TECHNICAL SUMMARY AND
EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

DESCRIPTION OF APPLICATION

Applicant:	Clayton Properties Group, Inc. TCEQ Permit No. WQ0016596001
Regulated Activity:	Domestic Wastewater Permit
Type of Application:	New Permit
Request:	New Permit
Authority:	Texas Water Code (TWC) § 26.027; 30 Texas Administrative Code (TAC) Chapters 222, 305, 309, 312, 319, and 30; and Commission policies.

EXECUTIVE DIRECTOR RECOMMENDATION

The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The draft permit includes an expiration date of **five years from the date of issuance,** according to 30 TAC § 305.127(1)(C)(ii)(III), Conditions to be Determined for Individual Permits.

REASON FOR PROJECT PROPOSED

Clayton Properties Group, Inc. has applied to the Texas Commission on Environmental Quality (TCEQ) for a new permit, TCEQ Permit No. WQ0016596001 to authorize the disposal of treated domestic wastewater at a daily average flow not to exceed 0.0505 million gallons per day (MGD) via public access subsurface area drip dispersal system with a minimum area of 11.60 acres. The proposed wastewater treatment facility will serve a new development of 265 multi-family apartments.

PROJECT DESCRIPTION AND LOCATION

The Orchard Ranch Wastewater Treatment Facility will consist of a membrane Bioreactor (MBR) plant. Treatment units will include a bar screen, an equalization tank, a sludge holding tank, two processing basins (anoxic, aeration, and membrane zones), and either one chlorine contact chamber or ultraviolet light (UV) disinfection system. The facility has not been constructed.

Sludge generated from the treatment facility will be hauled by a registered transporter and disposed of at a TCEQ permitted landfill, SouthWaste Disposal Sealy Composting Facility, MSW Permit No. 2388, in Austin County. The draft permit also authorizes the disposal of sludge at a TCEQ-authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge.

The wastewater treatment facility and disposal site will be located approximately 3,360 feet northwest from the intersection of Circle Drive and U.S. Highway 290, near the City of Austin, in Travis County, Texas 78736.

The wastewater treatment facility and disposal site will be located in the drainage basin of Barton Creek in Segment No. 1430 of the Colorado River Basin. No discharge of pollutants into water in the State is authorized by this permit.

SUMMARY OF EFFLUENT DATA

There is no effluent data since the facility has not been constructed.

DRAFT PERMIT CONDITIONS

The draft permit authorizes the disposal of treated domestic wastewater effluent at a daily average flow not to exceed 0.0505 MGD via public access subsurface area drip dispersal system with a minimum area of 11.60 acres. The permittee is required to provide at least three days of temporary storage for times when the facility is out of service due to an emergency or for scheduled maintenance. Application rates shall not exceed 0.1 gallons per square foot per day. The permittee will maintain the Bermuda grass (warm season) overseeded with rye grass (cool season) on the disposal site.

The effluent limitations in the draft permit, based on a daily average, are 10 mg/l biochemical oxygen demand (BOD_5), and 15 mg/l total suspended solids (TSS), and a single grab of 126 colony forming units (CFU) or most probable number (MPN) of *E. coli* per 100 ml. If chlorine disinfection is used: The effluent shall contain a total chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes based on peak flow. If UV disinfection is used: The permittee shall utilize an UV system for disinfection purposes and shall not exceed a single grab of 126 CFU or MPN colonies per 100 ml of *E. coli*.

The permittee shall comply with the requirements of 30 TAC § 309.13 (a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC § 309.13(e).

The draft permit includes Sludge Provisions according to the requirements of 30 TAC Chapter 312, Sludge Use, Disposal and Transportation. Sludge generated from the treatment facility will be hauled by a registered transporter and disposed of at a TCEQ permitted landfill, SouthWaste Disposal Sealy Composting Facility, MSW Permit No. 2388, in Austin County. The draft permit authorizes the disposal of sludge at a TCEQ-authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge.

SUMMARY OF CHANGES FROM APPLICATION

Since the applicant is applying for the option to use UV disinfection, the effluent limitations were changed from the proposed 20 mg/l BOD_5 and 20 mg/l TSS to 10 mg/l BOD_5 and 15 mg/l TSS in order to comply with 30 TAC § 222.85.

BASIS FOR DRAFT PERMIT

The following items were considered in developing the draft permit:

1. Application submitted with letter dated August 9, 2024 and additional information

submitted with letter dated September 23, 2024, Novemeber 1, 2024, and Novemeber 4, 2024.

2. Interoffice Memorandum from the Water Quality Assessment Team, Water Quality Assessment & Standards Section, Water Quality Division.

PROCEDURES FOR FINAL DECISION

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant advising the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for review and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application, and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent, along with the Executive Director's preliminary decision, as contained in the technical summary or fact sheet, to the Chief Clerk. At that time, Notice of Application and Preliminary Decision will be mailed to the same people and published in the same newspaper as the prior notice. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director's preliminary decision and draft permit in the public place with the application.

Any interested person may request a public meeting on the application until the deadline for filing public comments. A public meeting is intended for the taking of public comment, and is not a contested case proceeding.

After the public comment deadline, the Executive Director prepares a response to all significant public comments on the application or the draft permit raised during the public comment period. The Chief Clerk then mails the Executive Director's Response to Comments and Final Decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that if a person is not satisfied with the Executive Director's response and decision, they can request a contested case hearing or file a request to reconsider the Executive Director's decision within 30 days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the Executive Director's Response to Comments and Final Decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the Commission grants a contested case hearing as described above, the Commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the Commission will consider all public comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response.

For additional information about this application, contact Garrison Layne at (512) 239-0849.

Garrison Layne Municipal Permits Team Wastewater Permitting Section (MC 148)	Date

PERMIT NO. WQ0016596001

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. Box 13087
Austin, Texas 78711-3087

PERMIT TO DISCHARGE WASTES
under provisions of Chapter 26
of the Texas Water Code

Clayton Properties Group, Inc.

whose mailing address is

6720 Vaught Ranch Road, Suite 200
Austin, Texas 78730

Nature of Business Producing Waste: Domestic wastewater treatment operation, SIC Code 4952.

General Description and Location of Waste Disposal System:

Description: The Orchard Ranch Wastewater Treatment Facility will consist of a Membrane Bioreactor (MBR) plant. Treatment units will include a bar screen, an equalization tank, a sludge holding tank, two processing basins (anoxic, aeration, and membrane zones), and either one chlorine contact chamber or ultraviolet light (UV) disinfection system. The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.0505 million gallons per day (MGD) via public access subsurface area drip dispersal system with a minimum area of 11.60 acres. Application rates shall not exceed 0.1 gallons per square foot per day. The permittee will maintain the Bermuda grass (warm season) overseeded with rye grass (cool season) on the disposal site.

Location: The wastewater treatment facility and disposal site are located approximately 3,360 feet northwest from the intersection of Circle Drive and U.S. Highway 290, near the City of Austin, Travis County, Texas 78736. (See Attachment A.)

Drainage Area: The wastewater treatment facility and disposal site are located in the drainage basin of Barton Creek in Segment No. 1430 of the Colorado River Basin. No discharge of pollutants into water in the State is authorized by this permit.

This permit and the authorization contained herein shall expire at midnight, **five years from the date of issuance**.

ISSUED DATE:

For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Conditions of the Permit: No discharge of pollutants into water in the State is authorized.

A. Effluent Limitations

Character: Treated Domestic Sewage Effluent

Volume: Daily Average Flow – 0.0505 MGD from the treatment system

Quality: The following effluent limitations shall be required:

Parameter	Effluent Concentrations (Not to Exceed) Daily Average mg/l	7-Day Average mg/l	Daily Maximum mg/	Single Grab mg/l
Biochemical Oxygen Demand (5-day)	10	15	25	35
Total Suspended Solids	15	25	40	60
E. coli, CFU or MPN/ 100 ml	N/A	N/A	N/A	126

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.

If chlorine is used for disinfection: The effluent shall be chlorinated in a chlorine contact chamber to a residual of 1.0 mg/l with a minimum detention time of 20 minutes. If the effluent is to be transferred to a holding pond or tank, re-chlorination prior to the effluent being delivered into the irrigation system will be required.*

If Ultraviolet Light (UV) disinfection is used: The permittee shall utilize an UV system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.**

B. Monitoring Requirements:

Parameter	Monitoring Frequency	Sample Type
Flow	Continuous	Totalizing Meter
Biochemical Oxygen Demand (5-day)	One/week	Grab
Total Suspended Solids	One/week	Grab
pH	One/week	Grab
Total Chlorine Residual	Five/week	Grab
E. coli	1/quarter* Daily**	Grab

The monitoring shall be done after the final treatment unit and prior to storage of the treated effluent. If the effluent is land applied directly from the treatment system, monitoring shall be done after the final treatment unit and prior to land application. These records shall be maintained on a monthly basis and be available at the plant site for inspection by authorized representatives of the Commission for at least three years.

STANDARD PERMIT CONDITIONS

This permit is granted in accordance with the Texas Water Code and the rules and other Orders of the Commission and the laws of the State of Texas.

DEFINITIONS

All definitions in Section 26.001 of the Texas Water Code and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

1. Flow Measurements

    a. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.

    b. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with a 1 million gallons per day or greater permitted flow.

    c. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.

2. Concentration Measurements

    a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.

        i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

        ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.

    b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.

    c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.

3. Sample Type

   a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).

   b. Grab sample - an individual sample collected in less than 15 minutes.

4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.

5. The term “sewage sludge” is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids which have not been classified as hazardous waste separated from wastewater by unit processes.

6. The term “biosolids” is defined as sewage sludge that has been tested or processed to meet Class A, Class AB, or Class B pathogen standards in 30 TAC Chapter 312 for beneficial use.

7. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

MONITORING REQUIREMENTS

1. Monitoring Requirements

   Monitoring results shall be collected at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling in accordance with 30 TAC §§ 319.4 - 319.12.

   As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Texas Water Code, Chapters 26, 27, and 28, and Texas Health and Safety Code, Chapter 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record or other document submitted or required to be maintained under this permit, including monitoring reports, records or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

2. Test Procedures

   a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.

b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification.

3. Records of Results

a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge or biosolids use and disposal activities, which shall be retained for a period of at least five years, monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, and records of all data used to complete the application for this permit shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, or application. This period shall be extended at the request of the Executive Director.

c. Records of monitoring activities shall include the following:

i. date, time and place of sample or measurement;
ii. identity of individual who collected the sample or made the measurement.
iii. date and time of analysis;
iv. identity of the individual and laboratory who performed the analysis;
v. the technique or method of analysis; and
vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in determining compliance with permit requirements.

5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

6. Compliance Schedule Reports

   Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Enforcement Division (MC 224).

7. Noncompliance Notification

   a. In accordance with 30 TAC § 305.125(9), any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Except as allowed by 30 TAC § 305.132, report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

   b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:

      i. Unauthorized discharges as defined in Permit Condition 2(g).

      ii. Any unanticipated bypass which exceeds any effluent limitation in the permit.

   c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.

   d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible.

8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.

9. Changes in Discharges of Toxic Substances

   All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

   a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D,

Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

i. One hundred micrograms per liter (100 µg/L);
ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
iv. The level established by the TCEQ.

b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

i. Five hundred micrograms per liter (500 µg/L);
ii. One milligram per liter (1 mg/L) for antimony;
iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
iv. The level established by the TCEQ.

10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

PERMIT CONDITIONS

1. General

a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.

b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:

i. Violation of any terms or conditions of this permit;
ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

2. Compliance

   a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

   b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation or suspension, or for denial of a permit renewal application or an application for a permit for another facility.

   c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

   d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation which has a reasonable likelihood of adversely affecting human health or the environment.

   e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

   f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and Texas Water Code Section 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

   g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Special Provisions section of this permit.

   h. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code §§ 7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties).

3. Inspections and Entry

   a. Inspection and entry shall be allowed as prescribed in the Texas Water Code Chapters 26, 27, and 28, and Texas Health and Safety Code Chapter 361.

   b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or

monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in Texas Water Code Section 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

4. Permit Amendment and/or Renewal

   a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:

      i. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9;

      ii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

   b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.

   c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.

   d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this

permit.

e. In accordance with the Texas Water Code § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.

5. Permit Transfer

a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.

b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal which requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

8. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

9. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

10. Notice of Bankruptcy.

a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:

i. the permittee;
ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or
iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.

b. This notification must indicate:

i. the name of the permittee;
ii. the permit number(s);
iii. the bankruptcy court in which the petition for bankruptcy was filed; and
iv. the date of filing of the petition.

OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.

2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge or biosolids use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.

3. Domestic wastewater treatment facilities shall comply with the following provisions:

   a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.

   b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.

4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.

5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.

6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under Texas Water Code § 7.302(b)(6).

7. Documentation

   For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information specified as not confidential in 30 TAC § 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities which generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.

   a. Whenever flow measurements for any domestic sewage treatment facility reach 75 percent of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90 percent of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75 percent of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

      If in the judgement of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 219) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

   b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.

   c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or

discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.

10. Facilities which generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:

    a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.

    b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.

    c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.

    d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.

    e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.

    f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC Chapter 335 and must include the following, as it pertains to wastewater treatment and discharge:

        i. Volume of waste and date(s) generated from treatment process;
        ii. Volume of waste disposed of on-site or shipped off-site;

iii. Date(s) of disposal;
iv. Identity of hauler or transporter;
v. Location of disposal site; and
vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

11. For industrial facilities to which the requirements of 30 TAC Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with Chapter 361 of the Texas Health and Safety Code.

TCEQ Revision 06/2020

SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge or biosolids only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge. **The disposal of sludge or biosolids by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized with the TCEQ. This provision does not authorize Distribution and Marketing of Class A or Class AB Biosolids. This provision does not authorize the permittee to land apply biosolids on property owned, leased or under the direct control of the permittee.**

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS LAND APPLICATION

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge or biosolids.

2. In all cases, if the person (permit holder) who prepares the sewage sludge or biosolids supplies the sewage sludge or biosolids to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge or biosolids to assure compliance with these regulations.

3. The land application of processed or unprocessed chemical toilet waste, grease trap waste, grit trap waste, milk solids, or similar non-hazardous municipal or industrial solid wastes, or any of the wastes listed in this provision combined with biosolids, WTP residuals or domestic septage is prohibited unless the grease trap waste is added at a fats, oil and grease (FOG) receiving facility as part of an anaerobic digestion process.

B. Testing Requirements

1. Sewage sludge or biosolids shall be tested once during the term of this permit in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method that receives the prior approval of the TCEQ for the contaminants listed in 40 CFR Part 261.24, Table 1. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 11) within seven (7) days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped, and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 11) and the Enforcement Division (MC 224).

2. Biosolids shall not be applied to the land if the concentration of the pollutants exceeds the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C. of this permit.

TABLE 1

Pollutant	Ceiling Concentration (Milligrams per kilogram)*
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site must be treated by one of the following methods to ensure that the sludge meets either the Class A, Class AB or Class B biosolids pathogen requirements.

a. For sewage sludge to be classified as Class A biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge must be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC § 312.82(a)(2)(A) for specific information;

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of must be treated in one of the Processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion; or

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of must be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

b. For sewage sludge to be classified as Class AB biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 MPN per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

   Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

   The temperature of the sewage sludge shall be above 52° Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

   At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50%; or

   Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(iv-vi) for specific information; or

   Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

c. Sewage sludge that meets the requirements of Class AB biosolids may be classified a Class A biosolids if a variance request is submitted in writing that is supported by substantial documentation demonstrating equivalent methods for reducing odors and written approval is granted by the executive director. The executive director may deny the variance request or revoke that approved variance if it is determined that the variance may potentially endanger human health or the environment, or create nuisance odor conditions.

d. Three alternatives are available to demonstrate compliance with Class B biosolids

criteria.
Alternative 1

i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.

ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;

iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;

iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and

v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U.S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;

iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;

iv. The Executive Director will accept from the U.S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and

v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition to the Alternatives 1 – 3, the following site restrictions must be met if Class B biosolids are land applied:

i. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.

ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for 4 months or longer prior to incorporation into the soil.

iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than 4 months prior to incorporation into the soil.

iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.

v. Domestic livestock shall not be allowed to graze on the land for 30 days after application of biosolids.

vi. Turf grown on land where biosolids are applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn.

vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of biosolids.

viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of biosolids.

ix. Land application of biosolids shall be in accordance with the buffer zone requirements found in 30 TAC § 312.44.

4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following Alternatives 1 through 10 for vector attraction reduction.

Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%.

Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37° Celsius. Volatile solids must be reduced by less than 17% to demonstrate compliance.

Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20° Celsius. Volatile solids must be reduced by less than 15% to demonstrate compliance.

Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20° Celsius.

Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40° Celsius and the average temperature of the sewage sludge shall be higher than 45° Celsius.

Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.

Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 9 -

i. Biosolids shall be injected below the surface of the land.

ii. No significant amount of the biosolids shall be present on the land surface within one hour after biosolids are injected.

iii. When sewage sludge that is injected below the surface of the land is Class A or Class AB with respect to pathogens, the biosolids shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

Alternative 10-

i. Biosolids applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.

ii. When biosolids that are incorporated into the soil is Class A or Class AB with respect to pathogens, the biosolids shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

C. Monitoring Requirements

Toxicity Characteristic Leaching Procedure (TCLP) Test	- once during the term of this permit
PCBs	- once during the term of this permit

All metal constituents and fecal coliform or *Salmonella* sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC § 312.46(a)(1):

Amount of biosolids (*) metric tons per 365-day period	Monitoring Frequency
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 to less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(*) *The amount of bulk biosolids applied to the land (dry wt. basis).*

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC § 312.7

Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.

Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge or biosolids for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.

SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A, CLASS AB or B BIOSOLIDS PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3

For those permittees meeting Class A, Class AB or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

A. Pollutant Limits

Table 2

Pollutant	Cumulative Pollutant Loading Rate (pounds per acre)*
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

Pollutant	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

*Dry weight basis

B. Pathogen Control

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A, Class AB or Class B biosolids pathogen reduction requirements as defined above in Section I.B.3.

C. Management Practices

1. Bulk biosolids shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.

2. Bulk sewage sludge not meeting Class A biosolids requirements shall be land applied in a manner which complies with Applicability in accordance with 30 TAC §312.41 and the Management Requirements in accordance with 30 TAC § 312.44.

3. Bulk biosolids shall be applied at or below the agronomic rate of the cover crop.

4. An information sheet shall be provided to the person who receives bulk Class A or AB biosolids sold or given away. The information sheet shall contain the following information:

    a. The name and address of the person who prepared the Class A or AB biosolids that are sold or given away in a bag or other container for application to the land.

    b. A statement that application of the Class A or AB biosolids to the land is prohibited except in accordance with the instruction on the label or information sheet.

    c. The annual whole sludge application rate for the biosolids application rate for the biosolids that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

D. Notification Requirements

1. If bulk biosolids are applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk biosolids are proposed to be applied. The notice shall include:

    a. The location, by street address, and specific latitude and longitude, of each land application site.

    b. The approximate time period bulk biosolids will be applied to the site.

    c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk biosolids.

2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the biosolids disposal practice.

E. Record Keeping Requirements

The documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a biosolids material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a period

of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.

2. A description of how the pathogen reduction requirements are met (including site restrictions for Class AB and Class B biosolids, if applicable).

3. A description of how the vector attraction reduction requirements are met.

4. A description of how the management practices listed above in Section II.C are being met.

5. The following certification statement:

   "I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC § 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC § 312.83(b) have been met for each site on which bulk biosolids are applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained. The person who applies bulk biosolids shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply:

   a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii), as applicable, and to the permittee's specific sludge treatment activities.

   b. The location, by street address, and specific latitude and longitude, of each site on which sludge is applied.

   c. The number of acres in each site on which bulk sludge is applied.

   d. The date and time sludge is applied to each site.

e. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.

f. The total amount of sludge applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

F. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 11) and the Enforcement Division (MC 224).

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

2. Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.

3. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.

4. The frequency of monitoring listed in Section I.C. that applies to the permittee.

5. Toxicity Characteristic Leaching Procedure (TCLP) results.

6. PCB concentration in sludge or biosolids in mg/kg.

7. Identity of hauler(s) and TCEQ transporter number.

8. Date(s) of transport.

9. Texas Commission on Environmental Quality registration number, if applicable.

10. Amount of sludge or biosolids disposal dry weight (lbs/acre) at each disposal site.

11. The concentration (mg/kg) in the sludge or biosolids of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.

12. Level of pathogen reduction achieved (Class A, Class AB or Class B).

13. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B biosolids, include information on how site restrictions were met.

14. Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.

15. Vector attraction reduction alternative used as listed in Section I.B.4.

16. Amount of sludge or biosolids transported in dry tons/year.

17. The certification statement listed in either 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge or biosolids treatment activities, shall be attached to the annual reporting form.

18. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.

    a. The location, by street address, and specific latitude and longitude.

    b. The number of acres in each site on which bulk biosolids are applied.

    c. The date and time bulk biosolids are applied to each site.

    d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk biosolids applied to each site.

    e. The amount of biosolids (i.e., dry tons) applied to each site.

    The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL

A. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge or biosolids meets the requirements in 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.

B. If the permittee generates sewage sludge or biosolids and supplies that sewage sludge or biosolids to the owner or operator of a municipal solid waste landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.

C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge or biosolids disposal practice.

D. Sewage sludge s or biosolids hall be tested once during the term of this permit in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR § 261.24. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

   Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 11) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

   The report shall contain test results, certification that unauthorized waste management has stopped, and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 11) and the Enforcement Division (MC 224), by September 30_{th} of each year.

E. Sewage sludge or biosolids shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.

F. Record Keeping Requirements

   The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.

2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

G. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 11) and the Enforcement Division (MC 224).

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

2. Toxicity Characteristic Leaching Procedure (TCLP) results.

3. Annual sludge production in dry tons/year.

4. Amount of sludge or biosolids disposed in a municipal solid waste landfill in dry tons/year.

5. Amount of sludge or biosolids transported interstate in dry tons/year.

6. A certification that the sewage sludge or biosolids meets the requirements of 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.

7. Identity of hauler(s) and transporter registration number.

8. Owner of disposal site(s).

9. Location of disposal site(s).

10. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

SECTION IV. REQUIREMENTS APPLYING TO SLUDGE OR BIOSOLIDS TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING

These provisions apply to sludge or biosolids that is transported to another wastewater treatment facility or facility that further processes sludge or biosolids. These provisions are intended to allow transport of sludge or biosolids to facilities that have been authorized to accept sludge or biosolids. These provisions do not limit the ability of the receiving facility to determine whether to accept the sludge or biosolids, nor do they limit the ability of the receiving facility to request additional testing or documentation.

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.

2. Sludge or biosolids may only be transported using a registered transporter or using an approved pipeline.

B. Record Keeping Requirements

1. For sludge transported by an approved pipeline, the permittee must maintain records of the following:

   a. the amount of sludge or biosolids transported;

   b. the date of transport;

   c. the name and TCEQ permit number of the receiving facility or facilities;

   d. the location of the receiving facility or facilities;

   e. the name and TCEQ permit number of the facility that generated the waste; and

   f. copy of the written agreement between the permittee and the receiving facility to accept sludge or biosolids.

2. For sludge or biosolids transported by a registered transporter, the permittee must maintain records of the completed trip tickets in accordance with 30 TAC § 312.145(a)(1)-(7) and amount of sludge or biosolids transported.

3. The above records shall be maintained on-site on a monthly basis and shall be made available to the TCEQ upon request. These records shall be retained for at least five years.

C. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 11) and the Enforcement Division (MC 224).

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

2. the annual sludge or biosolids production;

3. the amount of sludge or biosolids transported;

4. the owner of each receiving facility;

5. the location of each receiving facility; and

6. the date(s) of disposal at each receiving facility.

SPECIAL PROVISIONS:

1. This permit is granted subject to the policy of the Commission to encourage the development of areawide waste collection, treatment and disposal systems. The Commission reserves the right to amend this permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an areawide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such areawide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

2. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations, and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

   This Category C facility must be operated by a chief operator or an operator holding a Class C license or higher. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift which does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

3. The permittee shall maintain and operate the treatment facility in order to achieve optimum efficiency of treatment capability. This shall include required monitoring of effluent flow and quality as well as appropriate grounds and building maintenance.

4. Prior to construction of the wastewater treatment facilities, the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) of the Water Quality Division, a summary transmittal letter according to the requirements in 30 TAC § 217.6(d). If requested by the Wastewater Permitting Section, the permittee shall submit plans, specifications and a final engineering design report which comply with the requirements of 30 TAC Chapter 217, Design Criteria for Wastewater Treatment Systems. The permittee shall clearly show how the treatment system will meet the permitted effluent limitations required on Page 2 of the permit. A copy of the summary transmittal letter shall be available at the plant site for inspection by authorized representatives of the TCEQ.

5. Prior to construction of the subsurface area drip dispersal system, the permittee shall submit, to the TCEQ Wastewater Permitting Section (MC148) of the Water Quality Division, an engineering report, including plans and specifications, that meets the requirements in 30 TAC Chapter 222, Subsurface Drip Dispersal Systems, Subchapter D: Design Criteria.

6. Reporting requirements according to 30 TAC §§ 319.1-319.11 and any additional effluent reporting requirements contained in this permit are suspended from the effective date of the permit until plant startup or discharge, whichever occurs first, from the facility described by

this permit. The permittee shall provide written notice to the TCEQ Regional Office (MC Region 11) and the Applications Review and Processing Team (MC 148) of the Water Quality Division at least forty-five (45) days prior to plant startup or anticipated discharge, whichever occurs first, on Notification of Completion Form 20007.

7. The permittee shall comply with the requirements of 30 TAC § 309.13 (a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC § 309.13(e).

8. The property is within the Edwards Aquifer Contributing Zone and is subject to 30 TAC Chapter 213, subchapter B.

9. Any recharge features uncovered by construction of and operation of the SADDS fields and wastewater treatment facilities shall be addressed in an updated and certified Recharge Feature Plan. The Recharge Feature Plan will include the best management practices implemented that will prevent impact to recharge features from wastewater application and prevent groundwater contamination. The updated and certified Recharge Feature Plan shall be submitted to the TCEQ Water Quality Assessment Team (MC-150) and the TCEQ Region 11 (Austin) Office within 30 days of discovery of the feature. The Recharge Feature Plan must be certified by a Texas-licensed Professional Geoscientist or a Texas-licensed Professional Engineer.

10. According to the requirements of 30 TAC §222.81(a), the permittee shall locate the SADDS a minimum horizontal distance of 100 feet from surface waters in the state, including an onsite stock tank and unnamed tributary to Grape Creek.

11. The permittee shall locate the SADDS a minimum horizontal distance of 500 feet from public water wells, springs, or other similar sources of public drinking water and 150 feet from private wells as described in 30 TAC §309.13(c)(1). The permittee shall not locate a SADDS within a floodway per 30 TAC §222.81(d).

12. The permittee shall comply with buffer zone requirements of 30 TAC Section §309.13(c). A wastewater treatment plant unit, defined by 30 TAC Section §309.11(9), must be located a minimum horizontal distance of 250 feet from a private well and a minimum horizontal distance of 500 feet from a public water well site, spring, or other similar sources of public drinking water, as provided by §290.41(c)(1) of this title.

13. The permittee shall construct berms or swales, or other engineering controls to prevent or divert stormwater from entering all subsurface wastewater application areas.

14. The permittee shall develop a Springs/Seeps Monitoring Plan and submit the plan to the TCEQ Water Quality Assessment Team (MC-150) for review, possible modification, and approval within 30 days of permit issuance. At a minimum, the plan shall include:

    a) A procedure to conduct quarterly field checks at the drip irrigation fields and down-gradient of the fields to identify emerging springs or seeps.

    b) A procedure to sample springs or seeps in the event that springs/seeps develop after drip irrigation of effluent commences.

    c) Quarterly field checks and sampling (if applicable) of the springs/seeps shall occur after

a minimum rainfall event of 0.5-inch, if possible.

d) Analysis of springs/seeps water for nutrients, including, but not limited to, a complete nitrogen series [(Nitrate (as N), Nitrite (as N), Total Kjeldahl Nitrogen, ammonia as N], total phosphorus, ortho-phosphate, chlorides, fecal coliform, and specific conductivity.

e) A record of the quarterly checks and sampling of the springs and seeps shall be maintained in a field log and kept onsite for TCEQ inspection.

f) Monitoring of emerging and existing springs/seeps shall continue for the life of the system.

g) The applicant shall submit the data, including laboratory reports, and a map showing the locations of any seeps/springs that were sampled per the Seeps/Springs Monitoring Plan to the Water Quality Assessment Team (MC-150) of the Water Quality Division, the TCEQ Region 11 (Austin) Office, and the Compliance Monitoring Section (MC-224) during the month of September of each year for review. If no seeps/springs were identified during a particular quarter, that information shall be included in the annual report.

h) A procedure for the implementation of corrective measures to remedy the discharge if laboratory analysis indicates that wastewater is emerging as a seep or spring.

i) The permittee shall implement the plan upon approval by the Water Quality Assessment Team. The executive director may request modification of the approved plan if future information indicates that it would be necessary for the protection of the environment.

15. Application rates shall not exceed 0.1 gallons per square foot per day. The permittee is responsible for providing equipment to determine the application rate and for maintaining accurate records of the volume of effluent applied. According to the requirements of 30 TAC § 222.161(d), the permittee shall maintain records documenting all activities associated with maintaining the vegetative cover (the crops), like planting, over-seeding, mowing height, fertilizing, and harvesting. These records shall be maintained for a minimum of five years and be made available to TCEQ staff upon request.

16. The permittee shall use cultural practices to promote and maintain the health and propagation of Bermudagrass (warm season) overseeded with winter rye (cool season) crops and avoid plant lodging. The permittee shall harvest the crops (cut and remove it from the field) at least once during the year. Harvesting and mowing dates shall be recorded in a logbook kept on site to be made available to TCEQ personnel upon request.

17. The permittee shall maintain a minimum rootable soil depth of 12 inches below the drip irrigation lines. At least a six-inch layer of soil shall be maintained over the drip lines. If imported soils are used, the permittee shall submit no later than 90 days prior to construction to the TCEQ Water Quality Assessment Team (MC 150) and the Wastewater Permitting Section (MC 148) of the Water Quality Division a plan for review/revision and approval describing how the imported soils will be incorporated into the native soils and how soil erosion will be prevented in the affected areas.

18. The physical condition of the land application fields shall be monitored on a weekly basis. Any areas with problems such as surface runoff, surficial erosion, stressed or damaged vegetation, etc., shall be recorded in the field log kept onsite. Corrective measures will be implemented within 24 hours of discovery.

19. Subsurface irrigation practices shall be designed and managed as to prevent ponding and surfacing of effluent, contamination of ground and surface water, and the occurrence of nuisance conditions in the area. To promote effluent and nutrient uptake by the crop, and to prevent pathways for effluent surfacing, Bermuda grass (warm season) overseeded with Winter rye (cool season) shall be established and well maintained in the irrigation area throughout the year.

20. For any area where treated effluent is stored or where there exist hose bibs or faucets, the permittee shall erect adequate signs stating that the irrigation water is from a non-potable water supply. Signs shall consist of a red slash superimposed over the international symbol for drinking water accompanied by the message “DO NOT DRINK THE WATER” in both English and Spanish. All piping transporting the effluent shall be clearly marked with these same signs.

21. Based on the requirements of 30 TAC 222.151, the subsurface system shall be designed and managed so as to prevent seepage or percolation out of the root zone, other than leaching in the amount required to maintain the health of the vegetative cover. Surfacing and ponding is prohibited. Creating a condition at the treatment facility or the drip dispersal zones that contributes to vector attraction or odor is prohibited.

22. Effluent shall not be applied for irrigation during rainfall events or when the ground is frozen or saturated.

23. Drip irrigation lines shall be installed on the contour and lateral slopes of the tubing shall not exceed 1 percent. The permittee can apply for a variance to this provision by providing justification in the detailed design criteria per Chapter 222 indicating how uneven application of effluent due to back draining will be avoided.

24. The permittee shall remove large (greater than 12-inch) stones and flagstones from the irrigation area. Any large stones brought to the surface during any trenching for the drip lines, construction, maintenance activities, and/or any disturbing of the soil shall be removed.

25. Each zone shall have at least two soil moisture-sensing devices placed at 12 inches below the depth of the drip lines that will automatically shut off irrigation to that zone when the soil becomes saturated. The devices shall be located on the downgradient side of each zone and be spaced a minimum of 50 feet apart. The soil moisture monitoring devices, including a map of the monitoring device locations, shall be included with the dispersal zone design and submitted with the engineering report required by 222 TAC Subchapter D.

26. Irrigation to treated effluent on land with a slope of 10% or greater is prohibited. Irrigation of treated effluent shall be limited to those tracts designated on Attachment A of this permit only after proper grading has been accomplished.

27. Soil Testing Plan

The permittee shall obtain representative soil samples from the root zones of the land application area receiving wastewater. Composite sampling techniques shall be used. Each composite sample shall represent no more than 11.60 acres with no less than two (2) cores per dosing bed (zone) representing each composite sample. Subsamples shall be composited by like sampling depth, type of crop and soil type for analysis and reporting. Soil types are soils that have like topsoil or plow layer textures. These soils shall be sampled individually from 0 to 12 inches and 12 to 24 inches below ground level. The permittee shall sample soils in December to February of each year. Soil samples shall be analyzed within 30 days of sample collection.

The permittee shall provide annual soil sample analyses of the land application area according to the following table:

Parameter	**Method**	**Minimum Analytical Level (MAL)**	**Reporting units**
pH	2:1 (v/v) water to soil mixture		Reported to 0.1 pH units after calibration of pH meter
Electrical Conductivity	Obtained from the SAR water saturated paste extract	0.01	dS/m (same as mmho/cm)
Nitrate-nitrogen	From a 1 N KCl soil extract	1	mg/kg (dry weight basis)
Total Kjeldahl Nitrogen (TKN)	For determination of Organic plus Ammonium Nitrogen. Procedures that use Mercury (Hg) are not acceptable.	20	mg/kg (dry weight basis)
Total Nitrogen	= TKN plus Nitrate-nitrogen		mg/kg (dry weight basis)
Plant-available: Phosphorus	Mehlich III with inductively coupled plasma	1 (P)	mg/kg (dry weight basis)
Plant-available: Potassium (K) Calcium (Ca) Magnesium (Mg) Sodium (Na)	May be determined in the same Mehlich III extract with inductively coupled plasma	5 (K) 10 (Ca) 5 (Mg) 10 (Na) 1 (S)	mg/kg (dry weight basis)

Sulfur (S)			
Water-soluble: Sodium (Na) Calcium (Ca) Magnesium (Mg)	Obtained from the SAR water saturated paste extract	1 (Na) 1 (Ca) 1 (Mg)	Water soluble constituents are reported in mg/L
Sodium Adsorption Ratio (SAR)	$SAR = \frac{Na}{\sqrt{\frac{(Ca + Mg)}{2}}}$		Express concentrations of Na, Ca and Mg in the water saturated paste extract in milliequivalents/liter (meq/L) to calculate the SAR. The SAR value is unit less. If the SAR is greater than 10, amendments (e.g., gypsum) shall be added to the soil to adjust the SAR to less than 10.
Amendment addition, e.g., gypsum			Report in short tons/acre in the year effected

A copy of this soil testing plan shall be provided to the analytical laboratory prior to sample analysis. The permittee shall submit the results of the annual soil sample analyses with copies of the laboratory reports and a map depicting the areas that have received wastewater within the permanent land application fields to the TCEQ Regional Office (MC Region 11), the Water Quality Assessment Team (MC 150), and the Compliance Monitoring Team (MC 224), no later than the end of September of each sampling year. If wastewater is not applied in a particular year, the permittee shall notify the same TCEQ offices and indicate that wastewater has not been applied on the approved land irrigation site(s) during that year.

28. The subsurface drip irrigation system shall consist of a sufficient number of different dispersal zones. The minimum depth of soil above the drip irrigation lines shall be at least six inches, and the minimum depth of soil below the drip irrigation lines shall consist of at least twelve inches of usable soil. In the event of effluent surfacing due to damage to the drip irrigation lines, effluent application shall be shut-off to the drip irrigation zone and public access to the zone shall be restricted.

29. The permittee shall design and install temporary storage that equals at least three days of the design flow of the facility for times when the subsurface area drip dispersal system is out of service due to an emergency or scheduled maintenance. In addition, the permittee shall pump and haul wastewater from the facility to prevent the discharge of treated or untreated wastewater if complete shutdown of the wastewater treatment facility becomes necessary or if the storage capacity is exceeded.

30. Permanent transmission lines shall be installed from the treatment system to each drip irrigation zone of the subsurface drip irrigation system. According to 30 TAC § 222.153, the permittee shall flush the subsurface area drip dispersal system from the dispersal zone and return the flush water to a point preceding the treatment system at least once every two months.

31. According to 30 TAC § 222.163, Closure Requirements, the permittee shall close the system under the standards set forth in this section.

32. According to the requirements of 30 TAC § 222.43, the permittee shall notify the TCEQ Regional Office (MC Region 11) for each of the following activities:

    a. At least 30 days prior to the date the field layout and/or construction startup is scheduled to begin for the proposed subsurface drip irrigation system.

    b. At least 30 days prior to the date that construction is projected to be complete.

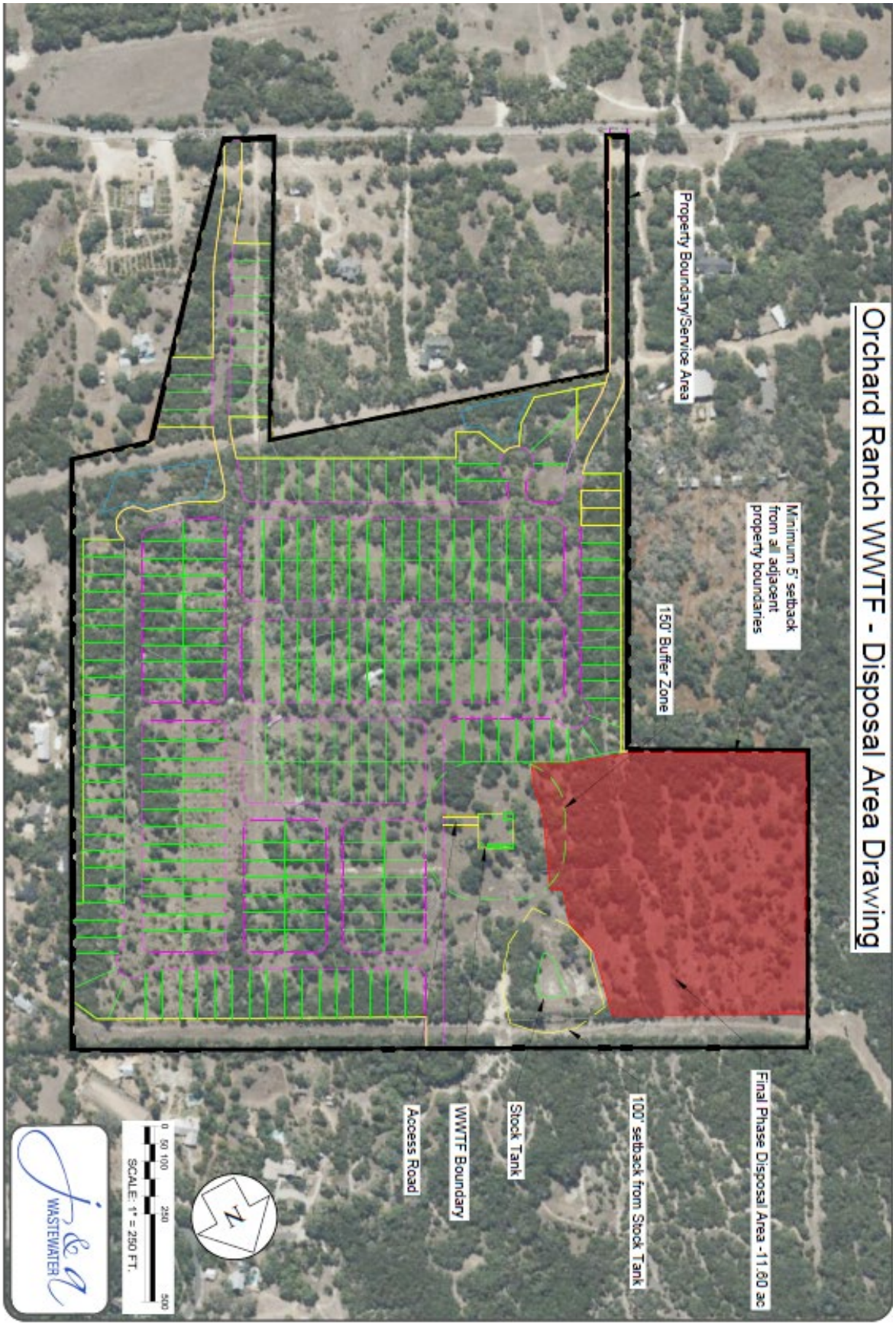
    c. Within 30 days after operation of the proposed subsurface drip irrigation system.

    d. If soils are imported, at least 30 days prior to completion of the soil importing project.

33. According to the requirements of 30 TAC § 222.45, the permittee shall submit a copy of the issued permit to the health department with jurisdiction in the area where the system is located before commencing operation of the proposed subsurface drip irrigation system. The permittee shall retain proof of delivery for the duration of the permit.

34. In accordance with 30 TAC § 319.9, a permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission in writing of its compliance and request a less frequent measurement schedule. To request a less frequent schedule, the permittee shall submit a written request to the TCEQ Wastewater Permitting Section (MC 148) for each phase that includes a different monitoring frequency. The request must contain all of the reported bacteria values (Daily Avg. and Daily Max/Single Grab) for the twelve consecutive months immediately prior to the request. If the Executive Director finds that a less frequent measurement schedule is protective of human health and the environment, the permittee may be given a less frequent measurement schedule. For this permit, one/quarter may be reduced to one/six months (Chlorine) or five/week may be reduced to three/week (UV) based on which disinfection method is used. **A violation of any bacteria limit by a facility that has been granted a less frequent measurement schedule will require the permittee to return to the standard frequency schedule and submit written notice to the TCEQ Wastewater Permitting Section (MC 148).** The permittee may not apply for another reduction in measurement frequency for at least 24 months from the date of the last violation. The Executive Director may establish a more frequent measurement schedule if necessary to protect human health or the environment.

Attachment A – Site Map
TCEQ Permit No. WQ0016596001
Clayton Properties Group, Inc.



ORIGINAL APPLICATION

Orchard Ranch
Wastewater Treatment Facility

TCEQ Subsurface TLAP Application for New Permit

Submitted to Texas Commission on Environmental Quality

JUNE 2024

TABLE OF CONTENTS

Section 1

Administrative Report

Attachments

- Attachment – Core Data Form
- Attachment – Plain Language Summaries
- Attachment – USGS Maps
- Attachment – Plant Site Well Reports
- Attachment - Original Photographs
- Attachment - Affected Landowner Map
- Attachment – Buffer Zone Map
- Attachment – Public Involvement Program

Section 2

Technical Report

Attachments

- Attachment – Process Flow Diagram
- Attachment - Treatment Unit Sizing and Process Description
- Attachment – Site Boundary
- Attachment – Nearby WWTF Exhibit
- Attachment – Nearby WWTF Letter
- Attachment – Windrose Map
- Attachment – Annual Cropping Plan
- Attachment – Disposal Area Boundary
- Attachment – USGS Maps (Disposal Area)
- Attachment – Disposal Area Well Reports
- Attachment - Disposal Area Well ID
- Attachment – Groundwater Quality Report
- Attachment – USDA Soil Report

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the application.

APPLICANT NAME: Clayton Properties Group, Inc. dba Brohn Homes

PERMIT NUMBER (If new, leave blank): WQ00 Click to enter text.

Indicate if each of the following items is included in your application.

	Y	N		Y	N
Administrative Report 1.0	☒	☐	Original USGS Map	☒	☐
Administrative Report 1.1	☒	☐	Affected Landowners Map	☒	☐
SPIF	☐	☒	Landowner Disk or Labels	☒	☐
Core Data Form	☒	☐	Buffer Zone Map	☒	☐
Public Involvement Plan Form	☒	☐	Flow Diagram	☒	☐
Technical Report 1.0	☒	☐	Site Drawing	☒	☐
Technical Report 1.1	☒	☐	Original Photographs	☒	☐
Worksheet 2.0	☐	☒	Design Calculations	☒	☐
Worksheet 2.1	☐	☒	Solids Management Plan	☒	☐
Worksheet 3.0	☒	☐	Water Balance	☐	☒
Worksheet 3.1	☐	☒			
Worksheet 3.2	☒	☐			
Worksheet 3.3	☐	☒			
Worksheet 4.0	☐	☒			
Worksheet 5.0	☐	☒			
Worksheet 6.0	☐	☒			
Worksheet 7.0	☒	☐			

For TCEQ Use Only

Segment Number _____County _____
Expiration Date _____Region_____
Permit Number _____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

For any questions about this form, please contact the Applications Review and Processing Team at 512-239-4671.

Section 1. Application Fees (Instructions Page 26)

Indicate the amount submitted for the application fee (check only one).

Flow	New/Major Amendment	Renewal
<0.05 MGD	$350.00 ☐	$315.00 ☐
≥0.05 but <0.10 MGD	$550.00 ☒	$515.00 ☐
≥0.10 but <0.25 MGD	$850.00 ☐	$815.00 ☐
≥0.25 but <0.50 MGD	$1,250.00 ☐	$1,215.00 ☐
≥0.50 but <1.0 MGD	$1,650.00 ☐	$1,615.00 ☐
≥1.0 MGD	$2,050.00 ☐	$2,015.00 ☐

Minor Amendment (for any flow) $150.00 ☐

Payment Information:

Mailed Check/Money Order Number: Click to enter text.

Check/Money Order Amount: Click to enter text.

Name Printed on Check: Click to enter text.

EPAY Voucher Number: Click to enter text.

Copy of Payment Voucher enclosed? Yes ☒

Section 2. Type of Application (Instructions Page 26)

a. Check the box next to the appropriate authorization type.

☐ Publicly-Owned Domestic Wastewater

☒ Privately-Owned Domestic Wastewater

☐ Conventional Wastewater Treatment

b. Check the box next to the appropriate facility status.

☐ Active ☒ Inactive

c. Check the box next to the appropriate permit type.

- ☐ TPDES Permit
- ☒ TLAP
- ☐ TPDES Permit with TLAP component
- ☐ Subsurface Area Drip Dispersal System (SADDS)

d. Check the box next to the appropriate application type

- ☒ New
- ☐ Major Amendment *with* Renewal
- ☐ Major Amendment *without* Renewal
- ☐ Renewal without changes
- ☐ Minor Amendment *with* Renewal
- ☐ Minor Amendment *without* Renewal
- ☐ Minor Modification of permit

e. For amendments or modifications, describe the proposed changes: Click to enter text.

f. For existing permits:

Permit Number: WQ00 Click to enter text.

EPA I.D. (TPDES only): TX Click to enter text.

Expiration Date: Click to enter text.

Section 3. Facility Owner (Applicant) and Co-Applicant Information (Instructions Page 26)

A. The owner of the facility must apply for the permit.

What is the Legal Name of the entity (applicant) applying for this permit?

Clayton Properties Group, Inc. dba Brohn Homes

(The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal documents forming the entity.)

If the applicant is currently a customer with the TCEQ, what is the Customer Number (CN)? You may search for your CN on the TCEQ website at http://www15.tceq.texas.gov/crpub/

CN: 600625057

What is the name and title of the person signing the application? The person must be an executive official meeting signatory requirements in *30 TAC § 305.44*.

Prefix: Mr. Last Name, First Name: Boenig, Adam

Title: Co-President Credential: Click to enter text.

B. Co-applicant information. Complete this section only if another person or entity is required to apply as a co-permittee.

What is the Legal Name of the co-applicant applying for this permit?

Click to enter text.

(The legal name must be spelled exactly as filed with the TX SOS, with the County, or in the legal documents forming the entity.)

If the co-applicant is currently a customer with the TCEQ, what is the Customer Number (CN)? You may search for your CN on the TCEQ website at: http://www15.tceq.texas.gov/crpub/

CN: Click to enter text.

What is the name and title of the person signing the application? The person must be an executive official meeting signatory requirements in *30 TAC § 305.44*.

Prefix: Click to enter text. Last Name, First Name: Click to enter text.

Title: Click to enter text. Credential: Click to enter text.

Provide a brief description of the need for a co-permittee: Click to enter text.

C. Core Data Form

Complete the Core Data Form for each customer and include as an attachment. If the customer type selected on the Core Data Form is **Individual**, complete **Attachment 1** of Administrative Report 1.0. Core Data Form Clayton Properties Group Inc dba Brohn Homes

Section 4. Application Contact Information (Instructions Page 27)

This is the person(s) TCEQ will contact if additional information is needed about this application. Provide a contact for administrative questions and technical questions.

A. Prefix: Mr. Last Name, First Name: Upadhyaya, Ashraya

Title: Project Engineer Credential: E.I.T.

Organization Name: JA Wastewater

Mailing Address: 5765 Fig Way City, State, Zip Code: Arvada, CO 80002

Phone No.: 903 414 0307 E-mail Address: aupadhyaya@jawastewater.com

Check one or both: ☒ Administrative Contact ☒ Technical Contact

B. Prefix: Ms. Last Name, First Name: Miller, Jamie

Title: President Credential: P.E.

Organization Name: JA Wastewater

Mailing Address: 5765 Fig Way City, State, Zip Code: Arvada, CO 80002

Phone No.: 970 443 9096 E-mail Address: jmiller@jawastewater.com

Check one or both: ☒ Administrative Contact ☒ Technical Contact

Section 5. Permit Contact Information (Instructions Page 27)

Provide the names and contact information for two individuals that can be contacted throughout the permit term.

A. Prefix: Mr. Last Name, First Name: Upadhyaya, Ashraya

Title: Project Engineer Credential: E.I.T.

Organization Name: JA Wastewater

Mailing Address: 5765 Fig Way City, State, Zip Code: Arvada, CO 80002

Phone No.: 903 414 0307 E-mail Address: aupadhyaya@jawastewater.com

B. Prefix: Mr. Last Name, First Name: Boenig, Adam

Title: Co-President Credential: Click to enter text.

Organization Name: Clayton Properties Group, Inc.

Mailing Address: 6720 Vaught Ranch Rd #200 City, State, Zip Code: Austin, TX 78730

Phone No.: 512 320 8833 E-mail Address: adamb@brohnhomes.com

Section 6. Billing Contact Information (Instructions Page 27)

The permittee is responsible for paying the annual fee. The annual fee will be assessed to permits ***in effect on September 1 of each year***. The TCEQ will send a bill to the address provided in this section. The permittee is responsible for terminating the permit when it is no longer needed (using form TCEQ-20029).

Prefix: Mr. Last Name, First Name: Boenig, Adam

Title: Co-President Credential: Click to enter text.

Organization Name: Clayton Properties Group, Inc.

Mailing Address: 6720 Vaught Ranch Rd #200 City, State, Zip Code: Austin, TX 78730

Phone No.: 512 320 8833 E-mail Address: adamb@brohnhomes.com

Section 7. DMR/MER Contact Information (Instructions Page 27)

Provide the name and complete mailing address of the person delegated to receive and submit Discharge Monitoring Reports (DMR) (EPA 3320-1) or maintain Monthly Effluent Reports (MER).

Prefix: Mr. Last Name, First Name: Boenig, Adam

Title: Co-President Credential: Click to enter text.

Organization Name: Clayton Properties Group, Inc.

Mailing Address: 6720 Vaught Ranch Rd #200 City, State, Zip Code: Austin, TX 78730

Phone No.: 512 320 8833 E-mail Address: adamb@brohnhomes.com

Section 8. Public Notice Information (Instructions Page 27)

A. Individual Publishing the Notices

Prefix: Mr. Last Name, First Name: Upadhyaya, Ashraya

Title: Project Engineer Credential: E.I.T.

Organization Name: JA Wastewater

Mailing Address: 5765 Fig way City, State, Zip Code: Arvada, CO 8002

Phone No.: 903 414 0307 E-mail Address: aupadhyaya@jawastewater.com

B. Method for Receiving Notice of Receipt and Intent to Obtain a Water Quality Permit Package

Indicate by a check mark the preferred method for receiving the first notice and instructions:

☒ E-mail Address

☐ Fax

☐ Regular Mail

C. Contact permit to be listed in the Notices

Prefix: Mr. Last Name, First Name: Upadhyaya, Ashraya

Title: Project Engineer Credential: E.I.T.

Organization Name: JA Wastewater

Mailing Address: 5765 Fig Way City, State, Zip Code: Arvada, CO 80002

Phone No.: 903 414 0307 E-mail Address: aupadhyaya@jawastewater.com

D. Public Viewing Information

If the facility or outfall is located in more than one county, a public viewing place for each county must be provided.

Public building name: City of Dripping Springs Community Library

Location within the building: Circulation Desk

Physical Address of Building: 501 Sportsplex Dr.

City: Dripping Springs County: Hays

Contact (Last Name, First Name): Marcia Atilano

Phone No.: 512 858 7825 Ext.: Click to enter text.

E. Bilingual Notice Requirements

This information **is required** for **new, major amendment, minor amendment or minor modification, and renewal** applications.

This section of the application is only used to determine if alternative language notices will be needed. Complete instructions on publishing the alternative language notices will be in your public notice package.

Please call the bilingual/ESL coordinator at the nearest elementary and middle schools and obtain the following information to determine whether an alternative language notices are required.

1. Is a bilingual education program required by the Texas Education Code at the elementary or middle school nearest to the facility or proposed facility?

   ☒ Yes ☐ No

   If **no**, publication of an alternative language notice is not required; **skip to** Section 9 below.

2. Are the students who attend either the elementary school or the middle school enrolled in a bilingual education program at that school?

   ☒ Yes ☐ No

3. Do the students at these schools attend a bilingual education program at another location?

   ☐ Yes ☒ No

4. Would the school be required to provide a bilingual education program but the school has waived out of this requirement under 19 TAC §89.1205(g)?

   ☐ Yes ☒ No

5. If the answer is **yes** to **question 1, 2, 3, or 4**, public notices in an alternative language are required. Which language is required by the bilingual program? Spanish

F. Plain Language Summary Template

Complete the Plain Language Summary (TCEQ Form 20972) and include as an attachment.

Attachment: Plain Language Summary

G. Public Involvement Plan Form

Complete the Public Involvement Plan Form (TCEQ Form 20960) for each application for a **new permit or major amendment to a permit** and include as an attachment.

Attachment: Public Involvement Plan Form

Section 9. Regulated Entity and Permitted Site Information (Instructions Page 29)

A. If the site is currently regulated by TCEQ, provide the Regulated Entity Number (RN) issued to this site. **RN** Click to enter text.

Search the TCEQ's Central Registry at http://www15.tceq.texas.gov/crpub/ to determine if the site is currently regulated by TCEQ.

B. Name of project or site (the name known by the community where located):

Orchard Ranch WWTF

C. Owner of treatment facility: Clayton Properties Group, Inc.

Ownership of Facility: ☐ Public ☒ Private ☐ Both ☐ Federal

D. Owner of land where treatment facility is or will be:

Prefix: Mr. Last Name, First Name: Boenig, Adam

Title: Co-President Credential: Click to enter text.

Organization Name: Clayton Properties Group, Inc.

Mailing Address: 6720 Vaught Ranch Rd #200 City, State, Zip Code: Austin, TX 78730

Phone No.: 512 320 8833 E-mail Address: adamb@brohnhomes.com

If the landowner is not the same person as the facility owner or co-applicant, attach a lease agreement or deed recorded easement. See instructions.

Attachment: Click to enter text.

E. Owner of effluent disposal site:

Prefix: Mr. Last Name, First Name: Boenig, Adam

Title: Co-President Credential: Click to enter text.

Organization Name: Clayton Properties Group, Inc

Mailing Address: 6720 Vaught Ranch Rd #200 City, State, Zip Code: Austin, TX 78730

Phone No.: 512 320 8833 E-mail Address: adamb@brohnhomes.com

If the landowner is not the same person as the facility owner or co-applicant, attach a lease agreement or deed recorded easement. See instructions.

Attachment: Click to enter text.

F. Owner sewage sludge disposal site (if authorization is requested for sludge disposal on property owned or controlled by the applicant)::

Prefix: Click to enter text. Last Name, First Name: Click to enter text.

Title: Click to enter text. Credential: Click to enter text.

Organization Name: Click to enter text.

Mailing Address: Click to enter text. City, State, Zip Code: Click to enter text.

Phone No.: Click to enter text. E-mail Address: Click to enter text.

If the landowner is not the same person as the facility owner or co-applicant, attach a lease agreement or deed recorded easement. See instructions.

Attachment: Click to enter text.

Section 10. TPDES Discharge Information (Instructions Page 31)

A. Is the wastewater treatment facility location in the existing permit accurate?

☐ Yes ☐ No

If **no**, **or a new permit application**, please give an accurate description:

Click to enter text.

B. Are the point(s) of discharge and the discharge route(s) in the existing permit correct?

☐ Yes ☐ No

If **no**, **or a new or amendment permit application**, provide an accurate description of the point of discharge and the discharge route to the nearest classified segment as defined in 30 TAC Chapter 307:

Click to enter text.

City nearest the outfall(s): Click to enter text.

County in which the outfalls(s) is/are located: Click to enter text.

C. Is or will the treated wastewater discharge to a city, county, or state highway right-of-way, or a flood control district drainage ditch?

☐ Yes ☐ No

If **yes**, indicate by a check mark if:

☐ Authorization granted ☐ Authorization pending

For **new and amendment** applications, provide copies of letters that show proof of contact and the approval letter upon receipt.

Attachment: Click to enter text.

D. For all applications involving an average daily discharge of 5 MGD or more, provide the names of all counties located within 100 statute miles downstream of the point(s) of discharge: Click to enter text.

Section 11. TLAP Disposal Information (Instructions Page 32)

A. For TLAPs, is the location of the effluent disposal site in the existing permit accurate?

☐ Yes ☐ No

If **no, or a new or amendment permit application**, provide an accurate description of the disposal site location:

Effluent disposal fields will be located 3360' NW of the intersection of Circle Dr and US 290 in Travis County.

B. City nearest the disposal site: Cedar Valley

C. County in which the disposal site is located: Travis County

D. For **TLAPs**, describe the routing of effluent from the treatment facility to the disposal site:

The effluent will be conveyed to the disposal area via a pipe.

E. For **TLAPs**, please identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: Grape Creek, segment 1430B, tributary of Barton Creek

Section 12. Miscellaneous Information (Instructions Page 32)

A. Is the facility located on or does the treated effluent cross American Indian Land?

☐ Yes ☒ No

B. If the existing permit contains an onsite sludge disposal authorization, is the location of the sewage sludge disposal site in the existing permit accurate?

☐ Yes ☐ No ☒ Not Applicable

If No, or if a new onsite sludge disposal authorization is being requested in this permit application, provide an accurate location description of the sewage sludge disposal site.

Click to enter text.

C. Did any person formerly employed by the TCEQ represent your company and get paid for service regarding this application?

☐ Yes ☒ No

If yes, list each person formerly employed by the TCEQ who represented your company and was paid for service regarding the application: Click to enter text.

D. Do you owe any fees to the TCEQ?

☐ Yes ☒ No

If **yes**, provide the following information:

Account number: Click to enter text.

Amount past due: Click to enter text.

E. Do you owe any penalties to the TCEQ?

☐ Yes ☒ No

If **yes**, please provide the following information:

Enforcement order number: Click to enter text.

Amount past due: Click to enter text.

Section 13. Attachments (Instructions Page 33)

Indicate which attachments are included with the Administrative Report. Check all that apply:

☐ Lease agreement or deed recorded easement, if the land where the treatment facility is located or the effluent disposal site are not owned by the applicant or co-applicant.

☒ Original full-size USGS Topographic Map with the following information:

- Applicant's property boundary
- Treatment facility boundary
- Labeled point of discharge for each discharge point (TPDES only)
- Highlighted discharge route for each discharge point (TPDES only)
- Onsite sewage sludge disposal site (if applicable)
- Effluent disposal site boundaries (TLAP only)
- New and future construction (if applicable)
- 1 mile radius information
- 3 miles downstream information (TPDES only)
- All ponds.

☐ Attachment 1 for Individuals as co-applicants

☒ Other Attachments. Please specify: Cora Data Form

Section 14. Signature Page (Instructions Page 34)

If co-applicants are necessary, each entity must submit an original, separate signature page.

Permit Number: Click to enter text.

Applicant: Clayton Properties Group, Inc. dba Brohn Homes

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that I am authorized under 30 Texas Administrative Code § 305.44 to sign and submit this document, and can provide documentation in proof of such authorization upon request.

Signatory name (typed or printed): Adam Boenig

Signatory title: Co-President

Signature:_____ Date:_____

(Use blue ink)

Subscribed and Sworn to before me by the said_____

on this_____ day of_____, 20_____.

My commission expires on the_____ day of_____, 20_____.

_____

Notary Public *[SEAL]*

_____

County, Texas

DOMESTIC WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

The following information is required for new and amendment applications.

Section 1. Affected Landowner Information (Instructions Page 36)

A. Indicate by a check mark that the landowners map or drawing, with scale, includes the following information, as applicable:

- ☒ The applicant's property boundaries
- ☒ The facility site boundaries within the applicant's property boundaries
- ☐ The distance the buffer zone falls into adjacent properties and the property boundaries of the landowners located within the buffer zone
- ☒ The property boundaries of all landowners surrounding the applicant's property (Note: if the application is a major amendment for a lignite mine, the map must include the property boundaries of all landowners adjacent to the new facility (ponds).)
- ☐ The point(s) of discharge and highlighted discharge route(s) clearly shown for one mile downstream
- ☐ The property boundaries of the landowners located on both sides of the discharge route for one full stream mile downstream of the point of discharge
- ☐ The property boundaries of the landowners along the watercourse for a one-half mile radius from the point of discharge if the point of discharge is into a lake, bay, estuary, or affected by tides
- ☒ The boundaries of the effluent disposal site (for example, irrigation area or subsurface drainfield site) and all evaporation/holding ponds within the applicant's property
- ☒ The property boundaries of all landowners surrounding the effluent disposal site
- ☐ The boundaries of the sludge land application site (for land application of sewage sludge for beneficial use) and the property boundaries of landowners surrounding the applicant's property boundaries where the sewage sludge land application site is located
- ☐ The property boundaries of landowners within one-half mile in all directions from the applicant's property boundaries where the sewage sludge disposal site (for example, sludge surface disposal site or sludge monofill) is located

B. ☒ Indicate by a check mark that a separate list with the landowners' names and mailing addresses cross-referenced to the landowner's map has been provided.

C. Indicate by a check mark in which format the landowners list is submitted:

☒ USB Drive ☐ Four sets of labels

D. Provide the source of the landowners' names and mailing addresses: (Travis County Appraisal District Map) travis.prodigycad.com/map

E. As required by *Texas Water Code § 5.115*, is any permanent school fund land affected by this application?

☐ Yes ☒ No

If **yes**, provide the location and foreseeable impacts and effects this application has on the land(s):

Click to enter text.

Section 2. Original Photographs (Instructions Page 38)

Provide original ground level photographs. Indicate with checkmarks that the following information is provided.

☒ At least one original photograph of the new or expanded treatment unit location

☐ At least two photographs of the existing/proposed point of discharge and as much area downstream (photo 1) and upstream (photo 2) as can be captured. If the discharge is to an open water body (e.g., lake, bay), the point of discharge should be in the right or left edge of each photograph showing the open water and with as much area on each respective side of the discharge as can be captured.

☒ At least one photograph of the existing/proposed effluent disposal site

☒ A plot plan or map showing the location and direction of each photograph

Section 3. Buffer Zone Map (Instructions Page 38)

A. Buffer zone map. Provide a buffer zone map on 8.5 x 11-inch paper with all of the following information. The applicant's property line and the buffer zone line may be distinguished by using dashes or symbols and appropriate labels.

- The applicant's property boundary;
- The required buffer zone; and
- Each treatment unit; and
- The distance from each treatment unit to the property boundaries.

B. Buffer zone compliance method. Indicate how the buffer zone requirements will be met. Check all that apply.

☒ Ownership

☐ Restrictive easement

☐ Nuisance odor control

☐ Variance

C. Unsuitable site characteristics. Does the facility comply with the requirements regarding unsuitable site characteristic found in 30 TAC § 309.13(a) through (d)?

☒ Yes ☐ No

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST OF COMMON DEFICIENCIES

Below is a list of common deficiencies found during the administrative review of domestic wastewater permit applications. To ensure the timely processing of this application, please review the items below and indicate by checking Yes that each item is complete and in accordance applicable rules at 30 TAC Chapters 21, 281, and 305. If an item is not required this application, indicate by checking N/A where appropriate. Please do not submit the application until the items below have been addressed.

Core Data Form (TCEQ Form No. 10400) ☒ Yes
(Required for all application types. Must be completed in its entirety and signed. Note: Form may be signed by applicant representative.)

Correct and Current Industrial Wastewater Permit Application Forms ☐ Yes
(TCEQ Form Nos. 10053 and 10054. Version dated 6/25/2018 or later.)

Water Quality Permit Payment Submittal Form (Page 19) ☐ Yes
(Original payment sent to TCEQ Revenue Section. See instructions for mailing address.)

7.5 Minute USGS Quadrangle Topographic Map Attached ☒ Yes
(Full-size map if seeking "New" permit. 8 ½ x 11 acceptable for Renewals and Amendments)

Current/Non-Expired, Executed Lease Agreement or Easement ☒ N/A ☐ Yes

Landowners Map ☐ N/A ☒ Yes
(See instructions for landowner requirements)

Things to Know:

- All the items shown on the map must be labeled.
- The applicant's complete property boundaries must be delineated which includes boundaries of contiguous property owned by the applicant.
- The applicant cannot be its own adjacent landowner. You must identify the landowners immediately adjacent to their property, regardless of how far they are from the actual facility.
- If the applicant's property is adjacent to a road, creek, or stream, the landowners on the opposite side must be identified. Although the properties are not adjacent to applicant's property boundary, they are considered potentially affected landowners. If the adjacent road is a divided highway as identified on the USGS topographic map, the applicant does not have to identify the landowners on the opposite side of the highway.

Landowners Cross Reference List ☐ N/A ☒ Yes
(See instructions for landowner requirements)

Landowners Labels or USB Drive attached ☐ N/A ☒ Yes
(See instructions for landowner requirements)

Original signature per 30 TAC § 305.44 – Blue Ink Preferred ☒ Yes
(If signature page is not signed by an elected official or principle executive officer, a copy of signature authority/delegation letter must be attached)

Plain Language Summary ☒ Yes

ATTACHMENT -

Core Data Form

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☒ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 600625057		**RN**

SECTION II: Customer Information

4. General Customer Information	**5. Effective Date for Customer Information Updates** (mm/dd/yyyy)	

☐ New Customer ☒ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)*	*If new Customer, enter previous Customer below:*
Clayton Properties Group, Inc. dba Brohn Homes	

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
16213627496			

11. Type of Customer:	☒ Corporation	☐ Individual	Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other		☐ Sole Proprietorship	☐ Other:

12. Number of Employees	**13. Independently Owned and Operated?**
☐ 0-20 ☒ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher	☒ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☒ Owner ☐ Operator ☐ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:	6720 Vaught Ranch Rd. #200						
	City	Austin	**State**	TX	**ZIP**	78730	**ZIP + 4**

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(512) 320-8833		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Orchard Ranch WWTF

23. Street Address of the Regulated Entity: ***(No PO Boxes)***								
	City		**State**		**ZIP**		**ZIP + 4**	
24. County								

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:	3,360' NW from the intersection of Circle Dr and US 290 in Travis County				
26. Nearest City			**State**	**Nearest ZIP Code**	
Dripping Springs			TX	78736	

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	13	54.42	97	57	31.58

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
4952		221320	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Wastewater Treatment

34. Mailing Address:	**6720 Vaught Ranch Rd #200**							
	City	**Austin**	**State**	**TX**	**ZIP**	**78730**	**ZIP + 4**	
35. E-Mail Address:	**adamb@brohnhomes.com**							

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(512) 320-8833		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☒ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Ashraya Upadhyaya	**41. Title:**	Project Engineer

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(903 **)** 414-0307		**( )** -	aupadhyaya@jawastewater.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Clayton Properties Group, Inc. dba Brohn Homes	**Job Title:**	Co-President
Name *(In Print):*	Adam Boenig	**Phone:**	**(** 512 **)** 320- **8833**
Signature:		**Date:**	

ATTACHMENT -

Plain Language

Summaries

English Plain Language Summary:

Clayton Properties Group Inc proposes to operate Orchard Ranch WWTF a wastewater treatment facility of average daily flow of 50,500 gallons per day. The facility is located approximately 3,360 feet NW of the intersection of Circle Dr and US 290 near Dripping Springs,in Travis County, Texas 78736.

This application is for a new TLAP subsurface application.

Discharges from the facility are expected to contain biological oxygen demand (BOD), total suspended solids (TSS), ammonia nitrogen (NH3) and total phosphorus (TP).Domestic strength wastewater will be treated by an activated sludge process operated in complete mix mode, followed by a final clarifier.

Spanish PLS :

Clayton Properties Group Inc propone operar Orchard Ranch WWTF, una instalación de tratamiento de aguas residuales con un flujo diario promedio de 50,500 galones por día. La instalación está ubicada aproximadamente a 3360 pies al NO de la intersección de Circle Dr y US 290 cerca de Dripping Springs, en el condado de Travis, Texas 78736.

Esta solicitud es para una nueva aplicación de subsuelo TLAP.

Se espera que las descargas de la instalación contengan la demanda biológica de oxígeno (DBO), sólidos suspendidos totales (SST), nitrógeno amoniacal (NH3) y fósforo total (TP). Las aguas residuales domésticas se tratarán mediante un proceso de lodos activados operado en modo de mezcla completa. , seguido de un clarificador final.

ATTACHMENT -

USGS Maps

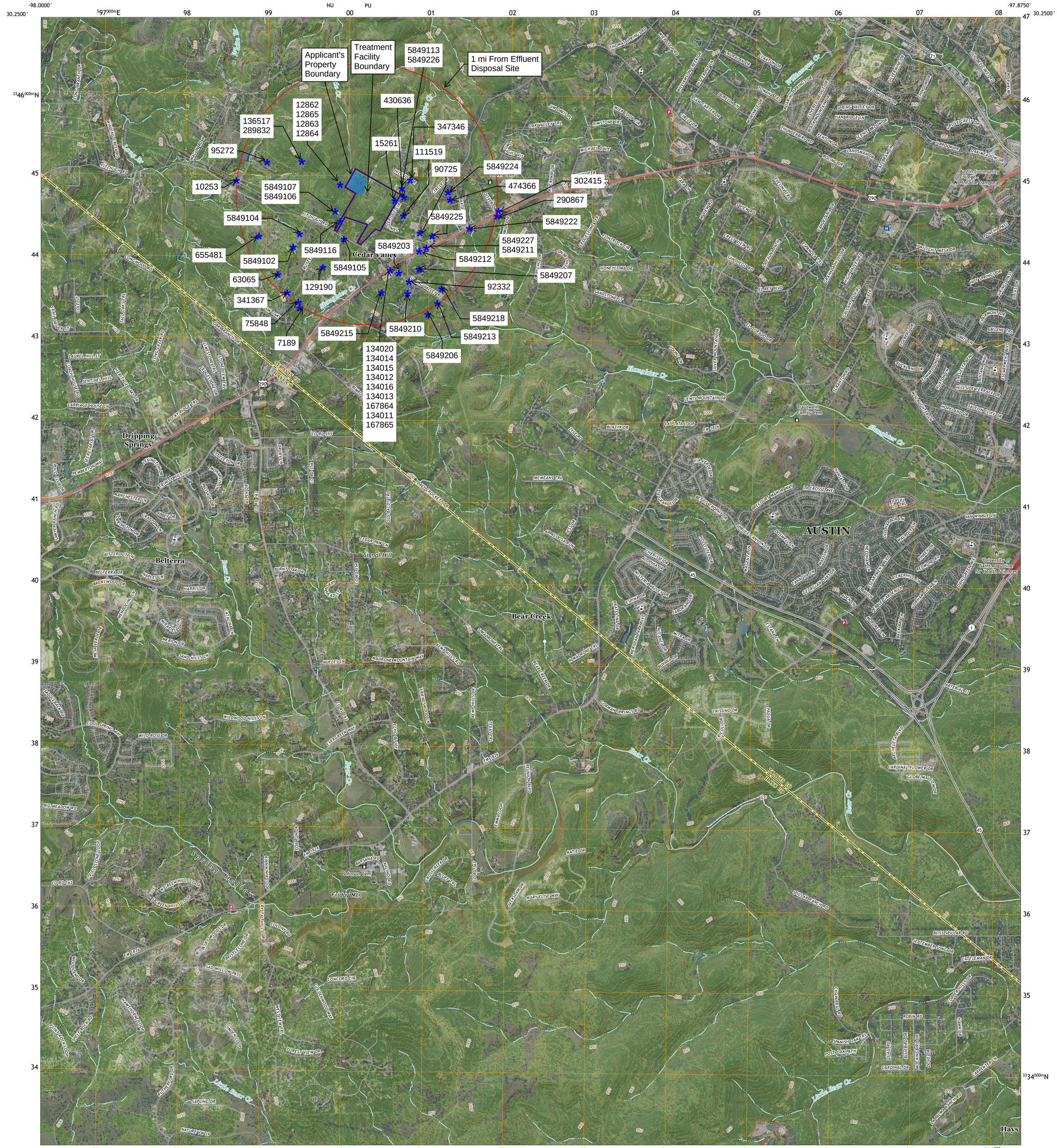
Orchard Ranch - USGS Map

USGS science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

SIGNAL HILL QUADRANGLE
TEXAS
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 14R

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, October 2016 - November 2016
Roads.....U.S. Census Bureau, 2015 - 2019
Names.....GNIS, 1979 - 2022
Hydrography.....National Hydrography Dataset, 2002 - 2018
Contours.....National Elevation Dataset, 2019
Boundaries.....Multiple sources; see metadata file 2019 - 2021

Wetlands.....FWS National Wetlands Inventory Not Available

MN
GN
0°32′ 9 MILS
3°50′ 68 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
100
NU PU
Grid Zone Designation 14R

SCALE 1:24 000
1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard.

TEXAS
QUADRANGLE LOCATION

1 2 3
4 5
6 7 8
ADJOINING QUADRANGLES

1 Shingle Hills
2 Bee Cave
3 Austin West
4 Dripping Springs
5 Oak Hill
6 Driftwood
7 Mountain City
8 Buda

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

SIGNAL HILL, TX
2022

J&A WASTEWATER

ATTACHMENT -

Plant Site Well

Reports

STATE OF TEXAS PLUGGING REPORT for Tracking #7189

Owner:	**MARK MULLER**	Owner Well #:	**001**
Address:	**15317 OZONE PLACE AUSTIN, TX 78728**	Grid #:	**58-49-1**
Well Location:	**LOT 1 OAK RUN ESTATES AUSTIN, TX 78737**	Latitude:	**30° 13' 04" N**
Well County:	**Travis**	Longitude:	**097° 58' 02" W**
		Elevation:	**No Data**

Well Type: **Withdrawal of Water**

Drilling Information

Company:	**No Data**	Date Drilled:	**No Data**
Driller:	**UNKNOWN**	License Number:	**No Data**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**6**		**460**

Plugging Information

Date Plugged: **6/20/2002** Plugger: **JIM BLAIR**

Plug Method: **Tremmie pipe cement from bottom to top**

Casing Left in Well:

DIa (in.)	*Top (ft.)*	*Bottom (ft.)*
6	**0**	**20**

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
0	**460**	**28**

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: **BEE CAVE DRILLING, INC.**

185 ANGELFIRE DR.
DRIPPING SPRINGS, TX 78620

Driller Name: **JIM BLAIR** License Number: **54416**

Comments: **WE SET OUR TREMMIE PIPE (1.25" PVC) AS DEEP AS WE COULD GET IT AND GROUTED WITH BENTONITE SLURRY TO THE SURFACE. WE THEN REMOVED THE TOP TWO FEET OF BENTONITE AND POURED.**

STATE OF TEXAS PLUGGING REPORT for Tracking #12862

Owner:	**TCEQ**	Owner Well #:	**No Data**
Address:	**PO Box 13087 AUSTIN, TX 78711**	Grid #:	**58-49-1**
Well Location:	**6517 HWY 290 W AUSTIN, TX**	Latitude:	**30° 13' 52" N**
		Longitude:	**097° 57' 44" W**
Well County:	**Travis**	Elevation:	**No Data**

Well Type: **Unknown**

Drilling Information

Company:	**No Data**	Date Drilled:	**No Data**
Driller:	**No Data**	License Number:	**No Data**

Borehole: **No Data**

Plugging Information

Date Plugged: **5/21/2003** Plugger: **DAVID**

Plug Method: **Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet**

Casing Left in Well:

Dia (in.)	*Top (ft.)*	*Bottom (ft.)*
5	**1**	**55**

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
1	**10**	**2**
10	**70**	**12 BEN**
70	**143**	**GRAVEL**

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: **DAVID MCDEARMON**

12907 LOWDEN
MANCHACA, TX 78652

Driller Name: **DAVID** License Number: **2563**

Comments: **DG**

STATE OF TEXAS PLUGGING REPORT for Tracking #12863

Owner:	**TCEQ**	Owner Well #:	**No Data**
Address:	**PO Box 13087 AUSTIN, TX 78711**	Grid #:	**58-49-1**
Well Location:	**6517 HWY 290 W AUSTIN, TX**	Latitude:	**30° 13' 52" N**
		Longitude:	**097° 57' 44" W**
Well County:	**Travis**	Elevation:	**No Data**

Well Type: **Unknown**

Drilling Information

Company:	**No Data**	Date Drilled:	**No Data**
Driller:	**No Data**	License Number:	**No Data**

Borehole: **No Data**

Plugging Information

Date Plugged: **5/21/2003** Plugger: **DAVID**

Plug Method: **Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet**

Casing Left in Well:

Dia (in.)	*Top (ft.)*	*Bottom (ft.)*
5		

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
1	**10**	**2**
10	**108**	**21 BEN**
100	**163**	**GRAVEL**

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: **DAVID MCDEARMON**

12907 LOWDEN
MANCHACA, TX 78652

Driller Name: **DAVID** License Number: **2563**

Comments: **DG**

STATE OF TEXAS PLUGGING REPORT for Tracking #12864

Owner:	**TCEQ**	Owner Well #:	**No Data**
Address:	**PO Box 13087 AUSTIN, TX 78711**	Grid #:	**58-49-1**
Well Location:	**6517 HWY 290 W AUSTIN, TX**	Latitude:	**30° 13' 52" N**
		Longitude:	**097° 57' 44" W**
Well County:	**Travis**	Elevation:	**No Data**

Well Type: **Unknown**

Drilling Information

Company:	**No Data**	Date Drilled:	**No Data**
Driller:	**No Data**	License Number:	**No Data**

Borehole: **No Data**

Plugging Information

Date Plugged: **5/21/2003** Plugger: **DAVID**

Plug Method: **Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet**

Casing Left in Well:

Dia (in.)	*Top (ft.)*	*Bottom (ft.)*
5	**1**	**51**

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
1	**10**	**2**
10	**103**	**16 BEN**
103	**142**	**GRAVEL**

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: **DAVID MCDEARMON**

12907 LOWDEN
MANCHACA, TX 78652

Driller Name: **DAVID** License Number: **2563**

Comments: **DG**

STATE OF TEXAS PLUGGING REPORT for Tracking #12865

Owner:	**TCEQ**	Owner Well #:	**No Data**
Address:	**PO Box 13087 AUSTIN, TX 78711**	Grid #:	**58-49-1**
Well Location:	**6517 HWY 290 W AUSTIN, TX**	Latitude:	**30° 13' 52" N**
		Longitude:	**097° 57' 44" W**
Well County:	**Travis**	Elevation:	**No Data**

Well Type: **Unknown**

Drilling Information

Company:	**No Data**	Date Drilled:	**No Data**
Driller:	**No Data**	License Number:	**No Data**

Borehole: **No Data**

Plugging Information

Date Plugged: **5/21/2003** Plugger: **DAVID**

Plug Method: **Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet**

Casing Left in Well:

Dia (in.)	*Top (ft.)*	*Bottom (ft.)*
4	**1**	**14.5**

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
1	**5**	**CEM**
5	**11**	**BEN**
11	**40**	**GRAVEL**

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: **DAVID MCDEARMON**

12907 LOWDEN
MANCHACA, TX 78652

Driller Name: **DAVID** License Number: **2563**

Comments: **DG**

STATE OF TEXAS PLUGGING REPORT for Tracking #90725

Owner:	**Steve Myer & Nancy Ebe**	Owner Well #:	**1**
Address:	**932 Hillside North Austin, TX 78736**	Grid #:	**58-49-2**
		Latitude:	**30° 13' 33" N**
Well Location:	**932 Hillside North Austin, TX 78736**	Longitude:	**097° 57' 08" W**
Well County:	**Travis**	Elevation:	**No Data**

Well Type: **Withdrawal of Water**

Drilling Information

Company:	**No Data**	Date Drilled:	**No Data**
Driller:	**Unknown**	License Number:	**No Data**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**6.25**		**700**

Plugging Information

Date Plugged: **10/29/2013** Plugger: **Fred Smith**

Plug Method: **Tremmie pipe bentonite from bottom to 2 feet from surface, cement top 2 feet**

Casing Left in Well:

Dia (in.)	*Top (ft.)*	*Bottom (ft.)*
6	**-1**	**60**

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
0	**10**	**3 Type H**
10	**700**	**27benseal 2 holeplug**

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: **Whisenant & Lyle Water Services**

P.O. Box 525
Dripping Springs, TX 78620

Driller Name: **Fred Smith** License Number: **54437**

Comments: **No Data**

STATE OF TEXAS PLUGGING REPORT for Tracking #136517

Owner:	**Fisher**	Owner Well #:	**No Data**
Address:	**15009 faggerquist rd. del valle, TX 78617**	Grid #:	**58-49-1**
Well Location:	**15009 faggerquist rd. del valle, TX 78617**	Latitude:	**30° 14' 01" N**
		Longitude:	**097° 58' 01" W**
Well County:	**Travis**	Elevation:	**No Data**

Well Type: **Closed-Loop Geothermal**

Drilling Information

Company: **Sarris Geothermal Drilling** Date Drilled: **4/26/2012**

Driller: **Anthony Sarris** License Number: **58870**

Well Report Tracking #289832

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**4.5**	**0**	**300**

Plugging Information

Date Plugged: **4/26/2012** Plugger: **Anthony Sarris**

Plug Method: **Unknown**

Casing Left in Well:

No Data

Plug(s) Placed in Well:

Description (number of sacks & material)
Not Provided

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: **Sarris Geothermal Drilling**

P O box 19452
Austin, TX 78760

Driller Name: **Anthony Sarris** License Number: **58870**

Comments: **4 closed geothermal wells drilled**

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-102

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849102
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.224444
Latitude (degrees minutes seconds)	30° 13' 28" N
Longitude (decimal degrees)	-97.968055
Longitude (degrees minutes seconds)	097° 58' 05" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	218GLRSU - Glen Rose Limestone, Upper Member
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1170
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	400
Well Depth Source	Unknown
Drilling Start Date	
Drilling End Date	0/0/1963
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	None
Water Quality Available	Yes
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	R.G. Rutter
Driller	Davis Rutter
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	
Created Date	
Last Update Date	3/4/2020

Remarks	

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis

Sample Date: 1/8/1969 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone, Upper Member

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		365	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		445.43	mg/L	
00910	CALCIUM (MG/L)		133	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		16	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		2.9	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		578	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		60	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		3.5	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.4	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		10	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.33		
00932	SODIUM, CALCULATED, PERCENT		6	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		18	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1264	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		206	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		21	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		668	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

GWDB DISCLAIMER: Except where noted, all of the information provided in the Texas Water Development Board (TWDB) Groundwater Database (https://www.twdb.texas.gov/groundwater/data/gwdbrpt.asp) is believed to be accurate and reliable; however, the TWDB assumes no responsibility for any errors appearing in rules or otherwise. Further, TWDB assumes no responsibility for the use of the information provided. PLEASE NOTE that users of these data are responsible for checking the accuracy, completeness, currency and/or suitability of all information themselves. TWDB makes no guarantees or warranties as to the accuracy, completeness, currency, or suitability of the information provided via the Groundwater Database (GWDB). TWDB specifically disclaims any and all liability for any claims or damages that may result from providing GWDB data or the information it contains. For additional information or answers to questions concerning the TWDB GWDB, contact the Groundwater Data Team at GroundwaterData@twdb.texas.gov.

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-104

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849104
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.2258333
Latitude (degrees minutes seconds)	30° 13' 33" N
Longitude (decimal degrees)	-97.9672222
Longitude (degrees minutes seconds)	097° 58' 02" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1140
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	262
Well Depth Source	Unknown
Drilling Start Date	
Drilling End Date	
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	None
Water Quality Available	No
Pump	Piston
Pump Depth (feet below land surface)	
Power Type	Windmill
Annular Seal Method	
Surface Completion	
Owner	R.G. Rutter
Driller	Charles Hayden
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	Well J-33 in 1957 Travis County report.
Previous State Well Number	
Reporting Agency	
Created Date	
Last Update Date	5/9/2020

Remarks	

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis - No Data Available

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-105

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849105
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.225278
Latitude (degrees minutes seconds)	30° 13' 31" N
Longitude (decimal degrees)	-97.961667
Longitude (degrees minutes seconds)	097° 57' 42" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1120
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	422
Well Depth Source	Unknown
Drilling Start Date	
Drilling End Date	0/0/1947
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	None
Water Quality Available	Yes
Pump	Piston
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	J.C. Christal
Driller	J. Glass
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	
Created Date	
Last Update Date	3/4/2020

Remarks	Depth before 1955 was 268 ft. Well J-34 in 1957 Travis County report.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis

Sample Date: 5/5/1950 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** U.S. Geological Survey

Sampled Aquifer: Glen Rose Limestone

Analyzed Lab: U.S. Geological Survey Lab **Reliability:** Reliability unknown or not available

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00940	CHLORIDE, TOTAL (MG/L AS CL)		12	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		396	mg/L as CACO3	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		784	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		58	mg/L as SO4	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-106

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849106
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.228333
Latitude (degrees minutes seconds)	30° 13' 42" N
Longitude (decimal degrees)	-97.962778
Longitude (degrees minutes seconds)	097° 57' 46" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1140
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	530
Well Depth Source	Unknown
Drilling Start Date	
Drilling End Date	0/0/1948
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	None
Water Quality Available	Yes
Pump	Piston
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	W.A. Schieffer
Driller	A.C. Clements
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	
Created Date	
Last Update Date	3/4/2020

Remarks	Well J-31 in 1957 Travis County report.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis

Sample Date: 5/5/1950 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** U.S. Geological Survey

Sampled Aquifer: Glen Rose Limestone

Analyzed Lab: U.S. Geological Survey Lab **Reliability:**

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00940	CHLORIDE, TOTAL (MG/L AS CL)		16	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		757	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		59	mg/L as SO4	

Water Quality Analysis

Sample Date: 1/29/1969 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		351	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		428.34	mg/L	
00910	CALCIUM (MG/L)		90	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		17	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		1.3	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		442	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		53	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		2.6	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.5	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		11	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.23		
00932	SODIUM, CALCULATED, PERCENT		5	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		11	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		936	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		95	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		21	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		491	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-107

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849107
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.228333
Latitude (degrees minutes seconds)	30° 13' 42" N
Longitude (decimal degrees)	-97.962778
Longitude (degrees minutes seconds)	097° 57' 46" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	218GLRSU - Glen Rose Limestone, Upper Member
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1140
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	350
Well Depth Source	Unknown
Drilling Start Date	
Drilling End Date	
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Stock
Water Level Observation	None
Water Quality Available	Yes
Pump	Piston
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	W.A. Schieffer
Driller	A.C. Clements
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	
Created Date	
Last Update Date	3/4/2020

Remarks	Well J-32 in 1957 Travis County report.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis

Sample Date: 1/29/1969 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone, Upper Member

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		272	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		331.93	mg/L	
00910	CALCIUM (MG/L)		83	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		30	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.5	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		351	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		35	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		42.5	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.7	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		11	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.39		
00932	SODIUM, CALCULATED, PERCENT		9	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		17	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		780	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		29	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		21	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		411	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-113

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	
County	
River Basin	
Groundwater Management Area	
Regional Water Planning Area	
Groundwater Conservation District	
Latitude (decimal degrees)	
Latitude (degrees minutes seconds)	° 00' 00" N
Longitude (decimal degrees)	
Longitude (degrees minutes seconds)	000° 00' 00" W
Coordinate Source	
Aquifer Code	
Aquifer	
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	
Land Surface Elevation Method	
Well Depth (feet below land surface)	
Well Depth Source	
Drilling Start Date	
Drilling End Date	
Drilling Method	
Borehole Completion	

Well Type	
Well Use	
Water Level Observation	
Water Quality Available	
Pump	
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	
Driller	
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	
Created Date	
Last Update Date	

Remarks	

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis - No Data Available

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-116

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849116
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.227222
Latitude (degrees minutes seconds)	30° 13' 38" N
Longitude (decimal degrees)	-97.962223
Longitude (degrees minutes seconds)	097° 57' 44" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1130
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	594
Well Depth Source	Owner
Drilling Start Date	
Drilling End Date	0/0/1971
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	Yes
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	Leonard Johnson
Driller	Hugh Glass
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/27/1998
Last Update Date	3/4/2020

Remarks	

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

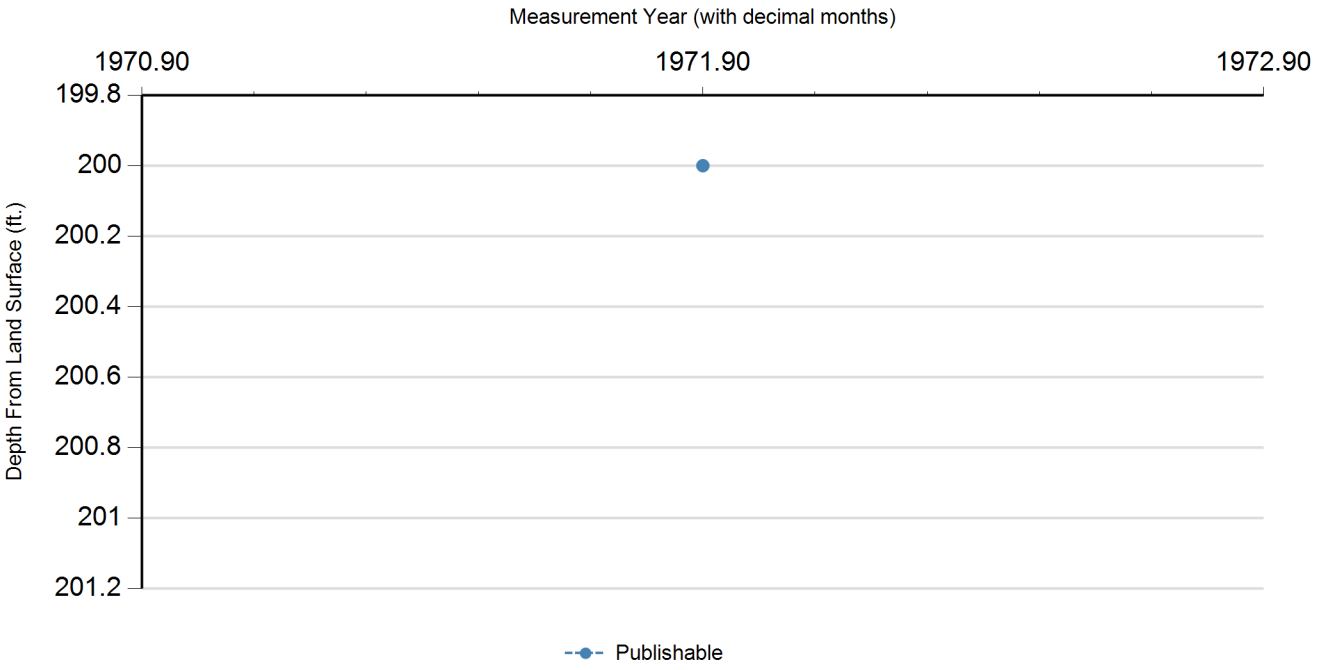
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	10/0/1971		200		930	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 58-49-116

groundwater division

Water Quality Analysis

Sample Date: 8/10/1971 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone

Analyzed Lab: Texas Department of Health **Reliability:** Reliability unknown or not available

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		292	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		356.34	mg/L	
00910	CALCIUM (MG/L)		540	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		24	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		4.8	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		1977	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		153	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)	<	0.4	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		11	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.24		
00932	SODIUM, CALCULATED, PERCENT		2	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		25	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		4743	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		1640	mg/L as SO4	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		2573	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-203

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849203
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.221667
Latitude (degrees minutes seconds)	30° 13' 18" N
Longitude (decimal degrees)	-97.954723
Longitude (degrees minutes seconds)	097° 57' 17" W
Coordinate Source	+/- 1 Second
Aquifer Code	218GLRSU - Glen Rose Limestone, Upper Member
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1093
Land Surface Elevation Method	Digital Elevation Model -DEM
Well Depth (feet below land surface)	50
Well Depth Source	Measured
Drilling Start Date	
Drilling End Date	
Drilling Method	Dug
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Stock
Water Level Observation	Historical
Water Quality Available	Yes
Pump	Bucket
Pump Depth (feet below land surface)	
Power Type	Hand
Annular Seal Method	
Surface Completion	
Owner	Sarah Moore
Driller	
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	
Created Date	10/27/1998
Last Update Date	3/4/2020

Remarks	Dug well. Well J-36 in 1957 Travis County report.

Casing

Diameter (in.)	Casing Type	Casing Material	Schedule	Gauge	Top Depth (ft.)	Bottom Depth (ft.)
48	Blank	Rock or Stone			0	8

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

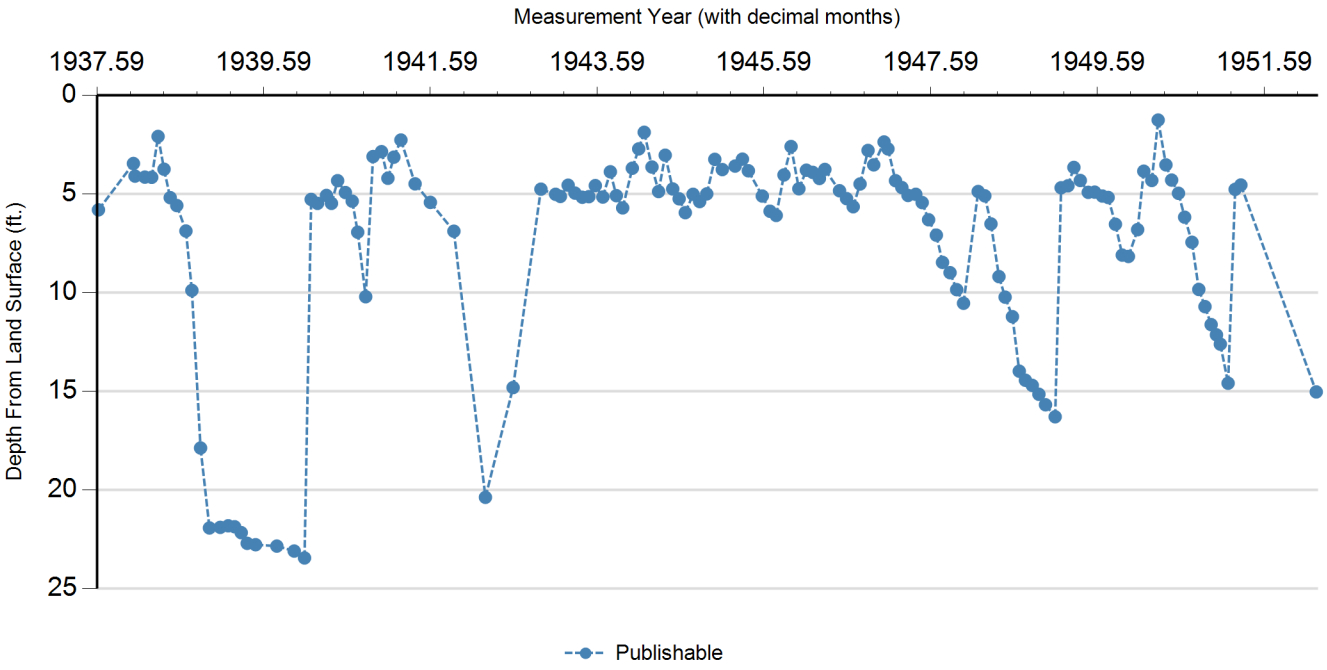
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	8/13/1937		5.81		1087.19	1	Other or Source of Measurement Unknown	Unknown	1	
P	1/11/1938		3.46	(2.35)	1089.54	1	Other or Source of Measurement Unknown	Unknown	1	
P	1/18/1938		4.1	0.64	1088.9	1	Other or Source of Measurement Unknown	Unknown	1	
P	3/1/1938		4.15	0.05	1088.85	1	Other or Source of Measurement Unknown	Unknown	1	
P	3/31/1938		4.16	0.01	1088.84	1	Other or Source of Measurement Unknown	Unknown	1	
P	4/29/1938		2.09	(2.07)	1090.91	1	Other or Source of Measurement Unknown	Unknown	1	
P	5/25/1938		3.75	1.66	1089.25	1	Other or Source of Measurement Unknown	Unknown	1	
P	6/22/1938		5.19	1.44	1087.81	1	Other or Source of Measurement Unknown	Unknown	1	
P	7/21/1938		5.59	0.40	1087.41	1	Other or Source of Measurement Unknown	Unknown	1	
P	8/31/1938		6.88	1.29	1086.12	1	Other or Source of Measurement Unknown	Unknown	1	
P	9/27/1938		9.89	3.01	1083.11	1	Other or Source of Measurement Unknown	Unknown	1	
P	11/5/1938		17.87	7.98	1075.13	1	Other or Source of Measurement Unknown	Unknown	1	
P	12/14/1938		21.92	4.05	1071.08	1	Other or Source of Measurement Unknown	Unknown	1	
P	1/26/1939		21.89	(0.03)	1071.11	1	Other or Source of Measurement Unknown	Unknown	1	

Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	3/1/1939		21.81	(0.08)	1071.19	1	Other or Source of Measurement Unknown	Unknown	1	
P	3/29/1939		21.86	0.05	1071.14	1	Other or Source of Measurement Unknown	Unknown	1	
P	4/28/1939		22.16	0.30	1070.84	1	Other or Source of Measurement Unknown	Unknown	1	
P	5/24/1939		22.7	0.54	1070.3	1	Other or Source of Measurement Unknown	Unknown	1	
P	7/1/1939		22.77	0.07	1070.23	1	Other or Source of Measurement Unknown	Unknown	1	
P	10/4/1939		22.84	0.07	1070.16	1	Other or Source of Measurement Unknown	Unknown	1	
P	12/20/1939		23.09	0.25	1069.91	1	Other or Source of Measurement Unknown	Unknown	1	
P	1/30/1940		23.44	0.35	1069.56	1	Other or Source of Measurement Unknown	Unknown	1	
P	2/29/1940		5.28	(18.16)	1087.72	1	Other or Source of Measurement Unknown	Unknown	1	
P	3/27/1940		5.48	0.20	1087.52	1	Other or Source of Measurement Unknown	Unknown	1	
P	5/6/1940		5.08	(0.40)	1087.92	1	Other or Source of Measurement Unknown	Unknown	1	
P	5/28/1940		5.48	0.40	1087.52	1	Other or Source of Measurement Unknown	Unknown	1	
P	6/25/1940		4.33	(1.15)	1088.67	1	Other or Source of Measurement Unknown	Unknown	1	
P	7/29/1940		4.93	0.60	1088.07	1	Other or Source of Measurement Unknown	Unknown	1	
P	8/29/1940		5.37	0.44	1087.63	1	Other or Source of Measurement Unknown	Unknown	1	
P	9/23/1940		6.94	1.57	1086.06	1	Other or Source of Measurement Unknown	Unknown	1	
P	10/28/1940		10.21	3.27	1082.79	1	Other or Source of Measurement Unknown	Unknown	1	
P	11/30/1940		3.11	(7.10)	1089.89	1	Other or Source of Measurement Unknown	Unknown	1	
P	1/2/1941		2.86	(0.25)	1090.14	1	Other or Source of Measurement Unknown	Unknown	1	
P	1/30/1941		4.21	1.35	1088.79	1	Other or Source of Measurement Unknown	Unknown	1	
P	2/26/1941		3.14	(1.07)	1089.86	1	Other or Source of Measurement Unknown	Unknown	1	
P	3/27/1941		2.27	(0.87)	1090.73	1	Other or Source of Measurement Unknown	Unknown	1	
P	5/29/1941		4.49	2.22	1088.51	1	Other or Source of Measurement Unknown	Unknown	1	
P	8/6/1941		5.43	0.94	1087.57	1	Other or Source of Measurement Unknown	Unknown	1	
P	11/19/1941		6.89	1.46	1086.11	1	Other or Source of Measurement Unknown	Unknown	1	
P	4/2/1942		20.37	13.48	1072.63	1	Other or Source of Measurement Unknown	Unknown	1	
P	8/3/1942		14.81	(5.56)	1078.19	1	Other or Source of Measurement Unknown	Unknown	1	

Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	12/5/1942		4.76	(10.05)	1088.24	1	Other or Source of Measurement Unknown	Unknown	1	
P	2/4/1943		5.02	0.26	1087.98	1	Other or Source of Measurement Unknown	Unknown	1	
P	2/25/1943		5.13	0.11	1087.87	1	Other or Source of Measurement Unknown	Unknown	1	
P	3/29/1943		4.56	(0.57)	1088.44	1	Other or Source of Measurement Unknown	Unknown	1	
P	4/29/1943		4.96	0.40	1088.04	1	Other or Source of Measurement Unknown	Unknown	1	
P	5/31/1943		5.17	0.21	1087.83	1	Other or Source of Measurement Unknown	Unknown	1	
P	6/30/1943		5.14	(0.03)	1087.86	1	Other or Source of Measurement Unknown	Unknown	1	
P	7/28/1943		4.58	(0.56)	1088.42	1	Other or Source of Measurement Unknown	Unknown	1	
P	9/1/1943		5.16	0.58	1087.84	1	Other or Source of Measurement Unknown	Unknown	1	
P	10/4/1943		3.88	(1.28)	1089.12	1	Other or Source of Measurement Unknown	Unknown	1	
P	10/30/1943		5.09	1.21	1087.91	1	Other or Source of Measurement Unknown	Unknown	1	
P	11/28/1943		5.71	0.62	1087.29	1	Other or Source of Measurement Unknown	Unknown	1	
P	1/5/1944		3.7	(2.01)	1089.3	1	Other or Source of Measurement Unknown	Unknown	1	
P	2/3/1944		2.72	(0.98)	1090.28	1	Other or Source of Measurement Unknown	Unknown	1	
P	2/27/1944		1.88	(0.84)	1091.12	1	Other or Source of Measurement Unknown	Unknown	1	
P	4/1/1944		3.64	1.76	1089.36	1	Other or Source of Measurement Unknown	Unknown	1	
P	4/30/1944		4.88	1.24	1088.12	1	Other or Source of Measurement Unknown	Unknown	1	
P	5/29/1944		3.04	(1.84)	1089.96	1	Other or Source of Measurement Unknown	Unknown	1	
P	7/2/1944		4.75	1.71	1088.25	1	Other or Source of Measurement Unknown	Unknown	1	
P	7/30/1944		5.25	0.50	1087.75	1	Other or Source of Measurement Unknown	Unknown	1	
P	8/27/1944		5.95	0.70	1087.05	1	Other or Source of Measurement Unknown	Unknown	1	
P	10/1/1944		5.02	(0.93)	1087.98	1	Other or Source of Measurement Unknown	Unknown	1	
P	10/30/1944		5.39	0.37	1087.61	1	Other or Source of Measurement Unknown	Unknown	1	
P	12/1/1944		5	(0.39)	1088	1	Other or Source of Measurement Unknown	Unknown	1	
P	1/1/1945		3.25	(1.75)	1089.75	1	Other or Source of Measurement Unknown	Unknown	1	
P	2/4/1945		3.77	0.52	1089.23	1	Other or Source of Measurement Unknown	Unknown	1	
P	3/30/1945		3.59	(0.18)	1089.41	1	Other or Source of Measurement Unknown	Unknown	1	

Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	5/2/1945		3.24	(0.35)	1089.76	1	Other or Source of Measurement Unknown	Unknown	1	
P	5/28/1945		3.83	0.59	1089.17	1	Other or Source of Measurement Unknown	Unknown	1	
P	7/29/1945		5.11	1.28	1087.89	1	Other or Source of Measurement Unknown	Unknown	1	
P	9/3/1945		5.88	0.77	1087.12	1	Other or Source of Measurement Unknown	Unknown	1	
P	9/30/1945		6.09	0.21	1086.91	1	Other or Source of Measurement Unknown	Unknown	1	
P	11/4/1945		4.04	(2.05)	1088.96	1	Other or Source of Measurement Unknown	Unknown	1	
P	12/5/1945		2.6	(1.44)	1090.4	1	Other or Source of Measurement Unknown	Unknown	1	
P	1/4/1946		4.74	2.14	1088.26	1	Other or Source of Measurement Unknown	Unknown	1	
P	2/7/1946		3.8	(0.94)	1089.2	1	Other or Source of Measurement Unknown	Unknown	1	
P	3/5/1946		3.91	0.11	1089.09	1	Other or Source of Measurement Unknown	Unknown	1	
P	4/4/1946		4.22	0.31	1088.78	1	Other or Source of Measurement Unknown	Unknown	1	
P	4/28/1946		3.76	(0.46)	1089.24	1	Other or Source of Measurement Unknown	Unknown	1	
P	7/2/1946		4.84	1.08	1088.16	1	Other or Source of Measurement Unknown	Unknown	1	
P	8/3/1946		5.24	0.40	1087.76	1	Other or Source of Measurement Unknown	Unknown	1	
P	9/2/1946		5.65	0.41	1087.35	1	Other or Source of Measurement Unknown	Unknown	1	
P	10/2/1946		4.5	(1.15)	1088.5	1	Other or Source of Measurement Unknown	Unknown	1	
P	11/7/1946		2.8	(1.70)	1090.2	1	Other or Source of Measurement Unknown	Unknown	1	
P	12/2/1946		3.53	0.73	1089.47	1	Other or Source of Measurement Unknown	Unknown	1	
P	1/12/1947		2.37	(1.16)	1090.63	1	Other or Source of Measurement Unknown	Unknown	1	
P	1/29/1947		2.72	0.35	1090.28	1	Other or Source of Measurement Unknown	Unknown	1	
P	3/2/1947		4.33	1.61	1088.67	1	Other or Source of Measurement Unknown	Unknown	1	
P	3/30/1947		4.68	0.35	1088.32	1	Other or Source of Measurement Unknown	Unknown	1	
P	4/27/1947		5.08	0.40	1087.92	1	Other or Source of Measurement Unknown	Unknown	1	
P	6/1/1947		5.02	(0.06)	1087.98	1	Other or Source of Measurement Unknown	Unknown	1	
P	6/29/1947		5.44	0.42	1087.56	1	Other or Source of Measurement Unknown	Unknown	1	
P	7/27/1947		6.31	0.87	1086.69	1	Other or Source of Measurement Unknown	Unknown	1	
P	9/1/1947		7.09	0.78	1085.91	1	Other or Source of Measurement Unknown	Unknown	1	

Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	9/28/1947		8.47	1.38	1084.53	1	Other or Source of Measurement Unknown	Unknown	1	
P	10/31/1947		8.99	0.52	1084.01	1	Other or Source of Measurement Unknown	Unknown	1	
P	11/30/1947		9.85	0.86	1083.15	1	Other or Source of Measurement Unknown	Unknown	1	
P	12/30/1947		10.54	0.69	1082.46	1	Other or Source of Measurement Unknown	Unknown	1	
P	2/29/1948		4.88	(5.66)	1088.12	1	Other or Source of Measurement Unknown	Unknown	1	
P	3/28/1948		5.1	0.22	1087.9	1	Other or Source of Measurement Unknown	Unknown	1	
P	4/25/1948		6.52	1.42	1086.48	1	Other or Source of Measurement Unknown	Unknown	1	
P	5/30/1948		9.19	2.67	1083.81	1	Other or Source of Measurement Unknown	Unknown	1	
P	6/27/1948		10.23	1.04	1082.77	1	Other or Source of Measurement Unknown	Unknown	1	
P	7/29/1948		11.22	0.99	1081.78	1	Other or Source of Measurement Unknown	Unknown	1	
P	8/29/1948		13.98	2.76	1079.02	1	Other or Source of Measurement Unknown	Unknown	1	
P	9/26/1948		14.44	0.46	1078.56	1	Other or Source of Measurement Unknown	Unknown	1	
P	10/26/1948		14.7	0.26	1078.3	1	Other or Source of Measurement Unknown	Unknown	1	
P	11/25/1948		15.15	0.45	1077.85	1	Other or Source of Measurement Unknown	Unknown	1	
P	12/24/1948		15.68	0.53	1077.32	1	Other or Source of Measurement Unknown	Unknown	1	
P	1/31/1949		16.29	0.61	1076.71	1	Other or Source of Measurement Unknown	Unknown	1	
P	2/27/1949		4.69	(11.60)	1088.31	1	Other or Source of Measurement Unknown	Unknown	1	
P	3/27/1949		4.59	(0.10)	1088.41	1	Other or Source of Measurement Unknown	Unknown	1	
P	4/23/1949		3.66	(0.93)	1089.34	1	Other or Source of Measurement Unknown	Unknown	1	
P	5/21/1949		4.32	0.66	1088.68	1	Other or Source of Measurement Unknown	Unknown	1	
P	6/26/1949		4.92	0.60	1088.08	1	Other or Source of Measurement Unknown	Unknown	1	
P	7/24/1949		4.91	(0.01)	1088.09	1	Other or Source of Measurement Unknown	Unknown	1	
P	8/28/1949		5.11	0.20	1087.89	1	Other or Source of Measurement Unknown	Unknown	1	
P	9/23/1949		5.18	0.07	1087.82	1	Other or Source of Measurement Unknown	Unknown	1	
P	10/25/1949		6.54	1.36	1086.46	1	Other or Source of Measurement Unknown	Unknown	1	
P	11/25/1949		8.1	1.56	1084.9	1	Other or Source of Measurement Unknown	Unknown	1	
P	12/22/1949		8.17	0.07	1084.83	1	Other or Source of Measurement Unknown	Unknown	1	

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 58-49-203

groundwater division

Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	1/27/1950		6.81	(1.36)	1086.19	1	Other or Source of Measurement Unknown	Unknown	1	
P	2/24/1950		3.85	(2.96)	1089.15	1	Other or Source of Measurement Unknown	Unknown	1	
P	3/29/1950		4.32	0.47	1088.68	1	Other or Source of Measurement Unknown	Unknown	1	
P	4/27/1950		1.26	(3.06)	1091.74	1	Other or Source of Measurement Unknown	Unknown	1	
P	5/31/1950		3.53	2.27	1089.47	1	Other or Source of Measurement Unknown	Unknown	1	
P	6/26/1950		4.3	0.77	1088.7	1	Other or Source of Measurement Unknown	Unknown	1	
P	7/26/1950		4.97	0.67	1088.03	1	Other or Source of Measurement Unknown	Unknown	1	
P	8/23/1950		6.18	1.21	1086.82	1	Other or Source of Measurement Unknown	Unknown	1	
P	9/25/1950		7.45	1.27	1085.55	1	Other or Source of Measurement Unknown	Unknown	1	
P	10/25/1950		9.84	2.39	1083.16	1	Other or Source of Measurement Unknown	Unknown	1	
P	11/22/1950		10.71	0.87	1082.29	1	Other or Source of Measurement Unknown	Unknown	1	
P	12/19/1950		11.62	0.91	1081.38	1	Other or Source of Measurement Unknown	Unknown	1	
P	1/7/1951		12.14	0.52	1080.86	1	Other or Source of Measurement Unknown	Unknown	1	
P	1/24/1951		12.61	0.47	1080.39	1	Other or Source of Measurement Unknown	Unknown	1	
P	2/28/1951		14.59	1.98	1078.41	1	Other or Source of Measurement Unknown	Unknown	1	
P	3/29/1951		4.77	(9.82)	1088.23	1	Other or Source of Measurement Unknown	Unknown	1	
P	4/24/1951		4.55	(0.22)	1088.45	1	Other or Source of Measurement Unknown	Unknown	1	
P	3/19/1952		15.03	10.48	1077.97	1	Other or Source of Measurement Unknown	Unknown	1	

Code Descriptions

Status Code	Status Description
P	Publishable

Remark ID	Remark Description
1	Accurately reflects water level conditions

Water Quality Analysis

Sample Date: 8/13/1937 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** U.S. Geological Survey

Sampled Aquifer: Glen Rose Limestone, Upper Member

Analyzed Lab: WPA **Reliability:** Reliability unknown or not available

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		272.05	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		332	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		16	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.1	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		366	mg/L as CACO3	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		60	mg/L as NO3	
00929	SODIUM, TOTAL (MG/L AS NA)		10	mg/L	
00945	SULFATE, TOTAL (MG/L AS SO4)		42	mg/L as SO4	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-206

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849206
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.217222
Latitude (degrees minutes seconds)	30° 13' 02" N
Longitude (decimal degrees)	-97.951112
Longitude (degrees minutes seconds)	097° 57' 04" W
Coordinate Source	+/- 5 Seconds
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1040
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	346
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	0/0/1965
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	Yes
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	Albert O'Daniel
Driller	Glass and Bible
Other Data Available	Drillers Log
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/27/1998
Last Update Date	3/4/2020

Remarks	Reported yield 40 GPM.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

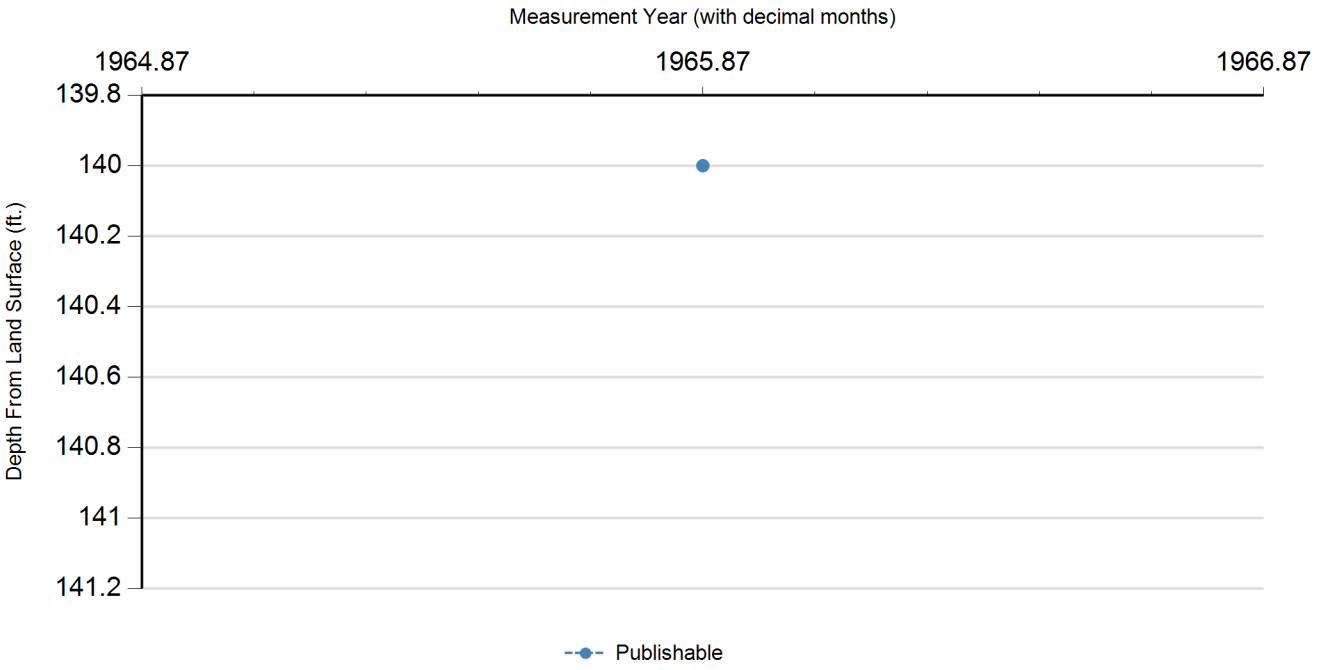
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	11/16/1965		140		900	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis

Sample Date: 1/15/1969 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		338	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		412.48	mg/L	
00910	CALCIUM (MG/L)		290	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		21	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		4.6	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		1246	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		127	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		0.5	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.2	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		11	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.21		
00932	SODIUM, CALCULATED, PERCENT		2	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		17	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		2835	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		850	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		21	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		1523	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-207

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849207
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.221944
Latitude (degrees minutes seconds)	30° 13' 19" N
Longitude (decimal degrees)	-97.952223
Longitude (degrees minutes seconds)	097° 57' 08" W
Coordinate Source	+/- 1 Second
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1160
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	493
Well Depth Source	Owner
Drilling Start Date	
Drilling End Date	0/0/1965
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	No
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	John Burnett
Driller	S. Glass
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/27/1998
Last Update Date	3/4/2020

Remarks	

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

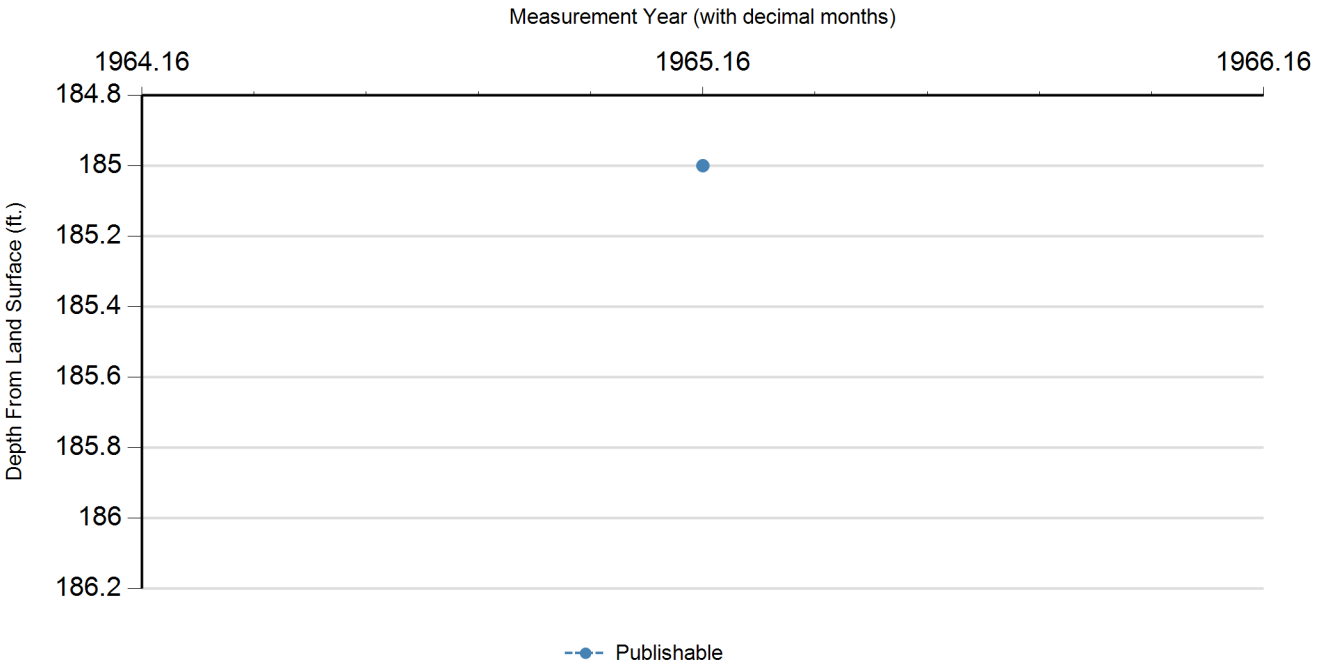
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	1/0/1965		185		975	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis - No Data Available

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-210

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849210
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.219444
Latitude (degrees minutes seconds)	30° 13' 10" N
Longitude (decimal degrees)	-97.953612
Longitude (degrees minutes seconds)	097° 57' 13" W
Coordinate Source	+/- 1 Second
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1060
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	435
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	0/0/1968
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	Yes
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	John Carpenter
Driller	Central Texas Drilling Co.
Other Data Available	Drillers Log; Specific Capacity
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/27/1998
Last Update Date	3/4/2020

Remarks	Reported yield 12 GPM with 35 feet drawdown after pumping 2 hours in 1968. Specific capacity 0.34.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

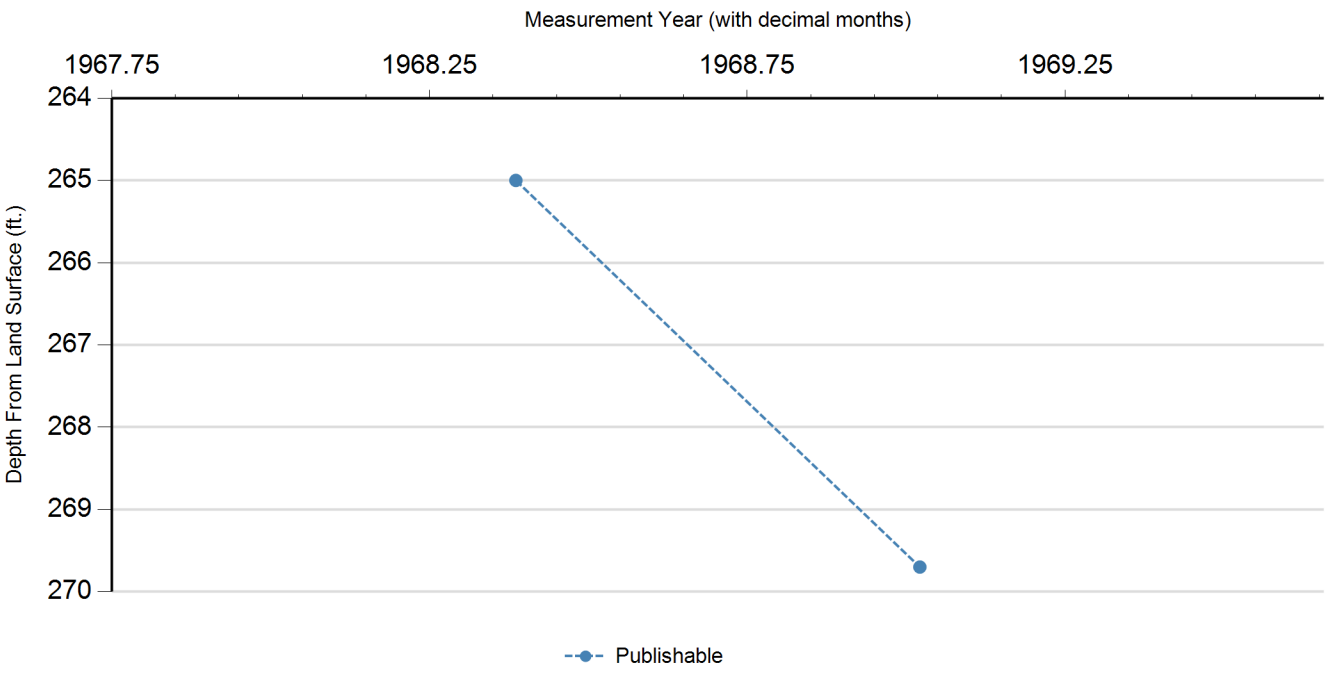
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	5/22/1968		265		795	1	Other or Source of Measurement Unknown	Unknown		
P	1/9/1969		269.7	4.70	790.3	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis

Sample Date: 1/9/1969 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		374	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		456.41	mg/L	
00910	CALCIUM (MG/L)		193	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		26	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		4.4	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		810	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		80	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		1	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.3	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		10	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.21		
00932	SODIUM, CALCULATED, PERCENT		3	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		14	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1782	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		393	mg/L as SO4	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		945	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-211

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849211
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.224444
Latitude (degrees minutes seconds)	30° 13' 28" N
Longitude (decimal degrees)	-97.951389
Longitude (degrees minutes seconds)	097° 57' 05" W
Coordinate Source	+/- 5 Seconds
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1125
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	415
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	0/0/1964
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Stock
Water Level Observation	Miscellaneous Measurements
Water Quality Available	Yes
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	R.L. Bales
Driller	Sterzing Drilling
Other Data Available	Drillers Log; Specific Capacity
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/27/1998
Last Update Date	3/4/2020

Remarks	Reported yield 25 GPM with 35 feet drawdown in 1964. Specific cap.0.7.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

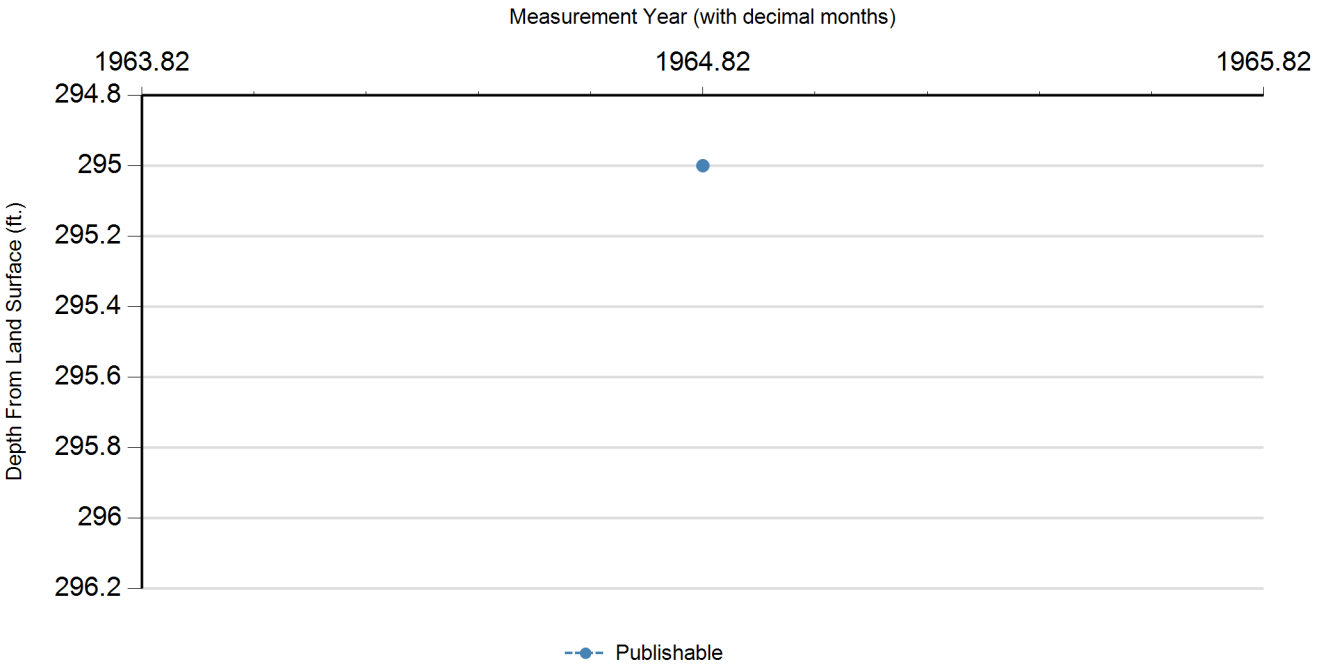
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	10/28/1964		295		830	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis

Sample Date: 1/8/1969 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		312	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		380.75	mg/L	
00910	CALCIUM (MG/L)		490	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		26	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		4.7	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		1856	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		154	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		2.6	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		11	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.18		
00932	SODIUM, CALCULATED, PERCENT		2	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		18	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		4309	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		1460	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		24	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		2353	mg/L	

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-212

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849212
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.223889
Latitude (degrees minutes seconds)	30° 13' 26" N
Longitude (decimal degrees)	-97.952223
Longitude (degrees minutes seconds)	097° 57' 08" W
Coordinate Source	+/- 5 Seconds
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1125
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	500
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	0/0/1967
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	None
Water Quality Available	Yes
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	R.L. Bales
Driller	R.L. Bible
Other Data Available	Drillers Log; Specific Capacity
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/27/1998
Last Update Date	3/4/2020

Remarks	Reported yield 12 GPM with 25 feet drawdown after pumping 1 hour in 1967. Specific capacity 0.48.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis

Sample Date: 1/8/1969 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone

Analyzed Lab: Texas Department of Health **Reliability:** From well not sufficiently pumped; not filtered or preserved

Collection Remarks: from storage tank

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		311	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		379.53	mg/L	
00910	CALCIUM (MG/L)		432	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		23	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		3.4	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		1592	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		125	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		2.6	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.3	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		10	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.13		
00932	SODIUM, CALCULATED, PERCENT		1	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		12	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		3654	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		1200	mg/L as SO4	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		1994	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-213

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849213
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.218333
Latitude (degrees minutes seconds)	30° 13' 06" N
Longitude (decimal degrees)	-97.950001
Longitude (degrees minutes seconds)	097° 57' 00" W
Coordinate Source	+/- 5 Seconds
Aquifer Code	218GLRSU - Glen Rose Limestone, Upper Member
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1050
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	349
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	0/0/1966
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	Yes
Pump	
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	AR. O'Daniel
Driller	Glass and Bible
Other Data Available	Drillers Log
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/27/1998
Last Update Date	3/4/2020

Remarks	

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

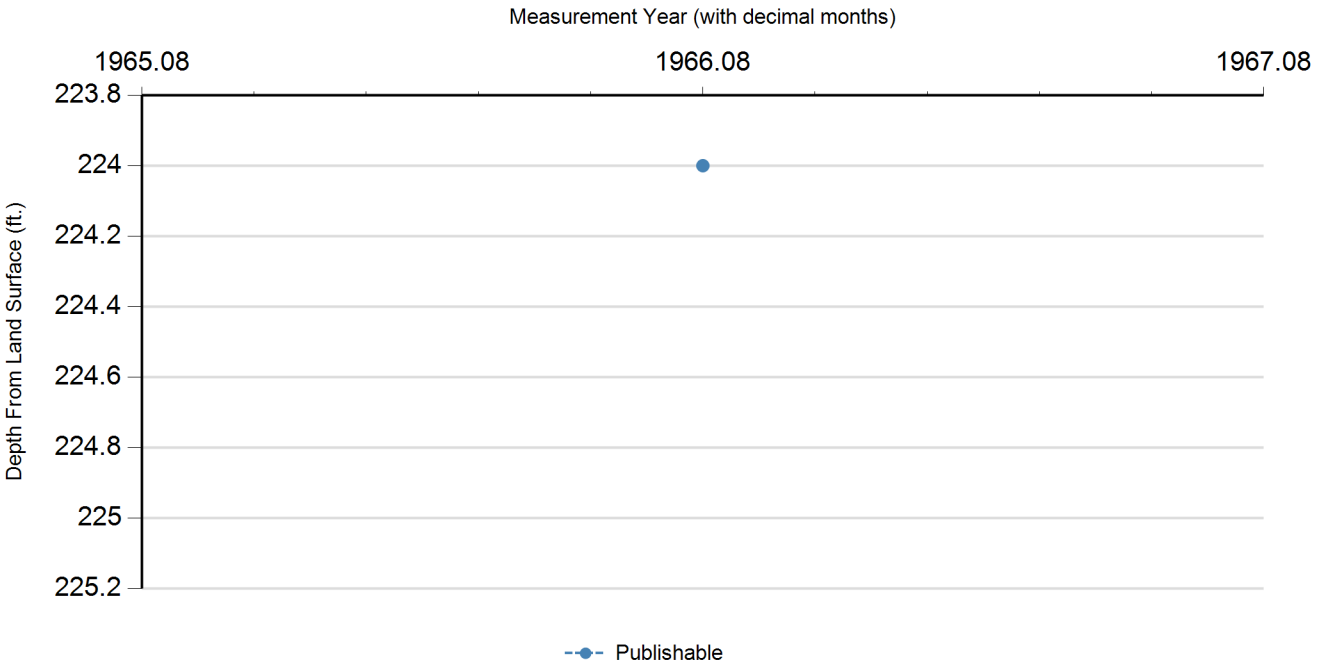
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	2/1/1966		224		826	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis

Sample Date: 1/15/1969 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone, Upper Member

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		390	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		475.93	mg/L	
00910	CALCIUM (MG/L)		85	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		15	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		2.1	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		508	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		72	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		0.5	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.4	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		11	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.23		
00932	SODIUM, CALCULATED, PERCENT		4	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		12	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1050	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		113	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		18	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		544	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-215

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849215
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.219444
Latitude (degrees minutes seconds)	30° 13' 10" N
Longitude (decimal degrees)	-97.956945
Longitude (degrees minutes seconds)	097° 57' 25" W
Coordinate Source	+/- 1 Second
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1060
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	570
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	9/5/1965
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	Yes
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	Robert Denman
Driller	Sterzing Drilling
Other Data Available	Drillers Log; Specific Capacity
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/27/1998
Last Update Date	3/4/2020

Remarks	Reported yield 20 GPM with 10 feet drawdown in 1965. Specific cap. 2.0

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

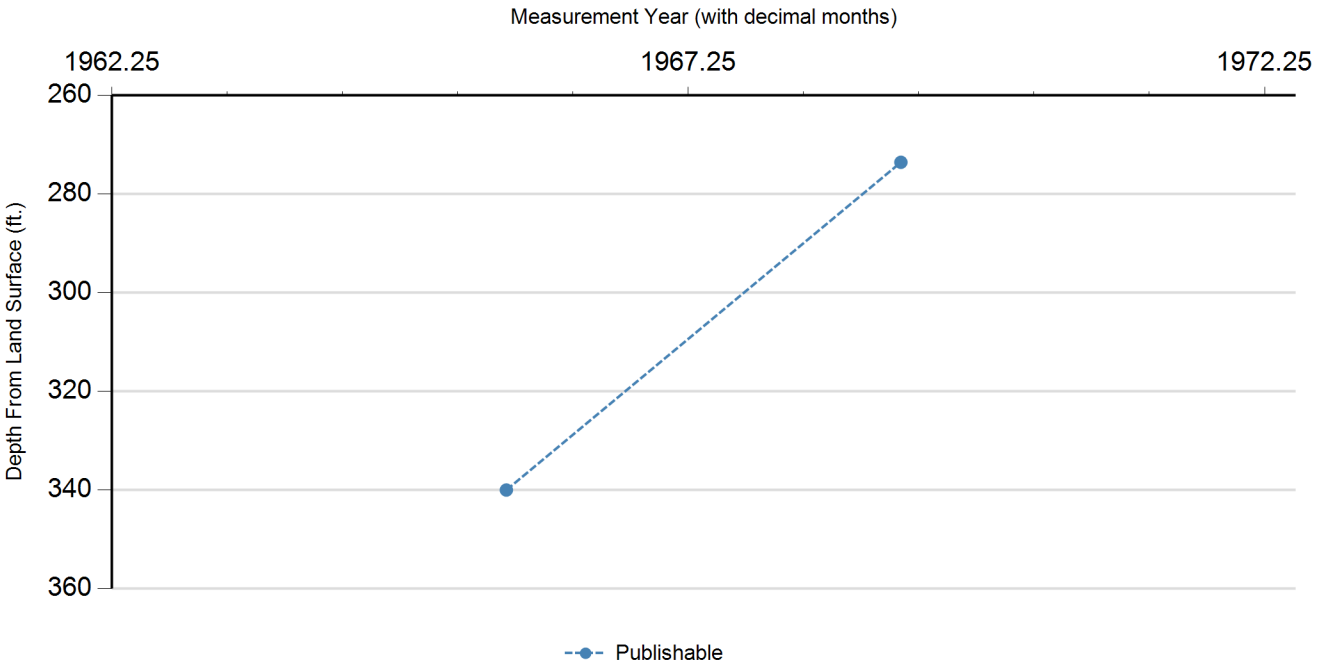
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	9/5/1965		340		720	1	Other or Source of Measurement Unknown	Unknown		
P	2/4/1969		273.6	(66.40)	786.4	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis

Sample Date: 2/4/1969 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		284	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		346.58	mg/L	
00910	CALCIUM (MG/L)		590	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		35	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		4.7	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		2175	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		171	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)	<	0.4	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		10	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.2		
00932	SODIUM, CALCULATED, PERCENT		2	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		21	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		5207	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		1750	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		21	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		2752	mg/L	

Water Quality Analysis

Sample Date: 6/5/1986 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		360	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		439.32	mg/L	
00910	CALCIUM (MG/L)		312	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		23	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		1.3	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		980	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		49	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		1.46	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.1	SU	
00937	POTASSIUM, TOTAL (MG/L AS K)		4	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		11	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.24		
00932	SODIUM, CALCULATED, PERCENT		3	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		17	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		2256	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		616	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		24	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		1250	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-218

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849218
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.22
Latitude (degrees minutes seconds)	30° 13' 12" N
Longitude (decimal degrees)	-97.949445
Longitude (degrees minutes seconds)	097° 56' 58" W
Coordinate Source	+/- 1 Second
Aquifer Code	218GLRSU - Glen Rose Limestone, Upper Member
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1090
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	351
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	11/11/1969
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	None
Water Quality Available	Yes
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	Jim Bourland
Driller	E.W. Glass
Other Data Available	Drillers Log; Specific Capacity
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/27/1998
Last Update Date	3/4/2020

Remarks	Reported yield 35 GPM with 16 feet drawdown in 1969. Specific cap. 2.2

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis

Sample Date: 11/17/1970 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone, Upper Member

Analyzed Lab: Texas Department of Health **Reliability:** From well not sufficiently pumped; not filtered or preserved

Collection Remarks: pressure tank

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		430	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		524.75	mg/L	
00910	CALCIUM (MG/L)		98	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		15	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		2.1	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		540	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		72	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)	<	0.4	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.4	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		10	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.26		
00932	SODIUM, CALCULATED, PERCENT		5	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		14	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1166	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		121	mg/L as SO4	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		590	mg/L	

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-222

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849222
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.226389
Latitude (degrees minutes seconds)	30° 13' 35" N
Longitude (decimal degrees)	-97.945834
Longitude (degrees minutes seconds)	097° 56' 45" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1040
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	621
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	12/11/1970
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	Yes
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	Jerry Angerman
Driller	Delby Glass
Other Data Available	Drillers Log; Specific Capacity
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/27/1998
Last Update Date	3/4/2020

Remarks	Reported yield 10 GPM with 90 feet drawdown after pumping 1/2 hour in 1970. Cemented from 0 to 46 feet. Specific capacity 0.11.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	12/11/1970		380		660	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis

Sample Date: 3/11/1971 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		345	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		421.02	mg/L	
00910	CALCIUM (MG/L)		117	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		21	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		2.4	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		604	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		76	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		1.5	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.4	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		12	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.23		
00932	SODIUM, CALCULATED, PERCENT		4	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		13	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1323	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		251	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		26	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		700	mg/L	

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-224

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849224
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.230278
Latitude (degrees minutes seconds)	30° 13' 49" N
Longitude (decimal degrees)	-97.948611
Longitude (degrees minutes seconds)	097° 56' 55" W
Coordinate Source	+/- 1 Second
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1120
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	569
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	0/0/1971
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	No
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	Jerry Angerman
Driller	Delby Glass
Other Data Available	Drillers Log; Specific Capacity
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/27/1998
Last Update Date	3/4/2020

Remarks	Reported yield 18 GPM with 90 feet drawdown after pumping 1/2 hour in 1971. Specific capacity 0.2.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

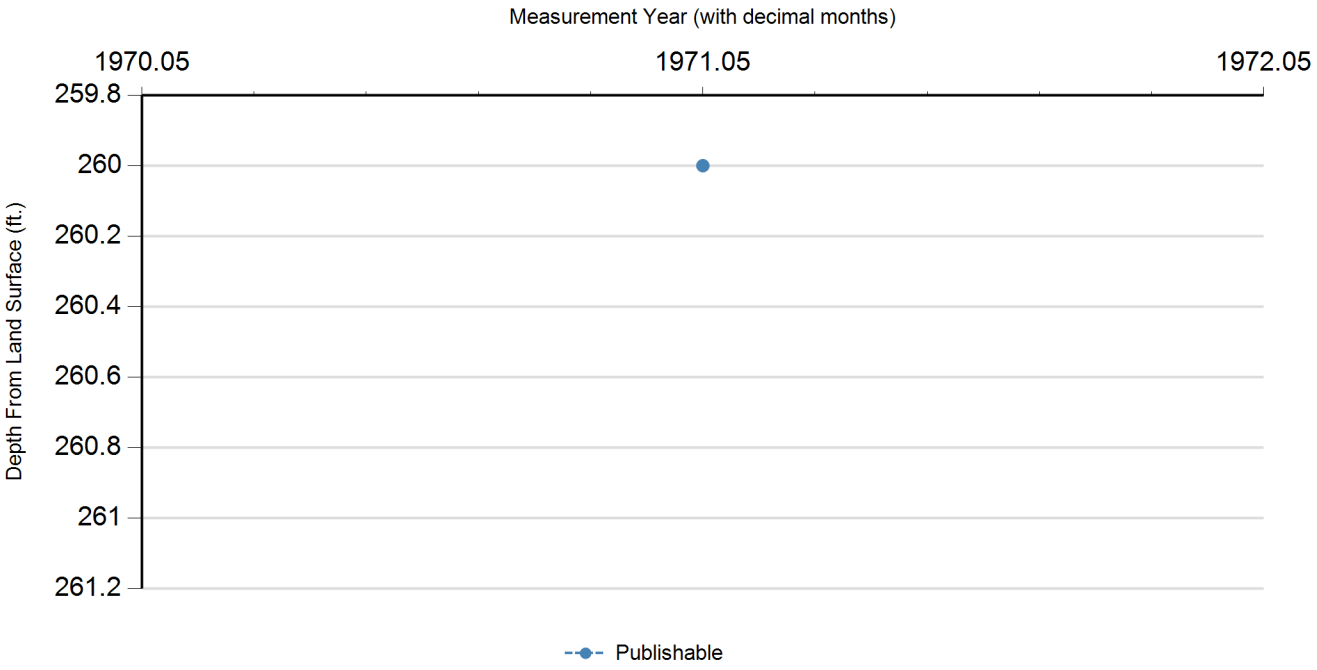
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	1/17/1971		260		860	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis - No Data Available

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-225

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849225
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.225555
Latitude (degrees minutes seconds)	30° 13' 32" N
Longitude (decimal degrees)	-97.950556
Longitude (degrees minutes seconds)	097° 57' 02" W
Coordinate Source	+/- 1 Second
Aquifer Code	217HSTN - Hosston Formation
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1110
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	938
Well Depth Source	Geologist-Consultant
Drilling Start Date	
Drilling End Date	0/0/1976
Drilling Method	
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Public Supply
Water Level Observation	Miscellaneous Measurements
Water Quality Available	No
Pump	
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	Jerry Angerman
Driller	Central Texas Drilling Co
Other Data Available	Caliper; Electric Log; Gamma Ray; Neutron
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/13/1998
Last Update Date	3/4/2020

Remarks	Geophysical logs.

Casing

Diameter (in.)	Casing Type	Casing Material	Schedule	Gauge	Top Depth (ft.)	Bottom Depth (ft.)
	Blank				0	785
	Open Hole				785	938

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	2/17/1976		452		658	1	Texas Water Development Board	Logging Sonde		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis - No Data Available

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-226

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849226
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.230833
Latitude (degrees minutes seconds)	30° 13' 51" N
Longitude (decimal degrees)	-97.954445
Longitude (degrees minutes seconds)	097° 57' 16" W
Coordinate Source	+/- 1 Second
Aquifer Code	218GLRSU - Glen Rose Limestone, Upper Member
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1160
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	411
Well Depth Source	Geophysical Log
Drilling Start Date	
Drilling End Date	11/0/1970
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Plugged or Destroyed
Water Level Observation	Miscellaneous Measurements
Water Quality Available	No
Pump	None
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	Gary Haldeman
Driller	Gary Haldeman and Leonard Johnson
Other Data Available	Electric Log; Gamma Ray; Temperature
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/27/1970
Last Update Date	3/4/2020

Remarks	Plugged. Geophysical log Q-56.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

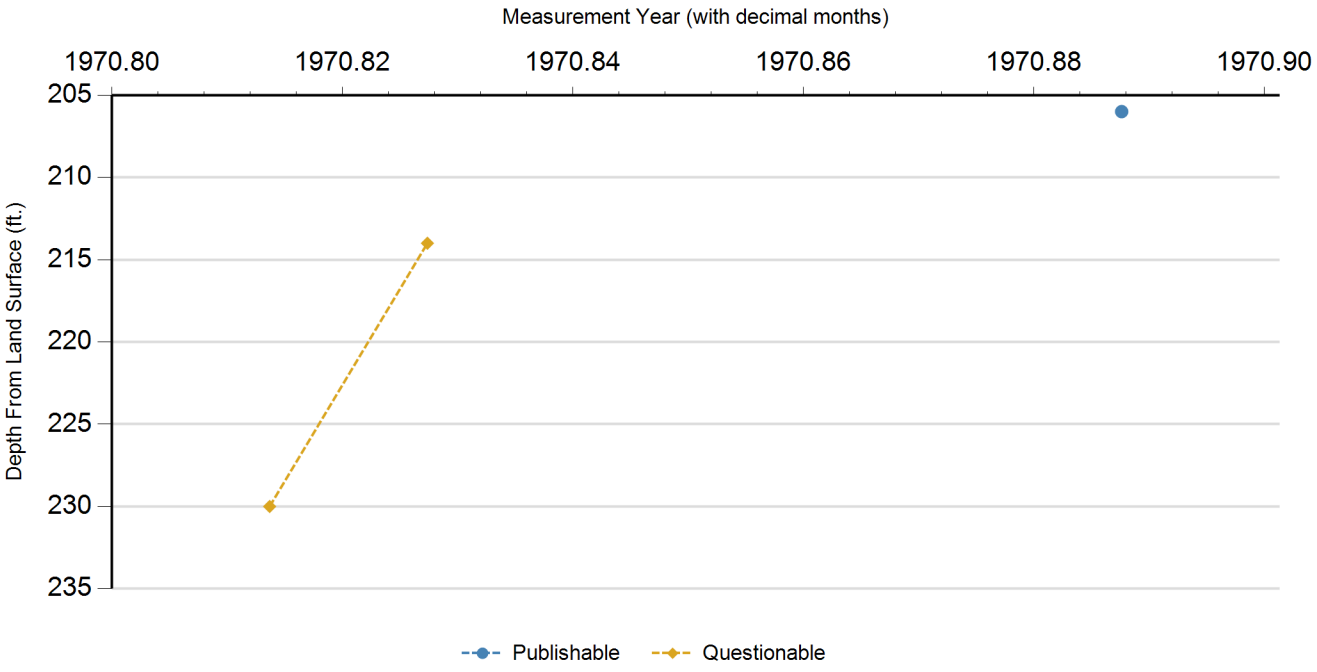
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
Q	10/27/1970		230		930	1	Other or Source of Measurement Unknown	Unknown	17	
Q	11/2/1970		214	(16.00)	946	1	Other or Source of Measurement Unknown	Unknown	17	
P	11/24/1970		206	(8.00)	954	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable
Q	Questionable

Remark ID	Remark Description
17	Measurement before well completion

Water Quality Analysis - No Data Available

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-227

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849227
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.224444
Latitude (degrees minutes seconds)	30° 13' 28" N
Longitude (decimal degrees)	-97.951389
Longitude (degrees minutes seconds)	097° 57' 05" W
Coordinate Source	+/- 1 Second
Aquifer Code	218GLRH - Glen Rose Limestone and Hensell Member of Pearsall Formation
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1125
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	500
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	3/0/1973
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	None
Water Quality Available	Yes
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	Fred Barkley
Driller	Richard L. Bible
Other Data Available	Drillers Log; Specific Capacity
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/27/1998
Last Update Date	3/4/2020

Remarks	Reported yield 7 GPM with 30 feet drawdown after pumping 1/2 hour in 1973. Specific capacity 0.23.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis

Sample Date: 6/5/1986 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone and Hensell Member of Pearsall Formation

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		225	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		274.58	mg/L	
00910	CALCIUM (MG/L)		568	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		27	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		3.5	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		1972	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		135	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		0.75	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.2	SU	
00937	POTASSIUM, TOTAL (MG/L AS K)		9	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		11	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.2		
00932	SODIUM, CALCULATED, PERCENT		2	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		20	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		4784	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		1705	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		24	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		2614	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

GWDB DISCLAIMER: Except where noted, all of the information provided in the Texas Water Development Board (TWDB) Groundwater Database (https://www.twdb.texas.gov/groundwater/data/gwdbrpt.asp) is believed to be accurate and reliable; however, the TWDB assumes no responsibility for any errors appearing in rules or otherwise. Further, TWDB assumes no responsibility for the use of the information provided. PLEASE NOTE that users of these data are responsible for checking the accuracy, completeness, currency and/or suitability of all information themselves. TWDB makes no guarantees or warranties as to the accuracy, completeness, currency, or suitability of the information provided via the Groundwater Database (GWDB). TWDB specifically disclaims any and all liability for any claims or damages that may result from providing GWDB data or the information it contains. For additional information or answers to questions concerning the TWDB GWDB, contact the Groundwater Data Team at GroundwaterData@twdb.texas.gov.

STATE OF TEXAS WELL REPORT for Tracking #10253

Owner:	**WALL TO WALL CONSTRUCTION**	Owner Well #:	**001**
Address:	**635 WESTFRONT ST. SUITE 100 HUTTO, TX 78634**	Grid #:	**58-49-1**
Well Location:	**LOT 20 SOUTHWEST OAKS DRIPPING SPRINGS, TX 78620**	Latitude:	**30° 13' 54" N**
		Longitude:	**097° 58' 32" W**
Well County:	**Travis**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **7/23/2002** Drilling End Date: **7/23/2002**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8	**0**	**10**
6.5	**10**	**848**

Drilling Method: **Air Rotary**

Borehole Completion: **Open Hole**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**16**	**10**

Seal Method: **SLURRIED & POURED**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **NOT YET INSTALLED**

Surface Completion: **Surface Sleeve Installed**

Water Level: **410 ft.** below land surface on **2002-07-24** Measurement Method: **Unknown**

Packers: **PLASTIC 16**
PLASTIC 730

Type of Pump: **Submersible** Pump Depth (ft.): **760**

Well Tests: **Jetted** **Yield: 20-25 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **BEE CAVE DRILLING, INC.**

185 ANGELFIRE DR.
DRIPPING SPRINGS, TX 78620

Driller Name: **SCOTT WILDER** License Number: **54416**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**2**	**TOPSOIL**
2	**20**	**CALICHE**
20	**560**	**GREY LIMESTONE**
560	**575**	**GREY ROCK**
575	**615**	**GREY ROCK & TAN SANDSTONE W/B**
615	**638**	**BLUE SHALE & CLAY W/B**
638	**647**	**TAN SANDSTONE**
647	**656**	**BLUE CLAY & SHALE**
656	**730**	**SAND-TAN & BLUE**
730	**836**	**TAN & BROWN SANDSTONE & SAND**
836	**848**	**ROCK & CLAY**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.) New/Used Type Setting From/To (ft.)
4.5 NEW PLASTIC 0 - 776
4.5 NEW SCREEN MFG. 776 - 836
4.5 NEW PLASTIC 836 - 848

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #15261

Owner:	**Bevron Corp.**	Owner Well #:	**No Data**
Address:	**13429 Madrone Mountain Way Austin, TX 78737**	Grid #:	**58-49-2**
Well Location:	**11016 Tangle Ridge Circle Austin, TX 78736**	Latitude:	**30° 13' 46" N**
		Longitude:	**097° 57' 19" W**
Well County:	**Travis**	Elevation:	**712 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **10/14/2002** Drilling End Date: **10/15/2002**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
7.875	**0**	**60**
7	**60**	**420**
6.75	**420**	**850**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**18**

Seal Method: **Gravity**

Sealed By: **ADC**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed**

Water Level: **523 ft.** below land surface on **2002-11-19** Measurement Method: **Unknown**

Packers: **Neoprene/burlap 50 & 740**

Type of Pump: **Submersible** Pump Depth (ft.): **640**

Well Tests: **Estimated** **Yield: 30 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
740-850	**trinity**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Associated Drilling Co.**

P. O. Box 1060
Manchaca, TX 78652

Driller Name: **Byron Benoit**

License Number: **1955**

Apprentice Number: **1955**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**topsoil**
1	**22**	**broken tan sandstone**
22	**24**	**void**
24	**40**	**broken tan sandstone**
40	**160**	**gray lime**
160	**220**	**broken tan lime**
220	**500**	**gray lime/shale**
500	**580**	**broken tan sandstone**
580	**680**	**gray lime**
680	**720**	**shale**
720	**740**	**tan sandstone**
740	**850**	**broken tan-light red sandstone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
4.5	**N**	**Plastic**	**-2 to 850**
SDR 17			
perf. from 740-850			

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STATE OF TEXAS WELL REPORT for Tracking #63065

Owner:	**SCOTT HEMPHILL**	Owner Well #:	**No Data**
Address:	**PMB 122, 12400 HWY. 71 W.,STE. AUSTIN, TX 78738**	Grid #:	**58-49-1**
Well Location:	**12400 HWY 71 PMB# 122 AUSTIN, TX 78738**	Latitude:	**30° 13' 17" N**
		Longitude:	**097° 58' 12" W**
Well County:	**Travis**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **5/2/2005** Drilling End Date: **5/2/2005**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.625	**0**	**40**
6.125	**40**	**890**

Drilling Method: **Air Rotary**

Borehole Completion: **CASED**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**40**	**6 CEMENT**
0	**40**	**3 VOLCLAY**

Seal Method: **Slurry**

Sealed By: **Driller**

Distance to Property Line (ft.): **N/A**

Distance to Septic Field or other concentrated contamination (ft.): **N/A**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **WELL DRILLED FIRST**

Surface Completion: **Surface Sleeve Installed**

Water Level: **No Data**

Packers: **5 BURLAP,PVC 40',440',680',700',720'**

Type of Pump: **Submersible**

Well Tests: **Jetted** **Yield: 50 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
65	**TRINITY**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **CENTRAL TEXAS DRILLING,INC.**

2520 HWY. 290 WEST
DRIPPING SPRINGS, TX 78620

Driller Name: **AARON GLASS** License Number: **4227**

Comments: **Amended 8/2/05 Ref.# 1855**

Report Amended on by Request #1855

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**TOP SOIL-ROCK**
1	**18**	**CALICHE**
18	**20**	**BLUE LIMESTONE**
20	**270**	**GRAY LIMESTONE**
270	**290**	**GRAY W/TAN LIMESTONE**
290	**340**	**TAN LIMESTONE**
340	**370**	**GRAY LIMESTONE**
370	**390**	**GRAY W/STRIPS OF CLAY**
390	**460**	**GRAY LIMESTONE**
460	**570**	**GRAY/TAN LIMESTONE**
570	**660**	**GRAY LIMESTONE**
660	**695**	**HAMMID CLAY**
695	**710**	**HAMMID CLAY W/RED CLAY**
710	**720**	**GRAY LIMESTONE**
720	**740**	**GRAY/TAN LIMESTONE**
740	**790**	**TAN/RED SANDSTONE**
790	**890**	**RED SANDSTONE**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
5" OD N PVC SDR17 +3 TO 890 .020			

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(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #75848

Owner:	**CHARLES CHRISTAL**	Owner Well #:	**No Data**
Address:	**10510 TENNETA HOUSTON, TX 77099**	Grid #:	**58-49-1**
Well Location:	**11097 FITZHUGH RD. AUSTIN, TX 78737**	Latitude:	**30° 13' 06" N**
		Longitude:	**097° 58' 03" W**
Well County:	**Travis**	Elevation:	**1148 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **12/21/2005** Drilling End Date: **12/22/2005**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8	**0**	**10**
6.75	**10**	**630**

Drilling Method: **Air Rotary**

Borehole Completion: **Open Hole**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**10**	**12 CEMENT**

Seal Method: **SLURRIED & POURED**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **NOT YET INSTALLED**

Surface Completion: **Surface Sleeve Installed**

Water Level: **539 ft.** below land surface on **2005-12-23** Measurement Method: **Unknown**

Packers: **NEOPRENE 13**
NEOPRENE 590

Type of Pump: **Submersible** Pump Depth (ft.): **610**

Well Tests: **Jetted** **Yield: 20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Yes**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **BEE CAVE DRILLING, INC.**

185 ANGELFIRE DR.
DRIPPING SPRINGS, TX 78620

Driller Name: **BOBBY ROBERTS** License Number: **54416**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**TOPSOIL**
1	**12**	**CALICHE**
12	**25**	**TAN SHALE**
25	**65**	**GREY CLAY**
65	**410**	**GREY LIMESTONE**
410	**485**	**GREY & WHITE ROCK**
485	**595**	**GREY LIMESTONE**
595	**630**	**GREY & WHITE ROCK W/B 20 GPM TDS 1000**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.) New/Used Type Setting From/To (ft.)
4.5 NEW PLASTIC 0 - 595
4.5 NEW SCREEN MFG. 595 - 630 .050

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STATE OF TEXAS WELL REPORT for Tracking #92332

Owner:	**Jean Dickerson**	Owner Well #:	**No Data**
Address:	**10707 Spring Valley Austin, TX 78737**	Grid #:	**58-49-2**
Well Location:	**10707 Spring Valley Austin, TX 78737**	Latitude:	**30° 13' 14" N**
		Longitude:	**097° 57' 13" W**
Well County:	**Travis**	Elevation:	**No Data**

Type of Work: **New Well** Proposed Use: **Domestic**

Drilling Start Date: **3/23/2006** Drilling End Date: **3/23/2006**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8	**0**	**20**
6	**20**	**605**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**20**	**5 of Portland**

Seal Method: **Slurry**

Sealed By: **Driller**

Distance to Property Line (ft.): **50**

Distance to Septic Field or other concentrated contamination (ft.): **100**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **Landowner**

Surface Completion: **Surface Sleeve Installed**

Water Level: **No Data**

Packers: **Burlap 460', 455', 20'**

Type of Pump: **No Data**

Well Tests: **Jetted** **Yield: 40-45 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
460-585	**Glenrose**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Apex Drilling, Inc**

PO Box 867
Marble Falls, TX 78654

Driller Name: **Michael G Becker P. G.** License Number: **54516**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**27**	**Tan Limestone**
27	**200**	**Tan & Grey Limestone**
200	**320**	**Tan Limestone**
320	**410**	**Grey Limestone w/ Clay**
410	**460**	**Tan & Grey Limestone**
460	**585**	**Tan Limestone**
585	**595**	**Grey Limestone**
595	**605**	**Grey Clay**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.) New/Used Type Setting From/To (ft.)
4.5" (5" OD) New PVC 2' to 605' SDR17

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P.O. Box 12157
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STATE OF TEXAS WELL REPORT for Tracking #95272

Owner:	**KAREN KINSER**	Owner Well #:	**No Data**
Address:	**10812 KINSER LANE AUSTIN, TX 78736**	Grid #:	**58-49-1**
Well Location:	**10812 KINSER LANE AUSTIN, TX 78736**	Latitude:	**30° 14' 01" N**
		Longitude:	**097° 58' 17" W**
Well County:	**Travis**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **9/7/2006** Drilling End Date: **9/7/2006**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.75	**0**	**50**
6.5	**50**	**870**

Drilling Method: **Air Rotary**

Borehole Completion: **CASED**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**6 CEMENT**
0	**50**	**10 VOLCLAY**

Seal Method: **Slurry**

Sealed By: **Driller**

Distance to Property Line (ft.): **N/A**

Distance to Septic Field or other concentrated contamination (ft.): **N/A**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **WELL DRILLED FIRST**

Surface Completion: **Surface Sleeve Installed**

Water Level: **490.8 ft.** below land surface on **2006-09-09** Measurement Method: **Unknown**

Packers: **5 BURLAP,PVC,RUBBER 50',630',650',670',770'**

Type of Pump: **Submersible**

Well Tests: **Jetted** **Yield: 30-40 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
60	**TRINITY**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **CENTRAL TEXAS DRILLING, INC.**

2520 HWY. 290 WEST
DRIPPING SPRINGS, TX 78620

Driller Name: **AARON GLASS** License Number: **4227**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**2**	**TOP SOIL**
2	**30**	**CALICHE**
30	**35**	**BLUE LIMESTONE**
35	**310**	**GRAY LIMESTONE**
310	**400**	**GRAY/TAN LIMESTONE**
400	**510**	**GRAY LIMESTONE**
510	**550**	**GRAY/TAN LIMESTONE**
550	**580**	**GRAY/TAN LIMESTONE W/BROWN**
580	**630**	**GRAY LIMESTONE**
630	**650**	**HAMMID CLAY**
650	**660**	**HAMMID CLAY W/RED CLAY**
660	**720**	**GRAY/TAN LIMESTONE**
720	**750**	**RED/GRAY LIMESTONE**
750	**770**	**RED LIMESTONE W/BLUE CLAY**
STRIPS		
770	**840**	**RED SAND**
840	**870**	**SAND & GRAVEL**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
5"	**OD**	**N PVC SDR17**	**+3 TO 870**
5"	**OD**	**N PVC SDR17 SLOT**	**730 TO 750 .032**
5"	**OD**	**N PVC SDR17 SLOT**	**790 TO 810 .032**
5"	**OD**	**N PVC SDR17 SLOT**	**830 TO 870 .032**

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STATE OF TEXAS WELL REPORT for Tracking #111519

Owner:	**LYNN BROWN**	Owner Well #:	**No Data**
Address:	**10944 FITZHUGH RD AUSTIN, TX 78736**	Grid #:	**58-49-2**
Well Location:	**10944 FITZHUGH RD AUSTIN, TX 78736**	Latitude:	**30° 13' 40" N**
		Longitude:	**097° 57' 15" W**
Well County:	**Travis**	Elevation:	**1094 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **4/2/2007** Drilling End Date: **4/3/2007**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
10	**0**	**12**
6.75	**12**	**810**

Drilling Method: **Air Rotary**

Borehole Completion: **Open Hole**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**6**	**5**
6	**12**	**4**

Seal Method: **SLURRIED & POURED**

Sealed By: **CESAR RAMOS**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **135**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **STEEL TAPE**

Surface Completion: **Surface Sleeve Installed**

Water Level: **447 ft.** below land surface on **2007-04-04** Measurement Method: **Unknown**

Packers: **NEOPRENE 12**
NEOPRENE 380
NEOPRENE 720
NEOPRENE 725

Type of Pump: **Submersible** Pump Depth (ft.): **740**

Well Tests: **Jetted** **Yield: 20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Yes**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **BEE CAVE DRILLING**

185 ANGELFIRE DR
DRIPPING SPRINGS, TX 78620

Driller Name: **JIM BLAIR** License Number: **54416**

Apprentice Name: **CESAR RAMOS** Apprentice Number: **57534**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**2**	**TOPSOIL**
2	**12**	**CALICHE**
12	**365**	**GRAY LIMESTONE**
365	**370**	**GRAY CLAY**
370	**440**	**GRAY LIMESTONE**
440	**660**	**BROWN ROCK W/B 10 GPM TDS 1610**
660	**715**	**GRAY SHALE**
715	**810**	**GRAY ROCK W/B 20 GPM TDS 1000**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.) New/Used Type Setting From/To (ft.)
4.5 NEW PLASTIC 0-740
4.5 NEW SCREEN MFG. 740-800 .050
4.5 NEW PLASTIC 800-810

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #129190

Owner:	**BILLY & PAT SIMPSON**	Owner Well #:	**No Data**
Address:	**201 SPANISH OAK TRL DRIPPING SPRINGS, TX 78620**	Grid #:	**58-49-1**
Well Location:	**11211 RUTTER LANE AUSTIN, TX 78736**	Latitude:	**30° 13' 20" N**
		Longitude:	**097° 57' 52" W**
Well County:	**Travis**	Elevation:	**1132 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **11/14/2007** Drilling End Date: **11/14/2007**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
10	**0**	**12**
6.75	**12**	**630**

Drilling Method: **Air Rotary**

Borehole Completion: **Open Hole**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**6**	**5**
6	**12**	**6**

Seal Method: **SLURRIED & POURED**

Sealed By: **CESAR RAMOS**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **NOT YET INSTALLED**

Surface Completion: **Surface Sleeve Installed**

Water Level: **512 ft.** below land surface on **2007-11-15** Measurement Method: **Unknown**

Packers: **NEOPRENE 12**
NEOPRENE 555
NEOPRENE 560

Type of Pump: **Submersible** Pump Depth (ft.): **600**

Well Tests: **Jetted** **Yield: 20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Yes**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **BEE CAVE DRILLING INC**

185 ANGELFIRE DR
DRIPPING SPRINGS, TX 78620

Driller Name: **JIM BLAIR** License Number: **54416**

Apprentice Name: **CESAR RAMOS** Apprentice Number: **57534**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**TOPSOIL**
1	**12**	**GRAY ROCK**
12	**510**	**GRAY LIMESTONE**
510	**590**	**BROWN & GRAY ROCK**
590	**630**	**GRAY ROCK W/B 20 GPM TDS 1370**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.) New/Used Type Setting From/To (ft.)
4.5 NEW PLASTIC 0-560
4.5 NEW SCREEN MFG 560-630 .050

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Texas Department of Licensing and Regulation
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(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #134011

Owner:	**Chevron**	Owner Well #:	**SB - 1**
Address:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Grid #:	**58-49-2**
Well Location:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Latitude:	**30° 13' 19" N**
		Longitude:	**097° 57' 21" W**
Well County:	**Travis**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Environmental Soil Boring**

Drilling Start Date: **1/24/2008** Drilling End Date: **1/24/2008**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8	**0**	**20**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Plugged**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**1 Cement**
2	**20**	**9 Bentonite**

Seal Method: **Hand Mixed**

Sealed By: **Vortex Drilling, Inc.**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Alternative Procedure Used**

Water Level: **No Data**

Packers: **N/A**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
N/A		

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Unknown**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **Unknown**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling Inc.**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **John E. Talbot** License Number: **3180**

Apprentice Name: **Martin Casarez** Apprentice Number: **57214**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Concrete fill**
1	**4**	**Black clay**
4	**5**	**Hard limestone**
5	**20**	**Crumbly limestone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
N/A			

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P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #134012

Owner:	**Chevron**	Owner Well #:	**SB - 2**
Address:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Grid #:	**58-49-2**
Well Location:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Latitude:	**30° 13' 19" N**
		Longitude:	**097° 57' 21" W**
Well County:	**Travis**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Environmental Soil Boring**

Drilling Start Date: **1/24/2008** Drilling End Date: **1/24/2008**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8	**0**	**20**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Plugged**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**1 Cement**
2	**20**	**9 Bentonite**

Seal Method: **Hand Mixed**

Sealed By: **Vortex Drilling, Inc.**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Alternative Procedure Used**

Water Level: **No Data**

Packers: **N/A**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
N/A		

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Unknown**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **Unknown**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling Inc.**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **John E. Talbot** License Number: **3180**

Apprentice Name: **Martin Casarez** Apprentice Number: **57214**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Concrete fill**
1	**4**	**Black clay**
4	**5**	**Hard limestone**
5	**20**	**Crumbly limestone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
N/A			

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STATE OF TEXAS WELL REPORT for Tracking #134013

Owner:	**Chevron**	Owner Well #:	**SB - 4**
Address:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Grid #:	**58-49-2**
Well Location:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Latitude:	**30° 13' 19" N**
		Longitude:	**097° 57' 21" W**
Well County:	**Travis**	Elevation:	**No Data**

Type of Work: **New Well** Proposed Use: **Environmental Soil Boring**

Drilling Start Date: **1/24/2008** Drilling End Date: **1/24/2008**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8**	**0**	**5**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Plugged**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**2**	**1 Cement**
	2	**5**	**1.5 Bentonite**

Seal Method: **Hand Mixed**

Sealed By: **Vortex Drilling, Inc.**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Alternative Procedure Used**

Water Level: **No Data**

Packers: **N/A**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

	Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Plug Information:	**N/A**		

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Unknown**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **Unknown**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling Inc.**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **John E. Talbot** License Number: **3180**

Apprentice Name: **Martin Casarez** Apprentice Number: **57214**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Concrete fill**
1	**4**	**Black clay**
4	**5**	**Hard limestone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
N/A			

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(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #134014

Owner:	**Chevron**	Owner Well #:	**SB - 5**
Address:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Grid #:	**58-49-2**
Well Location:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Latitude:	**30° 13' 19" N**
		Longitude:	**097° 57' 21" W**
Well County:	**Travis**	Elevation:	**No Data**

Type of Work: **New Well** Proposed Use: **Environmental Soil Boring**

Drilling Start Date: **1/24/2008** Drilling End Date: **1/24/2008**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8**	**0**	**5**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Plugged**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**2**	**1 Cement**
	2	**5**	**1.5 Bentonite**

Seal Method: **Hand Mixed**

Sealed By: **Vortex Drilling, Inc.**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Alternative Procedure Used**

Water Level: **No Data**

Packers: **N/A**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

	Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Plug Information:	**N/A**		

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Unknown**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **Unknown**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling Inc.**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **John E. Talbot** License Number: **3180**

Apprentice Name: **Martin Casarez** Apprentice Number: **57214**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Concrete fill**
1	**4**	**Black clay**
4	**5**	**Hard limestone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
N/A			

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P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #134015

Owner:	**Chevron**	Owner Well #:	**SB - 6**
Address:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Grid #:	**58-49-2**
Well Location:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Latitude:	**30° 13' 19" N**
		Longitude:	**097° 57' 21" W**
Well County:	**Travis**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Environmental Soil Boring**

Drilling Start Date: **1/24/2008** Drilling End Date: **1/24/2008**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8	**0**	**5**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Plugged**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**1 Cement**
2	**5**	**1.5 Bentonite**

Seal Method: **Hand Mixed**

Sealed By: **Vortex Drilling, Inc.**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Alternative Procedure Used**

Water Level: **No Data**

Packers: **N/A**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
N/A		

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Unknown**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **Unknown**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling Inc.**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **John E. Talbot** License Number: **3180**

Apprentice Name: **Martin Casarez** Apprentice Number: **57214**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Concrete fill**
1	**4**	**Black clay**
4	**5**	**Hard limestone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
N/A			

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P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #134016

Owner:	**Chevron**	Owner Well #:	**SB - 7**
Address:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Grid #:	**58-49-2**
Well Location:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Latitude:	**30° 13' 19" N**
		Longitude:	**097° 57' 21" W**
Well County:	**Travis**	Elevation:	**No Data**

Type of Work: **New Well** Proposed Use: **Environmental Soil Boring**

Drilling Start Date: **1/24/2008** Drilling End Date: **1/24/2008**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8	**0**	**5**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Plugged**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**1 Cement**
2	**5**	**1.5 Bentonite**

Seal Method: **Hand Mixed**

Sealed By: **Vortex Drilling, Inc.**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Alternative Procedure Used**

Water Level: **No Data**

Packers: **N/A**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
N/A		

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Unknown**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **Unknown**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling Inc.**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **John E. Talbot** License Number: **3180**

Apprentice Name: **Martin Casarez** Apprentice Number: **57214**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Concrete fill**
1	**4**	**Black clay**
4	**5**	**Hard limestone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
N/A			

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Texas Department of Licensing and Regulation
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Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #134020

Owner:	**Chevron**	Owner Well #:	**SB-3/TW-1**
Address:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Grid #:	**58-49-2**
Well Location:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Latitude:	**30° 13' 19" N**
		Longitude:	**097° 57' 21" W**
Well County:	**Travis**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **1/24/2008** Drilling End Date: **1/24/2008**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8**	**0**	**15**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Plugged**

Annular Seal Data: **No Data**

Seal Method: **Hand Mixed**

Sealed By: **Vortex Drilling, Inc.**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Alternative Procedure Used**

Water Level: **No Data**

Packers: **N/A**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
All Casing Removed.		
0 - 2 = 1 Concrete		
2 - 15 = 6.5 Bentonite		

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Unknown**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **Unknown**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling Inc.**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **John E. Talbot** License Number: **3180**

Apprentice Name: **Martin Casarez** Apprentice Number: **57214**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Concrete fill**
1	**4**	**Black clay**
4	**5**	**Hard limestone**
5	**15**	**Hard Limestone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.) New/Used Type Setting From/To (ft.)
2 New Schedule 40 PVC .010 15 - 5 Screen
2 New Schedule 40 PVC 5 - 0 Riser
2 New Bottom Cap

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #167864

Owner:	**Chevron**	Owner Well #:	**SB-8 to SB-9**
Address:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Grid #:	**58-49-2**
Well Location:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Latitude:	**30° 13' 19" N**
		Longitude:	**097° 57' 21" W**
Well County:	**Travis**	Elevation:	**No Data**

Type of Work: **New Well** Proposed Use: **Environmental Soil Boring**

Drilling Start Date: **1/22/2009** Drilling End Date: **1/22/2009**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
6	**0**	**10**

Drilling Method: **Bored**

Borehole Completion: **Plugged**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**1 Cement**
2	**10**	**1 Bentonite**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Alternative Procedure Used**

Water Level: **No Data**

Packers: **N/A**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
N/A		

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Unknown**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **Unknown**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling, Inc.**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **James E. Neal** License Number: **4868**

Comments: **SB-8 and SB-9 are identical borings.**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**10**	**Silty clay w/limestone pieces**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
N/A			

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STATE OF TEXAS WELL REPORT for Tracking #167865

Owner:	**Chevron**	Owner Well #:	**SB-5B**
Address:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Grid #:	**58-49-2**
Well Location:	**Highway 290 @ Fitzhugh Road Austin, TX 78736**	Latitude:	**30° 13' 19" N**
		Longitude:	**097° 57' 21" W**
Well County:	**Travis**	Elevation:	**No Data**

Type of Work: **New Well** Proposed Use: **Environmental Soil Boring**

Drilling Start Date: **1/22/2009** Drilling End Date: **1/22/2009**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
6	**0**	**10**

Drilling Method: **Bored**

Borehole Completion: **Plugged**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**1 Cement**
2	**10**	**1 Bentonite**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Alternative Procedure Used**

Water Level: **No Data**

Packers: **N/A**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
N/A		

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Unknown**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **Unknown**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling, Inc.**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **James E. Neal** License Number: **4868**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**10**	**Silty clay w/limestone pieces**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
N/A			

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STATE OF TEXAS WELL REPORT for Tracking #289832

Owner: **Fisher**

Address: **15009 faggerquist rd. del valle, TX 78617**

Well Location: **15009 faggerquist rd. del valle, TX 78617**

Well County: **Travis**

Owner Well #: **No Data**

Grid #: **58-49-1**

Latitude: **30° 14' 01" N**

Longitude: **097° 58' 01" W**

Elevation: **No Data**

****Plugged Within 48 Hours****

****This well has been plugged****

Plugging Report Tracking #136517

Type of Work: **New Well**

Proposed Use: **Closed-Loop Geothermal**

Drilling Start Date: **4/24/2012** Drilling End Date: **4/26/2012**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**4.5**	**0**	**300**

Drilling Method: **Air Rotary**

Borehole Completion: **Filter Packed**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
Filter Pack Intervals:	**0**	**30**	**Gravel**	**3/8**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**30**	**3 bentonite**

Seal Method: **Poured**

Sealed By: **Anthony Sarris1**

Distance to Property Line (ft.): **300**

Distance to Septic Field or other concentrated contamination (ft.): **100**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **owner**

Surface Completion: **Alternative Procedure Used**

Water Level: **No Data** on **2012-04-26**

Measurement Method: **Unknown**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Sarris Geothermal Drilling**

P O box 19452
Austin, TX 78760

Driller Name: **Anthony Sarris** License Number: **58870**

Comments: **4 closed geothermal wells drilled**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**-10**	**black clay**
10	**-300**	**grey shale**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
one inch	**new**	**polyethylene pipe**	**0-300**

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STATE OF TEXAS WELL REPORT for Tracking #290867

Owner:	**Circle K Stores, Inc. #2704683**	Owner Well #:	**B-1**
Address:	**P.O. Box 52085 Phoenix, AZ 85072**	Grid #:	**58-49-2**
Well Location:	**9920 US Hwy 290 W. Austin, TX 78736**	Latitude:	**30° 13' 40" N**
		Longitude:	**097° 56' 32" W**
Well County:	**Travis**	Elevation:	**No Data**

Type of Work: **New Well** Proposed Use: **Environmental Soil Boring**

Drilling Start Date: **6/6/2012** Drilling End Date: **6/6/2012**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
6	**0**	**15**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Plugged**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**1 Cement**
2	**15**	**6.5 Bentonite**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Alternative Procedure Used**

Water Level: **No Data**

Packers: **N/A**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
N/A		

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Unknown**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **Unknown**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling, Inc.**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **James E. Neal** License Number: **4868**

Apprentice Name: **Ralph Bartholomew** Apprentice Number: **59046**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**8"**	**Asphalt,base**
8"	**5**	**Caliche fill**
5	**10**	**Limestone,hard,dry**
10	**15**	**Limestone,hard,@13 wet**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
N/A			

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STATE OF TEXAS WELL REPORT for Tracking #302415

Owner:	**Triple S Petroleum Company**	Owner Well #:	**MW2**
Address:	**4911 East 7th St. Austin, TX 78702**	Grid #:	**58-49-2**
Well Location:	**9920 W. Hyw 290 Austin, TX**	Latitude:	**30° 13' 41" N**
		Longitude:	**097° 56' 31" W**
Well County:	**Travis**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **10/23/2012** Drilling End Date: **10/23/2012**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**6**	**0**	**25**

Drilling Method: **Air Rotary**

Borehole Completion: **20/40 Silica Sand**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**1**	**Concrete**
1	**3**	**Bentonite**

Seal Method: **Gravity**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Alternative Procedure Used**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Unknown**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **Unknown**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Total Support Services**

P.O. Box 81621
Austin, TX 78708

Driller Name: **Brian Kern** License Number: **54611**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Grass adn Top Soil**
1	**25**	**Tan and Gray Limestone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
2	**New**	**PVC**	**Riser 0/5 Sched. 40**
2	**New**	**PVC**	**Screen 5/25 0.010 Slotted**

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STATE OF TEXAS WELL REPORT for Tracking #341367

Owner:	**Robert Hardy / Cert. Homes**	Owner Well #:	**No Data**
Address:	**11501 Antler Bend Rd. Austin, TX 78737**	Grid #:	**58-49-1**
Well Location:	**11501 Antler Bend Rd. Austin, TX 78737**	Latitude:	**30° 13' 10" N**
		Longitude:	**097° 58' 08" W**
Well County:	**Travis**	Elevation:	**No Data**

Type of Work: **New Well** Proposed Use: **Domestic**

Drilling Start Date: **7/22/2013** Drilling End Date: **7/22/2013**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
9	**0**	**50**
6.25	**50**	**910**

Drilling Method: **Air Rotary**

Borehole Completion: **cased; Straight Wall**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
1	**50**	**6cmt 3gel**

Seal Method: **hand poured**

Sealed By: **ADC**

Distance to Property Line (ft.): **55**

Distance to Septic Field or other concentrated contamination (ft.): **110+**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **owner / tape**

Surface Completion: **Surface Sleeve Installed**

Water Level: **490 ft.** below land surface on **2013-07-22** Measurement Method: **Unknown**

Packers: **burlap,plastic,rubber @ 750,730,50**

Type of Pump: **Submersible** Pump Depth (ft.): **740**

Well Tests: **Jetted** **Yield: 15-20 GPM**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
n/a		

Water Quality:

Strata Depth (ft.)	Water Type
750-910	**hosston trinity**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Associated Drilling Inc.**

PO Box 673
Dripping Springs, TX 78620

Driller Name: **James Benoit** License Number: **4064**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**10**	**white chalk**
10	**410**	**gray lime**
410	**430**	**gray limestone**
430		**lost returns**
430	**670**	**med. hard lime**
670	**690**	**soft shale/clay**
690	**750**	**med. hard limestone**
750	**910**	**trinity sands**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
5	**new**	**sdr17 pvc**	**-3 to 830**
5	**new**	**sdr17 pvc (.032) screen**	**830 to 910**

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STATE OF TEXAS WELL REPORT for Tracking #347346

Owner:	**Steve Meyer & Nancy Ebe**	Owner Well #:	**2**
Address:	**932 Hillside North Austin, TX 78736**	Grid #:	**58-49-2**
		Latitude:	**30° 13' 54" N**
Well Location:	**932 Hillside North Austin, TX 78736**	Longitude:	**097° 57' 12" W**
Well County:	**Travis**	Elevation:	**1174 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Irrigation**

Drilling Start Date: **11/11/2013** Drilling End Date: **11/15/2013**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**7.875**	**0**	**960**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**100**	**1hlpg4bnsl6typH**

Seal Method: **Pos. Displacement**

Sealed By: **Driller**

Distance to Property Line (ft.): **30**

Distance to Septic Field or other concentrated contamination (ft.): **200+**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **Measured**

Surface Completion: **Surface Sleeve Installed**

Water Level: **525 ft.** below land surface on **2013-11-13** Measurement Method: **Unknown**

Packers: **6MIL Poly 100'**
6MIL Poly 260'
6MIL Poly 400'
6MIL Poly 500'
6MIL Poly 600'
6MIL Poly / Shale Packer 740'

Type of Pump: **Submersible** Pump Depth (ft.): **840**

Well Tests: **Jetted** **Yield: 60+ GPM**

Water Quality:

Strata Depth (ft.)	Water Type
840'/960'	**Good**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Whisenant & Lyle Water Services**

P.O. Box 525
Dripping Springs, TX 78620

Driller Name: **Martin Lingle** License Number: **54813**

Apprentice Name: **Travis Haffelder**

Comments: **TDS 1450**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Topsoil**
1	**10**	**Brown Limestone**
10	**83**	**Gray Limestone**
83	**300**	**Light Gray Tan Limestone**
300	**365**	**Dark Gray Limestone**
365	**405**	**Light Gray Tan Limestone**
405	**580**	**Brown Limestone**
580	**680**	**Gray Tan Limestone**
680	**700**	**Gray Clay**
700	**760**	**Brown Gray Tan Limestone**
760	**780**	**Brown Limestone**
780	**830**	**Red Sandstone**
830	**880**	**Conglomerate**
880	**910**	**Red Sandstone**
910	**953**	**Conglomerate**
953	**960**	**Black Rock**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
4.5	**New**	**PVC-SDR 17IB**	**+2'/860'**
4.5	**New**	**PVC-17 Slotted .035**	**860'/960'**

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(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #430636

Owner:	**Michael Hatfield**	Owner Well #:	**No Data**
Address:	**11010 Tangleridge Circle Austin, TX 78736**	Grid #:	**58-49-2**
Well Location:	**11010 Tangleridge Circle Austin, TX 78736**	Latitude:	**30° 13' 47.38" N**
		Longitude:	**097° 57' 15.28" W**
Well County:	**Travis**	Elevation:	**1166 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **8/12/2016** Drilling End Date: **8/17/2016**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
10	**0**	**10**
6.75	**10**	**870**

Drilling Method: **Air Rotary**

Borehole Completion: **Perforated or Slotted**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**30**	**Cement 6 Bags/Sacks**
30	**60**	**Bentonite 3 Bags/Sacks**

Seal Method: **Poured**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **524 ft.** below land surface on **2016-08-24** Measurement Method: **Electric Line**

Packers: **Rubber at 50 ft.**
Rubber at 500 ft.
Rubber at 790 ft.
Rubber at 810 ft.

Type of Pump: **Submersible** Pump Depth (ft.): **780**

Well Tests: **Jetted** **Yield: 20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
830 - 870	**Trinity**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Bee Cave Drilling, Inc.**

185 Angel Fire Dr.
Dripping Springs, TX 78620

Driller Name: **Jim Blair** License Number: **54416**

Comments: **No Data**

Report Amended on 8/30/2016 by Request #19654

Report Amended on 8/30/2016 by Request #19657

Report Amended on 8/31/2016 by Request #19658

Report Amended on 8/31/2016 by Request #19663

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**top soil**
1	**60**	**tan lime**
60	**360**	**grey lime**
360	**740**	**grey sandstone 500'-600' WB 10 gpm 1200 tds**
740	**790**	**grey clay**
790	**830**	**grey/tan sandstone**
830	**870**	**grey/tan/coarse sand/gravel 810'-870' WB 20 gpm 800 tds**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**sdr17**	**0**	**810**
4.5	**Perforated or Slotted**	**New Plastic (PVC)**	**sdr17**	**810**	**870**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #474366

Owner:	**CARLOS RODRIGUEZ**	Owner Well #:	**No Data**
Address:	**10806 BAXTER CIRCLE AUSTIN, TX 78736**	Grid #:	**58-49-2**
Well Location:	**10806 BAXTER CIRCLE AUSTIN, TX 78736**	Latitude:	**30° 13' 46.62" N**
		Longitude:	**097° 56' 54.54" W**
Well County:	**Travis**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **3/19/2018** Drilling End Date: **3/19/2018**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
9	**0**	**100**
6.125	**100**	**830**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**100**	**TYPE H CEMENT 13 Bags/Sacks**
0	**100**	**QUICK GEL 2 Bags/Sacks**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **8**

Distance to Septic Field or other concentrated contamination (ft.): **N/A**

Distance to Septic Tank (ft.): **200**

Method of Verification: **TAPE MEASURE/OWNER**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **No Data** on **2018-03-19**

Packers: **Burlap at 100 ft.**
BURLAP & PLASTIC at 120 ft.
BURLAP & PLASTIC at 650 ft.
BURLAP & PLASTIC at 660 ft.
BURLAP & PLASTIC at 710 ft.
BURLAP & PLASTIC at 730 ft.

Type of Pump: **Submersible** Pump Depth (ft.): **700**

Well Tests: **Jetted** **Yield: 40+ GPM**

Water Quality:

Strata Depth (ft.)	Water Type
730 - 830	**LOWER TRINITY**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Centex Pump & Supply, Inc.**

2520 Hwy. 290 West
Dripping Springs, TX 78620

Driller Name: **MARTIN DALE LINGLE** License Number: **54813**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**TOP SOIL**
1	**15**	**BROWN LIMESTONE**
15	**21**	**BLUE LIMESTONE**
21	**147**	**GRAY LIMESTONE**
147	**190**	**GRAY/TAN LIMESTONE**
190	**240**	**GRAY LIMESTONE**
240	**360**	**GRAY/TAN LIMESTONE**
360	**400**	**GRAY LIMESTONE**
400	**550**	**TAN LIMESTONE**
550	**650**	**BROWN LIMESTONE**
650	**710**	**CLAY**
710	**730**	**GRAY LIMESTONE**
730	**750**	**GRAY LIMESTONE W/SOME BROWN**
750	**770**	**RED SAND W/GRAVEL**
770	**790**	**BROWN SAND W/GRAVEL**
790	**810**	**BROWN LIMESTONE**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
5	**Blank**	**New Plastic (PVC)**	**SDR17**	**2**	**730**
5	**Perforated or Slotted**	**New Plastic (PVC)**	**SDR17 0.032**	**730**	**830**

810	**830**	**BROWN LIMESTONE W/RED CLAY**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #655481

Owner:	**Randall Porter**	Owner Well #:	**58491CF**
Address:	**464 Counts Estates DR. Dripping Springs, TX 78620**	Grid #:	**58-49-1**
Well Location:	**11701 Fitzhugh RD. Austin, TX 78736**	Latitude:	**30° 13' 32" N**
		Longitude:	**097° 58' 21" W**
Well County:	**Travis**	Elevation:	**1123 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **12/1/2023** Drilling End Date: **12/1/2023**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
9	**0**	**100**
6.13	**100**	**890**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**100**	**Cement 14 Bags/Sacks**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **50**

Distance to Septic Field or other concentrated contamination (ft.): **N/A**

Distance to Septic Tank (ft.): **N/A**

Method of Verification: **Well drilled first**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **610 ft.** below land surface on **2023-12-01**

Packers: **Burlap at 100 ft.**
Burlap/Plastic at 120 ft.
Burlap/Plastic at 500 ft.
Burlap/Plastic at 600 ft.
Burlap/Plastic at 700 ft.
Burlap/Plastic at 790 ft.

Type of Pump: **Submersible** Pump Depth (ft.): **740**

Well Tests: **Jetted** **Yield: 20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
790 - 890	**Lower Trinity**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Centex Pump & Supply, Inc.**

2520 Hwy. 290 West
Dripping Springs, TX 78620

Driller Name: **Martin Lingle** License Number: **54813**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Top Soil**
1	**12**	**Caliche**
12	**53**	**Gray w/ Clay**
53	**205**	**Gray**
205	**270**	**Gray-Tan**
270	**450**	**Gray**
450	**600**	**Tan**
600	**620**	**Gray**
620	**650**	**Hammid**
650	**670**	**Gray Tan**
670	**700**	**Gray & Red Clay**
700	**720**	**Gray Tan**
720	**790**	**Gray Tan Red**
790	**885**	**Tan Brown Sand Stone W/ Sand**
885	**890**	**Rock Brown Clay**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**0**	**790**
4.5	**Perforated or Slotted**	**New Plastic (PVC)**	**SDR17**	**790**	**890**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

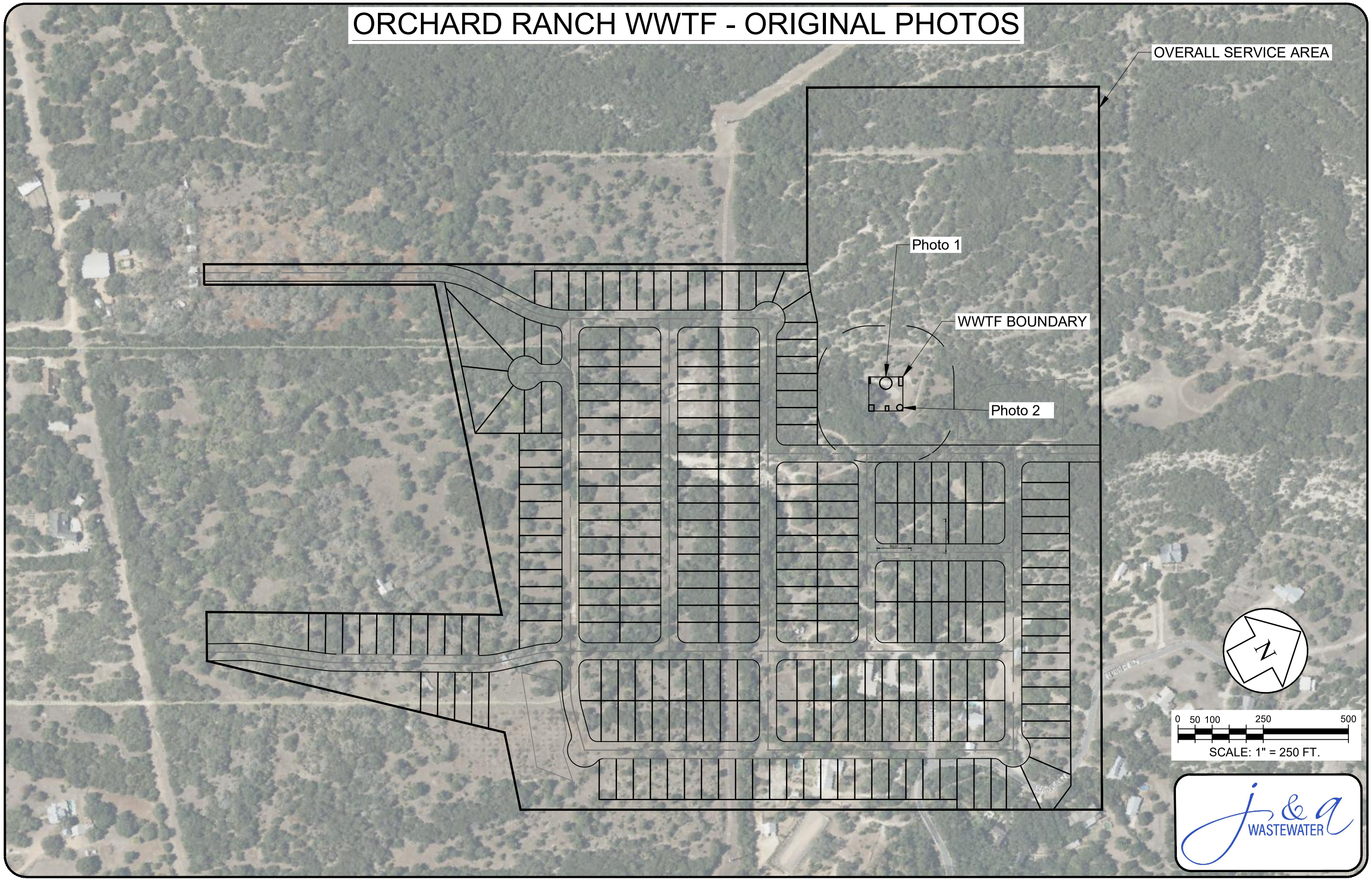
Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

ATTACHMENT -

Original Photographs

ORCHARD RANCH WWTF - ORIGINAL PHOTOS



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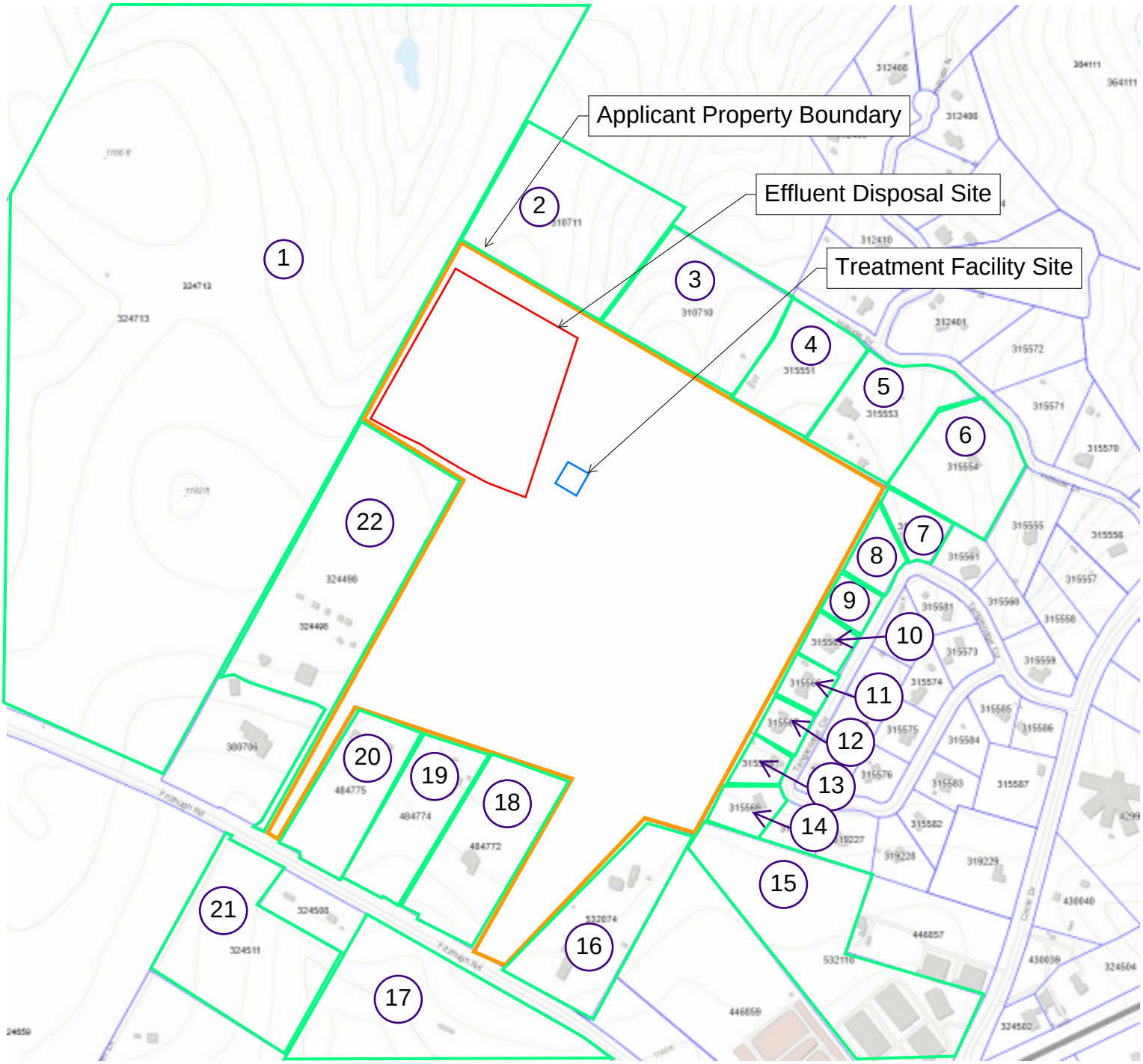
ATTACHMENT -

Affected Landowner

Orchard Ranch WWTF - Affected Landowner Map



N

500 Feet

j & a WASTEWATER

STONERIDGE CAPITAL PARTNERS LTD
1700 STONERIDGE TER
AUSTIN, TX 78746-7747

HILLSIDE ROCKY DOG LLC
10106 HILLSIDE NORTH
AUSTIN, TX 78736-7611

ROCKY K LLC
11017 HILLSIDE DR
AUSTIN, TX 78736-7621

AIKMAN ROBERT S & VICTORIA F AIKMAN
11025 HILLSIDE DR
AUSTIN, TX 78736-7621

MATTINGLY JOHN STEVEN & CAROL
11017 HILLSIDE DR
AUSTIN, TX 78736-7621

GEORGOULIS JAMES G
11011 HILLSIDE DR
AUSTIN, TX 78736-7621

STETZELBERGER BARBARA JO & MAT
11008 TANGLERIDGE CIR
AUSTIN, TX 78736-7600

HATFIELD MICHAEL LEWIS & BREND
11010 TANGLERIDGE CIR
AUSTIN, TX 78736-7600

VARGO ANDREW & ERIN FISHER
11012 TANGLERIDGE CIR
AUSTIN, TX 78736-7600

PACE EUGENE F & IRENE F
11016 TANGLERIDGE CIR
AUSTIN, TX 78736-7600

DEBI J FARLEY FAMILY TRUST
11020 TAGLERIDGE CIR
AUSTIN, TX 78736

BAUM PHILIP J & DIANN L
11024 TANGLERIDGE CIR
AUSTIN, TX 78736-7600

KUREK MICHAEL & CRYSTAL M
11028 TANGLERIDGE CIR
AUSTIN, TX 78769-7600

PEARCE LAWRENCE J & SHARON R
1120 S EUCLID AVE
OAK PARK, IL 60304-2014

CIRCLE DRIVE BIZ PARK LLC
230 KLATTENHOFF LN STE 100
HUTTO, TX 78634-4642

BROWN H LYNN & JAN H
10944 FITZHUGH RD
AUSTIN, TX 78736-7601

FITZHUGH290 HOLDING LLC
421 COUNTRY CLUB RD
FAIRVIEW, TX 75069

SMITH DAVID AUSTIN & LAUREN KIRSTEN
11090 FITZHUGH RD
AUSTIN, TX 78736-7607

PARKER MICHAEL J & KARYN PONDER PARKER
11094 FITZHUGH RD
AUSTIN, TX 78736-7607

POWELL ANTHONY R & DIANE
11098 FITZHUGH RD
AUSTIN, TX 78736-7607

SIMPSON PATRICIA C
11079 FITZHUGH RD
AUSTIN, TX 78736-7602

LONE STAR LAND PARTNERS LLC
3805 WESTRIDGE AVE
FORT WORTH, TX 76116-7407

AFFECTED LAND OWNER LIST

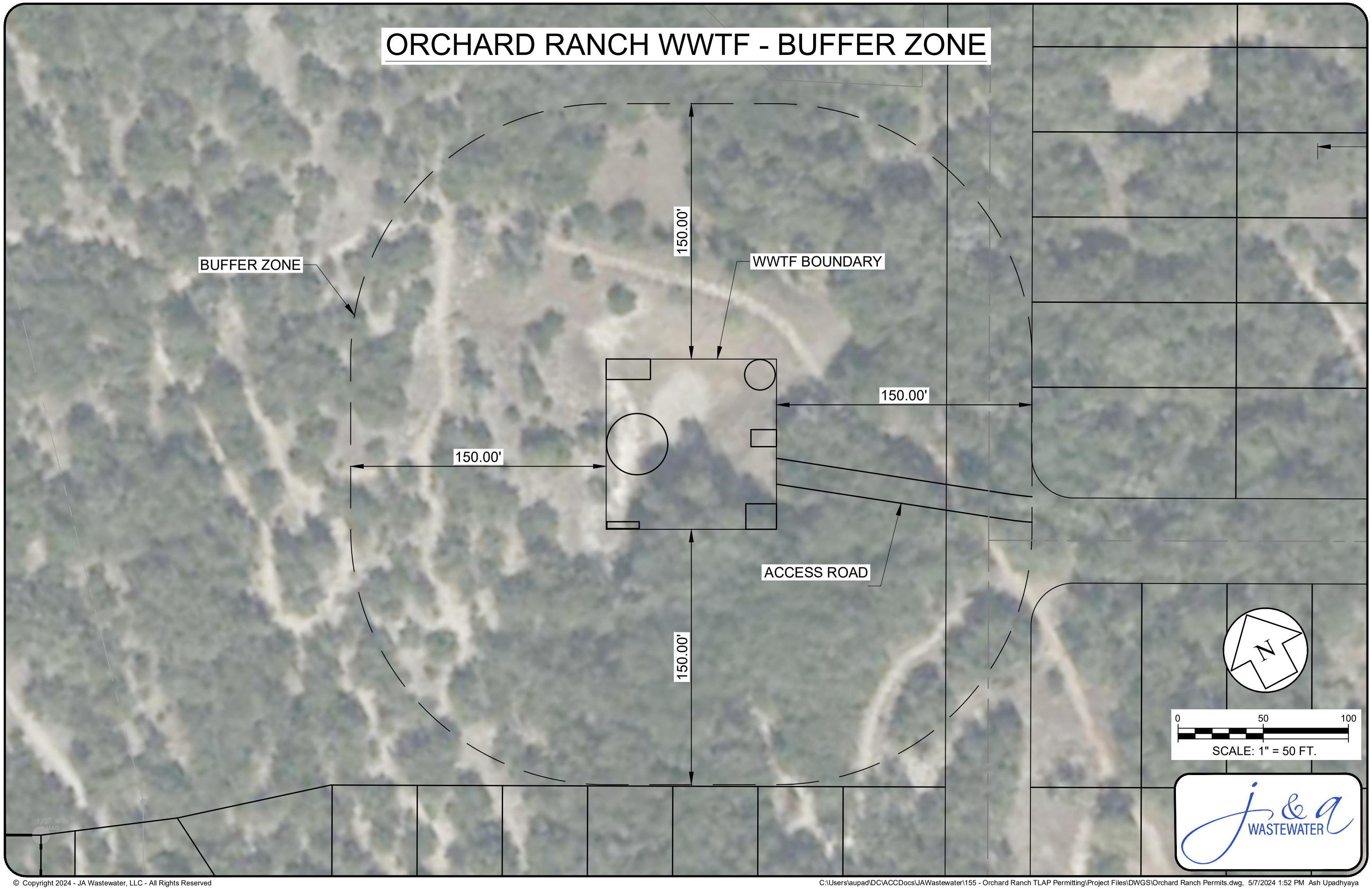
Address Source: Travis Central Appraisal District Map (https://travis.prodigycad.com/maps) On April 11, 2024

Map Label	Property ID Number	Owner Name	Mailing Address
1	324713	STONERIDGE CAPITAL PARTNERS LTD	1700 STONERIDGE TER AUSTIN TX 78746-7747
2	310711	HILLSIDE ROCKY DOG LLC	10106 HILLSIDE NORTH AUSTIN TX 78736-7611
3	310710	ROCKY K LLC	11017 HILLSIDE DR AUSTIN TX 78736-7621
4	315551	AIKMAN ROBERT S & VICTORIA F AIKMAN	11025 HILLSIDE DR AUSTIN TX USA 78736-7621
5	315553	MATTINGLY JOHN STEVEN & CAROL	11017 HILLSIDE DR AUSTIN TX 78736-7621
6	315554	GEORGOULIS JAMES G	11011 HILLSIDE DR AUSTIN TX 78736-7621
7	315562	STETZELBERGER BARBARA JO & MAT	11008 TANGLERIDGE CIR AUSTIN TX 78736-7600
8	315563	HATFIELD MICHAEL LEWIS & BREND	11010 TANGLERIDGE CIR AUSTIN TX 78736-7600
9	315564	VARGO NICHOLAS ANDREW & ERIN ELIZABETH FISHER	11012 TANGLERIDGE CIR AUSTIN TX 78736-7600
10	315565	PACE EUGENE F & IRENE F	11016 TANGLERIDGE CIR AUSTIN TX 78736-7600
11	315566	DEBI J FARLEY FAMILY TRUST	11020 TAGLERIDGE CIR AUSTIN TX 78736
12	315567	BAUM PHILIP J & DIANN L	11024 TANGLERIDGE CIR AUSTIN TX 78736-7600
13	315568	KUREK MICHAEL & CRYSTAL M	11028 TANGLERIDGE CIR AUSTIN TX 78736-7600
14	315569	PEARCE LAWRENCE J & SHARON R	1120 S EUCLID AVE OAK PARK IL 60304-2014
15	532118	CIRCLE DRIVE BIZ PARK LLC	230 KLATTENHOFF LN STE 100 HUTTO TX 78634-4642
16	532074	BROWN H LYNN & JAN H	10944 FITZHUGH RD AUSTIN TX 78736-7601
17	324505	FITZHUGH290 HOLDING LLC	421 COUNTRY CLUB RD FAIRVIEW TX 75069
18	484772	SMITH DAVID AUSTIN & LAUREN KIRSTEN	11090 FITZHUGH RD AUSTIN TX USA 78736-7607
19	484774	PARKER MICHAEL J & KARYN PONDER PARKER	11094 FITZHUGH RD AUSTIN TX 78736-7607
20	484775	POWELL ANTHONY R & DIANE	11098 FITZHUGH RD AUSTIN TX 78736-7607
21	324511	SIMPSON PATRICIA C	11079 FITZHUGH RD AUSTIN TX 78736-7602
22	324498	LONE STAR LAND PARTNERS LLC	3805 WESTRIDGE AVE FORT WORTH TX 76116-7407

ATTACHMENT -

Buffer Zone Map

ORCHARD RANCH WWTF - BUFFER ZONE



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ATTACHMENT -

Public Involvement

Program

Texas Commission on Environmental Quality

Public Involvement Plan Form for Permit and Registration Applications

The Public Involvement Plan is intended to provide applicants and the agency with information about how public outreach will be accomplished for certain types of applications in certain geographical areas of the state. It is intended to apply to new activities; major changes at existing plants, facilities, and processes; and to activities which are likely to have significant interest from the public. This preliminary screening is designed to identify applications that will benefit from an initial assessment of the need for enhanced public outreach.

All applicable sections of this form should be completed and submitted with the permit or registration application. For instructions on how to complete this form, see TCEQ-20960-inst.

Section 1. Preliminary Screening

☒ New Permit or Registration Application

☐ New Activity – modification, registration, amendment, facility, etc. (see instructions)

If neither of the above boxes are checked, completion of the form is not required and does not need to be submitted.

Section 2. Secondary Screening

☒ Requires public notice,

☐ Considered to have significant public interest, **and**

☐ Located within any of the following geographical locations:

- Austin
- Dallas
- Fort Worth
- Houston
- San Antonio
- West Texas
- Texas Panhandle
- Along the Texas/Mexico Border
- Other geographical locations should be decided on a case-by-case basis

If all the above boxes are not checked, a Public Involvement Plan is not necessary. Stop after Section 2 and submit the form.

☒ Public Involvement Plan not applicable to this application. Provide **brief** explanation.

This application is not expected to generate significant public interest.

Section 3. Application Information

Type of Application (check all that apply):

Air ☐ Initial ☐ Federal ☐ Amendment ☐ Standard Permit ☐ Title V

Waste ☐ Municipal Solid Waste ☐ Industrial and Hazardous Waste ☐ Scrap Tire
☐ Radioactive Material Licensing ☐ Underground Injection Control

Water Quality

☐ Texas Pollutant Discharge Elimination System (TPDES)

- ☐ Texas Land Application Permit (TLAP)
- ☐ State Only Concentrated Animal Feeding Operation (CAFO)
- ☐ Water Treatment Plant Residuals Disposal Permit

☐ Class B Biosolids Land Application Permit

☐ Domestic Septage Land Application Registration

Water Rights New Permit

☐ New Appropriation of Water

☐ New or existing reservoir

Amendment to an Existing Water Right

☐ Add a New Appropriation of Water

☐ Add a New or Existing Reservoir

☐ Major Amendment that could affect other water rights or the environment

Section 4. Plain Language Summary

Provide a brief description of planned activities.

Section 5. Community and Demographic Information

Community information can be found using EPA's EJ Screen, U.S. Census Bureau information, or generally available demographic tools.

Information gathered in this section can assist with the determination of whether alternative language notice is necessary. Please provide the following information.

(City)

(County)

(Census Tract)
Please indicate which of these three is the level used for gathering the following information.

☐ City ☐ County ☐ Census Tract

(a) Percent of people over 25 years of age who at least graduated from high school

(b) Per capita income for population near the specified location

(c) Percent of minority population and percent of population by race within the specified location

(d) Percent of Linguistically Isolated Households by language within the specified location

(e) Languages commonly spoken in area by percentage

(f) Community and/or Stakeholder Groups

(g) Historic public interest or involvement

Section 6. Planned Public Outreach Activities

(a) Is this application subject to the public participation requirements of Title 30 Texas Administrative Code (30 TAC) Chapter 39?

☐ Yes ☐ No

(b) If yes, do you intend at this time to provide public outreach other than what is required by rule?

☐ Yes ☐ No

If Yes, please describe.

If you answered "yes" that this application is subject to 30 TAC Chapter 39, answering the remaining questions in Section 6 is not required.

(c) Will you provide notice of this application in alternative languages?

☐ Yes ☐ No

Please refer to Section 5. If more than 5% of the population potentially affected by your application is Limited English Proficient, then you are required to provide notice in the alternative language.

If yes, how will you provide notice in alternative languages?

☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

(d) Is there an opportunity for some type of public meeting, including after notice?

☐ Yes ☐ No

(e) If a public meeting is held, will a translator be provided if requested?

☐ Yes ☐ No

(f) Hard copies of the application will be available at the following (check all that apply):

☐ TCEQ Regional Office ☐ TCEQ Central Office

☐ Public Place (specify)

Section 7. Voluntary Submittal

For applicants voluntarily providing this Public Involvement Plan, who are not subject to formal public participation requirements.

Will you provide notice of this application, including notice in alternative languages?

☐ Yes ☐ No

What types of notice will be provided?

☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.0

For any questions about this form, please contact the Domestic Wastewater Permitting Team at 512-239-4671.

The following information is required for all renewal, new, and amendment applications.

Section 1. Permitted or Proposed Flows (Instructions Page 43)

A. Existing/Interim I Phase

Design Flow (MGD): NA

2-Hr Peak Flow (MGD): NA

Estimated construction start date: NA

Estimated waste disposal start date: NA

B. Interim II Phase

Design Flow (MGD): NA

2-Hr Peak Flow (MGD): NA

Estimated construction start date: NA

Estimated waste disposal start date: NA

C. Final Phase

Design Flow (MGD): 0.0505

2-Hr Peak Flow (MGD): 0.202

Estimated construction start date: Oct 2024

Estimated waste disposal start date: Jan 2025

D. Current Operating Phase

Provide the startup date of the facility: NA

Section 2. Treatment Process (Instructions Page 43)

A. Current Operating Phase

Provide a detailed description of the treatment process. **Include the type of treatment plant, mode of operation, and all treatment units.** Start with the plant's head works and

finish with the point of discharge. Include all sludge processing and drying units. **If more than one phase exists or is proposed, a description of *each phase* must be provided**.

Please see Treatment Process Description and Unit Sizing

B. Treatment Units

In Table 1.0(1), provide the treatment unit type, the number of units, and dimensions (length, width, depth) **of each treatment unit, accounting for *all* phases of operation.**

Table 1.0(1) - Treatment Units

Treatment Unit Type	Number of Units	Dimensions (L x W x D)
Please see Treatment Process Description and Unit Sizing		

C. Process Flow Diagram

Provide flow diagrams for the existing facilities and **each** proposed phase of construction.

Attachment: Process Flow Diagram

Section 3. Site Information and Drawing (Instructions Page 44)

Provide the TPDES discharge outfall latitude and longitude. Enter N/A if not applicable.

- Latitude: Click to enter text.
- Longitude: Click to enter text.

Provide the TLAP disposal site latitude and longitude. Enter N/A if not applicable.

- Latitude: Click to enter text.
- Longitude: Click to enter text.

Provide a site drawing for the facility that shows the following:

- The boundaries of the treatment facility;
- The boundaries of the area served by the treatment facility;
- If land disposal of effluent, the boundaries of the disposal site and all storage/holding ponds; and
- If sludge disposal is authorized in the permit, the boundaries of the land application or

disposal site.

Attachment: Site Drawing

Provide the name **and** a description of the area served by the treatment facility.

Orchard Ranch WWTF will serve a new development of multi-family apartments that will generate 50,500-gallons per day of domestic strength wastewater at full-buildout.

Collection System Information **for wastewater TPDES permits only**: Provide information for each **uniquely owned** collection system, existing and new, served by this facility, including satellite collection systems. **Please see the instructions for a detailed explanation and examples.**

Collection System Information

Collection System Name	Owner Name	Owner Type	Population Served
		Choose an item.	
		Choose an item.	
		Choose an item.	
		Choose an item.	

Section 4. Unbuilt Phases (Instructions Page 45)

Is the application for a renewal of a permit that contains an unbuilt phase or phases?

☐ Yes ☒ No

If yes, does the existing permit contain a phase that has not been constructed **within five years** of being authorized by the TCEQ?

☐ Yes ☐ No

If yes, provide a detailed discussion regarding the continued need for the unbuilt phase. **Failure to provide sufficient justification may result in the Executive Director recommending denial of the unbuilt phase or phases**.

Click to enter text.

Section 5. Closure Plans (Instructions Page 45)

Have any treatment units been taken out of service permanently, or will any units be taken out of service in the next five years?

☐ Yes ☒ No

If yes, was a closure plan submitted to the TCEQ?

☐ Yes ☐ No

If yes, provide a brief description of the closure and the date of plan approval.

Click to enter text.

Section 6. Permit Specific Requirements (Instructions Page 45)

For applicants with an existing permit, check the Other Requirements or Special Provisions of the permit.

A. Summary transmittal

Have plans and specifications been approved for the existing facilities and each proposed phase?

☐ Yes ☒ No

If yes, provide the date(s) of approval for each phase: Click to enter text.

Provide information, including dates, on any actions taken to meet a *requirement or provision* pertaining to the submission of a summary transmittal letter. **Provide a copy of an approval letter from the TCEQ, if applicable**.

Click to enter text.

B. Buffer zones

Have the buffer zone requirements been met?

☒ Yes ☐ No

Provide information below, including dates, on any actions taken to meet the conditions of the buffer zone. If available, provide any new documentation relevant to maintaining the buffer zones.

Buffer zone will be met by ownership.

C. Other actions required by the current permit

Does the *Other Requirements* or *Special Provisions* section in the existing permit require submission of any other information or other required actions? Examples include Notification of Completion, progress reports, soil monitoring data, etc.

☐ Yes ☒ No

If yes, provide information below on the status of any actions taken to meet the conditions of an *Other Requirement* or *Special Provision*.

Click to enter text.

D. Grit and grease treatment

1. Acceptance of grit and grease waste

Does the facility have a grit and/or grease processing facility onsite that treats and decants or accepts transported loads of grit and grease waste that are discharged directly to the wastewater treatment plant prior to any treatment?

☐ Yes ☒ No

If No, stop here and continue with Subsection E. Stormwater Management.

2. Grit and grease processing

Describe below how the grit and grease waste is treated at the facility. In your description, include how and where the grit and grease is introduced to the treatment works and how it is separated or processed. Provide a flow diagram showing how grit and grease is processed at the facility.

Click to enter text.

3. Grit disposal

Does the facility have a Municipal Solid Waste (MSW) registration or permit for grit disposal?

☐ Yes ☐ No

If No, contact the TCEQ Municipal Solid Waste team at 512-239-2335. Note: A registration or permit is required for grit disposal. Grit shall not be combined with treatment plant sludge. See the instruction booklet for additional information on grit disposal requirements and restrictions.

Describe the method of grit disposal.

Click to enter text.

4. *Grease and decanted liquid disposal*

Note: A registration or permit is required for grease disposal. Grease shall not be combined with treatment plant sludge. For more information, contact the TCEQ Municipal Solid Waste team at 512-239-2335.

Describe how the decant and grease are treated and disposed of after grit separation.

Click to enter text.

E. Stormwater management

1. *Applicability*

Does the facility have a design flow of 1.0 MGD or greater in any phase?

☐ Yes ☒ No

Does the facility have an approved pretreatment program, under 40 CFR Part 403?

☐ Yes ☒ No

If no to both of the above, then skip to Subsection F, Other Wastes Received.

2. *MSGP coverage*

Is the stormwater runoff from the WWTP and dedicated lands for sewage disposal currently permitted under the TPDES Multi-Sector General Permit (MSGP), TXR050000?

☐ Yes ☐ No

If yes, please provide MSGP Authorization Number and skip to Subsection F, Other Wastes Received:

TXR05 Click to enter text. or TXRNE Click to enter text.

If no, do you intend to seek coverage under TXR050000?

☐ Yes ☐ No

3. *Conditional exclusion*

Alternatively, do you intend to apply for a conditional exclusion from permitting based TXR050000 (Multi Sector General Permit) Part II B.2 or TXR050000 (Multi Sector General Permit) Part V, Sector T 3(b)?

☐ Yes ☐ No

If yes, please explain below then proceed to Subsection F, Other Wastes Received:

Click to enter text.

4. ***Existing coverage in individual permit***

Is your stormwater discharge currently permitted through this individual TPDES or TLAP permit?

☐ Yes ☐ No

If yes, provide a description of stormwater runoff management practices at the site that are authorized in the wastewater permit then skip to Subsection F, Other Wastes Received.

Click to enter text.

5. ***Zero stormwater discharge***

Do you intend to have no discharge of stormwater via use of evaporation or other means?

☐ Yes ☐ No

If yes, explain below then skip to Subsection F. Other Wastes Received.

Click to enter text.

Note: If there is a potential to discharge any stormwater to surface water in the state as the result of any storm event, then permit coverage is required under the MSGP or an individual discharge permit. This requirement applies to all areas of facilities with treatment plants or systems that treat, store, recycle, or reclaim domestic sewage, wastewater or sewage sludge (including dedicated lands for sewage sludge disposal located within the onsite property boundaries) that meet the applicability criteria of above. You have the option of obtaining coverage under the MSGP for direct discharges, (recommended), or obtaining coverage under this individual permit.

6. ***Request for coverage in individual permit***

Are you requesting coverage of stormwater discharges associated with your treatment plant under this individual permit?

☐ Yes ☐ No

If yes, provide a description of stormwater runoff management practices at the site for which you are requesting authorization in this individual wastewater permit and describe whether you intend to comingle this discharge with your treated effluent or discharge it via a separate dedicated stormwater outfall. Please also indicate if you

intend to divert stormwater to the treatment plant headworks and indirectly discharge it to water in the state.

Click to enter text.

Note: Direct stormwater discharges to waters in the state authorized through this individual permit will require the development and implementation of a stormwater pollution prevention plan (SWPPP) and will be subject to additional monitoring and reporting requirements. Indirect discharges of stormwater via headworks recycling will require compliance with all individual permit requirements including 2-hour peak flow limitations. All stormwater discharge authorization requests will require additional information during the technical review of your application.

F. Discharges to the Lake Houston Watershed

Does the facility discharge in the Lake Houston watershed?

☐ Yes ☒ No

If yes, attach a Sewage Sludge Solids Management Plan. See Example 5 in the instructions.
Click to enter text.

G. Other wastes received including sludge from other WWTPs and septic waste

1. Acceptance of sludge from other WWTPs

Does or will the facility accept sludge from other treatment plants at the facility site?

☐ Yes ☒ No

If yes, attach sewage sludge solids management plan. See Example 5 of instructions.

In addition, provide the date the plant started or is anticipated to start accepting sludge, an estimate of monthly sludge acceptance (gallons or millions of gallons), an estimate of the BOD_5 concentration of the sludge, and the design BOD_5 concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

Click to enter text.

Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.

2. Acceptance of septic waste

Is the facility accepting or will it accept septic waste?

☐ Yes ☒ No

If yes, does the facility have a Type V processing unit?

☐ Yes ☐ No

If yes, does the unit have a Municipal Solid Waste permit?

☐ Yes ☐ No

If yes to any of the above, provide the date the plant started or is anticipated to start accepting septic waste, an estimate of monthly septic waste acceptance (gallons or millions of gallons), an estimate of the BOD_5 concentration of the septic waste, and the design BOD_5 concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

Click to enter text.

Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.

3. ***Acceptance of other wastes (not including septic, grease, grit, or RCRA, CERCLA or as discharged by IUs listed in Worksheet 6)***

Is or will the facility accept wastes that are not domestic in nature excluding the categories listed above?

☐ Yes ☒ No

If yes, provide the date that the plant started accepting the waste, an estimate how much waste is accepted on a monthly basis (gallons or millions of gallons), a description of the entities generating the waste, and any distinguishing chemical or other physical characteristic of the waste. Also note if this information has or has not changed since the last permit action.

Click to enter text.

Section 7. Pollutant Analysis of Treated Effluent (Instructions Page 50)

Is the facility in operation?

☐ Yes ☒ No

If no, this section is not applicable. Proceed to Section 8.

If yes, provide effluent analysis data for the listed pollutants. ***Wastewater treatment facilities*** complete Table 1.0(2). **W*ater treatment facilities*** discharging filter backwash water, complete Table 1.0(3). Provide copies of the laboratory results sheets. **These tables are not applicable for a minor amendment without renewal.** See the instructions for guidance.

Note: The sample date must be within 1 year of application submission.

Table1.0(2) – Pollutant Analysis for Wastewater Treatment Facilities

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
$CBOD_5$, mg/l					
Total Suspended Solids, mg/l					
Ammonia Nitrogen, mg/l					
Nitrate Nitrogen, mg/l					
Total Kjeldahl Nitrogen, mg/l					
Sulfate, mg/l					
Chloride, mg/l					
Total Phosphorus, mg/l					
pH, standard units					
Dissolved Oxygen*, mg/l					
Chlorine Residual, mg/l					
E.coli (CFU/100ml) freshwater					
Entercocci (CFU/100ml) saltwater					
Total Dissolved Solids, mg/l					
Electrical Conductivity, µmohs/cm, †					
Oil & Grease, mg/l					
Alkalinity ($CaCO_3$)*, mg/l					

*TPDES permits only
†TLAP permits only

Table1.0(3) – Pollutant Analysis for Water Treatment Facilities

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
Total Suspended Solids, mg/l					
Total Dissolved Solids, mg/l					
pH, standard units					
Fluoride, mg/l					
Aluminum, mg/l					
Alkalinity ($CaCO_3$), mg/l					

Section 8. Facility Operator (Instructions Page 50)

Facility Operator Name: William Abshire

Facility Operator's License Classification and Level: Class A

Facility Operator's License Number: WW0014404

Section 9. Sludge and Biosolids Management and Disposal (Instructions Page 51)

A. WWTP's Biosolids Management Facility Type

Check all that apply. See instructions for guidance

- ☐ Design flow>= 1 MGD
- ☐ Serves >= 10,000 people
- ☐ Class I Sludge Management Facility (per 40 CFR § 503.9)
- ☐ Biosolids generator
- ☐ Biosolids end user – land application (onsite)
- ☐ Biosolids end user – surface disposal (onsite)
- ☐ Biosolids end user – incinerator (onsite)

B. WWTP's Biosolids Treatment Process

Check all that apply. See instructions for guidance.

- ☐ Aerobic Digestion
- ☐ Air Drying (or sludge drying beds)
- ☐ Lower Temperature Composting
- ☐ Lime Stabilization
- ☐ Higher Temperature Composting
- ☐ Heat Drying
- ☐ Thermophilic Aerobic Digestion
- ☐ Beta Ray Irradiation
- ☐ Gamma Ray Irradiation
- ☐ Pasteurization
- ☐ Preliminary Operation (e.g. grinding, de-gritting, blending)
- ☐ Thickening (e.g. gravity thickening, centrifugation, filter press, vacuum filter)
- ☐ Sludge Lagoon
- ☐ Temporary Storage (< 2 years)
- ☐ Long Term Storage (>= 2 years)
- ☐ Methane or Biogas Recovery
- ☐ Other Treatment Process: Click to enter text.

C. Biosolids Management

Provide information on the *intended* biosolids management practice. Do not enter every management practice that you want authorized in the permit, as the permit will authorize

all biosolids management practices listed in the instructions. Rather indicate the management practice the facility plans to use.

Biosolids Management

Management Practice	Handler or Preparer Type	Bulk or Bag Container	Amount (dry metric tons)	Pathogen Reduction Options	Vector Attraction Reduction Option
Choose an item.	Choose an item.	Choose an item.		Choose an item.	Choose an item.
Choose an item.	Choose an item.	Choose an item.		Choose an item.	Choose an item.
Choose an item.	Choose an item.	Choose an item.		Choose an item.	Choose an item.

If "Other" is selected for Management Practice, please explain (e.g. monofill or transport to another WWTP): Monofill- transported to processing facility for disposal

D. Disposal site

Disposal site name: SouthWaste Disposal

TCEQ permit or registration number: MSW 2384

County where disposal site is located: Travis

E. Transportation method

Method of transportation (truck, train, pipe, other): Truck

Name of the hauler: Wastewater Transport Services, LLC

Hauler registration number: 24343

Sludge is transported as a:

Liquid ☐ semi-liquid ☒ semi-solid ☐ solid ☐

Section 10. Permit Authorization for Sewage Sludge Disposal (Instructions Page 53)

A. Beneficial use authorization

Does the existing permit include authorization for land application of sewage sludge for beneficial use?

☐ Yes ☒ No

If yes, are you requesting to continue this authorization to land apply sewage sludge for beneficial use?

☐ Yes ☐ No

If yes, is the completed **Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451)** attached to this permit application (see the instructions for details)?

☐ Yes ☐ No

B. Sludge processing authorization

Does the existing permit include authorization for any of the following sludge processing, storage or disposal options?

Sludge Composting	☐ Yes	☒ No
Marketing and Distribution of sludge	☐ Yes	☒ No
Sludge Surface Disposal or Sludge Monofill	☐ Yes	☒ No
Temporary storage in sludge lagoons	☐ Yes	☒ No

If yes to any of the above sludge options and the applicant is requesting to continue this authorization, is the completed **Domestic Wastewater Permit Application: Sewage Sludge Technical Report (TCEQ Form No. 10056)** attached to this permit application?

☐ Yes ☒ No

Section 11. Sewage Sludge Lagoons (Instructions Page 53)

Does this facility include sewage sludge lagoons?

☐ Yes ☒ No

If yes, complete the remainder of this section. If no, proceed to Section 12.

A. Location information

The following maps are required to be submitted as part of the application. For each map, provide the Attachment Number.

- Original General Highway (County) Map:

  Attachment: Click to enter text.
- USDA Natural Resources Conservation Service Soil Map:

  Attachment: Click to enter text.
- Federal Emergency Management Map:

  Attachment: Click to enter text.
- Site map:

  Attachment: Click to enter text.

Discuss in a description if any of the following exist within the lagoon area. Check all that apply.

☐ Overlap a designated 100-year frequency flood plain

☐ Soils with flooding classification

☐ Overlap an unstable area

☐ Wetlands

☐ Located less than 60 meters from a fault

☐ None of the above

Attachment: Click to enter text.

If a portion of the lagoon(s) is located within the 100-year frequency flood plain, provide the protective measures to be utilized including type and size of protective structures:

Click to enter text.

B. Temporary storage information

Provide the results for the pollutant screening of sludge lagoons. These results are in addition to pollutant results in *Section 7 of Technical Report 1.0.*

Nitrate Nitrogen, mg/kg: Click to enter text.

Total Kjeldahl Nitrogen, mg/kg: Click to enter text.

Total Nitrogen (=nitrate nitrogen + TKN), mg/kg: Click to enter text.

Phosphorus, mg/kg: Click to enter text.

Potassium, mg/kg: Click to enter text.

pH, standard units: Click to enter text.

Ammonia Nitrogen mg/kg: Click to enter text.

Arsenic: Click to enter text.

Cadmium: Click to enter text.

Chromium: Click to enter text.

Copper: Click to enter text.

Lead: Click to enter text.

Mercury: Click to enter text.

Molybdenum: Click to enter text.

Nickel: Click to enter text.

Selenium: Click to enter text.

Zinc: Click to enter text.

Total PCBs: Click to enter text.

Provide the following information:

Volume and frequency of sludge to the lagoon(s): Click to enter text.

Total dry tons stored in the lagoons(s) per 365-day period: Click to enter text.

Total dry tons stored in the lagoons(s) over the life of the unit: Click to enter text.

C. Liner information

Does the active/proposed sludge lagoon(s) have a liner with a maximum hydraulic conductivity of $1x10^{-7}$ cm/sec?

☐ Yes ☐ No

If yes, describe the liner below. Please note that a liner is required.

Click to enter text.

D. Site development plan

Provide a detailed description of the methods used to deposit sludge in the lagoon(s):

Click to enter text.

Attach the following documents to the application.

- Plan view and cross-section of the sludge lagoon(s)

  Attachment: Click to enter text.
- Copy of the closure plan

  Attachment: Click to enter text.
- Copy of deed recordation for the site

  Attachment: Click to enter text.
- Size of the sludge lagoon(s) in surface acres and capacity in cubic feet and gallons

  Attachment: Click to enter text.
- Description of the method of controlling infiltration of groundwater and surface water from entering the site

  Attachment: Click to enter text.
- Procedures to prevent the occurrence of nuisance conditions

  Attachment: Click to enter text.

E. Groundwater monitoring

Is groundwater monitoring currently conducted at this site, or are any wells available for groundwater monitoring, or are groundwater monitoring data otherwise available for the sludge lagoon(s)?

☐ Yes ☐ No

If groundwater monitoring data are available, provide a copy. Provide a profile of soil types encountered down to the groundwater table and the depth to the shallowest groundwater as a separate attachment.

Attachment: Click to enter text.

Section 12. Authorizations/Compliance/Enforcement (Instructions Page 55)

A. Additional authorizations

Does the permittee have additional authorizations for this facility, such as reuse authorization, sludge permit, etc?

☐ Yes ☒ No

If yes, provide the TCEQ authorization number and description of the authorization:

Click to enter text.

B. Permittee enforcement status

Is the permittee currently under enforcement for this facility?

☐ Yes ☒ No

Is the permittee required to meet an implementation schedule for compliance or enforcement?

☐ Yes ☒ No

If yes to either question, provide a brief summary of the enforcement, the implementation schedule, and the current status:

Click to enter text.

Section 13. RCRA/CERCLA Wastes (Instructions Page 55)

A. RCRA hazardous wastes

Has the facility received in the past three years, does it currently receive, or will it receive RCRA hazardous waste?

☐ Yes ☒ No

B. Remediation activity wastewater

Has the facility received in the past three years, does it currently receive, or will it receive CERCLA wastewater, RCRA remediation/corrective action wastewater or other remediation activity wastewater?

☐ Yes ☒ No

C. Details about wastes received

If yes to either Subsection A or B above, provide detailed information concerning these wastes with the application.

Attachment: Click to enter text.

Section 14. Laboratory Accreditation (Instructions Page 56)

All laboratory tests performed must meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*, which includes the following general exemptions from National Environmental Laboratory Accreditation Program (NELAP) certification requirements:

- The laboratory is an in-house laboratory and is:
  - periodically inspected by the TCEQ; or
  - located in another state and is accredited or inspected by that state; or
  - performing work for another company with a unit located in the same site; or
  - performing pro bono work for a governmental agency or charitable organization.
- The laboratory is accredited under federal law.
- The data are needed for emergency-response activities, and a laboratory accredited under the Texas Laboratory Accreditation Program is not available.
- The laboratory supplies data for which the TCEQ does not offer accreditation.

The applicant should review 30 TAC Chapter 25 for specific requirements.

The following certification statement shall be signed and submitted with every application. See the Signature Page section in the Instructions, for a list of designated representatives who may sign the certification.

CERTIFICATION:

I certify that all laboratory tests submitted with this application meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification.*

Printed Name: Adam Boenig

Title: Co-President

Signature: _____

Date: _____

DOMESTIC WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.1

The following information is required for new and amendment major applications.

Section 1. Justification for Permit (Instructions Page 57)

A. Justification of permit need

Provide a detailed discussion regarding the need for any phase(s) not currently permitted. Failure to provide sufficient justification may result in the Executive Director recommending denial of the proposed phase(s) or permit.

Orchard Ranch WWTF will serve a new community of approx. 265 multi-family units (i.e. 190 gpd/unit) generating approximately 50,500-gallons per day of wastewater. In terms of connecting to the nearest WWTF, it is not economically feasible to convey wastewater to a nearby facility (Hays Co WCID No.1 WWTF which is 0.75 linear miles away. We don't own the easements for the lines and due to geography of the site, a lift station would be required. A site drawing of the new development has been included with this application.

B. Regionalization of facilities

For additional guidance, please review TCEQ's Regionalization Policy for Wastewater Treatment[1].

Provide the following information concerning the potential for regionalization of domestic wastewater treatment facilities:

1. *Municipally incorporated areas*

If the applicant is a city, then Item 1 is not applicable. Proceed to Item 2 Utility CCN areas.

Is any portion of the proposed service area located in an incorporated city?

☐ Yes ☒ No ☐ Not Applicable

If yes, within the city limits of: Click to enter text.

If yes, attach correspondence from the city.

Attachment: Click to enter text.

If consent to provide service is available from the city, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the city versus the cost of the proposed facility or expansion attached.

Attachment: Click to enter text.

2. *Utility CCN areas*

Is any portion of the proposed service area located inside another utility's CCN area?

☐ Yes ☒ No

[1] https://www.tceq.texas.gov/permitting/wastewater/tceq-regionalization-for-wastewater

If yes, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the CCN facilities versus the cost of the proposed facility or expansion.

Attachment: Click to enter text.

3. Nearby WWTPs or collection systems

Are there any domestic permitted wastewater treatment facilities or collection systems located within a three-mile radius of the proposed facility?

☒ Yes ☐ No

If yes, attach a list of these facilities and collection systems that includes each permittee's name and permit number, and an area map showing the location of these facilities and collection systems.

Attachment: Nearby WWTP Map

If yes, attach proof of mailing a request for service to each facility and collection system, the letters requesting service, and correspondence from each facility and collection system.

Attachment: Nearby WWTP Letter

If the facility or collection system agrees to provide service, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the facility or collection system versus the cost of the proposed facility or expansion.

Attachment: Click to enter text.

Section 2. Proposed Organic Loading (Instructions Page 59)

Is this facility in operation?

☐ Yes ☒ No

If no, proceed to Item B, Proposed Organic Loading.

If yes, provide organic loading information in Item A, Current Organic Loading

A. Current organic loading

Facility Design Flow (flow being requested in application): Click to enter text.

Average Influent Organic Strength or BOD_5 Concentration in mg/l: Click to enter text.

Average Influent Loading (lbs/day = total average flow X average BOD_5 conc. X 8.34): Click to enter text.

Provide the source of the average organic strength or BOD_5 concentration.

Click to enter text.

B. Proposed organic loading

This table must be completed if this application is for a facility that is not in operation or if this application is to request an increased flow that will impact organic loading.

Table 1.1(1) – Design Organic Loading

Source	Total Average Flow (MGD)	Influent BOD5 Concentration (mg/l)
Municipality		
Subdivision	0.0505	350
Trailer park – transient		
Mobile home park		
School with cafeteria and showers		
School with cafeteria, no showers		
Recreational park, overnight use		
Recreational park, day use		
Office building or factory		
Motel		
Restaurant		
Hospital		
Nursing home		
Other		
TOTAL FLOW from all sources	0.0505	
AVERAGE BOD_5 from all sources		350

Section 3. Proposed Effluent Quality and Disinfection (Instructions Page 59)

A. Existing/Interim I Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: NA

Total Suspended Solids, mg/l: NA

Ammonia Nitrogen, mg/l: NA

Total Phosphorus, mg/l: NA

Dissolved Oxygen, mg/l: NA

Other: NA

B. Interim II Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: NA

Total Suspended Solids, mg/l: NA

Ammonia Nitrogen, mg/l: NA

Total Phosphorus, mg/l: NA

Dissolved Oxygen, mg/l: NA

Other: NA

C. Final Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: 20

Total Suspended Solids, mg/l: 20

Ammonia Nitrogen, mg/l: NA

Total Phosphorus, mg/l: NA

Dissolved Oxygen, mg/l: NA

Other: NA

D. Disinfection Method

Identify the proposed method of disinfection.

☒ Chlorine: 1-4 mg/l after 20 minutes detention time at peak flow

Dechlorination process: NA

☒ Ultraviolet Light: 10 seconds contact time at peak flow

☐ Other: NA

Section 4. Design Calculations (Instructions Page 59)

Attach design calculations and plant features for each proposed phase. Example 4 of the instructions includes sample design calculations and plant features.

Attachment: Design Calculation

Section 5. Facility Site (Instructions Page 60)

A. 100-year floodplain

Will the proposed facilities be located above the 100-year frequency flood level?

☒ Yes ☐ No

If no, describe measures used to protect the facility during a flood event. Include a site map showing the location of the treatment plant within the 100-year frequency flood level. If applicable, provide the size and types of protective structures.

Click to enter text.

FEMA Firmette Panel – 4843C0555J

For a new or expansion of a facility, will a wetland or part of a wetland be filled?

☐ Yes ☒ No

If yes, has the applicant applied for a US Corps of Engineers 404 Dredge and Fill Permit?

☐ Yes ☒ No

If yes, provide the permit number: Click to enter text.

If no, provide the approximate date you anticipate submitting your application to the Corps: Click to enter text.

B. Wind rose

Attach a wind rose: Wind Rose

Section 6. Permit Authorization for Sewage Sludge Disposal (Instructions Page 60)

A. Beneficial use authorization

Are you requesting to include authorization to land apply sewage sludge for beneficial use on property located adjacent to the wastewater treatment facility under the wastewater permit?

☐ Yes ☒ No

If yes, attach the completed **Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451)**: Click to enter text.

B. Sludge processing authorization

Identify the sludge processing, storage or disposal options that will be conducted at the wastewater treatment facility:

☐ Sludge Composting

☐ Marketing and Distribution of sludge

☐ Sludge Surface Disposal or Sludge Monofill

If any of the above, sludge options are selected, attach the completed **Domestic Wastewater Permit Application: Sewage Sludge Technical Report (TCEQ Form No. 10056)**: Click to enter text.

Section 7. Sewage Sludge Solids Management Plan (Instructions Page 61)

Attach a solids management plan to the application.

Attachment: Solida Management Plan

The sewage sludge solids management plan must contain the following information:

- Treatment units and processes dimensions and capacities
- Solids generated at 100, 75, 50, and 25 percent of design flow
- Mixed liquor suspended solids operating range at design and projected actual flow

- Quantity of solids to be removed and a schedule for solids removal
- Identification and ownership of the ultimate sludge disposal site
- For facultative lagoons, design life calculations, monitoring well locations and depths, and the ultimate disposal method for the sludge from the facultative lagoon

An example of a sewage sludge solids management plan has been included as Example 5 of the instructions.

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.0: LAND DISPOSAL OF EFFLUENT

The following is required for renewal, new, and amendment permit applications.

Section 1. Type of Disposal System (Instructions Page 68)

Identify the method of land disposal:

- ☐ Surface application
- ☒ Subsurface application
- ☐ Irrigation
- ☐ Subsurface soils absorption
- ☐ Drip irrigation system
- ☐ Subsurface area drip dispersal system
- ☐ Evaporation
- ☐ Evapotranspiration beds
- ☐ Other (describe in detail): Click to enter text.

NOTE: All applicants without authorization or proposing new/amended subsurface disposal MUST complete and submit Worksheet 7.0.

For existing authorizations, provide Registration Number: Click to enter text.

Section 2. Land Application Site(s) (Instructions Page 68)

In table 3.0(1), provide the requested information for the land application sites. Include the agricultural or cover crop type (wheat, cotton, alfalfa, bermuda grass, native grasses, etc.), land use (golf course, hayland, pastureland, park, row crop, etc.), irrigation area, amount of effluent applied, and whether or not the public has access to the area. Specify the amount of land area and the amount of effluent that will be allotted to each agricultural or cover crop, if more than one crop will be used.

Table 3.0(1) – Land Application Site Crops

Crop Type & Land Use	Irrigation Area (acres)	Effluent Application (GPD)	Public Access? Y/N
Bermuda Grass and Winter Rye	11.60	50,500	Y

Section 3. Storage and Evaporation Lagoons/Ponds (Instructions Page 68)

Table 3.0(2) – Storage and Evaporation Ponds

Pond Number	Surface Area (acres)	Storage Volume (acre-feet)	Dimensions	Liner Type

Attach a copy of a liner certification that was prepared, signed, and sealed by a Texas licensed professional engineer for each pond.

Attachment: Click to enter text.

Section 4. Flood and Runoff Protection (Instructions Page 68)

Is the land application site within the 100-year frequency flood level?

☐ Yes ☒ No

If yes, describe how the site will be protected from inundation.

Click to enter text.

Provide the source used to determine the 100-year frequency flood level:

FEMA Firmette Panel – 4843C0555J

Provide a description of tailwater controls and rainfall run-on controls used for the land application site.

The land application site will be protected from inundation by swales and other constructed landforms to direct water away from the land application site.

Section 5. Annual Cropping Plan (Instructions Page 68)

Attach an Annual Cropping Plan which includes a discussion of each of the following items. If not applicable, provide a detailed explanation indicating why. **Attachment**: Annual Cropping Plan

- Soils map with crops
- Cool and warm season plant species
- Crop yield goals
- Crop growing season
- Crop nutrient requirements
- Additional fertilizer requirements
- Minimum/maximum harvest height (for grass crops)
- Supplemental watering requirements
- Crop salt tolerances
- Harvesting method/number of harvests
- Justification for not removing existing vegetation to be irrigated

Section 6. Well and Map Information (Instructions Page 69)

Attach a USGS map with the following information shown and labeled. If not applicable, provide a detailed explanation indicating why. **Attachment**: Disposal Area USGS Map

- The boundaries of the land application site(s)
- Waste disposal or treatment facility site(s)
- On-site buildings
- Buffer zones
- Effluent storage and tailwater control facilities
- All water wells within 1-mile radius of the disposal site or property boundaries
- All springs and seeps onsite and within 500 feet of the property boundaries
- All surface waters in the state onsite and within 500 feet of the property boundaries
- All faults and sinkholes onsite and within 500 feet of the property

List and cross reference all water wells located within a half-mile radius of the disposal site or property boundaries shown on the USGS map in the following table. Attach additional pages as necessary to include all of the wells.

Table 3.0(3) – Water Well Data

Well ID	Well Use	Producing? Y/N	Open, cased, capped, or plugged?	Proposed Best Management Practice
Please see Well ID Information Attachment			Choose an item.	
			Choose an item.	

Well ID	Well Use	Producing? Y/N	Open, cased, capped, or plugged?	Proposed Best Management Practice
			Choose an item.	
			Choose an item.	
			Choose an item.	

If water quality data or well log information is available please include the information in an attachment listed by Well ID.

Attachment: Well ID Information

Section 7. Groundwater Quality (Instructions Page 69)

Attach a Groundwater Quality Technical Report which assesses the impact of the wastewater disposal system on groundwater. This report shall include an evaluation of the water wells (including the information in the well table provided in Item 6. above), the wastewater application rate, and pond liners. Indicate by a check mark that this report is provided.

Attachment: Groundwater Quality Report

Are groundwater monitoring wells available onsite? ☐ Yes ☒ No

Do you plan to install ground water monitoring wells or lysimeters around the land application site? ☐ Yes ☒ No

If yes, provide the proposed location of the monitoring wells or lysimeters on a site map.

Attachment: Click to enter text.

Section 8. Soil Map and Soil Analyses (Instructions Page 70)

A. Soil map

Attach a USDA Soil Survey map that shows the area to be used for effluent disposal.

Attachment: USDA Soils Map

B. Soil analyses

Attach the laboratory results sheets from the soil analyses. **Note**: for renewal applications, the current annual soil analyses required by the permit are acceptable as long as the test date is less than one year prior to the submission of the application.

Attachment: Soil Analysis

List all USDA designated soil series on the proposed land application site. Attach additional pages as necessary.

Table 3.0(4) – Soil Data

Soil Series	Depth from Surface	Permeability	Available Water Capacity	Curve Number
Please see USDA Soils Report				

Soil Series	Depth from Surface	Permeability	Available Water Capacity	Curve Number

Section 9. Effluent Monitoring Data (Instructions Page 71)

Is the facility in operation?

☐ Yes ☒ No

If no, this section is not applicable and the worksheet is complete.

If yes, provide the effluent monitoring data for the parameters regulated in the existing permit. If a parameter is not regulated in the existing permit, enter N/A.

Table 3.0(5) – Effluent Monitoring Data

Date	30 Day Avg Flow MGD	BOD5 mg/l	TSS mg/l	pH	Chlorine Residual mg/l	Acres irrigated

D. Overland flow

Area used for application, in acres: Click to enter text.

Slopes for application area, percent (%): Click to enter text.

Design application rate, in gpm/foot of slope width: Click to enter text.

Slope length, in feet: Click to enter text.

Design BOD_5 loading rate, in lbs BOD_5/acre/day: Click to enter text.

Design application frequency:

hours/day: Click to enter text. **And** days/week: Click to enter text.

Attach a separate engineering report with the method of application and design requirements according to *30 TAC Chapter 217*.

Attachment: Click to enter text.

Section 2. Edwards Aquifer (Instructions Page 73)

Is the facility subject to *30 TAC Chapter 213*, Edwards Aquifer Rules?

☐ Yes ☐ No

If **yes**, is the facility located on the Edwards Aquifer Recharge Zone?

☐ Yes ☐ No

If yes, attach a geological report addressing potential recharge features.

Attachment: Click to enter text.

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.2: SURFACE LAND DISPOSAL OF EFFLUENT

The following **is required** for **new and major amendment** permit applications. Renewal and minor amendments applicants may be asked for the worksheet on a case by case basis.

NOTE: All applicants proposing new/amended subsurface disposal MUST complete and submit Worksheet 7.0. This worksheet applies to any subsurface disposal system that **does not meet** the definition of a subsurface area drip dispersal system as defined in *30 TAC Chapter 222, Subsurface Area Drip Dispersal System.*

Section 1. Subsurface Application (Instructions Page 74)

Identify the type of system:

- ☐ Conventional Gravity Drainfield, Beds, or Trenches (new systems must be less than 5,000 GPD)
- ☒ Low Pressure Dosing
- ☐ Other, specify: 11.60 ac

Application area, in acres: Click to enter text.

Area of drainfield, in square feet: Click to enter text.

Application rate, in gal/square foot/day: 0.1 gal/sqft/day

Depth to groundwater, in feet: Click to enter text.

Area of trench, in square feet: Click to enter text.

Dosing duration per area, in hours: Click to enter text.

Number of beds: Click to enter text.

Dosing amount per area, in inches/day: Click to enter text.

Infiltration rate, in inches/hour: Click to enter text.

Storage volume, in gallons: 150,000 gallons

Area of bed(s), in square feet: Click to enter text.

Soil Classification: Click to enter text.

Attach a separate engineering report with the information required in *30 TAC § 309.20,* excluding the requirements of *§* 309.20 b(3)(A) and (B) design analysis which may be asked for on a case by case basis. Include a description of the schedule of dosing basin rotation.

Attachment: 3.2 Engineering Report

Section 2. Edwards Aquifer (Instructions Page 74)

Is the subsurface system over the Edwards Aquifer Recharge Zone as mapped by TCEQ?

☐ Yes ☒ No

Is the subsurface system over the Edwards Aquifer Transition Zone as mapped by TCEQ?

☐ Yes ☒ No

If yes to either question, the subsurface system may be prohibited by *30 TAC §213.8*. Please call the Municipal Permits Team, at 512-239-4671, to schedule a pre-application meeting.

WORKSHEET 7.0

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CLASS V INJECTION WELL INVENTORY/AUTHORIZATION FORM

Submit the completed form to:

TCEQ
IUC Permits Team
Radioactive Materials Division
MC-233
PO Box 13087
Austin, Texas 78711-3087
512-239-6466

For TCEQ Use Only
Reg. No._____
Date Received_____
Date Authorized_____

Section 1. General Information (Instructions Page 92)

1. TCEQ Program Area

Program Area (PST, VCP, IHW, etc.): Click to enter text.

Program ID: Click to enter text.

Contact Name: Click to enter text.

Phone Number: Click to enter text.

2. Agent/Consultant Contact Information

Contact Name: Click to enter text.

Address: Click to enter text.

City, State, and Zip Code: Click to enter text.

Phone Number: Click to enter text.

3. Owner/Operator Contact Information

☒ Owner ☐ Operator

Owner/Operator Name: Clayton Properties Group, Inc.

Contact Name: Adam Boenig

Address: 6720 Vaught Rd #200

City, State, and Zip Code: Austin, TX 78730

Phone Number: 512 320 8833

4. Facility Contact Information

Facility Name: Orchard Ranch WWTF

Address: Click to enter text.

City, State, and Zip Code: near Cedar Valley, Texas, 78736

Location description (if no address is available): 3360' from the intersection of Circle Dr and US 290

Facility Contact Person: Click to enter text.

Phone Number: Click to enter text.

5. **Latitude and Longitude, in degrees-minutes-seconds**

Latitude: 30 13' 54.42" N

Longitude: 97 57' 31.58" W

Method of determination (GPS, TOPO, etc.): GPS

Attach topographic quadrangle map as attachment A.

6. **Well Information**

Type of Well Construction, select one:

- ☐ Vertical Injection
- ☐ Subsurface Fluid Distribution System
- ☐ Infiltration Gallery
- ☐ Temporary Injection Points
- ☒ Other, Specify: Low Pressure Drainfield

Number of Injection Wells: Click to enter text.

7. **Purpose**

Detailed Description regarding purpose of Injection System:

Disposal of treated effluent

Attach a Site Map as Attachment B (Attach the Approved Remediation Plan, if appropriate.)

8. **Water Well Driller/Installer**

Water Well Driller/Installer Name: Click to enter text.

City, State, and Zip Code: Click to enter text.

Phone Number: Click to enter text.

License Number: Click to enter text.

Section 2. Proposed Down Hole Design

Attach a diagram signed and sealed by a licensed engineer as Attachment C.

Table 7.0(1) – Down Hole Design Table

Name of String	Size	Setting Depth	Sacks Cement/Grout – Slurry Volume – Top of Cement	Hole Size	Weight (lbs/ft) PVC/Steel
Casing					
Tubing					
Screen					

Section 3. Proposed Trench System, Subsurface Fluid Distribution System, or Infiltration Gallery

Attach a diagram signed and sealed by a licensed engineer as Attachment D.

System(s) Dimensions: Click to enter text.

System(s) Construction: Click to enter text.

Section 4. Site Hydrogeological and Injection Zone Data

1. Name of Contaminated Aquifer: Click to enter text.

2. Receiving Formation Name of Injection Zone: Click to enter text.

3. Well/Trench Total Depth: Click to enter text.

4. Surface Elevation: Click to enter text.

5. Depth to Ground Water: Click to enter text.

6. Injection Zone Depth: Click to enter text.

7. Injection Zone vertically isolated geologically? ☐ Yes ☐ No

Impervious Strata between Injection Zone and nearest Underground Source of Drinking Water:

Name: Click to enter text.

Thickness: Click to enter text.

8. Provide a list of contaminants and the levels (ppm) in contaminated aquifer

Attach as Attachment E.

9. Horizontal and Vertical extent of contamination and injection plume

Attach as Attachment F.

10. Formation (Injection Zone) Water Chemistry (Background levels) TDS, etc.

Attach as Attachment G.

11. Injection Fluid Chemistry in PPM at point of injection

Attach as Attachment H.

12. Lowest Known Depth of Ground Water with < 10,000 PPM TDS: Click to enter text.

13. Maximum injection Rate/Volume/Pressure: Click to enter text.

14. Water wells within 1/4 mile radius (attach map as Attachment I): Click to enter text.

15. Injection wells within 1/4 mile radius (attach map as Attachment J): Click to enter text.

16. Monitor wells within 1/4 mile radius (attach drillers logs and map as Attachment K): Click to enter text.

17. Sampling frequency: Click to enter text.

18. Known hazardous components in injection fluid: Click to enter text.

Section 5. Site History

1. Type of Facility: Click to enter text.
2. Contamination Dates: Click to enter text.
3. Original Contamination (VOCs, TPH, BTEX, etc.) and Concentrations (attach as Attachment L): Click to enter text.
4. Previous Remediation (attach results of any previous remediation as attachment M): Click to enter text.

NOTE: Authorization Form should be completed in detail and authorization given by the TCEQ before construction, operation, and/or conversion can begin. Attach additional pages as necessary.

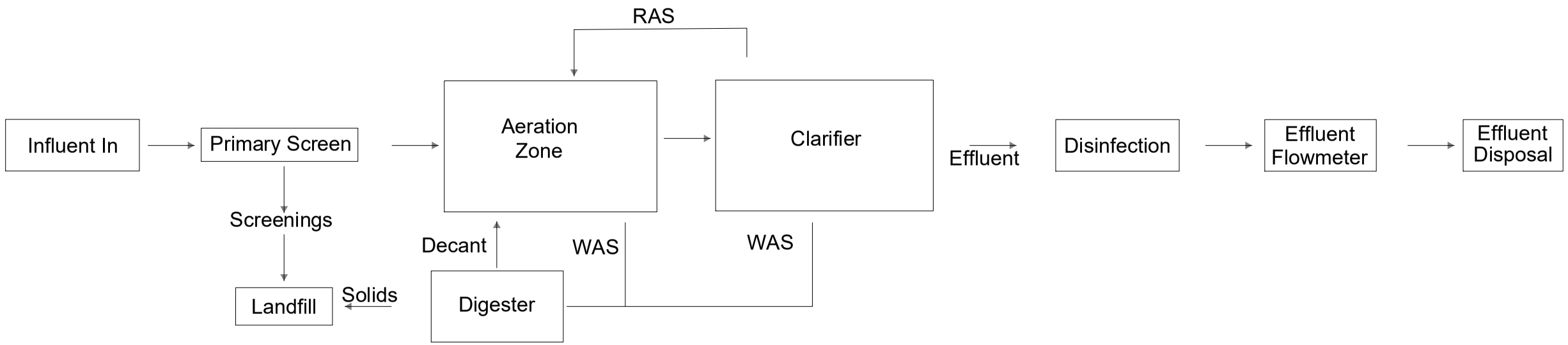
Class V Injection Well Designations

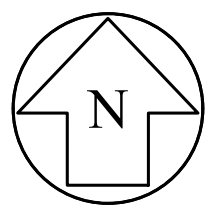
5A07 Heat Pump/AC return (IW used for groundwater to heat and/or cool buildings)
5A19 Industrial Cooling Water Return Flow (IW used to cool industrial process equipment)
5B22 Salt Water Intrusion Barrier (IW used to inject fluids to prevent the intrusion of salt water into an aquifer)
5D02 Storm Water Drainage (IW designed for the disposal of rain water)
5D04 Industrial Stormwater Drainage Wells (IW designed for the disposal of rain water associated with industrial facilities)
5F01 Agricultural Drainage (IW that receive agricultural runoff)
5R21 Aquifer Recharge (IW used to inject fluids to recharge an aquifer)
5S23 Subsidence Control Wells (IW used to control land subsidence caused by ground water withdrawal)
5W09 Untreated Sewage
5W10 Large Capacity Cesspools (Cesspools that are designed for 5,000 gpd or greater)
5W11 Large Capacity Septic systems (Septic systems designed for 5,000 gpd or greater)
5W12 WTTP disposal
5W20 Industrial Process Waste Disposal Wells
5W31 Septic System (Well Disposal method)
5W32 Septic System Drainfield Disposal
5X13 Mine Backfill (IW used to control subsidence, dispose of mining byproducts, and/or fill sections of a mine)
5X25 Experimental Wells (Pilot Test) (IW used to test new technologies or tracer dye studies)
5X26 Aquifer Remediation (IW used to clean up, treat, or prevent contamination of a USDW)
5X27 Other Wells
5X28 Motor Vehicle Waste Disposal Wells (IW used to dispose of waste from a motor vehicle site - These are currently banned)
5X29 Abandoned Drinking Water Wells (waste disposal)

ATTACHMENT -

Process Flow Diagram

ORCHARD RANCH WWTF - PROCESS FLOW DIAGRAM - FULL BUILDOUT - 50,500 GPD





0 100 200 400

SCALE: 1" = 200 FT.

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ATTACHMENT -

Treatment Unit Sizing

and Process

Description

Orchard Ranch WWTF

Wastewater Treatment Facility Process Description and Unit Sizing

Section 2 – Treatment Process

A. Treatment Process Description

The treatment system will be an activated sludge process operated in complete mix mode followed by disinfection. The system will have a primary screen, aeration basin, and final clarifier. The facility will utilize chlorine or UV disinfection. The design will be in accordance with Texas Administrative Code Title 30, Part 1: Texas Commission on Environmental Quality (TCEQ) Chapter 217 (Design Criteria for Domestic Wastewater Systems).

B. Treatment Unit Sizing

Full Buildout – 50,500 GPD

Headworks with Screening	For Full Buildout
Aeration Basin	12’ wide x 26’ long x 12’ Tall (10.5’ SWD) – 24,500 gal
Digester	12’ wide x 14’ long x 12’ tall (10.5’ SWD) – 12,863 gal
Chlorine Contact Chamber	4’ wide x 19’ long x 6’ tall (5’ SWD) – 2,806 gal – For Full Buildout
Final Clarifier	18’ dia x 10’ tall (8’ SWD) – 15,230 gal

Project: Orchard Ranch
Date: 5/3/2024

Phase: 1

			2 hr peak	*4Q for 2 hr
Flow	50500	GPD		202000 gpd
	0.0505	MGD		140.28 gpm
	35.07	GPM		16833 gal

EQ Basin Sizing:

Peak Factor	4	(#Q)	202000	gpd
Flow thru Plant	1	(#Q)	50500	gpd
Sizing Factor	3	(#Q)		
Peak Time	2	hr		
Basin Size Req'd:	12625	gal		

Aeration Basin Sizing:
*cannot exceed 45lb BOD/day/1,000cf (30 TAC 217.154(b)(2))

Organic Loading (BOD)

			Check:	(lb/day/ft3)	
Influent Conc.	350	mg/L			
Influent Flow	50500	gpd	Limit:	45	0.045
Influent loading	66811500	mg/day	Design:		0.045
	147.29	lb/day			

Basin Sizing:
*cannot exceed 35lb BOD/day/1,000cf (30 TAC 217.154(b)(2))

Basin Volume Req'd:	3273.205877	ft3
	24483.57996	gal

Dimensions:

	Req'd		Height (including Freeboard):	12
Width:	8.5	ft	Provided	
Length:	36.67457565	ft	Width:	12
Height:	10.5	ft	Length:	25.98
			Height:	10.5

Chlorine sizing:

	2806	gal	*4Q for 20 min	375.1	ft3	depth
				75.01	ft2	6 ft w/ freeboard
						5 ft SWD
			Width	4.0	ft	
			Length	18.8		

Process	Applicable Permit Effluent Sets (Concentration milligrams per liter (mg/l)) Five-day Biochemical Oxygen Demand (BOD_5)	Total Suspended Solids (TSS)	Ammonia Nitrogen	Maximum Organic Loading Rate (Pounds BOD_5/day/1,000 cubic feet (lbs/day/1,000cf))
Conventional activated sludge process without nitrification	10	15	NA	45
	20	20	NA	
Conventional activated sludge process with nitrification when reactor temperatures exceed 15° C	10	15	3, 2, or 1	35
Conventional activated sludge process with nitrification when reactor temperatures are 13° to 15° C	10	15	3, 2, or 1	25
Conventional activated sludge process with nitrification when reactor temperatures are 10° to 12° C	10	15	3, 2, or 1	20
Extended aeration basins including oxidation ditches (mean cell residence time over 20 days)	10	15	3, 2, or 1	15

Clarifier Sizing:
*max surface loading rate 1200 gal/day/sqft
*min detention time at 2 hr peak flow=1.8

Volume calculated per Detention time requirement

Min volume required:	15150	gal	
	2025.40107	ft3	
SWD:	10	ft	*min 1' freeboard
Clarifier Diameter:	15	ft	
Surface:	176.7145868	sqft	
Surface Loading Rate:	1143.09	gal/day/sqft	
Safety Factor:	1.4		
Design Surface:	247.4004215	sqft	
Design Clarifier Dia:	18		
Volume check:	2474.004215	ft3	Sufficient
	18505.55153	gal	

Applicable Permit Effluent Sets (concentration milligrams per liter (mg/l)) BOD_5	TSS	NH_3-N	Aeration Basin Organic Loading (five-day biochemical oxygen demand, from Table F.1.	Process - Treatment Level	Maximum Surface Loading Rate at Two-Hour Peak Flow (gallons/day/square foot)	Minimum Detention Time at Two-Hour Peak Flow (hours)
20	20		45	Fixed film - secondary or enhanced secondary	1,200	1.8
10	15					
20	20		45, 35, 25 or 20	Activated sludge - secondary, enhanced secondary, or secondary with nitrification	1,200	1.8
10	15					
10	15	3				
20	20		15	Extended air - secondary	900	2.0
10	15	3	15	Extended aeration - enhanced secondary	800	2.2

(2) The minimum side water depth for a clarifier with a mechanical sludge collector is:

(A) 10.0 feet if the surface area is equal to or greater than 300 square feet; and

(B) 8.0 feet if the surface area is less than 300 square feet.

Sludge Digester Sizing (Per 217 "New Rules")

Design Flow:	50,500	GPD	
BOD5 for Design	350	mg/l	
Solids Production "Normal Domestic" Wastewater	0.25	Kg/M^3 Treated	(Source: ASCE/WEF MOP #8; Volume #3; Page 17-20 "Estimating Solids Quanities")
Conv multiplier	1.72	(Design BOD/204 ("normal" BOD concentration))	
Solids Production	0.43	Kg/M^3 Treated	
M^3 @ 0.075 MGD	191,143	l/day	
	191	M^3 per day	
Dry Weight Solids	82	Kg/day	
	181	lbs/day	

TCEQ Requirements:			
Max allowed conc. of WAS flow	2%		217;(t);(7)(A),(i)
Detention Time	40	days	217;(t);(4)(B)

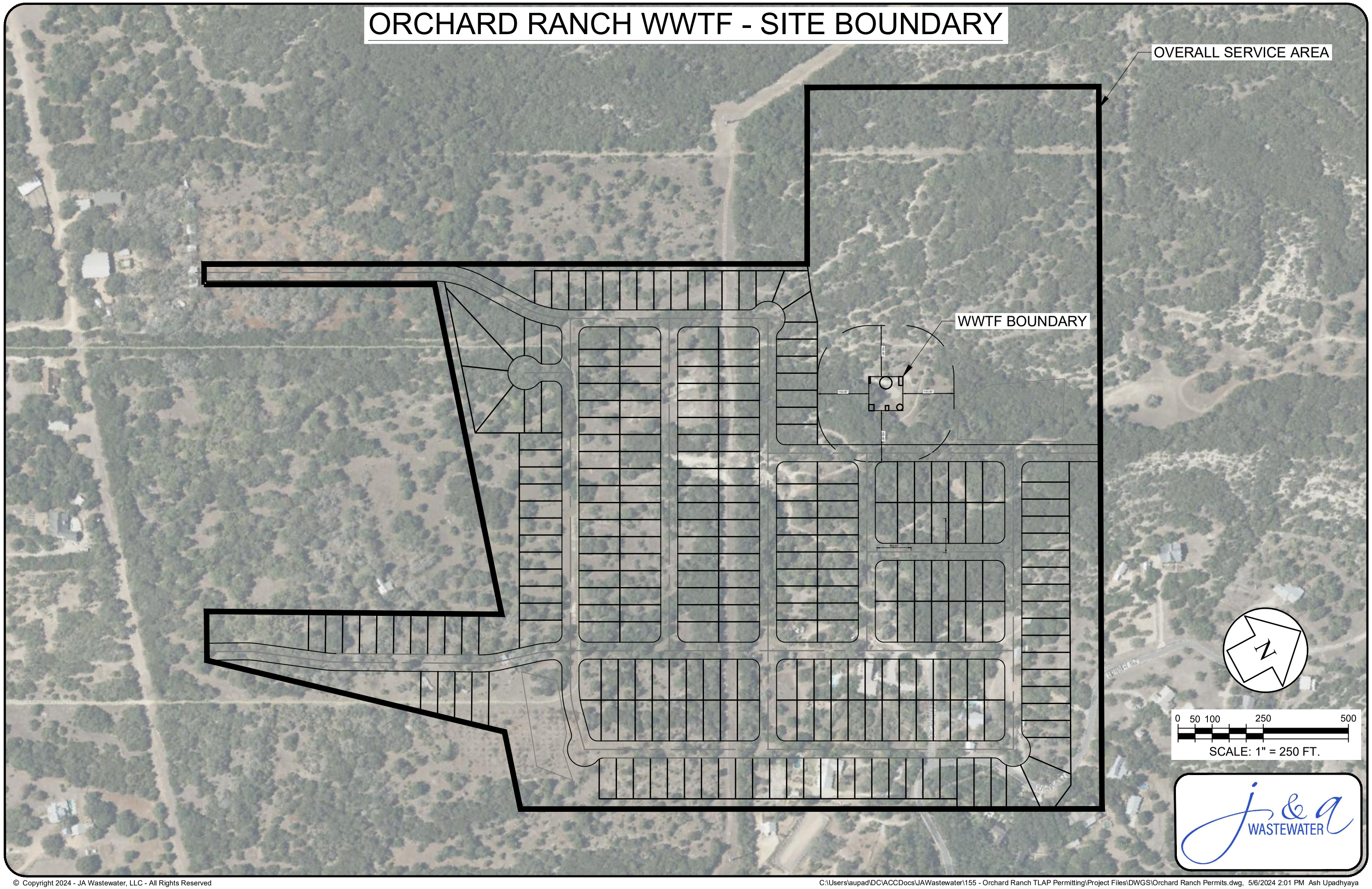
Calculate Volume Required:

7,223	(40 days of dry wt solids)
3,612	(Solids to dispose allowing for 50% reduction in digestion/decanting)
21,653	(Gallons of volume required assuming 2% concentration)
2,895	(Ft^3 Required)
15	(Length assuming 18' wide x 12' tall tank)

ATTACHMENT -

Site Drawing

ORCHARD RANCH WWTF - SITE BOUNDARY



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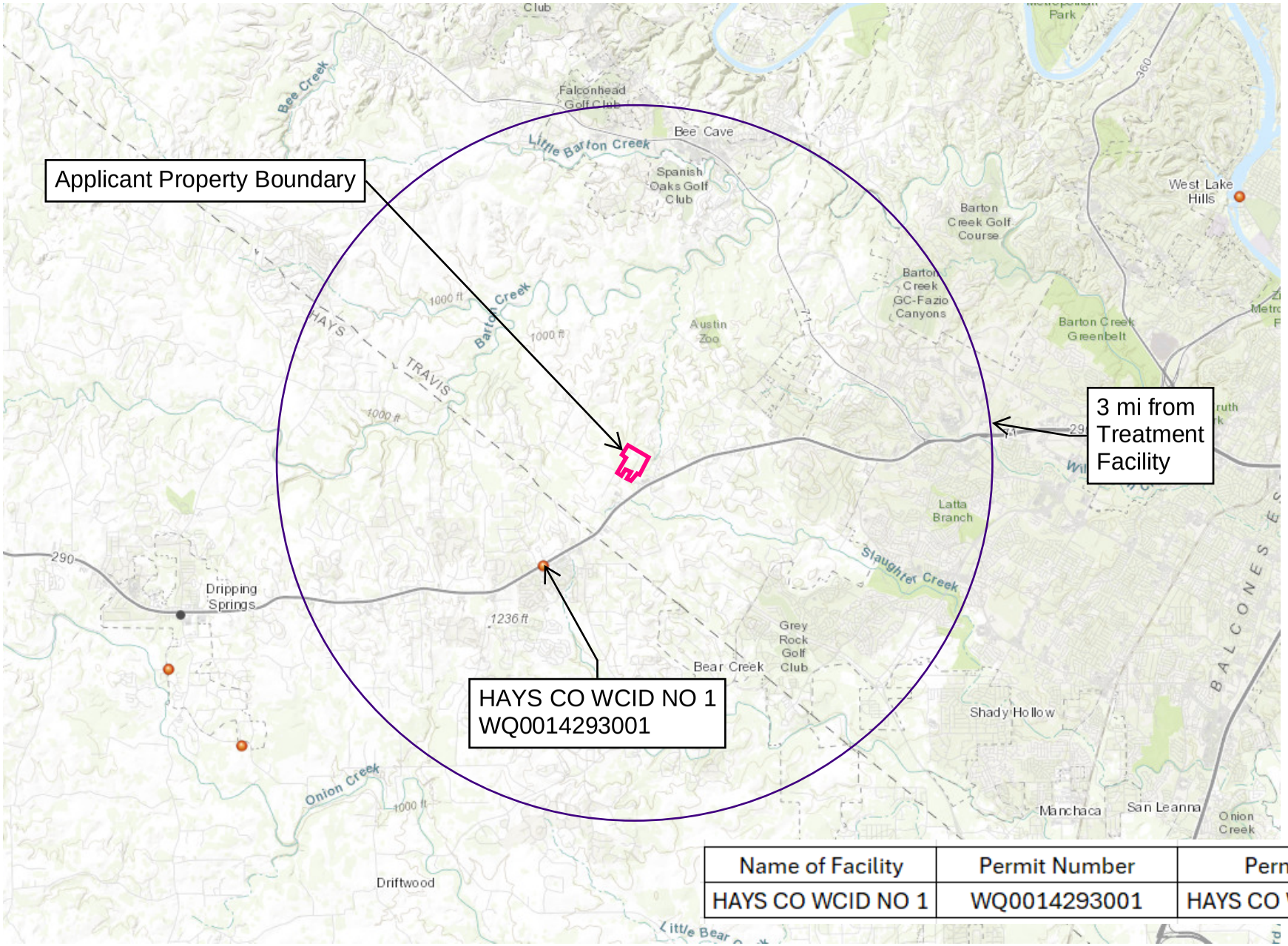
ATTACHMENT -

Nearby WWTF

Exhibit

Orchard Ranch - Nearby WWTF Map



Name of Facility	Permit Number	Permittee
HAYS CO WCID NO 1	WQ0014293001	HAYS CO WCID NO 1

ATTACHMENT -

Nearby WWTF Letter

May 7, 2024

Hays County Water Control & Improvement District No.1
3300 Bee Caves Road, Suite 650 #189
Austin, Texas 78746

Subject: Hays County WCID No.1 WWTP

To Whom it May Concern,

Clayton Properties Group Inc. is applying for a TLAP permit and the proposed facility location is within three miles of the Hays County WCID No.1 WWTP. It is our understanding that it is not economically feasible to convey wastewater to the Hays County WCID No.1 WWTP. Please confirm in writing at your earliest convenience.

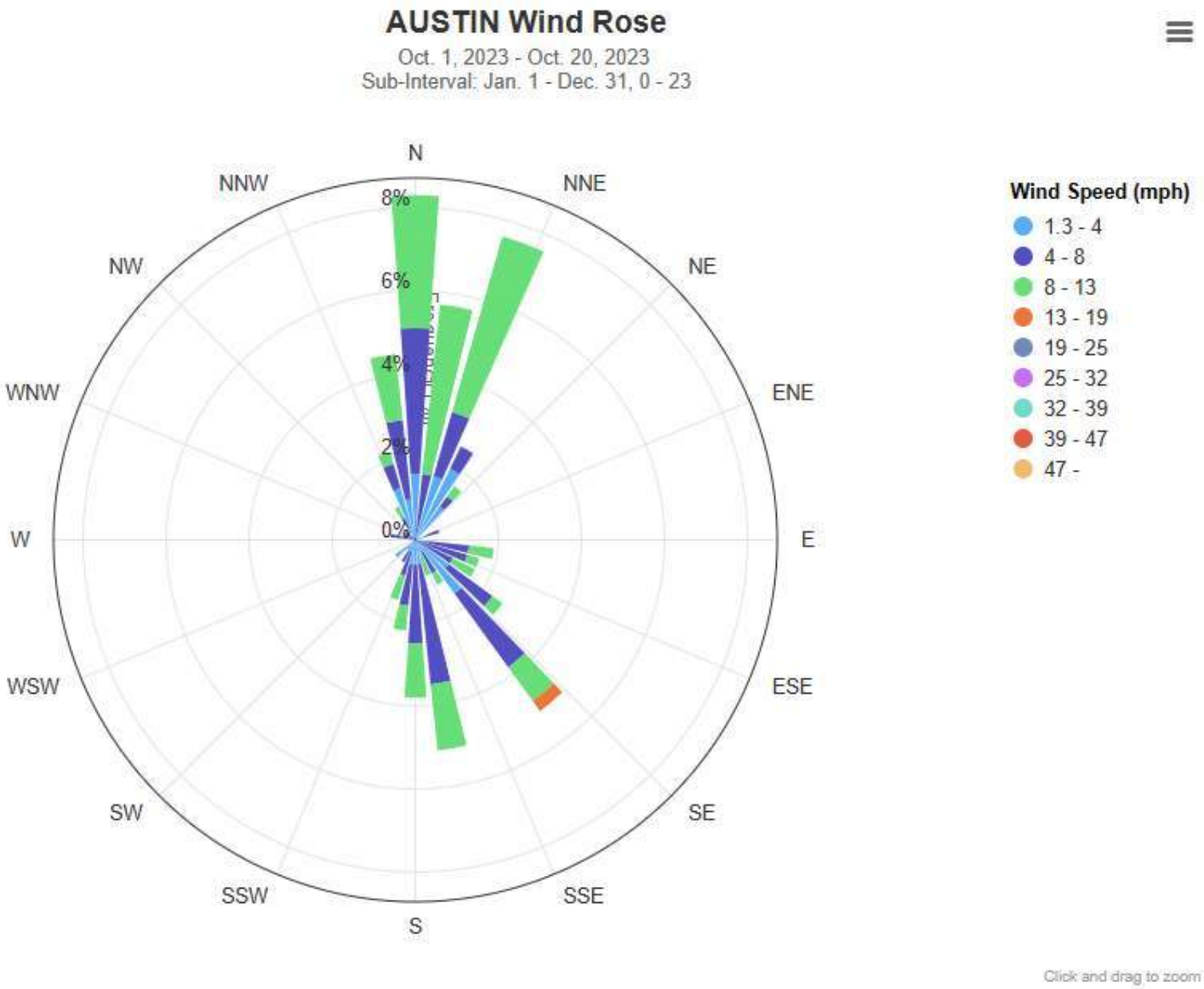
Sincerely,

Jamie L. Miller, P.E.
President
JA Wastewater
5765 Fig Way
Arvada, CO 80002
Firm Number F-23372

ATTACHMENT -

Windrose Map

Orchard Ranch WWTF - Wind Rose



AUSTIN-CAMP MABRY (TX) - Wind Frequency Table (percentage)

ATTACHMENT -

Annual Cropping Plan

Orchard Ranch WWTF – Annual Cropping Plan

a. Soils map depicting the location of the crops proposed or currently being grown. These locations should be identified by field and crop on the soils map.

A USDA Soils Map has been provided with the permit application.

b. All types of crops and acreage irrigated for each crop, including warm and cool season crops.

The 11.60 area will be seeded with Bermuda and winter rye grasses.

c. Crop yield goals or estimates.

Yield estimate: Bermuda grass will produce about 1 ton per acre with no applied fertilizer. Winter Rye produces 2 to 3 tons per acres.

d. Growing seasons for each crop including months the field is left fallow (no crops).

Growing season for Bermuda grass is from May through September. Growing season for winter rye is October through April, the fields are never left fallow.

e. Nutrient requirements for each crop, including additional fertilizer requirements for each crop, proposed additional fertilizer applications for each crop, and methods of fertilizer application for each crop, based on annual soil sampling and analysis.

The proposed design total nitrogen loading rate is 1.09 lb/acre/day or 397 lb/acre/year. Bermuda grass can utilize large amounts of nitrogen, with excellent yield response at 400 lbs/ acre/ year. (See Nutrient Demand High in Bermudagrass by Darst, et al. 1996). To most effectively use nitrogen, other nutrients are required such as phosphorus and potassium. These nutrient levels will be monitored through annual soil analysis and supplemented if required. Additional fertilizer is not anticipated but a manual spreader would be used if needed.

f. Provide the minimum and maximum harvest height for the crop (e.g. mowing height of grasses).

Minimum mowing height will be such that the grass is not scorched, approximately 3”. The maximum growing height will be determined by the operator, 18” is anticipated maximum height prior to mowing.

g. Supplemental watering requirements for each crop.

No supplemental watering is anticipated.

h. Salt tolerances of each crop.

Bermuda grass is highly salt tolerant, winter rye is considered to be intermediate in salt tolerance.

i. Describe the harvesting method and the proposed number of harvests for each crop.

The irrigation fields will be regularly mowed with clippings hauled off.

j. If the proposed crop is existing native vegetation that will not be harvested, include a justification that the non-removal of crops will not lead to a buildup in nutrients. If the proposed system is drip irrigation with a proposal to use the existing forested vegetation as a crop, then provide a vegetation survey by a certified arborist describing at a minimum: (1) the number of mature ashe juniper

(Juniperus ashei) and oaks (Quercus viginiana) trees per acre, (2) the number of other trees per acre, (3) percent of overstory canopy cover, (4) the extent of open spaces, and (5) areas with forbs and grasses expressed as percent of the land of each application site. A mature tree is one with a minimum height of 14 feet.

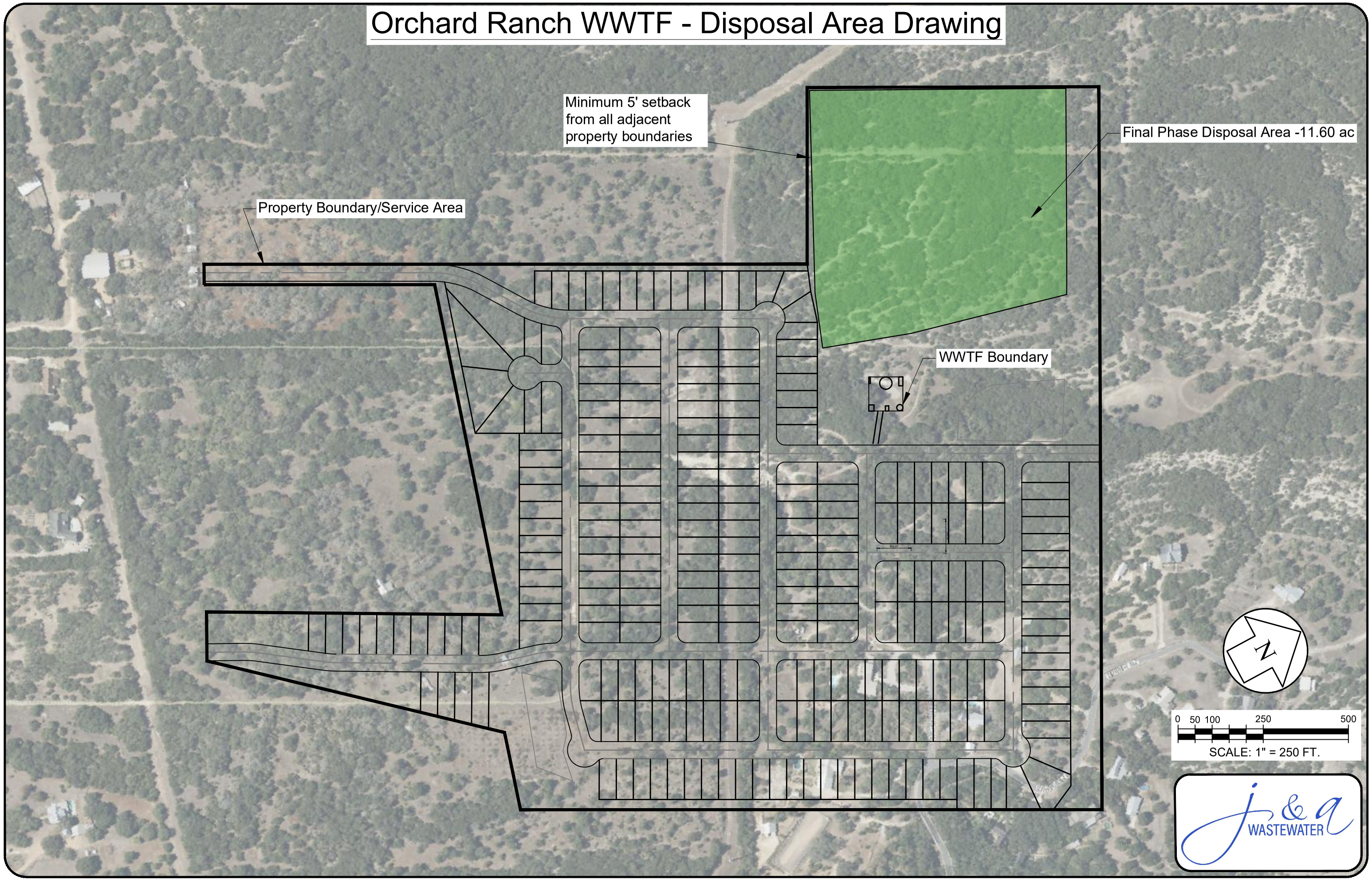
N/A

ATTACHMENT -

Disposal Area

Boundary

Orchard Ranch WWTF - Disposal Area Drawing



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ATTACHMENT -

USGS Maps (Disposal Area)

Orchard Ranch - USGS Map

USGS science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

SIGNAL HILL QUADRANGLE
TEXAS
7.5-MINUTE SERIES

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 14R

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, October 2016 - November 2016
Roads.....U.S. Census Bureau, 2015 - 2019
Names.....GNIS, 1979 - 2022
Hydrography.....National Hydrography Dataset, 2002 - 2018
Contours.....National Elevation Dataset, 2019
Boundaries.....Multiple sources; see metadata file 2019 - 2021

Wetlands.....FWS National Wetlands Inventory Not Available

MN
GN
0°32'
9 MILS
3°50'
68 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
100
NU PU
Grid Zone Designation
14R

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard.

QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES

1 Shingle Hills
2 Bee Cave
3 Austin West
4 Dripping Springs
5 Oak Hill
6 Driftwood
7 Mountain City
8 Buda

ROAD CLASSIFICATION

Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

SX24K71605

SIGNAL HILL, TX
2022

J & A WASTEWATER

ATTACHMENT -

Disposal Area Well

Reports

STATE OF TEXAS PLUGGING REPORT for Tracking #12862

Owner:	**TCEQ**	Owner Well #:	**No Data**
Address:	**PO Box 13087 AUSTIN, TX 78711**	Grid #:	**58-49-1**
Well Location:	**6517 HWY 290 W AUSTIN, TX**	Latitude:	**30° 13' 52" N**
		Longitude:	**097° 57' 44" W**
Well County:	**Travis**	Elevation:	**No Data**

Well Type: **Unknown**

Drilling Information

Company:	**No Data**	Date Drilled:	**No Data**
Driller:	**No Data**	License Number:	**No Data**

Borehole: **No Data**

Plugging Information

Date Plugged: **5/21/2003** Plugger: **DAVID**

Plug Method: **Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet**

Casing Left in Well:

Dia (in.)	*Top (ft.)*	*Bottom (ft.)*
5	**1**	**55**

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
1	**10**	**2**
10	**70**	**12 BEN**
70	**143**	**GRAVEL**

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: **DAVID MCDEARMON**

12907 LOWDEN
MANCHACA, TX 78652

Driller Name: **DAVID** License Number: **2563**

Comments: **DG**

STATE OF TEXAS PLUGGING REPORT for Tracking #12863

Owner:	**TCEQ**	Owner Well #:	**No Data**
Address:	**PO Box 13087 AUSTIN, TX 78711**	Grid #:	**58-49-1**
Well Location:	**6517 HWY 290 W AUSTIN, TX**	Latitude:	**30° 13' 52" N**
		Longitude:	**097° 57' 44" W**
Well County:	**Travis**	Elevation:	**No Data**

Well Type: **Unknown**

Drilling Information

Company:	**No Data**	Date Drilled:	**No Data**
Driller:	**No Data**	License Number:	**No Data**

Borehole: **No Data**

Plugging Information

Date Plugged: **5/21/2003** Plugger: **DAVID**

Plug Method: **Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet**

Casing Left in Well:

Dia (in.)	*Top (ft.)*	*Bottom (ft.)*
5		

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
1	**10**	**2**
10	**108**	**21 BEN**
100	**163**	**GRAVEL**

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: **DAVID MCDEARMON**

12907 LOWDEN
MANCHACA, TX 78652

Driller Name: **DAVID** License Number: **2563**

Comments: **DG**

STATE OF TEXAS PLUGGING REPORT for Tracking #12864

Owner:	**TCEQ**	Owner Well #:	**No Data**
Address:	**PO Box 13087 AUSTIN, TX 78711**	Grid #:	**58-49-1**
Well Location:	**6517 HWY 290 W AUSTIN, TX**	Latitude:	**30° 13' 52" N**
		Longitude:	**097° 57' 44" W**
Well County:	**Travis**	Elevation:	**No Data**

Well Type: **Unknown**

Drilling Information

Company:	**No Data**	Date Drilled:	**No Data**
Driller:	**No Data**	License Number:	**No Data**

Borehole: **No Data**

Plugging Information

Date Plugged: **5/21/2003** Plugger: **DAVID**

Plug Method: **Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet**

Casing Left in Well:

Dia (in.)	*Top (ft.)*	*Bottom (ft.)*
5	**1**	**51**

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
1	**10**	**2**
10	**103**	**16 BEN**
103	**142**	**GRAVEL**

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: **DAVID MCDEARMON**

12907 LOWDEN
MANCHACA, TX 78652

Driller Name: **DAVID** License Number: **2563**

Comments: **DG**

STATE OF TEXAS PLUGGING REPORT for Tracking #12865

Owner:	**TCEQ**	Owner Well #:	**No Data**
Address:	**PO Box 13087 AUSTIN, TX 78711**	Grid #:	**58-49-1**
Well Location:	**6517 HWY 290 W AUSTIN, TX**	Latitude:	**30° 13' 52" N**
		Longitude:	**097° 57' 44" W**
Well County:	**Travis**	Elevation:	**No Data**

Well Type: **Unknown**

Drilling Information

Company:	**No Data**	Date Drilled:	**No Data**
Driller:	**No Data**	License Number:	**No Data**

Borehole: **No Data**

Plugging Information

Date Plugged: **5/21/2003** Plugger: **DAVID**

Plug Method: **Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet**

Casing Left in Well:

Dia (in.)	*Top (ft.)*	*Bottom (ft.)*
4	**1**	**14.5**

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
1	**5**	**CEM**
5	**11**	**BEN**
11	**40**	**GRAVEL**

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: **DAVID MCDEARMON**

12907 LOWDEN
MANCHACA, TX 78652

Driller Name: **DAVID** License Number: **2563**

Comments: **DG**

STATE OF TEXAS PLUGGING REPORT for Tracking #90725

Owner:	**Steve Myer & Nancy Ebe**	Owner Well #:	**1**
Address:	**932 Hillside North Austin, TX 78736**	Grid #:	**58-49-2**
		Latitude:	**30° 13' 33" N**
Well Location:	**932 Hillside North Austin, TX 78736**	Longitude:	**097° 57' 08" W**
Well County:	**Travis**	Elevation:	**No Data**

Well Type: **Withdrawal of Water**

Drilling Information

Company:	**No Data**	Date Drilled:	**No Data**
Driller:	**Unknown**	License Number:	**No Data**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**6.25**		**700**

Plugging Information

Date Plugged: **10/29/2013** Plugger: **Fred Smith**

Plug Method: **Tremmie pipe bentonite from bottom to 2 feet from surface, cement top 2 feet**

Casing Left in Well:

Dia (in.)	*Top (ft.)*	*Bottom (ft.)*
6	**-1**	**60**

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
0	**10**	**3 Type H**
10	**700**	**27benseal 2 holeplug**

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: **Whisenant & Lyle Water Services**

P.O. Box 525
Dripping Springs, TX 78620

Driller Name: **Fred Smith** License Number: **54437**

Comments: **No Data**

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-105

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849105
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.225278
Latitude (degrees minutes seconds)	30° 13' 31" N
Longitude (decimal degrees)	-97.961667
Longitude (degrees minutes seconds)	097° 57' 42" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1120
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	422
Well Depth Source	Unknown
Drilling Start Date	
Drilling End Date	0/0/1947
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	None
Water Quality Available	Yes
Pump	Piston
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	J.C. Christal
Driller	J. Glass
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	
Created Date	
Last Update Date	3/4/2020

Remarks	Depth before 1955 was 268 ft. Well J-34 in 1957 Travis County report.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis

Sample Date: 5/5/1950 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** U.S. Geological Survey

Sampled Aquifer: Glen Rose Limestone

Analyzed Lab: U.S. Geological Survey Lab **Reliability:** Reliability unknown or not available

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00940	CHLORIDE, TOTAL (MG/L AS CL)		12	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		396	mg/L as CACO3	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		784	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		58	mg/L as SO4	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-106

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849106
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.228333
Latitude (degrees minutes seconds)	30° 13' 42" N
Longitude (decimal degrees)	-97.962778
Longitude (degrees minutes seconds)	097° 57' 46" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1140
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	530
Well Depth Source	Unknown
Drilling Start Date	
Drilling End Date	0/0/1948
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	None
Water Quality Available	Yes
Pump	Piston
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	W.A. Schieffer
Driller	A.C. Clements
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	
Created Date	
Last Update Date	3/4/2020

Remarks	Well J-31 in 1957 Travis County report.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis

Sample Date: 5/5/1950 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** U.S. Geological Survey

Sampled Aquifer: Glen Rose Limestone

Analyzed Lab: U.S. Geological Survey Lab **Reliability:**

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00940	CHLORIDE, TOTAL (MG/L AS CL)		16	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		757	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		59	mg/L as SO4	

Water Quality Analysis

Sample Date: 1/29/1969 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		351	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		428.34	mg/L	
00910	CALCIUM (MG/L)		90	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		17	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		1.3	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		442	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		53	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		2.6	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.5	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		11	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.23		
00932	SODIUM, CALCULATED, PERCENT		5	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		11	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		936	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		95	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		21	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		491	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-107

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849107
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.228333
Latitude (degrees minutes seconds)	30° 13' 42" N
Longitude (decimal degrees)	-97.962778
Longitude (degrees minutes seconds)	097° 57' 46" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	218GLRSU - Glen Rose Limestone, Upper Member
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1140
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	350
Well Depth Source	Unknown
Drilling Start Date	
Drilling End Date	
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Stock
Water Level Observation	None
Water Quality Available	Yes
Pump	Piston
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	W.A. Schieffer
Driller	A.C. Clements
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	
Created Date	
Last Update Date	3/4/2020

Remarks	Well J-32 in 1957 Travis County report.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis

Sample Date: 1/29/1969 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone, Upper Member

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		272	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		331.93	mg/L	
00910	CALCIUM (MG/L)		83	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		30	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.5	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		351	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		35	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		42.5	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.7	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		11	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.39		
00932	SODIUM, CALCULATED, PERCENT		9	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		17	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		780	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		29	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		21	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		411	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-113

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	
County	
River Basin	
Groundwater Management Area	
Regional Water Planning Area	
Groundwater Conservation District	
Latitude (decimal degrees)	
Latitude (degrees minutes seconds)	° 00' 00" N
Longitude (decimal degrees)	
Longitude (degrees minutes seconds)	000° 00' 00" W
Coordinate Source	
Aquifer Code	
Aquifer	
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	
Land Surface Elevation Method	
Well Depth (feet below land surface)	
Well Depth Source	
Drilling Start Date	
Drilling End Date	
Drilling Method	
Borehole Completion	

Well Type	
Well Use	
Water Level Observation	
Water Quality Available	
Pump	
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	
Driller	
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	
Created Date	
Last Update Date	

Remarks	

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis - No Data Available

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Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-116

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849116
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.227222
Latitude (degrees minutes seconds)	30° 13' 38" N
Longitude (decimal degrees)	-97.962223
Longitude (degrees minutes seconds)	097° 57' 44" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1130
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	594
Well Depth Source	Owner
Drilling Start Date	
Drilling End Date	0/0/1971
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	Yes
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	Leonard Johnson
Driller	Hugh Glass
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/27/1998
Last Update Date	3/4/2020

Remarks	

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

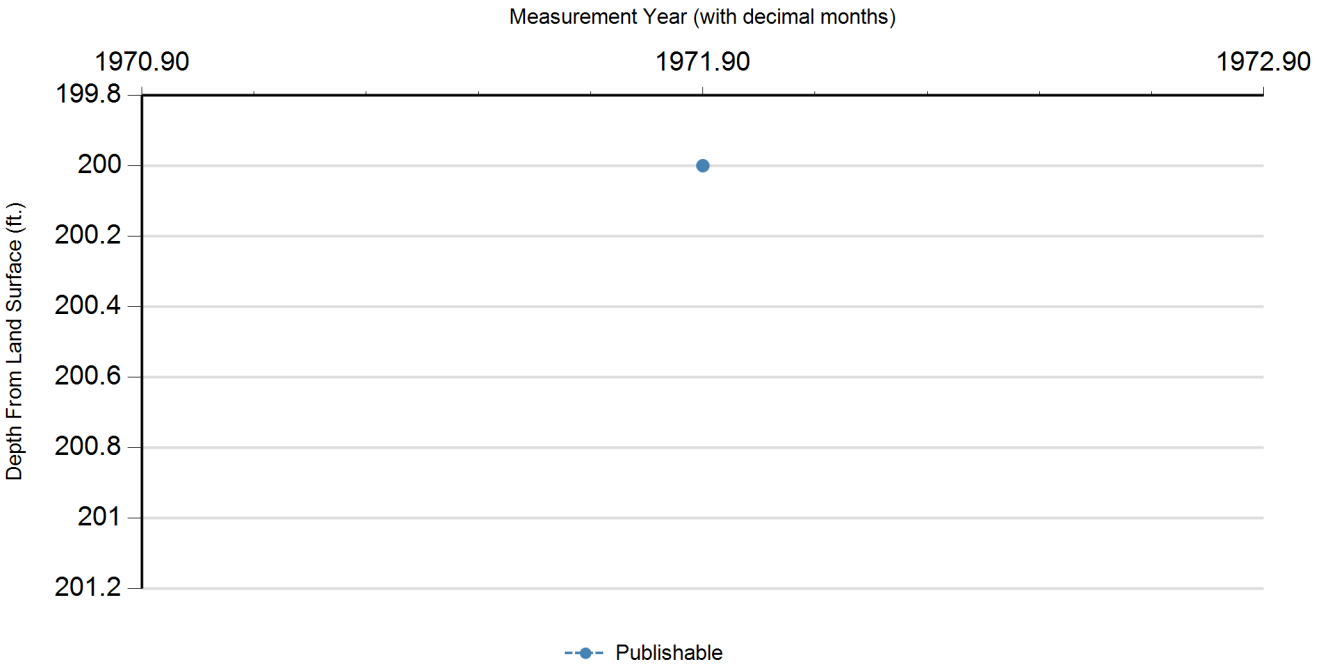
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	10/0/1971		200		930	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 58-49-116

groundwater division

Water Quality Analysis

Sample Date: 8/10/1971 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Glen Rose Limestone

Analyzed Lab: Texas Department of Health **Reliability:** Reliability unknown or not available

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		292	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		356.34	mg/L	
00910	CALCIUM (MG/L)		540	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		24	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		4.8	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		1977	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		153	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)	<	0.4	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		11	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.24		
00932	SODIUM, CALCULATED, PERCENT		2	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		25	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		4743	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		1640	mg/L as SO4	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		2573	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

GWDB DISCLAIMER: Except where noted, all of the information provided in the Texas Water Development Board (TWDB) Groundwater Database (https://www.twdb.texas.gov/groundwater/data/gwdbrpt.asp) is believed to be accurate and reliable; however, the TWDB assumes no responsibility for any errors appearing in rules or otherwise. Further, TWDB assumes no responsibility for the use of the information provided. PLEASE NOTE that users of these data are responsible for checking the accuracy, completeness, currency and/or suitability of all information themselves. TWDB makes no guarantees or warranties as to the accuracy, completeness, currency, or suitability of the information provided via the Groundwater Database (GWDB). TWDB specifically disclaims any and all liability for any claims or damages that may result from providing GWDB data or the information it contains. For additional information or answers to questions concerning the TWDB GWDB, contact the Groundwater Data Team at GroundwaterData@twdb.texas.gov.

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-49-226

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5849226
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.230833
Latitude (degrees minutes seconds)	30° 13' 51" N
Longitude (decimal degrees)	-97.954445
Longitude (degrees minutes seconds)	097° 57' 16" W
Coordinate Source	+/- 1 Second
Aquifer Code	218GLRSU - Glen Rose Limestone, Upper Member
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1160
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	411
Well Depth Source	Geophysical Log
Drilling Start Date	
Drilling End Date	11/0/1970
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Plugged or Destroyed
Water Level Observation	Miscellaneous Measurements
Water Quality Available	No
Pump	None
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	Gary Haldeman
Driller	Gary Haldeman and Leonard Johnson
Other Data Available	Electric Log; Gamma Ray; Temperature
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	10/27/1970
Last Update Date	3/4/2020

Remarks	Plugged. Geophysical log Q-56.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

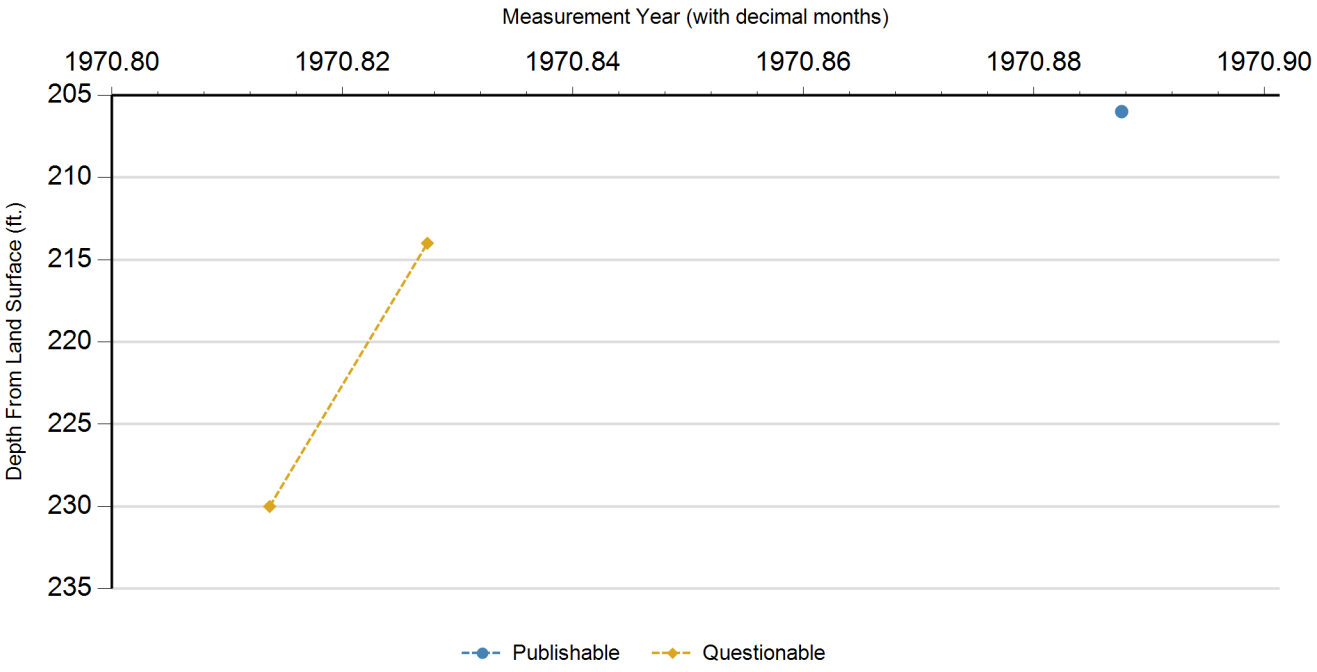
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
Q	10/27/1970		230		930	1	Other or Source of Measurement Unknown	Unknown	17	
Q	11/2/1970		214	(16.00)	946	1	Other or Source of Measurement Unknown	Unknown	17	
P	11/24/1970		206	(8.00)	954	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable
Q	Questionable

Remark ID	Remark Description
17	Measurement before well completion

Water Quality Analysis - No Data Available

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STATE OF TEXAS WELL REPORT for Tracking #15261

Owner:	**Bevron Corp.**	Owner Well #:	**No Data**
Address:	**13429 Madrone Mountain Way Austin, TX 78737**	Grid #:	**58-49-2**
Well Location:	**11016 Tangle Ridge Circle Austin, TX 78736**	Latitude:	**30° 13' 46" N**
		Longitude:	**097° 57' 19" W**
Well County:	**Travis**	Elevation:	**712 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **10/14/2002** Drilling End Date: **10/15/2002**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
7.875	**0**	**60**
7	**60**	**420**
6.75	**420**	**850**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**18**

Seal Method: **Gravity**

Sealed By: **ADC**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed**

Water Level: **523 ft.** below land surface on **2002-11-19** Measurement Method: **Unknown**

Packers: **Neoprene/burlap 50 & 740**

Type of Pump: **Submersible** Pump Depth (ft.): **640**

Well Tests: **Estimated** **Yield: 30 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
740-850	**trinity**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Associated Drilling Co.**

P. O. Box 1060
Manchaca, TX 78652

Driller Name: **Byron Benoit**

License Number: **1955**

Apprentice Number: **1955**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**topsoil**
1	**22**	**broken tan sandstone**
22	**24**	**void**
24	**40**	**broken tan sandstone**
40	**160**	**gray lime**
160	**220**	**broken tan lime**
220	**500**	**gray lime/shale**
500	**580**	**broken tan sandstone**
580	**680**	**gray lime**
680	**720**	**shale**
720	**740**	**tan sandstone**
740	**850**	**broken tan-light red sandstone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
4.5	**N**	**Plastic**	**-2 to 850**
SDR 17			
perf. from 740-850			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #111519

Owner:	**LYNN BROWN**	Owner Well #:	**No Data**
Address:	**10944 FITZHUGH RD AUSTIN, TX 78736**	Grid #:	**58-49-2**
Well Location:	**10944 FITZHUGH RD AUSTIN, TX 78736**	Latitude:	**30° 13' 40" N**
		Longitude:	**097° 57' 15" W**
Well County:	**Travis**	Elevation:	**1094 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **4/2/2007** Drilling End Date: **4/3/2007**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
10	**0**	**12**
6.75	**12**	**810**

Drilling Method: **Air Rotary**

Borehole Completion: **Open Hole**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**6**	**5**
6	**12**	**4**

Seal Method: **SLURRIED & POURED**

Sealed By: **CESAR RAMOS**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **135**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **STEEL TAPE**

Surface Completion: **Surface Sleeve Installed**

Water Level: **447 ft.** below land surface on **2007-04-04** Measurement Method: **Unknown**

Packers: **NEOPRENE 12**
NEOPRENE 380
NEOPRENE 720
NEOPRENE 725

Type of Pump: **Submersible** Pump Depth (ft.): **740**

Well Tests: **Jetted** **Yield: 20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Yes**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **BEE CAVE DRILLING**

185 ANGELFIRE DR
DRIPPING SPRINGS, TX 78620

Driller Name: **JIM BLAIR** License Number: **54416**

Apprentice Name: **CESAR RAMOS** Apprentice Number: **57534**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**2**	**TOPSOIL**
2	**12**	**CALICHE**
12	**365**	**GRAY LIMESTONE**
365	**370**	**GRAY CLAY**
370	**440**	**GRAY LIMESTONE**
440	**660**	**BROWN ROCK W/B 10 GPM TDS 1610**
660	**715**	**GRAY SHALE**
715	**810**	**GRAY ROCK W/B 20 GPM TDS 1000**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.) New/Used Type Setting From/To (ft.)
4.5 NEW PLASTIC 0-740
4.5 NEW SCREEN MFG. 740-800 .050
4.5 NEW PLASTIC 800-810

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #347346

Owner:	**Steve Meyer & Nancy Ebe**	Owner Well #:	**2**
Address:	**932 Hillside North Austin, TX 78736**	Grid #:	**58-49-2**
		Latitude:	**30° 13' 54" N**
Well Location:	**932 Hillside North Austin, TX 78736**	Longitude:	**097° 57' 12" W**
Well County:	**Travis**	Elevation:	**1174 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Irrigation**

Drilling Start Date: **11/11/2013** Drilling End Date: **11/15/2013**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**7.875**	**0**	**960**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**100**	**1hlpg4bnsl6typH**

Seal Method: **Pos. Displacement**

Sealed By: **Driller**

Distance to Property Line (ft.): **30**

Distance to Septic Field or other concentrated contamination (ft.): **200+**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **Measured**

Surface Completion: **Surface Sleeve Installed**

Water Level: **525 ft.** below land surface on **2013-11-13** Measurement Method: **Unknown**

Packers: **6MIL Poly 100'**
6MIL Poly 260'
6MIL Poly 400'
6MIL Poly 500'
6MIL Poly 600'
6MIL Poly / Shale Packer 740'

Type of Pump: **Submersible** Pump Depth (ft.): **840**

Well Tests: **Jetted** **Yield: 60+ GPM**

Water Quality:

Strata Depth (ft.)	Water Type
840'/960'	**Good**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Whisenant & Lyle Water Services**

P.O. Box 525
Dripping Springs, TX 78620

Driller Name: **Martin Lingle** License Number: **54813**

Apprentice Name: **Travis Haffelder**

Comments: **TDS 1450**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Topsoil**
1	**10**	**Brown Limestone**
10	**83**	**Gray Limestone**
83	**300**	**Light Gray Tan Limestone**
300	**365**	**Dark Gray Limestone**
365	**405**	**Light Gray Tan Limestone**
405	**580**	**Brown Limestone**
580	**680**	**Gray Tan Limestone**
680	**700**	**Gray Clay**
700	**760**	**Brown Gray Tan Limestone**
760	**780**	**Brown Limestone**
780	**830**	**Red Sandstone**
830	**880**	**Conglomerate**
880	**910**	**Red Sandstone**
910	**953**	**Conglomerate**
953	**960**	**Black Rock**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
4.5	**New**	**PVC-SDR 17IB**	**+2'/860'**
4.5	**New**	**PVC-17 Slotted .035**	**860'/960'**

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #430636

Owner:	**Michael Hatfield**	Owner Well #:	**No Data**
Address:	**11010 Tangleridge Circle Austin, TX 78736**	Grid #:	**58-49-2**
Well Location:	**11010 Tangleridge Circle Austin, TX 78736**	Latitude:	**30° 13' 47.38" N**
		Longitude:	**097° 57' 15.28" W**
Well County:	**Travis**	Elevation:	**1166 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **8/12/2016** Drilling End Date: **8/17/2016**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
10	**0**	**10**
6.75	**10**	**870**

Drilling Method: **Air Rotary**

Borehole Completion: **Perforated or Slotted**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**30**	**Cement 6 Bags/Sacks**
30	**60**	**Bentonite 3 Bags/Sacks**

Seal Method: **Poured**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **524 ft.** below land surface on **2016-08-24** Measurement Method: **Electric Line**

Packers: **Rubber at 50 ft.**
Rubber at 500 ft.
Rubber at 790 ft.
Rubber at 810 ft.

Type of Pump: **Submersible** Pump Depth (ft.): **780**

Well Tests: **Jetted** **Yield: 20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
830 - 870	**Trinity**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled 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 report(s) being returned for completion and resubmittal.

Company Information: **Bee Cave Drilling, Inc.**

185 Angel Fire Dr.
Dripping Springs, TX 78620

Driller Name: **Jim Blair** License Number: **54416**

Comments: **No Data**

Report Amended on 8/30/2016 by Request #19654

Report Amended on 8/30/2016 by Request #19657

Report Amended on 8/31/2016 by Request #19658

Report Amended on 8/31/2016 by Request #19663

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**top soil**
1	**60**	**tan lime**
60	**360**	**grey lime**
360	**740**	**grey sandstone 500'-600' WB 10 gpm 1200 tds**
740	**790**	**grey clay**
790	**830**	**grey/tan sandstone**
830	**870**	**grey/tan/coarse sand/gravel 810'-870' WB 20 gpm 800 tds**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**sdr17**	**0**	**810**
4.5	**Perforated or Slotted**	**New Plastic (PVC)**	**sdr17**	**810**	**870**

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

ATTACHMENT -

Disposal Area Well ID

Orchard Ranch WWTF - USGS Well ID Attachment						
Map Reference Number	Well ID #	Well Use	Producing Y/N	Open, cased, capped, or Plugged?	Proposed Best Management Practice	Well Log Included? Y/N
1	347346	Irrigation	Unknown	Unknown	Buffer requirment will be met	Y
2	5849113, 5849226	Unknown, Withdrawl of water	Unknown	Unknown, Plugged	Buffer requirment will be met/ Plugged	Y
3	430636	Domestic	Unknown	Unknown	Buffer requirment will be met	Y
4	111519	Domestic	Unknown	Unknown	Buffer requirment will be met	Y
5	5849105	Domestic	Unknown	Unknown	Buffer requirment will be met	Y
6	5849116	Domestic	Unknown	Unknown	Buffer requirment will be met	Y
7	5849106, 5849107	Domestic, Stock	Unknown	Unknown	Buffer requirment will be met	Y
8	12862, 12863, 12864, 12865	Unknwown	Unknown	Plugged	Plugged	Y
9	59261	Domestic	Unknown	Unknown	Buffer requirment will be met	Y

ATTACHMENT -

Groundwater Quality

Report

Orchard Ranch WWTF – Groundwater Quality Report

Background

The Orchard Ranch WWTF will serve a new development that generates 50,500 gpd of domestic strength wastewater at full buildout. The treated effluent will be disposed of via subsurface irrigation of 11.60 acres at full buildout.

Nearby Well Information

A USGS map showing all wells within 1 mile of the property boundaries has been included with this application. A well reference list with well attributes such as the well ID number, well depth, well status, and proposed management practice is provided with this application. There are no wells located within 500' of the disposal areas. The well logs for the wells on the reference list are included with this application. There are no monitoring wells available, and therefore no groundwater quality baseline data has been established. Below is a portion of the USGS map depicting the WWTF site, effluent disposal areas, 1-mile radius from the property boundaries, and well locations.

Impact on Local Groundwater Resources

The wastewater effluent is used to irrigate publicly accessible fields. The effluent applied to the land has a maximum application rate of 0.1 gal/sqft/day to ensure the effluent is taken up by the crop root systems and ensures that potential contaminants do not migrate below the root zone. The treated effluent will be stored in a leak-proof certified tank prior to being conveyed to the disposal areas.

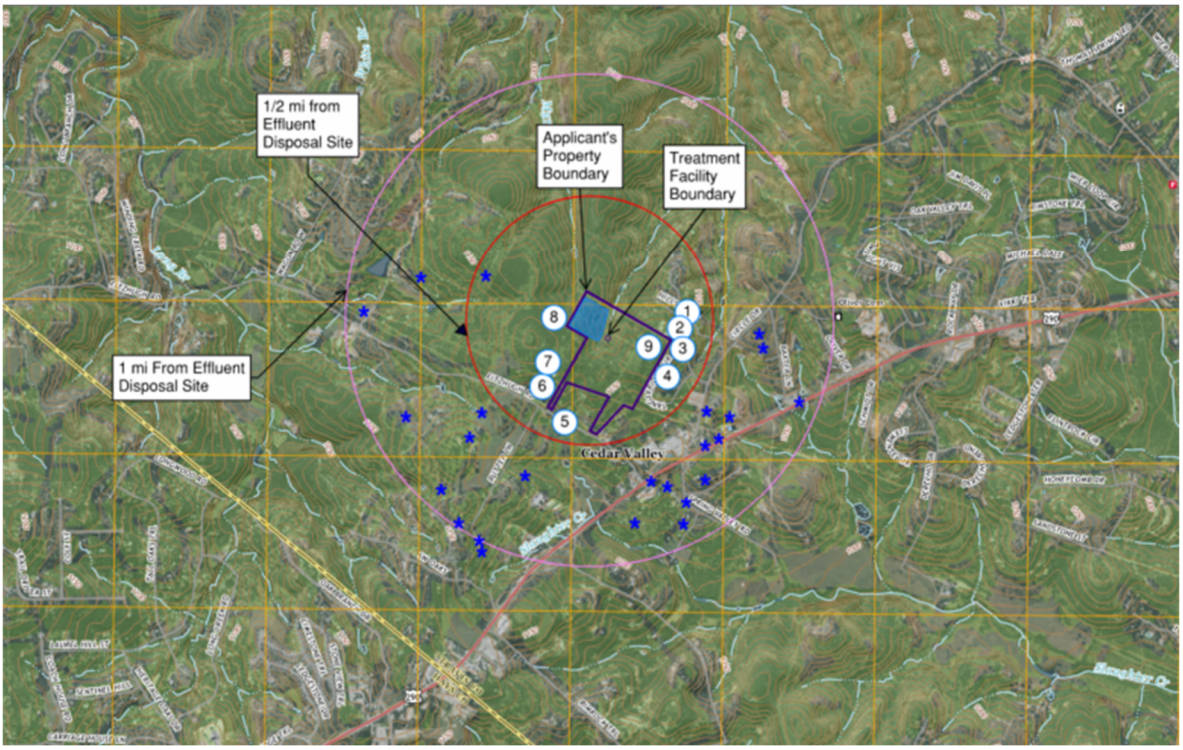

Figure 1: Excerpt from USGS Well Map

ATTACHMENT -

USDA Soil Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Travis County, Texas

May 7, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

Preface.....2
How Soil Surveys Are Made.....5
Soil Map.....8
Soil Map.....9
Legend.....10
Map Unit Legend.....11
Map Unit Descriptions.....11
Travis County, Texas.....13
BlD—Brackett-Rock outcrop complex, 1 to 12 percent slopes.....13
TcA—Eckrant and Speck soils, 0 to 2 percent slopes.....15
References.....18

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:2,120 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Travis County, Texas
Survey Area Data: Version 25, Sep 5, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BID	Brackett-Rock outcrop complex, 1 to 12 percent slopes	11.7	99.9%
TcA	Eckrant and Speck soils, 0 to 2 percent slopes	0.0	0.1%
Totals for Area of Interest		**11.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Travis County, Texas

BID—Brackett-Rock outcrop complex, 1 to 12 percent slopes

Map Unit Setting

National map unit symbol: 2yltz
Elevation: 820 to 1,330 feet
Mean annual precipitation: 33 to 37 inches
Mean annual air temperature: 65 to 69 degrees F
Frost-free period: 220 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Brackett and similar soils: 68 percent
Rock outcrop: 20 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Brackett

Setting

Landform: Ridges
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile

A - 0 to 6 inches: gravelly clay loam
Bw - 6 to 18 inches: clay loam
Cr - 18 to 60 inches: bedrock

Properties and qualities

Slope: 1 to 12 percent
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 90 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: R081CY355TX - Adobe 29-35 PZ
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Limestone

Typical profile

R - 0 to 48 inches: bedrock

Properties and qualities

Slope: 3 to 12 percent
Depth to restrictive feature: 0 to 2 inches to lithic bedrock
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

San saba

Percent of map unit: 4 percent
Landform: Ridges
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R081CY356TX - Blackland 29-35 PZ
Hydric soil rating: No

Volente

Percent of map unit: 4 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Eckrant

Percent of map unit: 4 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R081CY363TX - Steep Rocky 29-35 PZ
Hydric soil rating: No

TcA—Eckrant and Speck soils, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2ylv5
Elevation: 800 to 1,300 feet
Mean annual precipitation: 33 to 37 inches
Mean annual air temperature: 65 to 69 degrees F
Frost-free period: 220 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Eckrant and similar soils: 63 percent
Speck and similar soils: 32 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eckrant

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Typical profile

A1 - 0 to 5 inches: very stony clay
A2 - 5 to 8 inches: extremely flaggy clay
R - 8 to 30 inches: bedrock

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 6 to 14 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 0.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D

Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Description of Speck

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Typical profile

A - 0 to 14 inches: clay loam
Bt - 14 to 18 inches: gravelly clay
R - 18 to 40 inches: bedrock

Properties and qualities

Slope: 0 to 2 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: 14 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: D
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Minor Components

Crawford

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY358TX - Deep Redland 29-35 PZ
Hydric soil rating: No

Rock outcrop

Percent of map unit: 2 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve

Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 23, 2024

Mr. Ashraya Upadhyaya, E.I.T.
Project Engineer
JA Wastewater
5765 Fig Way
Arvada, Colorado 80002

RE: Application for Proposed Permit No.: WQ0016596001
Applicant Name: Clayton Properties Group, Inc. (CN600625057)
Site Name: Orchard Ranch WWTF (RN112025010)
Type of Application: New

VIA EMAIL

Dear Mr. Upadhyaya:

We have received the application for the above referenced permit, and it is currently under review. Your attention to the following item(s) are requested before we can declare the application administratively complete. Please submit responses to the following items via email.

1. Administrative Report 1.0, Application Fee on page 2: We were unable to confirm payment of the application processing fee. The filing fee for your application is $550.00. Please submit payment to: TCEQ, Revenue Section (MC 214), P.O. Box 13088, Austin, Texas 78711-3088. Also, provide a copy of the check or proof of payment along with the response to this letter.

   See attached vouchers.

2. Administrative Report 1.0, Section 9, item D: The owner of the land is listed as Mr. Adam Boenig. If Mr. Adam Boenig is the not the owner of land and Clayton Properties Group, Inc., is the owner of the land where the facility is located, please submit a revised page 7 indicating the owner of the land as Clayton Properties Group, Inc. If Mr. Adam Boenig is the owner of land, you must provide a copy of a long-term lease agreement between Clayton Properties Group, Inc and Mr. Adam Boenig giving Clayton Properties Group, Inc. use of the land for the duration of the registration. The lease agreement must contain a term for at least the length of the registration, identify number of acres, identify property by legal description of map, include the signatures of both parties, and clearly authorize to use the land for the purpose of operating the facility. If Clayton Properties Group, Inc. is the owner of the land where the facility is located, please submit a revised page 7 indicating the owner of the land as Clayton Properties Group, Inc. without the name of Mr. Adam Boenig.

   Clayton Properties Group, Inc. is confirmed as the landowner. See revised page 7 of Admin form.

3. Core Dara Form (CDF), Section III, Item 27 & 28: According to the latitude and longitude coordinates provided, the description of the facility's location appears to be incorrect. The facility appears to be located Grimes County, Texas. Please submit a revised copy of page 2 of the CDF correcting this item.

   See revised page 2 of Core Data Form.

4. The following is a portion of the NORI which contains information relevant to your application. Please read it carefully and indicate if it contains any errors or omissions. The complete notice will be sent to you once the application is declared administratively complete.

   APPLICATION. Clayton Properties Group, Inc., 6720 Vaught Ranch Road, Suite 200, Austin, Texas 78730, has applied to the Texas Commission on Environmental Quality (TCEQ) for proposed Texas Land Application Permit (TLAP) No. WQ0016596001 to authorize the disposal of treated wastewater at a volume not to exceed a daily average flow of 50,500 gallons per day via irrigation of 11.60 acres of land. The facility and disposal area will be located approximately 3,360 feet northwest from the intersection of Circle Drive and U.S. Highway 290, in the city of Austin, in Travis County, Texas 78736. TCEQ received this application on August 9, 2024. The permit application will be available for viewing and copying at Dripping Springs Community Library, circulation desk, 501 Sportsplex Drive, Dripping Springs, Texas prior to the date this notice is published in the newspaper. The application, including any updates, and associated notices are available electronically at the following webpage: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tlap-applications. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For the exact location, refer to the application.
   (link to map is pending applicant response)
   Further information may also be obtained from Clayton Properties Group, Inc. at the address stated above or by calling Mr. Ashraya Upadhyaya, E.I.T., Project Engineer, JA Wastewater, at 903-414-0307.

   See improved paragraph:
   "The facility and disposal area will be located approximately 3,360 feet northwest from the intersection of Circle Drive and U.S. Highway 290, in Cedar Valley, in Travis County, Texas 78736"

5. The application indicates that public notices in Spanish are required. After confirming the portion of the NORI above does not contain any errors or omissions, please use the attached template to translate the NORI into Spanish. Only the first and last paragraphs are unique to this application and require translation. Please provide the translated Spanish NORI in a Microsoft Word document.

   See Spanish translation word document.

Please submit the complete response, addressed to my attention by September 6, 2024. If you should have any questions, please do not hesitate to contact me by phone at (512) 239-4658 or by email at rachel.ellis@tceq.texas.gov

Sincerely,

Rachel Ellis

Rachel Ellis
Applications Review and Processing Team (MC148)
Water Quality Division
Texas Commission of Environmental Quality

(512) 320-8833		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Orchard Ranch WWTF

23. Street Address of the Regulated Entity: ***(No PO Boxes)***								
	City		**State**		**ZIP**		**ZIP + 4**	
24. County								

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:	3,360' NW from the intersection of Circle Dr and US 290 in Travis County				
26. Nearest City			**State**	**Nearest ZIP Code**	
Dripping Springs			TX	78736	

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:	30.231783°		**28. Longitude (W) In Decimal:**	-97.958772°	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	13	54.42	97	57	31.58

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
4952		221320	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Wastewater Treatment

34. Mailing Address:	**6720 Vaught Ranch Rd #200**							
	City	**Austin**	**State**	**TX**	**ZIP**	**78730**	**ZIP + 4**	
35. E-Mail Address:	**adamb@brohnhomes.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(512) 320-8833		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

Your transaction is complete. Thank you for using TCEQ ePay.

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt and the vouchers for your records. An email receipt has also been sent.

Transaction Information

Trace Number:	582EA000619297
Date:	07/30/2024 10:10 AM
Payment Method:	CC - Authorization 0000050969
ePay Actor:	BRAD BOENIG
Actor Email:	bradb@brohnhomes.com
IP:	71.42.240.26
TCEQ Amount:	$550.00
Texas.gov Price:	$562.63*

* This service is provided by Texas.gov, the official website of Texas. The price of this service includes funds that support the ongoing operations and enhancements of Texas.gov, which is provided by a third party in partnership with the State.

Payment Contact Information

Name:	BRAD BOENIG
Company:	BROHN HOMES
Address:	6720 VAUGHT RANCH RD STE 200, AUSTIN, TX 78730
Phone:	512-320-8833

Cart Items

Click on the voucher number to see the voucher details.

Voucher	Fee Description	AR Number	Amount
714899	WW PERMIT - FACILITY WITH FLOW >= .05 & < .10 MGD - NEW AND MAJOR AMENDMENTS		$500.00
714900	30 TAC 305.53B WQ NOTIFICATION FEE		$50.00
		TCEQ Amount:	$550.00

ePay Again | Exit ePay

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt for your records.

© 2002-2024 Texas Commission on Environmental Quality

Print this voucher for your records. If you are sending the TCEQ hardcopy documents related to this payment, include a copy of this voucher.

Transaction Information

Voucher Number:	714899
Trace Number:	582EA000619297
Date:	07/30/2024 10:10 AM
Payment Method:	CC - Authorization 0000050969
Voucher Amount:	$500.00
Fee Type:	WW PERMIT - FACILITY WITH FLOW >= .05 & < .10 MGD - NEW AND MAJOR AMENDMENTS
ePay Actor:	BRAD BOENIG
Actor Email:	bradb@brohnhomes.com
IP:	71.42.240.26

Payment Contact Information

Name:	BRAD BOENIG
Company:	BROHN HOMES
Address:	6720 VAUGHT RANCH RD STE 200, AUSTIN, TX 78730
Phone:	512-320-8833

Site Information

Site Name:	ORCHARD RANCH WWTF
Site Location:	3360 NW FROM THE INTERSECTION OF CIR DR & US 290 IN TRAVIS CO

Customer Information

CN:	CN600625057
Customer Address:	6720 VAUGHT RANCH RD STE 200, AUSTIN, TX 78730

Close

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Print this voucher for your records. If you are sending the TCEQ hardcopy documents related to this payment, include a copy of this voucher.

Transaction Information

Voucher Number:	714900
Trace Number:	582EA000619297
Date:	07/30/2024 10:10 AM
Payment Method:	CC - Authorization 0000050969
Voucher Amount:	$50.00
Fee Type:	30 TAC 305.53B WQ NOTIFICATION FEE
ePay Actor:	BRAD BOENIG
Actor Email:	bradb@brohnhomes.com
IP:	71.42.240.26

Payment Contact Information

Name:	BRAD BOENIG
Company:	BROHN HOMES
Address:	6720 VAUGHT RANCH RD STE 200, AUSTIN, TX 78730
Phone:	512-320-8833

Close

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3. Do the students at these schools attend a bilingual education program at another location?

   ☐ Yes ☒ No

4. Would the school be required to provide a bilingual education program but the school has waived out of this requirement under 19 TAC §89.1205(g)?

   ☐ Yes ☒ No

5. If the answer is **yes** to **question 1, 2, 3, or 4**, public notices in an alternative language are required. Which language is required by the bilingual program? Spanish

F. Plain Language Summary Template

Complete the Plain Language Summary (TCEQ Form 20972) and include as an attachment.

Attachment: Plain Language Summary

G. Public Involvement Plan Form

Complete the Public Involvement Plan Form (TCEQ Form 20960) for each application for a **new permit or major amendment to a permit** and include as an attachment.

Attachment: Public Involvement Plan Form

Section 9. Regulated Entity and Permitted Site Information (Instructions Page 29)

A. If the site is currently regulated by TCEQ, provide the Regulated Entity Number (RN) issued to this site. **RN** Click to enter text.

Search the TCEQ's Central Registry at http://www15.tceq.texas.gov/crpub/ to determine if the site is currently regulated by TCEQ.

B. Name of project or site (the name known by the community where located):

Orchard Ranch WWTF

C. Owner of treatment facility: Clayton Properties Group, Inc.

Ownership of Facility: ☐ Public ☒ Private ☐ Both ☐ Federal

D. Owner of land where treatment facility is or will be:

Prefix: Click to enter text. Last Name, First Name: Clayton Properties Group, Inc.

Title: Click to enter text. Credential: Click to enter text.

Organization Name: Clayton Properties Group, Inc.

Mailing Address: 6720 Vaught Ranch Rd #200 City, State, Zip Code: Austin, TX 78730

Phone No.: 512 320 8833 E-mail Address: adamb@brohnhomes.com

If the landowner is not the same person as the facility owner or co-applicant, attach a lease agreement or deed recorded easement. See instructions.

Attachment: Click to enter text.

Orchard Ranch WWTF - Original Photographs

1 Treatment Facility Site

2 Effluent Disposal Site

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.0

For any questions about this form, please contact the Domestic Wastewater Permitting Team at 512-239-4671.

The following information is required for all renewal, new, and amendment applications.

Section 1. Permitted or Proposed Flows (Instructions Page 43)

A. Existing/Interim I Phase

Design Flow (MGD): NA

2-Hr Peak Flow (MGD): NA

Estimated construction start date: NA

Estimated waste disposal start date: NA

B. Interim II Phase

Design Flow (MGD): NA

2-Hr Peak Flow (MGD): NA

Estimated construction start date: NA

Estimated waste disposal start date: NA

C. Final Phase

Design Flow (MGD): 0.0505

2-Hr Peak Flow (MGD): 0.202

Estimated construction start date: Aug 2025

Estimated waste disposal start date: June 2026

D. Current Operating Phase

Provide the startup date of the facility: NA

Section 2. Treatment Process (Instructions Page 43)

A. Current Operating Phase

Provide a detailed description of the treatment process. **Include the type of treatment plant, mode of operation, and all treatment units.** Start with the plant's head works and

Orchard Ranch WWTF – Engineering Report

Background

Orchard Ranch WWTF is a proposed wastewater treatment facility located in Travis County, Texas. The facility is seeking a Texas Land Application Permit (TLAP) to dispose of 50,500 gallons per day at full buildout of treated, domestic strength wastewater via subsurface irrigation.

Site Location

The facility is located approximately 3,600' NW from the intersection of Circle Dr and US 290 near Dripping Springs in Travis County, Texas. A 7.5-minute topographic map has been included with this report.

Site Drawing

A site drawing showing the wastewater facility, effluent storage tank, 150' buffer zone is included with this report.

Geology/Soils

The proposed site does not have any notable geologic features like caves, faults, or sinkholes. A USDA Soils Report has been included with this report.

Groundwater Quality

The minimum required buffer zone from the existing water wells will be met. Prior to being conveyed to the disposal areas, the treated effluent will be stored in a leak-proof tank. The wastewater effluent is used to irrigate publicly accessible areas. The effluent applied to the land has a maximum application rate, as a permit limit, to ensure the effluent is taken up by the crop root systems. The agronomic application rate ensures that potential contaminants do not migrate below the root zone. A USGS map showing the water wells and a water well reference list are included with this application.

Agricultural Practice

The facility will use an application rate of 0.1 gallons/square foot/day. A total of 11.6 acres of disposal area will be required for the full buildout flow of 50,500 gallons per day. The disposal areas will be seeded with Bermuda and winter rye grasses. The growing season for Bermuda grass is from April to October. Growing season for winter rye is November through March, the fields are never left fallow. The proposed design total nitrogen loading rate is 1.08 lb/acre/day or 397 lb/acre/year. Bermuda grass can utilize large amounts of nitrogen, with excellent yield response at 400 lbs/ acre/ year. (See Nutrient Demand High in Bermudagrass by Darst, et al. 1996). To most effectively use nitrogen, other nutrients are required such as phosphorus and potassium. These nutrient levels will be monitored through periodic soil analysis and supplemented if required. Additional fertilizer is not anticipated but a manual spreader would be used if needed. Minimum mowing height will be such that the grass is not scorched, approximately 3". The maximum growing height will be determined by the operator, 18" is anticipated maximum height prior to mowing. Bermuda grass will produce about 1 ton per acre with no applied fertilizer. Winter Rye produces 2 to 3 tons per acre. The irrigation system will be designed according to Standard Irrigation Best Management Practices as stated in 30 TAC 309.20b(5)(B).

Soil Testing

Soil analysis has been performed at the site, and a copy of the report has been included.

Equalization Basin and Chlorine Contact Chamber Sizing

Tankage Sizing

Project	Orchard Ranch	Flow	50500	gpd
Date	7/22/2024	2 hr peak	202000	gpd
Phase #	1			

Equalization

10521 gal *2.5Q for 2 hrs

Chlorine sizing:

2806 gal *4Q for 20 min

j & a WASTEWATER

Treatment Sizing Calculations - BioWin Results

INFLUENT
Flow- 55,000 GPD
BOD- 350 mg/L
TSS - 300 mg/L
TKN - 70 mg/L
TP- 9 mg/L
Assumed parameters
Avg Water Temperature - 18C
Inlet pH - 7.5

BIOWIN OUTPUT
SRT - 18 days
Aeration Tank Volume: 16000 Gallons
Aeration Tank MLSS: 9947 mg/L
Aeration Tank pH- 6.25

MBR Tank Volume - 6000 Gallons
MBR Membranes - Toray NHP210-300S
MBR Tank MLSS - 12000 mg/L
Flux rate: 12.5 GFD
RAS - 400% of influent

pH needs to be adjusted to avoid low pH limitation for autotrophs.

WAS - 963 GPD

EFFLUENT QUALITY
BOD - <5 mg/L
TSS- < 5mg/L (0 mg/L as per BioWin)
Turbidity - 0.1 - 0.5 NTU
Ammonia - 0.11 mg/L

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Solids Management Calculations

Tankage Sizing

Project	Orchard Ranch WWTF		Flow	50500	gpd
Date	7/17/2024		2 hr peak	202000	gpd
Phase #	1				
Flow	50500	GPD			
	0.0505	MGD			
	35.047	GPM			

Sludge Holding

Using 2% Flow for WAS Rate

WAS Rate	1010	gpd
Sludge Storage Days	10	days
Sludge Gallons Req'd	10100	gal
Select Tank Size	10100	gal
Days Storage	10	days

DOMESTIC WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.1

The following information is required for new and amendment major applications.

Section 1. Justification for Permit (Instructions Page 57)

A. Justification of permit need

Provide a detailed discussion regarding the need for any phase(s) not currently permitted. Failure to provide sufficient justification may result in the Executive Director recommending denial of the proposed phase(s) or permit.

The development that the Orchard Ranch WWTF will serve consists of 265 multi-family units that will generate 190 gpd/unit of flow totaling 50,500 gpd at ultimate buildout. This is in line with other communities in the general vicinity that uses similar flow generation. There are no facilities within 3 miles that have capacity, and/or it is not economically feasible to transport the waste to an existing facility. A site drawing of the development is included with the application.

B. Regionalization of facilities

For additional guidance, please review TCEQ's Regionalization Policy for Wastewater Treatment[1].

Provide the following information concerning the potential for regionalization of domestic wastewater treatment facilities:

1. Municipally incorporated areas

If the applicant is a city, then Item 1 is not applicable. Proceed to Item 2 Utility CCN areas.

Is any portion of the proposed service area located in an incorporated city?

☐ Yes ☒ No ☐ Not Applicable

If yes, within the city limits of: Click to enter text.

If yes, attach correspondence from the city.

Attachment: Click to enter text.

If consent to provide service is available from the city, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the city versus the cost of the proposed facility or expansion attached.

Attachment: Click to enter text.

2. Utility CCN areas

Is any portion of the proposed service area located inside another utility's CCN area?

☐ Yes ☒ No

[1] https://www.tceq.texas.gov/permitting/wastewater/tceq-regionalization-for-wastewater

July 25, 2024

Hays County Water Control & Improvement District No.1
3300 Bee Caves Rd, Suite 650 #189
Austin, TX 78746

Subject: Hays County WCID No.1 WWTP

To Whom it May Concern,

Clayton Properties Group Inc. dba Brohn Homes is applying for a TLAP permit and is located within three miles of the Hays County WCID No.1 WWTP. It is our understanding that the WWTP may not have the capacity and doesn't have the infrastructure (collection system) to accept waste from the new proposed subdivision. Please confirm in writing at your earliest convenience.

Sincerely,

Ashraya Upadhyaya, E.I.T
Project Engineer
JA Wastewater
5765 Fig Way
Arvada, CO 80002
Firm Number F-23372

Orchard Ranch WWTF – Site Preparation Report

Background

Orchard Ranch WWTF is a proposed wastewater treatment facility located in Travis County, Texas. The facility is seeking a Texas Land Application Permit (TLAP) to dispose of 50,500 gallons per day at full buildout of treated, domestic strength wastewater via subsurface irrigation.

Site Location

The facility is located approximately 3,600' NW from the intersection of Circle Dr and US 290 near Dripping Springs in Travis County, Texas. A 7.5-minute topographic map has been included with this report.

Site Drawing

A site drawing showing the wastewater facility, effluent storage tank, 150' buffer zone is included with this report.

Geology/Soils

The proposed site does not have any notable geologic features like caves, faults, or sinkholes. A USDA Soils Report has been included with this report.

Groundwater Quality

The minimum required buffer zone from the existing water wells will be met. Prior to being conveyed to the disposal areas, the treated effluent will be stored in a leak-proof tank. The wastewater effluent is used to irrigate publicly accessible areas. The effluent applied to the land has a maximum application rate, as a permit limit, to ensure the effluent is taken up by the crop root systems. The agronomic application rate ensures that potential contaminants do not migrate below the root zone. A USGS map showing the water wells and a water well reference list are included with this application.

Site Preparation Plan

Prior to construction of the subsurface area drip dispersal system, a site preparation plan will be implemented to address all site-specific limitations and ensure system suitability and efficiency. A detailed topographic survey will identify natural drainage patterns, and a grading plan will ensure that the runoff is diverted away from the dispersal zones. Soil profile analysis will identify any restrictive horizons, and appropriate soil amendments, or deep tillage techniques will be utilized to enhance water infiltration. Imported soil will be tested, verified, and seeded with existing soil, and evenly distributed to ensure compatibility and optimal soil conditions. Existing vegetation will be surveyed, removed according to a clearing plan, and erosion control measures will be implemented to stabilize the site post-clearing per the requirements of 30 TAC 222.75.

j & a WASTEWATER

Orchard Ranch WWTF – Site Preparation Report

Background

Orchard Ranch WWTF is a proposed wastewater treatment facility located in Travis County, Texas. The facility is seeking a Texas Land Application Permit (TLAP) to dispose of 50,500 gallons per day at full buildout of treated, domestic strength wastewater via subsurface irrigation.

Site Location

The facility is located approximately 3,600' NW from the intersection of Circle Dr and US 290 near Dripping Springs in Travis County, Texas. A 7.5-minute topographic map has been included with this report.

Site Drawing

A site drawing showing the wastewater facility, effluent storage tank, 150' buffer zone is included with this report.

Geology/Soils

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Groundwater Quality

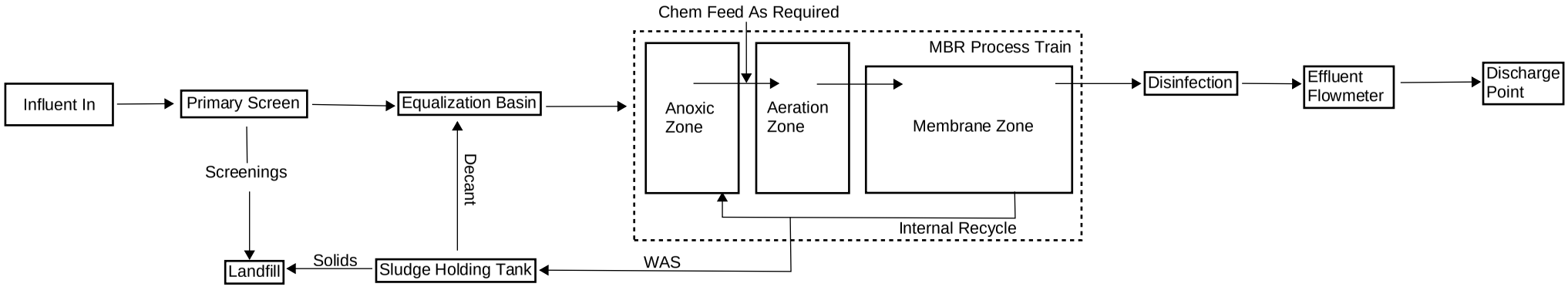
The minimum required buffer zone from the existing water wells will be met. Prior to being conveyed to the disposal areas, the treated effluent will be stored in a leak-proof tank. The wastewater effluent is used to irrigate publicly accessible areas. The effluent applied to the land has a maximum application rate, as a permit limit, to ensure the effluent is taken up by the crop root systems. The agronomic application rate ensures that potential contaminants do not migrate below the root zone. A USGS map showing the water wells and a water well reference list are included with this application.

Site Preparation Plan

Prior to construction of the subsurface area drip dispersal system, a site preparation plan will be implemented to address all site-specific limitations and ensure system suitability and efficiency. A detailed topographic survey will identify natural drainage patterns, and a grading plan will be executed to direct rainfall away from the dispersal zones. Soil profile analysis will identify any restrictive horizons, and appropriate soil amendments ,or deep tillage techniques will be utilized to enhance water infiltration. Imported soil will be tested, verified, and seeded with existing soil, and evenly distributed to ensure compatibility and optimal soil conditions. Existing vegetation will be surveyed, removed according to a clearing plan, and erosion control measures will be implemented to stabilize the site post-clearing per the requirements of 30 TAC 222.75.

j & a WASTEWATER

Orchard Ranch WWTF - Process Flow Diagram - Final Phase - 50,500 gpd



B. Proposed organic loading

This table must be completed if this application is for a facility that is not in operation or if this application is to request an increased flow that will impact organic loading.

Table 1.1(1) – Design Organic Loading

Source	Total Average Flow (MGD)	Influent BOD5 Concentration (mg/l)
Municipality		
Subdivision	0.0505	350
Trailer park – transient		
Mobile home park		
School with cafeteria and showers		
School with cafeteria, no showers		
Recreational park, overnight use		
Recreational park, day use		
Office building or factory		
Motel		
Restaurant		
Hospital		
Nursing home		
Other		
TOTAL FLOW from all sources	0.0505	
AVERAGE BOD_5 from all sources		350

Section 3. Proposed Effluent Quality and Disinfection (Instructions Page 59)

A. Existing/Interim I Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: NA

Total Suspended Solids, mg/l: NA

Ammonia Nitrogen, mg/l: NA

Total Phosphorus, mg/l: NA

Dissolved Oxygen, mg/l: NA

Other: NA

B. Interim II Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: NA

Total Suspended Solids, mg/l: NA

Ammonia Nitrogen, mg/l: NA

Total Phosphorus, mg/l: NA

Dissolved Oxygen, mg/l: NA

Other: NA

C. Final Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: 20

Total Suspended Solids, mg/l: 20

Ammonia Nitrogen, mg/l: NA

Total Phosphorus, mg/l: NA

Dissolved Oxygen, mg/l: >2

Other: NA

D. Disinfection Method

Identify the proposed method of disinfection.

☒ Chlorine: 1-4 mg/l after 20 minutes detention time at peak flow

Dechlorination process: OR,

☒ Ultraviolet Light: 10 seconds contact time at peak flow

☐ Other: NA

Section 4. Design Calculations (Instructions Page 59)

Attach design calculations and plant features for each proposed phase. Example 4 of the instructions includes sample design calculations and plant features.

Attachment: Design Calculation

Section 5. Facility Site (Instructions Page 60)

A. 100-year floodplain

Will the proposed facilities be located above the 100-year frequency flood level?

☒ Yes ☐ No

If no, describe measures used to protect the facility during a flood event. Include a site map showing the location of the treatment plant within the 100-year frequency flood level. If applicable, provide the size and types of protective structures.

Click to enter text.

Solids Management Calculations

Tankage Sizing

Project	Orchard Ranch WWTF		Flow	50500	gpd
Date	7/17/2024		2 hr peak	202000	gpd
Phase #	1				
Flow	50500	GPD			
	0.0505	MGD			
	35.047	GPM			

Sludge Holding

Using 2% Flow for WAS Rate

WAS Rate	1010	gpd
Sludge Storage Days	10	days
Sludge Gallons Req'd	10100	gal
Select Tank Size	10100	gal
Days Storage	10	days

Orchard Ranch WWTF

Wastewater Treatment Facility Process Description

Section 2 – Treatment Process

Treatment Process Description:

Orchard Ranch WWTF will be an MBR system consisting of several process trains. The system will have a primary screen, equalization tanks, multiple process trains consisting of anoxic, aeration, membrane zones, and sludge holding tanks. The facility will utilize UV or Chlorine disinfection. The design will be in accordance with Texas Administrative Code Title 30, Part 1: Texas Commission on Environmental Quality (TCEQ) Chapter 217 (Design Criteria for Domestic Wastewater Systems).

A. Treatment Unit Sizing

Final Phase – 50,500 GPD

Headworks with Screening	
Equalization Tank	(1) 12’ dia x 13’ tall – 14,000-gallon capacity
Sludge Holding Tank	(1) 12’ dia x 12.5’ tall – 11,000-gallon capacity
Process Units	(2) – 30’ x 10’ x 8.5’ SWD – 38,000 gallons
Chlorine Contact Chamber	(1) – 8’ x 8’ x 6’ SWD – 3,000-gallon capacity

Required only if Chlorine used as disinfection method

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.3: SUBSURFACE AREA DRIP DISPERSAL (SADDS) LAND DISPOSAL OF EFFLUENT

The following **is required** for **new and major amendment** subsurface area drip dispersal system permit applications. Renewal and minor amendments applicants may be asked for the worksheet on a case by case basis.

NOTE: All applicants proposing new/amended subsurface disposal MUST complete and submit Worksheet 7.0. This worksheet applies to any subsurface disposal system that **meets** the definition of a subsurface area drip dispersal system as defined in *30 TAC Chapter 222, Subsurface Area Drip Dispersal System.*

Section 1. Administrative Information (Instructions Page 75)

A. Provide the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the owner of the treatment facility:

B. Clayton Properties Group, Inc dba Brohn Homes Is the owner of the land where the treatment facility is located the same as the owner of the treatment facility?

☒ Yes ☐ No

If **no**, provide the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the owner of the land where the treatment facility is located.

Click to enter text.

C. Owner of the subsurface area drip dispersal system: Clayton Properties Group, Inc dba Brohn Homes Click to enter text.

D. Is the owner of the subsurface area drip dispersal system the same as the owner of the wastewater treatment facility or the site where the wastewater treatment facility is located?

☒ Yes ☐ No

If **no**, identify the names of all corporations or other business entities managed, owned, or otherwise closely related to the entity identified in Item 1.C.

Click to enter text.

E. Owner of the land where the subsurface area drip dispersal system is located: Clayton Properties Group, Inc dba Brohn Homes

F. Is the owner of the land where the subsurface area drip dispersal system is located the same as owner of the wastewater treatment facility, the site where the wastewater treatment facility is located, or the owner of the subsurface area drip dispersal system?

☒ Yes ☐ No

If **no**, identify the name of all corporations or other business entities managed, owned, or otherwise closely related to the entity identified in item 1.E.

Click to enter text.

Section 2. Subsurface Area Drip Dispersal System (Instructions Page 75)

A. Type of system

☒ Subsurface Drip Irrigation

☐ Surface Drip Irrigation

☐ Other, specify:

B. Irrigation operations

Application area, in acres: 11.6

Infiltration Rate, in inches/hour: 1.02

Average slope of the application area, percent (%): 1-5

Maximum slope of the application area, percent (%): 5-8

Storage volume, in gallons: 151,500

Major soil series: D

Depth to groundwater, in feet: min 7 ft

C. Application rate

Is the facility located **west** of the boundary shown in *30 TAC § 222.83* **and** also using a vegetative cover of non-native grasses over seeded with cool season grasses during the winter months (October-March)?

☒ Yes ☐ No

If yes, then the facility may propose a hydraulic application rate not to exceed 0.1 gal/square foot/day.

Is the facility located **east** of the boundary shown in *30 TAC § 222.83* **or** in any part of the state when the vegetative cover is any crop other than non-native grasses?

☐ Yes ☐ No

If **yes**, the facility must use the formula in *30 TAC §222.83* to calculate the maximum hydraulic application rate.

Do you plan to submit an alternative method to calculate the hydraulic application rate for approval by the executive director?

☐ Yes ☒ No

Hydraulic application rate, in gal/square foot/day: See Engineering Report

Nitrogen application rate, in lbs/gal/day: See Engineering Report

D. Dosing information

Number of doses per day: 96

Dosing duration per area, in hours: 0.017 i.e. 1 min

Rest period between doses, in hours: 0.25 i.e. 15 mins

Dosing amount per area, in inches/day: 0.16

Number of zones: 12

Does the proposed subsurface drip irrigation system use tree vegetative cover as a crop?

☐ Yes ☒ No

If **yes**, provide a vegetation survey by a certified arborist. Please call the Water Quality Assessment Team at (512) 239-4671 to schedule a pre-application meeting.

Attachment: Click to enter text.

Section 3. Required Plans (Instructions Page 75)

A. Recharge feature plan

Attach a Recharge Feature Plan with all information required in *30 TAC §222.79*.

Attachment: See Recharge Feature Plan

B. Soil evaluation

Attach a Soil Evaluation with all information required in *30 TAC §222.73*.

Attachment: See Soils Analysis

C. Site preparation plan

Attach a Site Preparation Plan with all information required in *30 TAC §222.75*.

Attachment: See Soils Preparation Report and Engineering Report

D. Soil sampling/testing

Attach soil sampling and testing that includes all information required in *30 TAC §222.157*.

Attachment: See Soils Analysis and Engineering Report

Section 4. Floodway Designation (Instructions Page 76)

A. Site location

Is the existing/proposed land application site within a designated floodway?

☐ Yes ☒ No

B. Flood map

Attach either the FEMA flood map or alternate information used to determine the floodway.

Attachment: **FEMA FIRMETTE PANEL 4843C0555J**

Section 5. Surface Waters in the State (Instructions Page 76)

A. Buffer Map

Attach a map showing appropriate buffers on surface waters in the state, water wells, and springs/seeps.

Attachment: USGS Map Attachment

B. Buffer variance request

Do you plan to request a buffer variance from water wells or waters in the state?

☐ Yes ☒ No

If yes, then attach the additional information required in *30 TAC § 222.81(c).*

Attachment: Click to enter text.

Section 6. Edwards Aquifer (Instructions Page 76)

A. Is the SADDS located over the Edwards Aquifer Recharge Zone as mapped by TCEQ?

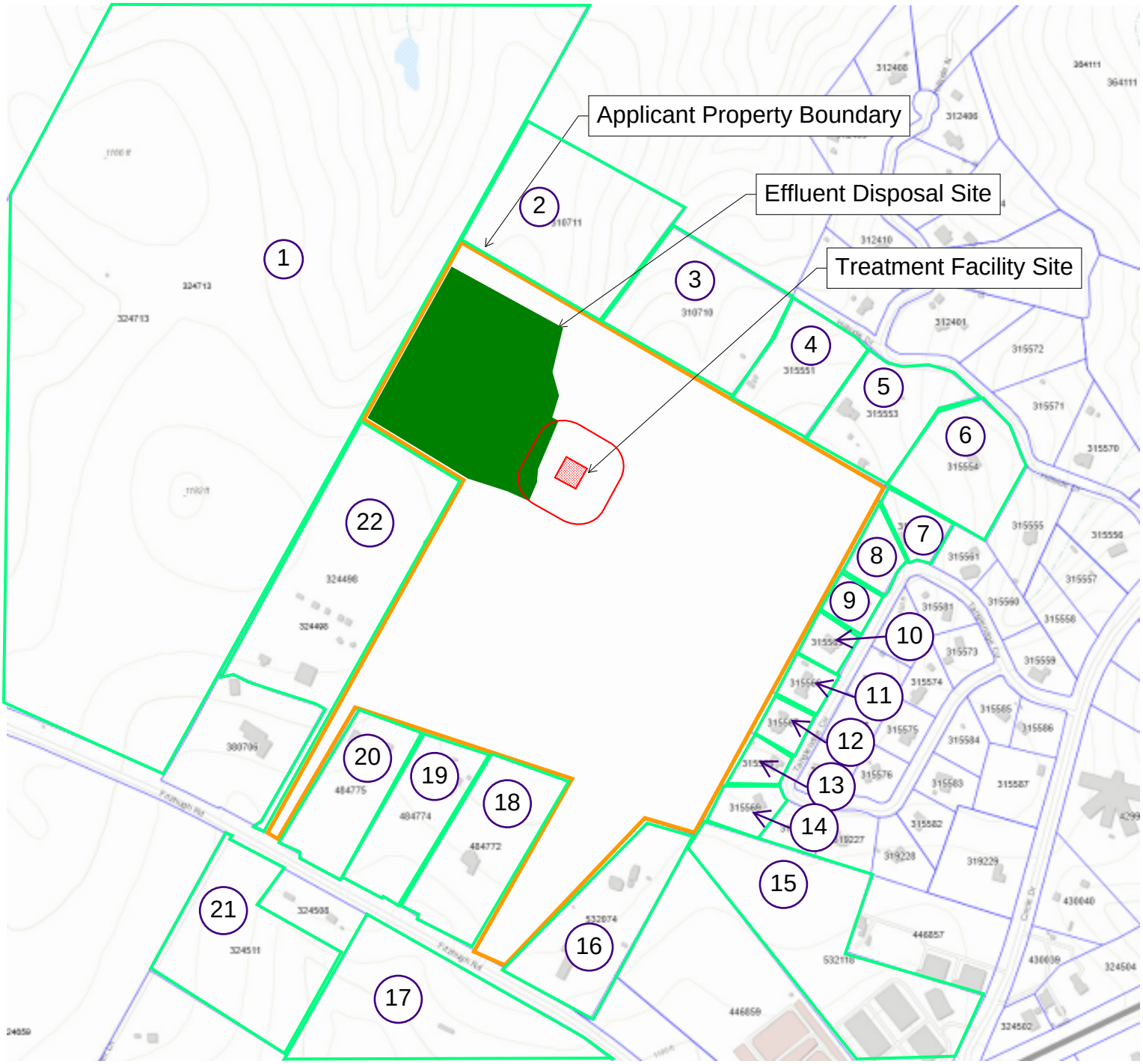
☐ Yes ☒ No

B. Is the SADDS located over the Edwards Aquifer Transition Zone as mapped by TCEQ?

☐ Yes ☒ No

If yes to either question, then the SADDS may be prohibited by *30 TAC §213.8*. Please call the Municipal Permits Team at 512-239-4671 to schedule a pre-application meeting.

Orchard Ranch WWTF - Affected Landowner Map



N

500 Feet

j & a WASTEWATER

ORCHARD RANCH WWTF - BUFFER ZONE

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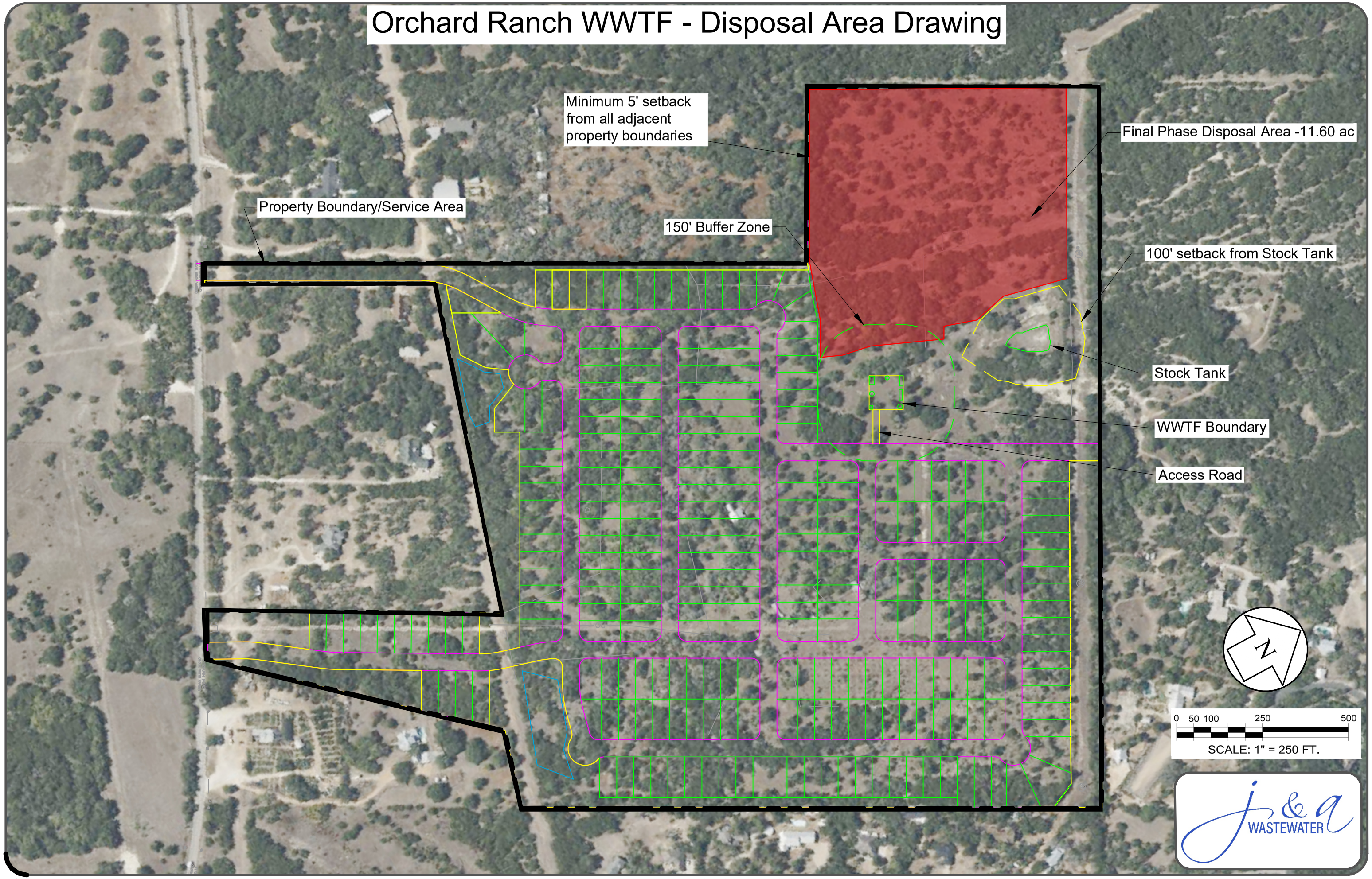
C:\Users\JanelaRevilla\DC\ACCDocs\JAWastewater\155 - Orchard Ranch TLAP Permitting\Project Files\DWGS\2024.10.29_Orchard Ranch Overall and Effluent_Final.dwg, 10/31/2024 9:37 AM Janela Revilla

Orchard Ranch WWTF - Disposal Area Drawing



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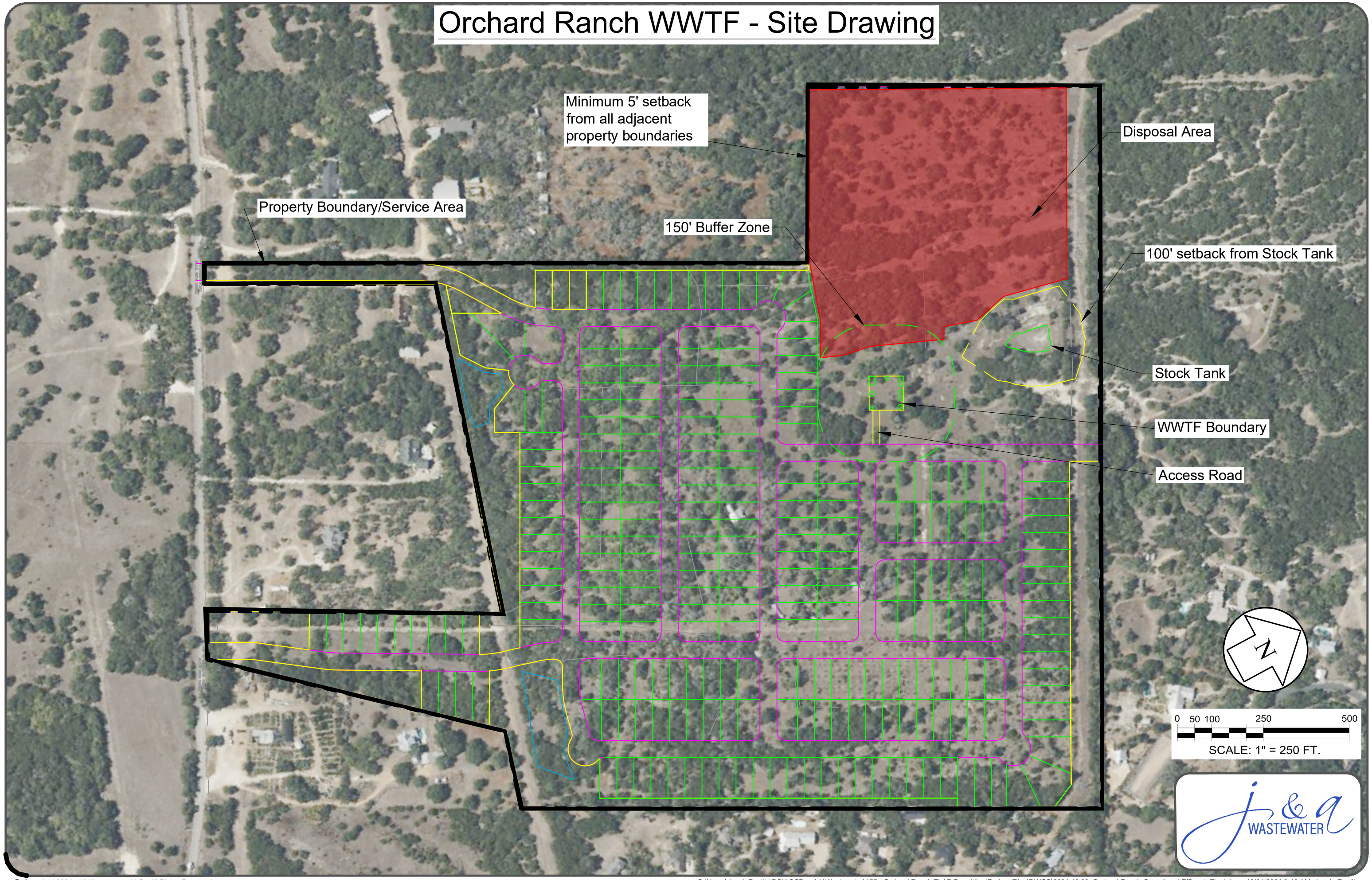
Orchard Ranch WWTF - Site Drawing



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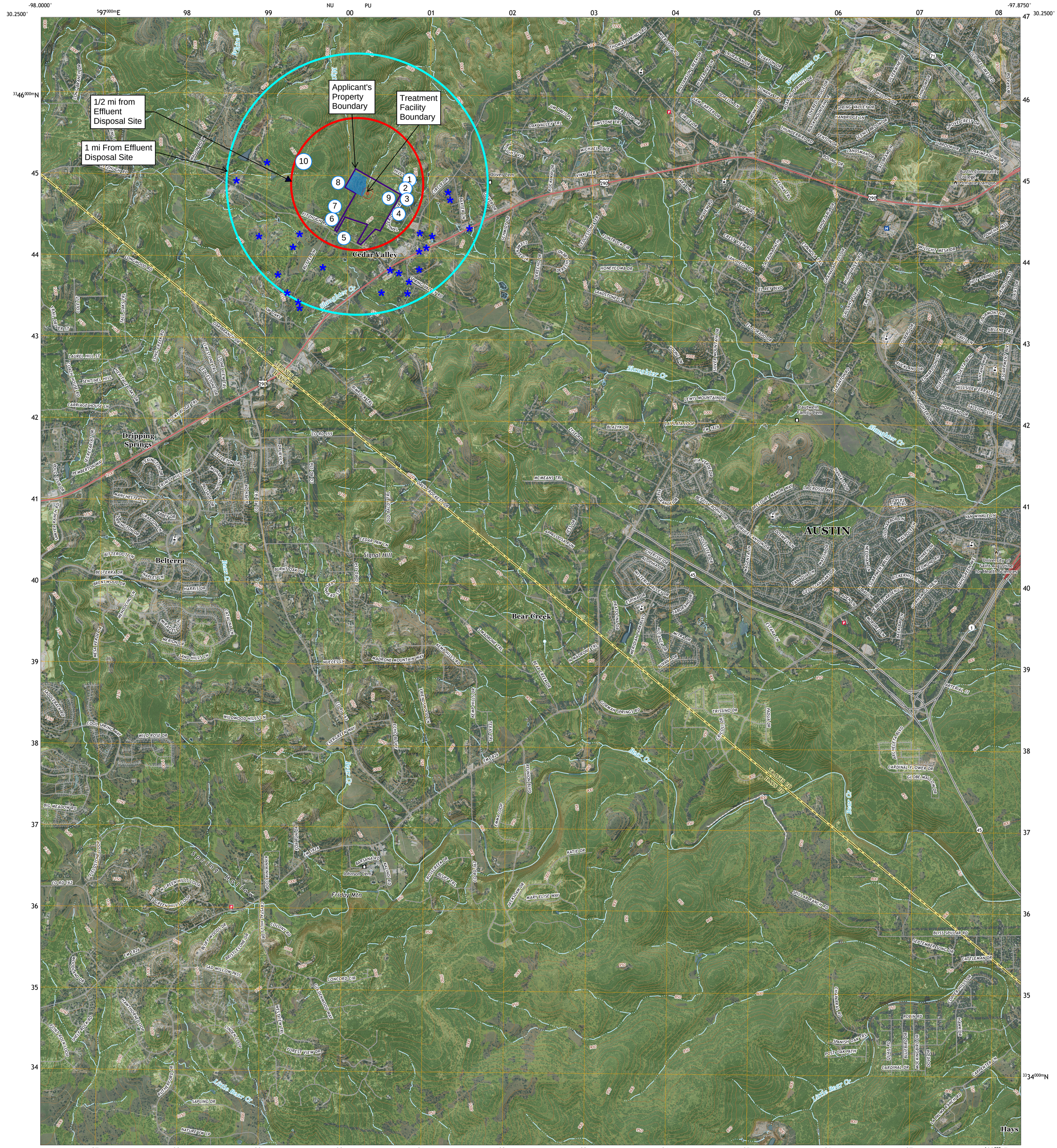
Orchard Ranch - USGS Map

USGS science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

SIGNAL HILL QUADRANGLE
TEXAS
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 14R

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, October 2016 - November 2016
Roads.....U.S. Census Bureau, 2015 - 2019
Names.....GNIS, 1979 - 2022
Hydrography.....National Hydrography Dataset, 2002 - 2018
Contours.....National Elevation Dataset, 2019
Boundaries.....Multiple sources; see metadata file 2019 - 2021

Wetlands.....FWS National Wetlands Inventory Not Available

MN
GN
0°32'
9 MILS
3°50'
68 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
100
NU PU
Grid Zone Designation
14R

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard.

TEXAS
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES

1 Shingle Hills
2 Bee Cave
3 Austin West
4 Dripping Springs
5 Oak Hill
6 Driftwood
7 Mountain City
8 Buda

ROAD CLASSIFICATION

Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

SIGNAL HILL, TX
2022

J&A WASTEWATER

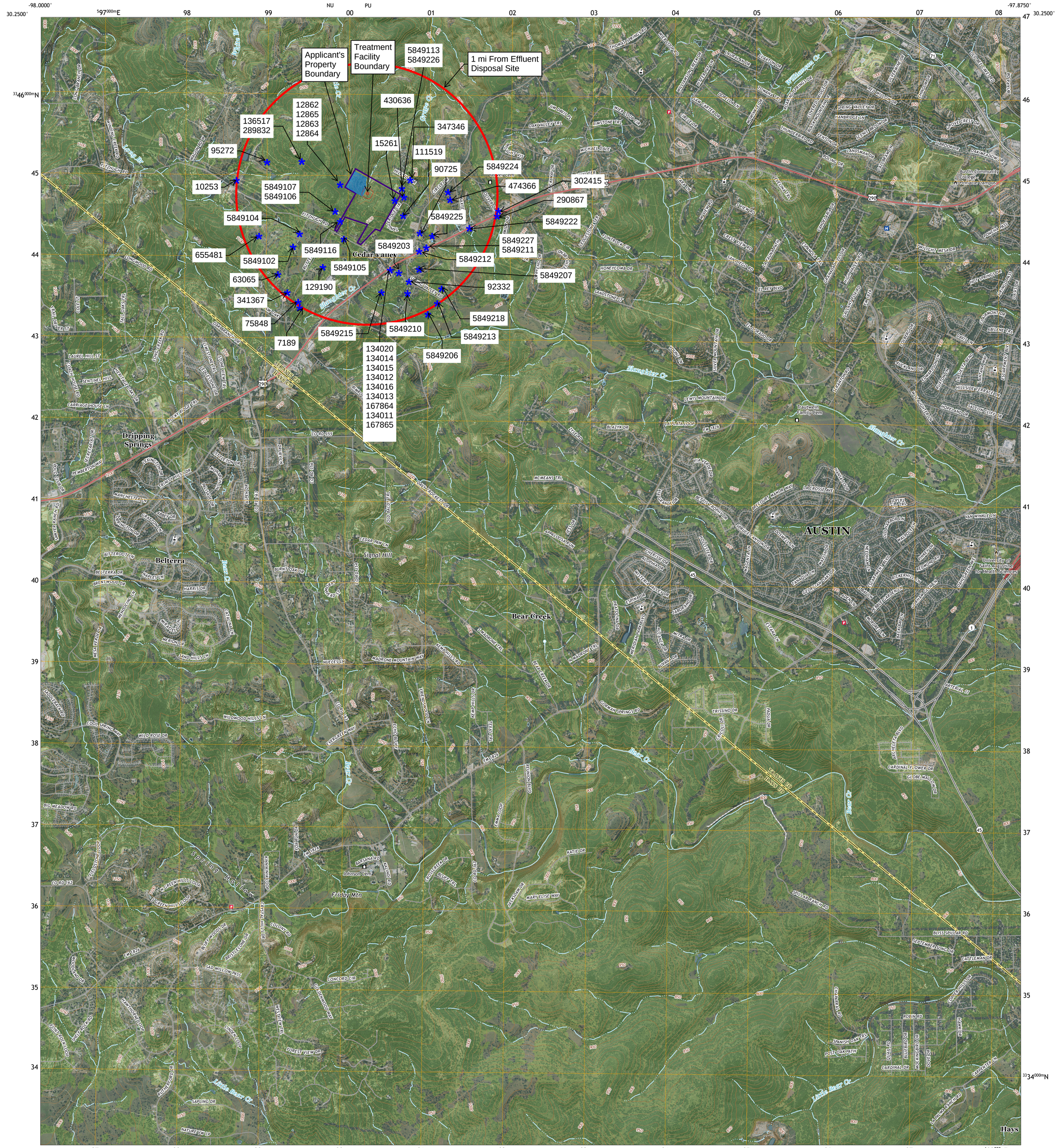
Orchard Ranch - USGS Map

USGS science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

SIGNAL HILL QUADRANGLE
TEXAS
7.5-MINUTE SERIES


Applicant's Property Boundary
Treatment Facility Boundary
1 mi From Effluent Disposal Site
5849113
5849226
430636
347346
15261
111519
90725
5849224
474366
302415
290867
5849222
5849227
5849211
5849212
5849207
92332
5849218
5849213
5849206
5849210
5849215
134020
134014
134015
134012
134016
134013
167864
134011
167865
5849225
5849203
5849105
5849116
129190
5849102
655481
5849104
5849107
5849106
10253
95272
136517
289832
12862
12865
12863
12864
63065
341367
75848
7189
Cedar Valley
Dripping Springs
Belterra
Signal Hill
Bear Creek
AUSTIN
Friday Mtn
Spring Hollow
Austin Community College Pinnacle Campus
Trautwein Family Cem
Johnson Cem
University of Saint Augustine for Health Sciences
Hays
Slaughter Cr
Bear Cr
Little Bear Cr
Onion Cr
Williamson Cr
Long Br
Walnut Br
TRAVIS CO
HAYS CO
FITZHUGH RD
OAK SPRING DR
SPRING VALLEY RD
EL REY BLVD
TWILIGHT MESA DR
HONEYCOMB DR
SANDSTONE ST
SANDIEGO RD
CREST VIEW RD
5 VIEW RD
W VIEW RD
FUNTIER CIR
LEDGESTONE TER
RIDGEWAY DR
MIDDLE DR
ONEIDA DR
APACHO DR
CANYON DR
OAK BRANCH DR
LONGWOOD RD
LAUREL HILL ST
COUGH HOUSE RD
SENTINEL HILL
HERITAGE OAKS DR
CARRIAGE HOUSE LN
ROCKY RIDGE TRL
ROCKY RIDGE DR
CO RD 163
CO RD 165
CO RD 165A
CO RD 155
CO RD 154
CO RD 162
CO RD 163
CO RD 164
CO RD 166
CO RD 167
CO RD 168
CO RD 169
CO RD 170
CO RD 171
CO RD 172
CO RD 173
CO RD 174
CO RD 175
CO RD 176
CO RD 177
CO RD 178
CO RD

Orchard Ranch
Wastewater Treatment Facility
Permit No. WQ0016596001

Supplemental Information
(Draft Permit)

Orchard Ranch
Wastewater Treatment Facility
Permit No. WQ0016596001

Revisions

TECHNICAL SUMMARY AND
EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

DESCRIPTION OF APPLICATION

Applicant:	Clayton Properties Group, Inc. TCEQ Permit No. WQ0016596001
Regulated Activity:	Domestic Wastewater Permit
Type of Application:	New Permit
Request:	New Permit
Authority:	Texas Water Code (TWC) § 26.027; 30 Texas Administrative Code (TAC) Chapters 222, 305, 309, 312, 319, and 30; and Commission policies.

EXECUTIVE DIRECTOR RECOMMENDATION

The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The draft permit includes an expiration date of **five years from the date of issuance,** according to 30 TAC § 305.127(1)(C)(ii)(III), Conditions to be Determined for Individual Permits.

REASON FOR PROJECT PROPOSED

Clayton Properties Group, Inc. has applied to the Texas Commission on Environmental Quality (TCEQ) for a new permit, TCEQ Permit No. WQ0016596001 to authorize the disposal of treated domestic wastewater at a daily average flow not to exceed 0.0505 million gallons per day (MGD) via public access subsurface area drip dispersal system with a minimum area of 11.60 acres. The proposed wastewater treatment facility will serve a new development of 265 multi-family apartments.

PROJECT DESCRIPTION AND LOCATION

The Orchard Ranch Wastewater Treatment Facility will consist of a membrane Bioreactor (MBR) plant. Treatment units will include a bar screen, an equalization tank, a sludge holding tank, two processing basins (anoxic, aeration, and membrane zones), and either one chlorine contact chamber or ultraviolet light (UV) disinfection system. The facility has not been constructed.

Sludge generated from the treatment facility will be hauled by a registered transporter and disposed of at a TCEQ permitted landfill, SouthWaste Disposal Sealy Composting Facility, MSW Permit No. 2388, in Austin County. The draft permit also authorizes the disposal of sludge at a TCEQ-authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge.

The wastewater treatment facility and disposal site will be located approximately 3,360 feet northwest from the intersection of Circle Drive and U.S. Highway 290, near the City of Austin, in Travis County, Texas 78736.

The wastewater treatment facility and disposal site will be located in the drainage basin of Barton Creek in Segment No. 1430 of the Colorado River Basin. No discharge of pollutants into water in the State is authorized by this permit.

SUMMARY OF EFFLUENT DATA

There is no effluent data since the facility has not been constructed.

DRAFT PERMIT CONDITIONS

The draft permit authorizes the disposal of treated domestic wastewater effluent at a daily average flow not to exceed 0.0505 MGD via public access subsurface area drip dispersal system with a minimum area of 11.60 acres. The permittee is required to provide at least three days of temporary storage for times when the facility is out of service due to an emergency or for scheduled maintenance. Application rates shall not exceed 0.1 gallons per square foot per day. The permittee will maintain the Bermuda grass (warm season) overseeded with rye grass (cool season) on the disposal site.

The effluent limitations in the draft permit, based on a daily average, are 10 mg/l biochemical oxygen demand (BOD_5), and 15 mg/l total suspended solids (TSS), and a single grab of 126 colony forming units (CFU) or most probable number (MPN) of *E. coli* per 100 ml. If chlorine disinfection is used: The effluent shall contain a total chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes based on peak flow. If UV disinfection is used: The permittee shall utilize an UV system for disinfection purposes and shall not exceed a single grab of 126 CFU or MPN colonies per 100 ml of *E. coli*.

The permittee shall comply with the requirements of 30 TAC § 309.13 (a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC § 309.13(e).

The draft permit includes Sludge Provisions according to the requirements of 30 TAC Chapter 312, Sludge Use, Disposal and Transportation. Sludge generated from the treatment facility will be hauled by a registered transporter and disposed of at a TCEQ permitted landfill, SouthWaste Disposal Sealy Composting Facility, MSW Permit No. 2388, in Austin County. The draft permit authorizes the disposal of sludge at a TCEQ-authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge.

SUMMARY OF CHANGES FROM APPLICATION

Since the applicant is applying for the option to use UV disinfection, the effluent limitations were changed from the proposed 20 mg/l BOD_5 and 20 mg/l TSS to 10 mg/l BOD_5 and 15 mg/l TSS in order to comply with 30 TAC § 222.85.

BASIS FOR DRAFT PERMIT

The following items were considered in developing the draft permit:

1. Application submitted with letter dated August 9, 2024 and additional information

submitted with letter dated September 23, 2024, Novemeber 1, 2024, and Novemeber 4, 2024.

2. Interoffice Memorandum from the Water Quality Assessment Team, Water Quality Assessment & Standards Section, Water Quality Division.

PROCEDURES FOR FINAL DECISION

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant advising the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for review and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application, and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent, along with the Executive Director's preliminary decision, as contained in the technical summary or fact sheet, to the Chief Clerk. At that time, Notice of Application and Preliminary Decision will be mailed to the same people and published in the same newspaper as the prior notice. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director's preliminary decision and draft permit in the public place with the application.

Any interested person may request a public meeting on the application until the deadline for filing public comments. A public meeting is intended for the taking of public comment, and is not a contested case proceeding.

After the public comment deadline, the Executive Director prepares a response to all significant public comments on the application or the draft permit raised during the public comment period. The Chief Clerk then mails the Executive Director's Response to Comments and Final Decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that if a person is not satisfied with the Executive Director's response and decision, they can request a contested case hearing or file a request to reconsider the Executive Director's decision within 30 days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the Executive Director's Response to Comments and Final Decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the Commission grants a contested case hearing as described above, the Commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the Commission will consider all public comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response.

For additional information about this application, contact Garrison Layne at (512) 239-0849.

Garrison Layne Municipal Permits Team Wastewater Permitting Section (MC 148)	Date

PERMIT NO. WQ0016596001

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. Box 13087
Austin, Texas 78711-3087

PERMIT TO DISCHARGE WASTES
under provisions of Chapter 26
of the Texas Water Code

Clayton Properties Group, Inc.

whose mailing address is

6720 Vaught Ranch Road, Suite 200
Austin, Texas 78730

Nature of Business Producing Waste: Domestic wastewater treatment operation, SIC Code 4952.

General Description and Location of Waste Disposal System:

Description: The Orchard Ranch Wastewater Treatment Facility will consist of a Membrane Bioreactor (MBR) plant. Treatment units will include a bar screen, an equalization tank, a sludge holding tank, two processing basins (anoxic, aeration, and membrane zones), and either one chlorine contact chamber or ultraviolet light (UV) disinfection system. The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.0505 million gallons per day (MGD) via public access subsurface area drip dispersal system with a minimum area of 11.60 acres. Application rates shall not exceed 0.1 gallons per square foot per day. The permittee will maintain the Bermuda grass (warm season) overseeded with rye grass (cool season) on the disposal site.

Location: The wastewater treatment facility and disposal site are located approximately 3,360 feet northwest from the intersection of Circle Drive and U.S. Highway 290, near the City of Austin, Travis County, Texas 78736. (See Attachment A.)

Drainage Area: The wastewater treatment facility and disposal site are located in the drainage basin of Barton Creek in Segment No. 1430 of the Colorado River Basin. No discharge of pollutants into water in the State is authorized by this permit.

This permit and the authorization contained herein shall expire at midnight, **five years from the date of issuance**.

ISSUED DATE:

For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Conditions of the Permit: No discharge of pollutants into water in the State is authorized.

A. Effluent Limitations

Character: Treated Domestic Sewage Effluent

Volume: Daily Average Flow – 0.0505 MGD from the treatment system

Quality: The following effluent limitations shall be required:

Parameter	Effluent Concentrations (Not to Exceed) Daily Average mg/l	7-Day Average mg/l	Daily Maximum mg/	Single Grab mg/l
Biochemical Oxygen Demand (5-day)	10	15	25	35
Total Suspended Solids	15	25	40	60
E. coli, CFU or MPN/ 100 ml	N/A	N/A	N/A	126

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.

If chlorine is used for disinfection: The effluent shall be chlorinated in a chlorine contact chamber to a residual of 1.0 mg/l with a minimum detention time of 20 minutes. If the effluent is to be transferred to a holding pond or tank, re-chlorination prior to the effluent being delivered into the irrigation system will be required.*

If Ultraviolet Light (UV) disinfection is used: The permittee shall utilize an UV system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.**

B. Monitoring Requirements:

Parameter	Monitoring Frequency	Sample Type
Flow	Continuous	Totalizing Meter
Biochemical Oxygen Demand (5-day)	One/week	Grab
Total Suspended Solids	One/week	Grab
pH	One/week	Grab
Total Chlorine Residual	Five/week	Grab
E. coli	1/quarter* Daily**	Grab

The monitoring shall be done after the final treatment unit and prior to storage of the treated effluent. If the effluent is land applied directly from the treatment system, monitoring shall be done after the final treatment unit and prior to land application. These records shall be maintained on a monthly basis and be available at the plant site for inspection by authorized representatives of the Commission for at least three years.

STANDARD PERMIT CONDITIONS

This permit is granted in accordance with the Texas Water Code and the rules and other Orders of the Commission and the laws of the State of Texas.

DEFINITIONS

All definitions in Section 26.001 of the Texas Water Code and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

1. Flow Measurements

    a. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.

    b. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with a 1 million gallons per day or greater permitted flow.

    c. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.

2. Concentration Measurements

    a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.

        i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

        ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.

    b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.

    c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.

3. Sample Type

   a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).

   b. Grab sample - an individual sample collected in less than 15 minutes.

4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.

5. The term “sewage sludge” is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids which have not been classified as hazardous waste separated from wastewater by unit processes.

6. The term “biosolids” is defined as sewage sludge that has been tested or processed to meet Class A, Class AB, or Class B pathogen standards in 30 TAC Chapter 312 for beneficial use.

7. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

MONITORING REQUIREMENTS

1. Monitoring Requirements

   Monitoring results shall be collected at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling in accordance with 30 TAC §§ 319.4 - 319.12.

   As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Texas Water Code, Chapters 26, 27, and 28, and Texas Health and Safety Code, Chapter 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record or other document submitted or required to be maintained under this permit, including monitoring reports, records or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

2. Test Procedures

   a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.

b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification.

3. Records of Results

a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge or biosolids use and disposal activities, which shall be retained for a period of at least five years, monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, and records of all data used to complete the application for this permit shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, or application. This period shall be extended at the request of the Executive Director.

c. Records of monitoring activities shall include the following:

i. date, time and place of sample or measurement;
ii. identity of individual who collected the sample or made the measurement.
iii. date and time of analysis;
iv. identity of the individual and laboratory who performed the analysis;
v. the technique or method of analysis; and
vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in determining compliance with permit requirements.

5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

6. Compliance Schedule Reports

   Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Enforcement Division (MC 224).

7. Noncompliance Notification

   a. In accordance with 30 TAC § 305.125(9), any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Except as allowed by 30 TAC § 305.132, report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

   b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:

      i. Unauthorized discharges as defined in Permit Condition 2(g).

      ii. Any unanticipated bypass which exceeds any effluent limitation in the permit.

   c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.

   d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible.

8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.

9. Changes in Discharges of Toxic Substances

   All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

   a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D,

Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

i. One hundred micrograms per liter (100 µg/L);
ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
iv. The level established by the TCEQ.

b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

i. Five hundred micrograms per liter (500 µg/L);
ii. One milligram per liter (1 mg/L) for antimony;
iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
iv. The level established by the TCEQ.

10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

PERMIT CONDITIONS

1. General

a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.

b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:

i. Violation of any terms or conditions of this permit;
ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

2. Compliance

   a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

   b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation or suspension, or for denial of a permit renewal application or an application for a permit for another facility.

   c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

   d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation which has a reasonable likelihood of adversely affecting human health or the environment.

   e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

   f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and Texas Water Code Section 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

   g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Special Provisions section of this permit.

   h. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code §§ 7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties).

3. Inspections and Entry

   a. Inspection and entry shall be allowed as prescribed in the Texas Water Code Chapters 26, 27, and 28, and Texas Health and Safety Code Chapter 361.

   b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or

monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in Texas Water Code Section 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

4. Permit Amendment and/or Renewal

   a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:

      i. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9;

      ii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

   b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.

   c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.

   d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this

permit.

e. In accordance with the Texas Water Code § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.

5. Permit Transfer

a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.

b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal which requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

8. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

9. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

10. Notice of Bankruptcy.

a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:

i. the permittee;
ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or
iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.

b. This notification must indicate:

i. the name of the permittee;
ii. the permit number(s);
iii. the bankruptcy court in which the petition for bankruptcy was filed; and
iv. the date of filing of the petition.

OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.

2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge or biosolids use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.

3. Domestic wastewater treatment facilities shall comply with the following provisions:

   a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.

   b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.

4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.

5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.

6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under Texas Water Code § 7.302(b)(6).

7. Documentation

   For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information specified as not confidential in 30 TAC § 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities which generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.

   a. Whenever flow measurements for any domestic sewage treatment facility reach 75 percent of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90 percent of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75 percent of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

      If in the judgement of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 219) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

   b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.

   c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or

discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.

10. Facilities which generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:

    a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.

    b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.

    c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.

    d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.

    e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.

    f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC Chapter 335 and must include the following, as it pertains to wastewater treatment and discharge:

        i. Volume of waste and date(s) generated from treatment process;
        ii. Volume of waste disposed of on-site or shipped off-site;

iii. Date(s) of disposal;
iv. Identity of hauler or transporter;
v. Location of disposal site; and
vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

11. For industrial facilities to which the requirements of 30 TAC Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with Chapter 361 of the Texas Health and Safety Code.

TCEQ Revision 06/2020

SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge or biosolids only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge. **The disposal of sludge or biosolids by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized with the TCEQ. This provision does not authorize Distribution and Marketing of Class A or Class AB Biosolids. This provision does not authorize the permittee to land apply biosolids on property owned, leased or under the direct control of the permittee.**

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS LAND APPLICATION

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge or biosolids.

2. In all cases, if the person (permit holder) who prepares the sewage sludge or biosolids supplies the sewage sludge or biosolids to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge or biosolids to assure compliance with these regulations.

3. The land application of processed or unprocessed chemical toilet waste, grease trap waste, grit trap waste, milk solids, or similar non-hazardous municipal or industrial solid wastes, or any of the wastes listed in this provision combined with biosolids, WTP residuals or domestic septage is prohibited unless the grease trap waste is added at a fats, oil and grease (FOG) receiving facility as part of an anaerobic digestion process.

B. Testing Requirements

1. Sewage sludge or biosolids shall be tested once during the term of this permit in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method that receives the prior approval of the TCEQ for the contaminants listed in 40 CFR Part 261.24, Table 1. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 11) within seven (7) days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped, and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 11) and the Enforcement Division (MC 224).

2. Biosolids shall not be applied to the land if the concentration of the pollutants exceeds the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C. of this permit.

TABLE 1

Pollutant	Ceiling Concentration (Milligrams per kilogram)*
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site must be treated by one of the following methods to ensure that the sludge meets either the Class A, Class AB or Class B biosolids pathogen requirements.

a. For sewage sludge to be classified as Class A biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge must be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC § 312.82(a)(2)(A) for specific information;

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of must be treated in one of the Processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion; or

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of must be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

b. For sewage sludge to be classified as Class AB biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 MPN per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

   Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

   The temperature of the sewage sludge shall be above 52° Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

   At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50%; or

   Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(iv-vi) for specific information; or

   Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

c. Sewage sludge that meets the requirements of Class AB biosolids may be classified a Class A biosolids if a variance request is submitted in writing that is supported by substantial documentation demonstrating equivalent methods for reducing odors and written approval is granted by the executive director. The executive director may deny the variance request or revoke that approved variance if it is determined that the variance may potentially endanger human health or the environment, or create nuisance odor conditions.

d. Three alternatives are available to demonstrate compliance with Class B biosolids

criteria.
Alternative 1

i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.

ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;

iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;

iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and

v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U.S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;

iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;

iv. The Executive Director will accept from the U.S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and

v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition to the Alternatives 1 – 3, the following site restrictions must be met if Class B biosolids are land applied:

i. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.

ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for 4 months or longer prior to incorporation into the soil.

iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than 4 months prior to incorporation into the soil.

iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.

v. Domestic livestock shall not be allowed to graze on the land for 30 days after application of biosolids.

vi. Turf grown on land where biosolids are applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn.

vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of biosolids.

viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of biosolids.

ix. Land application of biosolids shall be in accordance with the buffer zone requirements found in 30 TAC § 312.44.

4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following Alternatives 1 through 10 for vector attraction reduction.

Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%.

Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37° Celsius. Volatile solids must be reduced by less than 17% to demonstrate compliance.

Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20° Celsius. Volatile solids must be reduced by less than 15% to demonstrate compliance.

Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20° Celsius.

Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40° Celsius and the average temperature of the sewage sludge shall be higher than 45° Celsius.

Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.

Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 9 -

i. Biosolids shall be injected below the surface of the land.

ii. No significant amount of the biosolids shall be present on the land surface within one hour after biosolids are injected.

iii. When sewage sludge that is injected below the surface of the land is Class A or Class AB with respect to pathogens, the biosolids shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

Alternative 10-

i. Biosolids applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.

ii. When biosolids that are incorporated into the soil is Class A or Class AB with respect to pathogens, the biosolids shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

C. Monitoring Requirements

Toxicity Characteristic Leaching Procedure (TCLP) Test	- once during the term of this permit
PCBs	- once during the term of this permit

All metal constituents and fecal coliform or *Salmonella* sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC § 312.46(a)(1):

Amount of biosolids (*) metric tons per 365-day period	Monitoring Frequency
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 to less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(*) *The amount of bulk biosolids applied to the land (dry wt. basis).*

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC § 312.7

Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.

Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge or biosolids for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.

SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A, CLASS AB or B BIOSOLIDS PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3

For those permittees meeting Class A, Class AB or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

A. Pollutant Limits

Table 2

Pollutant	Cumulative Pollutant Loading Rate (pounds per acre)*
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

Pollutant	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

*Dry weight basis

B. Pathogen Control

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A, Class AB or Class B biosolids pathogen reduction requirements as defined above in Section I.B.3.

C. Management Practices

1. Bulk biosolids shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.

2. Bulk sewage sludge not meeting Class A biosolids requirements shall be land applied in a manner which complies with Applicability in accordance with 30 TAC §312.41 and the Management Requirements in accordance with 30 TAC § 312.44.

3. Bulk biosolids shall be applied at or below the agronomic rate of the cover crop.

4. An information sheet shall be provided to the person who receives bulk Class A or AB biosolids sold or given away. The information sheet shall contain the following information:

    a. The name and address of the person who prepared the Class A or AB biosolids that are sold or given away in a bag or other container for application to the land.

    b. A statement that application of the Class A or AB biosolids to the land is prohibited except in accordance with the instruction on the label or information sheet.

    c. The annual whole sludge application rate for the biosolids application rate for the biosolids that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

D. Notification Requirements

1. If bulk biosolids are applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk biosolids are proposed to be applied. The notice shall include:

    a. The location, by street address, and specific latitude and longitude, of each land application site.

    b. The approximate time period bulk biosolids will be applied to the site.

    c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk biosolids.

2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the biosolids disposal practice.

E. Record Keeping Requirements

The documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a biosolids material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a period

of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.

2. A description of how the pathogen reduction requirements are met (including site restrictions for Class AB and Class B biosolids, if applicable).

3. A description of how the vector attraction reduction requirements are met.

4. A description of how the management practices listed above in Section II.C are being met.

5. The following certification statement:

   "I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC § 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC § 312.83(b) have been met for each site on which bulk biosolids are applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained. The person who applies bulk biosolids shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply:

   a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii), as applicable, and to the permittee's specific sludge treatment activities.

   b. The location, by street address, and specific latitude and longitude, of each site on which sludge is applied.

   c. The number of acres in each site on which bulk sludge is applied.

   d. The date and time sludge is applied to each site.

e. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.

f. The total amount of sludge applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

F. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 11) and the Enforcement Division (MC 224).

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

2. Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.

3. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.

4. The frequency of monitoring listed in Section I.C. that applies to the permittee.

5. Toxicity Characteristic Leaching Procedure (TCLP) results.

6. PCB concentration in sludge or biosolids in mg/kg.

7. Identity of hauler(s) and TCEQ transporter number.

8. Date(s) of transport.

9. Texas Commission on Environmental Quality registration number, if applicable.

10. Amount of sludge or biosolids disposal dry weight (lbs/acre) at each disposal site.

11. The concentration (mg/kg) in the sludge or biosolids of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.

12. Level of pathogen reduction achieved (Class A, Class AB or Class B).

13. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B biosolids, include information on how site restrictions were met.

14. Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.

15. Vector attraction reduction alternative used as listed in Section I.B.4.

16. Amount of sludge or biosolids transported in dry tons/year.

17. The certification statement listed in either 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge or biosolids treatment activities, shall be attached to the annual reporting form.

18. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.

    a. The location, by street address, and specific latitude and longitude.

    b. The number of acres in each site on which bulk biosolids are applied.

    c. The date and time bulk biosolids are applied to each site.

    d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk biosolids applied to each site.

    e. The amount of biosolids (i.e., dry tons) applied to each site.

    The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL

A. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge or biosolids meets the requirements in 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.

B. If the permittee generates sewage sludge or biosolids and supplies that sewage sludge or biosolids to the owner or operator of a municipal solid waste landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.

C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge or biosolids disposal practice.

D. Sewage sludge s or biosolids hall be tested once during the term of this permit in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR § 261.24. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

   Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 11) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

   The report shall contain test results, certification that unauthorized waste management has stopped, and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 11) and the Enforcement Division (MC 224), by September 30_{th} of each year.

E. Sewage sludge or biosolids shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.

F. Record Keeping Requirements

   The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.

2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

G. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 11) and the Enforcement Division (MC 224).

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

2. Toxicity Characteristic Leaching Procedure (TCLP) results.

3. Annual sludge production in dry tons/year.

4. Amount of sludge or biosolids disposed in a municipal solid waste landfill in dry tons/year.

5. Amount of sludge or biosolids transported interstate in dry tons/year.

6. A certification that the sewage sludge or biosolids meets the requirements of 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.

7. Identity of hauler(s) and transporter registration number.

8. Owner of disposal site(s).

9. Location of disposal site(s).

10. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

SECTION IV. REQUIREMENTS APPLYING TO SLUDGE OR BIOSOLIDS TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING

These provisions apply to sludge or biosolids that is transported to another wastewater treatment facility or facility that further processes sludge or biosolids. These provisions are intended to allow transport of sludge or biosolids to facilities that have been authorized to accept sludge or biosolids. These provisions do not limit the ability of the receiving facility to determine whether to accept the sludge or biosolids, nor do they limit the ability of the receiving facility to request additional testing or documentation.

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.

2. Sludge or biosolids may only be transported using a registered transporter or using an approved pipeline.

B. Record Keeping Requirements

1. For sludge transported by an approved pipeline, the permittee must maintain records of the following:

   a. the amount of sludge or biosolids transported;

   b. the date of transport;

   c. the name and TCEQ permit number of the receiving facility or facilities;

   d. the location of the receiving facility or facilities;

   e. the name and TCEQ permit number of the facility that generated the waste; and

   f. copy of the written agreement between the permittee and the receiving facility to accept sludge or biosolids.

2. For sludge or biosolids transported by a registered transporter, the permittee must maintain records of the completed trip tickets in accordance with 30 TAC § 312.145(a)(1)-(7) and amount of sludge or biosolids transported.

3. The above records shall be maintained on-site on a monthly basis and shall be made available to the TCEQ upon request. These records shall be retained for at least five years.

C. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 11) and the Enforcement Division (MC 224).

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

2. the annual sludge or biosolids production;

3. the amount of sludge or biosolids transported;

4. the owner of each receiving facility;

5. the location of each receiving facility; and

6. the date(s) of disposal at each receiving facility.

SPECIAL PROVISIONS:

1. This permit is granted subject to the policy of the Commission to encourage the development of areawide waste collection, treatment and disposal systems. The Commission reserves the right to amend this permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an areawide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such areawide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

2. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations, and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

   This Category C facility must be operated by a chief operator or an operator holding a Class C license or higher. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift which does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

3. The permittee shall maintain and operate the treatment facility in order to achieve optimum efficiency of treatment capability. This shall include required monitoring of effluent flow and quality as well as appropriate grounds and building maintenance.

4. Prior to construction of the wastewater treatment facilities, the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) of the Water Quality Division, a summary transmittal letter according to the requirements in 30 TAC § 217.6(d). If requested by the Wastewater Permitting Section, the permittee shall submit plans, specifications and a final engineering design report which comply with the requirements of 30 TAC Chapter 217, Design Criteria for Wastewater Treatment Systems. The permittee shall clearly show how the treatment system will meet the permitted effluent limitations required on Page 2 of the permit. A copy of the summary transmittal letter shall be available at the plant site for inspection by authorized representatives of the TCEQ.

5. Prior to construction of the subsurface area drip dispersal system, the permittee shall submit, to the TCEQ Wastewater Permitting Section (MC148) of the Water Quality Division, an engineering report, including plans and specifications, that meets the requirements in 30 TAC Chapter 222, Subsurface Drip Dispersal Systems, Subchapter D: Design Criteria.

6. Reporting requirements according to 30 TAC §§ 319.1-319.11 and any additional effluent reporting requirements contained in this permit are suspended from the effective date of the permit until plant startup or discharge, whichever occurs first, from the facility described by

this permit. The permittee shall provide written notice to the TCEQ Regional Office (MC Region 11) and the Applications Review and Processing Team (MC 148) of the Water Quality Division at least forty-five (45) days prior to plant startup or anticipated discharge, whichever occurs first, on Notification of Completion Form 20007.

7. The permittee shall comply with the requirements of 30 TAC § 309.13 (a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC § 309.13(e).

8. The property is within the Edwards Aquifer Contributing Zone and is subject to 30 TAC Chapter 213, subchapter B.

9. Any recharge features uncovered by construction of and operation of the SADDS fields and wastewater treatment facilities shall be addressed in an updated and certified Recharge Feature Plan. The Recharge Feature Plan will include the best management practices implemented that will prevent impact to recharge features from wastewater application and prevent groundwater contamination. The updated and certified Recharge Feature Plan shall be submitted to the TCEQ Water Quality Assessment Team (MC-150) and the TCEQ Region 11 (Austin) Office within 30 days of discovery of the feature. The Recharge Feature Plan must be certified by a Texas-licensed Professional Geoscientist or a Texas-licensed Professional Engineer.

10. According to the requirements of 30 TAC §222.81(a), the permittee shall locate the SADDS a minimum horizontal distance of 100 feet from surface waters in the state, including an onsite stock tank and unnamed tributary to Grape Creek.

11. The permittee shall locate the SADDS a minimum horizontal distance of 500 feet from public water wells, springs, or other similar sources of public drinking water and 150 feet from private wells as described in 30 TAC §309.13(c)(1). The permittee shall not locate a SADDS within a floodway per 30 TAC §222.81(d).

12. The permittee shall comply with buffer zone requirements of 30 TAC Section §309.13(c). A wastewater treatment plant unit, defined by 30 TAC Section §309.11(9), must be located a minimum horizontal distance of 250 feet from a private well and a minimum horizontal distance of 500 feet from a public water well site, spring, or other similar sources of public drinking water, as provided by §290.41(c)(1) of this title.

13. The permittee shall construct berms or swales, or other engineering controls to prevent or divert stormwater from entering all subsurface wastewater application areas.

14. The permittee shall develop a Springs/Seeps Monitoring Plan and submit the plan to the TCEQ Water Quality Assessment Team (MC-150) for review, possible modification, and approval within 30 days of permit issuance. At a minimum, the plan shall include:

    a) A procedure to conduct quarterly field checks at the drip irrigation fields and down-gradient of the fields to identify emerging springs or seeps.

    b) A procedure to sample springs or seeps in the event that springs/seeps develop after drip irrigation of effluent commences.

    c) Quarterly field checks and sampling (if applicable) of the springs/seeps shall occur after

a minimum rainfall event of 0.5-inch, if possible.

d) Analysis of springs/seeps water for nutrients, including, but not limited to, a complete nitrogen series [(Nitrate (as N), Nitrite (as N), Total Kjeldahl Nitrogen, ammonia as N], total phosphorus, ortho-phosphate, chlorides, fecal coliform, and specific conductivity.

e) A record of the quarterly checks and sampling of the springs and seeps shall be maintained in a field log and kept onsite for TCEQ inspection.

f) Monitoring of emerging and existing springs/seeps shall continue for the life of the system.

g) The applicant shall submit the data, including laboratory reports, and a map showing the locations of any seeps/springs that were sampled per the Seeps/Springs Monitoring Plan to the Water Quality Assessment Team (MC-150) of the Water Quality Division, the TCEQ Region 11 (Austin) Office, and the Compliance Monitoring Section (MC-224) during the month of September of each year for review. If no seeps/springs were identified during a particular quarter, that information shall be included in the annual report.

h) A procedure for the implementation of corrective measures to remedy the discharge if laboratory analysis indicates that wastewater is emerging as a seep or spring.

i) The permittee shall implement the plan upon approval by the Water Quality Assessment Team. The executive director may request modification of the approved plan if future information indicates that it would be necessary for the protection of the environment.

15. Application rates shall not exceed 0.1 gallons per square foot per day. The permittee is responsible for providing equipment to determine the application rate and for maintaining accurate records of the volume of effluent applied. According to the requirements of 30 TAC § 222.161(d), the permittee shall maintain records documenting all activities associated with maintaining the vegetative cover (the crops), like planting, over-seeding, mowing height, fertilizing, and harvesting. These records shall be maintained for a minimum of five years and be made available to TCEQ staff upon request.

16. The permittee shall use cultural practices to promote and maintain the health and propagation of Bermudagrass (warm season) overseeded with winter rye (cool season) crops and avoid plant lodging. The permittee shall harvest the crops (cut and remove it from the field) at least once during the year. Harvesting and mowing dates shall be recorded in a logbook kept on site to be made available to TCEQ personnel upon request.

17. The permittee shall maintain a minimum rootable soil depth of 12 inches below the drip irrigation lines. At least a six-inch layer of soil shall be maintained over the drip lines. If imported soils are used, the permittee shall submit no later than 90 days prior to construction to the TCEQ Water Quality Assessment Team (MC 150) and the Wastewater Permitting Section (MC 148) of the Water Quality Division a plan for review/revision and approval describing how the imported soils will be incorporated into the native soils and how soil erosion will be prevented in the affected areas.

18. The physical condition of the land application fields shall be monitored on a weekly basis. Any areas with problems such as surface runoff, surficial erosion, stressed or damaged vegetation, etc., shall be recorded in the field log kept onsite. Corrective measures will be implemented within 24 hours of discovery.

19. Subsurface irrigation practices shall be designed and managed as to prevent ponding and surfacing of effluent, contamination of ground and surface water, and the occurrence of nuisance conditions in the area. To promote effluent and nutrient uptake by the crop, and to prevent pathways for effluent surfacing, Bermuda grass (warm season) overseeded with Winter rye (cool season) shall be established and well maintained in the irrigation area throughout the year.

20. For any area where treated effluent is stored or where there exist hose bibs or faucets, the permittee shall erect adequate signs stating that the irrigation water is from a non-potable water supply. Signs shall consist of a red slash superimposed over the international symbol for drinking water accompanied by the message “DO NOT DRINK THE WATER” in both English and Spanish. All piping transporting the effluent shall be clearly marked with these same signs.

21. Based on the requirements of 30 TAC 222.151, the subsurface system shall be designed and managed so as to prevent seepage or percolation out of the root zone, other than leaching in the amount required to maintain the health of the vegetative cover. Surfacing and ponding is prohibited. Creating a condition at the treatment facility or the drip dispersal zones that contributes to vector attraction or odor is prohibited.

22. Effluent shall not be applied for irrigation during rainfall events or when the ground is frozen or saturated.

23. Drip irrigation lines shall be installed on the contour and lateral slopes of the tubing shall not exceed 1 percent. The permittee can apply for a variance to this provision by providing justification in the detailed design criteria per Chapter 222 indicating how uneven application of effluent due to back draining will be avoided.

24. The permittee shall remove large (greater than 12-inch) stones and flagstones from the irrigation area. Any large stones brought to the surface during any trenching for the drip lines, construction, maintenance activities, and/or any disturbing of the soil shall be removed.

25. Each zone shall have at least two soil moisture-sensing devices placed at 12 inches below the depth of the drip lines that will automatically shut off irrigation to that zone when the soil becomes saturated. The devices shall be located on the downgradient side of each zone and be spaced a minimum of 50 feet apart. The soil moisture monitoring devices, including a map of the monitoring device locations, shall be included with the dispersal zone design and submitted with the engineering report required by 222 TAC Subchapter D.

26. Irrigation to treated effluent on land with a slope of 10% or greater is prohibited. Irrigation of treated effluent shall be limited to those tracts designated on Attachment A of this permit only after proper grading has been accomplished.

27. Soil Testing Plan

The permittee shall obtain representative soil samples from the root zones of the land application area receiving wastewater. Composite sampling techniques shall be used. Each composite sample shall represent no more than 11.60 acres with no less than two (2) cores per dosing bed (zone) representing each composite sample. Subsamples shall be composited by like sampling depth, type of crop and soil type for analysis and reporting. Soil types are soils that have like topsoil or plow layer textures. These soils shall be sampled individually from 0 to 12 inches and 12 to 24 inches below ground level. The permittee shall sample soils in December to February of each year. Soil samples shall be analyzed within 30 days of sample collection.

The permittee shall provide annual soil sample analyses of the land application area according to the following table:

Parameter	**Method**	**Minimum Analytical Level (MAL)**	**Reporting units**
pH	2:1 (v/v) water to soil mixture		Reported to 0.1 pH units after calibration of pH meter
Electrical Conductivity	Obtained from the SAR water saturated paste extract	0.01	dS/m (same as mmho/cm)
Nitrate-nitrogen	From a 1 N KCl soil extract	1	mg/kg (dry weight basis)
Total Kjeldahl Nitrogen (TKN)	For determination of Organic plus Ammonium Nitrogen. Procedures that use Mercury (Hg) are not acceptable.	20	mg/kg (dry weight basis)
Total Nitrogen	= TKN plus Nitrate-nitrogen		mg/kg (dry weight basis)
Plant-available: Phosphorus	Mehlich III with inductively coupled plasma	1 (P)	mg/kg (dry weight basis)
Plant-available: Potassium (K) Calcium (Ca) Magnesium (Mg) Sodium (Na)	May be determined in the same Mehlich III extract with inductively coupled plasma	5 (K) 10 (Ca) 5 (Mg) 10 (Na) 1 (S)	mg/kg (dry weight basis)

Sulfur (S)			
Water-soluble: Sodium (Na) Calcium (Ca) Magnesium (Mg)	Obtained from the SAR water saturated paste extract	1 (Na) 1 (Ca) 1 (Mg)	Water soluble constituents are reported in mg/L
Sodium Adsorption Ratio (SAR)	$SAR = \frac{Na}{\sqrt{\frac{(Ca + Mg)}{2}}}$		Express concentrations of Na, Ca and Mg in the water saturated paste extract in milliequivalents/liter (meq/L) to calculate the SAR. The SAR value is unit less. If the SAR is greater than 10, amendments (e.g., gypsum) shall be added to the soil to adjust the SAR to less than 10.
Amendment addition, e.g., gypsum			Report in short tons/acre in the year effected

A copy of this soil testing plan shall be provided to the analytical laboratory prior to sample analysis. The permittee shall submit the results of the annual soil sample analyses with copies of the laboratory reports and a map depicting the areas that have received wastewater within the permanent land application fields to the TCEQ Regional Office (MC Region 11), the Water Quality Assessment Team (MC 150), and the Compliance Monitoring Team (MC 224), no later than the end of September of each sampling year. If wastewater is not applied in a particular year, the permittee shall notify the same TCEQ offices and indicate that wastewater has not been applied on the approved land irrigation site(s) during that year.

28. The subsurface drip irrigation system shall consist of a sufficient number of different dispersal zones. The minimum depth of soil above the drip irrigation lines shall be at least six inches, and the minimum depth of soil below the drip irrigation lines shall consist of at least twelve inches of usable soil. In the event of effluent surfacing due to damage to the drip irrigation lines, effluent application shall be shut-off to the drip irrigation zone and public access to the zone shall be restricted.

29. The permittee shall design and install temporary storage that equals at least three days of the design flow of the facility for times when the subsurface area drip dispersal system is out of service due to an emergency or scheduled maintenance. In addition, the permittee shall pump and haul wastewater from the facility to prevent the discharge of treated or untreated wastewater if complete shutdown of the wastewater treatment facility becomes necessary or if the storage capacity is exceeded.

30. Permanent transmission lines shall be installed from the treatment system to each drip irrigation zone of the subsurface drip irrigation system. According to 30 TAC § 222.153, the permittee shall flush the subsurface area drip dispersal system from the dispersal zone and return the flush water to a point preceding the treatment system at least once every two months.

31. According to 30 TAC § 222.163, Closure Requirements, the permittee shall close the system under the standards set forth in this section.

32. According to the requirements of 30 TAC § 222.43, the permittee shall notify the TCEQ Regional Office (MC Region 11) for each of the following activities:

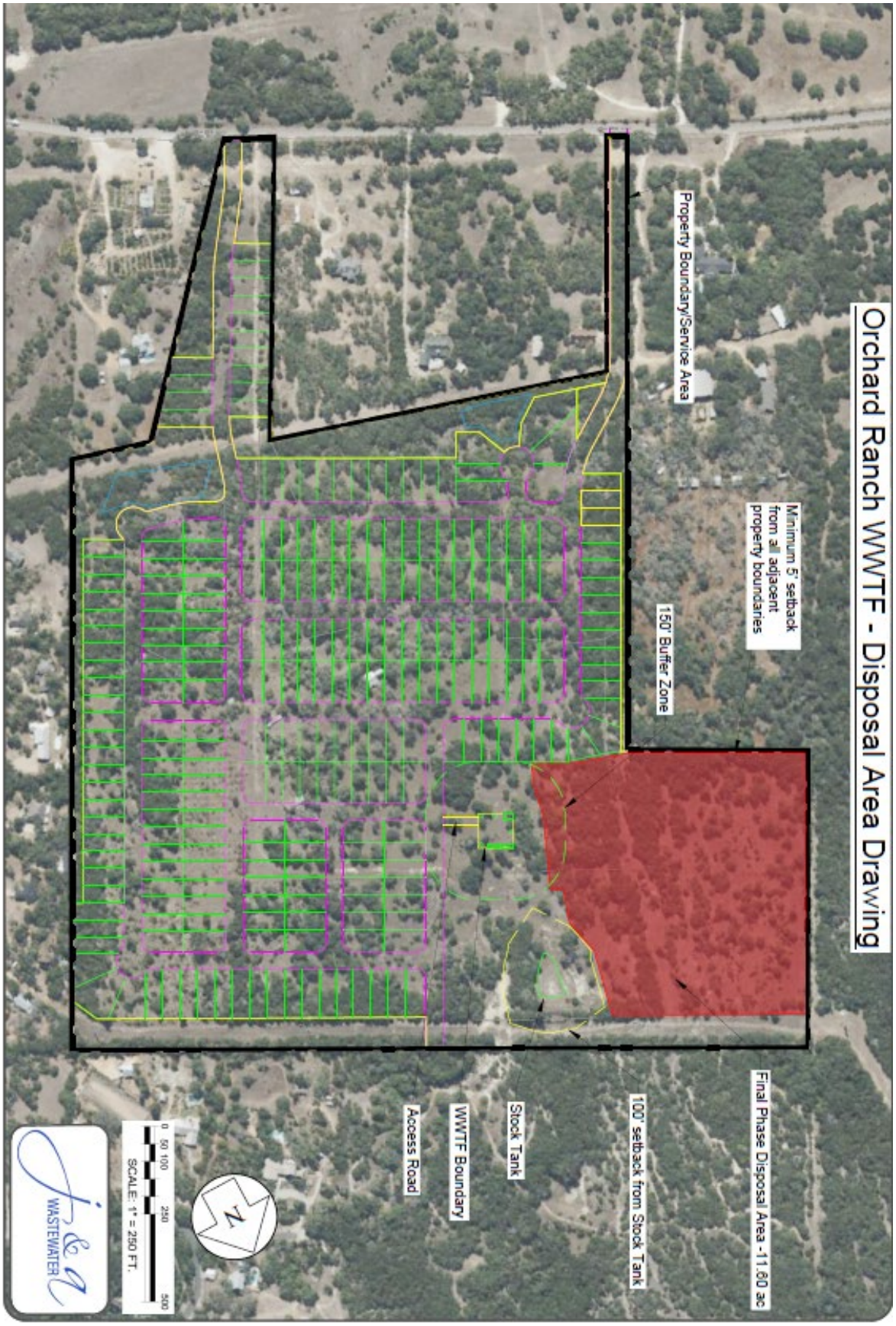
    a. At least 30 days prior to the date the field layout and/or construction startup is scheduled to begin for the proposed subsurface drip irrigation system.

    b. At least 30 days prior to the date that construction is projected to be complete.

    c. Within 30 days after operation of the proposed subsurface drip irrigation system.

    d. If soils are imported, at least 30 days prior to completion of the soil importing project.

33. According to the requirements of 30 TAC § 222.45, the permittee shall submit a copy of the issued permit to the health department with jurisdiction in the area where the system is located before commencing operation of the proposed subsurface drip irrigation system. The permittee shall retain proof of delivery for the duration of the permit.

34. In accordance with 30 TAC § 319.9, a permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission in writing of its compliance and request a less frequent measurement schedule. To request a less frequent schedule, the permittee shall submit a written request to the TCEQ Wastewater Permitting Section (MC 148) for each phase that includes a different monitoring frequency. The request must contain all of the reported bacteria values (Daily Avg. and Daily Max/Single Grab) for the twelve consecutive months immediately prior to the request. If the Executive Director finds that a less frequent measurement schedule is protective of human health and the environment, the permittee may be given a less frequent measurement schedule. For this permit, one/quarter may be reduced to one/six months (Chlorine) or five/week may be reduced to three/week (UV) based on which disinfection method is used. **A violation of any bacteria limit by a facility that has been granted a less frequent measurement schedule will require the permittee to return to the standard frequency schedule and submit written notice to the TCEQ Wastewater Permitting Section (MC 148).** The permittee may not apply for another reduction in measurement frequency for at least 24 months from the date of the last violation. The Executive Director may establish a more frequent measurement schedule if necessary to protect human health or the environment.

Attachment A – Site Map
TCEQ Permit No. WQ0016596001
Clayton Properties Group, Inc.