### **Texas Commission on Environmental Quality**

# **Edwards Aquifer Application Cover Page**

#### **Our Review of Your Application**

The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with 30 TAC 213.

#### **Administrative Review**

- Edwards Aquifer applications must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.
  - To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: <a href="http://www.tceq.texas.gov/field/eapp">http://www.tceq.texas.gov/field/eapp</a>.
- 2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.
- 3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.
- 4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.
  - An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.
- 5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.
- 6. If the geologic assessment was completed before October 1, 2004 and the site contains "possibly sensitive" features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

### **Technical Review**

- When an application is deemed administratively complete, the technical review period begins. The regional
  office will distribute copies of the application to the identified affected city, county, and groundwater
  conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days
  to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.
- 2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

- clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.
- 3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.
- 4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

### **Mid-Review Modifications**

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a "Mid-Review Modification". Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available:

- If the technical review has begun your application can be denied/withdrawn, your fees will be forfeited, and the plan will have to be resubmitted.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is denied/withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the affected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ's Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ's San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

| 1. Regulated Entity Name: CANAHAM RANCH       |                   |  |                            | 2. Regulated Entity No.: 102750809 |                            |                 |                                      |     |  |
|---|-------------------|--|----------------------------|------------------------------------|----------------------------|-----------------|--------------------------------------|-----|--|
| 3. Customer Name: CANHAM RAN                  |                   |  | NCH LTD                    |                                    | 4. Customer No.: 601401953 |                 |                                      | 953 |  |
| 5. Project Type:<br>(Please circle/check one) | New               |  | Modif                      | Modification Extension             |                            | nsion           | Exception X                          |     |  |
| 6. Plan Type:<br>(Please circle/check one)    |                   |  | Technical<br>Clarification | Optional Enhanced<br>Measures      |                            |                 |                                      |     |  |
| 7. Land Use:<br>(Please circle/check one)     | I Non-residential |  | itial                      | 8. Site (acres): 283               |                            | e (acres): 283  |                                      |     |  |
| 9. Application Fee:                           | \$500             |  | 10. Permanent l            |                                    | (5).                       |                 | N/A – 20% IMPERVIOUS COVER<br>WAIVER |     |  |
| 11. SCS (Linear Ft.):                         | N/A               |  | 12. AST/UST (No            |                                    |                            | o. Tar          | . Tanks): N/A                        |     |  |
| 13. County: COMAL 14. Watershed:              |                   |  | hed:                       |                                    |                            | GUADALUPE RIVER |                                      |     |  |

# **Application Distribution**

Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which cross into multiple jurisdictions, can require additional copies. Refer to the "Texas Groundwater Conservation Districts within the EAPP Boundaries" map found at:

http://www.tceq.texas.gov/assets/public/compliance/field\_ops/eapp/EAPP%20GWCD%20map.pdf

For more detailed boundaries, please contact the conservation district directly.

| Austin Region                           |  |   |  |  |
|---|--|---|--|--|
| County:                                 | Hays   | Travis  | Williamson   |  |
| Original (1 req.)                       | _  | _   |  |  |
| Region (1 req.)                         |  | _   | _  |  |
| County(ies)                             |  |   |  |  |
| Groundwater Conservation<br>District(s) | Edwards Aquifer AuthorityBarton Springs/ Edwards AquiferHays TrinityPlum Creek | Barton Springs/<br>Edwards Aquifer  | NA   |  |
| City(ies) Jurisdiction                  | AustinBudaDripping SpringsKyleMountain CitySan MarcosWimberleyWoodcreek        | AustinBee CavePflugervilleRollingwoodRound RockSunset ValleyWest Lake Hills | AustinCedar ParkFlorenceGeorgetownJerrellLeanderLiberty HillPflugervilleRound Rock |  |

| San Antonio Region                         |  |   |        |                              |               |
|--|--|---|--------|------------------------------|---------------|
| County:                                    | Bexar  | Comal   | Kinney | Medina                       | Uvalde        |
| Original (1 req.)                          |  | X   |        |                              |               |
| Region (1 req.)                            |  | X   |        |                              |               |
| County(ies)                                |  |   |        |                              |               |
| Groundwater<br>Conservation<br>District(s) | Edwards Aquifer<br>Authority<br>Trinity-Glen Rose  | Edwards Aquifer<br>Authority  | Kinney | EAA<br>Medina                | EAA<br>Uvalde |
| City(ies)<br>Jurisdiction                  | Castle HillsFair Oaks RanchHelotesHill Country VillageHollywood ParkSan Antonio (SAWS)Shavano Park | Bulverde<br>Fair Oaks Ranch<br>Garden Ridge<br>New Braunfels<br>Schertz | NA     | San<br>Antonio ETJ<br>(SAWS) | NA            |

| I certify that to the best of my knowledge, that the ap application is hereby submitted to TCEQ for adminis | plication is complete and accurate. This trative review and technical review. |
|---|---|
| MICHAEL F. LUCCI (AGENT)  |   |
| Print Name of Customer/Authorized Agent   | 11/20/22  |
| Signature of Customer/Authorized Agent  | Date  |

| **FOR TCEQ INTERNAL USE ONLY**                |                              |                          |  |  |
|---|------------------------------|--------------------------|--|--|
| Date(s)Reviewed:                              | Date Adı                     | ministratively Complete: |  |  |
| Received From:                                | Correct Number of Copies:    |                          |  |  |
| Received By:                                  | Distribu                     | tion Date:               |  |  |
| EAPP File Number:                             | Complex                      | K:                       |  |  |
| Admin, Review(s) (No.):                       | No. AR I                     | Rounds:                  |  |  |
| Delinquent Fees (Y/N):                        | Review Time Spent:           |                          |  |  |
| Lat./Long. Verified:                          | SOS Customer Verification:   |                          |  |  |
| Agent Authorization Complete/Notarized (Y/N): | Fee                          | Payable to TCEQ (Y/N):   |  |  |
| Core Data Form Complete (Y/N):                | Check:                       | Signed (Y/N):            |  |  |
| Core Data Form Incomplete Nos.:               | Less than 90 days old (Y/N): |                          |  |  |

# **General Information Form**

### **Texas Commission on Environmental Quality**

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

## Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **General Information Form** is hereby submitted for TCEQ review. The application was prepared by:

Print Name of Customer/Agent: MICHAEL F. LUCCI, PE (AGENT)

Date: 11/20/22

Signature of Customer/Agent:

# **Project Information**

| 1. | Regulated Entity Name: CANHAM RANCH                     |                                 |
|----|---|---------------------------------|
| 2. | County: COMAL   |                                 |
| 3. | Stream Basin: GUADALUPE RIVER                           |                                 |
| 4. | Groundwater Conservation District (If applicable):      | COMAL TRINITY GCD               |
| 5. | Edwards Aquifer Zone:                                   |                                 |
|    | Recharge Zone Transition Zone                           |                                 |
| 6. | Plan Type:  |                                 |
|    | <ul><li>WPAP</li><li>SCS</li><li>Modification</li></ul> | ☐ AST ☐ UST ⊠ Exception Request |

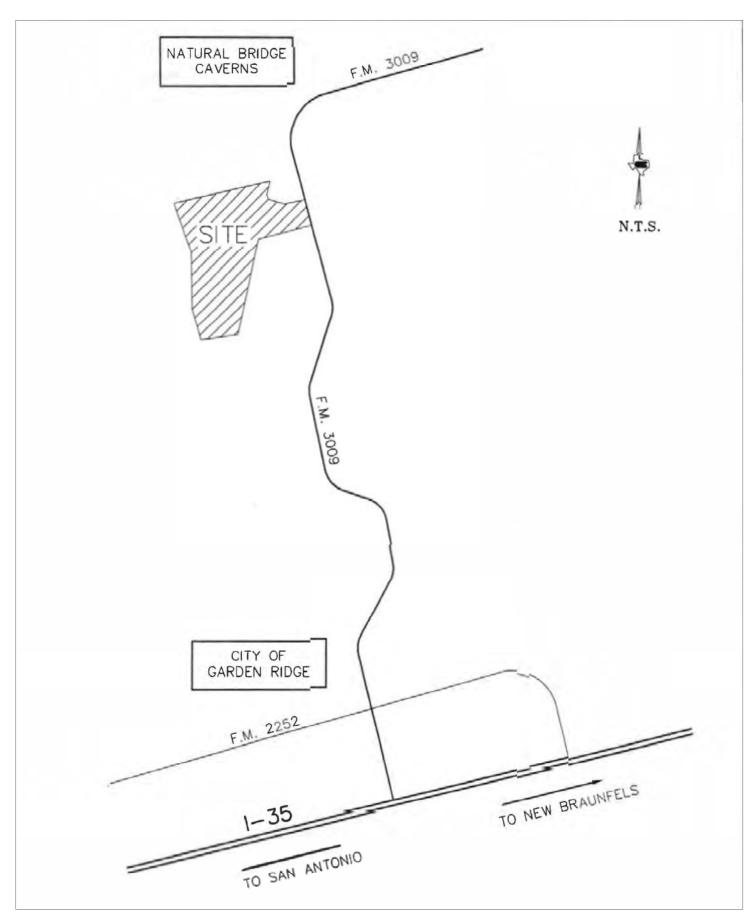
| 7.  | Customer (Applicant):  |
|-----|--|
|     | Contact Person: J.W. WOOD  Entity: CANHAM RANCH LTD.  Mailing Address: PO BOX 6799  City, State: HOUSTON, TX Zip: 77265  Telephone: 512-913-2338 FAX: N/A  Email Address: JWOOD@DELPHIWEST.COM   |
| 8.  | Agent/Representative (If any):   |
|     | Contact Person: MICHAEL F. LUCCI, PE Entity: MICHAEL F. LUCCI, PE, PLLC  Mailing Address: 24165 W INTERSTATE 10, STE 217-409  City, State: SAN ANTONIO, TX Zip: 78257  Telephone: 210-213-3462 FAX: N/A  Email Address: MIKELUCCI1@GMAIL.COM   |
| 9.  | Project Location:  |
|     | <ul> <li>☐ The project site is located inside the city limits of</li> <li>☐ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of <u>CITY OF SAN ANTONIO</u>.</li> <li>☐ The project site is not located within any city's limits or ETJ.</li> </ul>          |
| 10. | The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.   |
|     | TAKE 1-35 NORTH AND EXIT 3009. TURN NW ONTO 3009 AND CONTINUE 6.5 MILES TO GATE ON LEFT  |
| 11. | Attachment A – Road Map. A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.   |
| 12. | Attachment B - USGS / Edwards Recharge Zone Map. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:  |
|     | <ul> <li>☑ Project site boundaries.</li> <li>☑ USGS Quadrangle Name(s).</li> <li>☑ Boundaries of the Recharge Zone (and Transition Zone, if applicable).</li> <li>☑ Drainage path from the project site to the boundary of the Recharge Zone.</li> </ul>   |
| 13. | The TCEQ must be able to inspect the project site or the application will be returned. Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment. |

|           | Survey staking will be completed by this date: <u>N/A</u>   |
|-----------|---|
| r         | Attachment C – Project Description. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details: |
|           | Area of the site  Offsite areas Impervious cover Permanent BMP(s) Proposed site use Site history Previous development Area(s) to be demolished  |
| 15. Exist | ting project site conditions are noted below:   |
|           | Existing commercial site Existing industrial site Existing residential site Existing paved and/or unpaved roads Undeveloped (Cleared) Undeveloped (Undisturbed/Uncleared) Other:  |
| Proh      | ibited Activities   |
|           | am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:   |
| (         | (1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);  |
| (         | (2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;  |
| (         | (3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;   |
| (         | (4) The use of sewage holding tanks as parts of organized collection systems; and   |
| (         | (5) New municipal solid waste landfill facilities required to meet and comply with Type I<br>standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types<br>of Municipal Solid Waste Facilities).                        |
| (         | (6) New municipal and industrial wastewater discharges into or adjacent to water in the<br>state that would create additional pollutant loading.  |
|           | am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:   |
| (         | (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);  |

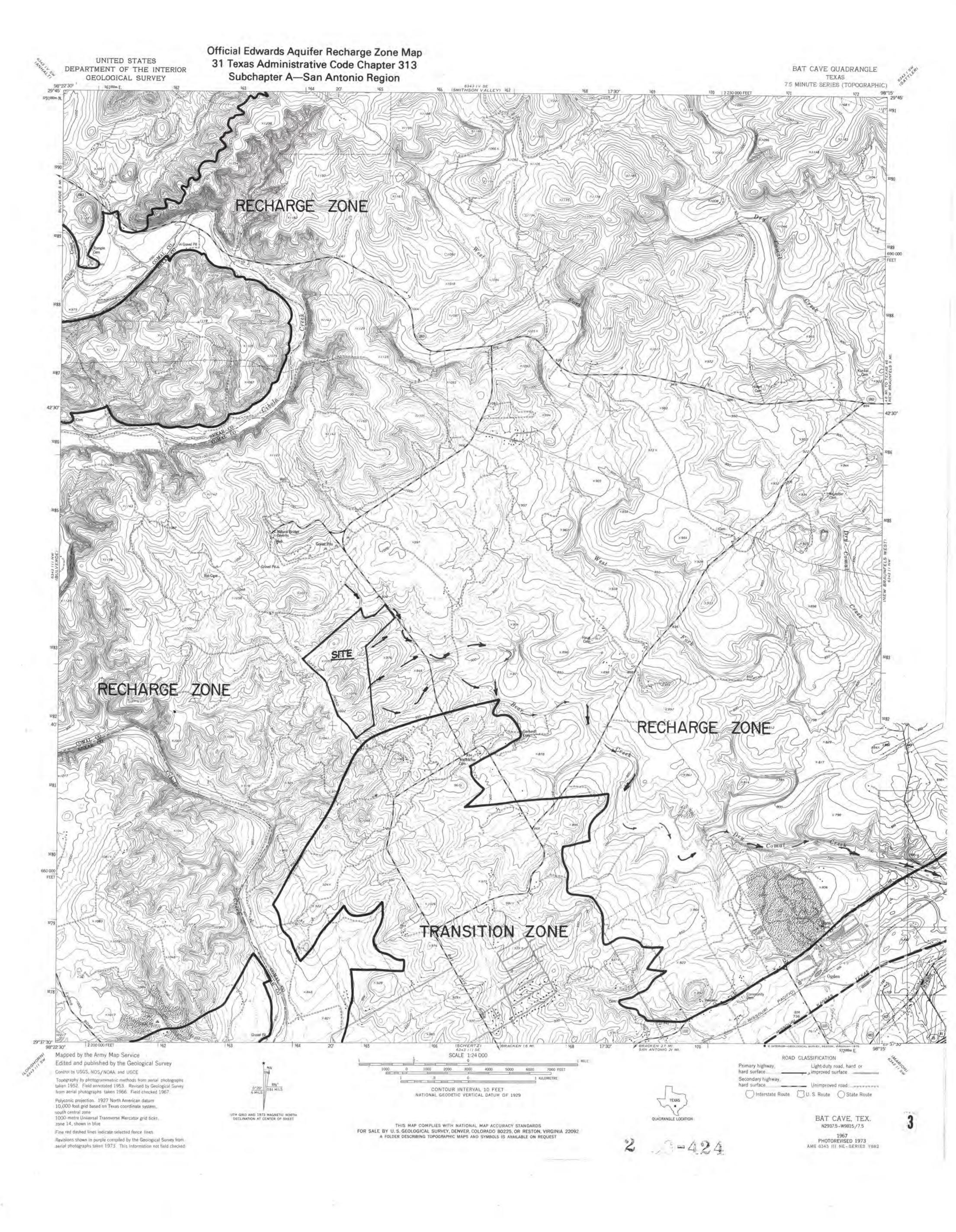
- (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and
- (3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

### Administrative Information

| 18. | The | e fee for the plan(s) is based on:   |
|-----|-----|--|
|     |     | For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.  For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.  For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.  A request for an exception to any substantive portion of the regulations related to the protection of water quality.  A request for an extension to a previously approved plan. |
| 19. |     | Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:   |
|     |     | <ul> <li>☐ TCEQ cashier</li> <li>☐ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)</li> <li>☐ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)</li> </ul>  |
| 20. |     | Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.   |
| 21. |     | No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.  |



LOCATION MAP ATTACHMENT A



Canham Ranch Exception Request

### **General Information Form**

# Attachment C Project Description

From the original WPAP: "Canham Ranch is located southeast of Natural Bridge Caverns on the west side of F.M. 3009. (See location map) Canham Ranch is approximately 283 acres of unimproved land, primarily composed of dense brush and trees, with grass and rock outcroppings. Bear Creek crosses through the front of the property and under F.M. 3009. A detailed flood study is being performed to determine the 100-year flood elevation. The proposed land use will be a 1.5 to 2.5 acre single-family residential subdivision with asphalt roads. The subdivision will have 130 lots with approximately 18,000 L.F. of roadway. The impervious cover will be approximately 8.48%. The total open space for the development will be approximately 85%. Each lot will have its own septic system with water supplied from a central water distribution system."

Lots 37 and 69 (Lot 68 in the WPAP) were originally designated for public water supply wells in the original WPAP. The WPAP Site Plan shows both of these wells as recharge features (25 & 26), and also notes a 150' easement around both wells. Additionally, the subdivision plat denotes both of these lots in their entirety as sanitary control and utility easements.

After WPAP and plat approval, it was found that neither of these locations were adequate for public water supply wells. Both wells were capped and these lots have been left vacant since platting in 2003. The Developer now wishes to remove the blanket sanitary control and utility easements for these two lots so that they may be sold and developed as single-family residences.

Preliminary conversation with Don Vandertulip, PE, TCEQ, outlined a plan to remove the recharge feature designation from these two wells on the WPAP. The removal of the blanket easements will be done by replatting both lots through Comal County.

However, in the course of this preliminary review, Mr. Vandertulip noted that the WPAP lot layout did not match the platted lot layout. As described in the attached email from Mr. Vandertulip as well as subsequent conversation, it was felt that the best way to rectify the lot layout discrepancies as well as removing the protected feature designations was via an exception request.

At the time of this decision (April 2022), the two wells in question had not been plugged. Since that time, both wells have been plugged to State standards and the plugging reports have been attached to the Exception Request section of this submittal.

Additionally noted in April by Mr. Vandertulip was that Standard Condition 11 in the WPAP Approval Letter called for the plugging of additional wells. In addition to the two wells discussed above, Mr. Vandertulip in his April 21, 2022 email (attached), identified three additional wells in question. It is believed that the two other test wells (features 27 & 30) were plugged prior. The fifth well, Feature 29, was sold with the lot and the Developer reports this well is currently being used for irrigation. Further discussion on the four plugged wells is provided in the Exception Request section of this report.

### mikelucci1@gmail.com

From: William Vandertulip <William.Vandertulip@Tceq.Texas.Gov>

Sent: Thursday, April 21, 2022 2:07 PM

**To:** mikelucci1@gmail.com

**Cc:** Monica Reyes

**Subject:** Canham Ranch Replat Alternatives

**Attachments:** 13-00062601 CANHAM RANCH WPAP.pdf; Canham Ranch Subdivision WPAP-Carter Burgess

09112000 Letter .pdf; CANHAMRANCH1.PDF; WPAP Site Plan.jpg; 213a.pdf; f-0628

\_recharge\_and\_transition\_zone\_exception\_request.docx

#### Mike:

There are now several options that your have mentioned. I reviewing the file, TCEQ discovered other issues that should also be corrected if changes are to be made.

A key to our thoughts in review of the file is that it appears that changes in the subdivision plan were made over the years without the Developer at the time submitting the changes to TCEQ for a WPAP Modification. I noticed in the files that on several occasions, an encountered feature was found during construction or Comal County contacted us with a question about a specific Feature identified in a Geologic Assessment, and often there was confusion on the location because there are multiple maps in use.

The original Application included a Carter-Burgess WPAP Map dated 6/26/2000 with 131 lots and the connection to FM-3009 at the SE corner of the Ranch connection to FM-3009. This map was modified during TNRCC review with the accepted WPAP Map dated 9/11/2000. This Plan (the .jpg attachment) had 149 Lots with the internal roadway connection at the ranch in the NE corner of the property connection to FM-3009 at the request of City of San Antonio. The 2003 Plat (CANHAMRANCH1.PDF) of the Ranch had 155 Lots and the Ranch connection to Fm-3009 switched back to the SE corner.

We believe that many of the accumulated changes and confusion can be brought current while making the easement adjustments you have suggested that would accommodate sale of the two lots originally designated for water supply wells. We suggest that the easement changes you decide to vacate and re-plat are completely the Owner and County decision, as long as there is no impact on the currently approved TCEQ WPAP. I have attached two documents-213a.pdf is a copy of TCEQ Edwards Aquifer rules applicable to the Recharge Zone and f-

0628\_recharge\_and\_transition\_zone\_exception\_request.docx is a one page Application (with attachments identified) that can be filed with our Office for review and approval.

Our suggestion is that this document include as the new WPAP, the Replated Plan for the Canham Ranch. Instead of conducting a new Geologic Assessment (GA) as is our typical requirement every 10 years, the originally identified features and Encountered features would be included on this updated plan. The protection requirements identified in the September 19, 2000 letter would remain effective, save revision of the comments on Lots 37 and Lot 68 in an updated Exception Request Letter from TCEQ. I have also attached a letter from Carter Burgess dated 09/11/2000 that may address the hand inserted question mark on the second page of the TNRCC letter. The 7 lots listed next to the question mark are addressed at the bottom of the first page of the Carter Burgess letter and were intended to clarify that those 7 lots are only affected by identified sewer setback easement and do not have "possibly sensitive features" on that lot.

Related to the two lots intended for water supply, there were 4 lots identified in the GA that were drilled as test wells for possible use as a water supply for the subdivision. There also were two pre-existing residences, each with a well, that were identified to be plugged. Standard Condition No. 11 in the TNRCC September 19, 2000 letter required the

identified abandoned wells to be plugged. This would apply to the five or six wells identified in two separate text. Confirmation of meeting this condition can be included in the Exception Request.

We can discuss the exterior Lot 37 Vacate and Replat on our call at 3 PM today. As far as the protection zone around Geologic Feature 2 on Lot 37/38, a closed depression), the feature protection zone was shown as a circle as was and is our custom. Some zones have been elongated to a tear-drop shape, depending on the ground topography. We have not used a square as shown on the Replat, sheet 1 of 2 for Lot 37. As mentioned above, we believe the impact to the Edwards Aquifer is minimized by maintaining the feature protection originally intended for the Ranch by the professionals working for the Owner and for TNRCC/TCEQ.

Don Vandertulip, PE, BCEE TCEQ Region 13 14250 Judson Road San Antonio, Texas 78233 210.403.4057

### mikelucci1@gmail.com

William Vandertulip < William. Vandertulip@Tceq. Texas. Gov> From:

Sent: Thursday, April 21, 2022 4:22 PM

To: mikelucci1@gmail.com

Cc: Monica Reyes

**Subject:** Canham Ranch Well Sites

Canham Ranch Well Sites Listed in GA-Lots from 06262000 WPAP Submittal.pdf **Attachments:** 

#### Mike:

Good discussion. The 2000 GA identified 4 Test Well sites and 1 existing ranch well in use as a domestic well. These 5 sites are plotted on the submitted WPAP Site Plan dated 06/26/2000. I have attached 4 shots of that drawing to identify the 5 Features as listed below:

Feature # 25 Lot 37 Man-made test well drilled to Lower Trinity Feature # 26 Lot 63 Man-made test well drilled to Lower Trinity Feature # 27 Lot 10 Man-made test well drilled to Lower Trinity

Feature # 29 Lot 6 Man-made domestic Ranch Well

Feature # 30 Lot 81/84 Man-made test well drilled to Lower Trinity

Contact me if you have other questions.

Don Vandertulip, PE, BCEE TCEQ Region 13 14250 Judson Road San Antonio, Texas 78233 210.403.4057

# Recharge and Transition Zone Exception Request Form

Texas Commission on Environmental Quality 30 TAC §213.9 Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

## Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Recharge and Transition Zone Exception Request Form** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: J. W. Wood

Date: 10/31/22

Signature of Customer/Agent:

Regulated Entity Name: CANHAM RANCH

## **Exception Request**

- Attachment A Nature of Exception. A narrative description of the nature of each exception requested is attached. All provisions of 30 TAC §213 Subchapter A for which an exception is being requested have been identified in the description.
- Attachment B Documentation of Equivalent Water Quality Protection.
   Documentation demonstrating equivalent water quality protection for the Edwards Aquifer is attached.

## Administrative Information

- 3. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
- 4. The applicant understands that no exception will be granted for a prohibited activity in Chapter 213.
- 5. The applicant understands that prior approval under this section must be obtained from the executive director for the exception to be authorized.

### **Exception Request Form**

### Attachment A

### **Nature of Exception**

- 1) Revision of the originally approved plan to remove recharge features 25, 26, 27 and 30. These were all man-made test wells that have been plugged per Standard Condition 11 in the 9/19/2020 WPAP approval letter.
- 2) Acceptance of the revised WPAP site plan to also show the correct subdivision lot layout as it was platted.

### Attachment B

### **Documentation of Equivalent Water Quality Protection**

Plugging reports for the four above mentioned wells are attached.

- Feature 25 (Lot 37) was plugged on 9/2/2022 by the developer and was verified with the driller by the project engineer.
- Feature 26 (Lot 69, former Lot 68) was plugged on 8/29/2022 by the developer and was verified with the driller by the project engineer.
- Feature 27 (Lot 7) was plugged on 7/25/2011. Project Engineer has no direct knowledge of this plugging, but developer has verified the attached plugging report was for the Lot 7 well.
- Feature 30 (Lot 9) was plugged on 1/06/2014. Project Engineer has no direct knowledge of this plugging, but the address on plugging report matches Lot 9 and no other wells were known to exist in this area.

# FEATURE 25 (LOT 37, BUKI)

STATE OF TEXAS PLUGGING REPORT for Tracking #222912

1

CANAM RANCH LTD. JW WOOD Owner Well #: Owner:

PO BOX 6799 Grid #: 68-22-5 Address:

**HOUSTON, TX 77265** 

Latitude: 29° 40' 08" N 24607 RIPPLE WAY Well Location:

**GARDEN RIDGE, TX 78266** 098° 19' 46.2" W Longitude:

Well County: Comal Elevation: **No Data** 

**Public Supply** Well Type:

**Drilling Information** 

Date Drilled: No Data Company: No Data

Driller: No Data License Number: No Data

Borehole: No Data

Plugging Information

10

Date Plugged: 9/2/2022 Plugger: RALPH NICHOLSON

Plug Method: Tremmie pipe cement from bottom to top

> Casing Left in Well: Plug(s) Placed in Well:

Dla (in.) Top (ft.) Bottom (ft.) Top (ft.) Bottom (ft.) Description (number of sacks & material) 2 700 2 1180 Cement 1055 Bags/Sacks

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the

driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in

the reports(s) being returned for completion and resubmittal.

**NICHOLSON PUMP SERVICE INC** Company Information:

PO BOX 1287

HELOTES, TX 78023

**Driller Name: RALPH NICHOLSON** License Number: 4316

Apprentice Name: **CHRIS UHLS** 

GRAVEL TO 712' .PUMPED 450 SACKS, WENT INTO FORMATION. BROUGHT Comments:

GRAVEL UP TO 695' AND PUMPED 580 MORE SACKS TO GET TO SURFACE.

# FEATURE 26 (LOT 69, BLK / COLD LOT 68)

# STATE OF TEXAS PLUGGING REPORT for Tracking #222910

Owner: CANHAM RANCH LTD. JW WOOD Owner Well #: 2

Address:

PO BOX 6799

Grid #:

68-22-5

**HOUSTON, TX 77265** 

Latitude:

29° 40' 36.1" N

Well Location:

**24818 CREEK LOOP** 

Longitude:

Well County:

**GARDEN RIDGE, TX 78266** 

098° 19' 45.1" W

Comal

Elevation:

No Data

Well Type:

**Public Supply** 

**Drilling Information** 

Company: No Data

Date Drilled:

No Data

Driller:

No Data

License Number:

No Data

Borehole:

No Data

Plugging Information

Date Plugged: 8/29/2022

Plugger: RALPH NICHOLSON

Plug Method:

Tremmie pipe cement from bottom to top

Casing Left in Well:

Plug(s) Placed in Well:

Dla (in.)

Top (ft.)

Bottom (ft.)

Top (ft.)

Bottom (ft.)

Description (number of sacks & material)

8

2

900

2

872

Cement 475

Certification Data:

The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information:

NICHOLSON PUMP SERVICE INC

**PO BOX 1287** 

HELOTES, TX 78023

**Driller Name:** 

**RALPH NICHOLSON** 

License Number:

4316

Apprentice Name:

**CHRIS UHLS** 

Comments:

**OBSTRUCTION AT 872'.** 

# FEATURE 27 (LOT 7, BLK 1)

## STATE OF TEXAS PLUGGING REPORT for Tracking #74182

Owner:

3009 Land LTD

Owner Well #: #1

Address:

18618 Tuscany Stone Ste 100 San Antonio, TX 78258

Grid #:

68-22-5

Latitude:

29° 40' 47" N

Well Location:

FM 3009

Well County:

San Antonio, TX

Longitude:

Comal

Elevation:

No Data

Well Type:

Withdrawal of Water

Drilling Information

Company: No Data

Date Drilled:

12/19/2008

Driller:

**Davenport Drilling** 

License Number:

No Data

Borehole:

Diameter (in.) 9

Top Depth (ft.)

Bottom Depth (ft.)

1200

Plugging Information

Date Plugged:

7/25/2011

Plugger: Richard Kyle Courtney

Plug Method:

**See Comments** 

Casing Left in Well:

Plug(s) Placed in Well:

Dla (in.)

Top (ft.)

Bottom (ft.)

Top (ft.)

Bottom (ft.)

Description (number of sacks & material)

4.5

0

40

0

405

134

Certification Data:

The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information:

C & C Groundwater Services LLC

29143 Old Fredericksburg Road

Boerne, TX 78015

Driller Name:

**Richard Kyle Courtney** 

License Number:

2546

Comments:

Gravel to water level with 22 cu yds and cement to surface

# FEATURE 30 (LOT 9, BLK 1)

## STATE OF TEXAS PLUGGING REPORT for Tracking #92668

**Mathew Zillmann** Owner Well #: No Data Owner:

Grid #: 68-22-4 Address: 7715 Canham Ranch Rd.

San Antonio, TX 78266

29° 40' 36" N Latitude: Well Location: 7715 Canham Ranch Rd

San Antonio, TX 78266 Longitude: 098° 20' 02" W

Well County: Comal Elevation: No Data

Withdrawal of Water Well Type:

**Drilling Information** 

Company: No Data Date Drilled: No Data

Driller: **Kutscher Drilling** License Number: No Data

Diameter (in.) Top Depth (ft.) Bottom Depth (ft.)

Borehole: 6 371

Plugging Information

Plugger: Daniel Kutscher Date Plugged: 1/6/2014

Plug Method: **See Comments** 

> Casing Left in Well: Plug(s) Placed in Well:

Dla (in.) Top (ft.) Bottom (ft.) Top (ft.) Bottom (ft.) Description (number of sacks & material) 8 2 16 0 10

10 371 21 bags benseal

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the

driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in

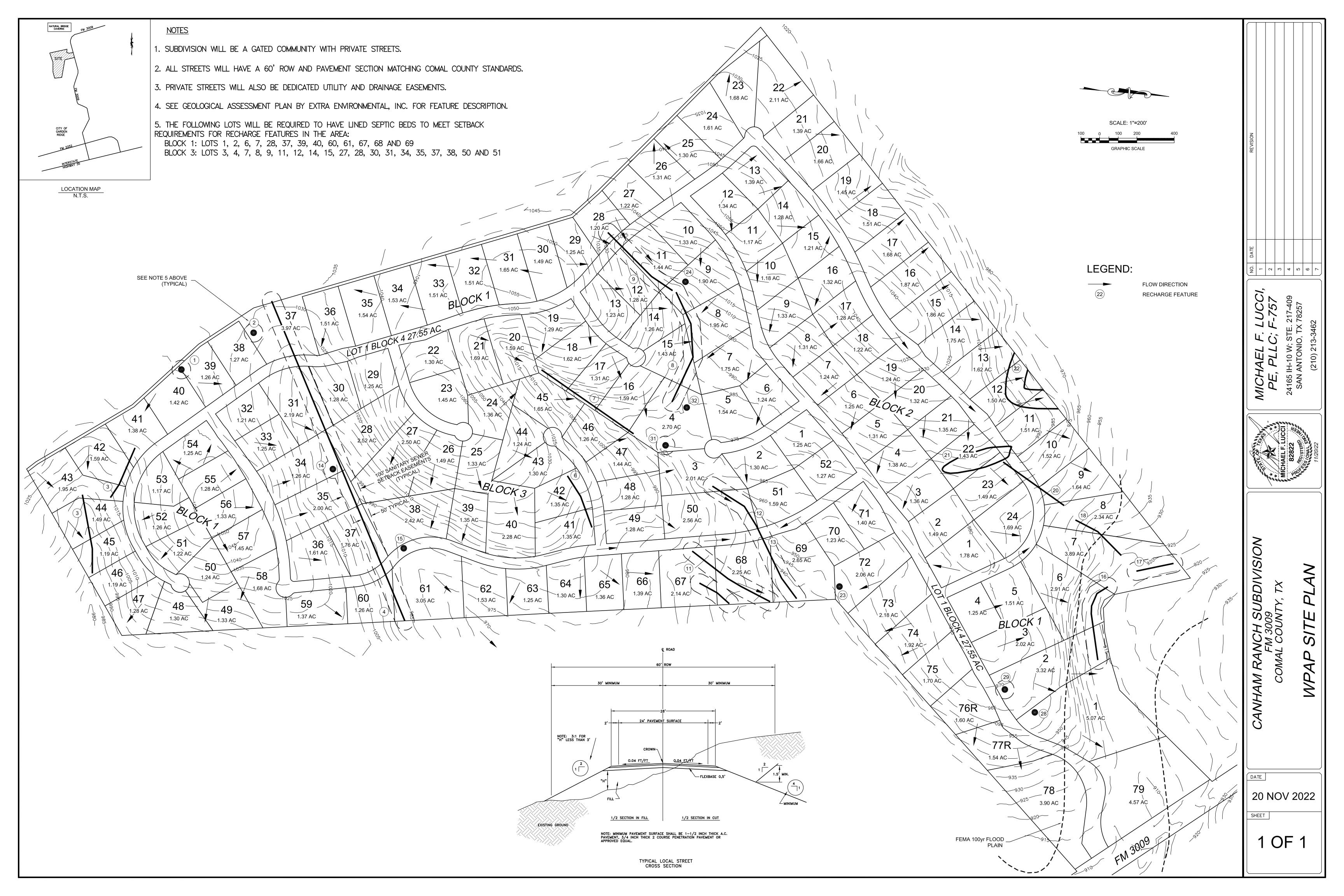
the reports(s) being returned for completion and resubmittal.

Company Information: **Kutscher Drilling** 

> 3810 Hunter Road San Marcos, TX 78666

Driller Name: **Daniel Kutscher** License Number: 54746

Comments: Benseal from 371' to 10' Cement from 10' to surface 3 bags cement



### Agent Authorization Form

For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

| 1                 | J.W. WOOD  |  |
|-------------------|--|--|
|                   | Print Name   |  |
|                   | MANAGING PARTNER   |  |
|                   | Title - Owner/President/Other  |  |
| of                | CANHAM RANCH LTD.  |  |
|                   | Corporation/Partnership/Entity Name  |  |
| have authorized _ | MICHAEL F. LUCCI Print Name of Agent/Engineer  |  |
|                   | The state of the s |  |
| of                | MICHAEL F. LUCCI, PE, PLLC   |  |
|                   | Print Name of Firm   |  |

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

### I also understand that:

- The applicant is responsible for compliance with 30 Texas Administrative Code. Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to \$10,000 per day per violation.
- For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.
- Application fees are due and payable at the time the application is submitted. The
  application fee must be sent to the TCEQ cashier or to the appropriate regional office.
  The application will not be considered until the correct fee is received by the
  commission.
- A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.
- No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

| SIGNATURE PA                           | AGE:   |  |                     |
|--|--|--|---------------------|
| Applicant                              | t's Signature  | Date 14.22   |                     |
| THE STATE OF                           | TX§  |  |                     |
| County of                              | ami §  |  |                     |
| to me to be the p<br>me that (s)he exe | e undersigned authority, on this operson whose name is subscribe ecuted same for the purpose and hand and seal of office on this _ | ed to the foregoing instrument, and accommoderation therein expressed. | known knowledged to |
| DH Not                                 | ARMENDRABHAI R. SUTHAR OTARY PU  | JBLIC  |                     |
|  | Notary ID 130203778  | mendrabui Suthan nted Name of Notary                                   |                     |
|  | MY COMMIS  | SSION EXPIRES: 74 25 2023  |                     |

# **Application Fee Form**

| <b>Texas Commission on Environme</b>              | ntal Quality                                     |                                     |                      |  |  |  |
|---|--|-------------------------------------|----------------------|--|--|--|
| Name of Proposed Regulated Enti                   | ity: <u>CANHAM RANCH</u>                         |                                     |                      |  |  |  |
| Regulated Entity Location: FM 300                 | Regulated Entity Location: FM 3009, COMAL COUNTY |                                     |                      |  |  |  |
| Name of Customer: <b>CANHAM RAM</b>               | NCH LTD.   |                                     |                      |  |  |  |
| Contact Person: MICHAEL F. LUCC                   | <u>CI, PE</u> Phone                              | : <u>210-213-3462</u>               |                      |  |  |  |
| Customer Reference Number (if is                  | ssued):CN <u>601401953</u>                       |                                     |                      |  |  |  |
| Regulated Entity Reference Numb                   | oer (if issued):RN <u>102750</u>                 | <u>809</u>                          |                      |  |  |  |
| Austin Regional Office (3373)                     |  |                                     |                      |  |  |  |
| Hays  | Travis   | ☐ Will                              | iamson               |  |  |  |
| San Antonio Regional Office (336                  | 52)  |                                     |                      |  |  |  |
| ⊠ Bexar   | Medina   | Uva                                 | lde                  |  |  |  |
| Comal   | Kinney   |                                     |                      |  |  |  |
| Application fees must be paid by                  | check, certified check, or                       | money order, payable                | to the <b>Texas</b>  |  |  |  |
| <b>Commission on Environmental Q</b>              | <mark>uality</mark> . Your canceled ch           | eck will serve as your              | receipt. <b>This</b> |  |  |  |
| form must be submitted with yo                    | ur fee payment. This pa                          | yment is being submit               | ted to:              |  |  |  |
| Austin Regional Office                            | 🔀 Sa   | n Antonio Regional Of               | ice                  |  |  |  |
| Mailed to: TCEQ - Cashier                         | □ Ov   | ernight Delivery to: TCEQ - Cashier |                      |  |  |  |
| Revenues Section                                  | 12   | 100 Park 35 Circle                  |                      |  |  |  |
| Mail Code 214                                     | Bu   | ilding A, 3rd Floor                 |                      |  |  |  |
| P.O. Box 13088                                    | Αι   | ıstin, TX 78753                     |                      |  |  |  |
| Austin, TX 78711-3088                             | (5   | 12)239-0357                         |                      |  |  |  |
| Site Location (Check All That App                 | oly):  |                                     |                      |  |  |  |
| Recharge Zone                                     | Contributing Zone                                | Transiti                            | on Zone              |  |  |  |
| Type of Pl  | lan  | Size                                | Fee Due              |  |  |  |
| Water Pollution Abatement Plan                    |  |                                     |                      |  |  |  |
| Plan: One Single Family Residen                   | · · · · · · · · · · · · · · · · · · ·            | Acres                               | \$                   |  |  |  |
| Water Pollution Abatement Plan                    |  |                                     |                      |  |  |  |
| Plan: Multiple Single Family Res                  | Acres  | \$                                  |                      |  |  |  |
| Water Pollution Abatement Plan, Contributing Zone |  |                                     |                      |  |  |  |
| Plan: Non-residential                             | _  | Acres                               | \$                   |  |  |  |
| Sewage Collection System                          | L.F.   | \$                                  |                      |  |  |  |
| Lift Stations without sewer lines                 | Acres  | \$                                  |                      |  |  |  |
| Underground or Aboveground S                      | Storage Tank Facility                            | Tanks                               | \$                   |  |  |  |
| Piping System(s)(only)                            |  | Each                                | \$                   |  |  |  |
| Exception   |  | 1 Each                              | \$ 500               |  |  |  |

Signature:

Each \$

**Extension of Time** 

Date: <u>11/20/22</u>

# **Application Fee Schedule**

**Texas Commission on Environmental Quality** 

Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

### Water Pollution Abatement Plans and Modifications

**Contributing Zone Plans and Modifications** 

|   | Project Area in |          |
|---|-----------------|----------|
| Project   | Acres           | Fee      |
| One Single Family Residential Dwelling                | < 5             | \$650    |
| Multiple Single Family Residential and Parks          | < 5             | \$1,500  |
|   | 5 < 10          | \$3,000  |
|   | 10 < 40         | \$4,000  |
|   | 40 < 100        | \$6,500  |
|   | 100 < 500       | \$8,000  |
|   | ≥ 500           | \$10,000 |
| Non-residential (Commercial, industrial,              | < 1             | \$3,000  |
| institutional, multi-family residential, schools, and | 1 < 5           | \$4,000  |
| other sites where regulated activities will occur)    | 5 < 10          | \$5,000  |
| -   | 10 < 40         | \$6,500  |
|   | 40 < 100        | \$8,000  |
|   | ≥ 100           | \$10,000 |

Organized Sewage Collection Systems and Modifications

| Project                   | Cost per Linear<br>Foot | Minimum Fee-<br>Maximum Fee |
|---------------------------|-------------------------|-----------------------------|
| Sewage Collection Systems | \$0.50                  | \$650 - \$6,500             |

# Underground and Aboveground Storage Tank System Facility Plans and Modifications

| Project   | Cost per Tank or<br>Piping System | Minimum Fee-<br>Maximum Fee |
|---|-----------------------------------|-----------------------------|
| Underground and Aboveground Storage Tank Facility | \$650                             | \$650 - \$6,500             |

**Exception Requests** 

| Project           | Fee   |
|-------------------|-------|
| Exception Request | \$500 |

Robert J. Huston, *Chairman* R. B. "Ralph" Marquez, *Commissioner* John M. Baker, *Commissioner* Jeffrey A. Saitas, *Executive Director* 



### TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

September 19, 2000

Mr. J. W. Wood Canham Ranch, Ltd. P.O. Box 160 Buda, TX 78160

Re:

Edwards Aquifer, Comal County

NAME OF PROJECT: Canham Ranch; Located on west side of FM 3009 approximately 4,000 feet

southeast of Natural Bridge Caverns entrance road; Comal County, Texas

TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas

Administrative Code (TAC) Chapter 213 Edwards Aquifer

Edwards Aquifer Protection Program File No. 1519.00

Dear Mr. Wood:

The Texas Natural Resource Conservation Commission (TNRCC) has completed its review of the WPAP application for the referenced project submitted to the San Antonio Regional Office by Ms. Brenda Kelly, P.E., of Carter & Burgess on behalf of Canham Ranch, Ltd. on June 26, 2000. Final review of the WPAP submittal was completed after additional material was received on September 12, 2000. As presented to the TNRCC, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer protection plan, modification to a plan, or exception. A motion for reconsideration must be filed no later than 20 days after the date of this approval letter. This approval expires two (2) years from the date of this letter unless, prior to the expiration date; more than 10% of the construction has commenced on the project or an extension of time has been requested.

### PROJECT DESCRIPTION

The proposed residential project will have an area of approximately 283 acres and will have the following parameters:

- The development will include 149 single-family residential lots with approximately 18,000 linear feet of roadway. Lots 37 and 68 will be used for public water supply wells.
- The proposed impervious cover for the development is approximately 9.22% of the total area of the site
- The impervious cover for this residential subdivision will be 23.98 acres.
- According to a letter dated, June 15, 2000, signed by Mr. Thomas Hornseth, P.E., Comal County Engineer, the site in the development is acceptable for the use of on-site sewage facilities.

REPLY TO: REGION 13 • 140 HEIMER Rd., Ste. 360 • SAN ANTONIO, TEXAS 78232-5042 • 210/490-3096 • FAX 210/545-4329

### PERMANENT POLLUTION ABATEMENT MEASURES

To prevent pollution of stormwater runoff originating on-site or up-gradient of the site and potentially flowing across and off the site after construction, total impervious cover for the project site will be less than 20% (9.22%).

### **GEOLOGY**

According to the geologic assessment included with the submittal, there are 32 geologic or manmade features located on the project site. Twenty-nine features were assessed as possibly sensitive, and three features were assessed as not sensitive. The San Antonio Regional Office did not conduct a site investigation.

### SPECIAL CONDITIONS

- I. Since this project will have not more than 20% impervious cover, an exemption from permanent BMPs is approved. If the percent impervious cover ever increases above 20% or the land use changes, the exemption for the whole site as described in the property boundaries required by §213.4(g), may no longer apply and the property owner must notify the San Antonio Regional Office of these changes.
- II. The proposed on-site sewage facility (OSSF) must be permitted by a local or the state permitting authority prior to commencement of construction.
- III. All planning and design materials for the proposed OSSF shall be submitted by a professional engineer or a sanitarian registered in Texas.
- IV. The following minimum separation distances in feet must be provided between OSSF units and recharge features or possible recharge features (S-1, S-2, S-4, S-8, S-9, S-11, S-12, S-16, S-17, S-25, S-26, S-27, S-29, S-30 and S-31):

| Sewage Treatment Tanks or Holding Tanks                    | 50         | )       |
|--|------------|---------|
| Soil Absorption Systems, & Unlined Evapotranspiration Beds | 150        |         |
| Lined Evapotranspiration Beds                              | 50         |         |
| Sewer Pipe with Watertight Joints                          | 50         | •       |
| Surface Irrigation Fields                                  | 150        | •       |
| Drip Irrigation Fields                                     | 100 when F | Հ₄≤ 0.1 |
| 2.1.p  | 150 when R | ζ> 0.1  |

The affected lots are Lots 1 & 8 (Block 1), Lot 16 (Block 2), and Lots 12, 13, 26 & 36 (Block 3).

- V. The proposed OSSF must meet all other requirements found in 30 TAC § 285--On-Site Sewage Facilities.
- VI. The applicant must notify purchasers of each of the lots that certain lots must have the required separation distances. The notification must include a copy of this letter.

### STANDARD CONDITIONS

1. Pursuant to §26.136 of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

### Prior to Commencement of Construction:

- Within 60 days of receiving written approval of an Edwards Aquifer protection plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries, covered by the Edwards Aquifer protection plan, shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TNRCC-0625) that you may use to deed record the approved WPAP is enclosed.
- 3. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
- 4. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
- The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and file number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension of an approved plan.
- 6. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. The TNRCC may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
- 7. Abandoned injection wells must be closed under the requirements of 30 TAC Chapter 331 (relating to Underground Injection Control).
- 8. All borings with depths greater than or equal to 20 feet must be plugged with a non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

### **During Construction:**

9. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.

- 10. If any sensitive feature is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
- Five wells exist on the site. All identified abandoned water wells, including injection, dewatering, and monitoring wells must be plugged pursuant to requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Licensing and Regulation of Water Well Drillers and Water Well Pump Installers) and all other locally applicable rules, as appropriate. If any abandoned wells (including water, injection (injection well referenced in Item 7), dewatering, and monitoring well) are encountered during construction, they must be plugged pursuant to requirements of the Texas Department of Licensing and Regulation (16 TAC Chapter 76) and all other locally applicable rules, as appropriate.
- 12. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).
- 13. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
- 14. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
- 15. To the maximum extent practicable, BMPs and measures must maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction. The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided. A request to temporarily seal the feature must include a justification that no reasonable and practicable alternative exists. The request will be evaluated by the executive director on a case-by-case basis.

### After Completion of Construction:

- 16. Owners of permanent BMPs and measures must insure that the BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.
- 17. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner

or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through the San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TNRCC-10263) is enclosed.

- 18. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
- 19. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50% of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
- 20. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

If you have any questions or require additional information, please contact John Mauser of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4024.

Sincerely.

Jeffrey A. Saitas, P.E. Executive Director

Texas Natural Resource Conservation Commission

JAS/JKM/eg

Enclosure:

Deed Recordation Affidavit, Form TNRCC-0625

Change in Responsibility for Maintenance or Permanent BMPs-Form TNRCC-10263

cc: Ms. Brenda Kelly, Carter & Burgess

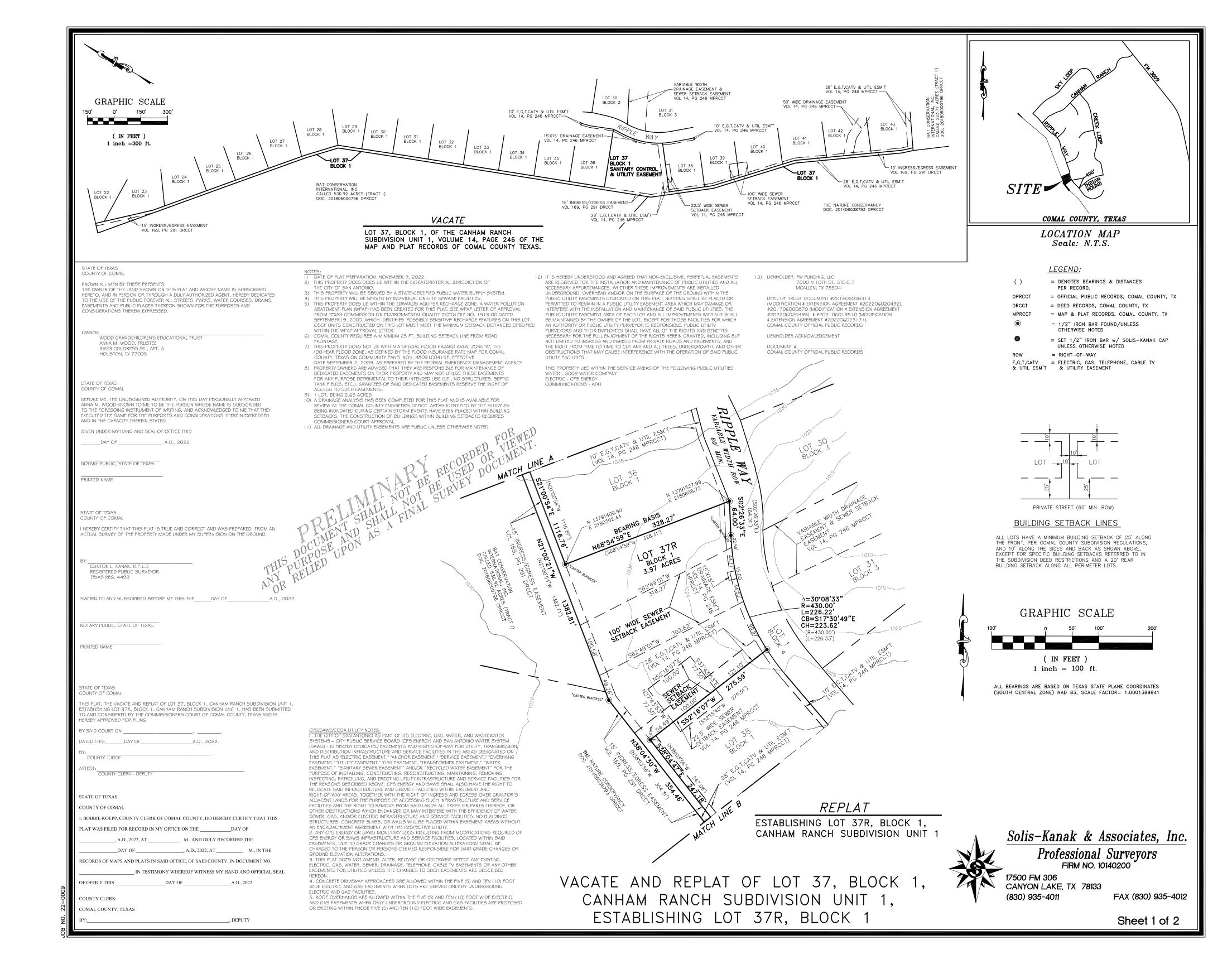
Ms. Rebecca Cedillo, San Antonio Water System

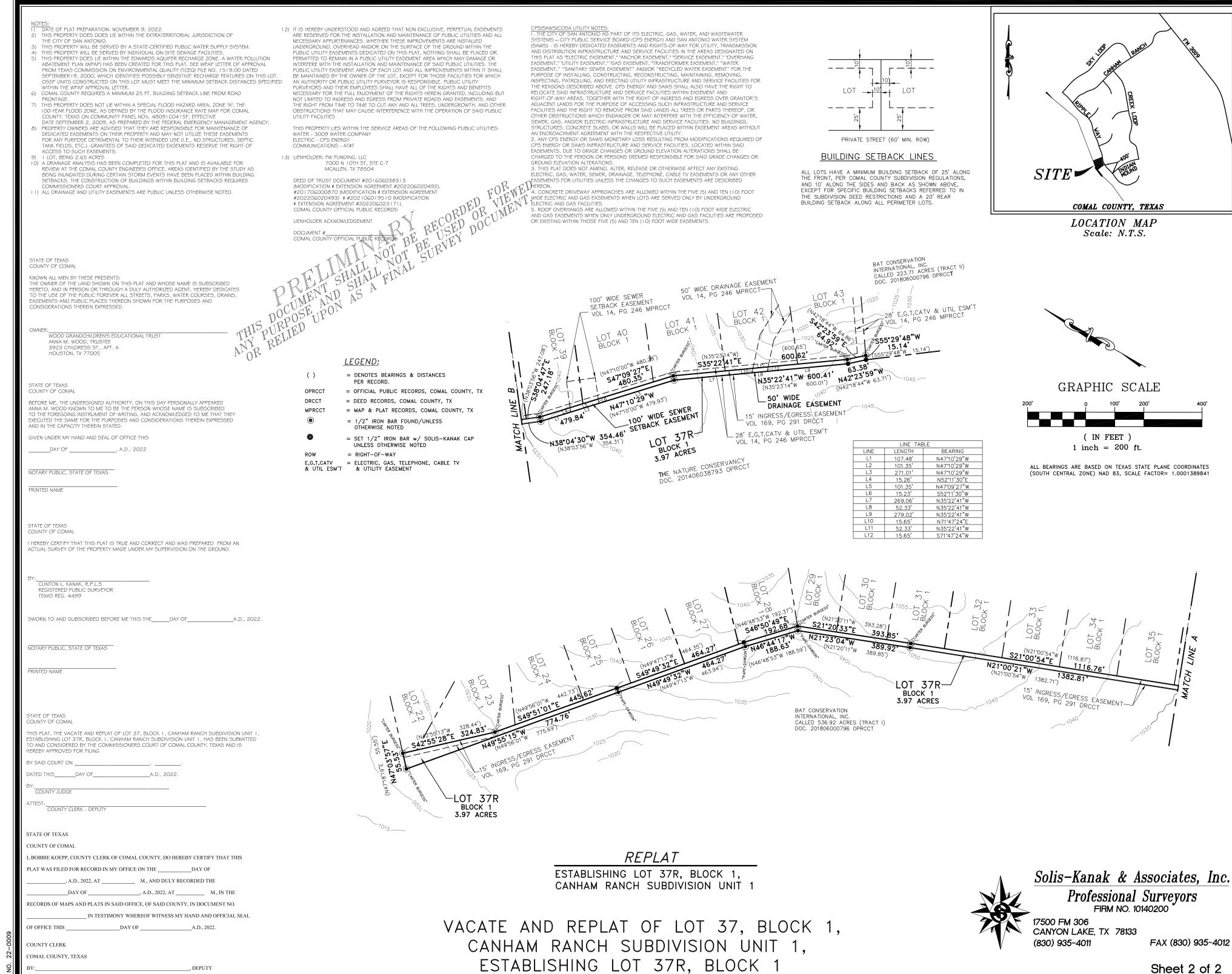
Mr. Tom Hornseth, Comal County

Mr. John Bohuslav, TXDOT San Antonio District

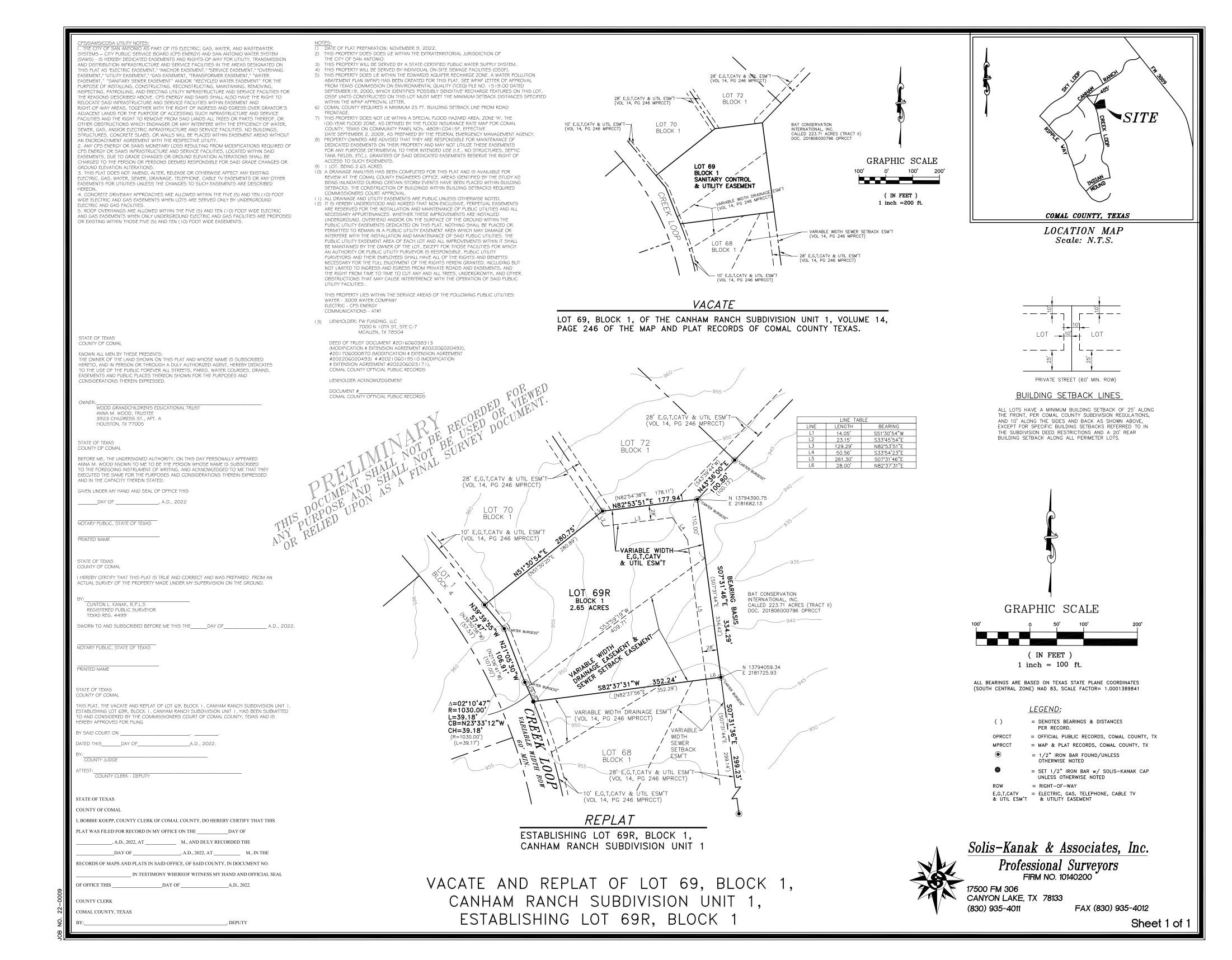
Mr. Greg Ellis, Edwards Aquifer Authority

TNRCC Field Operations, Austin





, DEPUTY



# **Owner Authorization Form**

**Texas Commission on Environmental Quality** for Required Signature Edwards Aquifer Protection Program Relating to 30 TAC Chapter 213 Effective June 1, 1999

### **Land Owner Authorization**

| <sub>I,</sub> JW WOOD of                                | WOOD GRANDCHILDREN'S EDUCATIONAL TRUST  |
|---|---|
| Land Owner Signatory Name                               | Land Owner Name (Legal Entity or Individual)  |
| am the owner of the property located at                 |   |
| LOTS 37 & 69, BLOCK 1, CANHAM                           | I RANCH UNIT 1  |
| Legal description of the                                | property referenced in the application  |
| §213.23(d) relating to the right to submit a signatory. | h §213.4(c)(2) and §213.4(d)(1) or §213.23(c)(2) and an application, signatory authority, and proof of authorized |
| I do hereby authorize CANHAM RANC                       | H LTD   |
|   | nt Name (Legal Entity or Individual)  |
| to conduct WPAP EXCEPTION REQ                           | UST   |
| Description of  | the proposed regulated activities   |
| at LOTS 37 & 69, BLOCK 1, CANH                          | AM RANCH UNIT 1   |
| Precise location of                                     | of the authorized regulated activities  |

# Land Owner Acknowledgement

I understand that WOOD GRANDCHILDREN'S EDUCATIONAL TRUST

Land Owner Name (Legal Entity or Individual)

Is ultimately responsible for compliance with the approved or conditionally approved Edwards Aquifer protection plan and any special conditions of the approved plan through all phases of plan implementation even if the responsibility for compliance and the right to possess and control the property referenced in the application has been contractually assumed by another legal entity. I further understand that any failure to comply with any condition of the executive director's approval is a violation is subject to administrative rule or orders and penalties as provided under §213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

| Land Owner Signature   |                                   |
|--|-----------------------------------|
| Land Owner Signature   | 11 22 2022<br>Date                |
| THE STATE OF § TEXAS   | bate                              |
| County of § HARRIS   |                                   |
| BEFORE ME, the undersigned authority, on this day per  | sonally appeared JW WOOD          |
| known to me to be the person whose name is subscribe acknowledged to me that (s)he executed same for the |                                   |
| GIVEN under my hand and seal of office on this $22$  |                                   |
|  | Twee                              |
| DHARMENDRABHAI R. SUTHAR   | NOTARY PUBLIC                     |
| Comm. Expires 04-25-2023   | Dhurmendrabhui R. Suhai           |
| Notary ID 130203778  | Typed or Printed Name of Notary   |
|  | MY COMMISSION EXPIRES: 04 25 7023 |
|  |                                   |
|  |                                   |
|  |                                   |
| Attached: (Mark all that apply)  |                                   |
| Lease Agreement  |                                   |
| Signed Contract  |                                   |
| Deed Recorded Easement   |                                   |
| Other legally binding document   |                                   |
|  |                                   |

# Applicant Acknowledgement

| I, JW WOOD   | of  | CANHAM RANCH LTD  |  |  |  |
|--|---|---|--|--|--|
| Applicant Signatory Name   |   | Applicant Name (Legal Entity or Individual)   |  |  |  |
| acknowledge that WOOD GRANDCHILDREN'S EDUCATIONAL TRUST  |   |   |  |  |  |
|  |   | (Legal Entity or Individual)  |  |  |  |
| has provided CANHAM RAN  |   |   |  |  |  |
|  | •   | egal Entity or Individual)  |  |  |  |
| with the right to possess and con<br>I understand that CANHAM R  |   | y referenced in the Edwards Aquifer protection plan.  |  |  |  |
|  | Applicant Name  | (Legal Entity or Individual)  |  |  |  |
| Aquifer protection plan and any implementation. I further under director's approval is a violation   | special condition<br>rstand that failure<br>is subject to adm | the approved or conditionally approved Edwards as of the approved plan through all phases of plan e to comply with any condition of the executive ninistrative rule or orders and penalties as provided iolation may also be subject to civil penalties and |  |  |  |
| Applicant Signature  |   |   |  |  |  |
| UWWat  |   | 11/22/2022  |  |  |  |
| Applicant Signature  |   | Date  |  |  |  |
| THE STATE OF § TEXAS   |   |   |  |  |  |
| County of § HARRIS   |   |   |  |  |  |
| BEFORE ME, the undersigned au  | thority, on this d  | ay personally appeared JW WOOD  |  |  |  |
| The second secon |   | bscribed to the foregoing instrument, and or the purpose and consideration therein expressed.   |  |  |  |
|  |   | 22 day of November 2022   |  |  |  |
| GIVEN diluci iliy halid alid sear c  | office off tills _  | Z= day of Tydoromas 7022  |  |  |  |
|  |   | NOTARY PUBLIC   |  |  |  |
| Notary Pub   | DRABHAI R. SUTHAR blic, State of Texas prices 04-25-2023      | Typed or Printed Name of Notary   |  |  |  |
| Notary Notary  | ID 130203778  | MY COMMISSION EXPIRES: 64/25/2023   |  |  |  |
|  |   |   |  |  |  |



TCEQ Use Only

# **TCEQ Core Data Form**

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

#### **SECTION I: General Information**

| 1. Reason fo   | or Submis                       | sion (If other is c         | hecked please      | e describ    | e in sp            | ace provid            | led.)    |                  |                     |                 |                          |
|--|---------------------------------|-----------------------------|--------------------|--------------|--------------------|-----------------------|----------|------------------|---------------------|-----------------|--------------------------|
| New Pe   | rmit, Regis                     | tration or Authori          | zation (Core D     | ata Forn     | n shou             | ıld be subr           | nitted v | vith the         | program applica     | tion.)          |                          |
| Renewal (Core Data Form should be submitted with the renewal form) |                                 |                             |                    | form)        | ☐ Other            |                       |          |                  |                     |                 |                          |
| 2. Customer  | Referenc                        | e Number <i>(if i</i> ss    | ued)               |              |                    | to search             | 3. R     | gulate           | d Entity Refere     | nce Number (    | if issued)               |
| CN 601401953   |                                 |                             |                    |              | r RN ni<br>ral Reg | umbers in<br>gistry** | RI       | 1027             | 750809              |                 |                          |
| SECTION  | ECTION II: Customer Information |                             |                    |              |                    |                       |          |                  |                     |                 |                          |
| 4. General C   | ustomer l                       | nformation                  | 5. Effective       | Date for     | r Custo            | omer Info             | rmatio   | n Upda           | tes (mm/dd/yyy      | /)              |                          |
| ☐ New Cust   |                                 | me (Verifiable wit          |                    | •            |                    | omer Inforr           |          | itroller c       | •                   | •               | Entity Ownership         |
|  |                                 |                             |                    |              |                    |                       |          |                  |                     |                 | active with the          |
|  |                                 | f State (SOS)               | -                  | -            |                    |                       | •        |                  |                     |                 |                          |
| 6. Customer  | Legal Nar                       | <b>ne</b> (If an individual | l, print last name | e first: eg: | Doe, J             | lohn)                 | <u>!</u> | f new Cu         | ustomer, enter pi   | evious Custom   | er below:                |
| CANHAN   | I RANC                          | CH LTD                      |                    |              |                    |                       |          |                  |                     |                 |                          |
| 7. TX SOS/C  | •                               | Number                      | 8. TX State        |              | 11 digits)         | )                     |          |                  | ral Tax ID (9 digit | i) 10. DUN      | S Number (if applicable) |
| 80018706   | 8                               |                             | 32011067           | 7801         |                    |                       | 8        | 33035            | 2148                |                 |                          |
| 11. Type of 0  | Customer:                       | ☐ Corporati                 | ion                |              | ☐ In               | ndividual             |          | Pa               | artnership: 🔲 Ge    | neral 🛭 Limited |                          |
| Government:  | City (                          | County  Federal             | ☐ State ☐ Other    |              | □ S                | ole Proprie           | etorship |                  | Other:              |                 |                          |
| <b>12. Number</b> ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○            | of Employ<br>21-100             | ees 101-250                 | 251-500            | ☐ 50         | 01 and             | l higher              |          | 3. Inde<br>⊠ Yes | pendently Owr       | •               | ated?                    |
|  |                                 | oposed or Actual) -         |                    |              |                    |                       |          |                  |                     |                 |                          |
| Owner  | · ·                             | Operat                      | tor                |              | ✓ Owi              | ner & Ope             | ator     |                  |                     | -               |                          |
| Occupatio  | nal Licens                      | ee Respo                    | nsible Party       |              | _ Volu             | untary Clea           | anup A   | pplicant         | Other:              |                 |                          |
|  | PO Bo                           | x 6799                      |                    |              |                    |                       |          |                  |                     |                 |                          |
| 15. Mailing<br>Address:  |                                 |                             |                    |              |                    |                       |          |                  |                     |                 |                          |
| , tadi ooo.  | City                            | HOUSTON                     |                    | Sta          | te                 | TX                    | ZIP      | 772              | .65                 | ZIP + 4         | 6799                     |
| 16. Country  | Mailing In                      | formation (if outsi         | de USA)            | •            |                    | 17.                   | E-Mail   | Addres           | SS (if applicable)  |                 | •                        |
|  |                                 |                             |                    |              |                    | JW                    | OOI      | )@DE             | ELPHIWES'           | Г.СОМ           |                          |
| 18. Telephor   | ne Number                       | r                           |                    | 19. Ext      | ensior             | n or Code             |          |                  | 20. Fax Num         | ber (if applica | ble)                     |
| ( 512 ) 913-2338   |                                 |                             |                    |              |                    |                       |          | ( )              | -                   |                 |                          |
| SECTION  | III: Re                         | egulated En                 | tity Infor         | matic        | <u>on</u>          |                       |          |                  |                     |                 |                          |
| 21. General I  | Regulated                       | Entity Informati            | ion (If 'New Re    | egulated     | Entity'            | " is selecte          | d belo   | v this fo        | rm should be a      | companied by    | a permit application)    |
| ☐ New Reg  | ulated Enti                     | ty 🔲 Update                 | to Regulated I     | Entity Na    | me                 | □ Update              | e to R   | egulated         | d Entity Informat   | ion             |                          |
| _  |                                 | •                           | •                  | •            |                    | d in orde             | r to n   | reet T           | CEQ Agency          | Data Stand      | dards (removal           |
|  |                                 | ndings such                 |                    |              |                    |                       |          |                  |                     |                 |                          |
|  |                                 | ame (Enter name             | of the site where  | e the regu   | ılated a           | action is taki        | ng plac  | э.)              |                     |                 |                          |
| CANHAN   | I RANC                          | CH                          |                    |              |                    |                       |          |                  |                     |                 |                          |

TCEQ-10400 (02/21) Page 1 of 3

|   | FM 300   | 9  |   |  |   |  |   |   |
|---|--|--|---|--|---|--|---|---|
| 23. Street Address of   |  |  |   |  |   |  |   |   |
| the Regulated Entity:<br>(No PO Boxes)  | City   | GARDEN   | State   | TX   | ZIP   | 78266  | ZIP + 4   | 2910  |
|   | _  | RIDGE  | Glate   | 1/1  | <b>4</b> 11   | 70200  | ZIF 7 4   | 2910  |
| 24. County  | COMAI  |  |   |  |   |  |   |   |
|   | Eı   | nter Physical Lo   | ocation Description   | on if no str                                   | eet address   | s is provided.   |   |   |
| 25. Description to<br>Physical Location:  | FROM I   | FROM I-35, TAKE FM 3009 NORTH FOR 6.5 MILES TO GATE ON LEFT  |   |  |   |  |   |   |
| 26. Nearest City  |  |  |   |  |   | State  | N   | earest ZIP Code   |
| GARDEN RIDGE  |  |  |   |  |   | TX   | 7   | 8266  |
| 27. Latitude (N) In Deci  | mal:   | 29.67278   |   | 28. L  | ongitude (V   | V) In Decimal:   | 98.3305   | 56  |
| Degrees   | Minutes  | S  | Seconds   | Degre  | es  | Minutes  | •   | Seconds   |
| 29  | 4  | 40   | 22  |  | 98  |  | 19  | 50  |
| 29. Primary SIC Code (4   | digits) 30.  | Secondary SIC  | Code (4 digits)   | 31. Prima<br>(5 or 6 digits                    | ry NAICS C  |  | Secondary N<br>6 digits)  | IAICS Code  |
| 1521  |  |  |   | 236115   |   |  |   |   |
| 33. What is the Primary   | Business of  | f this entity? (   | Do not repeat the SIC   | or NAICS des                                   | cription.)  |  |   |   |
| SINGLE-FAMILY   | RESIDE   | NTIAL SUE  | DIVISION  |  |   |  |   |   |
|   |  |  |   | РО   | BOX 6799  |  |   |   |
| 34. Mailing   |  |  |   |  |   |  |   |   |
| Address:  | City   | HOUSTON  | State   | TX   | ZIP   | 77265  | ZIP + 4   | 4 6799  |
|   |  |  |   |  |   |  |   |   |
| 35. E-Mail Address  | s:   |  |   | JWOOD@   | DELPHIW   | EST.COM  |   |   |
|   | s:<br>one Number   |  | 37. Extensio  |  | DELPHIW   |  | umber (if ap  | plicable)   |
| 36. Teleph  |  |  | 37. Extensio  |  | DDELPHIW  |  | umber <i>(if ap</i><br>) -                                      | plicable)   |
| 36. Teleph  | one Number<br>913-2338<br>D Numbers (  | Check all Programs   | and write in the per  | n or Code                                      |   | 38. Fax N<br>(   | ) -   | ·   |
| 36. Teleph<br>( 512 )<br>9. TCEQ Programs and II  | one Number<br>913-2338<br>D Numbers (  | Check all Programs   | and write in the per  | n or Code                                      | tion numbers  | 38. Fax N<br>(   | ) -   | ·   |
| 36. Teleph<br>( 512 )<br>9. TCEQ Programs and Il<br>orm. See the Core Data Form   | one Number<br>913-2338<br>D Numbers C<br>instructions for  | Check all Programs   | and write in the perce.   | n or Code                                      | tion numbers  | 38. Fax N ( that will be affected  | ) -   | es submitted on this  |
| 36. Teleph<br>( 512 )<br>9. TCEQ Programs and Il<br>orm. See the Core Data Form   | 913-2338  D Numbers Constructions for Districts  | Check all Programs   | and write in the perce.   | n or Code                                      | tion numbers  | 38. Fax N ( that will be affected  | ) -   | es submitted on this  |
| 36. Teleph ( 512 )  9. TCEQ Programs and II  orm. See the Core Data Form  Dam Safety  Municipal Solid Waste   | 913-2338  D Numbers Constructions for Districts  New Sc  | Check all Programs<br>r additional guidands<br>s<br>ource Review Air   | and write in the perce.  Edwards Aqui  13-00062601  OSSF                            | n or Code                                      | tion numbers  | 38. Fax N ( that will be affected ons Inventory Air  | ) - d by the updat  | es submitted on this<br>rial Hazardous Waste                        |
| 36. Teleph ( 512 )  9. TCEQ Programs and II  orm. See the Core Data Form  □ Dam Safety  | 913-2338  D Numbers Constructions for Districts  | Check all Programs<br>r additional guidands<br>s<br>ource Review Air   | and write in the perce.  Edwards Aqui   | n or Code                                      | tion numbers  | 38. Fax N ( that will be affected ons Inventory Air  | ) - d by the updat  | es submitted on this<br>rial Hazardous Waste                        |
| 36. Teleph ( 512 )  9. TCEQ Programs and II  orm. See the Core Data Form  Dam Safety  Municipal Solid Waste  Sludge   | one Number 913-2338  D Numbers C instructions for Districts  New Sc  | Check all Programs r additional guidant s  Durce Review Air  | and write in the perce.  Edwards Aqui  13-00062601  OSSF  Title V Air               | n or Code                                      | tion numbers  Emission  Petrole  Tires                              | 38. Fax N ( that will be affected ons Inventory Air um Storage Tank                            | ) - d by the updat  | es submitted on this rial Hazardous Waste Dil                       |
| 36. Teleph ( 512 )  9. TCEQ Programs and II  orm. See the Core Data Form  Dam Safety  Municipal Solid Waste   | 913-2338  D Numbers Constructions for Districts  New Sc  | Check all Programs r additional guidant s  Durce Review Air  | and write in the perce.  Edwards Aqui  13-00062601  OSSF                            | n or Code                                      | tion numbers  | 38. Fax N ( that will be affected ons Inventory Air um Storage Tank                            | ) - d by the updat  | es submitted on this rial Hazardous Waste Dil                       |
| 36. Teleph ( 512 )  9. TCEQ Programs and II  orm. See the Core Data Form  Dam Safety  Municipal Solid Waste  Sludge  Voluntary Cleanup  | one Number 913-2338  D Numbers Constructions for Districts  New Sco  | Check all Programs r additional guidants s curce Review Air Water  | and write in the perce.  Edwards Aqui  13-00062601  OSSF  Title V Air               | n or Code                                      | tion numbers  Emission  Petrole  Tires                              | 38. Fax N ( that will be affected ons Inventory Air um Storage Tank                            | ) - d by the updat  | es submitted on this rial Hazardous Waste Dil                       |
| 36. Teleph ( 512 ) 9. TCEQ Programs and II orm. See the Core Data Form  | one Number 913-2338  D Numbers Constructions for Districts  New Sco  | Check all Programs r additional guidants s curce Review Air Water  | and write in the perce.  Edwards Aqui  13-00062601  OSSF  Title V Air               | n or Code                                      | tion numbers  Emission  Petrole  Tires                              | 38. Fax N ( that will be affected ons Inventory Air um Storage Tank                            | ) - d by the updat  | es submitted on this rial Hazardous Waste Dil                       |
| 36. Teleph ( 512 ) 9. TCEQ Programs and II orm. See the Core Data Form Dam Safety  Municipal Solid Waste  Sludge Voluntary Cleanup  | one Number 913-2338  D Numbers Constructions for Districts  New Sco  | Check all Programs r additional guidants s curce Review Air Water  | and write in the perce.  Edwards Aqui  13-00062601  OSSF  Title V Air               | n or Code                                      | tion numbers  Emission  Petrole  Tires  Water F                     | 38. Fax N ( that will be affected ons Inventory Air um Storage Tank                            | ) - d by the updat  | es submitted on this rial Hazardous Waste Dil                       |
| 36. Teleph (512) 9. TCEQ Programs and II orm. See the Core Data Form Dam Safety  Municipal Solid Waste  Sludge Voluntary Cleanup  SECTION IV: Pro 40.   | one Number 913-2338  D Numbers Constructions for Districts  New Sco  | Check all Programs radditional guidants source Review Air  Water  Water  Mater   | and write in the perce.  Edwards Aqui  13-00062601  OSSF  Title V Air               | mits/registra                                  | tion numbers  Emission  Petrole  Tires  Water F                     | 38. Fax N ( that will be affected one Inventory Air um Storage Tank Rights                     | ) - d by the updat  | es submitted on this rial Hazardous Waste Dil                       |
| 36. Teleph ( 512 )  9. TCEQ Programs and II  orm. See the Core Data Form  Dam Safety  Municipal Solid Waste  Sludge  Voluntary Cleanup  SECTION IV: Pro  40. Name:  JW WOOD  42. Telephone                | one Number 913-2338  D Numbers Constructions for Districts  New Score Storm Very Waste Very Barer In   | Check all Programs radditional guidants source Review Air  Water  Water  Mater   | and write in the perce.  Edwards Aqui  13-00062601  OSSF  Title V Air  Wastewater A | mits/registra ifer  griculture  41. Title:     | tion numbers  Emission  Petrole  Tires  Water F                     | 38. Fax N ( that will be affected one Inventory Air um Storage Tank Rights                     | ) -  Ind by the update  Indust  PWS  Used (                     | es submitted on this rial Hazardous Waste Dil                       |
| 36. Teleph (512) 9. TCEQ Programs and II orm. See the Core Data Form Dam Safety  Municipal Solid Waste  Sludge  Voluntary Cleanup  SECTION IV: Pro 40. Name: JW WOOD  42. Telephone Number (512) 913-2338 | one Number 913-2338  D Numbers Constructions for Districts  New Score Waste Construction Storm Very | Check all Programs radditional guidants surce Review Air  Water  Water  Iformation                                     | and write in the perce.  Edwards Aqui  13-00062601  OSSF  Title V Air  Wastewater A | mits/registra ifer  griculture  41. Title:     | tion numbers  Emission  Petrole  Tires  Water F                     | 38. Fax N ( that will be affected one Inventory Air um Storage Tank Rights                     | ) -  Ind by the update  Indust  PWS  Used (                     | es submitted on this rial Hazardous Waste Dil                       |
| 36. Teleph ( 512 )  9. TCEQ Programs and II  prim. See the Core Data Form  Dam Safety  Municipal Solid Waste  Sludge  Voluntary Cleanup  SECTION IV: Pro  40. Name:  JW WOOD  42. Telephone Number        | one Number 913-2338  D Numbers Coinstructions for Districts  New Sci Storm V  Waste V  Paper In  43. Ext./Cod  thorized  | Check all Programs radditional guidants source Review Air  Water  Water  Water  44. Fax  (Signature  the best of my kr | and write in the perce.  Edwards Aqui  13-00062601  OSSF  Title V Air  Wastewater A | mits/registra  ifer  d1. Title:  45. E-M  JWOC | tion numbers  Emissic Petrole Tires Water F  MAN ail Address DD@DEI | 38. Fax N ( that will be affected one Inventory Air um Storage Tank Rights NAGING PA LPHIWEST. | ) -  Ind by the update  Indust  PWS  Used to Other:  RTNER  COM | es submitted on this rial Hazardous Waste  Dil  te, and that I have |

TCEQ-10400 (02/21) Page 2 of 3

Job Title:

MANAGING PARTNER

Company:

CANHAM RANCH LTD

| Name (In Print): | JW WOOD | 11101220 | Phone: | (512) 913- <b>2338</b> |
|------------------|---------|----------|--------|------------------------|
| Signature:       | _       | MILL     | Date:  | 11-22-22               |

TCEQ-10400 (02/21) Page 3 of 3

Robert J. Huston, Chairman R. B. "Ralph" Marquez, Commissioner John M. Baker, Commissioner Jeffrey A. Saitas, Executive Director



#### TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

RECEIVED

September 19, 2000

SEP 2 2 2000 COUNTY ENGINEER

Mr. J. W. Wood Canham Ranch, Ltd. P.O. Box 160 Buda, TX 78160

Re:

Edwards Aquifer, Comal County

NAME OF PROJECT: Canham Ranch, Located on west side of FM 3009 approximately 4,000 feet

southeast of Natural Bridge Caverns entrance road; Comal County, Texas

TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas

Administrative Code (TAC) Chapter 213 Edwards Aquifer

Edwards Aquifer Protection Program File No. 1519.00

Dear Mr. Wood:

The Texas Natural Resource Conservation Commission (TNRCC) has completed its review of the WPAP application for the referenced project submitted to the San Antonio Regional Office by Ms. Brenda Kelly, P.E., of Carter & Burgess on behalf of Canham Ranch, Ltd. on June 26, 2000. Final review of the WPAP submittal was completed after additional material was received on September 12, 2000. As presented to the TNRCC, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer protection plan, modification to a plan, or exception. A motion for reconsideration must be filed no later than 20 days after the date of this approval letter. This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10% of the construction has commenced on the project or an extension of time has been requested.

#### PROJECT DESCRIPTION

The proposed residential project will have an area of approximately 283 acres and will have the following parameters:

- The development will include 149 single-family residential lots with approximately 18,000 linear feet of roadway. Lots 37 and 68 will be used for public water supply wells.
- The proposed impervious cover for the development is approximately 9.22% of the total area of the site.
- The impervious cover for this residential subdivision will be 23.98 acres.
- According to a letter dated, June 15, 2000, signed by Mr. Thomas Hornseth, P.E., Comal County Engineer, the site in the development is acceptable for the use of on-site sewage facilities.

REPLY TO: REGION 13 • 140 HEIMER RD., STE. 360 • SAN ANTONIO, TEXAS 78232-5042 • 210/490-3096 • FAX 210/545-4329

#### PERMANENT POLLUTION ABATEMENT MEASURES

To prevent pollution of stormwater runoff originating on-site or up-gradient of the site and potentially flowing across and off the site after construction, total impervious cover for the project site will be less than 20% (9.22%).

#### **GEOLOGY**

According to the geologic assessment included with the submittal, there are 32 geologic or manmade features located on the project site. Twenty-nine features were assessed as possibly sensitive, and three features were assessed as not sensitive. The San Antonio Regional Office did not conduct a site investigation.

#### SPECIAL CONDITIONS

- I. Since this project will have not more than 20% impervious cover, an exemption from permanent BMPs is approved. If the percent impervious cover ever increases above 20% or the land use changes, the exemption for the whole site as described in the property boundaries required by §213.4(g), may no longer apply and the property owner must notify the San Antonio Regional Office of these changes.
- II. The proposed on-site sewage facility (OSSF) must be permitted by a local or the state permitting authority prior to commencement of construction.
- III. All planning and design materials for the proposed OSSF shall be submitted by a professional engineer or a sanitarian registered in Texas.
- IV. The following minimum separation distances in feet must be provided between OSSF units and recharge features or possible recharge features (S-1, S-2, S-4, S-8, S-9, S-11, S-12, S-16, S-17, S-25, S-26, S-27, S-29, S-30 and S-31):

| Sewage Treatment Tanks or Holding Tanks                    |       | 50        |     |
|--|-------|-----------|-----|
| Soil Absorption Systems, & Unlined Evapotranspiration Beds | 150   |           |     |
| Lined Evapotranspiration Beds                              | . 50  |           |     |
| Sewer Pipe with Watertight Joints                          |       | 50        |     |
| Surface Irrigation Fields                                  |       | 150       |     |
| Drip Irrigation Fields                                     | 100 w | hen R₄≤ ( | 0.1 |
|  | 150 w | hen R.> ( | 0.1 |

The affected lots are Lots 1 & 8 (Block 1), Lot 16 (Block 2), and Lots 12, 13, 26 & 36 (Block 3).

- V. The proposed OSSF must meet all other requirements found in 30 TAC § 285--On-Site Sewage Facilities.
- VI. The applicant must notify purchasers of each of the lots that certain lots must have the required separation distances. The notification must include a copy of this letter.

#### STANDARD CONDITIONS

1. Pursuant to §26.136 of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

Mr. J.W. Wood September 19, 2000 Page 3

#### Prior to Commencement of Construction:

- 2. Within 60 days of receiving written approval of an Edwards Aquifer protection plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries, covered by the Edwards Aquifer protection plan, shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TNRCC-0625) that you may use to deed record the approved WPAP is enclosed.
- 3. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
- 4. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
- 5. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and file number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension of an approved plan.
- 6. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. The TNRCC may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
- 7. Abandoned injection wells must be closed under the requirements of 30 TAC Chapter 331 (relating to Underground Injection Control).
- 8. All borings with depths greater than or equal to 20 feet must be plugged with a non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

#### **During Construction:**

9. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.

Mr. J.W. Wood September 19, 2000 Page 4

- If any sensitive feature is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
- 11. Five wells exist on the site. All identified abandoned water wells, including injection, dewatering, and monitoring wells must be plugged pursuant to requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Licensing and Regulation of Water Well Drillers and Water Well Pump Installers) and all other locally applicable rules, as appropriate. If any abandoned wells (including water, injection (injection well referenced in Item 7), dewatering, and monitoring well) are encountered during construction, they must be plugged pursuant to requirements of the Texas Department of Licensing and Regulation (16 TAC Chapter 76) and all other locally applicable rules, as appropriate.
- 12. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).
- 13. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
- 14. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
- 15. To the maximum extent practicable, BMPs and measures must maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction. The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided. A request to temporarily seal the feature must include a justification that no reasonable and practicable alternative exists. The request will be evaluated by the executive director on a case-by-case basis.

#### After Completion of Construction:

- 16. Owners of permanent BMPs and measures must insure that the BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.
- 17. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner

Mr. J.W. Wood September 19, 2000 Page 5

or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through the San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TNRCC-10263) is enclosed.

- 18. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
- 19. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50% of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
- 20. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

If you have any questions or require additional information, please contact John Mauser of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4024.

Sincerely,

Jeffrey A. Saltas, P.E. Executive Director

Texas Natural Resource Conservation Commission

JAS/JKM/eg

Enclosure:

Deed Recordation Affidavit, Form TNRCC-0625

Change in Responsibility for Maintenance or Permanent BMPs-Form TNRCC-10263

cc:

Ms. Brenda Kelly, Carter & Burgess

Ms. Rebecca Cedillo, San Antonio Water System

Mr. Tom Hornseth, Comal County

Mr. John Bohuslav, TXDOT San Antonio District

Mr. Greg Ellis, Edwards Aquifer Authority

TNRCC Field Operations, Austin

# **Carter**::Burgess

RECEIVED

SEP 2 2 2000

**COUNTY ENGINEER** 

911 Central Parkway North

Suite 425

San Antonio, Texas 78232 Phone: (210) 494-0088 Fax: (210) 494-4525

www.c-b.com

September 19, 2000

Mr. Tom Hornseth, P.E. **Comal County Engineer** Comal County Engineer's Office 195 David Jonas Drive New Braunfels, Texas 78132-3760

Re: Canham Ranch Subdivision, WPAP Revision

Dear Mr. Hornseth:

Enclosed is a revised site plan, and revised sheets, which were changed due to modifications to the site plan. Mr. John Mauser, TNRCC-Region 13, has reviewed this information and requested we send you a copy. Also enclosed is a copy of the letter sent to Mr. Mauser dated September 11, 2000 in reference to the changes made.

Please add these revisions to the original WPAP submitted for Canham Ranch Subdivision. If you have any questions, feel free to give me a call.

Sincerely,

Jeff Moeller

Attachments

Carter & Burgess, Inc.

C: John Mauser, TNRCC - Region 13

M:\31-0011.021 Canham Ranch Subdivision\word\ComalCo\_WPAP\_rev-ltr.doc

## **Carter**"Burgess

911 Central Parkway North Suite 425

San Antonio, Texas 78232 Phone: (210) 494-0088 Fax: (210) 494-4525 www.c-b.com

September 11, 2000

Mr. John Mauser TNRCC – Region 13, San Antonio 140 Heimer Road, Suite 360 San Antonio, Texas 78232

Re: Canham Ranch Subdivision - WPAP

#### Dear John:

Due to changes requested by the developer and the City of San Antonio, as well as revisions to minimize impacts to recharge features, the lot layout for the referenced project has changed since our original submittal received by your office on June 26, 2000.

The main revision is an increase in the total number of lots, from 130 to 149. Minor changes included lot line relocations to avoid recharge features and the roadway entrance shifted north per the City of San Antonio's request.

We have included 3 copies of revised sheets, which were affected by the change. Revisions are as follows:

- 1. Attachment C Project Description, General Information Revised the size of lots and impervious cover and open space percentages.
- 2. Water Pollution Abatement Plan Application, Pages 1 and 2. Revised areas of impervious cover and total wastewater generated.
- 3. Site Plan Revised lot layout and entrance road alignment.
- 4. Attachment A, Permanent Stormwater Section Revised the impervious cover percentage.

Per our conversation with you on August 23, 2000, we concur that features 1, 2, 4, 8, 9, 11, 12, 14, 16, 17, 25, 26, 27, 29, 30, and 31 are 'possibly sensitive'. This is based upon the assessment table comments in the Geologic Assessment, discussions with the Geologist, and field investigations. There were no 'sensitive' features identified in the Assessment. The features identified as 'possibly sensitive' above fall on, or cross through, the following lots.

```
Block 1 – Lots 2, 6, 7, 28, 37, 39, 40, 59, 60, 66, 67, and 68.
Block 2 – Lot 9.
Block 3 – Lots 3, 4, 7, 8, 9, 11, 14, 27, 29, 30, 32, 33, 35, 46, 47.
```

The following lots are only affected by the sanitary setback easement and do not actually have a 'possibly sensitive' recharge feature following within the limits of the lot lines.

Block 1 – Lots 1 and 8. Block 2 – Lot 16.

Block 3 – Lots 12, 13, 26, and 36.

The 'possibly sensitive' features listed will be protected by a 50-foot sanitary sewer setback easement. This is established based on Table 10, Chapter 285, of the TAC for septic systems with linings. These easements will be placed on the plat along with a note stating all septic systems installed on the designated lots will have lined septic beds.

This information should complete the WPAP submittal for Canham Ranch Subdivision. If you need additional information, or have any questions, please give us a call.

Sincerely,

Jeff Moeller

C: J.W. Wood Tom Taylor

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#### <u>Attachment C - Project Description</u>

Rev. 9-7-00

Canham Ranch is located southeast of Natural Bridge Caverns on the west side of F.M. 3009. (See location map) Canham Ranch is approximately 283 acres of unimproved land, primarily composed of dense brush and trees, with grass and rock outcroppings. Bear Creek crosses through the front of the property and under F.M. 3009. A detailed flood study is being performed to determine the 100-year flood elevation.

The proposed land use will be a single-family residential subdivision with an average lot size of 1.7 acres and will have asphalt roads. The subdivision will have 149 lots with approximately 18,000 L.F. of roadway. The impervious cover will be approximately 9.22%. The total open space for the development will be approximately 84%. Each lot will have its own septic system with water supplied from a central water distribution system.

#### WATER POLLUTION ABATEMENT PLAN APPLICATION

# FOR REGULATED ACTIVITIES ON THE EDWARDS AQUIFER RECHARGE ZONE AND RELATING TO 30 TAC §213.5(b), EFFECTIVE JUNE 1, 1999

Rev. 9-7-00

PROJECT NAME: CANHAM RANCH

#### **PROJECT INFORMATION**

| 1. | The typ | De of project is: Residential: # of Lote Residential: # of Livi Commercial Industrial Other: |            | ents:         | <u>149</u> |
|----|---------|--|------------|---------------|------------|
| 2. | Total s | ite acreage (size of p   | roperty):  | <u>281.29</u> |            |
| 3. | Project | ted population:  | <u>596</u> |               |            |

4. The amount and type of impervious cover expected after construction are shown below:

| Impervious Cover of Proposed<br>Project | Sq. Ft.   | Sq. Ft./Acre | Acres |
|---|-----------|--------------|-------|
| Structures/Rooftops                     | 447,000   | ÷ 43,560 =   | 10.26 |
| Parking                                 | 223,500   | ÷ 43,560 =   | 5.13  |
| Other paved surfaces                    | 459,451   | ÷ 43,560 =   | 10.55 |
| Total Impervious Cover                  | 1,129,951 | ÷ 43,560 =   | 25.94 |
| Total                                   | 9.22 %    |              |       |

- 5. X ATTACHMENT A Factors Affecting Water Quality. A description of any factors that could affect surface water and groundwater quality is provided at the end of this form.
- 6. X Only inert materials as defined by 30 TAC 330.2 will be used as fill material.

#### FOR ROAD PROJECTS ONLY

Complete questions 7-12 if this application is exclusively for a road project.

| 7. | Type o | of project:   |
|----|--------|---|
|    |        | TXDOT road project.   |
|    | _      | County road or roads built to county specifications.          |
|    |        | City thoroughfare or roads to be dedicated to a municipality. |
|    |        | Street or road providing access to private driveways.         |
|    |        |   |

8. Type of pavement or road surface to be used:

|      | <ul><li>Concrete</li><li>Asphaltic concrete pavement</li><li>Other:</li></ul>  | <u>Rev. 9-7-00</u>  |
|------|--|---|
| 9.   | Length of Right of Way (R.O.W.):  Width of R.O.W.:  L x W = Ft² ÷ 43,560 Ft²/Acre =  | _feet.<br>_feet.<br>_acres.   |
| 10.  | Length of pavement area:  Width of pavement area:  L x W = Ft² ÷ 43,560 Ft²/Acre =  Pavement area acres ÷ R.O.W. area  | _ feet.<br>_ acres.   |
| 11.  | <ul><li>A rest stop will be included in this project.</li><li>A rest stop will <b>not</b> be included in this project.</li></ul>   | ct.   |
| 12.  | Executive Director. Modifications to existin   | that do not require approval from the TNRCC g roadways such as widening roads/adding he width of one (1) existing lane require prior  |
| STOR | RMWATER TO BE GENERATED BY THE PROPOS  | ED PROJECT  |
| 13.  | ATTACHMENT B - Volume and Character of St character (quality) of the stormwater runoff which is provided at the end of this form. The estimates of st based on area and type of impervious cover. Include construction and post-construction conditions.   | expected to occur from the proposed project is ormwater runoff quality and quantity should be   |
| WAST | TEWATER TO BE GENERATED BY THE PROPOS  | ED PROJECT  |
| 14.  | The character and volume of wastewater is shown    100   | below:  |
| 15.  | be used to treat and dispose of the waste (authorized agent) written approval is proviland is suitable for the use of an on-site se suitable.  X Each lot in this project/development size. The system will be designed by sanitarian and installed by a license Sewage Collection System (Sewer Lines): | uthorized Agent. An on-site sewage facility will water. The appropriate licensing authority's ded at the end of this form. It states that the ewage facility or identifies areas that are not is at least one (1) acre (43,560 square feet) in a licensed professional engineer or registered d installer in compliance with 30 TAC §285. |

The site will not be used for multi-family residential or small businesses. The development will be low density, single family, residential with 0.53 dwelling units per acre. The total impervious cover for the site is approximately 9.22% at full development. This assumes a 24-foot asphalt roadway and 4500 square feet of improvements per lot.

#### <u>Attachment B – BMPs for Upgradient Stormwater</u>

The site is located on several ridges and there is no stormwater originating upgradient of the site. As shown on the Drainage Area map in the Temporary Stormwater Section, the drainage boundaries run along the west and north side of the property which is the natural ridge line in the area.

#### Attachment C – BMPs for On-site Stormwater

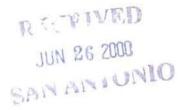
No permanent BMPs will be constructed to treat stormwater runoff. The site design allows the natural swales and low areas of the site to remain in a natural state, therefore acting as natural vegetative filter strips. The site, when fully developed, will have an impervious cover of approximately 8.5%. There will be appropriate sanitary setback easements placed around all recharge features identified in the Geologic Assessment as having significant recharge potential. The perimeter of the site will remain in a natural condition, preventing contaminated runoff from leaving the site.

#### <u>Attachment D – BMPs for Surface Streams</u>

The only surface stream in the area is Bear Creek and no sensitive features were identified in the Geologic Assessment for the site. All of the features identified as having significant recharge potential in the Geologic Assessment will be protected by a sanitary setback easement surrounding the feature. These easements will be shown on the plat for the subject property and recorded during the platting process. All surface streams will be protected from erosion by not allowing runoff to exceed existing velocities. This will be accomplished by adding energy dissipaters to the downstream side of culverts.

#### <u>Attachment E – Request to Seal Features</u>

The site was designed to cause minimal impact on features identified in the Geologic Assessment. Due to severe topographic constraints, building the proposed roadways through the subdivision will seal some of the features. No features will be closed in their entirety; only small portions of the affected features will be closed. The features affected are 3, 4, 6, 9, 10, 12, 13, 15, 19, 20 and 21. Features 3, 13 and 15 are classified as having



## WATER POLLUTION ABATEMENT PLAN APPLICATION

For

RECEIVED

JUL 6 2000

CANHAM RANCH SUBDIVISION

COUNTY ENGINEER

Located in Comal County, Texas

Submitted To:

#### **Texas Natural Resource Conservation Commission**

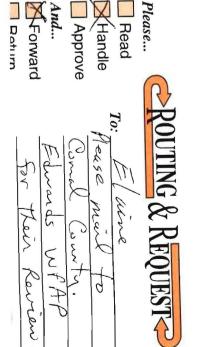
Region 13 - San Antonio 140 Heimer Road, Suite 360 San Antonio, Texas 78232 210.490-3096 Fax 210.545-4329

Submitted By:

Carter & Burgess, Inc.

911 Central Parkway North, Suite 175 San Antonio, Texas 78232 210.494-0088 Fax 210.494-4525

June 26, 2000





#### **GENERAL INFORMATION FORM**

# FOR REGULATED ACTIVITIES ON THE EDWARDS AQUIFER RECHARGE AND TRANSITION ZONES AND RELATING TO 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) EFFECTIVE JUNE 1, 1999

**CANHAM RANCH** 

| COU  | NTY: <u>COMAL</u>  |   | STREA             | M BASIN: BEAR CREEK  |
|------|--|---|-------------------|--|
| EDW  | ARDS AQUIFER:  | X RECHARGE ZO TRANSITION ZO   |                   |  |
| PLAN | ITYPE:   | X WPAP<br>SCS   | AST<br>UST        | EXCEPTION<br>MODIFICATION  |
| APPL | ICANT INFORMATIO   | N   |                   |  |
| 1.   | Applicant:   |   |                   |  |
|      | Contact Person:<br>Entity:<br>Mailing Address:<br>City, State:<br>Telephone: | J.W. WOOD  CANHAM RANCH, P.O. BOX 160  BUDA, TX  (512) 913-2338         |                   | Zip: <u>78160</u><br>: <u>_(512)                                    </u>       |
| 2.   | Agent/Representativ  | e (If any):   |                   |  |
|      | Contact Person:<br>Entity:<br>Mailing Address:<br>City, State:<br>Telephone: | BRENDA KELLY CARTER & BURG 911 CENTRAL PA SAN ANTONIO, T (210) 494-0088 | RKWAY NORTH<br>X  | , <u>SUITE 175</u><br>Zip: 78232<br>: <u>(210)</u> 494-4525                    |
| PROJ | ECT LOCATION   | 8   |                   |  |
| 3.   | Site Address:<br>Street:<br>City:  | 25,000 BLOCK<br>NATURAL BRIDGE<br>SAN ANTONIO                           | E CAVERNS ROA     | ND (F.M. 3009)<br>Zip:_78266   |
| 4.   | X This project is SAN ANTC   |   | but inside the ET | J (extra-territorial jurisdiction) of TJ.                                      |
| 5.   |  |   |                   | ription provides sufficient detail and<br>he project and site boundaries for a |

TAKE I-35 NORTH AND EXIT 3009. TURN NW ONTO 3009 AND CONTINUE 6.5 MILES TO

PROJECT NAME:

#### GATE ON LEFT.

- 6. X ATTACHMENT A ROAD MAP. A road map showing directions to and the location of the project site is attached at the end of this form.
- 7. X ATTACHMENT B USGS / EDWARDS RECHARGE ZONE MAP. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached behind this sheet. The map(s) should clearly show:
  - X Project site.
  - X USGS Quadrangle Name(s).
  - X Boundaries of the Recharge Zone (and Transition Zone, if applicable).
  - X Drainage path from the project to the boundary of the Recharge Zone.
- 8. X Sufficient survey staking is provided on the project to allow TNRCC regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment. The TNRCC must be able to inspect the project site or the application will be returned.
- 9. X ATTACHMENT C PROJECT DESCRIPTION. Attached at the end of this form is a detailed narrative description of the proposed project.
- 10. Existing project site conditions are noted below:
  - \_\_ Existing commercial site
  - Existing industrial site Existing residential site
  - X Existing paved and/or unpaved roads
  - Undeveloped (Cleared)
  - X Undeveloped (Undisturbed/Uncleared)
  - Other:

#### PROHIBITED ACTIVITIES

- 11. X I am aware that the following activities are prohibited on the **Recharge Zone** and are not proposed for this project:
  - (1) waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
  - (2) new feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
  - (3) land disposal of Class I wastes, as defined in 30 TAC §335.1;
  - (4) the use of sewage holding tanks as parts of organized collection systems; and
  - new municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).
- 12. X I am aware that the following activities are prohibited on the **Transition Zone** and are not proposed for this project:
  - (1) waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);

- (2) land disposal of Class I wastes, as defined in 30 TAC §335.1; and
- new municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

#### **ADMINISTRATIVE INFORMATION**

13.

X
 For a Water Pollution Abatement Plan and Modifications, the total acreage of the site where regulated activities will occur.
 For an Organized Sewage Collection System Plans and Modifications, the total linear footage of all collection system lines.
 For a UST Facility Plan or an AST Facility Plan, the total number of tanks or piping

systems. A Contributing Zone Plan.

The fee for the plan(s) is based on:

A request for an exception to any substantive portion of the regulations related to the protection of water quality.

\_\_\_ A request for an extension to a previously approved plan.

14. Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TNRCC is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

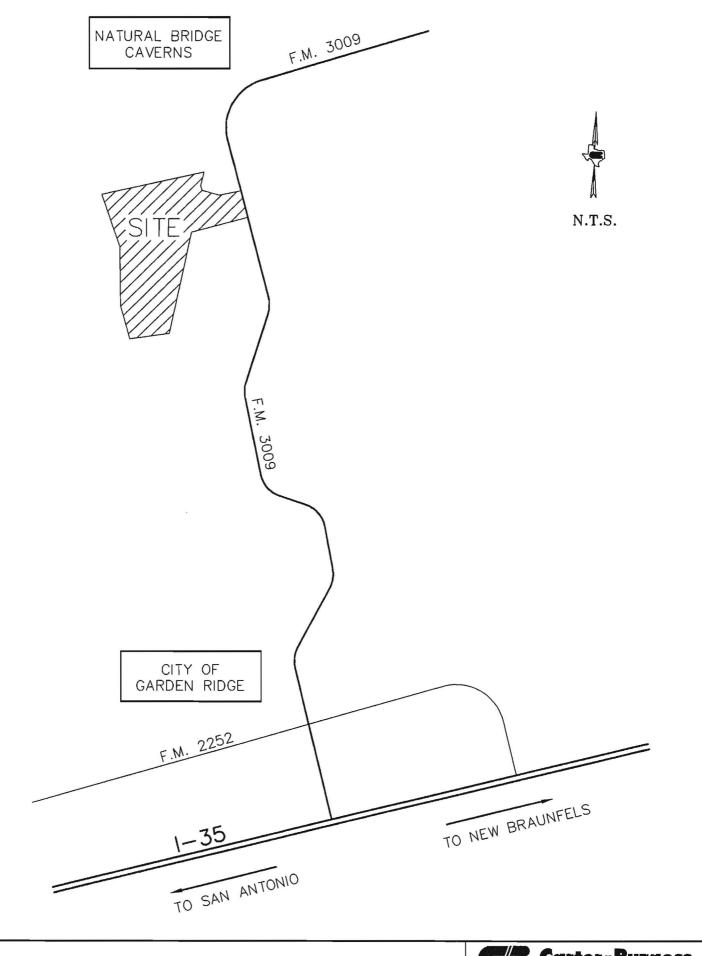
TNRCC cashier

- Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
- X San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)
- Submit one (1) original and three (3) copies of the completed application to the appropriate regional office for distribution by the TNRCC to the local municipality or county, groundwater conservation districts, and the TNRCC's Central Office.
- 16. X No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the executive director.
  - No person shall commence any regulated activity until the Contributing Zone Plan for the activity has been filed with the executive director.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **GENERAL INFORMATION FORM** is hereby submitted for TNRCC review. The application was prepared by:

Print Name of Applicant/Owner/Agent

Signature of Applicant/Owner/Agent

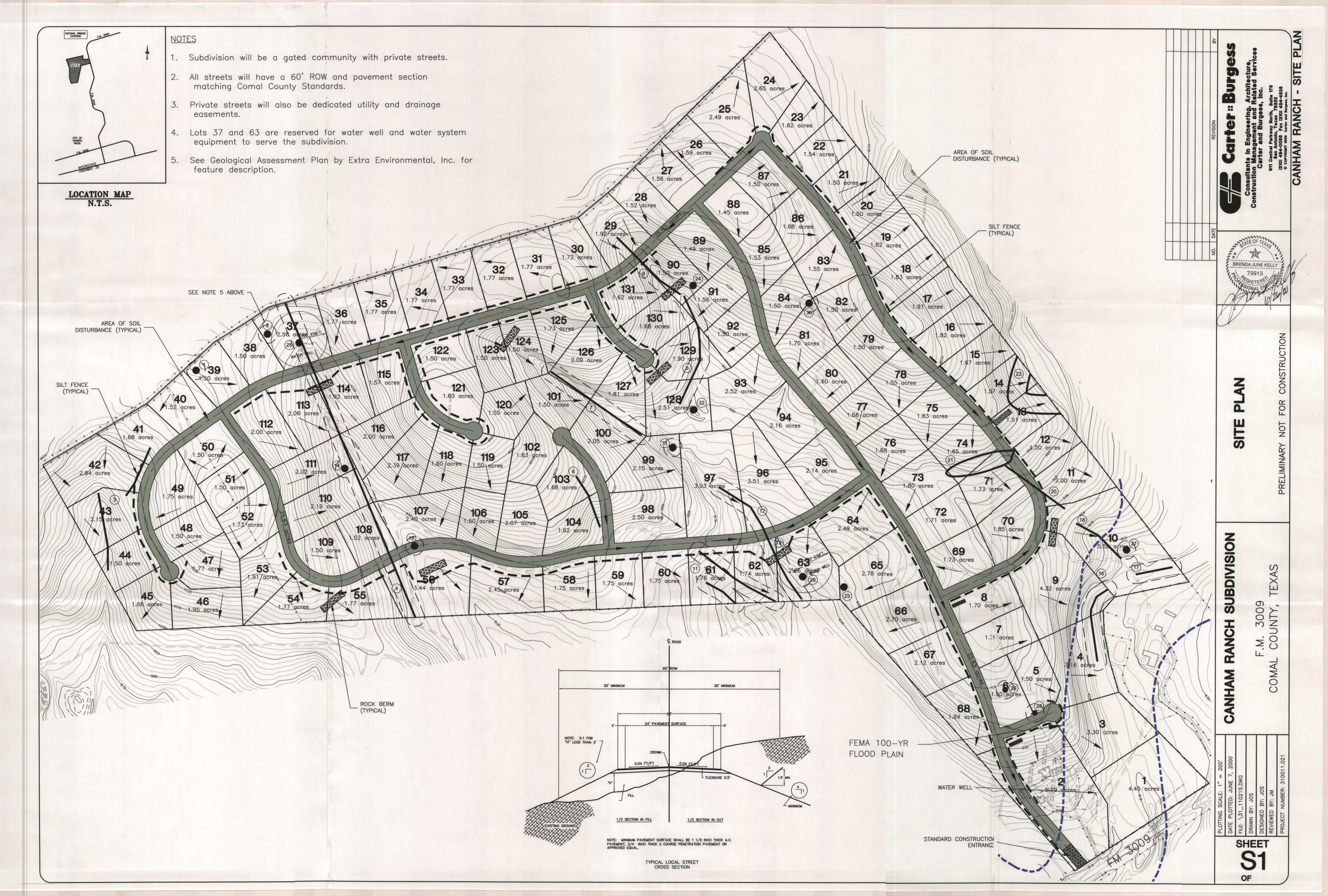


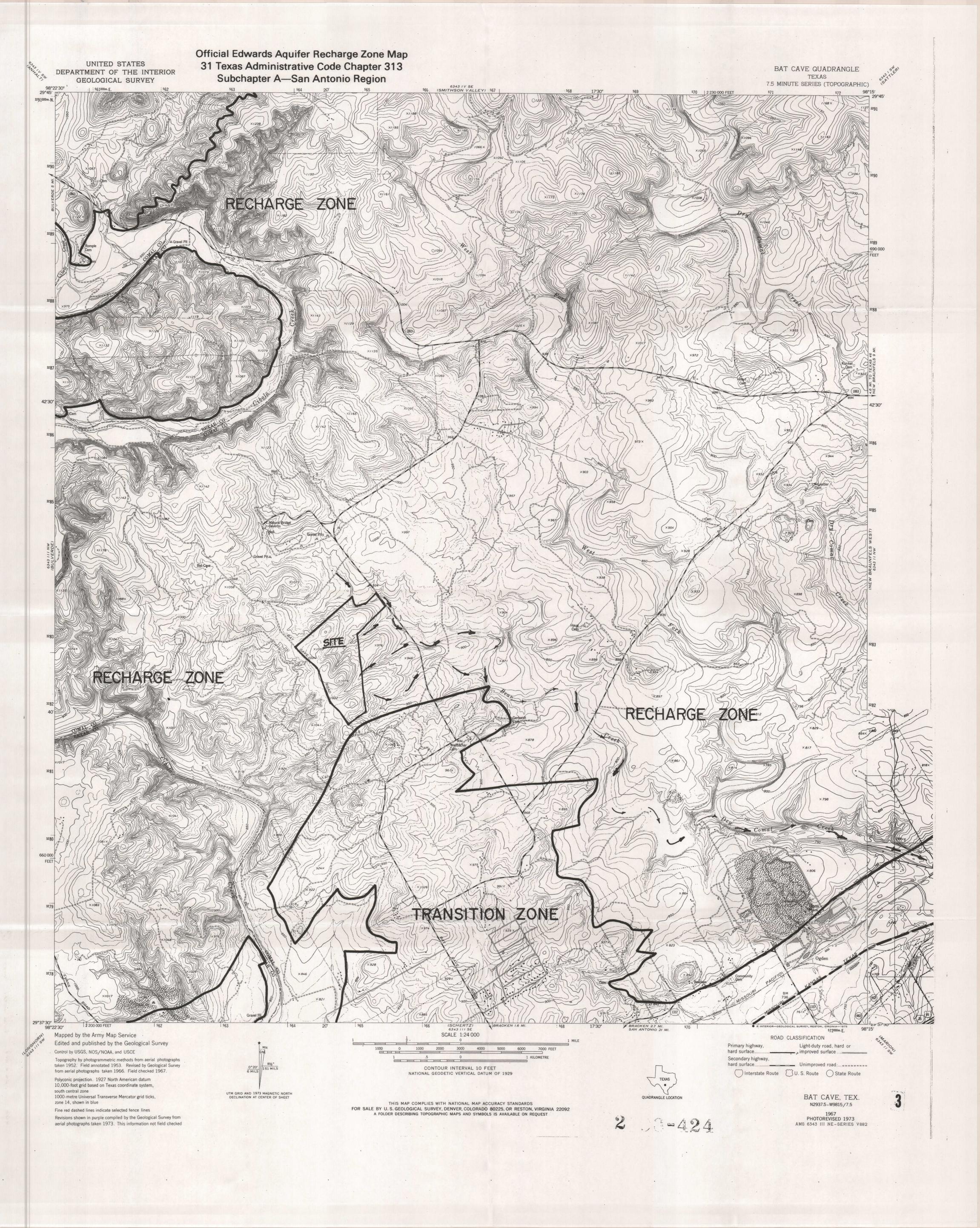
ATTACHMENT A CANHAM RANCH LOCATION MAP



Consultante in Engineering, Architecture, Construction Management and Raiated Services Carter and Burgeae, Inc.

> 911 Gentral Perkway North, Suite 178 San Antonio, Texas 78232 12101 484-0088 Fax 12101 484-4825





#### Attachment C - Project Description

Canham Ranch is located southeast of Natural Bridge Caverns on the west side of F.M. 3009. (See location map) Canham Ranch is approximately 283 acres of unimproved land, primarily composed of dense brush and trees, with grass and rock outcroppings. Bear Creek crosses through the front of the property and under F.M. 3009. A detailed flood study is being performed to determine the 100-year flood elevation.

The proposed land use will be a 1.5 to 2.5 acre single-family residential subdivision with asphalt roads. The subdivision will have 130 lots with approximately 18,000 L.F. of roadway. The impervious cover will be approximately 8.48%. The total open space for the development will be approximately 85%. Each lot will have its own septic system with water supplied from a central water distribution system.



### **GEOLOGIC ASSESSMENT**

of

CANAM PROPERTY approximately 250 acres FM 3009 - COMAL COUNTY, TEXAS

Prepared for:

Carter - Burgess 911 Central Parkway North, Ste. 175 San Antonio, TX 78232

Prepared by:

Joseph S. Moulder, geologist

# GEOLOGIC ASSESSMENT FOR REGULATED ACTIVITIES

ON THE EDWARDS AQUIFER RECHARGE/TRANSITION ZONES AND RELATING TO 30 TAC §213.5(b)(3), EFFECTIVE JUNE 1, 1999

| PROJ | ECT NA     | AME: CANAM PROPERTY FM 3009 Comal County  |
|------|------------|---|
| TYPE | OF PR      | OJECT: X WPAP AST SCS UST   |
| LOCA | TION C     | PF PROJECT: X Recharge Zone Transition Zone Contributing Zone within the Transition Zone  |
| PROJ | ECT IN     | FORMATION   |
| 1.   | <u>X</u>   | Geologic or manmade features are described and evaluated using the attached <b>GEOLOGIC ASSESSMENT TABLE</b> .  |
| 2.   | Soil co    | over on the project site is $\underline{.5-2}$ feet thick. In general, the soil present appears to have the to:   |
|      |            | nsmit fluid flow to the subsurface.<br>pede fluid flow to the subsurface.   |
| 3.   | <u>X</u> _ | SOILS ATTACHMENT. A narrative description of soil units and a soil profile, including thickness and hydrologic characteristics are attached at the end of this form.  |
| 4.   | X          | A STRATIGRAPHIC COLUMN is attached at the end of this form that shows formations, members, and thicknesses. The outcropping unit should be at the top of the stratigraphic column.  |
| 5.   | <u>X</u> _ | A NARRATIVE DESCRIPTION OF SITE SPECIFIC GEOLOGY is attached at the end of this form. The description must include a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure, and karst characteristics of the site. |
| 6.   | <u>X</u> _ | Appropriate SITE GEOLOGIC MAP(S) are attached:  |
|      |            | The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'  |
|      |            | Applicant's Site Plan Scale $1" = 200$ Site Geologic Map Scale $1" = 200$   |
| 7.   | _          | Method of collecting positional data: Global Positioning System (GPS) technology. Other method(s).  |
| 8.   | <u>X</u>   | The project site is shown and labeled on the Site Geologic Map.   |
| 9.   | X_         | Surface geologic units are shown and labeled on the Site Geologic Map.  |
| 10.  | <u>X</u> _ | Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in   |

|                      | -              | the attached Geologic Assessment Table.<br>Geologic or manmade features were not discovered on the project site during the field investigation.  |
|----------------------|----------------|--|
| 11.                  |                | The Recharge Zone boundary is shown and labeled, if appropriate.   |
| 12.                  | All kno        | wn wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.):   |
|                      | <u>X</u>       | There are _5_(#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)  The wells are not in use and have been properly abandoned.  X The wells are not in use and will be properly abandoned.  The wells are in use and comply with 16 TAC §76.  There are no wells or test holes of any kind known to exist on the project site. |
| ADMIN                | IISTRA         | TIVE INFORMATION   |
| 13.                  | <u>X</u>       | One (1) original and three (3) copies of the completed assessment has been provided.   |
| Date(s               | ) Geolo        | gic Assessment was performed: <u>April 4,5,12,18,20,24,25</u> 2000  Date(s)  |
| concer               | ning the       | f my knowledge, the responses to this form accurately reflect all information requested proposed regulated activities and methods to protect the Edwards Aquifer. My signature am qualified as a geologist as defined by 30 TAC 213.   |
| <u>Jo</u><br>Print N | seph<br>ame of | S. Moulder (210) 829-7137 Geologist Telephone  |
| Signati              | ure of G       | (210) 829-8271 Fax  25 April 2000  Beologist Date  |
| Repres               | senting:       | Extra Environmental, Inc. (Name of Company)  |

|          | GF    | ol oc  | IC ASSI               | SSI  | MF | NT     | TAF | BLE |                     |   |                          |   |                                      |             |                 |                  |                  |       |        | PR          | OJE      | CT       | NAN     | 1E:      |                |                  |                  | CAI           | MAM   | 1 PR                                 | OPE                                       | RT       | Y      |         |       |             |               |                 |         |                   |               |                 |                                      |          | 71           |
|----------|-------|--------|-----------------------|------|----|--------|-----|-----|---------------------|---|--------------------------|---|--------------------------------------|-------------|-----------------|------------------|------------------|-------|--------|-------------|----------|----------|---------|----------|----------------|------------------|------------------|---------------|-------|--------------------------------------|---|----------|--------|---------|-------|-------------|---------------|-----------------|---------|-------------------|---------------|-----------------|--------------------------------------|----------|--------------|
| EEAT     | URE I |        | IC ASSI               |      |    |        |     |     |                     |   |                          | FE  | ATU                                  | IRE         | CH/             | ARAC             | CTEF             | UST.  | ICS    |             |          |          |         |          |                |                  |                  |               |       |                                      |   |          |        |         |       | P           | HYS           | ICA             | L SE    | TTIN              | G             |                 |                                      |          |              |
| 1A       | 1B    | 1C     | 2                     | Т    | 3  |        | Т   |     | 4                   | T | 5                        | 6   |                                      |             | 7               |                  | T                | 8     |        | T           |          | 9        |         | T        |                | 10               | T                | 11            |       | 12                                   |   |          |        | 13      |       |             |               | 14              |         |                   | 15            |                 | 16                                   |          | 17           |
| LOCATION | _     | POINTS | GEOLOGIC<br>FORMATION | VERT |    | FEATUR |     |     | ZONTAL<br>RE (FEET) |   | LENGTH &<br>WIDTH (FEET) | TREND (C, CI                              | ), FR,<br>H)                         | DEN         | NSITY (         | (FR, VF)         | API              | RTURE | (FR, V | (R)         | NFILLIN  | G (CD, I | FR, FZ, | SC, I    | REL<br>NFILTRA | ATIVE<br>ATION F | RATE             | SUB-<br>TOTAL | SE    | ENSITIVI                             | TY  | DRAI     | NAGE A | AREA (A | CRES) |             | то            | POGRA           | PHY (2) |                   | SUB-<br>TOTAL |                 | POTENTI                              | AL<br>GE | COM-<br>MENT |
|          | _     |        | TORTALION             | 6    | ,  | SC, SH | +   |     | SC                  | + | FZ, FR, VR, Z            |   | 10                                   | 0           | 5               | 10               | 0                | 5     | 1      | .0          | 0        | 5        | 10      | 15       | 0              | 10               | 30               |               |       |                                      |   | 0        | 5      | 10      | 15    | 0           | 5             | 10              | 15      |                   |               |                 |                                      |          |              |
|          |       |        |                       | ×    |    | / Z    | : ) |     | Y Z                 | 1 |                          | D<br>I<br>R<br>E<br>C<br>T<br>I<br>O<br>N | D<br>O<br>M<br>I<br>N<br>A<br>N<br>T | L<br>O<br>W | M O D E R A T E | H<br>I<br>G<br>H | S<br>M<br>A<br>L | I     | 1 (    | R<br>G<br>E | CEMENTED | IN       | R       | N O N E  | N<br>E<br>/    | M O D E R A T E  | H<br>I<br>G<br>H |               | N O T | P<br>O<br>S<br>S<br>I<br>B<br>L<br>E | S<br>E<br>N<br>S<br>I<br>T<br>I<br>V<br>E | <1       | <10    | <50     | >50   | W<br>A<br>L | H I L L T O P | H I L L S I D E |         | S T R E A M B E D |               | N O N E / L O W | M<br>O<br>D<br>E<br>R<br>A<br>T<br>E | H I G H  | Y<br>E<br>S  |
|          | -     |        |                       | +    | +  |        | +   | +   | -                   | + |                          | NA NA                                     |                                      | -           | +               | +                | +                | +     | +      | +           | +        | 5        | +       | +        | 1              | 10               |                  | 25            |       | х                                    |   | 0        |        | 1       |       |             | 5             |                 |         |                   | 5             |                 | х                                    |          | ×            |
| 1        | CD    | 10     | Кер                   | 30   | +  | -      | +   | -   | -                   | + |                          | NA NA                                     |                                      | $\vdash$    | +               | +                | +                | +     | +      | +           | _        | 5        | +       | +        | $\dashv$       | 10               |                  | 25            |       | ×                                    |   | 0        |        |         |       | T           | 5             |                 |         | 1                 | 5             |                 | ×                                    |          | X            |
| 2        | CD    | 10     | Кер                   | 10   | 4  | 10 1.  | .5  | +   | -                   | + |                          |   | -                                    | $\vdash$    | +               | +                | +                | _     | +      | +           | _        | 5        | -       | $\dashv$ | -              | 10               |                  | 55            | 1     | x                                    | +   | $\vdash$ | 5      | +       | +     | +           | +             | 10              |         |                   | 15            |                 | X                                    |          | X            |
| 3        | FRZ   | 35     | Кер                   | _    | +  |        | +   | +   | _                   | + | 20 X 900                 | NA  | -                                    | -           | 5               | -                | +                | +     | +      | +           | +        | 3        | +       | $\dashv$ | 0              | 10               |                  | 25            | +     | X                                    | +   | +        | -      | 10      | +     | +           | +             | +               | +       | 20                | 30            | +               |                                      | ×        | ×            |
| 4        | FZ    | 15     | Kep/Kek               | _    | 1  |        | 4   | -   |                     | + | 2000 long                | NE -SW                                    | 10                                   | -           | +               | +                | +                | +     | +      | +           | -        | +        | _       | $\dashv$ | _              | -                | -                | 50            | -     | X                                    | +   | +        | 5      | +-      | +     | +           | +             | 10              | 1       | +                 | 15            | +               | X                                    | +        | X            |
| 5        | FRZ   | 35     | Кер                   |      |    |        | 1   | 1   |                     | 1 | 10 X 400                 | NE - SW                                   | 10                                   | 0           | +               | +                | _                |       | +      | +           | -        | 5        | -       | $\dashv$ | 0              | -                |                  | 40            | -     | X                                    | +   | +        | 5      | +       | +     | +           | +             | 10              | -       | +                 | 15            | +               | X                                    | +        | ×            |
| 6        | FRZ   | 35     | Кер                   |      |    |        | 1   | 1   |                     | 1 | 15 X 600                 | NS  | -                                    | 0           | +               | +                | _                |       | +      | 4           | -        | 5        | -       | -        | 0              | -                |                  |               | -     | ×                                    | +   | +        | 5      | +       | +     | +           | +             | 10              | _       | +                 | 15            | +               | ×                                    | +        | ×            |
| 7        | FRZ   | 35     | Кер                   |      |    |        |     |     |                     | 1 | 10 X 400                 | NS  | -                                    | 0           | -               | _                | +                |       | +      | 4           | _        | 5        | -       | -        | 0              | -                |                  | 40            | -     | -                                    | +   | +        | 5      | +       | +     | +           | +             | 10              | _       | +                 | 15            | +               | X                                    | +        | ×            |
| 8        | FRZ   | 35     | Кер                   |      |    |        |     |     |                     |   | 20 X 500                 | EW  |                                      | 1           | 5               | 5                | +                | 5     | -      | 4           | _        | 5        | _       | _        | 0              | _                |                  | 60            | -     | X                                    | +   | +        | +      | +       | +     | +           | +             | 10              | _       | +                 | 15            | +               | X                                    | +        | X            |
| 9        | FRZ   | 35     | Кер                   |      |    |        |     |     |                     | 1 | 12 X 200                 | NE SW                                     | 10                                   | 1           | 5               | 5                | 1                |       |        | _           | _        | 5        | _       | _        | 0              | _                |                  | 60            | -     | X                                    | +   | +        | 5      | +       | +     | +           | -             | _               | +       | +                 | 5             | X               | +                                    | +        | X            |
| 10       | FRZ   | 35     | Кер                   |      |    |        |     |     |                     |   | 15 X 200                 | NE SW                                     | 10                                   |             | 5               | 5                | 1                |       |        | 1           |          | 5        |         | _        | 0              | _                |                  | 60            | -     | X                                    | +   | 0        | +      | +       | +     | +           | +             | 11              | +       | +                 | 15            | +               | ×                                    | +        | X            |
| 11       | FRZ   | 35     | Кер                   |      |    |        |     |     |                     |   | 10 X 600                 | NS  |                                      |             |                 | 5                |                  |       | 5      |             |          | 5        |         |          | 0              | _                |                  | 50            | -     | X                                    | -   | -        | 5      | +       | +     | +           | +             | _               | +       | +                 | 15            | +               | X                                    | +        | X            |
| 12       | FRZ   | 35     | Кер                   |      |    |        |     |     |                     |   | 20 X 700                 | NE SW                                     | 10                                   |             | :               | 5                |                  | !     | 5      |             |          | 5        |         |          | 0              |                  |                  | 60            | -     | X                                    | -   | -        | 5      | +       | +     | +           | +             | 1               | -       | +                 | 15            | +               | 1                                    | +        |              |
| 13       | CD    | 10     | Kep                   | 25   |    | 30     | 3   |     |                     | T |                          | NA  |                                      |             |                 |                  |                  |       |        |             |          |          | 10      |          |                | 10               |                  | 30            |       | X                                    |   |          | 5      |         |       |             |               | 1               | 0       |                   | 15            |                 | X                                    |          | X            |

| (1) | C=  | 35,   | CD  | = 1 | 0, | FR | =  | 0, | FZ  | = | 15,  | MM | = | 35, |
|-----|-----|-------|-----|-----|----|----|----|----|-----|---|------|----|---|-----|
| SC  | = 1 | 0, SI | H = | 20, | VR | =  | 0, | Z  | ONE | = | : 35 |    |   |     |

(2) WALL = Vertical/near veritical wall above 100-yr floodplain FLOODPLAIN = 100-yr floodplain STREAM BED = Ordinary High Water Mark

I have read, understood, and followed the Texas Natural Resource Conservation Commission's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

Geologist signature

Date

Sheet \_\_1\_\_\_ of \_\_\_3\_\_

TNRCC - 0629 (2/1/97)

|          | GE    | OLOG   | IC ASSI               | SS   | ME                                    | NT    | TAB | BLE   |                   | THE STATE OF TAKE     |                            | 5.0                                  | SAM         |                 |                  |                  |                            | P                     | ROJ             | ECT              | NA          | ME               |                 |                                      |                  | CAI           | NAN   | 1 PR            | OPE               | RT    | 1      |         |       |                  |             |                                 |   |   |               |                     |                                      |                  | 3             |
|----------|-------|--------|-----------------------|------|---------------------------------------|-------|-----|-------|-------------------|-----------------------|----------------------------|--------------------------------------|-------------|-----------------|------------------|------------------|----------------------------|-----------------------|-----------------|------------------|-------------|------------------|-----------------|--------------------------------------|------------------|---------------|-------|-----------------|-------------------|-------|--------|---------|-------|------------------|-------------|---------------------------------|---|---|---------------|---------------------|--------------------------------------|------------------|---------------|
| FEA1     | URE I |        |                       |      |                                       |       |     |       |                   |                       | FE                         | ATU                                  | RE (        | CHA             | RAC              | ΓERI             | STI                        | CS                    |                 |                  |             |                  |                 |                                      |                  |               |       |                 |                   |       |        |         |       | Ph               | HYS         | CAI                             | L SE                                      | TTIN                                      | G             |                     |                                      |                  |               |
| 1A       | 1B    | 1C     | 2                     | Т    | 3                                     |       | T   | 4     |                   | 5                     | 6                          |                                      |             | 7               |                  |                  | 8                          |                       |                 | 9                | 9           |                  |                 | 10                                   |                  | 11            |       | 12              |                   |       | 1      | 3       |       |                  |             | 14                              |   |   | 15            |                     | 16                                   |                  | 17            |
| LOCATION |       | POINTS | GEOLOGIC<br>FORMATION | VERT | TICAL I                               | EATUR |     | HORIZ | ONTAL<br>E (FEET) | LENGTH & WIDTH (FEET) | TREND (C, CD<br>FZ, SC, SI | ), FR,<br>H)                         | DENS        | SITY (F         | R, VF)           | APER             | TURE (F                    | R, VR)                | INFIL           | LING (C          | D, FR, F    | z, sc,           | RI              | ELATIVE                              | RATE             | SUB-<br>TOTAL | S     | ENSITIVIT       | TY                | DRAIN | NAGE A | REA (AC | CRES) |                  | TOP         | POGRAP                          | HY (2)                                    |   | SUB-<br>TOTAL |                     | POTENTI                              | AL<br>SE         | COM-<br>MENTS |
|          |       |        |                       | C    | , CD, S                               | C, SH | +   | С,    | SC                | FZ, FR, VR, Z         |                            | 10                                   | 0           | 5               | 10               | 0                | 5                          | 10                    | 0               | 5                | 10          | 15               | 0               | 10                                   | 30               |               |       |                 |                   | 0     | 5      | 10      | 15    | 0                | 5           | 10                              | 15  | 20  |               |                     |                                      |                  |               |
|          |       |        |                       | x    | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | z     | x   | ,     | Y Z               |                       | D I R E C T I O N          | D<br>O<br>M<br>I<br>N<br>A<br>N<br>T | L<br>O<br>W | M O D E R A T E | H<br>I<br>G<br>H | S<br>M<br>A<br>L | M<br>E<br>D<br>I<br>U<br>M | L<br>A<br>R<br>G<br>E | C E M E N T E D | F<br>I<br>N<br>E | C O A R S E | N<br>O<br>N<br>E | N O N E / L O W | M<br>O<br>D<br>E<br>R<br>A<br>T<br>E | H<br>I<br>G<br>H |               | N O T | P O S S I B L E | S E N S I T I V E | <1    | <10    | <50     | >50   | W<br>A<br>L<br>L | H I L T O P | H<br>I<br>L<br>S<br>I<br>D<br>E | F<br>L<br>O<br>D<br>P<br>L<br>A<br>I<br>N | S<br>T<br>R<br>E<br>A<br>M<br>B<br>E<br>D |               | N O N E / L O W <15 | M<br>O<br>D<br>E<br>R<br>A<br>T<br>E | H<br>I<br>G<br>H | Y<br>E<br>S   |
| 14       | CD    | 10     | Кер                   | 30   | 70                                    | 3     | +   | +     |                   |                       | NA                         |                                      |             |                 |                  |                  |                            |                       |                 | 5                |             |                  |                 | 10                                   |                  | 25            |       | х               |                   |       | 5      |         |       |                  |             | 10                              |   |   | 15            |                     | Х                                    |                  | х             |
| 15       | CD    | 10     | Kep                   | 10   | 20                                    | 1.5   | 5   | +     |                   |                       | NA                         |                                      |             |                 |                  |                  |                            |                       |                 | 5                |             |                  |                 | 10                                   |                  | 25            |       | х               |                   |       | 5      |         |       |                  |             | 10                              |   |   | 15            |                     | X                                    |                  | X             |
| 16       | FRZ   | 35     | Kek                   | +    | +                                     | +     | +   | +     |                   | 20 X 600              | W-E                        |                                      | 0           |                 |                  | 0                |                            |                       |                 | 5                |             |                  | 0               |                                      |                  | 40            |       | х               |                   |       | 5      |         |       |                  |             | 10                              |   |   | 15            |                     | х                                    |                  | Х             |
| 17       | FRZ   | 35     | Kek                   | T    | +                                     | +     | +   | +     |                   | 20 X 200              | SE-NW                      |                                      | 0           |                 |                  | 0                |                            |                       |                 | 5                |             |                  | 0               |                                      |                  | 40            |       | х               |                   |       | 5      |         |       |                  | -           | 10                              |   |   | 15            |                     | х                                    |                  | X             |
| 18       | FRZ   | 35     | Kek                   | T    | +                                     | +     | +   | +     |                   | 20 X 400              | NE - SW                    | 10                                   | 0           |                 |                  | 0                |                            |                       |                 | 5                |             |                  | 0               |                                      |                  | 50            |       | х               |                   |       | 5      |         |       |                  |             | 10                              |   |   | 15            |                     | x                                    |                  | X             |
| 19       | FRZ   | 35     | Kek                   |      | 1                                     | +     | +   | +     |                   | 20 X 800              | NE - SW                    | 10                                   | 0           |                 |                  | 0                |                            |                       |                 | 5                |             |                  | 0               |                                      |                  | 50            |       | х               |                   |       | 5      |         |       |                  |             | 10                              |   |   | 15            |                     | х                                    |                  | X             |
| 20       | FRZ   | 35     | Kek                   | T    |                                       | 1     | 1   | 1     |                   | 20 x 400              | NE - SW                    | 10                                   | 0           |                 |                  | 0                |                            |                       |                 | 5                |             |                  | 0               |                                      |                  | 50            |       | х               |                   |       | 5      |         |       |                  |             | 10                              |   |   | 15            |                     | X                                    |                  | X             |
| 21       | FRZ   | 35     | Kek                   | T    | 1                                     | T     |     |       |                   | 100 X 400             | N-S                        |                                      | 0           |                 |                  | 0                |                            |                       |                 | 5                |             |                  | 0               |                                      |                  | 40            |       | X               |                   |       | 5      |         |       |                  |             | 10                              |   |   | 15            | _                   | X                                    |                  | ×             |
| 22       | FRZ   | 35     | Kek                   |      |                                       |       |     |       |                   | 100 X 600             | N & W                      |                                      | 0           |                 |                  | 0                |                            |                       |                 | 5                |             |                  | 0               |                                      |                  | 40            |       | x               |                   |       | 5      |         |       |                  |             | 10                              |   | _   | 15            | 1                   | ×                                    | -                | ×             |
| 23       | ММ    | 35     | Kek                   |      |                                       |       |     |       |                   |                       | NA                         |                                      |             |                 |                  |                  |                            |                       |                 | 5                |             |                  | 0               |                                      |                  | 40            |       | х               |                   |       | 5      |         |       |                  |             | 10                              | _   | -   | 15            | 1                   | X                                    | -                | X             |
| 24       | SC    | 10     | Кер                   | 2    | 8                                     | 2     | 2   |       |                   |                       | NA                         |                                      |             |                 |                  |                  |                            |                       |                 | 5                |             |                  | 0               |                                      |                  | 15            |       | х               |                   |       | 5      |         |       |                  |             | 10                              |   | 1   | 15            | 1                   | X                                    |                  | X             |
| 25       | ММ    | 35     | Кер                   |      |                                       |       | T   |       |                   |                       | NA                         |                                      |             |                 |                  |                  |                            |                       |                 |                  | 1           |                  |                 |                                      |                  | 35            |       | х               |                   |       | 5      |         |       |                  | -           | 10                              | 1   | 1   | 15            | -                   | X                                    | -                | X             |
| 26       | ММ    | 35     | Kep                   | T    |                                       |       |     |       |                   |                       | NA.                        |                                      |             |                 |                  |                  |                            |                       |                 |                  |             |                  |                 |                                      |                  | 35            |       | X               |                   |       | 5      |         |       |                  |             | 10                              |   |   | 15            |                     | X                                    |                  | X             |

| (1) | C | = : | 35,  | CD  | =  | 10,  | FR  | =  | 0, | FZ  | =   | 15,  | MM | = | 35, |
|-----|---|-----|------|-----|----|------|-----|----|----|-----|-----|------|----|---|-----|
| SC  | = | 10  | , SI | 4 = | 20 | , VI | ۲ = | 0, | Z  | ONE | E = | = 35 |    |   |     |

(2) WALL = Vertical/near veritical wall above 100-yr floodplain FLOODPLAIN = 100-yr floodplain STREAM BED = Ordinary High Water Mark

I have read, understood, and followed the Texas Natural Resource Conservation Commission's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

Geologist signature

Date

Sheet \_\_2\_\_\_ of \_\_\_3\_\_

TNRCC - 0629 (2/1/97)

|         | GE       | OLOG   | IC ASSE               | ESS | ME            | EN'    | TT   | AB | LE             |                |    |                          |   |                 |             |                 |                  |        |       |        | PR        | OJE             | CT               | NA             | ME:     |                |                 |             | CA            | NAN   | 1 PR                                 | OPE               | ERT | Y     | is air |        |    |                  |         |                            |                     |             |              |   |               |                                      |         |              |
|---------|----------|--------|-----------------------|-----|---------------|--------|------|----|----------------|----------------|----|--------------------------|---|-----------------|-------------|-----------------|------------------|--------|-------|--------|-----------|-----------------|------------------|----------------|---------|----------------|-----------------|-------------|---------------|-------|--------------------------------------|-------------------|-----|-------|--------|--------|----|------------------|---------|----------------------------|---------------------|-------------|--------------|---|---------------|--------------------------------------|---------|--------------|
| FEAT    | URE I    |        |                       |     |               |        |      |    |                |                |    |                          | F   | EATU            | IRE         | CH/             | ARA              | CTEF   | UST   | ICS    | 5         |                 |                  |                |         |                |                 |             |               |       |                                      |                   |     |       |        |        |    | PH               | YSI     | CAL                        | SE                  | TTIN        | IG           |   |               |                                      |         |              |
| 1A      | 1B       | 1C     | 2                     | T   |               | 3      |      | Г  | 4              |                | T  | 5                        | 6   |                 |             | 7               |                  | T      | 8     |        | T         |                 | 9                |                | П       |                | 10              |             | 11            |       | 12                                   |                   |     |       | 13     |        | I  |                  |         | 14                         |                     |             | 15           |   |               | 16                                   |         | 17           |
| OCATION | TYPE (1) | POINTS | GEOLOGIC<br>FORMATION | VER | RTICAL<br>(FE | L FEAT | TURE | FE | ORIZO<br>ATURE | ONTAL<br>(FEET | r) | LENGTH &<br>WIDTH (FEET) | TREND (C, C)<br>FZ, SC,                   | CD, FR,<br>SH)  | DEI         | NSITY (         | (FR, VF)         | API    | RTURE | (FR, \ | VR)       | INFILLI         | NG (CD,<br>SH, V | , FR, FZ<br>R) | SC,     | REL<br>NFILTRA | ATIVE<br>TION I | RATE        | SUB-<br>TOTAL | SI    | ENSITIVI                             | TY                | DRA | INAGE | AREA   | (ACRES | 9) |                  | ТОРО    | OGRAPH                     | IY (2)              |             | SUB-<br>TOTA | L | POT           | TENTIAL                              |         | COM-<br>MENT |
|         |          |        |                       |     | C, CD,        | SC, S  | SH   |    | C, 5           | SC             | 7  | FZ, FR, VR, Z            |   | 10              | 0           | 5               | 10               | 0      | 5     |        | 10        | 0               | 5                | 10             | 15      | 0              | 10              | 30          |               |       |                                      |                   | 0   | 5     | 10     | 1      | 5  | 0                | 5       | 10                         | 15                  | 20          |              |   |               |                                      |         |              |
|         |          |        |                       | x   |               | Y      | z    | x  | Y              | ,              | z  |                          | D<br>I<br>R<br>E<br>C<br>T<br>I<br>O<br>N | D O M I N A N T | L<br>O<br>W | M O D E R A T E | H<br>I<br>G<br>H | M A    | 0     |        | L A R G E | C E M E N T E D | IN               | C O A R S E    | N O N E | N<br>E         | M O D E R A T E | H<br>G<br>H |               | N O T | P<br>O<br>S<br>S<br>I<br>B<br>L<br>E | S E N S I T I V E | <1  | <10   | <50    | >5     | 0  | W<br>A<br>L<br>L | HILLTOP | H<br>I<br>L<br>S<br>I<br>D | F L O O D P L A I N | ST REAM BED |              |   | O N E / L O W | M<br>O<br>D<br>E<br>R<br>A<br>T<br>E | H I G H | Y<br>E<br>S  |
| 27      | ММ       | 35     | Kek                   | +   | +             |        |      | T  | +              | 1              | 7  |                          | NA  |                 |             |                 |                  | $\top$ |       | 1      | 1         | T               | 1                |                |         | 0              | 1               |             | 35            |       | х                                    |                   | NA  |       |        |        | 1  |                  |         | 10                         |                     |             | 10           |   | X             |                                      |         | X            |
| 28      | MM       | 35     | Kek                   | 1   | 1             | 1      |      |    | +              |                |    |                          | NA  |                 |             | 1               | +                | T      | 1     | 1      | 1         | T               | T                |                |         | 0              | 7               |             | 35            |       | х                                    |                   | 0   |       | 1      | 1      | T  |                  |         | 10                         |                     |             | 10           |   | х             |                                      |         | Х            |
| 29      | MM       | 35     | Kek                   | +   | +             |        |      | T  | +              | 1              |    |                          | NA  |                 |             |                 | 1                | 1      | 1     |        |           |                 | $\neg$           |                |         | 0              | 7               |             | 35            | П     | х                                    |                   | NA  | T     | T      | T      | T  |                  |         | 10                         |                     |             | 10           |   | x             |                                      |         | X            |
| 30      | MM       | 35     | Кер                   | 1   | +             |        |      |    | T              |                |    |                          | NA  |                 |             |                 |                  | T      |       |        |           |                 |                  |                |         | 0              |                 |             | 35            |       | х                                    |                   | NA  |       |        |        |    |                  |         | 10                         |                     |             | 10           |   | X             |                                      |         | X            |
| 31      | ММ       | 35     | Кер                   | 1   | 1             |        |      |    | T              |                |    |                          | NA  |                 |             |                 |                  | T      |       |        |           |                 |                  |                |         |                | 10              |             | 45            |       | x                                    |                   |     | 5     |        |        |    |                  |         | 10                         |                     |             | 15           |   |               | Х                                    |         | Х            |
| 32      | ММ       | 35     | Кер                   | F   | +             |        |      |    | -              |                |    |                          | NA  |                 |             |                 |                  |        |       | -      | 1         |                 |                  |                |         |                | 10              |             | 45            |       | ×                                    |                   |     | 5     |        | 1      | +  |                  |         | 10                         |                     |             | 15           | 1 | 1             | X                                    |         | X            |
|         |          |        |                       | F   | 1             |        |      | F  | +              | +              |    |                          |   |                 | F           | -               |                  | F      | +     | +      | -         | -               | -                |                | -       | -              | 4               |             |               | -     |                                      | -                 | -   | +     | +      | +      | +  |                  |         | -                          | -                   | -           | -            | + | -             |                                      |         |              |
|         |          |        |                       | #   | +             |        |      |    | #              | 1              |    |                          |   |                 |             | +               | 1                | #      | +     | 1      |           |                 |                  |                |         |                |                 |             |               |       |                                      |                   |     |       | #      | #      | #  |                  |         |                            |                     |             |              | 1 | 1             |                                      |         |              |
|         |          |        |                       | +   | +             |        |      | +  | +              |                | -  |                          |   |                 | +           | +               | +                | +      | -     | +      | +         |                 | +                |                |         | +              | +               | •           |               |       |                                      |                   |     | +     | +      | +      | +  |                  |         |                            |                     |             |              | 1 | 1             |                                      |         |              |
|         | 1        | +      |                       | +   | +             |        |      | T  | +              | 1              |    | 110                      |   |                 |             | 1               | $\top$           |        |       | 1      | 1         |                 |                  |                |         |                |                 |             |               | T     |                                      |                   | T   |       |        |        |    | -                |         |                            |                     |             |              |   |               |                                      |         |              |

| (1) C = 35, CD = 10, FR = 0, FZ = 15, MM = | 35, |
|--|-----|
| SC = 10, SH = 20, VR = 0, ZONE = 35        |     |

(2) WALL = Vertical/near veritical wall above 100-yr floodplain FLOODPLAIN = 100-yr floodplain STREAM BED = Ordinary High Water Mark

I have read, understood, and followed the Texas Natural Resource Conservation Commission's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

Geologist signature

Date

Sheet \_\_3\_\_\_ of \_\_\_3\_\_

TNRCC - 0629 (2/1/97)



#### ASSESSMENT TABLE COMMENTS

#### **Project Site:**

- 1 Closed Depression is a shallow circular depression on a hill top. There are no visible internal drainage pathways. Very little run off enters this depression. Bottom is covered with soil and grass. Depth is about 2 feet. Depression does not hold water for very long.
- 2 Closed Depression is shallow and somewhat lenticular shaped. No obvious internal drainage features. Bottom is covered with soil, grass and exposed limestone (unfractured). Depth is about 1.5 feet. Depression does not hold water very long.
- 3 Fractured rock zone is drainage path on a hill side. Outcrop is heavily wooded and partially covered with float material, soil and leaves. Steepness of ravine indicates a low infiltration rate. This feature does not provide much recharge since water flowing across does not have any retention time to infiltrate.
- Fault zone occurs as a drainage path on a hill side. Little to no surface evidence of the fault is present. Fault is a bifurcation of the Hueco Springs Fault. Feature trends in the dominant direction (NE-SW). Feature can provide recharge in areas (see #'s 14 & 15).
- 5 Feature has been reevaluated and removed from this assessment.
- 6 Fractured rock zone is drainage path on a hill side. Outcrop is heavily wooded and partially covered with float material, soil and leaves. Steepness of ravine in-

dicates a low infiltration rate. This feature does not provide much recharge since water flowing across does not have any retention time to infiltrate.

- 7 Fractured rock zone is drainage path on a hill side. Outcrop is heavily wooded and partially covered with float material, soil and leaves. Steepness of ravine indicates a low infiltration rate. This feature does not provide much recharge since water flowing across does not have any retention time to infiltrate.
- 8 Fractured rock zone is drainage path on a hill side. Outcrop is heavily wooded and partially covered with float material, soil and leaves. Steepness of ravine indicates a moderate infiltration rate which will contribute to recharge through fractures located in the less steep areas.
- 9 Fractured rock zone is drainage path on a hill side. Outcrop is heavily wooded and partially covered with float material, soil and leaves. Steepness of ravine indicates a low to moderate infiltration rate. Feature trends in the dominant direction (NE-SW). Parts of this feature could provide recharge.
- 10 Feature has been reevaluated and removed from this assessment.
- 11 Fractured rock zone is drainage path on a hill side. Outcrop is heavily wooded and partially covered with float material, soil and leaves. Steepness of ravine indicates a low to moderate infiltration rate. May or may not contribute to recharge.
- Fractured rock zone is drainage path on a hill side. Outcrop is heavily wooded and partially covered with float material, soil and leaves. Steepness of ravine indicates a low to moderate infiltration rate. Feature trends in the dominant direction (NE-SW). Lower portion of zone will contribute to recharge since water velocity will decrease in this area.
- Closed Depression is located on hill side and receives runoff from drainage path above. Depression is a manmade feature created by damming a pathway for the purpose of building a road. Depression has no internal drainage and appears to hold water indicating a low infiltration rate. Bottom is composed of fractured rock. Fractures are filled in with fines and gravel which will slow or restrict recharge.

- 14 Closed Depression is located on hill side and receives runoff from drainage path above. Depression appears to be natural from the accumulation of sediments in the drainage path. Bottom is covered with soil and some grass. Water does accumulate in the depression for a moderate length of time indicating a slow infiltration rate.
- 15 Closed Depression is located on hill side and receives runoff from drainage path above. Depression appears to be natural from the accumulation of sediments in the drainage path. Bottom is covered with soil and some grass. Water does accumulate in the depression for a moderate length of time indicating a slow infiltration rate.
- 16 Fractured rock zone is drainage path on a hill side. Outcrop is heavily wooded and partially covered with float material, soil and leaves. Steepness of ravine would indicate a low to moderate infiltration rate. However, many large boulders are present which will slow water velocity, increasing infiltration.
- 17 Fractured rock zone is drainage path on a hill side. Outcrop is heavily wooded and partially covered with float material, soil and leaves. Drainage is not very steep and will allow water to move slowly or pool, increasing recharge.
- Fractured rock zone is drainage path on a hill side. Outcrop is heavily wooded and mostly covered with float material, soil and leaves. Steepness of ravine indicates a low infiltration rate, if any at all.
- 19 Feature has been reevaluated and removed from this assessment.
- 20 Feature is fractured rock zone on a hill side (appears to be an old road). Outcrop is the result of erosion of the tire tracks. Steepness of this zone indicates very little recharge if any at all.
- 21 Feature is a fractured rock outcrop on a hill side. Outcrop is sitting on an unfractured tabular outcrop. This feature does not appear to contribute to recharge at all.
- 22 Fractured rock zone is an erosional outcrop on a hill side. Outcrop is moder-

ately wooded and very steep. Steepness of outcrop indicates a low infiltration rate.

- Man-Made circular depression constructed for watering cattle. Constructed by bull dozing the surrounding soil to create a dam. Tends to hold water, therefore, infiltration is low if any. Bottom is unfractured limestone. Recharge potential is very low.
- Solution cavity located in a drainage path. Opening is 2" X 8" and is approximately 22" in depth. Interior opens into a small bowl shaped chamber with a soil bottom. Cavity is on the side of the drainage path and only receives water during heavy rain fall periods.
- 25 Man-made feature is a test well recently drilled to evaluate the availability and quality of Lower Trinity groundwater. Well will either be completed or plugged after the evaluation is complete.
- Man-made feature is a test well recently drilled to evaluate the availability and quality of Lower Trinity groundwater. Well will either be completed or plugged after the evaluation is complete.
- 27 Man-made feature is a test well recently drilled to evaluate the availability and quality of Lower Trinity groundwater. Well will either be completed or plugged after the evaluation is complete.
- 28 Man-made feature is an old septic field. Field is a depression which was filled in with large boulders to allow drainage from the septic tank. System is no longer located on the property.
- 29 Man-made feature is a domestic water well which served the ranch homes on the property. Well will either be used or plugged depending on the development of the property.
- 30 Man-made feature is a test well recently drilled to evaluate the availability and quality of Lower Trinity groundwater. Well will either be completed or plugged after the evaluation is complete.
- Man-made feature is a dug out depression in a drainage path. It is not clear if this was for water holding purposes or for road material (caliche pit). Feature does not hold water for any length of time.
- Man-Made circular depression constructed for watering cattle. Constructed by bull dozing the surrounding soil to create a dam. Tends to hold water, therefore, infiltration is low if any. Bottom is unfractured limestone.



#### SOILS ATTACHMENT

#### Surface Soils:

In the general area and on the project site the surface soils are of the Comfort-Rock outcrop complex, undulating. These soils are composed of reddish brown to gray brown clay soils with organics and angular limestone gravels and cobbles. Soil thickness across the project site is approximately 6 inches to 2 feet. At the rear of the project site the soil varies from zero to approximately 6 inches in thickness. The northeast half of the project site has thicker accumulations of soil since this area is lower in elevation.

Hydrologically, the surface soils located on the project site will transmit run-off to the underlying bedrock if they are very dry. This is due to desication cracks which form on the surface from clay shrinkage. However, once saturated, these soils will inhibit the flow of run-off downward (clay expansion). Therefore, since the underlying soil is moist most of the time, it will tend to impede or slow down transmission of water downward.

| STRATIGRAPHY |                  | FORMATIO                               | NS/MEMBERS                                  |
|--------------|------------------|--|---|
|              | PERSON FORMATION | Leached & Collapsed members, undivided | microcrystalline limestone collapse breccia |
|              | <br>B            | Regional Dense member                  |   |
|              |                  | Grainstone member                      |   |
|              | KAINER FORMATION | Kirschberg Evaporite<br>member         |   |
|              | KAINE            | Dolomitic member                       | ·   |
|              |                  | Basal Nodular membe                    | r   |

CANAM PROPERTY RECHARGE ZONE FM 3009 COMAL COUNTY, TEXAS

GENERAL STRATAGRAPHIC COLUMN





# FIELD DESCRIPTION OF OUTCROPPING UNITS

# Project Site:

Field investigations revealed that in general the site has a thin veneer of soil and organic debris (<2'). The low areas along drainage patterns are covered with grass and scattered boulders while the higher areas have a dense cover of brush and trees. Low lying areas, as well as the higher ground have a thin veneer of soil which obscures most of the smaller features that might be present (fractures and cavities). As a result the features, specifically the fractured rock zones, appear discontinuous on the surface.

The site appears to be composed mostly of the Leached & Collapsed member of the Person Formation which outcrops on the tops of knolls and hills. The lower member of the Person Formation as well as members of the Kainer Formation outcrop below this member on hillsides and in valleys. Specifically, the Regional Dense member of the Person Formation and the Grainstone and Kirschberg members of the Kainer Formation.

A bifurcation of the Hueco Springs Fault crosses the property on the southwest quadrant of the property. The fault bifurcation strikes in the dominant northeast-southwest direction. Little evidence is visible on the surface where this fault crosses the property. However, it does form a prominent drainage valley which originates on the property and continues across the adjoining property down to FM 3009.

The terrain of the project site is gently rolling with drainage patterns generally trending in a northeast direction. This trend parallels the dominant direction of the faults in the area. Most of the soil cover on the project site has a high organic content

and a low clay content allowing stormwater to sink in rather than run off. The closed depressions on the project site have no visible internal drainage and tend to transmit runoff into the subsurface at a slow rate. There are a number of large outcrops of the Regional Dense member which are not fractured. These slab outcrops appear as large denuded areas with little or no soil cover.

Hill tops on the property are covered with soil, trees and scattered boulders obscuring any features that might be present. The southwest half of the property is higher topographically than the northeast half. As a result the southwest half is predominantly composed of the Person Formation while the northeast half is composed of the Kainer Formation.

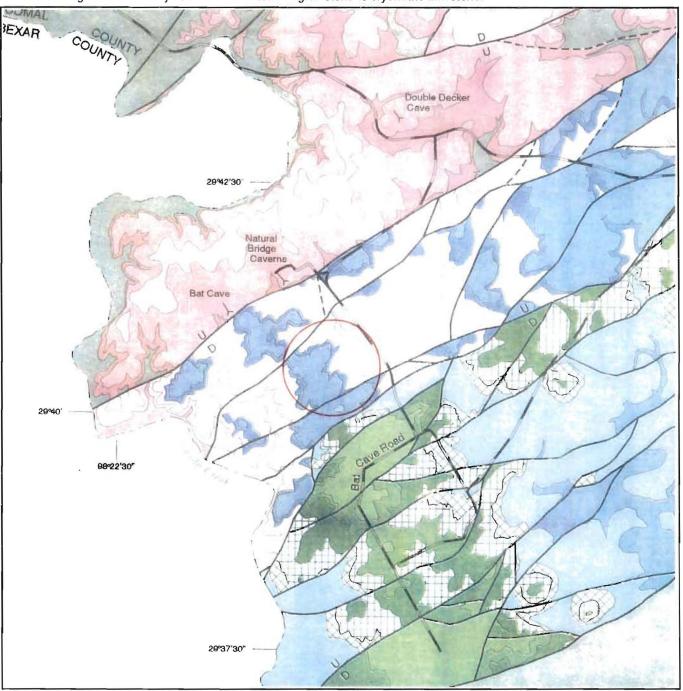
# reproduced from: U.S. Geological Survey

# Water-Resources Investigations Report 94-4117

scale 1:75000

**GEOLOGY-** KAINER FORMATION- Kek, the Kainer Formation is about 230 ft thick within Comal County. The lithology of the Kainer Formation includes marine sediments consisting of fossiliferous mudstones and wackestones grading upward into dolomitic mudstones with evaporites and finally terminating with a *miliolid* grainstone.

PERSON FORMATION- Kep, the Person Formation is about 180 ft thick within Comal County. The lithology of the Person Formation ranges from variably burrowed mudstone to grainstone to crystalline limestone.



CANAM PROPERTY FM 3009 COMAL COUNTY, TEXAS

HYDROGEOLOGY MAP



# WATER POLLUTION ABATEMENT PLAN APPLICATION

FOR REGULATED ACTIVITIES
ON THE EDWARDS AQUIFER RECHARGE ZONE
AND RELATING TO 30 TAC §213.5(b), EFFECTIVE JUNE 1, 1999

PROJECT NAME: CANHAM RANCH

#### **PROJECT INFORMATION**

| 1. | The ty       | pe of project is:   |                |        |            |
|----|--------------|---|----------------|--------|------------|
|    | <u>X</u><br> | Residential: # of Lots:<br>Residential: # of Living<br>Commercial<br>Industrial<br>Other: | ງ Unit Equival | ents:  | <u>130</u> |
| 2. | Total s      | ite acreage (size of pro  | perty):        | 282.72 | 22         |
| 3. | Project      | ted population:   | <u>520</u>     |        |            |

4. The amount and type of impervious cover expected after construction are shown below:

| Impervious Cover of Proposed<br>Project | Sq. Ft.   | Sq. Ft./Acre | Acres |
|---|-----------|--------------|-------|
| Structures/Rooftops                     | 390,000   | ÷ 43,560 =   | 8.95  |
| Parking                                 | 195,000   | ÷ 43,560 =   | 4.48  |
| Other paved surfaces                    | 459,451   | ÷ 43,560 =   | 10.55 |
| Total Impervious Cover                  | 1,044,451 | ÷ 43,560 =   | 23.98 |
| Total I                                 | 8.48 %    |              |       |

- 5. X ATTACHMENT A Factors Affecting Water Quality. A description of any factors that could affect surface water and groundwater quality is provided at the end of this form.
- 6. X Only inert materials as defined by 30 TAC 330.2 will be used as fill material.

#### FOR ROAD PROJECTS ONLY

Complete questions 7-12 if this application is exclusively for a road project.

| 7. | Type of project:   |
|----|--|
|    | TXDOT road project. County road or roads built to county specifications. City thoroughfare or roads to be dedicated to a municipality. Street or road providing access to private driveways. |
|    |  |

8. Type of pavement or road surface to be used:

|      | Concrete Asphaltic concrete pavement Other:  |
|------|--|
| 9.   | Length of Right of Way (R.O.W.): feet.  Width of R.O.W.: feet.  L x W = Ft² + 43,560 Ft²/Acre = acres.   |
| 10.  | Length of pavement area: feet.  Width of pavement area: feet.  L x W = Ft² ÷ 43,560 Ft²/Acre = acres.  Pavement area acres ÷ R.O.W. area acres x 100 =% impervious cover.  |
| 11.  | <ul><li>A rest stop will be included in this project.</li><li>A rest stop will <b>not</b> be included in this project.</li></ul>   |
| 12.  | Maintenance and repair of existing roadways that do not require approval from the TNRCC Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TNRCC.   |
| STOF | RMWATER TO BE GENERATED BY THE PROPOSED PROJECT  |
| 13.  | <b>ATTACHMENT B - Volume and Character of Stormwater.</b> A description of the volume and character (quality) of the stormwater runoff which is expected to occur from the proposed project is provided at the end of this form. The estimates of stormwater runoff quality and quantity should be based on area and type of impervious cover. Include the runoff coefficient of the site for both preconstruction and post-construction conditions.   |
| WAS  | TEWATER TO BE GENERATED BY THE PROPOSED PROJECT  |
| 14.  | The character and volume of wastewater is shown below:  100 % Domestic 39,000 gallons/day 0 % Industrial 0 gallons/day 0 % Commingled 0 gallons/day  TOTAL 39,000 gallons/day  |
| 15.  | Wastewater will be disposed of by:  X On-Site Sewage Facility (OSSF/Septic Tank):  ATTACHMENT C - Suitability Letter from Authorized Agent. An on-site sewage facility will be used to treat and dispose of the wastewater. The appropriate licensing authority's (authorized agent) written approval is provided at the end of this form. It states that the land is suitable for the use of an on-site sewage facility or identifies areas that are not suitable.  X Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC §285.  Sewage Collection System (Sewer Lines):  Private service laterals from the wastewater generating facilities will be connected to an existing SCS. |

|       | ABSTANCE               | to an existing SCS.  Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.  The SCS was previously submitted on  The SCS was submitted with this application.  The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to executive director approval.  |
|-------|------------------------|---|
|       |                        | sewage collection system will convey the wastewater to the  |
| 16.   | X All p                | rivate service laterals will be inspected as required in 30 TAC 213.5.  |
| SITE  | PLAN REQU              | IREMENTS  |
| Items | s 17 through           | 27 must be included on the Site Plan.   |
| 17.   |                        | an must have a minimum scale of 1" = 400'. Plan Scale: 1" = <u>200</u> '.   |
| 18.   | X Som                  | odplain boundaries<br>ne part(s) of the project site is located within the 100-year floodplain. The floodplain<br>nown and labeled.<br>part of the project site is located within the 100-year floodplain.  |
|       | sources(s):            | ar floodplain boundaries are based on the following specific (including date of material)  1 map number 485463 0075 D, dated July 17, 1995, Comal County, Texas   |
| 19.   | but road               | layout of the development is shown with existing and finished contours at appropriate, not greater than ten-foot contour intervals. Show lots, recreation centers, buildings, is, etc.  I ayout of the development is shown with existing contours. Finished topographic  |
|       |                        | ours will not differ from the existing topographic configuration and are not shown.   |
| 20.   | X Ther (Che            | ells (oil, water, unplugged, capped and/or abandoned, test holes, etc.): re are 6 (#) wells present on the project site and the locations are shown and labeled. reck all of the following that apply)  The wells are not in use and have been properly abandoned. The wells are not in use and will be properly abandoned. The wells are in use and comply with 30 TAC §238. re are no wells or test holes of any kind known to exist on the project site. |
| 21.   | X All s<br>Geo<br>No s | manmade features which are on the site:  sensitive and possibly sensitive geologic or manmade features identified in the logic Assessment are shown and labeled.  sensitive and possibly sensitive geologic or manmade features were identified in the logic Assessment.  |

the Geologic Assessment requirement is requested and explained in ATTACHMENT D provided at the end of this form. Geologic or manmade features were found and are shown and labeled.

- ATTACHMENT D Exception to the Required Geologic Assessment. An exception to the Geologic Assessment requirement is requested and explained in ATTACHMENT D provided at the end of this form. No geologic or manmade features were found.
- 22. X The drainage patterns and approximate slopes anticipated after major grading activities.
- 23. X Areas of soil disturbance and areas which will not be disturbed.
- 24. X Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
- 25. X Locations where soil stabilization practices are expected to occur.
- 26. X Surface waters (including wetlands).
- 27. \_\_\_ Locations where stormwater discharges to surface water or sensitive features.

  X There will be no discharges to surface water or sensitive features.

#### **ADMINISTRATIVE INFORMATION**

- 28. X One (1) original and three (3) copies of the completed application have been provided.
- 29. X Any modification of this WPAP will require TNRCC executive director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **WATER POLLUTION ABATEMENT PLAN APPLICATION FORM** is hereby submitted for TNRCC review and executive director approval. The form was prepared by:

Print Name of Applicant/Owner/Agent

Signature of Applicant Owner Agent

# Attachment A - Factors Affecting Water Quality

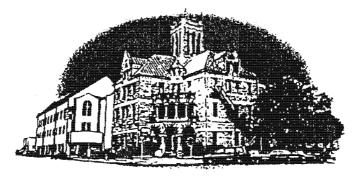
The development will be a low density, single-family development that will result in minimal to no pollution. Pollution may originate from ordinary household chemicals, normal automobile wastes, and runoff from asphalt streets.

# Attachment B - Volume and Character of Stormwater

The development of Canham Ranch will result in more stormwater runoff. Calculations were performed using HEC-HMS. The CN value for existing conditions is 72, and the CN value for proposed conditions is 81. For the 100-year storm event, stormwater runoff increased from 1646 cfs to 1916 cfs. This is an increase of 16%. For the 25-year storm event, stormwater runoff increased from 1224 cfs to 1502 cfs. This is an increase of 23%.

Drainage patterns for the site will remain relatively unchanged. Low areas and swales will remain in their original condition, therefore offering vegetative filtering capabilities. The lot layout was designed to utilize the drainage patterns to protect the vegetation in these areas and prevent improvements from being constructed that would alter these areas.

Due to the fact that the majority of the drainage lows will remain in their natural condition and the fact that the total impervious cover is low (8.48%), the quality of stormwater runoff leaving the site should remain unchanged.



# Comal County

OFFICE OF COMAL COUNTY ENGINEER

June 15, 2000

Canham Ranch, Ltd Mr. J.W. Wood, Managing Partner P.O. Box 160 Buda, TX 78610

Re: Proposed subdivision, CANHAM RANCH SUBDIVISION, within Comal

County, Texas

Dear Property Owner(s):

We have completed the field inspection of the referenced for the recommendation for private sewage facilities and have found the property to be approved with the conditions that individual septic systems permits shall be required for the lots within this subdivision.

Please be advised that these individual permits will be required to meet 30 TAC 285.40, subchapter E (copy attached). Please specifically reference the one acre minimum lot size and 150 foot distance requirement to recharge features.

Should you have any questions, please feel free to contact us.

Sincerely,

Thomas H. Hornseth, P.E. Comal County Engineer

cc: Carter & Burgess, Inc.
Mr. Jeff Moeller

#### **TEMPORARY STORMWATER SECTION**

FOR REGULATED ACTIVITIES

ON THE EDWARDS AQUIFER RECHARGE ZONE

AND RELATING TO 30 TAC §213.5(b)(4)(A), (B), (D)(i) and (G); EFFECTIVE JUNE 1, 1999

PROJECT NAME: CANHAM RANCH

# POTENTIAL SOURCES OF CONTAMINATION

Examples: Fuel storage and use, chemical storage and use, use of asphaltic products, construction vehicles tracking onto public roads, and existing solid waste.

| 1, |                     | for construction equipment and hazardous substances which will be used during uction:   |
|----|---------------------|---|
|    | <br><br><br><u></u> | Aboveground storage tanks with a cumulative storage capacity of less that 250 gallons will be stored on the site for less than one (1) year.  Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.  Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An <b>Aboveground Storage Tank Facility Plan</b> application must be submitted to the appropriate regional office of the TNRCC prior to moving the tanks onto the project.  Fuels and hazardous substances will not be stored on-site. |
| 2. | <u>X</u>            | <b>ATTACHMENT A - Spill Response Actions</b> . A description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is provided at the end of this form.  |
| 3. | <u>N/A</u>          | Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.   |
| 4. | <u>X</u>            | ATTACHMENT B - Potential Sources of Contamination. Describe in an attachment at the end of this form any other activities or processes which may be a potential source of contamination.  The are no other potential sources of contamination.  |

#### **SEQUENCE OF CONSTRUCTION**

- 5. X ATTACHMENT C Sequence of Major Activities. A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is provided at the end of this form. For each activity described, an estimate of the total area of the site to be disturbed by each activity is given.
- 6. X Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Bear Creek

# TEMPORARY BEST MANAGEMENT PRACTICES (TBMPs)

Erosion control examples: tree protection, interceptor swales, level spreaders, outlet stabilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized construction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment basins. Please refer to the Technical Guidance Manual for guidelines and specifications. **All structural BMPs must be shown on the site plan.** 

- 7. X ATTACHMENT D Temporary Best Management Practices and Measures. A description of the TBMPs and measures that will be used during and after construction are provided at the end of this form. For each activity listed in the sequence of construction, include appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented.
  - TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information has been provided in the attachment at the end of this form
  - a. A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.
  - b. A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.
  - c. A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
  - d. A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TNRCC inspections, or during excavation, blasting, or construction.
- 8. The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.
  - \_\_\_ ATTACHMENT E Request to Temporarily Seal a Feature. A request to temporarily seal a feature is provided at the end of this form. The request includes justification as to why no reasonable and practicable alternative exists for each feature.
  - X There will be no temporary sealing of naturally-occurring sensitive features on the site.
- 9. X ATTACHMENT F Structural Practices. Describe the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site. Placement of structural practices in floodplains has been avoided.
- 10. X ATTACHMENT G Drainage Area Map. A drainage area map is provided at the end of this form to support the following requirements.

- For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.
- For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.
- \_\_\_ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.
- X There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.
- 11. N/A ATTACHMENT H Temporary Sediment Pond(s) Plans and Calculations. Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure has been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are provided as at the end of this form.
- 12. X ATTACHMENT I Inspection and Maintenance for BMPs. A plan for the inspection of temporary BMPs and measures and for their timely maintenance, repair, and, if necessary, retrofit is provided at the end of this form. A description of documentation procedures and record keeping practices is included in the plan.
- All control measures must be properly selected, installed, and maintained in accordance with the manufacturers specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicates a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.
- 14. X If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
- 15. X Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.
- 16. X Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

#### SOIL STABILIZATION PRACTICES

Examples: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or preservation of mature vegetation.

- 17. X ATTACHMENT J Schedule of Interim and Permanent Soil Stabilization Practices. A schedule of the interim and permanent soil stabilization practices for the site is attached at the end of this form.
- 18. X Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
- 19. X Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

#### ADMINISTRATIVE INFORMATION

- 20. X All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.
- 21. X If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TNRCC Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TNRCC has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.
- 22. X Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **TEMPORARY STORMWATER SECTION** is hereby submitted for TNRCC review and executive director approval. The application was prepared by:

Print Name of Applicant/Owner/Agent

Signature of Applicant/Owner/Agent

Date

6/26/ac

# <u>Attachment A – Spill Response Actions</u>

There will be <u>no</u> above ground fuel storage tanks allowed on this project. Equipment will be fueled using mobile fuel trucks as needed. There is a small chance of a fuel spill occurring due to leaking construction equipment or re-fueling operations. If a minor spill were to occur, the soil impacted would be removed from the site and properly disposed of in an approved landfill site. If a major spill were to occur, where the amounts spilled were equal to, or exceeding, the Reportable Quantity, RQ, as defined by EPA regulations 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 then the following steps will be taken.

- Notify the National Response Center at (800) 424-8802 and the TNRCC San Antonio Regional Office at (210) 545-4329 immediately.
- Submit a written description of their release to the EPA and TNRCC Regional office
  providing the date and circumstances of the release and the steps to be taken to prevent
  another release
- Modify the WPAP and SWPPP to include the information listed above.

### Attachment B - Potential Sources of Contamination

The only potential sources of contamination are construction equipment leaks, re-fueling spills and asphalt lay down operations. There are no other anticipated potential sources of contamination.

#### Attachment C – Sequence of Major Activities

Stages of Construction

- 1. Clearing and Grubbing removal of trees, stumps, brush and other debris within the proposed street right-of-way. Approximate disturbed area = 25.6 acres
- 2. Rough Grading Cutting and filling of street areas to prepare the roadbed for pavement layers. Approximate disturbed area = 25.6 acres.
- 3. Culvert Installation Culverts will be installed where needed to allow runoff under the proposed roads. Approximated disturbed area is less than 2 acres.
- 4. Utility Installation There will be underground water, telephone and electric lines installed. Approximate disturbed area = less than 5 acres.
- 5. Finished Grading Final landscaping and asphalt pavement layers are installed. Approximate disturbed area = 12 acres.
- 6. Residential Construction Lots will be sold to individuals only, and homes built at random times. The construction is very minimal and will average less than 10% disturbed area per lot.

# Attachment D - Temporary BMPs and Measures

The roadway right-of-way is the only area that will be cleared. All of the low areas, which collect storm water runoff, will remain in a natural state acting as vegetative filer strips. Grasses will be allowed to grow between the edge of pavement and right-of-way line and will act as a filter for street runoff once established.

Silt fence will be place on the down gradient side of the site to contain pollutants generated from on-site runoff. Rock berms will be constructed at concentrated points of discharge and just downstream of all culvert locations. The majority of the property will not be disturbed leaving the natural vegetation, therefore, reducing the potential of polluting streams and the aquifer. A stabilized construction exit will be installed to help eliminate contaminants from leaving the site during construction traffic.

There where no sensitive features identified in the Geologic Assessment. The possibly sensitive features that were identified in the Geologic Assessment will be protected during construction by diverting runoff away from the features or placing silt fence just upstream of the feature location.

The following sequence will be followed for installing temporary BMPs:

- 1. Roadway centerline will be cleared for surveying purposes.
- 2. Silt fence will be constructed on the downstream side of proposed roadways prior to beginning clearing and grubbing operations.
- 3. A stabilized construction exit will be established before clearing and grubbing equipment is delivered to the site.
- 4. Rock berms and rock check dams are constructed downstream of proposed culvert locations once rough grading has been completed and prior to culvert installation.

#### Attachment E – Request to Temporarily Seal a Feature

No features will be temporarily sealed.

#### Attachment F – Structural Practices

Rock berms, rock check dams and silt fence will be used to protect exposed soils and to prevent contamination from leaving the site or flowing over the features identified in the Geologic Assessment. The majority of the site will remain in a natural condition; therefore, natural filtration will be allowed to occur.

# Attachment H - Temporary Sediment Pond(s) Plans and Calculations

There will not be more than 10-acres of disturbed soil in a common drainage area that will occur at one time. There will be rock berms and rock check dams installed to treat concentrated runoff from larger drainage areas (<10-acres) and silt fence used for small drainage areas and sheet flow runoff. No sediment ponds will be used on this project due to the minimal disturbance of soil.

# Attachment I – Inspection and Maintenance for BMPs

# **Inspection and Maintenance Plan**

- The contractor is required to inspect the controls and fences at weekly intervals and after significant rainfall events to insure that they are functioning properly. The person(s) responsible for maintenance of controls and fences shall immediately make any necessary repairs to damaged areas. Silt accumulation at controls must be removed when the depth reaches six inches. Contractor is required to maintain the construction exit in a condition that prevents soil from tracking onto public roads via construction equipment and traffic.
- TNRCC staff will be allowed full access to the property during construction of the project for inspecting controls and fences and to verify that the accepted plan is being utilized in the field. TNRCC staff has the right to speak with the contractor to verify plan changes and modifications.
- Any changes made to the location or type of controls shown on the accepted plans, due to onsite conditions, shall be documented on the site plan that is part of this Water Pollution Abatement Plan. No other changes shall be made unless approved by the TNRCC and the Design Engineer. Documentation shall clearly show changes made, date, and person responsible and reason change was made.

|                                  | Design Engineer. Documentation shall cloonsible and reason change was made.                        | early show changes made, date, and per |
|----------------------------------|--|--|
| Owner's In                       | formation:   |  |
| Owner:<br>Contact:<br>Address:   | Canham Ranch Ltd, J.W. Wood, Managing Partner P.O. Box 160 Buda, Texas 78610                       | Phone #: (512) 913-2338                |
| Owner's En                       | igineer:   |  |
| Company:<br>Contact:<br>Address: | Carter & Burgess, Inc. Brenda J. Kelly, P.E. 911 Central Pkwy North, #175 San Antonio, Texas 78232 | Phone #: (210) 494-0088                |
| Person or F                      | irm Responsible For Erosion/Sedimen  | tation Control Maintenance:            |
| Company:<br>Contact:<br>Address: |  |  |
| Signature o                      | of Responsible Party:  |  |
| This portion                     | n of the form shall be filled out and sig  | ned by the responsible party prior to  |

Temporary Stormwater Section

construction.

# Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices

There will be minimal disturbed soil due to construction operations that are not covered by pavement or buildings. The area is generally very rocky with a minimal amount of overlying soil. Areas, which are disturbed by construction staging, and storage areas will be hydro mulched with the appropriate seed mixture. Areas between the edge of pavement and right-of-way line will also be hydro mulched if a soil layer exists. Areas within islands and the entrance will be landscaped with appropriate plants and mulched. There will be no fill slopes exceeding a 3:1 slope and all fill slopes will be hydro mulched. Installation of hydro mulch is as follows:

- 1. Final grading must be completed and all necessary BMPs should be in place prior to the addition of hydro mulch.
- 2. Hydro mulch mixture shall be as recommended by the County Agriculture Extension Agent or as shown below for the specific time of year and whether or not irrigation will be utilized.
- 3. Hydro mulch shall be applied at a rate stipulated by the Extension Agent or as shown below and shall be applied in a uniform manner
- 4. Other types of seeding applications may be used by the Contractor if approved by the Design Engineer and TNRCC.
- 5. If blankets or matting are used, they shall conform to the Texas Department of Transportation specifications.

| Dates              | Climate               | Species        | (lb/ac) |
|--------------------|-----------------------|----------------|---------|
| Sept. 1 to Nov. 30 | Temporary Cool Season | Tall Fescue    | 4.0     |
|                    |                       | Oats           | 21.0    |
|                    |                       | Wheat          | 30.0    |
|                    |                       | Total          | 55.0    |
| Sept. 1 to Nov. 30 | Cool Season Legume    | Hairy Vetch    | 8.0     |
| May 1 to Aug. 31   | Temporary Warm Season | Foxtail Millet | 30.0    |

### PERMANENT STORMWATER SECTION

#### FOR REGULATED ACTIVITIES

# ON THE EDWARDS AQUIFER RECHARGE ZONE

AND RELATING TO 30 TAC §213.5(b)(4)(C), (D)(ii), (E), and (5), EFFECTIVE JUNE 1, 1999

PROJECT NAME: CANHAM RANCH

1.

X

Permanent best management practices (BMPs) and measures that will be used during and after construction is completed.

Permanent BMPs and measures must be implemented to control the discharge of pollution

|    |     | from regulated activities after the completion of construction.   |
|----|-----|---|
| 2. | N/A | These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director. |
|    |     | <ul> <li>The TNRCC Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.</li> <li>A technical guidance other than the TNRCC TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is provided below</li> </ul>   |

- 3. N/A Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.
- 4. X Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.
  - X This site will be used for low density single-family residential development and has 20% or less impervious cover.
  - This site will be used for low density single-family residential development but has more than 20% impervious cover.
  - This site will not be used for low density single-family residential development.
- 5. X The executive director may waive the requirement for other permanent BMPs for multifamily residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be

recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

- \_\_ ATTACHMENT A 20% or Less Impervious Cover Waiver. This site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is found at the end of this form.
- This site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
- X This site will not be used for multi-family residential developments, schools, or small business sites.

# 6. ATTACHMENT B - BMPs for Upgradient Stormwater.

- A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is identified as ATTACHMENT B at the end of this form.
- X If no surface water, groundwater or stormwater originates upgradient from the site and flows across the site, an explanation is provided as **ATTACHMENT B** at the end of this form.
- If permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, an explanation is provided as **ATTACHMENT B** at the end of this form .

#### 7. ATTACHMENT C - BMPs for On-site Stormwater.

- A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is identified as **ATTACHMENT C** at the end of this form.
- X If permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, an explanation is provided as **ATTACHMENT C** at the end of this form.
- 8. X ATTACHMENT D BMPs for Surface Streams. A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is provided at the end of this form. Each feature identified in the Geologic Assessment as "sensitive" or "possibly sensitive" has been addressed.
- 9. X The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.
  - X The permanent sealing of or diversion of flow from a naturally-occurring "sensitive" or "possibly sensitive" feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed for any naturally-

- occurring "sensitive" or "possibly sensitive" features on this site.

  ATTACHMENT E Request to Seal Features. A request to seal a naturallyoccurring "sensitive" or "possibly sensitive" feature, that includes a justification as to
  why no reasonable and practicable alternative exists, is found at the end of this
  form. A request and justification has been provided for each feature.
- 10. N/A ATTACHMENT F Construction Plans. Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information have been signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed permanent BMPs and measures are provided at the end of this form. Design Calculations, TNRCC Construction Notes, all man-made or naturally occurring geologic features, all proposed structural measures, and appropriate details must be shown on the construction plans.
- 11. N/A ATTACHMENT G Inspection, Maintenance, Repair and Retrofit Plan. A plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is provided at the end of this form. The plan has been prepared and certified by the engineer designing the permanent BMPs and measures. The plan has been signed by the owner or responsible party. The plan includes procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofits as well as a discussion of record keeping procedures.
- 12. N/A The TNRCC Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.
  - Pilot-scale field testing (including water quality monitoring) may be required for BMPs that are not contained in technical guidance recognized by or prepared by the executive director.
    - \_\_\_ ATTACHMENT H Pilot-Scale Field Testing Plan. A plan for pilot-scale field testing is provided at the end of this form.
- 13. X ATTACHMENT I Measures for Minimizing Surface Stream Contamination. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is provided at the end of this form. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity which increase erosion that results in water quality degradation.

# Responsibility for maintenance of permanent BMPs and measures after construction is complete.

- 14. N/A The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.
- 15. N/A A copy of the transfer of responsibility must be filed with the executive director at the

appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **PERMANENT STORMWATER SECTION** is hereby submitted for TNRCC review and executive director approval. The application was prepared by:

Print Name of Applicant/Owner/Agent

Signature of Applicant/Owner/Agent

# Attachment A – 20% or Less Impervious Cover Waiver

The site will not be used for multi-family residential or small businesses. The development will be low density, single family, residential with less than .5 dwelling units per acre. The total impervious cover for the site is approximately 8.5% at full development. This assumes a 24-foot asphalt roadway and 4500 square feet of improvements per lot.

# Attachment B – BMPs for Upgradient Stormwater

The site is located on several ridges and there is no stormwater originating upgradient of the site. As shown on the Drainage Area map in the Temporary Stormwater Section, the drainage boundaries run along the west and north side of the property which is the natural ridge line in the area.

#### Attachment C – BMPs for On-site Stormwater

No permanent BMPs will be constructed to treat stormwater runoff. The site design allows the natural swales and low areas of the site to remain in a natural state, therefore acting as natural vegetative filter strips. The site, when fully developed, will have an impervious cover of approximately 8.5%. There will be appropriate sanitary setback easements placed around all recharge features identified in the Geologic Assessment as having significant recharge potential. The perimeter of the site will remain in a natural condition, preventing contaminated runoff from leaving the site.

#### Attachment D – BMPs for Surface Streams

The only surface stream in the area is Bear Creek and no sensitive features were identified in the Geologic Assessment for the site. All of the features identified as having significant recharge potential in the Geologic Assessment will be protected by a sanitary setback easement surrounding the feature. These easements will be shown on the plat for the subject property and recorded during the platting process. All surface streams will be protected from erosion by not allowing runoff to exceed existing velocities. This will be accomplished by adding energy dissipaters to the downstream side of culverts.

#### **Attachment E – Request to Seal Features**

The site was designed to cause minimal impact on features identified in the Geologic Assessment. Due to severe topographic constraints, building the proposed roadways through the subdivision will seal some of the features. No features will be closed in their entirety; only small portions of the affected features will be closed. The features affected are 3, 4, 6, 9, 10, 12, 13, 15, 19, 20 and 21. Features 3, 13 and 15 are classified as having

moderate infiltration rates and the remaining features are classified as having none to low infiltration rates. Due to the low sensitivity and infiltration of the features and the low density of the development, there will be minimal impact caused by closing small portions of the listed features. Features 25, 26, 27, and 30 are man-made test holes used to determine groundwater quality and quantity at the site. These features will either be developed into wells to serve the development or permanently closed to prevent contamination. Features 29 and 33 are old wells that served the existing ranch homes on the property. These wells will be permanently sealed or brought up to current well standards if used for a single-family residence. This will occur prior to construction of the project.

# <u>Attachment I – Measures for Minimizing Surface Stream Contamination</u>

All surface streams will be protected from erosion by not allowing runoff to exceed existing velocities. This will be accomplished by adding energy dissipaters to the downstream side of culverts.

# TEXAS NATURAL RESOURCE CONSERVATION COMMISSION EDWARDS AQUIFER PROTECTION PLAN APPLICATION FEE FORM

|  | APP | LICAT | ION F | EE | FOR |
|--|-----|-------|-------|----|-----|
|--|-----|-------|-------|----|-----|

| NAME OF PROPOSED PROJECT: CA<br>PROJECT LOCATION: 25,000 BLOCK N<br>NAME OF APPLICANT: J.W. WOOD                              | <u>ANHAM RANCH</u><br>IATURAL BRIDGE CAVERI | NS ROAD (F.  | <u>M. 3009)</u>                   |
|---|---|--|-----------------------------------|
| APPLICANT'S ADDRESS: P.O. BOX 160,<br>CONTACT PERSON: BRENDA KELLY<br>Please Print  | BUDA, TX 78160                              | PHONE:   | (210) 494-0088                    |
| AUSTIN REGIONAL OFFICE (3373) ☐ Hays ☐ Travis ☐ Williamson  | SAN ANTONIO REGI ☐ Bexar X Comal ☐ Kinney   |  | CE (3362)<br>Î Medina<br>Î Uvalde |
| APPLICATION FEES MUST BE PAID BY CONTEXAS NATURAL RESOURCE CONSERVE YOUR RECEIPT. THIS FORM MUST BE SUBMITTED TO (CHECK ONE): | ATION COMMISSION. YO                        | UR CANCEL  | ED CHECK WILL SERVE AS            |
| X SAN ANTONIO REGIONAL OFFICE  ☐ Mailed to TNRCC: TNRCC - Cashier Revenues Section Mail Code 214 P.O. Box 13088               | ☐ Overnig<br>TNRCC<br>12100 Pa<br>Building  | REGIONAL<br>Int Delivery t<br>- Cashier<br>ark 35 Circle<br>A, 3rd Floor<br>TX 78753 |                                   |

| Type of Plan  | Size          | Fee Due     |
|---|---------------|-------------|
| Water Pollution Abatement, One Single Family Residential Dwelling       | Acres         | \$          |
| Water Pollution Abatement, Multiple Single Family Residential and Parks | 282.722 Acres | \$ 5,000.00 |
| Water Pollution Abatement, Non-residential                              | Acres         | \$          |
| Sewage Collection System  | L.F.          | \$          |
| Lift Stations without sewer lines                                       | Acres         | \$          |
| Underground or Aboveground Storage Tank<br>Facility                     | Tanks         | \$          |
| Piping System(s)(only)  | Each          | \$          |
| Exception   | Each          | \$          |
| Extension of Time   | Each          | \$          |

Date 6.17.00

512/239-0347

Austin, TX 78711-3088

#### TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

# **EDWARDS AQUIFER PROTECTION PLAN**

APPLICATION FEE SCHEDULE

30 TAC §213.14 (effective 11/14/97) & 30 TAC §213.9 (effective 6/1/99)

#### WATER POLLUTION ABATEMENT PLANS AND MODIFICATIONS

| PROJECT   | PROJECT AREA IN ACRES          | FEE                                      |
|---|--------------------------------|--|
| One Single Family Residential Dwelling  | <5                             | \$500                                    |
| Multiple Single Family Residential and Parks  | <5<br>5 < 10<br>10 < 50<br>≥50 | \$1,000<br>\$2,000<br>\$3,000<br>\$5,000 |
| Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur) | < 1<br>1 < 5<br>5 < 10<br>≥10  | \$2,000<br>\$3,000<br>\$4,000<br>\$5,000 |

#### ORGANIZED SEWAGE COLLECTION SYSTEMS AND MODIFICATIONS

| PROJECT                   | COST PER LINEAR FOOT | MINIMUM FEE<br>MAXIMUM FEE<br>\$500 - \$5,000 |  |
|---------------------------|----------------------|---|--|
| Sewage Collection Systems | \$0.50               |   |  |

# UNDERGROUND AND ABOVEGROUND STORAGE TANK SYSTEM FACILITY PLANS AND MODIFICATIONS

| PROJECT  | COST PER TANK OR<br>PIPING SYSTEM | MINIMUM FEE<br>MAXIMUM FEE |  |
|--|-----------------------------------|----------------------------|--|
| Underground and Aboveground Storage Tank<br>Facility | \$500                             | \$500 - \$5,000            |  |

#### **EXCEPTION REQUESTS**

| PROJECT           | FEE   |
|-------------------|-------|
| Exception Request | \$250 |

#### **EXTENSION OF TIME REQUESTS**

| PROJECT                   | FEE   |
|---------------------------|-------|
| Extension of Time Request | \$100 |

# **AGENT AUTHORIZATION FORM**

FOR REQUIRED SIGNATURE
EDWARDS AQUIFER PROTECTION PROGRAM
RELATING TO 30 TAC CHAPTER 213
EFFECTIVE JUNE 1, 1999

J. W. Wood Print Name

Managing Partner

Title - Owner/President/Other

of Canham Ranch, Ltd.

Corporation/Partnership/Entity Name

have authorized Brenda J. Kelly, P.E.

Print Name of Agent/Engineer

of <u>Carter & Burgess, Inc</u>

Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Natural Resource Conservation Commission (TNRCC) for the review and approval consideration of regulated activities.

#### I also understand that:

- 1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TNRCC's approval letter. The TNRCC is authorized to assess administrative penalties of up to \$10,000 per day per violation.
- 2. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and the forms must accompany the completed application.
- 3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TNRCC cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. For applicants who are not the property owner, but who have the right to control and possess and control the property, additional authorization is required from the owner. Date 6.130 THE STATE OF TEXAS § County of \ranks \§ BEFORE ME, the undersigned authority, on this day personally appeared  $3, \omega, \omega_{\infty}$ to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed. GIVEN under my hand and seal of office on this  $n^{-1}$  day of nTERESA J. WHEATLEY MY COMMISSION EXPIRES October 26, 2000 Typed or Printed Name of Notary MY COMMISSION EXPIRES:

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