including an addition;
   (2) lots; or
   (3) streets, alleys, squares, parks or other parts of the tract intended to be dedicated to public use or for the use of purchasers or owners of lots fronting on or adjacent to the streets, alleys, squares, parks, or other parts.

b) A division of a tract under Subsection (a) includes a division regardless of whether it is made by using a metes and bounds description in a deed of conveyance or in a contract for a deed, by using a contract of sale or other executory contract to convey, or by using any other method.

6. Exemptions to the Plat Requirement

The following exemptions may allow a division of property without the preparation of a subdivision plat. Under these exemptions, a property owner may not be required to prepare a subdivision plat for their division of their property, but the division of property must still meet the minimum lot size requirements set forth in the Comal County On-Site Sewage Facility Order.

a) The County shall not require the owner of an unplatted tract of land located outside the limits of a municipality who divides the tract into two or more parts to have a plat of the subdivision prepared if

   (1) the land is to used primarily for agricultural use, as defined by Section 1-d, Article VIII, Texas Constitution, or for farm, ranch, wildlife management, or timber production use within the meaning of section 1-d-1, Article VIII, Texas Constitution; and

   (2) the owner does not lay out a part of the tract described by above in 5. a(3); and

   (3) if the tract described ceases to be used primarily for agricultural use or for farm, ranch, wildlife management, or timber production use, the platting requirements apply.

b) The County shall not require the owner of an unplatted tract of land located outside the limits of a municipality who divides the tract into four or fewer parts to have a plat of the subdivision prepared if:

   (1) each of the lots is sold, given, or otherwise transferred to an individual who is related to the owner within the third degree of consanguinity of affinity, as determined by Chapter 573, Government Code;

   (2) the owner does not lay out a part of the tract described by 5. a(3); and

(3) if any lot is sold, given, or otherwise transferred to an individual who is not related to the owner within the third degree consanguinity or affinity, the platting requirements apply.

c) The County shall not require the owner of an unplatted tract of land located outside the limits of a municipality who divides the tract into two or more parts to have a plat of the subdivision prepared if:

(1) all of the lots in the subdivision are more than 10 acres in area; and

(2) the owner does not lay out a part of the tract described in 5. a(3).

d) The County shall not require the owner of an unplatted tract of land located outside the limits of a municipality who divides the tract into two or more parts and does not lay out a part of the tract described in 5. a(3) to have a plat of the subdivision prepared if all of the lots are sold to veterans through the Veteran's Land Board Program.

e) The County shall not require the owner of an unplatted tract of land located outside the limits of a municipality who divides the tract into two or more parts to have a plat of the subdivision prepared if:

(1) the owner does not lay out a part of the tract described in 5. a(3); and

(2) one new part is to be retained by the owner, and the other new part is to be transferred to another person who will further subdivide the tract subject to the plat approval requirements of these regulations.

f) The County shall not require the owner of an unplatted tract of land located outside the limits of a municipality who divides the tract into two parts to have a plat of the subdivision prepared if:

(1) the owner does not lay out any part of the tract described in 5. a(3); and

(2) all parts are transferred to persons who owned undivided interest in the original tract and a plat is filed before any further development of any part of the tract.

g) The County shall not require the owner of an unplatted or platted tract of land located outside the limits of a municipality who divides the tract into two parts to have a plat of the subdivision prepared if:

(1) the owner does not lay out any part of the tract described in 5. a(3); and

(2) the subdivision is the result of the owner dividing a tract by granting a security interest in property to secure an indebtedness.

h) The County shall not require the owner of an unplatted tract of land located outside the limits of a municipality who divides the tract into two parts to have a plat of the subdivision prepared if:

(1) the owner does not lay out any part of the tract described in 5. a(3); and

(2) the subdivision is the result of the owner dividing a tract to convey property to an adjacent property owner.

i) The County shall not require the owner of a tract of land located outside the limits of a municipality to have a plat or revision plat of the subdivision prepared if:

(1) said tract was created prior to January 1, 2001, as evidenced by a document recorded in the Comal County Clerk's records before January 1, 2001; or

(2) said tract was the result of a division of land that resulted from the acquisition of public right-of-way by Comal County or the State of Texas.

3. **Section A, Regulations, Subsection II, Definition of Terms**

Delete definition for "Subdivision"

Add the following definitions:

Public Water System - A system, approved by the Texas Natural Resource Conservation Commission, for the provision to the public of water for human consumption through pipes or other constructed conveyances.

Water Production Facility – A collection of pumps, treatment equipment, tanks and other devices designed to extract water from a source, provide necessary treatment to purify and disinfect, pressurize, pump, and store potable water.

Water Distribution Facility – a system or network of pipes and valves designed to deliver potable water to users.

Water Supply – a source of water

Hydrogeologist – An individual with at least 5 years of progressively more responsible professional experience, following receipt of a baccalaureate degree, during which full competence has been demonstrated in the application of scientific or engineering principles and methods to the execution of work involving:
(1) the understanding of the occurrence, movement, and composition of ground water in relation to the geologic environment,
(2) the development, management, or regulation of ground water, or
(3) the teaching and research of ground water subjects at the university level.

El Paso Go to page 6 Public & Non Public Water Systems (page 7)

CHAPTER 364
MODEL SUBDIVISION RULES

DIVISION 1. GENERAL AND ADMINISTRATIVE PROVISIONS

Section 1.1. Authority and Scope of Rules. These rules are adopted by _____ County, Texas, under the authority of the Local Government Code, Chapter 232 and Water Code, §16.350. Notwithstanding any provision to the contrary, these rules apply only to a subdivision which creates two or more lots of five acres or less intended for residential purposes. Lots of five acres or less are presumed to be for residential purposes unless the land is restricted to nonresidential uses on the final plat and in all deeds and contracts for deeds.

Section 1.2. Purpose. It is the purpose of these rules to promote the public health of the county residents, to ensure that adequate water and wastewater facilities are provided in subdivisions within the jurisdiction of this county, and to apply the minimum state standards for water and wastewater facilities to these subdivisions.

Section 1.3. Effective Date. These rules become effective on the ___ day of _____, _____.

Section 1.4. Repealer. Provisions of Order(s) Number ____, adopted on the _____ day of _____, _____, are hereby repealed, except as to such sections which are retained herein.

Section 1.5. Plat Required.

(a) The owner of a tract of land located outside the corporate limits of a municipality that divides the tract in any manner that creates two or more lots of five acres or less intended for residential purposes must have a plat of the subdivision prepared. Lots of five acres or less are presumed to be for residential purposes unless the land is restricted to nonresidential uses on the final plat and all deeds and contracts for deeds.

(b) No subdivided land shall be sold or conveyed until the subdivider:
  (1) has received approval of a final plat of the tract; and
  (2) has filed and recorded with the county clerk of the county in which the tract is located a legally approved plat.

(c) A division of a tract is defined as including a metes and bounds description, or any description of less than a whole parcel, in a deed of conveyance or in a contract for a deed, using a contract of sale or other executory contract, lease/purchase agreement, or using any other method to convey property.

Section 1.6. Supersession. These rules supersede any conflicting regulations of the county.

Section 1.7. Severability. If any part or provision of these regulations, or application thereof, to any person or circumstance is adjudged invalid by any court of competent jurisdiction, such judgment shall be confined in its operation to the part, provision, or application directly involved in the controversy in which such judgment shall have been rendered and shall not affect or impair the validity of the remainder of these regulations or the application thereof to other persons or

disposal systems and make inspections of such systems as necessary to assure that the system is in compliance with the Texas Health and Safety Code, Chapter 366 and rules in 30 TAC Chapter 285, and in particular §§285.4, 285.5 and 285.30 - 285.39. In addition to the unsatisfactory on-site disposal systems listed in 30 TAC §285.3(i), pit privies and portable toilets are not acceptable waste disposal systems for lots platted under these rules.

Section 2.4. Greywater Systems for Reuse of Treated Wastewater.

(a) Organized or municipal sewerage systems. Any proposal for sewage collection, treatment and disposal which includes greywater reuse shall meet minimum criteria of 30 TAC Chapter 210 promulgated and administered by the commission.

(b) On-site sewerage facilities. Any proposal for on-site sewage disposal which includes provisions for greywater use shall meet the minimum criteria of 30 TAC Chapter 285.

Section 2.5. Sludge Disposal. The disposal of sludge from water treatment and sewerage facilities shall meet the criteria of 30 TAC Chapter 312 and Chapter 317.

Section 2.6. Setbacks. In areas that lack a nationally recognized fire code as listed in Local Government Code, §233.062(c) and lack water lines sized for fire protection, setbacks from roads and right-of-ways shall be a minimum of 10 feet, setbacks from adjacent property lines shall be a minimum of five feet, and shall not conflict with separation or setback distances required by rules governing public utilities, on-site sewerage facilities, or drinking water supplies. Setback lines required elsewhere in the orders or rules of the county shall control to the extent greater setbacks are therein required.

Section 2.7. Number of Dwellings Per Lot. No more than one single family detached dwelling shall be located on each lot. A notation of this restriction shall be placed on the face of the final plat. This restriction shall be placed in all deeds and contracts for deeds for real estate sold within the subdivision. Proposals which include multi-family residential shall include adequate, detailed planning materials as required for determination of proper water and wastewater utility type and design.

DIVISION 3. PLAT APPROVAL

Section 3.1. Applications for Plat Approval.

(a) Owner representation. An application for approval of a plat shall be filed with the county by the record owner of the property to be subdivided or the duly authorized agent of the record owner.

(b) Standards. Every plat creating two or more lots of five acres or less for residential use shall comply with the standards of Division 2 and the requirements of Division 3 of these rules.

Section 3.2. Final Engineering Report. The final plat shall include on the plat or have attached to the plat an engineering report bearing the signed and dated seal of a professional engineer registered in the State of Texas. The engineering report shall discuss the availability

and methodology of providing water facilities and wastewater treatment to individual lots within the subdivision. A detailed cost estimate per lot acceptable to the county shall be provided for those unconstructed water supply and distribution facilities and wastewater collection and treatment facilities which are necessary to serve each lot of the subdivision. The plan shall include a construction schedule for each significant element needed to provide adequate water or wastewater facilities. If financial guarantees are to be provided under Section 3.4 of this title, the schedule shall include the start dates and completion dates.

(a) Public water systems.

(1) Where water supplies are to be provided by an existing public water system, the subdivider shall furnish an executed contractual agreement between the subdivider and the retail public utility in substantially the form attached in Appendix 1A and referenced in Section 2.2(a)(1) of this title. Before final plat approval, plans and specifications for the proposed water facilities shall have been approved by all entities having jurisdiction over the proposed project which may include in addition to the county the commission and the county health department. If groundwater is to be the source of the water supply, the final engineering report shall include a groundwater availability study that complies with the requirements of 30 TAC §§230.1 through 230.11 for water availability for a public water supply systems and certifies the long term (30 years) quantity and quality of available groundwater supplies relative to the ultimate needs of the subdivision.

(2) Where there is no existing retail public utility to construct and maintain the proposed water facilities, the subdivider shall establish a retail public utility and obtain a Certificate of Convenience and Necessity (CCN) from the commission and include evidence of the CCN issuance with the plat. Before final plat approval, plans and specifications for the proposed water facilities shall have been approved by all entities having jurisdiction over the proposed project. If groundwater is to be the source of the water supply, the final engineering report shall include a groundwater availability study that complies with the requirements of 30 TAC §§230.1 through 230.11 for water availability for a public water supply systems and certifies the long term (30 years) quantity and quality of available groundwater supplies relative to the ultimate needs of the subdivision. If surface water is the source of supply then the final engineering report shall include evidence that sufficient water rights have been obtained and dedicated, either through acquisition or wholesale water supply agreement, that will provide a sufficient supply to serve the needs of the subdivision for a term of not less than 30 years.

(b) Non-public water systems. Where individual wells are proposed for the supply of drinking water to residences, the final engineering report shall include the quantitative and qualitative results of sampling the test wells in accordance with Section 2.2(b) of this title. The results of such analyses shall be made available to the prospective property owners. If the water quality of the test well required pursuant to Section 2.2(b) of this title does not meet the water quality standards as set forth in that section without treatment by an identified and commercially available water treatment system, then the final report must state the type of treatment system that will treat the water produced from the well to

the specified water quality standards, the location of at least one commercial establishment within the county at which the system is available for purchase, and the cost of such system, the cost of installation of the system, and the estimated monthly maintenance cost of the treatment system. The final engineering report shall include a groundwater availability study that complies with the requirements of 30 TAC §§230.1 through 230.11 for water availability for individual water supply wells on individual lots and certifies the long term (30 years) quantity and quality of available groundwater supplies relative to the ultimate needs of the subdivision. The description of the required sanitary control easement shall be included.

(c) Organized sewerage facilities.

(1) Where wastewater treatment is to be provided by an existing retail public utility, the subdivider shall furnish evidence of a contractual agreement between the subdivider and the retail public utility in substantially the form attached in Appendix 1B and referenced in Section 2.3(a)(2) of this title. Before final plat approval, an appropriate permit to dispose of wastes shall have been obtained from the commission and plans and specifications for the proposed wastewater collection and treatment facilities shall have been approved by all entities having jurisdiction over the proposed project.

(2) Where there is no existing retail public utility to construct and maintain the proposed sewerage facilities, the subdivider shall establish a retail public utility and obtain a CCN from the commission. Before final plat approval, a wastewater treatment permit authorizing the treatment of the wastewater for the ultimate build-out population of the subdivision shall have been obtained from the commission and plans and specifications for the proposed sewerage facilities shall have been approved by all entities having jurisdiction over the proposed project.

(d) On-site sewerage facilities. Where private on-site sewerage facilities are proposed, the final engineering report shall include planning materials required by 30 TAC §285.4(c), including the site evaluation described by 30 TAC §285.30 and all other information required by the county's OSSF order.

Section 3.3. Additional Information. The county may, at its option, require additional information necessary to determine the adequacy of proposed water and wastewater improvements as part of the plat approval process. Such information may include, but not be limited to:

(1) layout of proposed street and drainage work;
(2) legal description of the property;
(3) existing area features;
(4) topography;
(5) flood plains;
(6) description of existing easements;
(7) layout of other utilities;
(8) notation of deed restrictions;
(9) public use areas; or
(10) proposed area features.

Gillespie County

SUBDIVISION REGULATIONS

for

GILLESPIE COUNTY, TEXAS

August 25, 2003

County of Gillespie

Subdivision Regulations

TABLE OF CONTENTS

SECTION A: PURPOSE

The purpose of these Regulations is to provide a system for the orderly, safe and healthy development of the unincorporated areas within Gillespie County, Texas. This regulation is specifically intended to protect citizens of the County by insuring that developments in the County meet standards which preclude future unnecessary burdens for its citizens. This document also furnishes the owner with guidance and assistance in the expedient subdivision or development of land.

Included in this document are:

A section that describes the authority under which these Regulations are adopted.

A section that outlines the enforcement authority available to the County.

A section that defines the uncommon words and terms used in these Regulations.

A section that explains the criteria used to determine when the subdivision of land requires the approval of the Commissioners Court.

A section that explains the requirements and procedures for platting subdivided land.

A section that provides specifications for the construction of streets and roads.

A section that explains water availability requirements when subdividing land.

A section that establishes certain security requirements to be borne by the owner/developer during the subdivision process.

These Regulations are in no way intended to restrict development in the County. Rather, it is intended that through public and private cooperation the County can achieve and maintain a quality and standard of life which reflects the highest traditions and standards of its citizens.

SECTION H. WATER AVAILABILITY REQUIREMENTS

1. General: Gillespie County has been designated by the State of Texas as a County within a Priority Groundwater Management Area. Therefore, pursuant to Chapter 35, Section 35.019, Texas Water Code, the Gillespie County Commissioners Court has the authority to require any person seeking subdivision plat approval to show:

a. Compliance with Water Availability Requirements adopted by the Commissioners Court.

b. That an adequate supply of water of sufficient quantity and quality is available to supply the number of lots proposed for the platted area.

2. Water Availability Requirements: Before any subdivision plat is approved, the developer must establish to the reasonable satisfaction of the Commissioners Court that an adequate quantity and quality of groundwater, or water from surface water sources which meet the standards established by the TCEQ, exists to support the development and occupation of the subdivision. The Hill Country Underground Water Conservation District (HCUWCD) shall oversee the implementation of this Section, and may, if sufficient data is readily available, make recommendations to the Commissioners Court to waive any of the requirements in this Section H. Any person fulfilling the requirement set forth below shall be deemed to have satisfied these Water Availability Requirements. Failure to satisfy these requirements shall result in the rejection of a subdivision plat.

3. Public or Community Water Systems:

a. New Public or Community Water System: If the person requesting plat approval proposes to utilize a new public or community water system, such system shall be developed in accordance with Subchapter C, Chapter 341, Texas Health and Safety Code and as defined by current rules and regulation of the TCEQ 30 TAC Chapter 290. If the public or community water system will have more than fifteen (15) connections, the developer shall present documentation to the Commissioners Court showing that the requirements as specified in Section 4 of these Water Availability Requirements have been met and approved by the HCUWCD. In addition a letter or other document from TCEQ's Rate Analysis and Plan Review Team, Water Utilities Division, shall be supplied approving the business plan and the plans and specifications of the proposed water system. If the proposed water system will have fewer than fifteen (15) connections, the developer shall present a letter from the HCUWCD stating that the HCUWCD has reviewed the plans and specifications for the proposed system, along with any technical data required in subsection 4 of these Water Availability Requirements and finds the proposed system adequate for its intended use.

b. Expansion of an Existing Public or Community Water System: If the developer proposes to utilize an existing public or community water system, the

developer shall present to the Commissioners Court in satisfaction of these requirements a copy of the executed agreement between the developer and the owner of such existing system for such water. If the total number of connections served by the community water system as defined above is more than fifteen (15), including the additional lots, the developer shall present a letter from TCEQ's Rate Analysis and Plan Review Team, Water Utilities Division, stating that the existing water system has sufficient capacity to service the additional connections. In addition the developer shall present to the Commissioners Court documentation that has been approved by the HCUWCD which shows that subsection 4 of these Water Availability Requirements have been met. If the proposed water system will have fewer than fifteen (15) connections, the developer shall present a letter from the HCUWCD stating that the HCUWCD has reviewed the plans and specifications for the proposed system, along with any technical data required in subsection 4 of these Water Availability Requirements and finds the proposed system adequate for its intended use.

c. Individual Wells Prohibited: All subdivision plats which satisfy the Water Availability Requirements by utilizing a new or existing public or community water system shall, by deed restriction or other legal means, prohibit the drilling or use of individual wells within such subdivision. Such prohibition shall be prominently noted on the recorded plat. Any existing wells not owned and utilized by the public or community water system shall be plugged in accordance with the applicable rules and regulations of the Water Well Drillers Board and the HCUWCD.

4. Water Availability Certification: If the developer proposes groundwater as the primary source of water for the tracts in a subdivision, whether by individual private or community wells, the following requirements shall be met:

a. Projected Water Demand Estimate as specified in TCEQ Groundwater Availability Certification of Platting Ch. 230.6.

b. General Groundwater Resource Information as specified in TCEQ Ch. 230.7.

c. Aquifer Testing as specified in TCEQ Ch. 230.2(2): Aquifer testing is a test involving the withdrawal of measured quantities of water from or addition of water to a well and the measurement of resulting changes in water level in the aquifer both during and after the period of discharge or addition for the purpose of determining the characteristics of the aquifer. Bail and slug tests are not considered to be aquifer tests. The required aquifer testing parameters shall be as specified in TCEQ Ch. 230.8 Obtaining Site-Specific Groundwater Data.

d. Determination of Groundwater Quality as specified in TCEQ Ch. 230.9.

e. Determination of Groundwater Availability as specified in TCEQ Ch. 230.10.

f. Sufficiency of Water and Certification. In addition to the test results required above, submit to the Commissioners Court a certificate from a registered professional engineer licensed by the State of Texas or a licensed professional geoscientist. Said certificate shall be based on the pump test results and any other information available, which information shall be detailed, and shall state the opinion of the certifier that sufficient groundwater exists beneath such subdivision of a quantity and quality adequate for the use of the persons purchasing tracts in such subdivision. In addition, a letter is required from the HCUWCD that based on the pump tests results and other information available to the HCUWCD the development after full build-out will not cause an aquifer mining condition to exist. Specifically, sufficient quantity of groundwater is defined as meeting or exceeding a sustainable well production capacity of ten (10) gallons per minute per lot after full build-out. In areas where ten (10) gallons per minute per lot is marginal, additional aquifer test may be required. For those areas where well production capacity is less than ten (10) gallons per minute, lot sizes shall be adjusted accordingly. The developer shall provide to each purchaser or potential purchaser of a tract located in such subdivision a summary of the water quality and quantity test results prior to concluding the sale of any tract. If the developer is unable to obtain the certificate that water of sufficient quantity and quality exists or the Commissioners Court receives a letter from the HCUWCD reporting that sufficient water is not available, the Commissioners Court shall deny that specific plat request.

g. Groundwater Availability Determination Conditions as specified in TCEQ Ch. 230.11 (b). The assumptions and uncertainties that are inherent in the determination of groundwater availability should be clearly identified. These conditions must be identified to adequately define the bases for the availability and usability statements. These bases may include, but are not limited to uncontrollable and unknown factors such as:

(1) Future pumpage from the aquifer or from interconnected aquifers from area wells outside of the subdivision or any other factor that cannot be predicted that would affect the storage of water in the aquifer.

(2) Long-term impacts to the aquifer based on climatic variations.

(3) Future impacts to usable groundwater due to unforeseen or unpredictable contamination.

Guadalupe County Road & Bridge
2605 N. Guadalupe
Seguin, Texas 78155
Phone: 830.379.9721
Fax: 372.3249

GUADALUPE COUNTY
ROAD AND BRIDGE

Fax

To: Allen Standen **From:** Larry Timmermann

Fax: 512.821.2724 **Date:** January 24, 2006

Pages: 4

Re: Information

☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

3. A statement indicating whether the Applicant shall seek County maintenance of the roads or approval of a homeowner's association for road maintenance or designation of roads as private roads.

4. A proposed Preliminary Plat shall satisfy the requirements of Article VIII relating to alignment of streets and shall contain a written certification from a Registered Professional Engineer that the location and dimensions of streets as set forth and laid out on the Preliminary Plat or Survey are in accordance with these Regulations.

D. Sewage

1. If a state approved disposal sewage system is not provided, the owner of the proposed subdivision shall make site evaluations (location of the site evaluations shall be shown on the plat) in accordance with the Guadalupe County and TCEQ regulations in effect for installation of on site sewage facilities. Representative soil sample of the proposed tracts or lots will be tested and results approved by the County Engineer. If the tests are not acceptable, corrective measures, as specified by the County Engineer are required.

2. An appropriate statement will be placed on the plat indicating the types of septic system required for the subdivision.

E. Utilities Information

1. A signed statement of each entity supplying utilities shall be displayed on the plat. Plats must have the approval of utility companies (water and electric) as to proper location of public easements and that utilities' intent to serve the subdivision.

2. The location of all proposed utility easements and/or infrastructure, including water well sanitary easements, if applicable.

3. Designation of the water and sewer utility provider for the subdivision, if known, and the source of the water intended to serve each lot within the subdivided area (i.e. surface water, ground water from a specified aquifer, etc.).

4. All utilities must meet the requirements of Article IX.

Approval of Preliminary Plat

The Commissioners Court shall approve a Preliminary Plat if it satisfies each of the requirements set forth in Article V and all other provisions of these Regulations.

ARTICLE VI

REQUIREMENTS FOR FINAL PLAT APPROVAL

A. General Information

1. A proposed final plat shall comply with the requirements of the approved preliminary plat and be approved within **one hundred (180) days** of preliminary approval.

2. Bearings and dimensions of the boundary of the Subdivision and all lots, parks, green belts, easements, or reserves. Dimensions shall be shown to the nearest one-hundredth of a foot (0.01') and bearings shall be shown to the nearest one second of angle (01"). The length of the radius and arc of all curves, with bearings and distances of all chords, shall be clearly indicated.

3. A description of monument used to mark all boundary, lot and block corners, and all points of curvature and the tangent on street rights-of-way.

4. Location of original survey line. The subdivision shall be located with respect to an original corner of the original survey of which it is a part.

5. Lot and block numbers for each Lot.

6. Acreage of all Lots, calculated to the nearest one-hundredth of an acre.

7. A Performance Bond, Letter of Credit, or an Escrow Account shall be established or posted with the County Judge in an amount determined by the County Road Administrator to insure proper construction of roads, streets, drainage and utility improvement.

8. All utility providers (such as Water District, Electrical, and Sewer Utility Supplier) must sign off on final plat, and indicate by letter their intent or agreement or serve the subdivision.

9. The plat must also show sign off by the Respective Fire Chief and Appraisal District.

10. If final plat approval is not complete within one hundred eighty (180) days of preliminary plat approval then the preliminary plat is considered void.

B. Floodplain and Drainage Information

1. For subdivisions containing 100 year floodplain, benchmarks and required finished floor elevations of each lot shall be shown.

ARTICLE IX

Utilities

A. GENERAL

All underground water, telephone, gas, cable, and electric lines shall be buried to a minimum depth of twenty four (24") inches. All sewer lines shall be buried to a minimum depth of twenty four (24") inches, except as is necessary to provide for adequate variations in elevations so as to be functional.

B. WATER

1. If a developer contracts with a Public Water Provider to provide water, the subdivision water distribution system will be engineered to meet the requirements of Chapter 290 of the Texas Natural Resource Conservation Commission.

2. Where a water line of six(6") inch diameter or greater is along the roadway adjacent to or across from the proposed subdivision, and is available for service to the proposed subdivision, the Developer shall place fire hydrants to the specifications of the State Board of Insurance Standards or to the standard of any city with extraterritorial jurisdiction. Fire hydrants placed in the subdivision shall have at least two (2) two and one-half (2 .5") inch outlets with National Standard Treads (N.S.T.) and one (1) larger outlet for local fire department. (Guadalupe County Fire Departments utilize a four and one-half (4.5") inch steamer connection).

3. If the property is served by a Public Water Provider, appropriate back-flow protection measures must be taken to ensure that no cross connection exists between the well water and the Public water. An inspection will be performed by the Public Water Provider to ascertain the protection.

Hays County

HAYS COUNTY

SUBDIVISION AND DEVELOPMENT REGULATIONS

EFFECTIVE DATE: JUNE 3, 1997. AMENDED JUNE3, 2003

HAYS COUNTY SUBDIVISION AND DEVELOPMENT REGULATIONS

ARTICLE I

1. Preamble and Purpose

1.1 These Subdivision and Development Regulations have been adopted by Order of the Hays County Commissioners Court to provide a framework for the orderly and efficient development of rural and suburban Hays County.

1.2 These Subdivision Regulations have been adopted based on the following findings:

(a) The Commissioners Court of Hays County has the authority to regulate the subdivision process pursuant to Local Government Code, §232.001 et seq.;

(b) The Commissioners Court of Hays County has been designated by the Texas Commission on Environmental Quality as the authorized agent for the licensing and regulation of on-site sewerage facilities within Hays County and these Regulations are a necessary component of such regulation;

(c) The Commissioners Court of Hays County has the authority and obligation to exercise general control over the roads, highways, bridges and related drainage structures and development within Hays County;

(d) The Commissioners Court of Hays County has been granted the authority and responsibility under the Federal Emergency Management Act to administer floodplain development regulations within the County and to regulate associated development;

(e) The Commissioners Court of Hays County has considered the potential pollution, nuisances and injury to public health that could be caused by the use of private sewerage facilities within the County and has adopted these Regulations to abate or prevent the potential pollution, nuisances or injury to public health;

(f) The Commissioners Court of Hays County has the authority and obligation to protect the public health, safety, morals, or general welfare of the citizens of Hays County as provided in Chapter 232.100 Texas LGC;

(g) These Regulations are enacted to implement the powers conveyed to counties under the laws of the State of Texas, including but not limited to Tex. Rev. Stat. Ann. Art. 2352 (general control over all roads, highways and bridges), Tex. Rev. Stat. Ann. Art. 6702-1 (authority to adopt and implement a system for the laying out, opening, altering and discontinuing of roads), Tex. Rev. Stat. Ann. Art 6626a (regulations of roads and streets and other facilities to control drainage

and storm water runoff within real estate subdivision developments), Tex. Rev. Stat. Ann. Art. 4477-8 (county solid waste disposal systems), Tex. Rev. Stat. Ann. Art. 1443, 1443a and 1436b (regulation of water and gas utility lines within county right-of-way), Tex. Rev. Stat. Ann. Art. 4477-7e (authority to adopt standards for on-site sewerage facilities), Tex. Rev. Stat. Ann. Art. 4477-9a (regulation of public highways for litter control), Tex. Local Gov't Code Ann. Section 232.001, et seq. (authority to adopt and enforce subdivision regulations and require plat approval), Tex. Local Gov't Code Ann. Section 242.001 (authority to regulate subdivisions pursuant to all statutes applicable to counties within the extraterritorial jurisdiction of municipalities), Tex. Health and Safety Code Ann. Sections 366.032 and 368.011 (authority to adopt rules relating to on-site sewerage facilities), Tex. Health and Safety Code Sections 121.003 and 122.001 (authority to enforce laws and appropriate funds necessary to protect public health), Tex. Water Code Ann. Section 16.311, et seq. (authority to set standards for construction within floodplain and to guide development of future development to minimize damage caused by floods), Tex. Water Code Ann. Section 54.2271 (regulation of municipal utility districts), Tex. Water Code 26.032 (authority to adopt rules to prevent pollution or injury to public health arising from use of on-site sewerage facilities), and Tex. Water Code Sections 26.171 and 26.175 (regulation of water quality by counties);

(h) The Commissioners Court has considered the potential burden on landowners and taxpayers of substandard development or poor quality road construction;

(i) Significant portions of Hays County are subject to the Edwards Aquifer Rules of the Texas Commission on Environmental Quality and, where feasible, reference is made to these Rules in these Regulations in order to provide property owners with a consistent framework for development throughout Hays County, but with a recognition that the Texas Commission on Environmental Quality retains the exclusive jurisdiction to enforce and administer the Edwards Aquifer Rules;

(j) These Regulations are enacted to preserve and protect the resources, public health and private property interests of Hays County.

(k) Water Availability requirements are authorized through the Texas Water Code Chapter 35 Sec. 35.019 and based on a finding by the Texas Water Development Board that since 1990 water usage within this priority groundwater management area has exceeded supply.

1.3 The Commissioners Court of Hays County, following public notice, investigation and hearing, has declared and hereby declares these Regulations to be necessary and appropriate to accomplish the purposes and goals enumerated above.

3.11 Wastewater and Development Permits. The Department shall issue no On-Site Sewage Facility or development permit on any parcel of land unless that property is in compliance with all the requirements of these Regulations and the Hays County Rules for On-Site Sewerage, except that:

(a) A division of land occurring before June 1, 1984 shall be considered grandfathered;

(b) A complete application for subdivision approval received by the Department prior to the effective date of these Regulations shall be considered solely on the basis of the Regulations in effect at the time the complete application was received by the Department.

3.12 Water Availability Requirements. While these rules are intended to preserve and protect the water resources of Hays County, the Commissioners Court of Hays County does not make any warranty - express, implied or otherwise - that subdivisions that comply with these rules will be able to meet the water needs of those purchasing lots within the subdivision.

Applicability: This section shall apply to all individuals seeking plat approval from the Hays County Commissioners Court.

Exemptions:

(a) All subdivisions of five lots or less in which all lots average at least 2 acres each.
(b) All subdivisions of ten lots or less in which all lots are larger than ten acres.
(c) All subdivisions in which all lots are restricted by plat note to be served only by rainwater collection or surface water sources.
(d) All subdivisions of property for the purpose of conveyance to family members up to the second order of sanguinity in which all lots average at least 2 acres, and in which each lot is to be used only for their personal single family residence

Requirements:

1. Subdivisions to be served by individual private water wells:

- Applicants requesting plat approval shall construct at least two wells (one test well and one monitor well). Use of existing wells will be permitted if the wells fully meet these regulations. Well analyses shall be performed by a State of Texas Registered Professional Engineer or Hydrogeologist, qualified to perform the hydrogeological testing, geophysical well logging and aquifer pump testing. The following information shall be provided to Commissioners Court for each well tested.

(a) Identify the hydrogeologic formation by well driller's log and approved geophysical logging methods. Provide a map and list of all known wells within 1,000 feet of the proposed subdivision boundaries (or a distance where measurable drawdown effects from the proposed subdivision well are

expected). Each well is to be located by latitude and longitude.

(b) Obtain the static water level to the nearest one tenth foot and equate to the mean sea level elevation. Hays County reserves the right to maintain selected monitor well sites for long-term data acquisition of static water levels in order to track regional water level trends. The test and monitor wells shall contain a one inch plug to facilitate possible future water level monitoring.

(c) Perform an aquifer pump test using approved methods of the karst aquifer systems of the Texas Hill Country. The pump test shall be performed prior to any acidization or other flow capacity treatment. The duration of the pump test shall be 24 hours or until the water level has stabilized (less than one tenth foot fluctuations) in the test well for a period exceeding two hours. The constant pumping rate used in the pumping test shall be at least the average rate of pumping for water supply use. Following pumping, water level measurements will be continued in the test and monitor wells until levels recover to their original static levels.

(d) Using information from the aquifer pump test, calculate aquifer properties including transmissivity, hydraulic conductivity, and storage coefficient of the test and monitor wells.

(e) Using aquifer properties and proposed pumping rates for the full subdivision build-out, provide cumulative drawn-down calculations for selected radial distances up to 1,000 feet of the proposed subdivision boundaries, or a distance where measurable draw-down effects at known wells identified in (a) are expected.

(f) The bacterial and chemical analysis of the test well as provided in 30 TAC 230.9.

- Individuals marketing these subdivision lots shall provide each purchaser with a summary of all the above referenced data.

2. Subdivisions to be served by TCEQ permitted public water supplies:

- Individuals proposing to serve a new subdivision by a public water supply system established to serve the new subdivision shall provide to commissioners court the following information:

(a) Certification that the public water supply system has sufficient capacity and acceptable water quality to serve all the proposed development for the subdivision.

(b) A map identifying the service boundaries of the public water supply as authorized in their Certificate of Convenience and Necessity.

(c) A projection of the annual water usage generated by the new subdivision at build-out.

(d) When new wells are being constructed to serve a TCEQ permitted water supply, provide a map and list of all known wells within 1,000 feet of the proposed subdivision boundaries (or a distance where measurable draw-down effects from the proposed subdivision wells are expected).

(e) This subparagraph does not include previously approved public water supplies by TCEQ or expanded CCN's.

3. Subdivisions to be served by an existing public water supply as permitted by TCEQ shall provide:

(a) A letter from the public water supply company certifying that the public water supply has sufficient capacity to serve all the proposed development for the subdivision.
(b) A projection of the annual water usage generated by the new subdivision at full build-out.

ARTICLE IV

4. Exemptions

4.1 Exempted Subdivisions.

a) Exemptions are allowed as defined by Local Government Code 232.0015.
b) Exemptions must have direct access (fee simple) to a permitted road.

4.2 Registration. An Owner whose subdivision is exempt from the platting requirements of these Regulations shall register the division with the County Clerk and submit the following to the County Clerk:

(a) A duplicate copy of the recorded conveyance instrument, with legible metes and bounds description attached thereto;

(b) A survey or sketch (which may be on tax parcel maps or other form approved by the Department) showing the boundaries of the Lots, adjacent roads and adjacent property owners;

(c) An executed registration form in the form promulgated by the Department which shall require the Owner to acknowledge that all Lots remain subject to the on-site wastewater rules and development permit requirements of the County.

(d) An affidavit stating that the owner/subdivider of the land acknowledges that any change to the exemption will require the platting of the property through the Hays County Commissioners Court.

ARTICLE V

5. Preliminary Plan.

5.1 Information. A proposed Preliminary Plan shall include the following:

(a) General Information.

(1) Name of the proposed Subdivision, which shall not be the same or deceptively similar to any other subdivision within the County unless the subdivision is an extension of a pre-existing, contiguous subdivision.

(2) The boundary lines and total acreage of the Original Tract and the Subdivision.

(3) A note stating the total number of Lots within the proposed subdivision and the average size of Lots, and the total number of Lots within the following size categories: 10 acres or larger, larger than 5.0 acres and smaller than 10 acres, 2.00 acres or larger up to 5.00 acres, larger than 1.00 acre and smaller than 2.0 acres and smaller than 1.00 acre.

(4) Approximate acreage and dimensions of each Lot.

(5) The location of any proposed parks, squares, greenbelts, schools or other public use facilities.

(6) Names of adjoining subdivisions or owners of property contiguous to the proposed Subdivision.

(7) Name and address of the surveyor and/or engineer.

(8) Name and address of the Owner, and developer or applicant if not the Owner.

(9) Area map showing general location of Subdivision in relation to major roads, towns, cities or topographic features.

(10) North arrow, scale and date. The scale shall not exceed 1" = 200'.

(11) Boundary lines of any incorporated city and the limit of the extraterritorial jurisdiction of any city.

(12) The location of school district boundaries and a statement clearly indicating in which school district(s) the Subdivision is located. In the event any Lot lies

within more than one school district then the plat shall clearly state the number of acres within the Lot that lies within each school district.

(b) Flood Plain and Drainage Information.

(1) Elevation contours at no greater than ten-foot (10') intervals, based on NGVD '29 datum.

(2) All Special Flood Hazard Areas identified by the most current flood Insurance Rate Maps published by the Federal Emergency Management Agency.

(3) For each Lot containing 100-year floodplain, sufficient additional contours to identify and delineate the 100-year floodplain and regulatory floodway, if any. If base flood elevations have not already been established, they shall be established by a method satisfactory to the Director.

(4) For each subdivision containing 100-year floodplain, at least one benchmark showing NGVD '29 elevation, as well as latitude and longitude.

(5) A drainage plan depicting the anticipated flow of all drainage onto and from the subdivision and showing all major topographic features on or adjacent to the property including all water courses, 100 year floodplain boundaries, ravines, bridges and culverts.

(6) The location and size of all proposed drainage structures, including on-site retention or detention ponds and easements and the impact of lot and street layouts on drainage.

(7) General depiction of the boundary lines of the Edwards Aquifer Recharge Zone, or the Contributing Zone of the Barton Springs Segment of the Edwards Aquifer (as defined in the Rules of Hays County for On-Site Sewage Facilities), if affecting the property, and a statement certified by the surveyor or engineer under his or her professional seal that, to the best of his or her knowledge, the plat accurately reflects the general location (or absence) of the Edwards Aquifer Recharge Zone or the Contributing Zone of the Barton Springs Segment of the Edwards Aquifer.

(8) Depiction of all streams, rivers, ponds, lakes, other surface water features or any Sensitive Features (as defined by the *Texas Commission on Environmental Quality* in 30 Texas Administrative Code §213.3) and a statement certified by the surveyor or engineer under his or her professional seal that, to the best of his or her knowledge, the plat accurately reflects the general location (or absence) of all such features in accordance with the terms of these Regulations.

Kendall County

KENDALL COUNTY ORDER NO. August 29, 2005

KENDALL COUNTY, TEXAS

DEVELOPMENT

RULES

AND REGULATIONS

KENDALL COUNTY
RULES AND REGULATIONS

TABLE OF CONTENTS

302.2500 Minimum design requirements for new streets or roads:

STREET OR ROAD CLASSIFICATION				
	(Private) Residential Class B	(Public) Residential Class A	Collector	Arterial
Minimum ROW	60'	60'	80'	90'
Design speed	30 mph	30 mph	45 mph	50 mph
Maximum gradient	12%	12%	9%	6%
Minimum gradient	0.3%	0.3%	0.3%	0.3%
Travel way	22'	24'	38'	38' min.
Paved width	26'	28'	42'	42' min.
Vertical Curve "K" minimum	30 sag 40 crest	30 sag 40 crest	60 sag 80 crest	90 sag 110 crest
Stopping sight distance	200'	200'	312'	350'
Minimum horizontal curve radius	25° 229'	15° 382'	10° 573'	6° 955'
Subgrade width	30'	32'	46'	46' min.
Base width	28'	30'	44'	44' min.
Traffic Volume (ADT)	1-749	1-749	750-1500	>1500

302.2600 Where roads or streets intersect, the fillet between the intersecting streets shall be paved to a minimum radius of 25 feet.

302.2700 The installation of security gates or guard stations is permissible only in gated subdivisions. Provisions shall be made for entry by county, school district, and emergency vehicles. Gates shall be set back behind the right-of-way of the connecting road.

303 WATER FACILITIES

303.1000 The developer of a proposed subdivision shall provide evidence that an adequate supply of water of sufficient quantity and quality is available to supply the number of lots proposed for the platted area.

303.1100 Water Availability:
This paragraph is applicable only if the water supply for a proposed subdivision is based on a groundwater supply, from individual water wells on individual lots. If expansion of an existing public water supply system or installation of a new public water supply system is the proposed method of water distribution for the proposed subdivision, site-specific groundwater data shall be developed under the requirements of Texas Administrative Code (TAC), Title 30, Part I, Chapter 290, Subchapter D (relating to Rules and Regulations for Public Water Systems) and the information developed in meeting these requirements shall be attached to the form required under TAC, Title 30, Part I, Chapter 230.3 (relating to Certification of Groundwater Availability for Platting).

A. Groundwater Availability:

1. Definition:

Groundwater availability shall be defined as the amount of groundwater available to a proposed platted subdivision, at full build-out, which does not cause the permanent long term lowering of the aquifer.

2. Preparing the Availability Report:

A developer of a platted subdivision will be required to furnish a Groundwater Availability Report (GAR). The GAR shall be prepared and certified by a Professional Engineer or a Professional Geoscientist licensed in the State of Texas. The data used to prepare the report shall be obtained from test wells, or a series of test wells using the following criteria:

a. Test wells shall be provided in accordance with the following:

1) Subdivisions up to and including 75 acres shall require a single (one) test well.
2) Subdivisions greater than 75 acres and up to and including 320 acres shall require a minimum of two test wells.
3) An additional test well shall be required for each additional 320 acres, or parts thereof. In order to provide uniformity of test data, additional test wells shall be required, for subdivisions requiring two or more test wells, if the five hour pump test, (detailed below), indicates a variance of 50% or greater between any two wells. In this case, paragraph 1(c) above shall be amended to read, "An additional test well shall be required for each 160 acres, or parts thereof."

b. Locations of the test wells shall be shown on the subdivision plats.

c. The test wells must be placed within the proposed subdivision and shall be located by latitude and longitude.

d. Location of all known existing, abandoned, and inoperative wells within the proposed subdivision shall be identified, located, and mapped by on-site surveys. Existing well locations shall be illustrated on the plats.

e. An existing well may be used as a test well if sufficient data is available, or can be obtained, for that well to demonstrate that it meets the requirements. The County may accept the results of a previous well test in lieu of a new test if:

1) The well is located within the proposed subdivision.
2) The previous test fully meets all the requirements.
3) The previous test was conducted in an aquifer which is being considered as the source of water supply for the

proposed subdivision; and

4) Aquifer conditions (e.g., water levels, gradients, etc.) during the previous test were approximately the same as they are presently.

f. The test wells shall be pumped with a pump capable of varying its discharge rate up to sixteen (16) gallons per minute. During the testing period the discharge rate shall be adjusted until the water surface in the well stabilizes and remains constant for a pumping period of 5 hours. An air line may be used to monitor water levels during pumping and recovery periods.

g. Water pumped out of the well during well development shall not be allowed to influence initial well performance results.

h. Well testing required by this section shall be performed before any acidization or other flow-capacity enhancement procedures are applied to the test well.

i. Each GAR shall contain a statement of groundwater quality. Groundwater quality shall be based on a test conducted in a Texas Department of Health approved laboratory, using the criteria as defined in TAC, Title 30, Chapter 230.9(a)(2)(3).

3. Protection of groundwater:
All reasonably necessary precautions shall be taken during construction of test wells to ensure that surface contaminants do not reach the subsurface environment and that undesirable groundwater (water that is injurious to human health and the environment or water that can cause pollution to land or other waters) if encountered, is sealed off and confined to the zone(s) of origin. Test wells shall be cased and cemented per current county rules and regulations for a residential well.

B. Exemptions:

A subdivision of land may be exempted from preparing a GAR if it can be shown that:

1. Each parcel is twenty acres or more, and no more than one well is permitted per twenty acres.
2. The subdivision's water source is supplied solely from surface water or rainwater catchments.

C. Approval Criteria:

Commissioners Court will not approve a final plat for a subdivision falling under the requirements of this section unless a GAR is approved. It must be the clear conclusion of the report that the fully developed subdivision will have water currently available of sufficient amount and quality. The submitted GAR must contain at a

minimum the following information summarized on the attached form of the latest revision:

1. Size of subdivision including total acres and proposed number of lots
2. Number of test wells drilled, including dry holes.
3. Number of wells pump tested
4. Well locations by physical address/description and GPS coordinates
5. Well logs including static water levels
6. Elevation above mean sea level at the well sites
7. A geological cross section of the studied area at a scale of not less than or equal to one-inch per 400 feet horizontal and one-inch per 100 feet vertical.
8. Well yields in gallons per minute from the 5 hour pump test
9. Average well yields for all wells tested
10. Water quality results from an approved laboratory
11. Conclusion statement based on TAC, Title 30, Part 1, Chapter 230.11(b)(c).

D. Well Accessibility:

Test wells shall remain available for County inspection for a minimum of 60 days after the receipted date of the GAR. Upon final approval of the GAR by the Commissioners Court, test wells may be offered for sale in conjunction with tract sales within the platted subdivision.

303.1200 In subdivisions with ten (10) or more lots, one well for fire protection shall be maintained and kept operational by the subdivision homeowners' association or a designated property owner. A 10,000 gallon or larger storage tank shall be provided near this well. Two or more 5,000 gallon tanks would be acceptable provided that at least one of the tanks is located near the entrance of the subdivision. The tank shall be fitted with connections approved by the County Fire Marshall. Fire department personnel shall have access to this well and tank for fire-fighting purposes. The County and the Cow Creek Groundwater Conservation District shall have access to this well for water monitoring. This access shall be by an easement shown on the recorded plat.

303.1300 In subdivisions without a public water system or water from an approved source to each lot, the developer shall notify every purchaser, in writing, that there is no approved water supply and provide full disclosure of anticipated water availability and water quality.

303.1400 A note shall be added to the plat showing name and address of the company preparing the Water Availability Report.

303.1500 The restrictive covenants covering lots served by individually-owned water wells shall include provisions addressing the sanitary control easement.

303.1600 A public water supply system shall meet all requirements of the appropriate state regulatory agency.

303.1700 For all lots proposed to be supplied with water from a public water-supply system, the developer shall furnish evidence that the system has received the required approval of Texas Commission of Environmental Quality (TCEQ) and that the minimum production of the system shall at least equal the requirements prescribed by the regulatory agency for the number of planned lots.

303.1800 All subdivision plats which satisfy water requirements by using a new or existing public or community water system shall, by deed restrictions or other legal means, prohibit the drilling or use of individual wells within such subdivision. Such prohibition shall be prominently noted on the recorded plat.

303.1900 Public water systems, including fire hydrants shall conform to American Water Works Association (AWWA) specifications as to design, materials, construction, and testing and comply with the rules and regulations of TCEQ. The developer shall present a letter from the County Fire Marshal approving proposed fire hydrant installation.

304 SEWAGE AND WASTE DISPOSAL

304.1000 GENERAL

A. Every parcel of land to have a home site or commercial activity shall have an adequate system for sewage and wastewater disposal upon occupancy by either:
    1) connection to an approved community sewage disposal system; or
    2) creation of properly designed and operational individual on-site sewage disposal system (OSSF).

B. On-site sewage disposal systems can be sources of pollution to ground water, soil surface, and the environment if not properly sized, constructed and maintained. A permit for the construction and location on a lot is required in the interest of public health and welfare.

304.1100 Connection to a community sewage disposal facility and system is preferred where possible.

304.1200 Wastewater treatment systems shall conform to the rules and regulations of TCEQ as to design, materials, and construction and the developer shall present proof of TCEQ acceptance, and that of any other state or county agency controlling sewage disposal systems.

304.1300 If a Wastewater treatment system is to be installed, the plans for the location of such systems must be approved by the County and thereafter by the appropriate state regulatory agency prior to approval of the final plat by the county. If connection is to be made to an existing public sanitary sewage system, evidence must be presented that such system has previously received such approval and has sufficient capacity to handle the additional demand.

County of Lampasas TEXAS

P.O. Box 231
LAMPASAS, TEXAS 76550
512 / 556-8271
FAX #: 512 / 556-8270
lampasascountyjudge@hotmail.com

FAX

TO: Allen Standen **FROM:** Haley Wheeler.

Fax: 512 821-2724 **Pages (including coversheet)** 4

Phone: _____ **Date:** Jan. 24, 2006

RE: Subdivision

___ **Urgent** ___ **For Review** ___ **Please Comment** ___ **please Reply**

Comments:

If transmission is in error, please contact me at (512) - 556-8271, ext ___
RETURN FAX NUMBER: (512) - 556-8270

WATER FACILITIES

LOTS SERVED BY INDIVIDUALLY-OWNED WATER WELLS

Whenever a Developer creates lots without a public water system or without supplying water from an approved source to each lot, the Developer or his agents shall notify every purchaser, in writing, that there is no approved water supply furnished to each lot.

A full disclosure of anticipated water availability and water quality shall be made by the Developer to each potential lot customer. Each potential customer shall be furnished TCEQ's drinking water standards governing drinking water quality for convenient reference.

The County makes no representation or guarantees as to water quality or that a present or future adequate water supply exits.

PUBLIC WATER SYSTEMS

A public water supply system shall meet all requirements of the appropriate State Regulatory Agency and shall be registered with all applicable information on the water system with the commissioners' court or its designated agent.

Commissioners' Court or its designated agent shall have the right to inspect all phases of public water wells during development.

For all lots proposed to be supplied with water from a public water supply system, the Developer shall furnish the commissioners' court evidence that the system has received the required approvals of the appropriate State regulatory agencies, and that the minimum production of the system shall at least equal the requirements of the regulatory agency for the number of residences projected.

Public water systems, including fire hydrants shall conform to American Water Works Association (AWWA) specifications as to design, materials, construction, and testing and comply with the rules and regulations of TCEQ. The Developer shall present a letter from the Fire Marshal approving proposed fire hydrant installation. Such systems also must have approval of all controlling State agencies.

SEWAGE AND WASTE DISPOSAL

GENERAL

A. Every parcel of land to have a home site or commercial activity shall have an adequate system for sewage and wastewater disposal upon occupancy by either:
   1. connection to an approved community sewage disposal system; or
   2. creation of properly designed and operational individual on-site sewage disposal system.

B. On-site sewage disposal systems can be sources of pollution to ground water, soil surface, and the environment if not properly sized, constructed and maintained. A permit for the construction and location on a lot is required in the interest of public health and welfare and will be obtained at the County Judge's office.

C. Public sewage systems shall conform to the rules and regulations of TCEQ as to design, material, and construction. The Developer shall present proof of TCEQ acceptance, and that of any other State or County agency controlling sewage disposal systems.

D. Connection to a community sewage disposal system is preferred where possible. If a public sewage system is to be installed, the plans for the location of such systems must be approved by the commissioners' court or its designated agent and thereafter by the appropriate State regulatory agency prior to approval of the final plat by the County. **If connection is to be made to an existing public sanitary sewage system, proof must be presented that such system has given approval and has sufficient capacity to handle the additional demand.**

E. If an individual on-site sewage disposal system is to be utilized, the developer shall prominently annotate both the preliminary and the approved final plat that homeowners are to be responsible for the construction of an approved on-site sewage and wastewater system after obtaining a permit issued by the Commissioners Court or its designated agent.

F. The lot owner, with a County-issued disposal system permit, shall be responsible for working with a disposal system contractor to develop a soil profile at the selected drain field site to the depth of five (5) feet or to a restrictive horizon to aid in determining the type of disposal system to construct.
   1. If the soil profile reflects soil suitable and sufficient for a system employing soil absorption for disposal of effluent a septic tank and drain field may be constructed.

2. If the soil profile does not reflect soil suitable or sufficient for disposal of effluent by soil absorption, then another acceptable alternate on-site sewage disposal system designed and maintained by a sanitary engineer must be constructed.
3. Review/Inspection by County Septic System Inspector is required.

MANUFACTURED HOME COMMUNITY REGULATIONS

The purpose of this section is to achieve orderly development of manufactured home communities, to promote and develop the use of land to assure the best possible community environment and to protect and promote the health, safety, and general welfare.

A Lots in a manufactured home community shall front on a street of not less than sixty (60) feet width right-of-way.

B Lots served with public water system and public sewage disposal system shall be no smaller than one-half (½) acre in size with a minimum frontage of sixty (60) feet.

C The County will withhold all permits from manufactured home communities, until the manufactured home community has been approved in the manner prescribed by these regulations that follow.

MANUFACTURED HOME COMMUNITY PLAN

A. Submission. Each applicant seeking approval of a manufactured home community shall submit, to the commissioners' court, six (6) blue or black-line copies of a manufactured home park plan.

B. Approval. When plans for the mobile home community are completed in accordance with these rules, the commissioners' court may approve the plan as submitted, amend, and approve the plan as amended, or disapprove the plan.

OFFICE OF MEDINA COUNTY JUDGE & COMMISSIONERS COURT

James E. Barden, County Judge
Chris Mitchell, Commissioner Pct. 1
Beverly Keller, Commissioner Pct. 2
Arturo Barrientes, Commissioner Pct. 3
Kelly Carroll, Commissioner Pct. 4

1100 16th Street
Room 101
Hondo, Texas 78861
Telephone (830) 741-6021
Facsimile (830) 741-6025

FACSIMILE TRANSMITTAL

Date: November 7, 2005

To: Allen Sanden

Company:

From: Jim Barden

Fax: 512-821-2724

Re: SB 1323

Pages Transmitted (Including Cover): 8

Please contact our office if any portion of this transmission is not received. Thank You.

√_____ Original will not follow

_____ Original will follow via:
_____Regular mail
_____ Overnight delivery
_____ Hand delivery

Medina County Judge
James E. Barden

1100 16th Street
Room 101
Hondo, Texas 78861-1841

(830) 741-6021 Fax (830) 741-6025

November 7, 2005

To: Allen Sanden

Cc: Pat Brawner

From: James E. Barden, County Judge

Attached are pages from our subdivision rules (effective 07/01/2005) which deal with water availability certification.

As you can see those rules are somewhat new to our county and thus experience is limited. I think Mr. Brawner (830-741-6195) may be able to answer some of your questions. Please feel free to call me if you have any questions that you think the Commissioners or I can help you with.

JEB/jaa

10.2.6.2 Design, Testing and Inspections. Petitioners should coordinate with the County Commissioner regarding the nature and extent of reconstruction, repair, upgrade, modification or realignment of existing street and drainage improvements necessary to bring them into conformance with these Regulations. The Commissioners Court may require such testing and inspection of existing improvements as the Court deems necessary, and may require that construction plans for necessary modifications be prepared by a licensed engineer at the petitioners' expense.

10.2.6.3 Procedure. The procedures and requirements of Sections 10.2.2 through 10.2.5 shall apply, provided that in case of conflicting requirements the requirements of this Section 10.2.6 shall govern.

10.3 Installation of Utility Lines. All utility lines planned to be constructed under paved street shall be installed before the street is paved. All utility lines installed under an existing paved street shall be bored to a point at least four (4) feet beyond the pavement and must be approved in advance by the County Commissioner, unless otherwise approved by Commissioners Court.

10.4 Construction of Roads Prior to Final Plat. Upon approval of a Preliminary Plan, an Owner may apply to the County Commissioner to commence construction of roads, streets, utilities and drainage structures within the right-of-way. This application will be granted upon the County Commissioner's review and approval of the Construction Plans, and other materials required in Section 6.4 or 6.5, as applicable. An Owner wishing to construct roads, streets, or other improvements prior to the recording of a Record Plat, shall be required to post maintenance Bond or Letter of Credit upon recording of the Final Plat satisfying the requirements of Section 10.2.5.1 above.

ARTICLE XI

11. WATER AND WASTEWATER SYSTEMS.

11.1 Water.

11.1.1 Design and Construction. Public water supply systems shall be designed and constructed in accordance with the rules of the TCEQ. See also Section 11.7, Fire Protection.

11.2 Wastewater.

11.2.1 Design and Construction. Wastewater collection systems shall be designed and constructed in accordance with the rules of the TCEQ.

11.2.2 Compliance with On-Site Sewage Rules. All Lots must be designed in compliance with the Rules of Medina County for On-Site Sewage Facilities.

11.3 Water Availability.

11.3.1 The Medina County Commissioners Court makes no representation or warranty, either express or implied, that subdivisions that comply with these water availability regulations will meet the current and/or future water needs of purchasers of property within the subdivision.

11.3.2 Applicability. These Water Availability Regulations apply to all applications for approval of a plat for a Subdivision wholly or partially within Medina County, Texas, pursuant to the Medina County Subdivision Rules, except as exempted hereafter.

11.3.3 Exceptions to Water Availability Regulations.

11.3.3.1 Subdivision of property where platting is not required by the Medina County Subdivision Rules;

11.3.3.2 Subdivision of property in which all Lots are 25 acres or greater.

11.3.4 Water Availability data shall be presented to the Commissioners Court upon submission of the Preliminary Plan. Medina County shall have the Water Availability data reviewed by a qualified expert on behalf of Medina County.

11.4 Requirements For Subdivisions To Be Served By Private Water Wells. The Preliminary Plan submittal to the Commissioners Court for a proposed subdivision whose water supply will be private water wells shall include Water Availability data derived from a minimum of two wells (one test well and one monitor well). There shall be one (1) set of Test-Monitor wells for each 100 acres. The use of existing wells is permitted if the existing well complies with these regulations.

11.4.1 The following Water Availability data is required:

11.4.1.1 Map of the proposed subdivision prepared by a qualified expert identifying:

a. Geological formations;

b. Location of test and monitor wells by longitude and latitude;

c. Available data on wells within 1,000 feet of the boundaries of the proposed subdivision (including well depth, depth to water yield and estimated yield). Subject wells may be identified in the files of the Texas Water Development Board or TCEQ or otherwise known to the qualified expert.

11.4.1.2 The static water level to the nearest 0.1 foot, equated to the mean sea level elevation.

11.4.1.3 Data derived from an aquifer pump test utilizing proven

methods recommended by TWDB or TCEQ for the karst aquifer systems of the Texas Hill Country. The pump test shall be supervised by a qualified expert and shall be performed prior to any acidization or other flow capacity treatment of the well. The duration of the pump test shall be 24 consecutive hours or until the water level has stabilized (less than 0.1 foot fluctuation) in the test well for a period exceeding two hours.

11.4.1.4 Statement by a qualified expert, based on the pump test:

a. Estimated yield of wells proposed for the subdivision;

b. Determination of transmissivity of the water-bearing formation or strata from which the ground water will be withdrawn;

11.4.1.5 Certification by a registered professional engineer that an adequate supply of water of sufficient quantity and quality exists to supply the subdivision at full build-out based on number of connections, using the formula for minimum gallons per year to be supplied to the subdivision:

Minimum gallons per year =
Number of connections x 3.5 x 100 x 365 days.

11.4.2 The following statement shall appear on the final plat for the approved subdivision: "This subdivision will be served by individual, privately-owned groundwater wells. Information on the available supply of groundwater and its quality is available to prospective purchasers of Lots in this subdivision in the office of the County Clerk of Medina County, Texas."

11.4.3 For any existing or proposed private water well which is subject to permitting or pumping restrictions by a governmental subdivision, the Applicant shall submit proof that pumping of groundwater at the specified rate complies with applicable regulations and/or permits.

11.5 Requirements For Subdivisions To Be Served By A Proposed New Public Water Supply System.

11.5.1 The Preliminary Plan submittal to the Commissioners Court for a proposed subdivision whose water supply will be a proposed new Public Water Supply System relying wholly or partially on groundwater or surface water shall include Water Availability data on those respective sources.

11.5.2 For Ground Water sources, this water availability data shall be derived from a minimum of two wells (one test well and one monitor well). There shall be one (1) set of Test Monitor wells for each 100 acres. The use of

existing wells is permitted if the existing well complies with these Regulations. Groundwater Availability Data shall include:

11.5.2.1 Map of the proposed subdivision prepared by a qualified expert identifying:
- a. geological formations;
- b. location of test and monitor wells by longitude and latitude;
- c. available data on wells within 1,000 feet of the boundaries of the proposed subdivision (including well depth, depth to water yield and estimated yield). Subject wells may be identified in the files of the Texas Water Development Board or TCEQ or otherwise known to the qualified expert.

11.5.2.2 The static water level to the nearest 0.1-foot, equated to the mean sea level elevation.

11.5.2.3 Data derived from an aquifer pump test utilizing proven methods recommended by TWDB or TCEQ for the karst aquifer systems of the Texas Hill Country. The pump test shall be supervised by a qualified expert and shall be performed prior to any acidization or other flow capacity treatment of the well. The duration of the pump test shall be 24 consecutive hours or until the water level has stabilized (less than 0.1 foot fluctuation) in the test well for a period exceeding two hours.

11.5.2.4 Statement by a qualified expert, based on the pump test:

11.5.2.4.1 Estimated yield of wells proposed for the subdivision;

11.5.2.4.2 Determination of transmissivity of the water-bearing formation or strata from which the groundwater will be withdrawn;

11.5.3 For Surface Water sources, water availability data shall include:

11.5.3.1 Identification of the source(s) of surface water (name of stream or impoundment) and proof that withdrawal or diversion of surface water complies with state and federal laws.

11.5.3.2 Identification of any wholesale water provider to the system, the date of wholesale water supply contract(s) and the maximum quantity of water per year that is committed by the wholesale supplier to the public water supply system.

11.5.3.3 A description of interconnection(s) with other public water supply system(s) and the terms under which water will be provided by either system to the other.

11.5.3.4 For proposed new public water supply system, certification by a qualified expert that an adequate

supply of water of sufficient quantity and quality to supply the subdivision at full build-out, based on number of connections, in accordance with TCEQ utility regulations at 30 TAC, Chapter 291.

11.5.4 The following statement shall appear on the final plat for an approved subdivision: *"This subdivision will be served by [Name of New Public Water Supply System, and mailing address]. Information on the [Name of New Public Water Supply System] is available to prospective purchasers of lots in this subdivision in the office of the County Clerk of Medina County, Texas."*

11.6 Requirements For Subdivisions To Be Served By An Existing Public Water Supply System. The Preliminary Plan submittal to the Commissioners Court for a proposed subdivision whose water supply will be an existing Public Water Supply System relying wholly or partially on groundwater or surface water shall include certification in writing by the president or general manager of the public water supply system of the following:

11.6.1 General System Information.

11.6.1.1 Name, address, phone number, authorized agent and TCEQ facility number.

11.6.1.2 Map of the service area of the Public Water Supply System, showing the location of the proposed subdivision.

11.6.1.3 Certification that an adequate supply of water of sufficient quantity and quality exists to supply the subdivision at full build-out, based on number of connections, in accordance with TCEQ utility regulations at 30 TAC, Chapter 291.

11.6.4 The following statement shall appear on the final plat for an approved subdivision: *"This subdivision will be served by [Name and address of Public Water Supply System]. Information on the [Name of Public Water Supply System] is available to prospective purchasers of lots in this subdivision in the office of the County Clerk of Medina County, Texas and be stated in the deed restrictions."*

11.7 Fire Protection.

11.7.4 In any subdivision containing fifteen (15) or more Lots that are not served by a public water supply system meeting the current Insurance Services Office (ISO) Fire Suppression Rating Schedule standards adopted by the Office of the State Fire Marshall, the developer shall provide firefighting facilities. For purposes of these Regulations, firefighting facilities are defined as water storage facilities for firefighting.

11.7.4.1 Each firefighting facility shall provide a minimum 20,000 gallons of water storage with permanent provisions for refilling the total water storage volume within seventy-two (72) hours.

11.7.4.2 Firefighting facilities shall have high-flow connections meeting ISO standards for gravity flow refilling of firefighting vehicle water tanks and for connection to firefighting vehicle pumps.

11.7.4.3 Firefighting facilities shall be elevated sufficiently to provide gravity flow to a firefighting vehicle water tank.

11.7.4.4 The County Commissioner may consult with area fire department officials concerning the design and location of firefighting facilities.

11.7.4.5 Construction documents for firefighting facilities shall be submitted to the Commissioners Court with plans for subdivision street and drainage improvements.

11.7.4.6 Firefighting facilities shall be provided in accordance with the following table:

Number of Lots in Subdivision	Number of Firefighting Facilities Required
15 - 119	1
120 - 299	2
300 - 599	3
600 +	To Be Determined by Commissioners Court

ARTICLE XII

12. DRAINAGE DESIGN AND IMPROVEMENTS.

12.1 Stormwater Runoff into County Drainage Facilities. Stormwater runoff from any Development may not be released into any county drainage ditch, swale, easement, culvert or other facility or any such drainage facility associated with an existing road, whether public or private, at a rate greater than when the property was in its undeveloped condition. The County Commissioner may require the submission of additional materials at the time of the Preliminary or Final Plat application to assure the proposed subdivision will be in compliance with this Section.

12.1.1 Incentive for Lots Larger than Five (5) Acres. If all Lots in a subdivision are larger than five (5) acres and restricted by plat note limiting future development to one single family residence per Lot and prohibiting TCEQ

Travis County

Exhibit 82.201(c)

TNR's Non-Legislative Version 7/26/05

Travis County TNR Planning and Engineering Services Division
411 West 13th Street, Executive Office Building, 8th Floor, P.O. Box 1748, Austin, TX 78767
phone (512) 854-9383 fax (512) 854-4649

FINAL PLAT APPLICATION COMPLETENESS REVIEW FORM

This form represents the standard requirements for a completeness review all final plat applications. Failure to provide all of the information requested may result in the determination that the final plat application is incomplete. The application will be reviewed for completeness, not correctness. The correctness review will be based on the requirements of Chapter 82 of Travis County's Standards for Construction of Streets and Drainage in Subdivisions.

Project Name on Plan: _____ Date: _____

Application Type: [ ] Short Form Plat (no proposed streets) [ ] Long Form Plat (proposed streets)

[ ] Resubdivision/Amended (Plat Name) _____

Street Location: _____ Property Acreage: _____

Precinct: _____ Other Jurisdiction (City ETJ, etc.): _____

Approved Preliminary Plan Name: _____

Tax Map Parcel ID: _____ Watershed: _____

FEMA Floodplain Panel Number(s): _____

Signature of Property Owner or Agent*: _____ Email: _____

Printed Name: _____ Phone: _____ Fax: _____

** Attach written authorization signed by the Owner of Record designating him/her as agent for this project.*

DEPARTMENTAL USE ONLY

Date Filed: _____ Staff Name: _____

Final Plat Application Checklist Items marked with a "check" are complete, complete all circled items. "NA" means not applicable.

[ ] 1. One (1) copy of Final Plat (drawn at 1"=100'). Also, for all commercial subdivisions and for any single-family residential subdivision over 20 acres, digital drawing file of subdivision.

[ ] 2. All subdivision plat sheets shall be 18" x 24".

[ ] 3. Plat original must be drawn in black ink on mylar or vellum material.

[ ] 4. The subdivision name must be prominently displayed on each sheet of the plat.

[ ] 5. Each sheet of the plat must be sequentially numbered (example "Sheet 2 of 4").

[ ] 6. Location map, legend and north arrow comply with Preliminary Plan standards.

[ ] 7. Lot and block numbers must be systematically and sequentially arranged.

[ ] 8. Adjacent property must be referenced by book and page of Travis County Plat Records with lot and block numbers. Unplatted adjacent land must be referenced by property owner, acreage and volume and page Travis County Real Property Records.

[ ] 9. All existing and proposed easements must be shown and labeled. Existing easements must reference the holder of easement and recording information. Provide one (1) copy of all existing separate instrument easement documents.

[ ] 10. A letter, statement, or other instrument from holder of privately held easement or fee strip stating their approval of crossing or modification of the easement.

[ ] 11. Reference any covenants or restrictions imposed on the land by volume and page of Travis County Real Property Records. Provide one (1) copy of covenants/restrictions.

[ ] 12. The names and right-of-way widths of all adjacent streets must be shown.

[ ] 13. The name, linear footage and width of each street being platted must be listed.

[ ] 14. Bearings and distance for every street, lot line and easement whether curved or tangent. The radius, central angle, arc, chord, chord bearing, and tangent distance for all curves. Dimensions shown in feet and hundredths of a foot and angles must be shown in degrees, minutes, and seconds.

[ ] 15. Location of all permanent monuments and control points, including County line monumentation, if applicable, set as described in Section 82.204(c)(12) and shown on plat as per Section 82.204(c)(12) of Travis County's Standards.

[ ] 16. All drainage easements must be shown in accordance with the Preliminary Plan.

[ ] 17. Dedication of 100 year flood plain in drainage easements clearly delineated using bearings and distances.

[ ] 18. Contain all natural drainageways in drainage easements when drainage leaves or crosses existing or proposed right-of-way or when natural drainageways cross multiple lots or as determined by Travis County TNR. Clearly delineated using bearings and distances. Or provide a grading plan and the following plat note: Construction on Lot(s) ____, will not cause ponding, erosion or increased flow on adjacent properties.

[ ] 19. If there is a drainage easement, add note: "No objects, including but not limited to buildings, fences, landscaping or other structures in drainage easements except as approved by Travis County and the City of _____."

[ ] 20. For any lot affected by the 100 year flood plain, a Minimum Finished Floor Elevation must be established for each affected lot in accordance with Travis County's Standards. If multiple base flood elevations are shown for a single lot, include the following plat note: Finished flood elevation on lot ___ shall be one (1) foot above the highest adjacent FEMA flood plain base flood elevations shown hereon.

[ ] 21. One or more benchmark monumented in subdivisions which contain or are bounded by flood plain or where new street are dedicated.

[ ] 22. The acreage of each Lot served by an onsite sewage system must be noted.

[ ] 23. Total acreage and number of lots listed on plat.

[ ] 24. The usage of each lot that is not single family residential must be noted on plat.

[ ] 25. Preamble describing exact legal description and referencing applicable statute.

[ ] 26. Surveyor certification is on the plat.

[ ] 27. County Clerk 's Affidavits on the plat.

[ ] 28. Commissioners' Court resolution.

[ ] 29. ETJ note (to be signed prior to final plat approval) by the Director of Planning for the City of Austin (or other city as applicable) when property is outside the ETJ.

[ ] 30. Appropriate notes and signature blocks for officials of other jurisdictions.

[ ] 31. Travis County Development Permit required prior to any site development.

[ ] 32. Travis County Flood plain note.

[ ] 33. Individual sewage disposal system notes and signature block.

[ ] 34. Plat note prohibiting occupancy of any lot until connection is made to an approved public sewer system or approved private individual sewage disposal system.

[ ] 35. Plat note prohibiting occupancy of any lot until water satisfactory for human consumption is available from a source in adequate and sufficient supply for the proposed development.

[ ] 36. Plat note designating proposed water and/or wastewater provider.

[ ] 37. If groundwater will be relied on to provide the water supply to the subdivision, the material required by 30 Texas Administrative Code Chapter 230.

Supplemental Submittal Information Required Before Final Plat Approval

[ ] 38. A letter from each utility company (electric power, telephone, gas, water and wastewater) serving the immediate area, indicating whether and when service will be available to all lots in the subdivision. For water and/or wastewater, the letter must be accompanied by a contract for service and construction of any new water/wastewater facilities.

[ ] 39. A tax certificate from the County Tax Assessor-Collector stating that all real property taxes are paid up to and including the preceding tax year.

[ ] 40. Copy of current Owner's Property Deed.

[ ] 41. Copy of Restrictive Covenants or Joint Use Driveway Agreement if joint use driveways are proposed.

[ ] 42. Copy of Restrictive Covenants/Home Owners Agreement. (existing or proposed if required for common areas).

[ ] 43. Copy of preliminary street and drainage plans and detailed construction estimate signed and sealed by the engineer. *The application may be rejected if insufficient information is provided. Fiscal posting may need to be increased if the complete construction warrant a higher fiscal posting amount.. Complete construction plans and fiscal for restoration and the construction of streets and drainage must be provided prior to issuance of development permit, unless alternate fiscal is approved by the Court. The owner must provide fiscal or an executed copy of Exhibit 82.401(D) plus restoration fiscal within 48 hours of notice that the plat is to be recommended to the Court for approval and recordation or the plat may be rejected. (See supplemental checklist for streets and drainage plans).*

[ ] 44. Topographic information, drainage area map, drainage plan, and drainage report. *(If different from Preliminary Plan submittal - see supplemental checklist for streets and drainage plans).*

[ ] 45. Electronic media submittal. *(optional)*

[ ] 46. Copy of Preliminary Plan for long form plat submittals. *A separate Preliminary Plan will not be required if the applicant is final platting the entire parent tract and provides the information required with preliminary plans. (See preliminary plan checklist)*

[ ] 47. Copy of Traffic Impact Analysis, if required as per 82.301(b).

[ ] 48. Copy of all variance requests with appropriate supporting documentation.

[ ] 49. For developments with sidewalks, approval letter from Department of Licensing and Regulation, or a letter from a Texas Registered Professional Engineer, an architect or other profession acceptable to the Texas Department of Licensing and Regulation, stating that the design of any public accommodations meets ADA requirements, or a waiver to the requirements has been granted by TDLR, per 82.301(c)(B).

[ ] 50. Copy of Travis County Construction Agreement.

[ ] 51. Letter of concurrence from emergency service provider.

[ ] 52. Written approval for all proposed street names from E-911 Addressing.

[ ] 53. Permits or approvals from federal, state, or regional entities with jurisdiction. If the limits of 100 year flood plain as per FEMA vary from the current FEMA panels, provide proof of application to FEMA for a Conditional Letter of Map Amendment (CLOMA) or Conditional Letter of Map Revision (CLOMR). A Conditional Letter of Map Amendment, or Revision, must be provided prior to final plat approval and the Letter of Map Amendment or Revision must be provided prior to issuance of development permits for lot improvements.

[ ] 54. Travis County Subdivision Fees Calculation Form and receipt of payment of all required fees.

[ ] 55. Water quality control maintenance plan under Section 82.209(h), if applicable.

Private Street Subdivision

[ ] 56. Preamble contains private street language.

[ ] 57. Private streets are shown on plat as "Private Street, Drainage Easement and PUE".

[ ] 58. One (1) copy of Home Owners Agreement.

[ ] 59. If gates are proposed, provide an entry detail showing location of gates, key pads, etc.

On this date, all items necessary for a technical review of the proposed Final Plat have been submitted and constitute a COMPLETE APPLICATION. More information about the items required herein can be obtained from Travis County, Standards for Construction of Streets and Drainage in Subdivision (Chapter 82). A copy of these standards can be obtained from TNR at 411 West 13th Street, 8th floor, (512) 854-9383 or on the Travis County web page: http://www.co.travis.tx.us/tnr/subdivision.

Application Completed: Staff Name:

Report #	County	Pump Well ID	Consultant(s)	Certified By	Developer	Pump Test Date	Alternate Location	Lat	Long	Aquifer	Aquifer Type	Pump Well depth	Screen Diam. ft.	Open Interval ft.	Pump Rate gpm	Pump Period hrs	Max-Drawdown ft.	Mon. Well	Dist from pump well ft.	Init. WL ft bgs	Final WL ft bgs	Aquif Thick ft.	Fully Penetrated	T gpd/ft	S	K gpd/ft^2	Spec Cap gpm/ft	Well Effic. (%)	Est. drawdown ft. bgs	Rec. Well Spac.	Chemical Analyses	Comments
1	Gillispie	PW-3	Pape-Dawson Engineers	Philip Pearce, PG 691	River Run R. V. Park	7/20/2004	N.A.	30.2308	-99.1833	Middle Trinity	Confined	900	0.53	170	265	24	129.4	Y	530	-210.96	-344.99	270	Assumed	3,135	0.000155	11.6	2	94	24 feet after 30 years at property boundary		Yes, no analysis included	
2	Gillispie	Lot 12	Marshall E. Jennings	Marshall E. Jennings, P. E. 26130	High River Ranch Subdivision	1/21/2005	N.A.	30.2025	-98.9597	Hensell Member, Middle Trinity	Semiconfined	193	0.53	150 - 190	17.6	24	11.4	Y	311	-127.71	-140.55	200	Assumed	6,140	0.000018	30.6	1.54	85	1.1 feet after 30 years at property boundary	300 feet at 0.2 gpm	Yes, T. Hard 394, Ca 49, Mg 66, Na 42, SO4 59, Cl 69, F 0.6, TDS 480	Possible local recharge boundary
3	Blanco	PW-1	Hill Country Engineering and Bond Geological Services	Michael Lucci, P.E. 82822 and Steve Bond PG 518	Rockin J Ranch Subdivision Units, 1 & 2	4/14/2004	N.A.	30.0467	-98.4017	Middle Trinity	Unconfined	340	0.53	240 - 340	155	36	1.87	Y	200	-173.79	-175.66	90	Assumed	345,000	0.001	3837	82.9		N. A.		SO4 161, TDS 580	Located in fault block, high perm. and porosity. Tests were conducted during high rainfall event
3.1	Blanco	PW-2	Hill Country Engineering and Bond Geological Services	Michael Lucci, P.E. 82822 and Steve Bond PG 518	Rockin J Ranch Subdivision, Units 1 & 2	4/17/2004	N.A.	30.0433	-98.3953	Middle Trinity	Unconfined				145	36	0.72	Y	200	-216.12	-216.84	90	Assumed	595,000	0.001	6620	201.4		N. A.			Located in fault block, high perm. and porosity. Tests were conducted during high rainfall event
4	Blanco	BT-3	Strata Geological Services Inc.	William Feathergail Wilson PG 21	Brushy Top Ranch Subdivision	9/11/2005	N.A.	30.1624	-98.3955	Lower Trinity, Hosston	Confined	580	0.38	460 - 520	13.6	2	91.98	N		-217		60	Assumed	108	3.88E-05	1.8	0.15		N. A.	10 acres	1,850 to 2,200 TDS	
4.1	Blanco	BT-1	Strata Geological Services Inc.	William Feathergail Wilson PG 21	Brushy Top Ranch Subdivision	9/11/2005	N.A.	30.1516	-98.4018	Lower Trinity, Hosston	Confined	670	0.38	560 - 620				N		-295									N. A.	10 acres		
5	Blanco	1A	Edwards Aquifer Research and Data Center	Marshall E. Jennings, P. E. 26130 and John Burch (evaluated by LBG-Guyton)	Crystal Mountain Development, Phases III and IV	8/16/2000	N.A.	30.455	-98.3561	Ellenburger-San Saba	Partially Confined	460	0.5	160 - 460	15	24	73.94	N	300	-167.46	-241.43	300	Assumed	183	0.00014		0.2		N. A.	500 feet	Yes, T. Hard 401, Ca 80, Mg 49, Na 16, SO4 32, Cl 10, F 0.5, TDS 409	Estimated aquifer thickness
5.1	Blanco	4A	Edwards Aquifer Research and Data Center	Marshall E. Jennings, P. E. 26130 and John Burch (evaluated by LBG-Guyton)	Crystal Mountain Development, Phases III and IV	8/20/2000	N.A.	30.4800	-98.3497	Ellenburger-San Saba	Partially Confined	385	0.5	180 - 385	17	24	7.33	Y	300	-141.74	-149.07	305	Assumed	7,970	0.0017		3.1		N. A.	500 feet		Estimated aquifer thickness
6	Blanco	Sect. 2	Winkley Engineering	Thomas Winkley and Thomas Partridge (evaluated by LBG-Guyton)	Cielo Springs Subdivision, Sections 2 and 3	01/21/2000	N.A.	30.0739	-98.4182	Middle Trinity, Lower Glen Rose	Partially Confined	500	0.5	280 - 355, 450 - 460, 475 - 500	19	24	41.05	Y	120	-172.5	-213.55	110	Assumed	319	0.00005	2.9	0.46		N. A.		No, T. Hard 240, Ca 544, Mg 304, Na 75, SO4 3,040, Cl 34, F 2.9, TDS 3,730, pH 8.0	
6.1	Blanco	Sect. 3	Winkley Engineering	Thomas Winkley and Thomas Partridge (evaluated by LBG-Guyton)	Cielo Springs Subdivision, Sections 2 and 3	01/21/2000	N.A.	30.0877	-98.4320	Middle Trinity, Lower Glen Rose	Partially Confined	560	0.5	367 - 371, 465 - 560	20	24	106.4	Y	120	-121.2	-227.6	99	Assumed	444	0.000099		0.18		N. A.		No, T. Hard 210, Ca 587, Mg 261, Na 94, SO4 2,910, Cl 41, F 3.3, TDS 3,570, pH 7.5	
7	Blanco	1(P)	Marshall E. Jennings	Marshall E. Jennings, P. E. 26130	The Lake on Flat Creek	2/27/2004	N.A.	30.2892	-98.4228	Ellenburger-San Saba	Confined	364	0.53	110 - 337	8.8	24	107.45	Y	181	-41.55	-149		Assumed	625	0.00027		0.07		pumping at 0.3 gpm/well, 1.6 feet drawdown 1,000 feet from property boundary after one year		Yes, T. Hard 362, Ca 69, Mg 46, Na 14, SO4 12, Cl 10, F 0.3, TDS 326	Unknown aquifer thickness used for analysis
7.1	Blanco	2(P)	Marshall E. Jennings	Marshall E. Jennings, P. E. 26130	The Lake on Flat Creek	2/27/2004	N.A.	30.2883	-98.4144	Ellenburger-San Saba	Confined	706	0.53	118 - 672	9	24	167.38	Y	239	-39.64	-207.02		Assumed	97	0.00008		0.05		N. A.			Unknown aquifer thickness used for analysis
8	Blanco	1-P	Marshall E. Jennings	Marshall E. Jennings, P. E. 26130	The Preserve at Walnut Springs	10/13/2004	N.A.	30.2450	-98.4864	Ellenburger-San Saba	Confined	324		220 - 285	20	24	4.43	Y	592	-185.12	-189.55	65	Assumed	4,308	0.00009		4.5		pumping at 4.4 gpm, 1.0 feet drawdown 1,000 feet from property boundary after one year		Yes, T. Hard 603, Ca 126, Mg 70, Na 14, SO4 358, Cl 28, F 1.3, TDS 781	
9	Blanco	2(P)	Marshall E. Jennings	Marshall E. Jennings, P. E. 26130	One River Point Subdivision	6/7/2002	N.A.	30.3090	-98.4207	Ellenburger-San Saba	Confined	382	0.53	62 - 382	15	24	54.96	Y	316	-47	-101.96		Assumed	215	0.0002		0.27		pumping at 4.7 gpm, 3.6 feet drawdown 1,000 feet from property boundary after one year		Yes,T Hard 275, Ca 46, Mg 39, Na 14, SO4 79, Cl 11, F 0.2, TDS 363	Unknown aquifer thickness used for analysis
9.1	Blanco	3(P)	Marshall E. Jennings	Marshall E. Jennings, P. E. 26130	One River Point Subdivision	6/7/2002	N.A.	30.3122	-98.4237	Ellenburger-San Saba	Confined	423	0.53	63 - 423	4	24	121.16	Y	189	-4	-125.16		Assumed	1,615	0.0004		0.03		N. A.			Unknown aquifer thickness used for analysis
10	Blanco and Hays Counties	PW 2&3	The Wellspec Company and Bond Geological Services	Joe J. Vickers and Steve Bond PG 518	Shady Valley Subdivision changed to Silverado Estates, Phase 1, Units	8/10/2002	N.A.	30.2022	-98.2197	Middle Trinity (Hensell/Cow Creek)	Confined	450	0.42	360 - 450	40	24	1.83	Y	500	-254.7	-256.53	30	Assumed	14,650	0.004		21.9		N. A.		No, T. Hard 320, Ca 610, Mg 290, Na 72, SO4 2,200, Cl 66, F 1.9, TDS 3,000, pH 6.9	Estimated monitor well distance

Report #	County	Pump Well ID	Consultant(s)	Certified By	Developer	Pump Test Date	Alternate Location	Lat	Long	Aquifer	Aquifer Type	Pump Well depth	Screen Diam. ft.	Open Interval ft.	Pump Rate gpm	Pump Period hrs	Max-Drawdown ft.	Mon. Well	Dist from pump well ft.	Init. WL ft bgs	Final WL ft bgs	Aquif Thick ft.	Fully Penetrated	T gpd/ft	S	K gpd/ft^2	Spec Cap gpm/ft	Well Effic. (%)	Est. drawdown ft. bgs	Rec. Well Spac.	Chemical Analyses	Comments
10.1	Blanco and Hays Counties	PW-4	The Wellspec Company and Bond Geological Services	Joe J. Vickers and Steve Bond PG 518	Shady Valley Subdivision changed to Silverado Estates, Phase 1	08/08/2002	N.A.	30.2144	-98.2269	Middle Trinity (Hensell/Cow Creek)	Confined	430	0.42	360 - 430	30	24	1.89	Y	700	-226.12	-228.01	30	Assumed	12,420	0.0001		15.9		3.5 feet decline at 4,000 feet from center of subdivision (pumping well, pumping 30 gpm after 30 years)		No, T. Hard 340, Ca 690, Mg 220, Na 67, SO4 2,100, Cl 58, F 1.9, TDS 3,000, pH 6.8	Estimated monitor well distance
11	Comal	PW	Bond Geological Services	Steve Bond PG 518	Summit Estates Subdivision	12/19/2002	N.A.	29.9786	-98.2640	Middle Trinity (Hensell/Cow Creek)	Confined	370			40	24	44.4	Y	203	-188.69	-233.1	65	Assumed	1,200	0.00001	138 to 2070	0.9		140 feet drawdown at the property boundary after 30 years	200 feet and 84 gpm	Yes, T. Hard 322, SO4 30, Cl 10, F 0.6, TDS 451, pH 7.0	Balcones Fault System southern end of property (160' of displacement)
12	Comal	PW	Bond Geological Services	Steve Bond PG 518	Bear Creek Hills, Lot 28, Subdivision	8/26/2004	N.A.	29.7656	-98.2275	Middle Trinity (Hensell/Cow Creek)	Confined	600	0.32	510 - 562	6.1	24	170	Y	670	-366.86	-537.01	200	Assumed	40	0.00001	0.2	0.04		18.7 feet drawdown at the property boundary after 30 years		Yes, T. Hard 260, SO4 29, Cl 7, F 1.6, TDS 291, pH 7.7	Balcones Fault System near observation well, 10s of feet displacement
13	Hays	Dunn TW-1	Daniel B. Stephens & Associates	Billy Gamblin PE 82640	Faith Ranch	8/24/2005	N.A.	30.1008	-98.1983	Middle Trinity (Hensell/Cow Creek)	Confined	550	0.38	490 - 550	11.6	24	93	Y	390	-387.2	-480.2	30	Assumed	1,035	0.00004	34.4	0.12	42	11.2 feet drawdown at the property boundary after 30 years	300 feet at 11 gpm	Yes, T. Hard 381, SO4 104, Cl 25, F 0.7, TDS 468, pH 7.3	
14	Bell	Salado 1	LBG-Guyton & Associates	Bill Stein AIPG 10441	Hidden Springs at Salado Creek Development	5/18/2001	N.A.	30.9181	-97.6133	Middle Trinity (Hensell Sand)	Confined	820	0.38	760 - 820	30	26.1	36	Y	105	-243.7		20	Assumed	2,230	0.000046	103	0.8		11.2 feet drawdown at the property boundary after 30 years	150 feet	Yes, T. Hard 63, Ca 12, Mg 8, Na 225, SO4 134, Cl 120, F 2.3, TDS 722, pH 7.6	
14.1	Bell	Salado 3	LBG-Guyton & Associates	Bill Stein AIPG 10441	Hidden Springs at Salado Creek Development	05/24/2001	N.A.	30.9381	-97.5828	Middle Trinity (Hensell Sand)	Confined	860	0.38	800 - 860	30	24	28	Y	205	-188.57		20	Assumed	2,050	0.000041	112	1.1		0.5 gpm/well, 17 feet drawdown at the property boundary after 30 years	150 feet	Yes, T. Hard 66, Ca 11, Mg 8, Na 276, SO4 243, Cl 143, F 2.5, TDS 972, pH 7.7	Additional water quality study conducted during 2003
15	Bell	Well 1	Temple Civil Engineering Company	Carl B. Pearson, PE, Susan Worth	Heritage Subdivision	7/21/2003	N.A.	30.9747	-97.4892	Edwards Aquifer	Unconfined?	218	0.38	138 - 218	17	72	27.5	Y	116	-81.1	-108.5	60					0.62		N. A.		Yes, T. Hard 80, SO4 351, Cl 282, F 5.1, TDS 1,380, pH 8.3	No pump test analysis or data
15.1	Bell	Well 2	Temple Civil Engineering Company	Carl B. Pearson, PE, Susan Worth	Heritage Subdivision	7/21/2003	N.A.	30.9744	-97.4886	Edwards Aquifer	Unconfined?	218	0.38	138 - 218	17	72	14.2	Y	116	-83.1	-97.3	135					1.2		N. A.			No pump test analysis or data
16	Bell	Well 1	Kleinfelder	H. L. Fleischhauer, PG 4496	Iduma Trail Subdivision	9/8/2004	N.A.	30.9447	-97.7992	Middle Trinity (Hosston-Sycamore, Hensell Sand)	Confined	537	0.33	480 - 520	11.5	24	101.8	Y	112	-332		40	Did not fully penetrate	112	0.000035	2.6	0.11	76	0.5 gpm/well, 29 feet drawdown at the property boundary after 30 years	100 feet at 1 gpm	Yes, T. Hard 32, SO4 153, Cl 142, F 4.79, TDS 840, pH 8.4	
17	Bell	#2	Bandas Engineering Company	John Hart Bandas, PE 86858	Eagle Creek of Salado	5/8/2004	N.A.	30.9743	-97.5011	Edwards Aquifer	Unconfined?	180	0.38	100 - 180	15	35.8	9.4	Y	110	-84		80	Assumed	352	0.000018		1.6		15 gpm, 15.6 feet drawdown at 500' from the property boundary after 30 years		Yes, T. Hard 159, SO4 156, Cl 109, F 4.66, TDS 758, pH 7.9	
18	Bandera	900' New Well	Strata Geological Services Inc.	William Feathergail Wilson, PG 21	900' Well, Lake Media Shores	1/28/2001	N.A.	29.6353	-98.9856	Sligo and Hosston	Confined	900	0.66	613 - 900	162	36	363	N		-66	-429	279	Assumed	65	0.0045		0.45		N. A.		Unknown, Field measurements of TDS 450 to 500	
19	Johnson (not a GwAS county)	Well #2 (replace-ment)	Collier Consulting Inc	Lynn Smith and Dr. Hughbert Collier	Cleburne State Park	8/17/2000	State Well Grid 32-44-8			Paluxy Formation	Confined	210	0.33	150 - 190	13	36	10.4	N		-156.2		46	Assumed				1.25		N. A.		Yes, T. Hard 290, Ca 11, Mg 3, Na 142, SO4 24, Cl 14, TDS 378, pH 8.3	Not a GwAS county, Very poor pump test results, unable to interpret data
20	Bandera	City of Bandera	Pyle & Klein Consulting Engineers	Unknown	City of Bandera	10/21/1998	State Well Grid 69-24-2, north-central			Trinity?	Confined	770	0.66	610 - 710	280	22	64.69	N		-493	-557.69						4.3		N. A.		Yes, T. Hard 490, Ca 105, Mg 58, Na 107, SO4 30, Cl 270, F 1.8, TDS 940, pH 6.7	No pump test analysis
21	Kendall	Kreutzberg	LBG-Guyton & Associates	Bill Stein AIPG 10441	Cordillera West	7/22/1999	N.A.	29.87	-98.6547	Middle Trinity (Hensell/Cow Creek)	Confined	325	0.5	233 - 325	4.5	24	65	Y	51	-176	-241	80	Assumed	228	0.00026		0.07		N. A.	max. 10 gpm	Yes, T. Hard 316, Ca 55, Mg 44, SO4 98, Cl 27, F 2.0, pH 7.2	
21.1	Kendall	Horseshoe Bend	LBG-Guyton & Associates	Bill Stein AIPG 10441	Cordillera West	7/27/1999	N.A.	29.8697	-98.6469	Middle Trinity (Hensell/Cow Creek)	Confined	330	0.5	230 - 330	5	24	115	Y	56	-174	-289	80	Assumed	75	0.00024		0.04		N. A.	max. 10 gpm	pH 7.2	Pump test results labeled wrong in Table on page 11

Appendix D
County Subdivision Groundwater Availability Studies
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Report #	County	Pump Well ID	Consultant(s)	Certified By	Developer	Pump Test Date	Alternate Location	Lat	Long	Aquifer	Aquifer Type	Pump Well depth	Screen Diam. ft.	Open Interval ft.	Pump Rate gpm	Pump Period hrs	Max-Drawdown ft.	Mon. Well	Dist from pump well ft.	Init. WL ft bgs	Final WL ft bgs	Aquif Thick ft.	Fully Penetrated	T gpd/ft	S	K gpd/ft^2	Spec Cap gpm/ft	Well Effic. (%)	Est. drawdown ft. bgs	Rec. Well Spac.	Chemical Analyses	Comments
21.2	Kendall	Gas Line (Telephone Bldg)	LBG-Guyton & Associates	Bill Stein AIPG 10441	Cordillera West	7/24/1999	N.A.	29.8661	-98.6394	Middle Trinity (Hensell/Cow Creek)	Confined	292	0.5	200 - 292	4.4	24	13	Y	58	-147	-160	80	Assumed	378	0.00032		0.23		N. A.	max. 10 gpm	Yes, T. Hard 340, Ca 59, Mg 47, SO4 163, Cl 33, F 2.6, pH 7.2	Pump test results labeled wrong in Table on page 11
22	Travis	Well 1 Location Well 2# pumping	GEOS Consulting	John Mikels, AIPG 7445	Saint Andrews High School, Well #2 Pump Test, Austin, Tx	6/10/2001	N.A.	30.2469	-97.8531	Middle Trinity (Hensell/Cow Creek)	Confined	960			36.9	24.7	245.82	Y	176	-260.88	-506.7		Assumed	130	0.00038		0.15		15.2 gpm, 13 feet drawdown at 5,000' from pumping wells 1 and 2 after 20 years		No, T. Hard 2,018, Ca 470, Mg 205, Na 22, SO4 1,570, Cl 19, F 2.7, TDS 2,740, pH 7.1	Confusing analysis, near Mt. Bonnell Fault (few hundred feet)
23	Hays	RMR Testwell	GEOS Consulting	John Mikels, AIPG 7445	River Mountain Ranch, Section 6, Phase 2	7/5/2001	N.A.	30.0101	-98.0111	Middle and Upper Trinity	Confined	1,030	0.66	185 - 1,025	100	31.8	72.72	Y	1,200	-307.75	-380.47		Assumed	200	0.000012		1.38		N. A.		Yes, T. Hard 470, SO4 185, Cl 37, F 1.4, TDS 684, pH 7.3	Monitor Well 95% of pumping well, Very slow recovery, fracture controlled
24	Kerr (not a GwAS county)	Well #1	Strata Geological Services Inc.	William Feathergail Wilson, PG 21	Turtle Creek Area	6/25/2001	N.A.	29.9514	-99.0899	Lower Glen Rose and Hensel Sand	Confined	282	0.33	261 - 282	10.3	6.6	9.97	N		-169.6	-179.57	18	Partially penetrated	1,175	0.055	65	1.0		N. A.		Yes, T. Hard 438, SO4 159 Cl 21, F 1.7, TDS 600, pH 7.3	Not a GwAS county, Short pump test with no monitor wells, WLs rise during pump test?
24.1	Kerr (not a GwAS county)	Well #2	Strata Geological Services Inc.	William Feathergail Wilson, PG 21	Turtle Creek Area	6/26/2001	N.A.	29.9463	-99.0910	Lower Glen Rose and Hensel Sand	Confined	362	0.5	299 - 362	13.2	6.6	11.17	N		-204.14	-215.31	61	Assumed	114	0.000189	1.9	1.2		N. A.		Yes, T. ard 424, SO4 158 Cl 10, F 0.6, TDS 592, pH 7.3	Not a GwAS county, Short pump test with no monitor wells, WLs rise during pump test?
25	Bandera	Well Set #2	Strata Geological Services Inc.	William Feathergail Wilson, PG 21	Medina Springs Subdivision	11/19/2002	N.A.	29.8167	-99.2716	Hensell Sand and Cow Creek Limestone	Confined	460		426 - 460	14.2	24	112.87	Y	100	-98.64	-211.52	45	Assumed	87	0.00014	1.9	0.125	50	20 feet drawdown at subdivision boundary after 20 years	10 gpm at 1,000 ft spacing	Yes, T. Hard 470, SO4 400, Cl 10, F 1.2, TDS 694, pH 7.2	No information on monitor wells results
25.1	Bandera	Well Set #4	Strata Geological Services Inc.	William Feathergail Wilson, PG 21	Medina Springs Subdivision	11/27/2002	N.A.	29.8161	-99.2808	Hensell Sand and Cow Creek Limestone	Confined	555		491 - 555	10.8	24	155.22	Y	100	-173.4	-205.4	155	Assumed	53	0.00018	0.9	0.07	50	20 feet drawdown at subdivision boundary after 20 years	10 gpm at 1,000 ft spacing	No, T. Hard 280, Ca 33, Mg 230, Na 41, SO4 780, Cl 69, F 3.7, TDS 1,600, pH 7.1	No information on monitor wells results
26	Hays	Well #1	The Wellspec Company and Bond Geological Services	Joe J. Vickers and Steve Bond PG 518	Heather Hills Subdivision	2/11/2001	N.A.	30.2602	-98.1079	Sligo and Hosston Formations	Confined	780	0.38	660 - 760	7.3	24	173.84	Y	530	-317.01	-490.85	300	Assumed	120	0.0003	1.5	0.04		4.7 gpm, drawdown of 27 feet at 4,000 feet from center of subdivision		No, T. Hard 1,946, Ca 400, Mg 230, Na 69 SO4 1,500, Cl 78, F 2.8, TDS 2,800, pH 7.4	
27	Hays	Pumping Well	The Wellspec Company and Bond Geological Services	Joe J. Vickers and Steve Bond PG 518	Valley Verde Subdivision	8/22/2000	N.A.	30.1968	-98.2169	Hensell Sand and Cow Creek Limestone	Confined	455	0.42	360 - 455	30	28	5.06	Y	600	-317.3	-322.36	100	Assumed	2,200	0.008	20.9	5.9		0.3 gpm/well, Drawdown of 1 foot at 2,000 feet beyond boundary of subdivision after 20 years		No, T. Hard 260, Ca 370, Mg 220, Na 51, SO4 1,500, Cl 44, F 1.9, TDS 2,500, pH 7.2	
28	Hays	Pumping Well	The Wellspec Company and Bond Geological Services	Joe J. Vickers and Steve Bond PG 518	Westridge Subdivision	3/17/2000	State Well Grid 57-47-9			Cow Creek Limestone	Confined	440	0.38	340 - 390	30	24	48.02	Y	400	-262.52	-310.54	50	Assumed	1,336	0.015	15	0.63		0.3 gpm/well, drawdown of 5 feet at 2,000 feet from center of subdivision after 20 years		Yes, T. Hard 316, SO4 15, Cl 12, F 0.2, TDS 392, pH 7.6	Intense thunderstorm during first 4 hrs of test
29	Bandera	Well 2 (pair, #1)	Chapman Engineering	Calvin C. Chapman, P.E 81268	Mason Creek Vist Subdivision	1/30/2001	N.A.	29.7772	-99.0310	Lower Glen Rose and/or Cow Creek Limestone	Confined	480	0.5		16	18	88.4	Y	100	-40		60	Assumed	8,370	0.00319	110.7	0.18	28	N. A.		Yes, T. Hard 293, SO4 60, Cl 32, F 0.7, TDS 456, pH 7.1	Total demand and Specific Capacity are calculated wrong. Missing pump converted data, estimated monitor well distance
30	Bandera	WW#2	Chapman Engineering	Calvin C. Chapman, P.E 81268	Water Well 1 and 2 Merritt Subdivision, Pipe Creek	5/25/1999	N.A.	29.7006	-98.9554	Hensell Sand and Cow Creek Limestone	Confined	460	0.38	360 - 460	17.7	3.5	10.14	N		-133.15	-143.29	50	Assumed	17	0.00015	0.3	1.7		N. A.		Yes, T. Hard 276, SO4 56, Cl 36, F 0.6, TDS 478, pH 7.0	Short pump test, no monitor well,
30.1	Bandera	WW#1	Chapman Engineering	Calvin C. Chapman, P.E 81268	Water Well 1 and 2 Merritt Subdivision, Pipe Creek	5/24/1999	N.A.	29.6998	-98.9503	Hensell Sand and Cow Creek Limestone	Confined	440	0.38	360 - 440	18.9	3.5	14.59	N		-145.21	-159.8	50	Assumed	26	0.00015	0.3	1.3		N. A.		No, T. Hard 1,378, SO4 799, Cl 45, F 4.0, TDS 1,300?, pH 6.9	Short pump test, no monitor well
31	Bandera	Well #2	Strata Geological Services	William Feathergail Wilson, CPG #3566	Bear Springs Trails, Section 1	3/9/2000	N.A.	29.7378	-98.9361	Hensell Sand and Cow Creek Limestone	Confined	540	0.38		32	5.1	74.02	N		-228.01	-302.03	25	Assumed	352	0.00035	14	0.4		N. A.		N.A.	Short Pump Test, no monitor well
32	Bandera		Environmental Fuel Systems, Inc (combined with # 21)	William Feathergail Wilson, CPG #3566	Madrona Ridge Subdivision	3/12/1998	N.A.	29.6551	-99.0157	Glen Rose	Confined	505	0.38	145 - 505	14.2	4	38.8	N		-248.25	-287.05	230	Assumed	106	0.149	0.5	0.37		N. A.		N.A.	Missing pump WL converted data, short pump test, no monitor well

Appendix D
County Subdivision Groundwater Availability Studies
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Report #	County	Pump Well ID	Consultant(s)	Certified By	Developer	Pump Test Date	Alternate Location	Lat	Long	Aquifer	Aquifer Type	Pump Well depth	Screen Diam. ft.	Open Interval ft.	Pump Rate gpm	Pump Period hrs	Max-Drawdown ft.	Mon. Well	Dist from pump well ft.	Init. WL ft bgs	Final WL ft bgs	Aquif Thick ft.	Fully Penetrated	T gpd/ft	S	K gpd/ft^2	Spec Cap gpm/ft	Well Effic. (%)	Est. drawdown ft. bgs	Rec. Well Spac.	Chemical Analyses	Comments
33	Kinney (not a GwAS county)	Well #1	URS/Dames and Moore	Unknown, (G. L. Snyder, URS?)	Bitters Farm (Dooley Estate, Irrigation wells 2 and 3)	3/30/2001	N.A.	29.3786	-100.4631	Edwards Aquifer, Salmon Peak, McKnight and West Nueces	Confined	1,112	0.71	360 - 1,112	1,860	36		Y	2,840	14.0		700	Assumed	279,100	0.000016	449			N. A.		No, T. Hard 213, Mg 206, Na 184, SO4 1,550, Cl 179,F 2.9, TDS 2,890, pH 7.3	Not a GwAS county, Wells are artesian, 14' above surface, no pump test raw data
34	Hays	Test Well #1	LBG-Guyton & Associates	Bill Stein, 10441 AIPG	Bridlewood Ranches Development	3/5/2003	N.A.	29.8956	-98.0595	Glen Rose and Cow Creek Limestone	Confined	1,100	0.42	400 - 420, 1,060 - 1,100	29	24	0.75	Y	238	-297.84	-298.59	100	Assumed	6,600	0.0001	66	38.5		Drawdown of 23 feet at 1,000 feet from the perimeter of subdivision after ?? years		No, T. Hard 320, Ca 450, Mg 85, Na 10, SO4 1,300, Cl 20, F 2.4, TDS 2,000, pH 6.8	No raw pump test data.
35	Hays	PW2	The Wellspec Company and Bond Geological Services	Joe J. Vickers PG 1543 and Steve Bond PG 518	Woodlands Estates II	4/11/2000	State Well Grid 57-39-6			Hensell Sand and Cow Creek Limestone	Confined	410	0.5	20 - 410	35	24	1.36	Y	800	-170	-171.36	40	Assumed	9,600	0.034		25		Drawdown of 1.5 feet (162 gpm) at 3,000 feet from the pumping well after 10 years		No, T. Hard 207, Ca 132, Mg 97, Na 257, SO4 904, Cl 145, F 0.9, TDS 1,610, pH 7.6	No well locations or raw pump data
36	Hays	PW-1	The Wellspec Company and Bond Geological Services	Joe J. Vickers and Steve Bond PG 518	Frontera Subdivision	11/12/2004	N.A.	30.2536	-98.0346	Lower Trinity	Confined	770	0.42	695 - 755	11	24	20.11	Y	660	-509.98	-530.09	200	Partially penetrated	2,000	0.001	20	0.55		3.1 gpm/well, Drawdown of 1 foot at 6,000 feet from the perimeter of subdivision after 30 years		Yes, T. Hard 511, Ca 90, Mg 70, Na 16, SO4 222, Cl 13, F 2.5, TDS 795, pH 7.1	
37	Hays	No. 2 Well	GEOS Consulting	John Mikels, AIPG 7445	Sierra West, Sec 2A	5/13/2000	N.A.	30.0597	-97.9960	Hensell Sand and Cow Creek Limestone	Confined	940	0.83	105 - 930	229	25	236.4	Y	750	-217.18	-453.58	70	Assumed	2,800	0.000025	43	0.97		Drawdown of 60 feet (162 gpm) at 5,280 feet from the pumping well after 20 years		Yes, T. Hard 422, Ca 60, Mg 66, Na 27, SO4 142, Cl 10, F 3.6, TDS 620	
38	Hays	PW-1	The Wellspec Company and Banks and Associates	Joe J. Vickers and Erin Banks PE 84248	High View Ranch	4/25/2003	N.A.	30.0846	-98.0872	Middle Trinity, Cow Creek	Confined	560	0.42	60 - 560	12.7	24	19.62	Y	750	-388.73	-408.35	40	Partially penetrated	525	7.34E-05		0.65		Maximum drawdown of 6 feet (at 3 gpm) at lots 5 and 7 after 30 years		Yes, T. Hard 619, Ca 118, Mg 79, Na 27, SO4 156, Cl 10, F 2.9, TDS 611	
39	Hays	PW-1	Banks and Associates	Erin Banks PE 84248	Kelly's Country Subdivision	10/13/2004	N.A.	30.0689	-98.0923	Middle Trinity, Cow Creek	Confined	460	0.42	260 - 460	12.5	23.5	41.73	Y	500	-327.02	-368.75	135	Assumed	355	1.86E-05		0.3		Drawdown of 46.5 feet (1.2 gpm) at southern subdivision boundary after 30 years		Yes, T. Hard 372, Ca 76, Mg 44, Na 17, SO4 69, Cl 18, F 0.6, TDS 494, pH 7.7	
40	Hays	New Well	GEOS Consulting	John Mikels, AIPG 7445	Mt. Sharp Ranch	2/6/2000	N.A.	30.0943	-98.1737	Lower Trinity, Hosston	Confined	430	0.42	380 - 430	34	24.6	5.6	Y	660	-300.65	-306.3	100	Partially penetrated	4,000	0.00007		6.1		Drawdown of 2.2 feet (0.3 gpm/well) at 2,000 ' past property boundary after 20 years		No, T. Hard 490, Ca 250, Mg 170, Na 13, SO4 730, Cl 26, F 3.3, TDS 2,100, pH 6.9	
41	Hays	PW-1/ Well 5	Banks and Associates	Erin Banks, PE 84248	Goldenview Estates Subdivision	4/13/2001	N.A.	30.1463	-97.9715	Middle Trinity, Cow Creek	Confined	650	0.42	560 - 650	14	24	36.85	Y	463	-231.18	-268.03	40	Assumed	972	0.005				Drawdown of 2.9 feet (0.3 gpm/well, at subdivision Lots 6 and 7 boundary after 10 years		Yes, T. Hard 749, Ca 136, Mg 100, Na 48, SO4 500, Cl 48, F 2.6, TDS 854, pH 7.1	No scale on maps
42	Hays	PW-1	Banks and Associates	Erin Banks, PE 84248	Homestead at Gatlin Creek	5/3/2003	N.A.	30.1316	-98.1399	Middle Trinity, Cow Creek	Confined	500	0.48	288 - 447	20	24	4.94	Y	538	-251.79	-256.73	60	Assumed	3,000	1.03E-05		4.1		Drawdown of 1.7 feet (0.3 gpm/well, at subdivision boundary Lot 3a after 30 years		No, T. Hard 292, Ca 331, Mg 211, Na 75, SO4 1,380, Cl 59, TDS 2,000	Drawdown higher in observation well, possibly local pumping
43	Hays	PW-1	The Wellspec Company and Bond Geological Services	Joe J. Vickers and Steve Bond PG 518	Walking W Ranch Subdivision	3/14/2003	N.A.	30.2888	-98.0962	Middle Trinity, Hensell and Cow Creek	Confined	590	0.42	480 - 580	13	24.3	12.96	Y	620	-450.46	-463.42	75	Assumed	2,300	0.00005	31	1		Drawdown of 10.5 feet (20 gpm) at 4,000' from center of subdivision after 30 years		Yes, T. Hard 490, Ca 82, Mg 76, Na 27, SO4 169, Cl 20, F 3.4, TDS 565	
44	Hays	No. 1 Well	GEOS Consulting	John Mikels, AIPG 7445	Running Rope No. 1 Test Well	10/13/1999	N.A.	30.0523	-97.9952	Upper Trinity Aquifer	Confined	460	0.5	40 - 460	30	28.8	53.7	Y	508	-137.3	-191	20	Assumed	231	0.000013		0.56		Drawdown of 33 feet (3.5 gpm) at 5,000 feet from pumping well after 20 years		No, T. Hard 1,033, Ca 196, Mg 132, Na 15, SO4 1,175, Cl 19, F 2.8, TDS 1,713	Pump test results indicated possible local faulting, 500 ft throw.
45	Hays	PW-1	Banks and Associates	Erin Banks, PE 84248	Cielo Ranch Subdivision	10/22/2004	N.A.	29.9253	-98.1198	Middle Trinity, Cow Creek	Confined	860	0.42	840 - 860	9	22.5	103.35	Y		-467.55	-570.9	120	Assumed	225	0.00001		0.09		Drawdown of 15.6 feet at (3.75 gpm) at 2,000 feet from pumping well after 30 years (revised)		Yes, T. Hard 325, Ca 53, Mg 47, Na 21, SO4 156, Cl 10, F 3.4, TDS 664	Erratic monitor well response to pump test, 200' difference in static water levels

Report #	County	Pump Well ID	Consultant(s)	Certified By	Developer	Pump Test Date	Alternate Location	Lat	Long	Aquifer	Aquifer Type	Pump Well depth	Screen Diam. ft.	Open Interval ft.	Pump Rate gpm	Pump Period hrs	Max-Drawdown ft.	Mon. Well	Dist from pump well ft.	Init. WL ft bgs	Final WL ft bgs	Aquif Thick ft.	Fully Penetrated	T gpd/ft	S	K gpd/ft^2	Spec Cap gpm/ft	Well Effic. (%)	Est. drawdown ft. bgs	Rec. Well Spac.	Chemical Analyses	Comments
46	Hays	P, Lot 23	Marshall E. Jennings	Marshall E. Jennings, PE 26130	The Vineyard Subdivision	6/1/2005	N.A.	30.1071	-98.0811	Middle Trinity, Lower Glen Rose, Hensell and Cow Creek	Semi-confined	460	0.38	390 - 450	35	24	67.29	Y	668	-228.78	-296.07	20	Assumed	970	0.00002		0.52		Drawdown of 19.0 feet at (0.25 gpm/well, no recharge) at 2,000 feet from pumping well after 10 years	Drill wells to a depth of 450 ft.	Yes, T. Hard 168, Ca 34, Mg 20, Na 17, SO4 21, Cl 10, F 0.9, TDS 304, pH 7.1	Possible recharge boundary, Gatlin Creek 2,500 feet, 1 to 2 inches of rain during test
47	Hays	Well 3	Premier Hydro	Scott Courtney, PG 6413	Las Misiones Hill Country Estates	5/25/2005	N.A.	29.9865	-98.1610	Middle Trinity, Lower Glen Rose, Hensell and Cow Creek	Confined	450	0.33	100 - 450	61.2	24		Y	320	-58.5		340	Assumed	12,700	0.00095	32.2			Drawdown of 0.5 feet at 24 gpm at 5,000 feet from pumping well after 30 years		Yes, T. Hard 322, SO4 47, Cl 12, F 1.3, TDS 343, pH 7.1	Leaking packer suspected 240 min into pump test, no raw pump test data
48	Hays	TW-1	Daniel B. Stephens & Associates	Billy Gamblin, PE 82640	The Oaks at Gatlin Creek	2/2/2005	N.A.	30.1216	98.0980	Middle Trinity, Travis Peak Hensell	Confined	400	0.38	360 - 400	14	24	10.96	Y	600	-142		40	Assumed	3,600	0.00025	90.5	1.28	85	Drawdown of 1.3 feet at (0.42 gpm/well) at property boundary after 30 years	300 feet at 14 gpm		
49	Guadalupe	Observ. Well	Southwest Engineers	Kaveh Khorzad	Crystal Clear WSC		Observation Well coordinates	29.6525	-97.8286	Wilcox	confined					1.1	64.33	Y		117.33		141	Assumed	1,160	9.08E-10				N. A.			Partial report received
50	Bandera	Holiday #1	Strata Geological Services	William Feathergail Wilson, CPG #3566	Tecon, Public Water well	1/28/2001	N.A.	29.6353	-98.9856	Hosston	confined				162	36		N				279	Assumed	655	0.0045	2.3			N. A.			
51	Gillispie	CWR-2A	Strata Geological Services	William Feathergail Wilson, CPG #3566	Cool Water Ranch - 2	4/9/2005	N.A.	30.3125	-98.7550	Hensel	confined			60	9.7	12		Y	150			197	Assumed	111	0.041	0.6			N. A.			No drawdown in monitor well, pumping well in isolated channel facies
52	Gillispie	Well 1	Strata Geological Services	William Feathergail Wilson, CPG #3566	The Vineyard	7/26/2005	N.A.	30.2800	-98.8942	Hensel	confined				21.3	12	0.5	Y	150			80	Assumed	10,850	0.00784	136.1			N. A.			e-line collected data after transducer failed, 12 hour pump test, personal communication
53	Kendall	West #5	LBG-Guyton & Associates	Bill Stein AIPG 10441	KWW West	12/20/1999	N.A.	29.8661	-98.5664	Middle Trinity, Cow Creek	confined	252	0.33	185 - 252	5	24	12	Y	53	-131	-143	60	Assumed	307	0.00011		0.4		N. A.	10 gpm/well	Chemical data missing from copy of report, pH 7.1	Very detailed analyses of pumping scenarios
53.1	Kendall	West #6	LBG-Guyton & Associates	Bill Stein AIPG 10441	KWW West	12/27/1999	N.A.	29.8669	-98.5906	Middle Trinity, Cow Creek	confined	252	0.33	185 - 252	7	24	30	Y	49	-137	-167	60	Assumed	310	0.00018		0.2		N. A.	10 gpm/well	Chemical data missing from copy of report, pH 7.3	Very detailed analyses of pumping scenarios
53.2	Kendall	West #9	LBG-Guyton & Associates	Bill Stein AIPG 10441	KWW West	2/1/2000	N.A.	29.8742	-98.5933	Middle Trinity, Cow Creek	confined	252	0.33	185 - 252	7	24	19	Y	51	-145	-164	60	Assumed	295	0.0021		0.4		N. A.	10 gpm/well	Chemical data missing from copy of report, pH 7.2	Very detailed analyses of pumping scenarios
54	Kendall	Waterstone #1	LBG-Guyton & Associates	Bill Stein AIPG 10441	Waterstone Development	6/15/2000	N.A.	29.8961	-98.5372	Lower Trinity, Hosston Sand	confined	480	0.42	240 - 280	24	24	60	Y	265	-84	-144	300	Assumed	1,060			0.4		N. A.	10 gpm/well	Chemical data missing from copy of report, pH 7.2, Spec. Cond. 1,930	Very detailed analyses of pumping scenarios
54.1	Kendall	Waterstone #2	LBG-Guyton & Associates	Bill Stein AIPG 10441	Waterstone Development	10/19/2000	N.A.	29.8858	-98.5547	Middle Trinity, Cow Creek	confined	452	0.42	300 - 452	10	24	6	Y	51	-78.5	-84.5	60	Assumed	5,280			1.7		N. A.	10 gpm/well	Chemical data missing from copy of report, pH 7.5, Spec. Cond. 1,780	Very detailed analyses of pumping scenarios
54.2	Kendall	Waterstone #3	LBG-Guyton & Associates	Bill Stein AIPG 10441	Waterstone Development	5/23/2000	N.A.	29.9028	-98.5547	Lower Trinity, Hosston Sand	confined	500	0.42	415 - 500	42	24	210	Y	49	-80	-290	300	Assumed	410	0.00025		0.2		N. A.	10 gpm/well	Chemical data missing from copy of report, pH 7.2, Spec. Cond. 2,360	Very detailed analyses of pumping scenarios