



Technical Package Cover Page

This file contains the following documents:

1. Summary of application (in plain language)
 - English
 - Alternative Language (Spanish)
2. First notice (NORI-Notice of Receipt of Application and Intent to Obtain a Permit)
 - English
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3. Second notice (NAPD-Notice of Preliminary Decision)
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4. Application materials *
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Plain Language Summary Template and Instructions for Texas Pollutant Discharge Elimination System (TPDES) and Texas Land Application (TLAP) Permit Applications

ENGLISH TEMPLATE FOR TPDES or TLAP NEW/RENEWAL/AMENDMENT APPLICATIONS

DOMESTIC WASTEWATER

The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 30 Texas Administrative Code Chapter 39. The information provided in this summary may change during the technical review of the application and are not federal enforceable representations of the permit application.

Travis County Water Control and Improvement District – Point Venture (CN600644843) operates the Point Venture Wastewater Treatment Plant (WWTP) (RN101916161), a complete mix activated sludge suspended growth biological process plant. The facility is located at 19053 Venture Drive, near the City of Lago Vista, in Travis County, Texas 78645.

This application is for a renewal to dispose a daily average flow not to exceed 0.1 million gallons per day (MGD) of treated domestic wastewater via surface irrigation of 48 acres of a golf course. This permit will not authorize a discharge of pollutants into water in the state.

Discharges from the facility are expected to contain five-day biochemical oxygen demand (BOD₅), total suspended solids (TSS), and *Escherichia coli*. Domestic wastewater is treated by an activated sludge process plant and the treatment units include a lift station, headworks, flow splitter box, an aeration basin, a final clarifier, a tertiary filter unit, a chlorine contact chamber, an effluent transfer basin, and a sludge holding basin.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



NOTICE OF RECEIPT OF APPLICATION AND INTENT TO OBTAIN WATER QUALITY PERMIT RENEWAL

PERMIT NO. WQ0011385001

APPLICATION. Travis County Water Control and Improvement District - Point Venture, 18606 Venture Drive, Lago Vista, Texas 78645, has applied to the Texas Commission on Environmental Quality (TCEQ) to renew Texas Land Application Permit (TLAP) No. WQ0011385001 to authorize the disposal of treated wastewater at a volume not to exceed a daily average flow of 82,000 gallons per day via surface irrigation of 33.576 acres of a golf course and a daily average flow not to exceed 67,800 gallons per day via subsurface area drip irrigation system (SADDs) with a minimum area of 19.464 acres of a golf course. The domestic wastewater treatment facility and disposal area are located at 19053 Venture Drive, near the city of Lago Vista, in Travis County, Texas 78645. TCEQ received this application on October 25, 2024. The permit application will be available for viewing and copying at Travis County Water Control and Improvement District - Point Venture, main office, conference room, 18606 Venture Drive, Lago Vista, in Travis County, 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.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-97.999166,30.383333&level=18>

ADDITIONAL NOTICE. TCEQ's Executive Director has determined the application is administratively complete and will conduct a technical review of the application. After technical review of the application is complete, the Executive Director may prepare a draft permit and will issue a preliminary decision on the application. **Notice of the Application and Preliminary Decision will be published and mailed to those who are on the county-wide mailing list and to those who are on the mailing list for this application. That notice will contain the deadline for submitting public comments.**

PUBLIC COMMENT / PUBLIC MEETING. You may submit public comments or request a public meeting on this application. The purpose of a public meeting is to provide the opportunity to submit comments or to ask questions about the application. TCEQ will hold a public meeting if the Executive Director determines that there is a significant degree of public interest in the application or if requested by a local legislator. A public meeting is not a contested case hearing.

OPPORTUNITY FOR A CONTESTED CASE HEARING. After the deadline for submitting public comments, the Executive Director will consider all timely comments and prepare a response to all relevant and material, or significant public comments. **Unless the application is directly referred for a contested case hearing, the response to comments, and the Executive Director's decision on the application, will be mailed to everyone who submitted public comments and to those persons who are on the mailing list for this application.** If comments are received, the mailing will also provide instructions for requesting reconsideration of the Executive Director's decision and for requesting a contested case hearing. A contested case hearing is a legal proceeding similar to a civil trial in state district court.

TO REQUEST A CONTESTED CASE HEARING, YOU MUST INCLUDE THE FOLLOWING ITEMS IN YOUR REQUEST: your name, address, phone number; applicant's name and proposed permit number; the location and distance of your property/activities relative to the proposed facility; a specific description of how you would be adversely affected by the facility in a way not common to the general public; a list of all disputed issues of fact that you submit during the comment period and, the statement "[I/we] request a contested case hearing." If the request for contested case hearing is filed on behalf of a group or association, the request must designate the group's representative for receiving future correspondence; identify by name and physical address an individual member of the group who would be adversely affected by the proposed facility or activity; provide the information discussed above regarding the affected member's location and distance from the facility or activity; explain how and why the member would be affected; and explain how the interests the group seeks to protect are relevant to the group's purpose.

Following the close of all applicable comment and request periods, the Executive Director will forward the application and any requests for reconsideration or for a contested case hearing to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

The Commission may only grant a request for a contested case hearing on issues the requestor submitted in their timely comments that were not subsequently withdrawn. **If a hearing is granted, the subject of a hearing will be limited to disputed issues of fact or mixed questions of fact and law relating to relevant and material water quality concerns submitted during the comment period.**

TCEQ may act on an application to renew a permit for discharge of wastewater without providing an opportunity for a contested case hearing if certain criteria are met.

MAILING LIST. If you submit public comments, a request for a contested case hearing or a reconsideration of the Executive Director's decision, you will be added to the mailing list for this specific application to receive future public notices mailed by the Office of the Chief Clerk. In addition, you may request to be placed on: (1) the permanent mailing list for a specific applicant name and permit number; and/or (2) the mailing list for a specific county. If you wish to be placed on the permanent and/or the county mailing list, clearly specify which list(s) and send your request to TCEQ Office of the Chief Clerk at the address below.

INFORMATION AVAILABLE ONLINE. For details about the status of the application, visit the Commissioners' Integrated Database at www.tceq.texas.gov/goto/cid. Search the database using the permit number for this application, which is provided at the top of this notice.

AGENCY CONTACTS AND INFORMATION. All public comments and requests must be submitted either electronically at <https://www14.tceq.texas.gov/epic/eComment/>, or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Please be aware that any contact information you provide, including your name, phone number, email address and physical address will become part of the agency's public record. For more information about this permit application or the permitting process, please call the TCEQ Public Education Program, Toll Free, at 1-800-687-4040 or visit their website at www.tceq.texas.gov/goto/pep. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Travis County Water Control and Improvement District - Point Venture at the address stated above or by calling Mr. David Vargas, Trihydro Corporation, at 512-442-3008.

Issuance Date: November 12, 2024

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



NOTICE OF APPLICATION AND PRELIMINARY DECISION FOR WATER QUALITY LAND APPLICATION PERMIT FOR MUNICIPAL WASTEWATER

RENEWAL

PERMIT NO. WQ0011385001

APPLICATION AND PRELIMINARY DECISION. Travis County Water Control and Improvement District - Point Venture, 18606 Venture Drive, Lago Vista, Texas 78645, has applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of TCEQ Permit No. WQ0011385001 which authorizes the disposal of treated domestic wastewater at a daily average flow not to exceed 82,200 gallons per day via surface irrigation of 33.576 acres of a golf course and a daily average flow not to exceed 67,800 gallons per day via subsurface area drip irrigation system (SADDs) with a minimum area of 19.464 acres of a golf course. This permit will not authorize a discharge of pollutants into water in the state. TCEQ received this application on October 25, 2024.

The wastewater treatment facility and disposal site are located at 19053 Venture Drive, in Travis County, Texas 78645. The wastewater treatment facility and disposal site are located in the drainage basin of Lake Travis in Segment No. 1404 of the Colorado River Basin. This link to an electronic map of the site or facility's general location is provided as a public courtesy and is not part of the application or notice. For the exact location, refer to the application.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-97.999166,30.383333&level=18>

The TCEQ Executive Director has completed the technical review of the application and prepared a draft permit. The draft permit, if approved, would establish the conditions under which the facility must operate. The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The permit application, Executive Director's preliminary decision, and draft permit are available for viewing and copying at Travis County Water Control and Improvement District - Point Venture, main office, conference room, 18606 Venture Drive, Lago Vista, in Travis County, Texas. 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>.

PUBLIC COMMENT / PUBLIC MEETING. You may submit public comments or request a public meeting about this application. The purpose of a public meeting is to provide the opportunity to submit comments or to ask questions about the application. TCEQ holds a public meeting if the Executive Director determines that there is a significant degree of public interest in the application or if requested by a local legislator. A public meeting is not a contested case hearing.

OPPORTUNITY FOR A CONTESTED CASE HEARING. After the deadline for submitting public comments, the Executive Director will consider all timely comments and prepare a response to all relevant and material, or significant public comments. **Unless the application is directly referred for a contested case hearing, the response to comments will be mailed to everyone who submitted public comments and to those persons who are on the mailing list for this application. If comments are received, the mailing will also provide instructions for requesting a contested case hearing or reconsideration of the Executive Director's decision.** A contested case hearing is a legal proceeding similar to a civil trial in a state district court.

TO REQUEST A CONTESTED CASE HEARING, YOU MUST INCLUDE THE FOLLOWING ITEMS IN YOUR REQUEST: your name, address, phone number; applicant's name and proposed permit number; the location and distance of your property/activities relative to the proposed facility; a specific description of how you would be adversely affected by the facility in a way not common to the general public; a list of all disputed issues of fact that you submit during the comment period; and the statement "[I/we] request a contested case hearing." If the request for contested case hearing is filed on behalf of a group or association, the request must designate the group's representative for receiving future correspondence; identify by name and physical address an individual member of the group who would be adversely affected by the proposed facility or activity; provide the information discussed above regarding the affected member's location and distance from the facility or activity; explain how and why the member would be affected; and explain how the interests the group seeks to protect are relevant to the group's purpose.

Following the close of all applicable comment and request periods, the Executive Director will forward the application and any requests for reconsideration or for a contested case hearing to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

The Commission may only grant a request for a contested case hearing on issues the requestor submitted in their timely comments that were not subsequently withdrawn. **If a hearing is granted, the subject of a hearing will be limited to disputed issues of fact or mixed questions of fact and law relating to relevant and material water quality concerns submitted during the comment period. TCEQ may act on an application to renew a permit for discharge of wastewater without providing an opportunity for a contested case hearing if certain criteria are met.**

EXECUTIVE DIRECTOR ACTION. The Executive Director may issue final approval of the application unless a timely contested case hearing request or request for reconsideration is filed. If a timely hearing request or request for reconsideration is filed, the Executive Director will not issue final approval of the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

MAILING LIST. If you submit public comments, a request for a contested case hearing or a reconsideration of the Executive Director's decision, you will be added to the mailing list for this specific application to receive future public notices mailed by the Office of the Chief Clerk. In addition, you may request to be placed on: (1) the permanent mailing list for a specific applicant name and permit number; and/or (2) the mailing list for a specific county. If you wish to be placed on the permanent and/or the county mailing list, clearly specify which list(s) and send your request to TCEQ Office of the Chief Clerk at the address below.

All written public comments and public meeting requests must be submitted to the Office of the Chief Clerk, MC 105, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, TX 78711-3087 or electronically at www.tceq.texas.gov/goto/comment within 30 days from the date of newspaper publication of this notice.

INFORMATION AVAILABLE ONLINE. For details about the status of the application, visit the Commissioners' Integrated Database at www.tceq.texas.gov/goto/cid. Search the database using the permit number for this application, which is provided at the top of this notice.

AGENCY CONTACTS AND INFORMATION. Public comments and requests must be submitted either electronically at www.tceq.texas.gov/goto/comment, or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC 105, P.O. Box 13087, Austin, Texas 78711-3087. Any personal information you submit to the TCEQ will become part of the agency's record; this includes email addresses. For more information about this permit application or the permitting process, please call the TCEQ Public Education Program, Toll Free, at 1-800-687-4040 or visit their website at www.tceq.texas.gov/goto/pep. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Travis County Water Control and Improvement District - Point Venture at the address stated above or by calling Mr. David Vargas, Trihydro Corporation, at 512-442-3008.

Issuance Date: April 15, 2025



PERMIT NO. WQ0011385001

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

This is a renewal of Permit No.
WQ0011385001 issued on
February 4, 2015.

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

Travis County Water Control and Improvement District - Point Venture

whose mailing address is

18606 Venture Drive
Lago Vista, Texas 78645

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

General Description and Location of Waste Disposal System:

Description: The Point Venture Wastewater Treatment Facility consists of an activated sludge process plant using the complete mix mode. Treatment units in the Interim phase include an onsite lift station, an aeration basin, a final clarifier, a chlorine contact basin, and an effluent transfer basin. Treatment units in the Final phase include an onsite lift station, a fine screen headworks, a flow splitter box, an aeration basin, a final clarifier, an aerobic sludge digester, a chlorine contact chamber, sludge holding basin, and an effluent transfer basin. The facility is in operation.

Interim Phase – Surface Irrigation. The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.10 MGD via surface irrigation of 48 acres of a golf course. The facility includes two storage ponds with a total surface area of 0.6 acre and total capacity of 3.85 acre-feet and two steel tanks with a total capacity of 18.41 acre-feet for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 2.33 acre-feet per year per acre irrigated. The irrigated crop is Bermuda grass.

Final Phase – Surface Irrigation. The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.0822 MGD via surface irrigation of 33.576 acres of a golf course. The facility will include two storage ponds with a total surface area of 0.6 acre and total capacity of 3.85 acre-feet and two steel tanks with a total capacity of 18.41 acre-feet for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 2.74 acre-feet per year per acre irrigated. The

irrigated crop is Bermuda grass.

Final Phase – Subsurface area drip dispersal system (SADDs). The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.0678 MGD via subsurface area drip irrigation system (SADDs) with a minimum area of 19.464 acres of a golf course. The facility will include one dosing tank with a total capacity of 339,000 gallons for storage of treated effluent prior to subsurface drip irrigation. Application rates shall not exceed 0.1 gallons per square foot per day. The permittee will maintain native grasses, native oaks and juniper trees and, on the open areas, bermuda grass and winter rye, on the SADDs disposal site.

Location: The wastewater treatment facility and disposal site are located 19053 Venture Drive, in Travis County, Texas 78645. (See Attachment A.)

Drainage Area: The wastewater treatment facility and disposal site are located in the drainage basin of Lake Travis in Segment No. 1404 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, **ten years from the date of issuance.**

ISSUED DATE:

For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR SURFACE IRRIGATION

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 – 0.10 MGD in the Interim Phase;
Daily Average Flow – 0.0822 MGD in the Final Phase from the treatment system

Quality: The following effluent limitations are required:

<u>Parameter</u>	Effluent Concentrations			
	(Not to Exceed)			
	<u>Daily Average</u> mg/l	<u>7-Day Average</u> mg/l	<u>Daily Maximum</u> mg/	<u>Single Grab</u> mg/l
Biochemical Oxygen Demand (5-day)	10	15	25	35
Total Suspended Solids	15	25	40	60

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

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. A trace total chlorine residual shall be maintained in the effluent at the point of irrigation application.

B. Monitoring Requirements:

<u>Parameter</u>	<u>Monitoring Frequency</u>	<u>Sample Type</u>
Flow	Five/week	Instantaneous
Biochemical Oxygen Demand (5-day)	One/month	Grab
Total Suspended Solids	One/month	Grab
pH	One/month	Grab
Total Chlorine Residual	One/month	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.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR SADDs

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 – 0.0678 MGD in the Final Phase from the treatment system

Quality: The following effluent limitations shall be required:

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

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. A trace chlorine residual shall be maintained in the effluent at the point of irrigation application.

B. Monitoring Requirements:

<u>Parameter</u>	<u>Monitoring Frequency</u>	<u>Sample Type</u>
Flow	Five/week	Instantaneous
Biochemical Oxygen Demand (5-day)	One/month	Grab
Total Suspended Solids	One/month	Grab
pH	One/month	Grab
Chlorine Residual	One/month	Grab
<i>E. coli</i>	One/month	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.

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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

<u>Pollutant</u>	<u>Ceiling Concentration</u> <u>(Milligrams per kilogram)*</u>
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 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 biosolids 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. Sewage sludge shall be injected below the surface of the land.
- ii. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is 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 sewage sludge 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):

<u>Amount of biosolids (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
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, sewage sludge or biosolids for disposal at a landfill) 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

<u>Pollutant</u>	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

<u>Pollutant</u>	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 or biosolids 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 sewage sludge 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 or biosolids treatment activities.
 - b. The location, by street address, and specific latitude and longitude, of each site on which sludge or biosolids are applied.
 - c. The number of acres in each site on which bulk sludge or biosolids are applied.
 - d. The date and time sludge or biosolids are 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 meet 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 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) 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 30th 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 (MC224).

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 or biosolids 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 or biosolids 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.

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SPECIAL PROVISIONS FOR SURFACE IRRIGATION:

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 Category 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 Final Phase 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 Section 217.6(c). 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 Pages 2 and 4 of the permit.
5. The permittee had submitted evidence of legal restrictions (on file) prohibiting residential structures within the part of the buffer zone not owned by the permittee according to 30 TAC § 309.13(e)(3). The evidence of legal restrictions shall be submitted to the Executive Director in care of the TCEQ Wastewater Permitting Section (MC 148). The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). (See Attachment B.)

6. The permittee shall obtain representative soil samples from the root zones of the land application area. Composite sampling techniques shall be used. Each composite sample shall represent no more than 33.576 acres with no fewer than 15 subsamples representing each composite sample. For analysis and reporting, subsamples shall be composited by like sampling depth, type of crop, and soil type. Soil types are soils that have like topsoil or plow layer textures. These soils shall be sampled individually from 0 to 6 inches, 6 to 18 inches and 18 to 30 below ground level. The permittee shall sample soils in December to February of each. Soil samples shall be analyzed within 30 days of sample collection.

The permittee shall provide annual soil 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	2:1 (v/v) water to soil mixture	0.01	dS/m (same as mmho/cm)
Nitrate-nitrogen	From a 1 <u>N</u> 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 + nitrate-nitrogen (same as, organic-nitrogen + ammonium-nitrogen + nitrate-nitrogen)		mg/kg (dry weight basis)
Plant-available: Phosphorus	Mehlich III with inductively coupled plasma	1	mg/kg (dry weight basis)
Plant-available: Potassium	May be determined in the same Mehlich III extract with inductively coupled plasma	5 (K)	mg/kg (dry weight basis)
Amendment addition, e.g., gypsum	Recommendation from analytical laboratory		Report in <i>short tons/acre</i> in the year effected

The permittee shall provide a copy of this plan 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) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division no later than end of September following the sampling date of each year. If wastewater is not applied in a particular year, the permittee shall notify the same TCEQ offices and indicate that wastewater and/or sludge has not been applied on the approved land disposal sites during that year.

7. The irrigated crops include Bermuda grass for surface irrigation. The permittee will maintain native grasses, native oaks and juniper trees and, on the open areas, bermuda grass and winter rye, on the SADDs disposal site.
8. Application rates to the irrigated land shall not exceed 2.33 acre-feet per year per acre irrigated in the Interim Phase. Application rates to the irrigated land shall not exceed 2.74 acre-feet per year per acre irrigated in the Final Phase. The permittee is responsible for providing equipment to determine application rates and maintaining accurate records of the volume of effluent applied. These records shall be made available for review by the Texas Commission on Environmental Quality and shall be maintained for at least three years.
9. Irrigation practices shall be designed and managed as to prevent ponding of effluent or contamination of ground and surface waters and to prevent the occurrence of nuisance conditions in the area. To promote effluent and nutrient uptake by the crop, and to prevent pathways for effluent surfacing, the Bermuda grass, native grasses, native oaks, and juniper trees and winter rye shall be established and well maintained in the irrigation area throughout the year. Tailwater control facilities shall be provided as necessary to prevent the discharge of any effluent from the irrigated land.
10. Effluent shall not be applied for irrigation during rainfall events or when the ground is frozen or saturated.
11. 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.
12. Spray fixtures for the irrigation system shall be of such design that they cannot be operated by unauthorized personnel.
13. Irrigation with effluent shall be accomplished only when the area specified is not in use.
14. The permittee shall maintain a long term contract with the owner(s) of the land application site which is authorized for use in this permit, or own the land authorized for land application of treated effluent.
15. Holding or storage ponds shall conform to the design criteria for stabilization ponds with regard to construction and levee design and shall maintain a minimum freeboard of two feet according to 30 TAC Chapter 217, Design Criteria for Wastewater Treatment Systems.

16. Permanent transmission lines shall be installed from the holding pond to each tract of land to be irrigated utilizing effluent from that pond.
17. Facilities for the retention or storage of treated or untreated wastewater, such as constructed wetlands, ponds and lagoons, shall be adequately lined to control seepage. The liner shall meet the requirements in 30 TAC § 217.203, Design Criteria for Natural Treatment Facilities.

The permittee shall furnish certification by a Texas Licensed Professional Engineer that the completed pond lining meets the appropriate criteria above prior to use of the facilities. The certification shall be submitted to the TCEQ Regional Office (MC Region 11), Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, Water Quality Assessment Team (MC 150) and Wastewater Permitting Section (MC 148) of the Water Quality Division.

18. For existing ponds that were lined and certified under 30 TAC Chapter 317: Facilities for the retention of treated or untreated wastewater shall be adequately lined to control seepage. The following methods of pond lining are acceptable.
 - a. In-situ clay soils or placed and compacted clay soils meeting the following requirements:
 - 1) More than 30% passing a No. 200 mesh sieve
 - 2) Liquid limit greater than 30%
 - 3) Plasticity index greater than 15
 - 4) A minimum thickness of 2 feet
 - b. Membrane lining with a minimum thickness of 20 mils, and an underdrain leak detection system.
 - c. An alternate method of pond lining may be utilized with prior approval from the Executive Director.

The permittee has furnished certification by a Texas Licensed Professional Engineer that the completed pond lining meets the appropriate criteria above (on file).

19. The existing wastewater ponds shall be maintained and operated in a manner that prevents unauthorized discharge to water in the state and contamination of groundwater.
20. Facilities for the retention of treated or untreated wastewater shall be adequately managed and lined to control seepage. At least once per month, the Permittee shall inspect the sides and bottom (if visible) of all wastewater ponds for signs of damage and leakage, and any pond leak detection systems that are in service. Leaking ponds shall be removed from service, or operated in a manner to prevent discharge, until repairs are made or replacement ponds are constructed.
21. Any new or modified wastewater pond shall be adequately lined to control seepage in accordance with 30 TAC §217.203 **and** 30 TAC §309.13(d) since the facility overlies the recharge zone of an aquifer. New or modified wastewater ponds shall not be put into service until the permittee demonstrates that the pond liners meet the requirements of 30 TAC §217.203 **and** 30 TAC §309.13(d). The permittee shall demonstrate that the number, location, and test results of samples collected for geotechnical testing are in accordance with 30 TAC §217.203(d) and (e), and that the liner has a minimum thickness of 3 feet in

accordance with 30 TAC §309.13(d) since the facility overlies the recharge zone of an aquifer. The report providing this demonstration shall be submitted to the Water Quality Assessment Team (MC-150) and the TCEQ Regional Office (MC-Region 11) for review and approval prior to use of the wastewater ponds. If a synthetic liner is to be used, the liner thickness shall be a minimum of 40 mils and be constructed with an underground leak detection system with appropriate sampling points.

22. The permittee shall submit the liner certification for a newly-constructed or modified wastewater pond to the Water Quality Assessment Team (MC-150), the TCEQ Regional Office (MC-Region 11), and the TCEQ Compliance Monitoring Section (MC-224) within 30 days of completion and prior to use. The certification shall be signed and sealed by a Texas-licensed professional engineer and include a description of how the liner meets the requirements of 30 TAC §217.203 **and** 30 TAC §309.13(d).
23. Pond liner certifications and all liner construction and repair documentation shall be maintained by the Permittee for the life of the facility and be made available for TCEQ personnel for inspection and review.
24. The permittee shall comply with buffer zone requirements of 30 TAC §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 ft from a private well and a minimum horizontal distance of 500 ft from a public water well site, spring, or other similar sources of public drinking water, as provided by §290.41(c)(1)(C) of this title.
25. The permittee shall provide automatic shutdown alarm controls for the irrigation system of the future irrigation areas (hatched areas in Attachment C) that will be continuously responsive to the measured wind speed and direction to prevent nuisance spray drift off the stated irrigation areas.
26. The permittee shall provide facilities for the protection of its wastewater treatment facilities from a 100-year flood.
27. The permittee shall use cultural practices to promote and maintain the health and propagation of the Bermuda grass, native grasses, native oaks, juniper trees, and winter rye crops and avoid plant lodging. The permittee shall harvest the crops (cut and remove it from the field) at least one time during the year. Harvesting and mowing dates shall be recorded in a log book kept on site to be made available to TCEQ personnel upon request.
28. The physical condition of the spray irrigation fields will be monitored on a weekly basis when the fields are being utilized for the purpose of wastewater irrigation. Any areas with problems such as surface runoff, surficial erosion, stressed or damaged vegetation will be recorded in the field log kept onsite and corrective measures will be initiated within 24 hours of discovery.

SPECIAL PROVISIONS FOR SADDs:

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 Category 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 Interim Phase and Final Phase 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 Section 217.6(c). 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.
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. The permittee had submitted evidence of legal restrictions (on file) prohibiting residential structures within the part of the buffer zone not owned by the permittee according to 30 TAC Section 309.13(e)(3). The evidence of legal restrictions shall be submitted to the Executive Director in care of the TCEQ Wastewater Permitting Section (MC 148). The permittee shall

comply with the requirements of 30 TAC Section 309.13(a) through (d). (See Attachment B.)

7. According to the requirements of 30 TAC Section 222.81(a), the permittee shall locate the subsurface area drip dispersal system a minimum horizontal distance of 100 feet from surface waters in the state. The permittee shall locate the subsurface area drip dispersal system 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 water wells as described in 30 TAC Section 309.13(c)(1). The permittee shall not locate a subsurface area drip dispersal system within a floodway according to the requirements of 30 TAC Section 222.81(d).
8. The permittee will maintain native grasses, native oaks and juniper trees and, on the open areas, bermuda grass and winter rye. 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 Section 222.161(d), the permittee shall maintain records documenting all activities associated with maintaining the vegetative cover, 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.
9. Based on the requirements of 30 TAC Section 222.151, the subsurface drip irrigation 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.
10. The subsurface drip irrigation system shall consist of a sufficient number of different dispersal zones. 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.
11. 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.
12. 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 Section 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.
13. According to the requirements of 30 TAC Section 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.
14. 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.
 15. According to 30 TAC Section 222.163, Closure Requirements, the permittee shall close the system under the standards set forth in this section.
 16. Irrigation practices shall be designed and managed as to prevent ponding of effluent or contamination of ground and surface waters and to prevent the occurrence of nuisance conditions in the area. To promote effluent and nutrient uptake by the crop, and to prevent pathways for effluent surfacing, the Bermuda grass, native grasses, native oaks, and juniper trees and winter rye shall be established and well maintained in the irrigation area throughout the year. Tailwater control facilities shall be provided as necessary to prevent the discharge of any effluent from the irrigated land.
 17. Irrigation with effluent shall be accomplished only when the area specified is not in use.
 18. 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.
 19. The permittee shall maintain a long term contract with the owner(s) of the land application site which is authorized for use in this permit, or own the land authorized for land application of treated effluent.
 20. According to the requirements of 30 TAC Section 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.
 21. The permittee shall comply with the buffer zone requirements of 30 TAC §217; §222.81; §290; §309; and any Best Management Practice (BMP) proposed in the permit application regarding water in the state. Effluent shall not be applied within 150 feet of a private water supply well; 500 feet of a public water supply well, spring, or similar source of public drinking water; 200 feet of a solution channel, sinkhole, or other conduit to groundwater; or 100 feet from surface waters in the state.
 22. Any recharge features uncovered by construction activities shall be addressed in an updated and certified Recharge Feature Plan (RFP). The RFP will include the BMPs implemented that will prevent impact to recharge features from wastewater application and prevent groundwater contamination. The updated certified RFP shall be submitted to the TCEQ Water Quality Assessment Team (MC-150) and the TCEQ Region 11 Office within 30 days of discovery of the new recharge feature(s).

23. The permittee shall notify the TCEQ Region 11 Office 30 days before any of the following activities begin in accordance with 30 TAC §222.43: construction start up, drip system field layout, completion of any soil amendments, operation of the subsurface drip system, or completion of the subsurface project.
24. The applicant shall construct berms or swales that will prevent, or divert, stormwater from entering all subsurface wastewater application areas.
25. The shallow groundwater monitoring program shall be implemented per the Drip Irrigation System Engineering Report and Annual Cropping Plan of the application. Additionally:

The applicant shall submit the data from the quarterly shallow groundwater monitoring plan to the Water Quality Assessment Team (MC-150) of the Water Quality Division and the Compliance Monitoring Section (MC-224) during the month of September of each year for review.

The shallow groundwater sampling points are, at a minimum, the same locations as the sampling points used for the annual soil sampling (Locations A through Z) and are shown in Attachment D.

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.

26. The seep/springs sampling program shall be implemented per the Drip Irrigation System Engineering Report and Annual Cropping Plan of the application. Additionally:

The applicant shall submit the data from the quarterly seeps/springs monitoring plan to the Water Quality Assessment Team (MC-150) of the Water Quality Division and the Compliance Monitoring Section (MC-224) during the months of March and September of each year for review.

Any spring and/or seep development found downgradient from the drip irrigation fields will be reported to the TCEQ Region 11 Office within five (5) business days. If laboratory analysis indicates that wastewater is emerging as a spring or seep, corrective measures will be implemented immediately to correct the discharge.

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.

27. 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 19.464 acres with no less than two soil cores per each dispersal zone. For analysis and reporting, subsamples shall be composited by like sampling depth, type of crop, and soil type. 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 below ground level. The permittee shall sample soils in December to February of each. Soil samples shall be analyzed within 30 days of sample collection.

The permittee shall provide annual soil 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 <u>N</u> 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)
Plant-available: Phosphorus	Mehlich III with inductively coupled plasma	1	mg/kg (dry weight basis)
Plant-available: Potassium Calcium Magnesium Sulfur	May be determined in the same Mehlich III extract with inductively coupled plasma	5 (K) 10 (Ca) 5 (Mg) 1 (S)	mg/kg (dry weight basis)
Water-soluble: Sodium Calcium Magnesium	Obtained from the SAR water saturated paste extract	1 (Na) 1 (Ca) 1 (Mg)	Water soluble constituents are <i>reported</i> in mg/L
Sodium Adsorption Ratio (SAR)	$SAR = \frac{Na}{\sqrt{\frac{(Ca + Mg)}{2}}}$		<i>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.</i>

			If the SAR is 10 or 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	Recommendation from analytical laboratory		Report in <i>short tons/acre</i> in the year effected

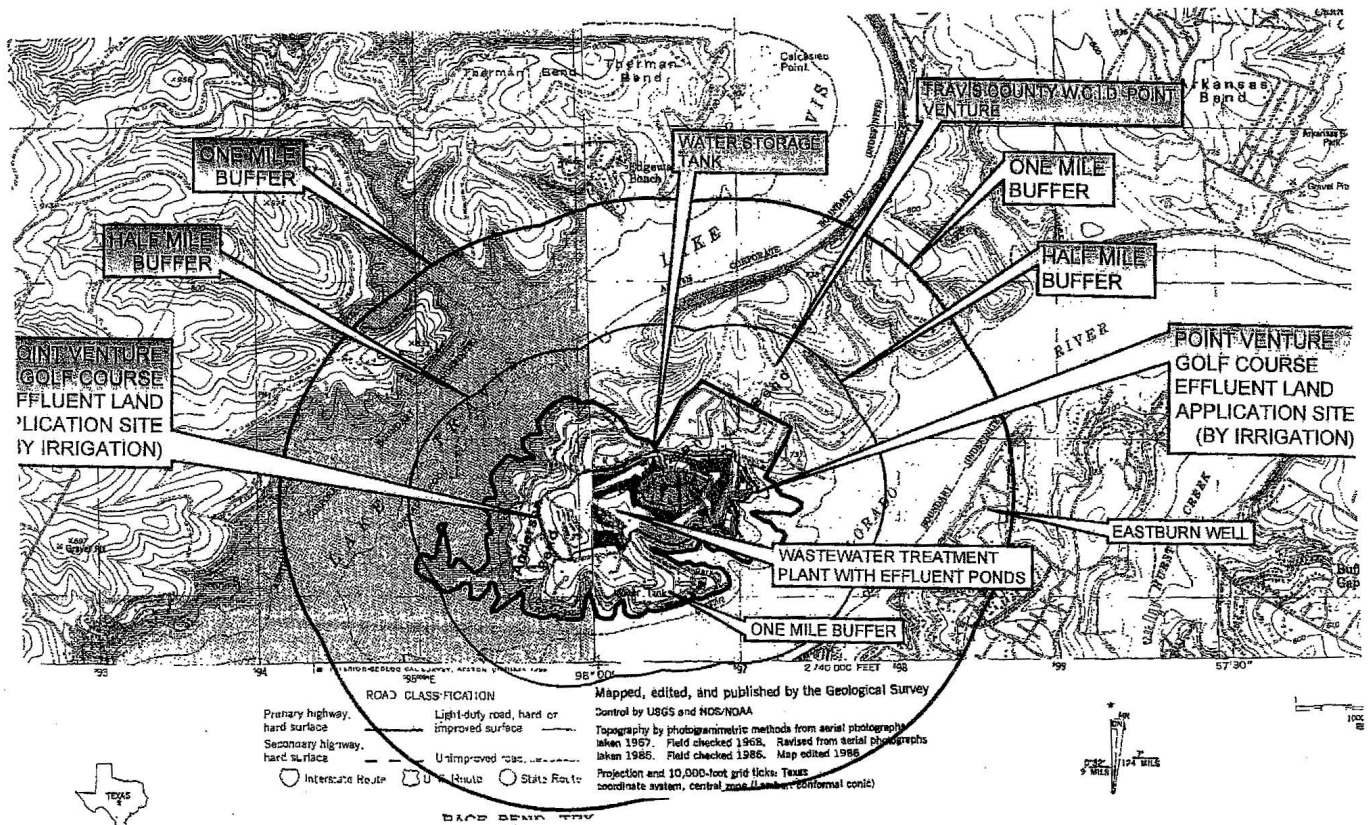
A copy of this soil testing plan shall be provided to the analytical laboratory prior to sample analysis. The permittee shall submit the results of the annual soil sample analyses with copies of the laboratory reports and a map depicting the areas that have received wastewater within the permanent land application fields to the TCEQ Regional Office (MC Region 11), the Water Quality Compliance Monitoring Team (MC 224) of the Water Quality Assessment (MC 150) and Enforcement Division, no later than September 30 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 permittee shall maintain a minimum rootable soil depth below the drip irrigation lines of 12 inches. At least a 6 inch layer of soil shall be maintained over the drip lines. If imported soils are utilized, 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.
29. Each drip field (zone) shall have at least one moisture sensing device placed at 12 inches below the drip lines at the topographic low of each zone that will automatically shut off irrigation to the drip field when the soil becomes saturated. In each zone, the moisture sensing devices will be at least 20 feet apart if more than one moisture sensing device is installed.
30. If complete shutdown of the facility becomes necessary or if the storage capacity is exceeded, the permittee shall employ pump and haul method to prevent the discharge of treated or untreated wastewater. The permittee shall obtain the necessary authorization from the TCEQ Region 11 before undertaking the pump and haul activity.
31. 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 30 TAC Chapter 222 indicating how uneven application of effluent due to back draining will be avoided. The permittee shall notify the TCEQ Region 11 office 30 days prior to installation of the drip lines.
32. All open areas in the 19.464 acres shall be planted to Bermuda grass and rye grass and maintained to ensure a year round non-dormant vegetative cover. The permittee shall mow and/or harvest (cut and remove it from the field at least one time during the year) and manage the grass areas to ensure the health of the plant stand and elevated

evapotranspiration of the vegetative cover. Harvesting and mowing dates shall be recorded in a log book kept on site to be made available to TCEQ personnel upon request.

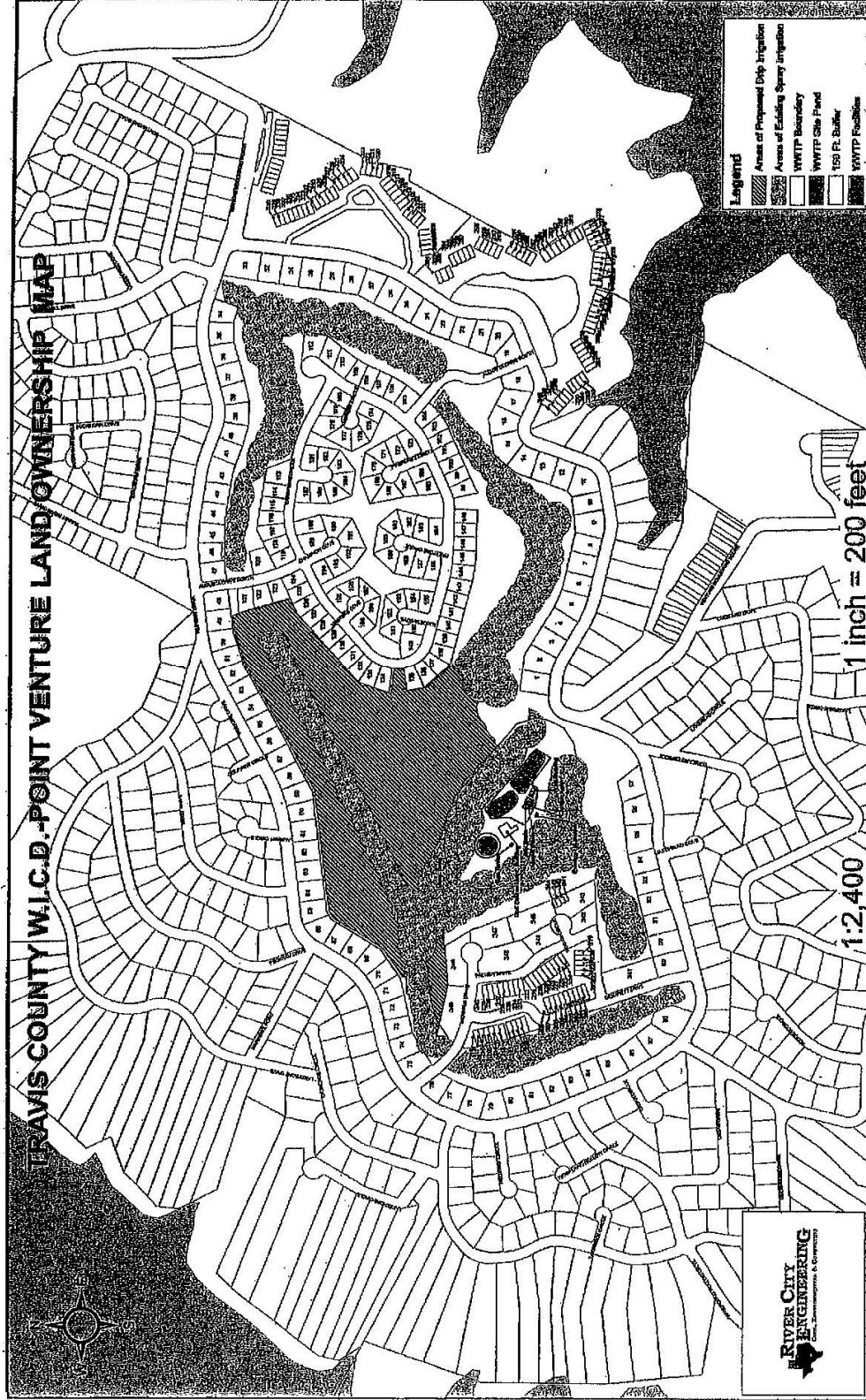
33. Each dispersal zone shall meet the flush velocity requirements of 30 TAC §222.117.
34. The physical condition of the land application fields will be monitored on a weekly basis when the fields are being utilized for the purpose of wastewater irrigation. Any areas with problems such as surface runoff, surficial erosion, stressed or damaged vegetation will be recorded in the field log kept onsite and corrective measures will be initiated within 24 hours of discovery.
35. 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.

ATTACHMENT A

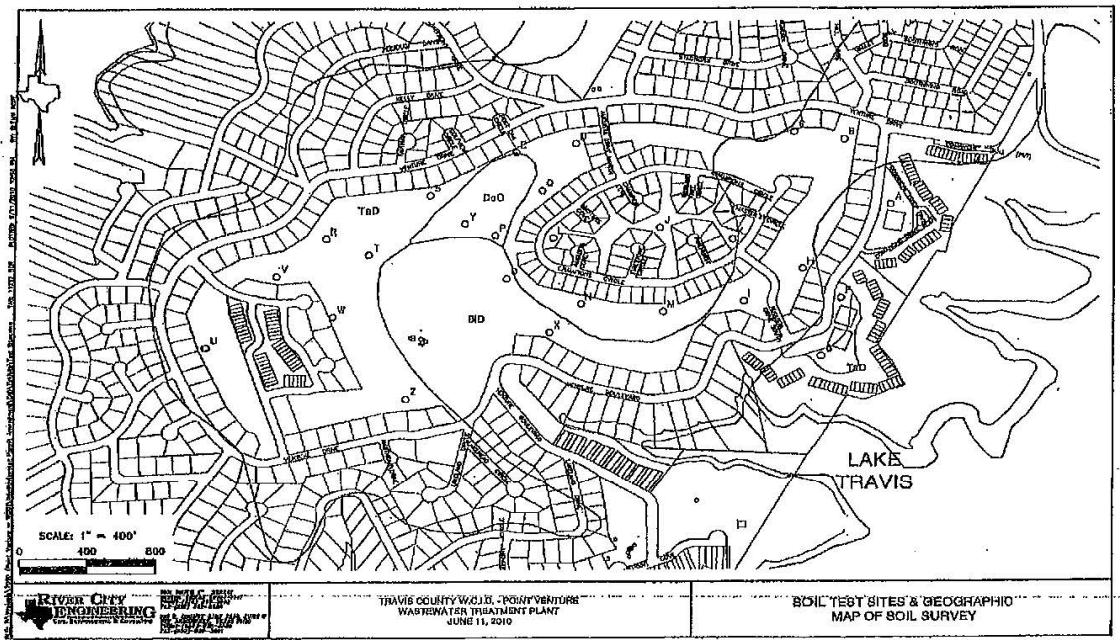


Travis County Water Control and Improvement District - Point Venture
TCEQ Permit No. WQ0011385001

ATTACHMENT C



**ATTACHMENT D Shallow Groundwater Monitoring Locations
(Locations A through Z)**



TECHNICAL SUMMARY AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

DESCRIPTION OF APPLICATION

Applicant:	Travis County Water Control and Improvement District - Point Venture TCEQ Permit No. WQ0011385001
Regulated Activity:	Domestic Wastewater Permit
Type of Application:	Renewal
Request:	Renewal with no changes
Authority:	Texas Water Code (TWC) § 26.027; 30 Texas Administrative Code (TAC) Chapters 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 **ten years from the date of issuance**, according to 30 TAC Section 305.127(1)(C)(ii)(III), Conditions to be Determined for Individual Permits.

REASON FOR PROJECT PROPOSED

Travis County Water Control and Improvement District - Point Venture has applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of Permit No. WQ0011385001 to authorize the disposal of treated domestic wastewater at a daily average flow not to exceed 0.10 million gallons per day (MGD) via surface irrigation of 48 acres of a golf course in the Interim Phase and 0.0822 MGD via surface irrigation of 33.576 acres of a golf course and 0.0678 MGD via subsurface area drip irrigation system (SADDs) with a minimum area of 19.464 acres of a golf course in the Final Phase.

The facility includes two storage ponds with a total surface area of 0.6 acre and total capacity of 3.85 acre-feet and two steel tanks with a total capacity of 18.41 acre-feet for storage of treated effluent prior to irrigation in the Interim Phase and the Final Phase. The facility will include one dosing tank with a total capacity of 339,000 gallons for storage of treated effluent prior to subsurface drip irrigation. The existing wastewater treatment facility serves the Village of Point Venture.

PROJECT DESCRIPTION AND LOCATION

The Point Venture Wastewater Treatment Facility consists of an activated sludge process plant using the complete mix mode. Treatment units in the Interim phase include an onsite lift station, an aeration basin, a final clarifier, a chlorine contact basin, and an effluent transfer basin. Treatment units in the Final phase include an onsite lift station, a fine screen headworks, a flow splitter box, an aeration basin, a final clarifier, an aerobic sludge digester, a chlorine

Travis County Water Control and Improvement District - Point Venture
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Statement of Basis/Technical Summary and Executive Director's Preliminary Decision

contact chamber, sludge holding basin, and an effluent transfer basin. The facility is in operation.

Sludge generated from the treatment facility is hauled by a registered transporter and disposed of at a TCEQ-authorized land application site, Austin Wastewater Processing Facility, MSW Permit No. 2384A, in Travis 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 are located 19053 Venture Drive in Travis County, Texas 78645.

The wastewater treatment facility and disposal site are located in the drainage basin of Lake Travis in Segment No. 1404 of the Colorado River Basin. No discharge of pollutants into water in the state is authorized by this permit.

SUMMARY OF EFFLUENT DATA

The following is a summary of the applicant's effluent monitoring data for the period September 2022 through August 2024. The average of Daily Average value is computed by averaging of all 30-day average values for the reporting period for each parameter: flow, five-day biochemical oxygen demand (BOD₅), and total suspended solids (TSS).

<u>Parameter</u>	<u>Average of Daily Average</u>
Flow, MGD	0.065
BOD ₅ , mg/l	7.1
TSS, mg/l	12

DRAFT PERMIT CONDITIONS

Interim Phase – Surface Irrigation. The draft permit authorizes the disposal of treated domestic wastewater effluent at a daily average flow not to exceed 0.10 MGD via surface irrigation of 48 acres of a golf course. The facility includes two storage ponds with a total surface area of 0.6 acre and total capacity of 3.85 acre-feet and two steel tanks with a total capacity of 18.41 acre-feet for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 2.33 acre-feet per year per acre irrigated. The irrigated crop is Bermuda grass.

Final Phase – Surface Irrigation. The draft permit authorizes the disposal of treated domestic wastewater effluent at a daily average flow not to exceed 0.0822 MGD via surface irrigation of 33.576 acres of a golf course. The facility will include two storage ponds with a total surface area of 0.6 acre and total capacity of 3.85 acre-feet and two steel tanks with a total capacity of 18.41 acre-feet for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 2.74 acre-feet per year per acre irrigated. The irrigated crop is Bermuda grass.

Final Phase – Subsurface area drip dispersal system (SADDS). The draft permit authorizes the disposal of treated domestic wastewater effluent at a daily average flow not to exceed 0.0678 MGD via subsurface area drip irrigation system (SADDS) with a minimum area

of 19.464 acres of a golf course. The facility will include one dosing tank with a total capacity of 339,000 gallons for storage of treated effluent prior to subsurface drip irrigation. Application rates shall not exceed 0.1 gallons per square foot per day. The permittee will maintain native grasses, native oaks and juniper trees and, on the open areas, bermuda grass and winter rye, on the SADDs disposal site.

All Phases. The effluent limitations in the draft permit, based on a daily average, are 10 mg/l BOD₅ and 15 mg/l TSS. The effluent shall contain a chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes based on peak flow.

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 is hauled by a registered transporter and disposed of at a TCEQ-authorized land application site, Austin Wastewater Processing Facility, MSW Permit No. 2384A, in Travis 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.

SUMMARY OF CHANGES FROM APPLICATION

None.

SUMMARY OF CHANGES FROM EXISTING PERMIT

Effluent limitations and monitoring requirements in the draft permit remain the same as the existing permit effluent limitations and monitoring requirements. The Sludge Provisions, Special Provisions, and Standard Provisions have been revised in the draft permit.

Certain accidental discharges or spills of treated or untreated wastewater from wastewater treatment facilities or collection systems owned or operated by a local government may be reported on a monthly basis in accordance with 30 TAC § 305.132.

The draft permit includes all updates based on the 30 TAC 312 rule change effective April 23, 2020.

The Interim I phase of the existing permit has been removed since the facility is currently operating at the 0.10 MGD capacity. The Interim II phase of the existing permit has been updated to the Interim phase, and the Final phase remains the same.

SECTION IV, REQUIREMENTS APPLYING TO SLUDGE OR BIOSOLIDS TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING, has been added to the Sludge Provisions of the draft permit to allow the transportation of sludge or biosolids to another facility.

Based on the Agronomy Recommendation and the Geology Compliance Review, Surface Irrigation Special Provision Nos. 6, 9, 11, and 18 in the existing permit were updated in the draft permit; Surface Irrigation Special Provision Nos. 19 through 24, 27, and 28 were added to the draft permit; and SADDs Special Provision Nos. 16, 18, 27, 34, and 35 in the existing permit were updated in the draft permit.

BASIS FOR DRAFT PERMIT

The following items were considered in developing the draft permit:

1. Application received on October 25, 2024, and additional information received on November 1, 2024.
2. Existing TCEQ permit: Permit No. WQ0011385001 issued on February 4, 2015.
3. 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, the 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.

Travis County Water Control and Improvement District - Point Venture
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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 Kimberly Kendall, P.E. at (512) 239-4540.

Kimberly Kendall

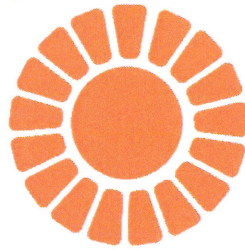
Kimberly Kendall, P.E.
Municipal Permits Team
Wastewater Permitting Section (MC 148)

March 21, 2025

Date



TRAVIS COUNTY W.C.&I.D. POINT VENTURE
TCEQ DOMESTIC WASTEWATER
TEXAS LAND APPLICATION PERMIT RENEWAL



October 2024

Project #: TRAVI-024-0003



A handwritten signature in blue ink, reading "David Alexander Vargas", written over the bottom right of the professional engineer seal.

SUBMITTED BY: Trihydro Corporation

5508 Highway 290 West, Suite 201, Austin, TX 78735

PREPARED FOR: Travis County Water Control and Improvement District - Point Venture

18606 Venture Drive, Point Venture, TX 78645

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PERMIT APPLICATION SUMMARY LETTER



October 17, 2024

Erwin Madrid
Texas Commission on Environmental Quality
Applications Review and Processing Team (MC 145)
P.O. Box 13087
Austin, Texas 78711-3087

RE: Permit Application Summary Letter
Travis County Water Control & Improvement District Point Venture
Point Venture Wastewater Treatment Plant
TLAP Permit No: WQ0011385001

Dear Mr. Madrid:

Travis County Water Control & Improvement District Point Venture (the District) is seeking to renew their existing Texas Land Application Permit (TLAP) WQ0011385001.

The Point Venture Wastewater Treatment Plant (WWTP) has a treatment capacity of 0.15 million gallons per day (MGD). In Interim I Phase, the District is authorized to dispose treated domestic wastewater effluent at a daily average flow not to exceed 0.082 MGD via surface irrigation between the months of April and October, and 0.061875 MGD via surface irrigation between the months of November and March on 48 acres of the Point Venture Property Owners Association (POA) Golf Course.

The current phase, Interim II Phase, the District is authorized to dispose treated domestic wastewater effluent at a daily average flow not to exceed 0.1 MGD via surface irrigation on 48 acres of the POA Golf Course.

In the Final Phase, the District is authorized to dispose treated domestic wastewater effluent at a daily average flow not to exceed 0.0822 MGD via surface irrigation on 33.576 acres of the POA Golf Course, and a daily average flow not to exceed 0.0678 MGD via subsurface area drip irrigation system (SADDS) on 19.464 acres of the POA Golf Course.

No changes to the existing permit are being proposed. If you have questions, or need additional information, please do not hesitate to contact us. My email address is dvargas@trihydro.com and I can be reached at (512) 442-3008.



Mr. Erwin Madrid
October 17, 2024
Page 2

Sincerely,
Trihydro Corporation

A handwritten signature in green ink that reads "David Alexander Vargas". The signature is written in a cursive, flowing style.

David Alexander Vargas, P.E.
Project Manager

ADMINISTRATIVE REPORT 1.0



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the application.

APPLICANT NAME: TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE

PERMIT NUMBER (If new, leave blank): WQ0011385001

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

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

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 <input type="checkbox"/>	\$315.00 <input type="checkbox"/>
≥0.05 but <0.10 MGD	\$550.00 <input type="checkbox"/>	\$515.00 <input type="checkbox"/>
≥0.10 but <0.25 MGD	\$850.00 <input type="checkbox"/>	\$815.00 <input checked="" type="checkbox"/>
≥0.25 but <0.50 MGD	\$1,250.00 <input type="checkbox"/>	\$1,215.00 <input type="checkbox"/>
≥0.50 but <1.0 MGD	\$1,650.00 <input type="checkbox"/>	\$1,615.00 <input type="checkbox"/>
≥1.0 MGD	\$2,050.00 <input type="checkbox"/>	\$2,015.00 <input type="checkbox"/>

Minor Amendment (for any flow) \$150.00 ☐

Payment Information:

Mailed Check/Money Order Number: 3213
Check/Money Order Amount: \$815.00
Name Printed on Check: Travis County WCID Point Venture
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

- | | |
|---|---|
| <input type="checkbox"/> New | |
| <input type="checkbox"/> Major Amendment <u>with</u> Renewal | <input type="checkbox"/> Minor Amendment <u>with</u> Renewal |
| <input type="checkbox"/> Major Amendment <u>without</u> Renewal | <input type="checkbox"/> Minor Amendment <u>without</u> Renewal |
| <input checked="" type="checkbox"/> Renewal without changes | <input type="checkbox"/> Minor Modification of permit |

e. For amendments or modifications, describe the proposed changes: N/A

f. For existing permits:

Permit Number: WQ00 11385001

EPA I.D. (TPDES only): TX N/A

Expiration Date: 12/01/2024

Section 3. Facility Owner (Applicant) and Co-Applcant 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?

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE

(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: CN600644843

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: TABASKA, STEVE

Title: DISTRICT BOARD PRESIDENT

Credential: N/A

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?

N/A

(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: N/A

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: N/A

Last Name, First Name: N/A

Title: N/A

Credential: N/A

Provide a brief description of the need for a co-permittee: N/A

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. [Click to enter text.](#)

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: VARGAS, DAVID
Title: PROJECT MANAGER Credential: PROFESSIONAL ENGINEER
Organization Name: TRIHYDRO CORPORATION
Mailing Address: 5508 HIGHWAY 290 WEST SUITE 201 City, State, Zip Code: AUSTIN, TEXAS 78735
Phone No.: (512) 442-3008 E-mail Address: dvargas@trihydro.com
Check one or both: ☒ Administrative Contact ☒ Technical Contact
- B. Prefix: MS. Last Name, First Name: ERICKSON, DODIE
Title: DISTRICT ACCT. MANAGER Credential: [Click to enter text.](#)
Organization Name: INFRAMARK SERVICES
Mailing Address: 18606 VENTURE DRIVE City, State, Zip Code: POINT VENTURE, TX 78645
Phone No.: 512-921-5863 E-mail Address: dodie.erickson@inframark.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: BOND, PATRICK
Title: ENVIRONMENTAL QUALITY SPECIALIST Credential: [Click to enter text.](#)
Organization Name: INFRAMARK SERVICES
Mailing Address: 2002 WEST GRAND AVENUE PARKWAY NORTH, SUITE 100 City, State, Zip Code: KATY, TX 77449

Phone No.: 281-505-0452

E-mail Address: patrick.bond@inframark.com

B. Prefix: MR.

Last Name, First Name: JACINTO, ALLAN

Title: ENVIRONMENTAL QUALITY SPECIALIST

Credential: Click to enter text.

Organization Name: INFRAMARK SERVICES

Mailing Address: 2002 WEST GRAND AVENUE PARKWAY NORTH, SUITE 100 City, State, Zip
Code: KATY, TX 77449

Phone No.: 832-435-5688

E-mail Address: allan.jacinto@inframark.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: MS.

Last Name, First Name: CECALA, JEAN

Title: OFFICE MANAGER

Credential: Click to enter text.

Organization Name: TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE

Mailing Address: 18606 VENTURE DRIVE City, State, Zip Code: POINT VENTURE, TX, 78645

Phone No.: (512) 267-1641

E-mail Address: office@wcidpv.org

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: BOND, PATRICK

Title: ENVIRONMENTAL QUALITY SPECIALIST

Credential: Click to enter text.

Organization Name: INFRAMARK SERVICES

Mailing Address: 2002 WEST GRAND AVENUE PARKWAY NORTH, SUITE 100 City, State, Zip
Code: KATY, TX 77449

Phone No.: 281-505-0452

E-mail Address: patrick.bond@inframark.com

Section 8. Public Notice Information (Instructions Page 27)

A. Individual Publishing the Notices

Prefix: MS.

Last Name, First Name: CHAPA, VANESSA

Title: COMPLIANCE MANAGER, TEXAS MUDS

Credential: Click to enter text.

Organization Name: INFRAMARK SERVICES

Mailing Address: 2002 WEST GRAND AVENUE PARKWAY NORTH, SUITE 100 City, State, Zip
Code: KATY, TX 77449

Phone No.: 281-877-2612

E-mail Address: vanessa.chapa@inframark.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: VARGAS, DAVID

Title: PROJECT MANAGER

Credential: PROFESSIONAL ENGINEER

Organization Name: TRIHYDRO CORPORATION

Mailing Address: 5508 HWY 290 W, STE 201 City, State, Zip Code: AUSTIN, TX 78735

Phone No.: 512-442-3008

E-mail Address: dvargas@trihydro.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: TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE - MAIN OFFICE

Location within the building: CONFERENCE ROOM

Physical Address of Building: 18606 VENTURE DRIVE

City: POINT VENTURE

County: TRAVIS

Contact (Last Name, First Name): ERICKSON, DODIE

Phone No.: 512-267-1641 Ext.: N/A

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? [Click to enter text.](#)

F. Plain Language Summary Template

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

Attachment: [Click to enter text.](#)

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: [Click to enter text.](#)

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 101916161

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):

POINT VENTURE WASTEWATER TREATMENT PLANT

C. Owner of treatment facility: TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE

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

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

Prefix: MS.

Last Name, First Name: CECALA, JEAN

Title: OFFICE MANAGER

Credential: [Click to enter text.](#)

Organization Name: TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE

Mailing Address: 18606 VENTURE DRIVE City, State, Zip Code: POINT VENTURE, TX 78645

Phone No.: 512-267-1641

E-mail Address: office@wcidpv.org

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: N/A

E. Owner of effluent disposal site:

Prefix: MS.

Last Name, First Name: MARTIN, LORI

Title: GENERAL MANAGER

Credential: Click to enter text.

Organization Name: POINT VENTURE PROPERTY OWNERS ASSOCIATION

Mailing Address: 555 VENTURE BLVD S City, State, Zip Code: POINT VENTURE, TX 78645

Phone No.: 512-267-1128 Ext 2 E-mail Address: lori@pointventure.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: SEE ATTACHMENT 'F'

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

Prefix: N/A

Last Name, First Name: N/A

Title: N/A

Credential: N/A

Organization Name: N/A

Mailing Address: N/A

City, State, Zip Code: N/A

Phone No.: N/A

E-mail Address: N/A

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: N/A

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:

N/A

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:

N/A

City nearest the outfall(s): N/A

County in which the outfalls(s) is/are located: N/A

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: N/A

- 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: N/A

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:

Click to enter text.

- B. City nearest the disposal site: VILLAGE OF POINT VENTURE

- C. County in which the disposal site is located: TRAVIS

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

TREATED WASTEWATER EFFLUENT IS TRANSFERRED FROM THE WASTEWATER TREATMENT PLANT (WWTP) TO (2) EXISTING EFFLUENT STORAGE TANKS AND (2) EXISTING EFFLUENT STORAGE PONDS, LOCATED ADJACENT TO THE WWTP. EFFLUENT IS PUMPED FROM THE LOWER STORAGE POND THROUGH A PRESSURE MAIN TO THE EXISTING SPRAY IRRIGATION AND EFFLUENT WILL BE PUMPED FROM THE CONCRETE EFFLUENT STORAGE TANK THROUGH A PROPOSED PUMP STATION AND PRESSURE MAIN TO THE PROPOSED DRIP IRRIGATION SITES.

- E. For **TLAPs**, please identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: LAKE TRAVIS

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.

N/A

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: [Click to enter text.](#)

Section 14. Signature Page (Instructions Page 34)

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

Permit Number: WQ0011385001

Applicant: TRAVIS COUNTY WATER CONTROL & IMPROVEMENT DISTRICT - POINT VENTURE


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): STEVE TABASKA

Signatory title: DISTRICT BOARD PRESIDENT

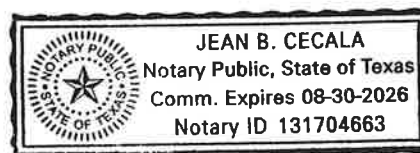
Signature:  Date: 10/21/2024
(Use blue ink)

Subscribed and Sworn to before me by the said Steve Tabaska
on this 21st day of October, 2024.
My commission expires on the 30th day of August, 2026.


Notary Public

[SEAL]

Travis
County, Texas



CORE DATA FORM



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.)		
<input type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input checked="" type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> 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 600644843		RN 101916161

SECTION II: Customer Information

4. General Customer Information		5. Effective Date for Customer Information Updates (mm/dd/yyyy)		10/17/2024	
<input type="checkbox"/> New Customer <input checked="" type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership					
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)					
<i>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).</i>					
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)				<i>If new Customer, enter previous Customer below:</i>	
TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE					
7. TX SOS/CPA Filing Number		8. TX State Tax ID (11 digits)		9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)
N/A		N/A		74-1815633	N/A
11. Type of Customer:		<input type="checkbox"/> Corporation		<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Local <input type="checkbox"/> State <input checked="" type="checkbox"/> Other		<input type="checkbox"/> Sole Proprietorship		<input type="checkbox"/> Other:	
12. Number of Employees				13. Independently Owned and Operated?	
<input checked="" type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following					
<input checked="" type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Owner & Operator <input type="checkbox"/> Other: <input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant					
15. Mailing Address:	18606 VENTURE DRIVE				
	City	POINT VENTURE	State	TX	ZIP 78645
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) 267-1641		(512) 267-0818

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If 'New Regulated Entity' is selected, a new permit application is also required.)								
<input type="checkbox"/> New Regulated Entity <input checked="" type="checkbox"/> Update to Regulated Entity Name <input checked="" type="checkbox"/> Update to Regulated Entity Information								
<i>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).</i>								
22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)								
POINT VENTURE WWTP								
23. Street Address of the Regulated Entity: (No PO Boxes)	19053 VENTURE DRIVE							
	City	POINT VENTURE	State	TX	ZIP	78645	ZIP + 4	
24. County	TRAVIS							

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

25. Description to Physical Location:	LOCATED APPROXIMATELY 8 MILES SOUTH OF INTERSECTION OF FM 1431 AND LOHMAN FORD RD WITHIN VILLAGE OF POINT VENTURE.							
26. Nearest City					State	Nearest ZIP Code		
LAGO VISTA					TX		78645	
<i>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).</i>								
27. Latitude (N) In Decimal:		30.383169			28. Longitude (W) In Decimal:		97.999097	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds			
30	22	59.41	97	59	56.75			
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.)								
MUNICIPAL SEWER TREATMENT PLANT								
34. Mailing Address:	18606 VENTURE DRIVE							
	City	POINT VENTURE	State	TX	ZIP	78645	ZIP + 4	
35. E-Mail Address:	office@wcidpv.org							
36. Telephone Number	37. Extension or Code				38. Fax Number (if applicable)			
(512) 267-1641					(512) 267-818			

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.


<input type="checkbox"/> Dam Safety	<input checked="" type="checkbox"/> Districts	<input type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
<input type="checkbox"/> Sludge	<input type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Voluntary Cleanup	<input checked="" type="checkbox"/> Wastewater	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

SECTION IV: Preparer Information

40. Name:	DAVID VARGAS, P.E.		41. Title:	PROJECT MANAGER
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address	
(512) 442-3008	5307	(512) 448-7811	dvargas@trihydro.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:	TRIHYDRO CORPORATION		Job Title:	PROJECT MANAGER	
Name (In Print):	DAVID VARGAS, P.E.			Phone:	(512) 442- 3008
Signature:				Date:	10/17/2024

TECHNICAL REPORT 1.0



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): 0.082

2-Hr Peak Flow (MGD): 0.328

Estimated construction start date: EXISTING

Estimated waste disposal start date: EXISTING

B. Interim II Phase

Design Flow (MGD): 0.10

2-Hr Peak Flow (MGD): 0.40

Estimated construction start date: EXISTING

Estimated waste disposal start date: EXISTING

C. Final Phase

Design Flow (MGD): 0.15

2-Hr Peak Flow (MGD): 0.45

Estimated construction start date: 2030

Estimated waste disposal start date: 2032

D. Current Operating Phase

Provide the startup date of the facility: INTERIM II; Sept. 2001 startup date of existing WWTP.

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.**

SEE ATTACHMENT 'B'

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)
SEE ATTACHMENT 'B'		

C. Process Flow Diagram

Provide flow diagrams for the existing facilities and **each** proposed phase of construction.

Attachment: SEE ATTACHMENT 'C'

Section 3. Site Information and Drawing (Instructions Page 44)

Provide the TPDES discharge outfall latitude and longitude. Enter N/A if not applicable.

- Latitude: N/A
- Longitude: N/A

Provide the TLAP disposal site latitude and longitude. Enter N/A if not applicable.

- Latitude: SEE ATTACHMENT 'F'
- Longitude: SEE ATTACHMENT 'F'

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: SEE ATTACHMENT 'E'

Provide the name **and** a description of the area served by the treatment facility.

The WWTP serves the Village of Point Venture, located approximately 7 miles south of Lago Vista, Texas.

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
N/A	N/A	Choose an item.	N/A
		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.**

TCEQ approved a \$14.5M Bond Issuance (Unlimited Tax Bonds, Series 2020) that included expansion of a new 0.15 MGD WWTP, reclaimed water system improvements, conveyance improvements, and drainage improvements. Due to rising costs and inflation from the COVID-19 pandemic, the WWTP project exhausted the original bond issuance cost and the reclaimed water system improvements, consisting of a drip irrigation pump station, conveyance line, and drip irrigation system, will have to be funded through another source in the future. The reclaimed water system improvements, including the new WWTP, will lead to transitioning to the Final Phase of the Permit.

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.

N/A

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: 2005: Interim Phase I; 8/18/2016: Interim II Phase; Final Phase to occur at a future date

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.

The existing WWTP meets the buffer zone requirements and have no environmental impacts when it was constructed. See Attachment L for the 1999 Environmental Assessment Report. The new WWTP is being constructed next to the existing WWTP on the same site, meeting the buffer zone requirements.

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*.

Surface Irrigation, Special Provision #4: submit summary transmittal letter prior to construction of Final Phase – construction has not started.
SADDS, Special Provision #4: submit summary transmittal letter prior to construction of Final Phase – construction has not started.

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.

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.

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.

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.
N/A

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 BOD₅ concentration of the sludge, and the design BOD₅ concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

N/A

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 BOD₅ concentration of the septic waste, and the design BOD₅ concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

N/A

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.

N/A

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). **Water 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	8	35	1	GRAB	5/15/2024 8:23
Total Suspended Solids, mg/l	9	60	1	GRAB	5/15/2024 8:23
Ammonia Nitrogen, mg/l	30.9	N/A	1	GRAB	5/15/2024 8:23
Nitrate Nitrogen, mg/l	2.7	N/A	1	GRAB	5/15/2024 8:23
Total Kjeldahl Nitrogen, mg/l	35.5	N/A	1	GRAB	5/15/2024 8:23
Sulfate, mg/l	51.6	N/A	1	GRAB	5/15/2024 8:23
Chloride, mg/l	149	N/A	1	GRAB	5/15/2024 8:23
Total Phosphorus, mg/l	6.84	N/A	1	GRAB	5/15/2024 8:23
pH, standard units	8.0	>6.0 & <9.0	1	GRAB	5/15/2024 8:23
Dissolved Oxygen*, mg/l	N/A	N/A	N/A	N/A	N/A
Chlorine Residual, mg/l	3.9	N/A	1	GRAB	5/15/2024 8:23
<i>E.coli</i> (CFU/100ml) freshwater	<1.0	N/A	1	GRAB	5/15/2024 8:23
Enterococci (CFU/100ml) saltwater	N/A	N/A	N/A	N/A	N/A
Total Dissolved Solids, mg/l	380	N/A	1	GRAB	5/15/2024 8:23
Electrical Conductivity, μ mohs/cm, †	1170	N/A	1	GRAB	5/15/2024 8:23
Oil & Grease, mg/l	<5.1	N/A	1	GRAB	5/15/2024 8:23
Alkalinity (CaCO ₃)*, mg/l	N/A	N/A	N/A	N/A	N/A

*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	N/A	N/A	N/A	N/A	N/A
Total Dissolved Solids, mg/l	N/A	N/A	N/A	N/A	N/A
pH, standard units	N/A	N/A	N/A	N/A	N/A
Fluoride, mg/l	N/A	N/A	N/A	N/A	N/A
Aluminum, mg/l	N/A	N/A	N/A	N/A	N/A
Alkalinity (CaCO ₃), mg/l	N/A	N/A	N/A	N/A	N/A

Section 8. Facility Operator (Instructions Page 50)

Facility Operator Name: Christian Dickerson & Gerald Connell

Facility Operator's License Classification and Level: B Wastewater (Christian) & A Wastewater (Gerald)

Facility Operator's License Number: WW0058578 (Christian) & WW0057523 (Gerald)

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 \geq 1 MGD
- ☐ Serves \geq 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: existing sludge holding basin; weekly sludge haul off

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
Other	Off-site Third-Party Handler or Preparer	Not Applicable		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): weekly sludge haul off by Wastewater Transport Services (WWTS) via 7,000-gal tanker truck; sludge disposed at Austin Wastewater Processing Facility.

D. Disposal site

Disposal site name: Austin Wastewater Processing Facility

TCEQ permit or registration number: TCEQ Type V 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

Hauler registration number: TCEQ Type V MSW#2384

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	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Marketing and Distribution of sludge	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Sludge Surface Disposal or Sludge Monofill	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Temporary storage in sludge lagoons	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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: N/A
- USDA Natural Resources Conservation Service Soil Map:
Attachment: N/A
- Federal Emergency Management Map:
Attachment: N/A
- Site map:
Attachment: N/A

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: N/A

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:

N/A

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: N/A

Total Kjeldahl Nitrogen, mg/kg: N/A

Total Nitrogen (=nitrate nitrogen + TKN), mg/kg: N/A

Phosphorus, mg/kg: N/A

Potassium, mg/kg: N/A

pH, standard units: N/A

Ammonia Nitrogen mg/kg: N/A

Arsenic: N/A

Cadmium: N/A

Chromium: N/A

Copper: N/A

Lead: N/A

Mercury: N/A

Molybdenum: N/A

Nickel: N/A

Selenium: N/A

Zinc: N/A

Total PCBs: N/A

Provide the following information:

Volume and frequency of sludge to the lagoon(s): N/A

Total dry tons stored in the lagoons(s) per 365-day period: N/A

Total dry tons stored in the lagoons(s) over the life of the unit: N/A

C. Liner information

Does the active/proposed sludge lagoon(s) have a liner with a maximum hydraulic conductivity of 1×10^{-7} cm/sec?

☐ Yes ☐ No

If yes, describe the liner below. Please note that a liner is required.

N/A

D. Site development plan

Provide a detailed description of the methods used to deposit sludge in the lagoon(s):

N/A

Attach the following documents to the application.

- Plan view and cross-section of the sludge lagoon(s)
Attachment: N/A
- Copy of the closure plan
Attachment: N/A
- Copy of deed recordation for the site
Attachment: N/A
- Size of the sludge lagoon(s) in surface acres and capacity in cubic feet and gallons
Attachment: N/A
- Description of the method of controlling infiltration of groundwater and surface water from entering the site
Attachment: N/A
- Procedures to prevent the occurrence of nuisance conditions
Attachment: N/A

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: N/A

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:

210 Reuse Authorization No. R11385-001 – reuse of Type I & Type II wastewater effluent from Point Venture wastewater treatment facility.

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:

N/A

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: N/A

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.

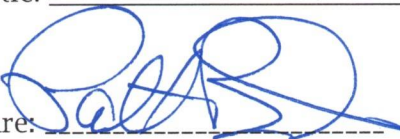
The following certification statement shall be signed and submitted with every application. See the Signature Page section in the Instructions, for a list of designated representatives who may sign the certification.

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: Patrick Bond

Title: Environmental Quality Specialist

Signature: 

Date: 10.23.2024

TCEQ WORKSHEET 3.0
LAND DISPOSAL OF EFFLUENT

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:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Surface application | <input type="checkbox"/> Subsurface application |
| <input checked="" type="checkbox"/> Irrigation | <input type="checkbox"/> Subsurface soils absorption |
| <input type="checkbox"/> Drip irrigation system | <input checked="" type="checkbox"/> Subsurface area drip dispersal system |
| <input type="checkbox"/> Evaporation | <input type="checkbox"/> Evapotranspiration beds |
| <input type="checkbox"/> 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: R11385-001

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 - GOLF COURSE	19.464	67,800	Y
BERMUDA - GOLF COURSE	33.576	82,200	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
1 (Upper) & 2 (Lower)	0.6 ac Total	3.85 ac-ft Total 1.09 ac-ft (Upper) 2.76 ac-ft (Lower)	No record information.	Soil (Upper) HDPE 40 mil thickness (Lower)
GST #1	0.2	9.21	93' I.D. x 60'	Steel Tank (open top)
GST #2	0.0	6.44	77' I.D. x 60'	Concrete Tank (w/ proposed dome roof)

Attach a copy of a liner certification that was prepared, signed, and sealed by a Texas licensed professional engineer for each pond.

Attachment: SEE ATTACHMENT 'K'

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.

N/A

Provide the source used to determine the 100-year frequency flood level:

FEMA FIRM MAPS - SEE ATTACHMENT 'G'

Provide a description of tailwater controls and rainfall run-on controls used for the land application site.

Golf course has sand bunkers, roughs and rip-rap that controls run-off when effluent is applied to tee boxes, fairways, and greens.

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:** SEE ATTACHMENT 'I'

- 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:** SEE ATTACHMENT 'H'

- 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
			Choose an item.	No well within a half-mile radius

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.	
			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: [Click to enter text.](#)

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: See ATTACHMENT 'L' for copies of the 1999 Environmental Assessment Report and 2009 Site Soils Investigation Report. No significant environmental or archaeological sites nor wetlands nor active water bearing zones exists within the existing WWTP site and effluent disposal areas. WWTP and effluent disposal areas are located on the upper unit of the Glen Rose Formation where it is generally not conducive to formation of karst features.

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: N/A

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: SEE ATTACHMENT 'J'

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: SEE ATTACHMENT 'M'

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
SEE ATTACHMENT 'J'				

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
09/2024	0.061	4.3	9.0	7.4	N/A	48
08/2024	0.062	3.5	9.3	7.5	N/A	48
07/2024	0.076	2.0	2.6	7.8	N/A	48
06/2024	0.066	1.8	2.3	7.7	N/A	48
05/2024	0.065	6.7	11.3	7.7	N/A	48
04/2024	0.067	17.5	18.0	7.6	N/A	48
03/2024	0.071	3.5	6.0	7.8	N/A	48
02/2024	0.060	5.3	13.0	7.8	N/A	48
01/2024	0.064	9.8	12.4	7.6	N/A	48
12/2023	0.065	5.5	11.3	7.5	N/A	48
11/2023	0.066	2.8	6.2	7.4	N/A	48
10/2023	0.061	2.5	5.8	7.6	N/A	48
09/2023	0.065	2.8	9.3	7.6	N/A	48

Date	30 Day Avg Flow MGD	BOD5 mg/l	TSS mg/l	pH	Chlorine Residual mg/l	Acres irrigated
08/2023	0.060	7.0	32.8	7.6	N/A	48
07/2023	0.064	18.4	11.6	7.7	N/A	48
06/2023	0.060	10.0	4.5	7.6	N/A	48
05/2023	0.057	4.8	6.6	7.6	N/A	48
04/2023	0.059	7.5	11.8	7.5	N/A	48
03/2023	0.055	7.0	15.8	7.5	N/A	48
02/2023	0.054	8.3	10.5	7.4	N/A	48
01/2023	0.061	10.0	15.5	7.6	N/A	48
12/2022	0.067	5.3	10.3	7.5	N/A	48
11/2022	0.073	13.0	26.6	7.3	N/A	48
10/2022	0.082	10.0	14.8	7.3	N/A	48
09/2022	0.077	6.0	9.3	7.5	N/A	48

Provide a discussion of all persistent excursions above the permitted limits and any corrective actions taken.

November 2022, transfer pumps failed; Inframark replaced one pump and repaired other pump. July & August 2023, the RAS line at the WWTP clogged, which Inframark later repaired. April 2024, clarifier was not working due to leaking gear box, which Inframark later replaced with a new gear box.

TCEQ WORKSHEET 6.0
INDUSTRIAL WASTE CONTRIBUTION

DOMESTIC WASTEWATER PERMIT APPLICATION

WORKSHEET 6.0: INDUSTRIAL WASTE CONTRIBUTION

The following is required for all publicly owned treatment works.

Section 1. All POTWs (Instructions Page 89)

A. Industrial users (IUs)

Provide the number of each of the following types of industrial users (IUs) that discharge to your POTW and the daily flows from each user. See the Instructions for definitions of Categorical IUs, Significant IUs - non-categorical, and Other IUs.

If there are no users, enter 0 (zero).

Categorical IUs:

Number of IUs: 0

Average Daily Flows, in MGD: 0

Significant IUs - non-categorical:

Number of IUs: 0

Average Daily Flows, in MGD: 0

Other IUs:

Number of IUs: 0

Average Daily Flows, in MGD: 0

B. Treatment plant interference

In the past three years, has your POTW experienced treatment plant interference (see instructions)?

☐ Yes ☒ No

If yes, identify the dates, duration, description of interference, and probable cause(s) and possible source(s) of each interference event. Include the names of the IUs that may have caused the interference.

N/A

C. Treatment plant pass through

In the past three years, has your POTW experienced pass through (see instructions)?

☐ Yes ☒ No

If **yes**, identify the dates, duration, a description of the pollutants passing through the treatment plant, and probable cause(s) and possible source(s) of each pass through event. Include the names of the IUs that may have caused pass through.

N/A

D. Pretreatment program

Does your POTW have an approved pretreatment program?

☐ Yes ☒ No

If **yes**, complete Section 2 only of this Worksheet.

Is your POTW required to develop an approved pretreatment program?

☐ Yes ☒ No

If **yes**, complete Section 2.c. and 2.d. only, and skip Section 3.

If **no to either question above**, skip Section 2 and complete Section 3 for each significant industrial user and categorical industrial user.

Section 2. POTWs with Approved Programs or Those Required to Develop a Program (Instructions Page 90)

A. Substantial modifications

Have there been any **substantial modifications** to the approved pretreatment program that have not been submitted to the TCEQ for approval according to *40 CFR §403.18*?

☐ Yes ☐ No

If **yes**, identify the modifications that have not been submitted to TCEQ, including the purpose of the modification.

Click to enter text.

B. Non-substantial modifications

Have there been any **non-substantial modifications** to the approved pretreatment program that have not been submitted to TCEQ for review and acceptance?

☐ Yes ☐ No

If yes, identify all non-substantial modifications that have not been submitted to TCEQ, including the purpose of the modification.

Click to enter text.

C. Effluent parameters above the MAL

In Table 6.0(1), list all parameters measured above the MAL in the POTW's effluent monitoring during the last three years. Submit an attachment if necessary.

Table 6.0(1) – Parameters Above the MAL

Pollutant	Concentration	MAL	Units	Date

D. Industrial user interruptions

Has any SIU, CIU, or other IU caused or contributed to any problems (excluding interferences or pass throughs) at your POTW in the past three years?

☐ Yes ☐ No

If yes, identify the industry, describe each episode, including dates, duration, description of the problems, and probable pollutants.

Click to enter text.

Section 3. Significant Industrial User (SIU) Information and Categorical Industrial User (CIU) (Instructions Page 90)

A. General information

Company Name: N/A

SIC Code: N/A

Contact name: N/A

Address: N/A

City, State, and Zip Code: N/A

Telephone number: N/A

Email address: N/A

B. Process information

Describe the industrial processes or other activities that affect or contribute to the SIU(s) or CIU(s) discharge (i.e., process and non-process wastewater).

N/A

C. Product and service information

Provide a description of the principal product(s) or services performed.

N/A

D. Flow rate information

See the Instructions for definitions of “process” and “non-process wastewater.”

Process Wastewater:

Discharge, in gallons/day: N/A

Discharge Type: ☐ Continuous ☐ Batch ☐ Intermittent

Non-Process Wastewater:

Discharge, in gallons/day: N/A

Discharge Type: ☐ Continuous ☐ Batch ☐ Intermittent

E. Pretreatment standards

Is the SIU or CIU subject to technically based local limits as defined in the instructions?

☐ Yes ☒ No

Is the SIU or CIU subject to categorical pretreatment standards found in *40 CFR Parts 405-471*?

☐ Yes ☒ No

If subject to categorical pretreatment standards, indicate the applicable category and subcategory for each categorical process.

Category: Subcategories: N/A

[Click or tap here to enter text.](#) N/A

Category: N/A

Subcategories: N/A

Category: N/A

Subcategories: N/A

Category: N/A

Subcategories: N/A

Category: N/A

Subcategories: N/A

F. Industrial user interruptions

Has the SIU or CIU caused or contributed to any problems (e.g., interferences, pass through, odors, corrosion, blockages) at your POTW in the past three years?

☐ Yes ☒ No

If yes, identify the SIU, describe each episode, including dates, duration, description of problems, and probable pollutants.

N/A

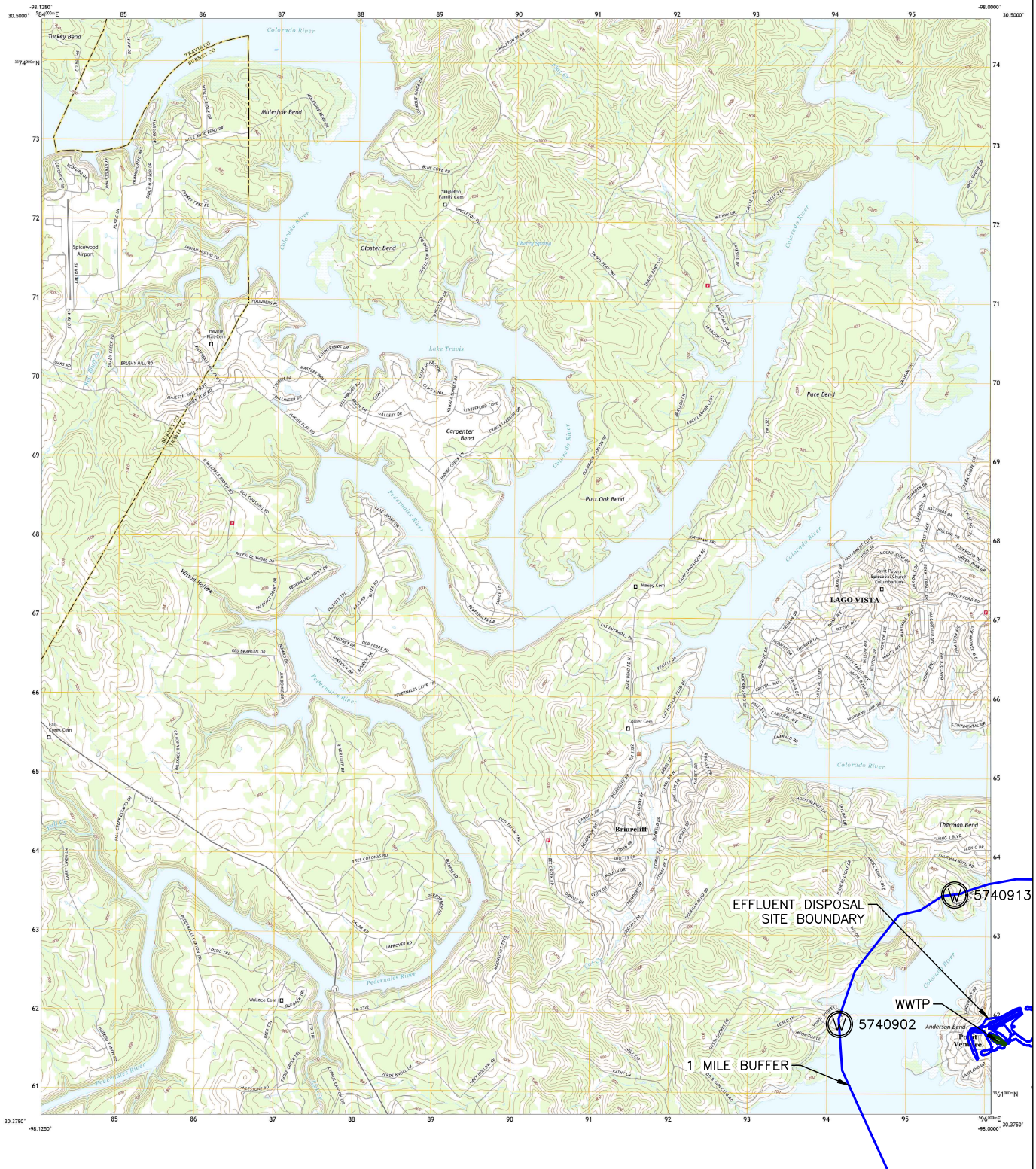
ATTACHMENT A
ORIGINAL USGS TOPOGRAPHIC MAPS



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



PACE BEND QUADRANGLE
TEXAS
7.5-MINUTE SERIES



Texas Engineering Firm F-131
Texas Survey Firm 10194320
New Braunfels Austin
1672 Independence Dr Suite 315 5508 Highway 290 West Suite 201
New Braunfels, Texas 78132 Austin, Texas 78735
(P) 830/626.3588 (F) 830/626.3544 (P) 512/442.3008 (F) 512/448.7811
www.trihydro.com

ATTACHMENT A (SHEET 1 OF 4)

ORIGINAL USGS TOPOGRAPHIC MAP

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT POINT VENTURE

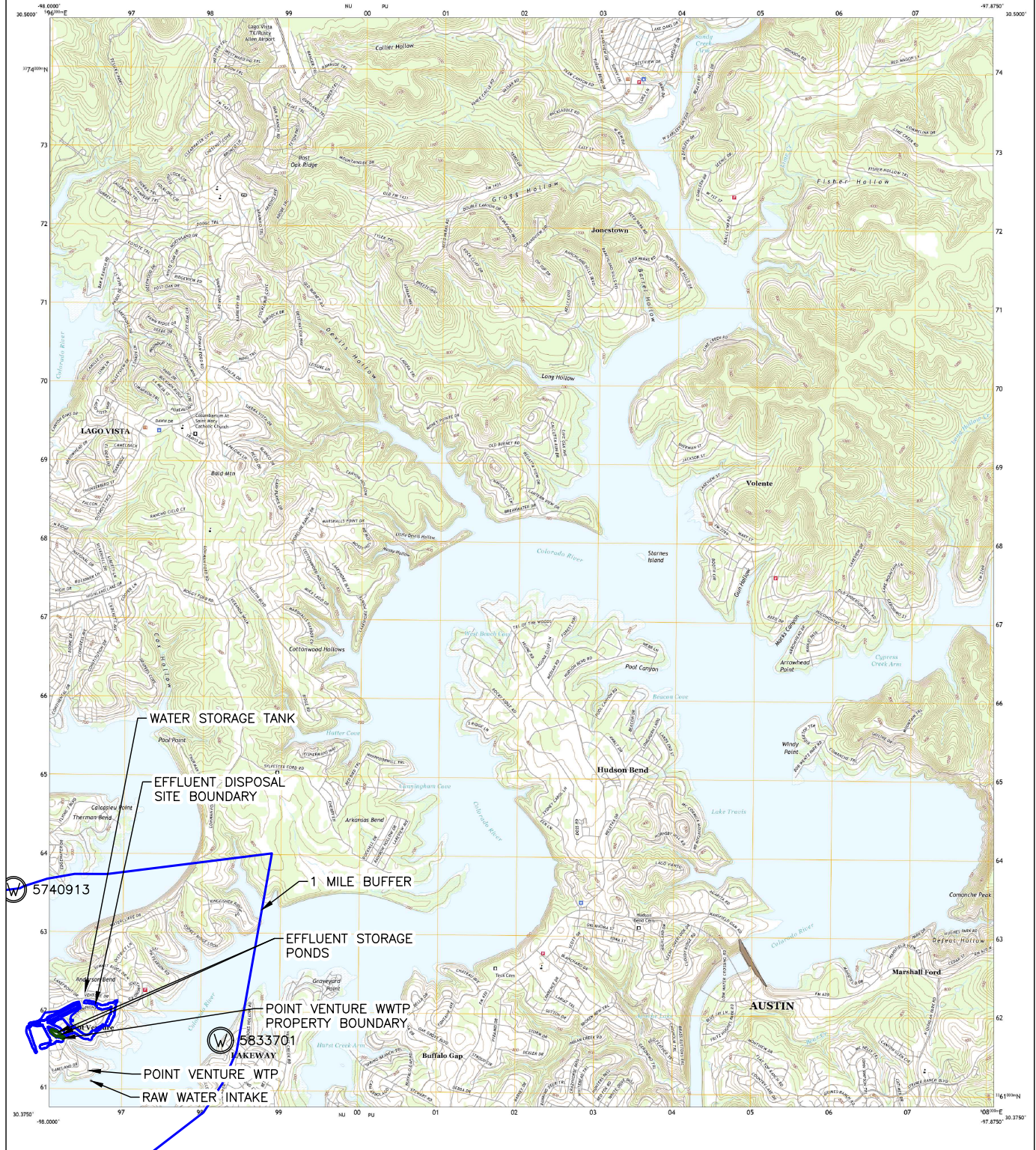
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U.S. DEPARTMENT OF THE INTERIOR
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MANSFIELD DAM QUADRANGLE
TEXAS - TRAVIS COUNTY
7.5-MINUTE SERIES



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Texas Survey Firm 10194320
Austin
1672 Independence Dr Suite 315 5508 Highway 290 West Suite 201
New Braunfels, Texas 78132 Austin, Texas 78735
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ATTACHMENT A (SHEET 2 OF 4)

ORIGINAL USGS TOPOGRAPHIC MAP

TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT POINT VENTURE

Drawn By: JDM	Checked By: FG	Scale: NTS	Date: 5/29/2024
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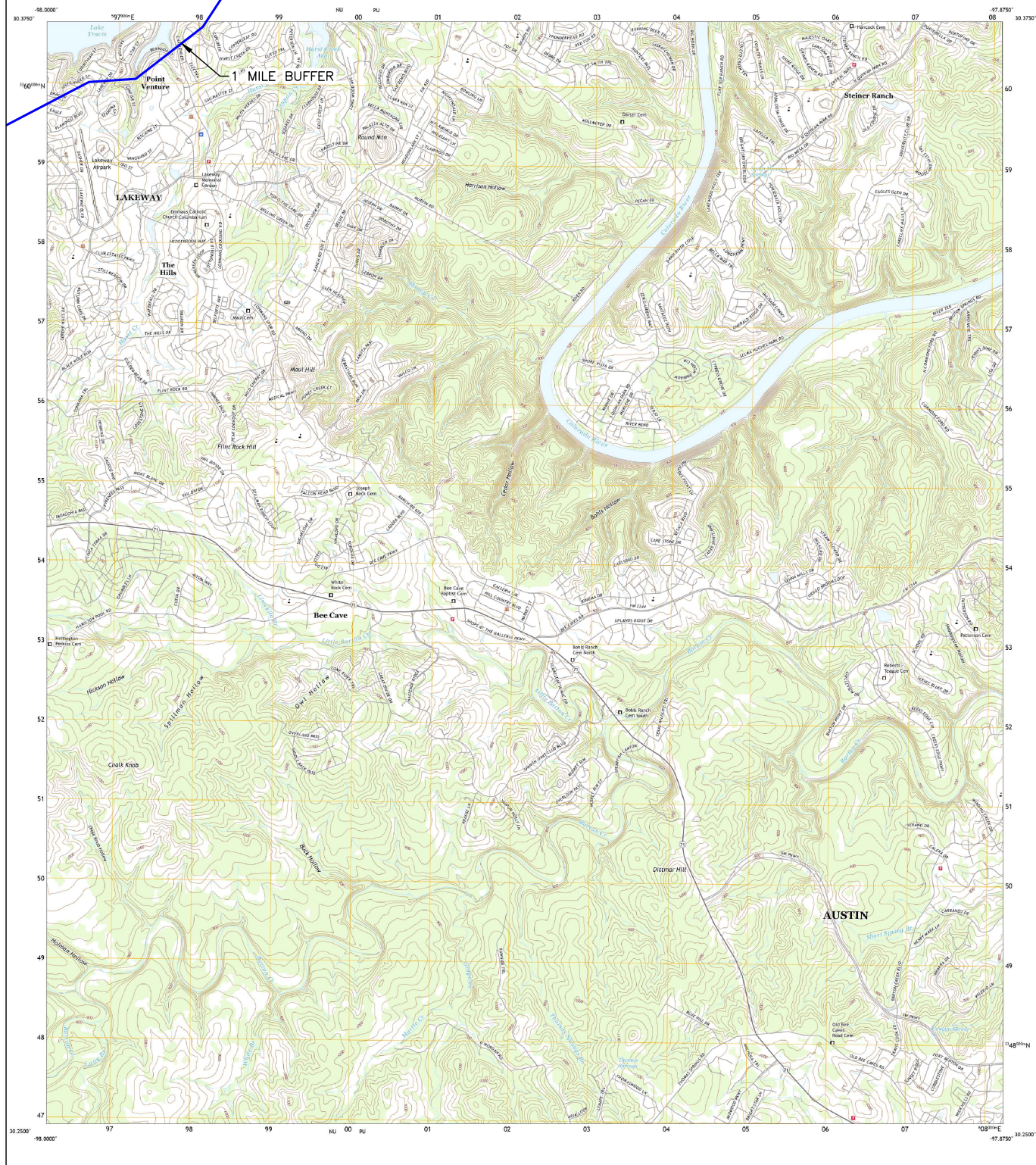


U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

5833701

The National Map
US Topo

BEE CAVE QUADRANGLE
TEXAS - TRAVIS COUNTY
7.5-MINUTE SERIES



Texas Engineering Firm F-131
Texas Survey Firm 10194320 Austin
1672 Independence Dr Suite 315 5508 Highway 290 West Suite 201
New Braunfels, Texas 78132 Austin, Texas 78735
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ATTACHMENT A (SHEET 3 OF 4)

ORIGINAL USGS TOPOGRAPHIC MAP

TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT POINT VENTURE

Drawn By: JDM | Checked By: FG | Scale: NTS | Date: 5/29/2024

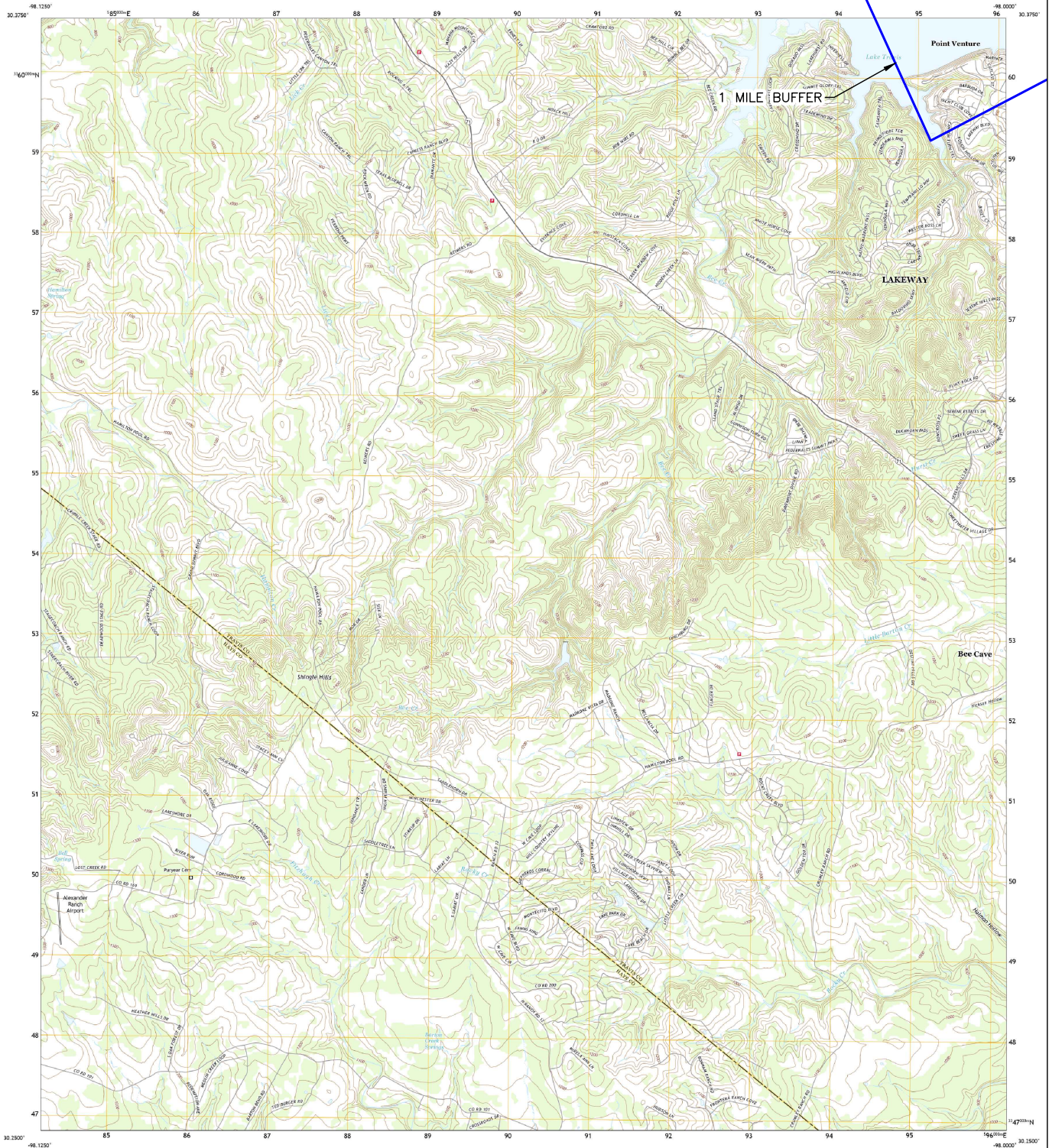


U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



5740902

SHINGLE HILLS QUADRANGLE
TEXAS
7.5-MINUTE SERIES



Texas Engineering Firm F-131
Texas Survey Firm 10194320 Austin
New Braunfels
1672 Independence Dr Suite 315 5508 Highway 290 West Suite 201
New Braunfels, Texas 78132 Austin, Texas 78735
(P) 830/626.3588 (F) 830/626.3544 (P) 512/442.3008 (F) 512/448.7811
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ATTACHMENT A (SHEET 4 OF 4)

ORIGINAL USGS TOPOGRAPHIC MAP

TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT POINT VENTURE

Drawn By: JDM Checked By: FG Scale: NTS Date: 5/29/2024

ATTACHMENT B
TREATMENT UNIT DETAIL

Treatment Process Description

The existing 0.1 million gallon per day (MGD) wastewater treatment plant (WWTP) is a complete mix activated sludge (CMAS) suspended growth biological process. The process consists of an Aeration Basin, Clarifier, Chlorine Contact Basin, Effluent Transfer Basin, and a Sludge Holding Basin. Municipal raw wastewater (influent) is pumped from a duplex lift station to the head of the plant where it then flows by gravity through the treatment process. Influent is pumped from the lift station to the Aeration Basin then flows to the Clarifier, then to the Chlorine Contact Basin, then to the Effluent Transfer Basin. From the Effluent Transfer Basin, effluent (Type II) either flows by gravity to the existing upper storage pond (Pond #1), or is pumped to the two existing ground storage tanks (GSTs). Effluent from the GSTs flows into Pond #1, then into the lower pond (Pond #2). Point Venture Property Owners Association (POA) pump station draws effluent from Pond #2 and pumps the effluent into the existing spray irrigation system. Scum and Waste Activated Sludge (WAS) flows to the Sludge Holding Basin where sludge is hauled off by a TCEQ registered hauler to a TCEQ permitted site.

Interim Phase I Treatment Unit Type & Dimensions

Treatment Unit (Exist. Plant)	# of Total Units	Dimensions (L x W x D)
Aeration	1	27.5' x 19.833' x 16.5'
Clarifier	1	25' x 25' x 16.5'
Chlorine Contact	1	16.92' x 6.667' x 16.5'
Sludge Holding	1	22' x 19.833' x 16.5'
Effluent Transfer	1	6.75' x 6.667' x 16.5'

A new 0.15 MGD WWTP is currently being constructed next to the existing 0.1 MGD WWTP. The existing plant exceeded 75% organic loading capacity. The new plant will maintain compliance with the existing TLAP and handle increased flows resulting from continued development and population growth. The new plant project is funded through the TCEQ approved Unlimited Tax Bonds, Series 2020.

The new plant will be a CMAS suspended growth biological process similar to the existing plant. The new plant will maintain the current permitted capacity at an average daily flow of 0.15 MGD with a peaking factor of 3, resulting in peak flow of 0.45 MGD, and will stay in the current Interim Phase II. The new plant will replace the existing plant, with exception to the Sludge Holding Basin. The existing plant will remain in place until future capacity requirements prompt its reactivation. The new plant will produce Type I effluent and the project will include installing a new dome cover for the existing concrete effluent GST to meet TLAP requirements for the future subsurface area drip dispersal system (SADDS).

The new plant process consists of a triplex Lift Station, Fine Screen Headworks, Flow Splitter Box, Aeration Basin, Clarifier, Tertiary Filtration Packaged Unit, Chlorine Contact Basin, Effluent Transfer Basin, and existing Sludge Holding Basin. Influent will be pumped from the triplex Lift Station to the Fine Screen Headworks, then to the Flow Splitter Box, then flows to the Aeration Basin then flows to the Clarifier, then to the Tertiary Filtration Unit, then to the Chlorine Contact Basin, then to the Effluent Transfer Basin. From the Effluent Transfer Basin, effluent (Type I) will be pumped to the two existing ground storage tanks (GSTs). Effluent from the GSTs will flow into Pond #1, then into Pond #2. POA pump station will draw effluent from Pond #2 and pump the effluent into the existing spray irrigation system. Scum and return activated sludge (RAS) will be returned to the head of the plant, and WAS will

be pumped to the existing Sludge Holding Basin where sludge will hauled off by a TCEQ registered hauler to a TCEQ permitted site. Please see Attachment 'B1' for copy of the June 2023 Summary Transmittal Letter for the new plant for reference.

A flow diagram is provided in Attachment 'C' of this application.

Interim Phase II (Current) Treatment Unit Type & Dimensions

Treatment Unit (New Plant)	# of Total Units	Dimensions (L x W x D)
Headworks	1	23.833' x 1.33' x 2.25'
Flow Splitter Box	1	7.833' x 2.5' x 3.0'
Aeration	1	28.0' x 58.0' x 17.0'
Clarifier	1	28.0' dia. x 14.0'
Filter Unit	1	6.5' x 4.5' x 8.0'
Chlorine Contact	1	16.0' x 12.0' x 9.083'
Effluent Transfer	1	12.0' x 8.0' x 8.0'
Sludge Holding	1	22' x 19.833' x 16.5'

Final Phase Treatment Unit Type & Dimensions

Treatment Unit (New Plant)	# of Total Units	Dimensions (L x W x D)
Headworks	1	23.833' x 1.33' x 2.25'
Flow Splitter Box	1	7.833' x 2.5' x 3.0'
Aeration	1	28.0' x 58.0' x 17.0'
Clarifier	1	28.0' dia. x 14.0'
Filter Unit	1	6.5' x 4.5' x 8.0'
Chlorine Contact	1	16.0' x 12.0' x 9.083'
Effluent Transfer	1	12.0' x 8.0' x 8.0'
Sludge Holding	1	22' x 19.833' x 16.5'

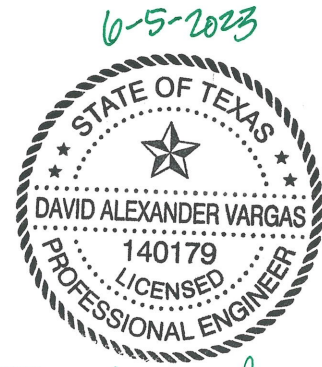
ATTACHMENT B1

JUNE 2023 SUMMARY TRANSMITTAL LETTER



June 5, 2023

Mr. Louis C. Herrin III, P.E.
TCEQ – MC 148
P.O. Box 13087
Austin, Texas 78711-3087



A handwritten signature in green ink that reads 'David Alexander Vargas'.

RE: Chapter 217.6 Summary Transmittal Letter
Permittee: Travis County Water Control and Improvement District Point Venture
Treatment Facility & TLAP Permit Numbers: WQ0011385001
Project Name: 0.15 MGD WWTP
County: Travis
Unlimited Tax Bonds, Series 2020

Dear Mr. Herrin:

The purpose of this letter is to provide the Texas Commission on Environmental Quality (TCEQ) with the information necessary to comply with the requirements of 217.6(d) of the TCEQ's rules entitled "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS." The necessary information is provided below. The project is funded through the Unlimited Tax Bonds, Series 2020. In addition to the summary transmittal letter, the design plans, project manual, and design calculations will be furnished for review and approval.

1. Engineering Firm
Trihydro Corporation
Firm No. F-131
5508 Highway 290 West, Suite 201
Austin, Texas 78735
2. Design Engineer
David Alexander Vargas, P.E.
Phone: (512) 646-0137
dvargas@trihydro.com
3. Project Location
Travis County



Mr. Louis C. Herrin III, P.E.

June 5, 2023

Page 2

4. Project Name
0.15 MGD WWTP

5. Entity to Own, Operate, and Maintain Project through its Design Life
Travis County Water Control and Improvement District Point Venture
18606 Venture Drive
Point Venture, Texas 78645

6. Compliance:
The plans and specifications are in substantial compliance with the rules and regulations of Chapter 217, and no variances are requested.

7. Variance Request and Public Health
The plans and specifications do not contain any variance requests. The project will not threaten public health nor the environment.

8. Project Scope
Travis County Water Control and Improvement District Point Venture (the District) are proposing to construct a new 0.15 million gallons per day (MGD) wastewater treatment plant (WWTP) due to the existing 0.1 MGD plant exceeding 75% of organic loading capacity. The new plant will maintain compliance with the District's existing TCEQ Texas Land Application Permit (TLAP) and handle increased flows resulting from continued development and population growth.

The new plant will be a Complete Mix Activated Sludge (CMAS) suspended growth biological process similar to the existing plant. The new plant will maintain the current permitted capacity at an average daily flow of 0.15 MGD with a peaking factor of 3, resulting in a peak flow of 0.45 MGD. The influent wastewater flow consists of 300 milligrams per liter (mg/L) 5-day biological oxygen demand (BOD₅) and 300 mg/L total suspended solids (TSS), based on 3 years of historical data. The treatment plant loadings are 376 pounds per day (lbs/day) BOD₅ and 376 lbs/day TSS at average flow.

The proposed treatment plant will replace the existing plant. The existing plant will remain in place until future capacity requirements prompt its reactivation. That expansion will consist of both plants operating at build-out capacity with average daily flows of 0.15 MGD (new plant) and 0.1 MGD (existing plant), for a total build-out average flow of 0.25 MGD. With a peaking factor of 3, the build-out peak flow is 0.75 MGD.

Treated effluent for the proposed treatment plant will have the following water quality concentrations that will meet the TCEQ TLAP requirements for Type I effluent:



Mr. Louis C. Herrin III, P.E.

June 5, 2023

Page 3

- 5 mg/L BOD5
- 5 mg/L TSS
- 3 NTU Turbidity

Incoming wastewater will collect at the main lift station, which will contain three solids handling submersible pumps, each rated 354 gpm at 40' TDH. Firm capacity is 708 gpm with two pumps operating and third pump serving as an in-place spare. Primary control is a submersible level transmitter and secondary control (backup) is a series of float switches.

Wastewater from the main lift station will discharge into the fine screen channel for primary influent screening. A manual bar screen is located in a channel adjacent to the fine screen and serves as an emergency backup or secondary screen when the primary mechanical fine screen is unable to operate. Discharge from both channels passes over a Cipolletti weir and enters the aeration basin.

Wastewater from the headworks enters the 190,000-gal aeration basin in the northwest corner and the mixed liquor suspended solids (MLSS) exits the basin through a level control slide gate in the southeast corner of the basin. Symmetrically located in the middle of the basin will be two, 20 Hp slow speed mechanical surface aerators, controlled by variable frequency drives (VFD). The aerators will be platform mounted, and designed to both oxygenate and provide a complete mix in the aeration basin. The optimum oxygen level in the basin will be 2 mg/L. The actual oxygen level can be adjusted by increasing/decreasing the aerator speed or by adjusting the aerator submergence via the level control slide gate.

The secondary clarifier will receive MLSS from the aeration basin and separate the flow into bacteria rich sludge and decant effluent. Solids will be removed from the basin bottom through a return activated sludge (RAS) line. RAS flow will be set proportionally to the incoming average wastewater flow. A magnetic flow meter will log and record the RAS flow, totalize the flow, and display instantaneous flow and historical values versus time. A manual telescoping valve will regulate the RAS flow. RAS will flow out of the telescoping valve and enter the basin portion of the telescoping valve structure. From there, it is either returned to the head of the plant or pumped out as waste activated sludge (WAS) to the existing sludge holding basin. The telescoping valve structure will contain two WAS submersible grinder pumps, each rated 24 gpm at 63' TDH, that will run on timers at approximately 5 minutes per hour. In the Clarifier, the decant effluent will pass over a series of v-notch weirs at the top of the clarifier and will be piped to the tertiary filtration unit. The clarifier is sized to handle average and peak flows of 0.15 MGD and 0.45 MGD, respectively. The clarifier will be 28' diameter with a side water depth of 14', which meets the TCEQ requirements for detention time, weir loading, and surface loading rate.



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The District's latest TLAP permit modification changed the effluent disposal from spray irrigation to a combination of spray and drip irrigation. Although the permit modification occurred in 2015, the change in effluent disposal was not required until the next plant expansion or upgrade, which is this project. Since the existing plant does not contain a filter component, the new tertiary filtration unit has been designed for easy upgrade to a filter unit capable of processing the entire flow of both the proposed plant and eventual reactivation of the existing plant. The proposed unit is sized to handle the current average flow of 0.15 MGD and with additional filter cartridges, the eventual average flow of 0.25 MGD and peak flow of 0.75 MGD. This will not exceed the TCEQ maximum filtration rate. The unit is a self-contained filter assembly that is housed in a stainless steel tank. The unit is fed by the clarifier using gravity flow. The clarified effluent passes through the filter media panels resulting in the final effluent meeting the 5 mg/L TSS required by the permit.

Subsequently, both the chlorine contact and effluent transfer basins are sized to handle the average and peak flows of 0.25 MGD and 0.75 MGD, respectively. The chlorine contact basin has a volume of 1,455 cubic feet, which provides the TCEQ required 20 minutes of contact time before the effluent leaves the basin. Between the chlorine contact and effluent transfer basins will be a 60 degree v-notch weir. The height of the effluent, as it passes through the weir, will produce a record of the plant's daily wastewater discharge. An ultrasonic transmitter measures the height of the effluent, as it passes through the weir, and will transmit the data to the Main Control Panel (MCP) and the Supervisory Control and Data Acquisition (SCADA) system for a totalized record of flow.

The effluent transfer basin will contain two vertical turbine pumps (VTP), each rated 521 gpm at 78' TDH. During normal operation, the northern VTP will pump effluent to the concrete tank dedicated to drip irrigation and the southern VTP will pump effluent to the welded steel tank dedicated to spray irrigation. Should either pump be unable to operate, the valving in the discharge manifold can be adjusted so that either pump can pump to either tank. Effluent level in the basin will be constantly monitored via an ultrasonic level transmitter for pump control with a backup float system. Levels in the effluent storage tanks will be monitored by pressure transmitters mounted on the discharge piping and will direct the effluent flow to the appropriate storage tank.

Because the drip irrigation system requires a closed storage tank, the existing 2.1 MG prestressed concrete effluent ground storage tank will receive a new aluminum geodesic dome cover, which will allow the tank to be used for the drip irrigation system.

The disinfection system will utilize 12.5% sodium hypochlorite and will be delivered via a triplex metering pump skid system. Each of the pumps will be dedicated to a particular location, but a piping manifold will allow any pump to deliver chlorine to any discharge location. Chlorine will be dosed at the clarifier effluent drop box to chlorinate the clarified effluent prior to the filtration unit reducing algae growth in the filters. Chlorine will also be dosed to the filtered effluent prior to entering the



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chlorine contact basin, and dosed to the stored effluent prior to entering the drip irrigation system. Currently, the Point Venture Property Owners Associated (POA) utilizes a separate chlorine system to dose 12.5% sodium hypochlorite prior to the effluent entering the existing spray irrigation system.

The plant's non-potable water (NPW) system will consist of two submersible well pumps, each rated 25 gpm at 185' TDH, a 212-gal hydropneumatic tank, and associated piping. The NPW will provide high pressure effluent required for cleaning the fine screen unit and for treatment basin washdown. Flow records for the NPW system will be collected manually at a flow meter located in the NPW valve vault.

Demolition and/or abandonment of identified site features include but are not limited to the following: existing lift station and adjacent manhole; chemical feed building and its associated equipment; sludge holding basin diffused aeration system; yard piping; concrete pads; site fencing; and concrete pavement. New concrete access drive pavement and chain link fencing and gates will be installed.

Once the new plant is placed online, the existing plant will be placed offline for renovations. Each basin at the existing plant will be drained and cleaned. Renovation work will occur at the existing sludge holding basin. A new diffused aeration system, and decant system will be installed to improve treatment and operation of the sludge process. Two positive displacement blower packages will be installed to provide aeration and mixing to the renovated sludge holding basin. Each blower is rated 85 scfm at 6 psig and will include a common pipe and valve manifold.

The District owns and operates three offsite wastewater lift stations and the associated wastewater collection system. Two lift stations, Whispering Hollow & POA, will be renovated to address operational deficiencies and deteriorating condition of existing piping and equipment.

At the Whispering Hollow Lift Station, the existing wet well and vault, including all piping, equipment, appurtenances, storage shed, and fencing, will be demolished. A proposed precast concrete wet well will be installed containing two proposed submersible grinder pumps, each rated 46 gpm at 100' TDH, and associated piping and appurtenances. These improvements will increase the rated capacity of the lift station from 35 gpm to 46 gpm. A proposed precast concrete valve vault will be installed containing 4" discharge piping, valving, and appurtenances. Existing 3" and 4" pressure sewer influent piping will be redirected and connect to the proposed wet well. An 8' tall precast concrete security fence with a 12' wide privacy panel double swing gate will be installed around the site. Additional improvements include provisions for portable davit crane, and upgraded electrical and control components.



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At the proposed POA Lift Station site, four trees will be removed, and various 2" and 4" sewer lines will be abandoned in place. The existing wet well, including all piping and equipment, 6" gravity sewer piping, junction box, hose bibb, and fencing, will be demolished. The proposed POA Lift Station site will be situated at a higher elevation to move it out of the Lake Travis floodplain. A proposed precast concrete wet well will be installed containing two proposed submersible grinder pumps, each rated 24 gpm at 63' TDH, and associated piping and appurtenances. These improvements will increase the rated capacity of the lift station from 15 gpm to 24 gpm. A proposed precast concrete valve vault will be installed containing 2" discharge piping and appurtenances. Proposed 6" and 8" gravity sewer lines and appurtenances will connect the existing wastewater system to the proposed lift station. Proposed 2" force main line and appurtenances will be installed to connect to existing 2" force main. An 8' tall chain link fence with a 12' wide double swing chain link gate will be installed around the new lift station site. Additional improvements include portable davit crane, and upgraded electrical and control components.

Additionally, four substandard manholes will be demolished and replaced and one proposed manhole will be installed to improve the existing wastewater collection system.

The project contains no innovative or nonconforming technologies, nor variances from the requirements of Chapter 217.

If you have questions, or need additional information, please do not hesitate to contact us. My email address is dvargas@trihydro.com and I can be reached at (512) 442-3008.

Sincerely,
Trihydro Corporation
Firm No. F-131

David Alexander Vargas, P.E.
Assistant Project Engineer/Project Manager

701-023-300



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cc: Steve Tabaska, Board President – Travis County W.C.&I.D. Point Venture
Steven Young, Sr. Design Technician – Trihydro Corporation
Dodie Erickson, District Account Manager – Inframark
Shawn Stewart, Region 11 Water Section Manager – TCEQ

Attachments:

1. 0.15 MGD WWTP Design Plans
2. 0.15 MGD WWTP Project Manual
3. 0.15 MGD WWTP Design Calculations
4. Offsite Lift Stations Design Calculations
5. Wastewater System Overview Exhibit

**ATTACHMENT C
FLOW DIAGRAM**

ATTACHMENT D
POLLUTANT ANALYSES OF EXISTING EFFLUENT

Email information for report date:
6/1/24 09:55
H016330

INFRAMARK

Attn: Alan Gould
alan.gould@Inframark.com

14050 Summit Drive Suite 103
Austin, TX 78728

Please contact us for your sampling needs or if you have any questions. Some convenient contacts are listed below. You can also access your results and reports through our ClientConnect™ portal on our website (www.aqua-techlabs.com).

For sampling questions:

samplingbryan@aqua-techlabs.com (Bryan area)
samplingaustin@aqua-techlabs.com (Austin area)

reporting@aqua-techlabs.com (report questions)

Aqua-Tech values you as a customer and encourages you to speak with our staff at 979-778-3707 or the above emails if you have questions.

Thank you for your business,
June M. Brien
Executive Technical Director

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The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with TNI and/or through the TCEQ Drinking Water Commercial Laboratory Approval Program.

The following abbreviations indicate certification status:

NEL	TNI accredited parameter.
ANR	Accreditation not offered by the State of Texas.
DWP	Approval through the TCEQ Drinking Water Commercial Laboratory Approval Program.
INF	Aqua-Tech Laboratories, Inc. is not accredited for this parameter. It is reported on an informational basis only.

Certificate: T104704371-23-27



TCEQ Lab ID T104704371

Subcontracted data summarized in this report is indicated by "Sub" in the Lab column.

General Definitions:

NR	Not Reported.
RPD	Relative Percent Difference.
% R	Percent Recovery.
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The Sample Quantitation Limit is the value below which the parameter cannot reliably be detected. The SQL includes all sample preparations, dilutions and / or concentrations.
Adj MDL	The Adjusted Method Detection Limit is the MDL value adjusted for any sample dilutions or concentrations.
MDL	The Method Detection Limit is the lowest theoretical value that is statistically different from zero for a specific method, taking into account all preparation steps and instrument settings.

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Sample Collected" field of this report as "Client" or "CLT".

Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

Record Retention:

All reports, raw data, and associated quality control data are kept on file for 10 years before being destroyed. Any client that would like copies of records must contact Aqua-Tech Laboratories, Inc. no later than six months prior to the scheduled disposal. An administrative fee for retrieval and distribution will apply.

This report was approved by:

June M. Brien, Technical Director

The results in this report apply only to the samples analyzed. This analytical report must be reproduced in its entirety unless written permission is granted by Aqua-Tech Laboratories, Inc.

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Analytical Report

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Point Venture WWTP Effluent			Collected: 05/15/24 08:23 by Brendan Bourland Received: 05/15/24 14:23 by Brendan Bourland				Type Grab	Matrix Non Potable		C-O-C # N/A		
Lab ID#	H016330-01	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
Field Parameters												
Field pH		8.0	pH Units		0.01	0.01	0.1	Austin	At Collection	SM4500-H+ B 2011	M177179	ANR
Temperature		22.7	Deg. C		0.1	0.1	0.1	Austin	At Collection	SM2550 B 2000	M177179	ANR
Total Residual Chlorine		3.9	mg Cl as CL2/L			0.10	0.10	Calc	At Collection	SM4500-Cl F 2011	[CALC]	ANR
General Chemistry												
Carbonaceous BOD (5 day)		8	mg/L		1	2	2	Austin	05/16/24 06:45 MSA	SM5210 B 2016	M177361	NEL
Total Suspended Solids		9	mg/L		1	2	2	Austin	05/17/24 12:56 KHA	SM2540 D 2015	M177490	NEL
Total Dissolved Solids		380	mg/L		25.0	100	100	Austin	05/20/24 11:57 BEB	SM2540 C 2015	M177536	NEL
Total Kjeldahl Nitrogen as N		35.5	mg/L		0.13	0.78	1.20	Bryan	05/21/24 13:52 KMA	EPA 351.2 R2.0	M177534	NEL
Nitrate as N		2.7	mg/L			0.17	0.50	Calc	05/22/24 11:26 BEB	SM4500-NO3-F 2011	[CALC]	NEL
Nitrite as N		3.1	mg/L		0.002	0.10	0.50	Austin	05/16/24 14:33 BEB	SM4500 NO2- B 2011	M177410	NEL
Nitrate/Nitrite as N		5.8	mg/L		0.02	0.17	0.20	Bryan	05/22/24 11:26 KMA	SM4500-NO3-F 2011	M177631	ANR
Oil & Grease (HEM)		<5.1	mg/L		4.4	5.1	5.1	Bryan	05/21/24 09:36 HDH	EPA 1664B	M177568	NEL
Chloride		149	mg/L		0.60	2.41	20.0	Austin	05/20/24 11:15 MSA	SM4500-Cl- B 2011	M177532	NEL
Sulfate as SO4(2-)		51.6	mg/L		2.63	10.5	20.0	Austin	05/20/24 09:22 KFB	ASTM D0516-16	M177517	NEL
Specific Conductance (adjusted to 25.0°C)		1170	uS/cm		2.00	2.00	2.00	Austin	05/20/24 08:00 MSA	SM2510 B 2011	M177505	NEL
Microbiological Analyses												
E. Coli		<1.0	MPN/100 mL		1.0	1.0	1.0	Austin	05/15/24 15:26 ACG	SM9223 B 2004	M177357	NEL
Results run by SM 9223B are reported as MPN (Most Probable Number). MPN is comparable to CFU (Colony Forming Units). Both MPN and CFU are allowed in most permits.												
Metals (Total)												
Phosphorus-Total		6.84	mg/L		0.082	0.041	0.050	Austin	05/17/24 14:10 KT	EPA 200.7 R4.4	M177414	NEL

H016330-01 - re-analysis	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch
General Chemistry										
Ammonia as N	30.9	mg/L		0.05	0.27	3.00	Bryan	05/27/24 13:00 KMA	SM4500-NH3 G 2011	M177855

Explanation of Notes

J	Analyte detected below the SQL but above the MDL.
RPD-01	Duplicate RPD is outside acceptable range. Acceptance of run is not based on matrix QC.
SL-01	The dried residue did not yield between 2.5 and 200 mg as specified in the method. Due to holding time constraints or insufficient sample volume, the sample cannot be reanalyzed.

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Analytical Report

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Field Parameters - Quality Control													
Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Chlorine Residual, Total - SM4500-Cl F 2011													<i>Austin</i>
Duplicate	1.5	mg/L			05/15/24 13:23 BGB		1.9			23.5	10.2	M177179	
Duplicate	<0.1	mg/L			05/15/24 13:23 BGB		<0.1				10.2	M177179	
Field pH - SM4500-H+ B 2011													<i>Austin</i>
Duplicate	<0.1	pH Units			05/15/24 13:23 BGB		<0.1				0.551	M177179	
Duplicate	7.0	pH Units			05/15/24 13:23 BGB		7.1			0.283	0.551	M177179	
Temperature - SM2550 B 2000													<i>Austin</i>
Duplicate	<0.1	Deg. C			05/15/24 13:23 BGB		<0.1				2.48	M177179	
Duplicate	28.4	Deg. C			05/15/24 13:23 BGB		27.6			2.86	2.48	M177179	
General Chemistry - Quality Control													
Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Ammonia as N - SM4500-NH3 G 2011													<i>Bryan</i>
Initial Cal Check	1.00	mg/L			05/23/24 12:21 KMA	1.00		99.6	90 - 110			2405290	
Low Cal Check	0.05	mg/L			05/23/24 12:21 KMA	0.0500		102	70 - 130			2405290	
Blank	<0.05	mg/L	0.05	0.05	05/23/24 12:21 KMA							M177705	
LCS	0.47	mg/L	0.05	0.05	05/23/24 12:21 KMA	0.500		94.6	85 - 115			M177705	
LCS Dup	0.49	mg/L	0.05	0.05	05/23/24 12:21 KMA	0.500		98.8	85 - 115	4.34	20	M177705	
Matrix Spike	1.06	mg/L	0.05	0.05	05/23/24 12:21 KMA	0.500	0.55	102	70 - 130			M177705	
Matrix Spike Dup	1.05	mg/L	0.05	0.05	05/23/24 12:21 KMA	0.500	0.55	100	70 - 130	2.18	20	M177705	
Initial Cal Check	5.15	mg/L			05/27/24 13:00 KMA	5.00		103	90 - 110			2405334	
Low Cal Check	0.46	mg/L			05/27/24 13:00 KMA	0.500		92.6	70 - 130			2405334	
Blank	<0.50	mg/L	0.05	0.50	05/27/24 13:00 KMA							M177855	
LCS	1.98	mg/L	0.05	0.51	05/27/24 13:00 KMA	2.00		98.8	85 - 115			M177855	
LCS Dup	2.01	mg/L	0.05	0.51	05/27/24 13:00 KMA	2.00		100	85 - 115	1.61	20	M177855	
Matrix Spike	8.29	mg/L	0.05	0.51	05/27/24 13:00 KMA	2.00	5.86	121	70 - 130			M177855	
Matrix Spike Dup	8.45	mg/L	0.05	0.51	05/27/24 13:00 KMA	2.00	5.86	129	70 - 130	6.38	20	M177855	

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General Chemistry - Quality Control

Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch
Carbonaceous BOD (5 day) - SM5210 B 2016												<i>Austin</i>
Diln Water Blk	<0.20	mg/L	1	1	05/16/24 06:45 MSA		0.1		< or = 0.2 mg/L			2405186
GGA	183	mg/L	1	1	05/16/24 06:45 MSA	199		92.0	84.6 - 115.4			2405186
GGA	192	mg/L	1	1	05/16/24 06:45 MSA	199		96.5	84.6 - 115.4			2405186
GGA	186	mg/L	1	1	05/16/24 06:45 MSA	199		93.5	84.6 - 115.4			2405186
Seed Blank	<1	mg/L	1	1	05/16/24 06:45 MSA							2405186
Seed Blank	<1	mg/L	1	1	05/16/24 06:45 MSA							2405186
Seed Blank	<1	mg/L	1	1	05/16/24 06:45 MSA							2405186
Duplicate	2	mg/L	1	1	05/16/24 06:45 MSA		2			35.4	47.7	M177361
Chloride - SM4500-Cl- B 2011												<i>Austin</i>
Initial Cal Check	50.5	mg/L			05/20/24 11:15 MSA	50.0		101	90 - 110			2405237
Blank	<5.00	mg/L	0.60	5.00	05/20/24 11:15 MSA							M177532
LCS	20.6	mg/L	0.60	5.00	05/20/24 11:15 MSA	19.8		104	90 - 110			M177532
LCS Dup	20.6	mg/L	0.60	5.00	05/20/24 11:15 MSA	19.8		104	90 - 110	0.00	5.86	M177532
Matrix Spike	207	mg/L	2.41	20.0	05/20/24 11:15 MSA	79.2	131	96.7	83.4 - 113			M177532
Matrix Spike Dup	207	mg/L	2.41	20.0	05/20/24 11:15 MSA	79.2	131	96.7	83.4 - 113	0.00	10.7	M177532
MRL Check	5.14	mg/L	0.60	5.00	05/20/24 11:15 MSA	4.95		104	70 - 130			M177532
Mn Interference - SM4500-Cl F 2011												<i>Austin</i>
Duplicate	0.3	mg/L	0.1	0.1	05/20/24 13:17 BAL		0.3			0.00	7.47	M177551
Nitrate/Nitrite as N - SM4500-NO3-F 2011												<i>Bryan</i>
Initial Cal Check	1.0	mg/L			05/22/24 11:26 KMA	0.959		106	90 - 110			2405271
Low Cal Check	0.02	mg/L			05/22/24 11:26 KMA	0.0200		110	70 - 130			2405271
Blank	<0.02	mg/L	0.02	0.02	05/22/24 11:26 KMA							M177631
LCS	0.51	mg/L	0.02	0.02	05/22/24 11:26 KMA	0.500		101	89.5 - 111			M177631
LCS Dup	0.51	mg/L	0.02	0.02	05/22/24 11:26 KMA	0.500		102	89.5 - 111	0.394	10	M177631
Matrix Spike	9.3	mg/L	0.10	0.12	05/22/24 11:26 KMA	5.00	4.5	96.4	80.1 - 118			M177631
Matrix Spike Dup	9.4	mg/L	0.10	0.12	05/22/24 11:26 KMA	5.00	4.5	96.9	80.1 - 118	0.476	10	M177631

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General Chemistry - Quality Control												
Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch
Nitrite as N - SM4500 NO2- B 2011												Austin
Initial Cal Check	0.07	mg/L			05/16/24 14:33 BEB	0.0736		93.3	90 - 110			2405204
Blank	<0.01	mg/L	0.002	0.01	05/16/24 14:33 BEB							M177410
filtered blank	<0.01	mg/L	0.002	0.01	05/16/24 14:33 BEB							M177410
LCS	0.08	mg/L	0.002	0.01	05/16/24 14:33 BEB	0.0800		106	90 - 110			M177410
LCS Dup	0.09	mg/L	0.002	0.01	05/16/24 14:33 BEB	0.0800		109	90 - 110	3.34	10	M177410
Matrix Spike	7.2	mg/L	0.10	0.50	05/16/24 14:33 BEB	4.00	3.1	103	57 - 116			M177410
Matrix Spike Dup	7.4	mg/L	0.10	0.50	05/16/24 14:33 BEB	4.00	3.1	107	57 - 116	3.42	10	M177410
MRL Check	<0.01	mg/L	0.002	0.01	05/16/24 14:33 BEB	0.0100		88.0	70 - 130			M177410
Initial Cal Check	0.08	mg/L			10/06/23 11:00 MSA	0.0800		106	90 - 110			2310075
Oil & Grease (HEM) - EPA 1664B												Bryan
Blank	<5.0	mg/L	5.0	5.0	05/21/24 09:36 HDH							M177568
LCS	36.3	mg/L	4.9	4.9	05/21/24 09:36 HDH	39.5		91.8	78 - 114			M177568
LCS Dup	35.3	mg/L	5.1	5.1	05/21/24 09:36 HDH	41.0		86.2	78 - 114	6.26	200	M177568
Matrix Spike	38.1	mg/L	4.9	4.9	05/21/24 09:36 HDH	39.4	<4.9	96.7	78 - 114			M177568
Specific Conductance (adjusted to 25.0°C) - SM2510 B 2011												Austin
Initial Cal Check	529	uS/cm			05/20/24 08:00 MSA	545		97.1	90 - 110			2405228
Blank	<2.00	uS/cm	2.00	2.00	05/20/24 08:00 MSA							M177505
Duplicate	1040	uS/cm	2.00	2.00	05/20/24 08:00 MSA		1040			0.192	10	M177505
LCS	1400	uS/cm	2.00	2.00	05/20/24 08:00 MSA	1410		99.5	90 - 110			M177505
Sulfate as SO4(2-) - ASTM D0516-16												Austin
Initial Cal Check	28.9	mg/L			05/19/23 13:33 BEB	30.0		96.4	85 - 115			2305280
Initial Cal Check	32.5	mg/L			05/20/24 09:22 KFB	30.0		108	90 - 110			2405234
Low Cal Check	4.99	mg/L			05/20/24 09:22 KFB	5.00		99.9	70 - 130			2405234
Blank	<5.00	mg/L	2.63	5.00	05/20/24 09:22 KFB							M177517
Duplicate	52.7	mg/L	10.5	20.0	05/20/24 09:22 KFB		51.6			1.99	11.8	M177517
LCS	10.3	mg/L	2.63	5.00	05/20/24 09:22 KFB	10.0		103	85 - 115			M177517
LCS Dup	10.3	mg/L	2.63	5.00	05/20/24 09:22 KFB	10.0		103	85 - 115	0.653	13.5	M177517
Matrix Spike	95.4	mg/L	10.5	20.0	05/20/24 09:22 KFB	40.0	51.6	109	67.7 - 129			M177517
Matrix Spike Dup	98.2	mg/L	10.5	20.0	05/20/24 09:22 KFB	40.0	51.6	116	67.7 - 129	6.31	15	M177517
Total Dissolved Solids - SM2540 C 2015												Austin
Blank	<50.0	mg/L	50.0	50.0	05/20/24 11:57 BEB							M177536
Duplicate	628	mg/L	100	100	05/20/24 11:57 BEB		672			6.77	11.2	M177536
Reference	448	mg/L	100	100	05/20/24 11:57 BEB	507		88.4	74.9 - 127			M177536

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635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193



AUSTIN FACILITY
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

INFRAMARK

Report Printed:

6/1/24 9:55

H016330

General Chemistry - Quality Control

Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch
Total Kjeldahl Nitrogen as N - EPA 351.2 R2.0												Bryan
Initial Cal Check	4.55	mg/L			05/21/24 13:52 KMA	4.56		99.8	90 - 110			2405250
Low Cal Check	0.21	mg/L			05/21/24 13:52 KMA	0.200		106	70 - 130			2405250
Blank	<0.20	mg/L	0.13	0.20	05/21/24 13:52 KMA							M177534
LCS	4.09	mg/L	0.13	0.20	05/21/24 13:52 KMA	4.00		102	87.4 - 119			M177534
LCS Dup	4.10	mg/L	0.13	0.20	05/21/24 13:52 KMA	4.00		103	87.4 - 119	0.269	5.44	M177534
Matrix Spike	173	mg/L	3.25	5.00	05/21/24 13:52 KMA	100	71.8	101	62.1 - 130			M177534
Matrix Spike Dup	175	mg/L	3.25	5.00	05/21/24 13:52 KMA	100	71.8	103	62.1 - 130	1.79	17.5	M177534
Total Suspended Solids - SM2540 D 2015												Austin
Blank	<1	mg/L	1	1	05/17/24 12:56 KHA							M177490
Duplicate	3	mg/L	1	1	05/17/24 12:56 KHA		2			11.8	20	M177490
Reference	104	mg/L	10	10	05/17/24 12:56 KHA	101		103	80 - 120			M177490

Metals (Total) - Quality Control

Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch
Phosphorus-Total - EPA 200.7 R4.4												Austin
Blank	<0.050	mg/L	0.041	0.050	05/17/24 13:30 KT							M177414
LCS	2.46	mg/L	0.041	0.050	05/17/24 13:33 KT	2.50		98.4	84.5 - 115.4			M177414
LCS Dup	2.51	mg/L	0.041	0.050	05/17/24 13:35 KT	2.50		100	84.5 - 115.4	1.91	20	M177414
Duplicate	0.255	mg/L	0.041	0.050	05/17/24 13:38 KT		0.235			8.16	20	M177414
Matrix Spike	3.12	mg/L	0.041	0.050	05/17/24 13:40 KT	2.50	0.235	115	69.5 - 130.4			M177414

Microbiological Analyses - Quality Control

Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	Log10 Comparison Range	Control Limit	Batch
E. Coli - SM9223 B 2004												Austin
Blank	<1.0	MPN/100 mL	1.0	1.0	05/15/24 14:38 ACG							M177357
Dup Log10 Range		MPN/100 mL	1.0	1.0	05/15/24 15:26 ACG					0.000		M177357
Duplicate	<1.0	MPN/100 mL	1.0	1.0	05/15/24 15:26 ACG		<1.0				0.5	M177357

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H016330

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
H016330-01										
Carbonaceous BOD (5 day)	SM5210 B 2016	5/16/24 6:45 MSA	Austin	B	150	mL	300	mL	1	M177361
Chloride	SM4500-Cl- B 2011	5/20/24 11:15 MSA	Austin	C	25.0	mL	100	mL	1	M177532
E. Coli	SM9223 B 2004	5/15/24 15:14 ACG	Austin	D	100	N/A	100	N/A	1	M177357
Nitrate/Nitrite as N	SM4500-NO3-F 2011	5/22/24 9:35 KMA	Bryan	A	1.00	mL	10.0	mL	1	M177631
Nitrite as N	SM4500 NO2- B 2011	5/16/24 14:33 BEB	Austin	F	0.500	mL	25.0	mL	1	M177410
Oil & Grease (HEM)	EPA 1664B	5/21/24 9:36 HDH	Bryan	H	989	mL	1000	mL	1	M177568
Phosphorus-Total	EPA 200.7 R4.4	5/16/24 14:57 BGB	Austin	J	50.0	mL	25.0	mL	1	M177414
Specific Conductance (adjusted to 25.0°C)	SM2510 B 2011	5/20/24 8:00 MSA	Austin	C	25.0	mL	25.0	mL	1	M177505
Sulfate as SO4(2-)	ASTM D0516-16	5/20/24 9:22 KFB	Austin	C	25.0	mL	100	mL	1	M177517
Total Dissolved Solids	SM2540 C 2015	5/20/24 11:57 BEB	Austin	C	25.0	mL	100	mL	1	M177536
Total Kjeldahl Nitrogen as N	EPA 351.2 R2.0	5/20/24 11:08 CTG	Bryan	A	25.0	mL	25.0	mL	6	M177534
Total Suspended Solids	SM2540 D 2015	5/17/24 12:56 KHA	Austin	K	600	mL	1000	mL	1	M177490
H016330-01RE1										
Ammonia as N	SM4500-NH3 G 2011	5/27/24 9:57 KMA	Bryan	A	1.00	mL	6.00	mL	1	M177855

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6/1/24

9:55

H016330

Chain-of-Custody Summary

The following record summarizes custody for work orders sampled by Aqua-Tech Laboratories, Inc. personnel on route.

Original signatures are kept on file by Aqua-Tech Laboratories, Inc. and are available upon request.

WORK ORDER H016330

Cooler ID	Temperature °C	Condition Good?	On Ice?	Preservation Correct?	Custody Maintained by ATL?	See comments below or comments and qualifiers with analytical results explaining any "No" answers.
T08	2.4	Yes	Yes	Yes	Yes	
H016330-01		Grab		Sampling Begun: 5/15/24 8:23		Sampling Ended: 5/15/24 8:23
Container & Description		pH Checks / Comments		Container & Description		pH Checks / Comments
A	AMM NO3 TKN 0.25LP H2SO4			B	CBOD 1LP	
D	Ecoli 0.1L StP Na2S2O3			E	Mn Corr 0.25 LP	
G	OG pH Chk - 1LP HCl	pH<2		H	OG - 1LG Amber HCl	
J	P 0.25LP H2SO4	pH<2		K	TSS 2LP	
C	Cl Cond SO4 TDS 1LP					
F	NO2 0.25LP					
I	OG - 1LG Amber HCl					

Sampled & Submitted to Lab by: Brendan Bourland (Route Driver)

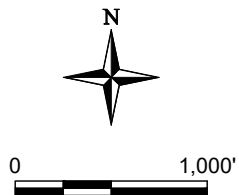
Received: 5/15/24 14:23 By Brendan Bourland (Austin)

ATTACHMENT E
SITE DRAWING



EXPLANATION

- PROPERTY BOUNDARY
- CCN BOUNDARY
- EFFLUENT DISPOSAL AREA
- WWTP BOUNDARY



Texas Engineering Firm F-131
Texas Survey Firm 10194320
New Braunfels Austin
1672 Independence Dr Suite 315 5508 Highway 290 West Suite 201
New Braunfels, Texas 78132 Austin, Texas 78735
(P) 830/626.3588 (F) 830/626.3544 (P) 512/442.3008 (F) 512/448.7811
www.trihydro.com

ATTACHMENT E

SITE DRAWING

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT POINT VENTURE

Drawn By: JDM Checked By: FG Scale: 1" = 1000' Date: 5/29/2024

ATTACHMENT F
EFFLUENT DISPOSAL AGREEMENT

EFFLUENT DISPOSAL CONTRACT
BETWEEN
TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT - POINT VENTURE
AND
POINT VENTURE PROPERTY OWNERS ASSOCIATION, INC.

THE STATE OF TEXAS §
 §
COUNTY OF TRAVIS §

This Effluent Disposal Contract (the "Contract") is entered into as of the 15th day of June, 1999, by and between Point Venture Property Owners Association, Inc., a Texas non-profit corporation ("PVPOA"), and Travis County Water Control and Improvement District - Point Venture, a political subdivision of the State of Texas operating under Chapters 49 and 51, Texas Water Code (the "District").

RECITALS

The District provides water and wastewater services to property within its boundaries, including the Point Venture Golf Course (the "PVGC") owned by PVPOA, which golf course is more fully described in the attached Exhibit "A" (the "Property"). The District and PVPOA want to enter into this Contract that supersedes any and all previous agreements, whether written or oral.

AGREEMENT

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the District and PVPOA agree as follows:

SECTION 1.

USE OF EFFLUENT FROM THE DISTRICT'S WASTEWATER
TREATMENT FACILITIES FOR IRRIGATION OF PVGC

1.01 Agreement to Supply and Use Effluent. The approximately 45-acre PVGC shall serve as the primary irrigation area for the effluent from the District's existing wastewater treatment plant operated under TNRCC Permit No. 11495-01, and the second plant that the District intends to construct from the proceeds of bonds issued pursuant to the election held on January 17, 1998, and any expansions of or improvements to those plants (hereafter called the "District's Plants," whether singularly or collectively, as determined by the context), under the following terms and conditions. The District will make available for PVGC, and PVPOA, subject to the capacity of PVPOA's facilities to take and dispose of the effluent in its irrigation facilities and the other provisions of this

Contract, shall take, all of the effluent produced at the District's Plants except for the effluent reused pursuant to paragraph 1.02 of this Contract. When there is insufficient effluent to satisfy all needs PVPOA shall have priority.

1.02 Use of Effluent by Others. The District may make effluent from its District's Plants available to others, to the extent permitted by the TNRCC reuse rules, and to the extent it is not needed by PVPOA to irrigate the PVGC, pursuant to the following conditions:

i. The District will not make the effluent available to others when PVPOA is unable to divert raw lake water by reason of low lake level or other reason, unless consented to in writing by PVPOA.

ii. PVPOA will cooperate with the District in transporting the effluent through the PVGC irrigation system to deliver to other persons or entities using the effluent. The connection of other irrigation systems to the PVGC irrigation system shall be at no cost to PVPOA. PVPOA shall be compensated by the District for its pumping costs pursuant to Paragraph 6.02 of this Contract.

iii. Effluent shall not be used by persons or entities other than PVPOA while PVPOA's irrigation system is in use, unless agreed to in advance by PVPOA's golf course superintendent.

1.03 Volumes of Effluent Use. During the months of October, November, December, January, February, March and April of each year PVPOA will use its best efforts to operate its irrigation system to the maximum possible extent so as to keep the contents of Storage Ponds Nos. 1 and 2 (as those ponds are later described) at levels satisfactory to the District's manager. The District may commence irrigation of the PVGC at any time the effluent in Storage Ponds 1 and 2 reach an emergency level, as determined by the District's manager. This will be coordinated between the District's manager and the PVGC personnel designated in writing by PVPOA. In no event shall PVPOA or PVGC be required to irrigate in such a manner as to violate the then existing rules and regulations governing either party.

SECTION 2.

STORAGE PONDS, STORAGE TANK AND POINT OF DELIVERY

2.01 Pond Locations. Attached as Exhibit "B" is a map showing the approximate location of Storage Ponds Nos. 1 and 2, as they are located on the site that is owned by the District.

2.02 Pond Maintenance. The District shall be responsible for adequate maintenance of Storage Ponds Nos. 1 and 2, including without limitation, algae treatment and prevention, mowing, vegetation control, and signs or safety warnings required by any authorized regulatory entity. Any changes in the pond landscape or the construction of additional pond facilities shall require prior written approval by PVPOA.

2.03 Storage Tank. PVPOA will sell the land described by metes and bounds on Exhibit "C" attached hereto in form and under the terms and conditions of the attached Exhibit "D." The approximate location of this tank site is shown on Exhibit "B." The District will build a three million gallon ~~open~~ storage tank described in Exhibit "C" (the "Storage Tank") on this site.

2.04 Points of Delivery. Effluent from the District's Plants may be pumped to the Storage Tank, or allowed to flow by gravity to Storage Pond No. 1. Effluent may be delivered from the Storage Tank to Storage Pond No. 1 by drain line, and may be delivered to Storage Pond No. 2 by overflow from Storage Pond No. 1. PVPOA will grant to the District, in form satisfactory to each party's counsel, easements for the effluent lines between the District's Plants and the Storage Tank and between the Storage Tank and Storage Pond No. 1. The effluent shall be delivered to Storage Pond No. 2 from where it may be pumped by PVPOA to the PVGC irrigation system. The inlet of PVPOA's main irrigation pump located on Storage Pond No. 2 shall be the District's point of delivery to PVPOA for the PVGC (the "PVGC Point of Delivery"). Title to all water delivered by the District to PVPOA pursuant to Section 1 of this Contract shall be in the District up to the PVGC Point of Delivery, at which point title shall pass to PVPOA. Each of the parties agree to save and hold harmless and shall indemnify the other party, its officers, directors, employees, agents, and persons acting in concert with any of them, ("Indemnified Parties"), from all claims, demands, losses, and causes of actions, including but not limited to attorney's fees, expenses of investigation or litigation, expert witness or consultant fees, judgments or settlements, which may be asserted by anyone on account or alleged to be the result of the transportation and or delivery of said water while title remains in said party, including but not limited to claims, demands, losses, and causes of actions alleged to arise, in whole or in part, from the negligence of the indemnified party.

SECTION 3.

IRRIGATION FACILITIES

3.01 PVPOA Existing Irrigation System. PVPOA represents that its existing irrigation facilities are presently in good working condition and have the capacity to accept deliveries of effluent in the maximum amounts previously tendered to PVPOA by the District. PVPOA shall be responsible for maintenance and operation of the existing irrigation facilities.

SECTION 4.

IRRIGATION WITH LAKE WATER

4.01 Irrigation with Lake Water. The District shall accept and take possession of water purchased by PVPOA for supplemental irrigation water from the Lower Colorado River Authority (the "LCRA") and delivered to District at the existing delivery point at Storage Pond No. 2. Title to the purchased water shall pass to the District at that pond. Water purchased from the LCRA shall be commingled in Storage Pond No. 2 with District effluent and then delivered to PVPOA at the PVGC Point of Delivery.

The District shall be responsible for delivering effluent and LCRA water, of the quality required by the TNRCC for irrigation of the PVGC. PVPOA shall not deliver purchased LCRA water to the District's Storage Pond No. 2 of a quality which, when commingled with effluent, shall lower the quality of water in Storage Pond No. 2 below that required by the TNRCC for irrigation of PVGC.

SECTION 5.

LINE AND PLANT LOCATIONS AND EASEMENTS

5.01 Plant Location. The locations of the District's existing plant, and the second plant that the District intends to construct from the proceeds of bonds issued pursuant to the election held on January 17, 1998, are shown on Exhibit "B" attached hereto.

5.02 Line Easements. The District currently has an easement for its gravity sewer line across the golf course, a copy of which is attached hereto as Exhibit "E." PVPOA will grant to the District an easement or easements for additional lines at a location or locations mutually agreeable to the District and PVPOA, in a form satisfactory to each party's counsel.

SECTION 6.

MISCELLANEOUS PROVISIONS

6.01 Raw Water Charges. If the use of effluent by others during June, July, August or September requires PVPOA to use raw lake water for irrigation of the PVGC, the District will reimburse PVPOA for certain expenses as follows:

- a. The District will reimburse PVPOA for the amount it has to pay to the Lower Colorado River Authority ("LCRA") for the quantity of raw lake water required because of the effluent taken by others during those months.

- b. The District will reimburse PVPOA for the cost of pumping the raw water from Lake Travis to Storage Pond No. 2, as provided in Section 6.02 of this Contract.

6.02 Pumping Charge. If PVPOA pumps water for use by others pursuant to paragraph 1.02 of this Contract, and if PVPOA pumps lake water in the manner described by Paragraph 6.01(b) of this Contract, the District shall pay PVPOA \$0.25 per 1,000 gallons to compensate for the cost of pumping. If the power company increases the cost of electricity for the pumping, the \$0.25 per 1,000 gallons shall be increased by the same percentage as the increase in the cost of electricity. The District shall reimburse PVPOA on a pro rata basis for its costs of operating and maintaining its pumping facilities should PVPOA pump water for use by others.

6.03 Payment of Charges. Payment of charges under 6.01 and 6.02 shall be made in the manner described on the attached Exhibit "F."

6.04 Runoff Control. PVPOA shall diligently operate and maintain its irrigation systems on PVGC to prevent unauthorized run-off, contamination of underground or surface water, creation of a nuisance, and discharge of effluent in area streams, subject to the conditions set forth in this Contract. District shall not require PVPOA to operate and maintain its irrigation systems of PVGC which would cause the above stated conditions.

SECTION 7.

FUTURE CHANGES

In the event of changes in future conditions that require an amendment to this Contract to accomplish the purposes of this Contract, the parties agree to submit to mediation should the parties not mutually agree to such an amendment.

SECTION 8.

INDEMNIFICATIONS

The District and PVPOA hereby agree to save and hold harmless and shall indemnify, to the fullest extent of the law, the other party, its officers, director, employees, agents, and persons acting in concert with any of them, ("Indemnified Parties"), from all claims, demands, losses, fines, penalties, and causes of actions, including but not limited to attorney's fees, expenses of investigation or litigation, expert witness or consultant fees, judgments or settlements, which may be asserted by anyone on account or alleged to be the result of or arising out of or resulting from the failure of said indemnifying party to comply with any and all obligations hereunder, including but not limited to claims, demands, losses, fines, penalties, and causes of actions alleged to arise, in whole or in part, from the

negligence of the indemnified party, provided that neither party shall be responsible for indirect, special or consequential damages of the other.

SECTION 9.

REMEDIES UPON DEFAULT

9.01 Notice and Cure. If either party determines that the other party is in default under this Contract, the party claiming default by the other party shall give written notice to the defaulting party at the address set forth herein for notice. The defaulting party shall have thirty (30) days in which to cure the default, or if such default cannot be reasonably cured within such thirty (30) day period, the defaulting party shall use reasonable efforts to undertake to cure such default within such thirty (30) day period. If the defaulting party does not cure the default within thirty (30) days, or if the default cannot be reasonably cured within such thirty (30) day period, or if the defaulting party does not use reasonable efforts to undertake to cure the default within such thirty (30) day period, the party claiming default shall be entitled to the rights and remedies hereinafter set forth.

9.02 Mandamus and Specific Performance. It is not intended hereby to specify (and this Contract shall not be considered as specifying) an exclusive remedy for any default, but all such other remedies (other than termination by rescission or by any other means) existing at law or in equity may be availed of by any party hereto and shall be cumulative. Recognizing, however, that the District's undertaking to provide and maintain a supply of water hereunder is an obligation, failure in the performance of which cannot be adequately compensated in money damages alone, the District agrees, in the event of any default on its part, that the PVPOA shall have available to it the equitable remedy of mandamus and specific performance in addition to any other legal or equitable remedies (other than termination) which may also be available. Recognizing that failure in the performance of the PVPOA's obligations hereunder could not be adequately compensated in money damages alone, the PVPOA agrees in the event of any default on its part that the District shall have available to it the equitable remedy of mandamus and specific performance in addition to any other legal or equitable remedies (other than termination by rescission or by any other means) which may also be available to the District. No waiver or waivers of any breach or default (or any breaches or defaults) by any party hereto or of performance shall be deemed a waiver thereof in the future, nor shall any such waiver or waivers be deemed or construed to be waiver of subsequent breaches or defaults of any kind, character, or description, under any circumstances.

SECTION 10.

ATTORNEY'S FEES

If any legal action is brought by either of the parties hereto, it is expressly agreed that the prevailing party in such legal action shall be entitled to recovery from the other party reasonable attorney's fees, and expert witness fees, in addition to any other relief that may be awarded. For the purpose of this clause, the prevailing party is the party who obtains the net damage recovery, or the party in whose favor final judgment is entered. In the event that declaratory or injunctive relief alone is granted, the court may determine which, if either, of the parties shall be considered to be the prevailing party. The amount of reasonable attorney's fees shall be determined by the court, in the trial of such action or in a separate action brought for that purpose. Attorney's fees awarded under the provisions of this paragraph shall be in addition to any other relief that may be awarded.

SECTION 11.

NOTICE

Any notice provided for under the terms of this Contract by either party to the other shall be in writing and may be effected by personal delivery or by registered or certified mail, return receipt requested. Notice to the District shall be sufficient if made or addressed to:

General Manager
Travis County Water Control and
Improvement District - Point Venture
19053 Venture Drive
Leander, Texas 78645

With Copy to:

Mike Willatt
Willatt & Flickinger
2001 North Lamar
Austin, Texas 78705

Notice to PVPOA shall be sufficient if made or addressed to:

Point Venture Property Owners Association, Inc.
555 Venture Boulevard South
Leander, Texas 78645

Each party may change the address which notice may be sent to that party by giving notice of such change to the other party in accordance with the provisions of this Paragraph.

SECTION 12.

SUCCESSORS AND ASSIGNS

This Contract shall be binding on and inure to the benefit of the successors and assigns of the respective parties to this Contract. The obligations of PVPOA under this Contract shall run with the Property and shall be binding on all parties having any right, title, or interest in the Property in whole or in part, and their heirs, successors and assigns. An original of this Contract shall be recorded in the Real Property Records of Travis County, Texas.

SECTION 13.

TERM

Unless terminated by mutual agreement of the parties hereto or their successors and assigns, this Contract shall continue in force and effect for a period of thirty (30) years from its effective date and may thereafter be continuously renewed by mutual agreement of the parties.

SECTION 14.

SEVERABILITY

If any provision of this Contract is held to be invalid, illegal or unenforceable in any respect, this invalidity, illegality or unenforceability will not affect any other provision, and this Contract will be construed as if the invalid, illegal or unenforceable provision had never been contained herein.

SECTION 15.

SOLE AGREEMENT; MODIFICATION

This Contract represents the entire agreement between the parties relating to the subject matter and supersedes all prior oral or written agreements between the District and PVPOA's predecessor(s) in title to the Property. This Contract may be modified or varied only by a written instrument executed by both the District and PVPOA.

SECTION 16.

APPLICABLE LAW

This Contract will be construed and interpreted under the laws of the State of Texas.

SECTION 17.

GOOD FAITH

The parties to this Contract are obligated to use good faith in trying to perform their obligations under this Contract, and in making it possible for the other party to perform its obligations under this Contract.

SECTION 18.

EFFECTIVE DATE

The effective date of this Contract is the date set forth on the first page.

IN WITNESS WHEREOF, PVPOA and the District have executed this Contract in multiple copies, each of equal dignity.


TRAVIS COUNTY WATER CONTROL
AND IMPROVEMENT DISTRICT -
POINT VENTURE

By: Chadbourne B. Smith
President

ATTEST:

Elaine Strickler
Secretary

POINT VENTURE PROPERTY OWNERS
ASSOCIATION, INC.,
a Texas non-profit corporation

By: , President

ACKNOWLEDGMENTS

THE STATE OF TEXAS

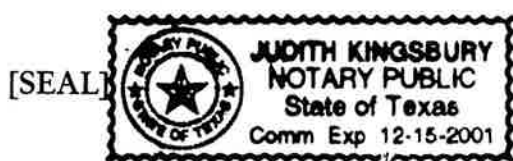
§

COUNTY OF TRAVIS

§

§

This instrument was acknowledged before me on JUNE 30, 1999 by Chadbourne B. Smith as President of Travis County Water Control and Improvement District - Point Venture, on behalf of said District.



Judith Kingsbury
Notary Public, State of Texas

Printed Name

My Commission Expires: 12-15-2001

THE STATE OF TEXAS

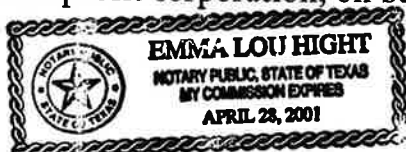
§

COUNTY OF TRAVIS

§

§

This instrument was acknowledged before me on July 1, 1999 by James J. Strong as President of Point Venture Property Owners Association, Inc. a Texas non-profit corporation, on behalf of said corporation.



Emma Lou Hight
Notary Public, State of TEXAS

EMMA LOU HIGHT
Printed Name

My Commission Expires: 04-28-01

LIST OF EXHIBITS

- Exhibit "A" - Metes and Bounds Description of the Point Venture Golf Course.
- Exhibit "B" - Map showing location of Storage Ponds, Storage Tank and Plants.
- Exhibit "C" - Site for Storage Tank.
- Exhibit "D" - Contract for Purchase and Sale of Storage Tank Site.
- Exhibit "E" - Existing Easement for Gravity Sewer Line.
- Exhibit "F" - Payment of Charges Under 6.01 and 6.02.

EXHIBIT "A"

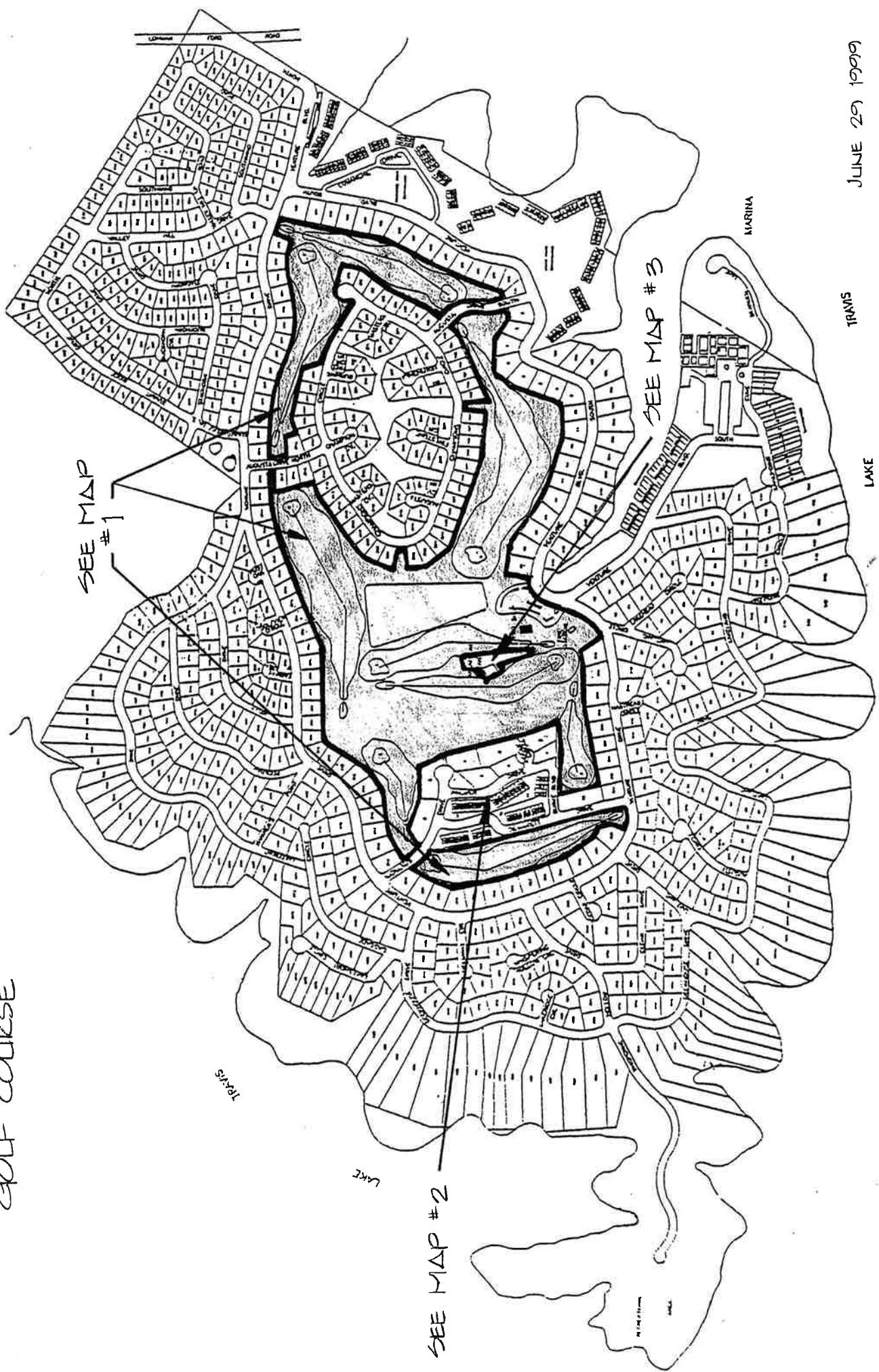
LEGAL DESCRIPTION OF POINT VENTURE GOLF COURSE

- Sheet 1 Overall map of Point Venture with the Golf Course description shaded.
- Sheet 2 Travis Central Appraisal District owner information with legal and deed
- Sheet 3 - 10 General Warranty Deed as recorded in vol. 9285, pgs.0649 - 0656 (8 total)

Note: on pg 0654 Exhibit "A" is the legal description of the Point Venture Golf Course... the following Maps explain each of the parcels described on pg. 0654 Exhibit "A"

- Sheet 11
Map #1 "Point Venture, Section Two" record plat as recorded in volume 51, page 36- area 1 and area 5 are dedicated to Golf Course except...
- Sheet 12
Map #2 "Point Venture, Section Two B" record plat as recorded in volume 56, page 45 - is 11.02 acres taken out of area 5 to be subdivided and developed instead of golf course and...
- Sheet 13
Map #3 "Tract One, Tract Two, Tract Three and an Access Easement" - 0.492, 0.084, 0.377 acre respectively for the Point Venture Wastewater Treatment Plant and Effluent Pond instead of Golf Course (see their legal description on page 0655) and...
"Tract One-A, Tract Three-A, Tract Three-B, Tract Three - C" - 0.040, 0.088, 0.101, 0.042 acre respectively for additional land use by the Wastewater Treatment System (see their legal description on page 0656)

EXHIBIT "A"
LEGAL DESCRIPTION OF POINT VENTURE
GOLF COURSE



LAKE
TRANS

JUNE 29 1999

SHEET 1 OF 13

POINT VENTURE

YEAR 1998 OWNER DETAIL INFORMATION 0147500153 0000 TY 1998 03/16/1999
 NXT N SECU OWNER NAME POINT VENTURE PROPERTY OWNERS DEL OWNER ...
 LEC: STRT VENTURE BV HOUSE 000000 FRAC SUF UNT ZIP
 ---MAILING ADDRESS---
 POINT VENTURE PROPERTY DEED TYPE WD * AREA 1 & AREA 5 (74.198 ACR)
 OWNERS ASSOCIATION INC VOLUME 09285 * (GOLF COURSE & PRO SHOP)
 555 VENTURE BLVD S PAGE 00649 N POINT VENTURE SEC 2
 LEANDER TX DATE 07/22/1985

 ZIP 78645 - ***** OWN HIST Y
 RENDERED VALUE *****
 APPRAISED VAL 104,887 SQFT IMPR 1,120
 STRUCTURE CODE 20 SQFT VALUE 93.64
 FINAL VALUE ***** CD INIT
 DBA PT VENTURE GOLF COURSE REF
 OTH CAD ACCT MULTI
 AREA 9 NBHD 1GOLF GROUP REGION LD LINK LINK ACRES
 AGENT START END ADDR RETURNS TCAD NOTICE TAX NOTICE
 TCAD ***** FLD INSP LETTER
 ARB ***** EXEMPTIONS ADJX
 COLL *****
 TOTAL TAXES 2957.81

1900

GENERAL WARRANTY DEED

03949171

THE STATE OF TEXAS

§

§ KNOW ALL PERSONS BY THESE PRESENTS:

COUNTY OF TRAVIS

§

MAR-17-85 8366 * 13:00

THAT MITCHELL DEVELOPMENT CORPORATION OF THE SOUTHWEST ("Grantor"), a Delaware corporation acting by and through its authorized officers, for and in consideration of Ten Dollars (\$10.00), the performance of those covenants contained in that certain contract by and between Grantor and Grantee dated April 11, 1985, and other good and valuable consideration paid to Grantor by VENTURE YACHT AND COUNTRY CLUB, INC., a Texas Non-Profit corporation (hereinafter called "Grantee"), of Travis County, Texas, the receipt of which is hereby acknowledged, and the further covenant, consideration and condition is that the following shall in all things be observed, followed and complied with:

- (1) Grantee shall not encumber the title to the Property during the term of the lease of the Property to Grantor dated July 22, 1985, or during the extension thereof provided for in the lease;
- (2) Grantee shall expend at least Two Hundred Thousand Dollars (\$200,000.00) to improve the amenities at Point Venture I transferred herein to Grantee within three (3) years of the date hereof pursuant to the terms of the Contract by and between Grantor and Grantee dated April 11, 1985, and the Lease by and between Grantor and Grantee dated July 22, 1985;
- (3) Grantee shall pay annually to Grantor a sum equal to twenty-five percent (25%) of the annual maintenance charge assessment levied against all property in Point Venture I and II pursuant to the terms of the Contract by and between Grantor and Grantee dated April 11, 1985;

In the event of any violations or failure to perform any one of the above covenants by Grantee, its successors or assigns, Grantor, its successors or assigns, shall give written notice to Grantee, its successors or assigns, specifying any such violation or failure to perform and, if Grantee its successors or assigns shall fail to cure or come into compliance with or perform the covenant within ninety (90) days after receipt of such notice, fee simple title to all of the properties conveyed herein shall, without entry or suit, immediately revert to and vest in Grantor herein, its successors or assigns, and the conveyance hereunder shall be null and void, and Grantor, its successors or assigns shall be entitled to immediate possession of such properties and the improvements thereon;

has GRANTED, SOLD and CONVEYED, and by these presents does hereby GRANT, SELL and CONVEY unto said Grantee, the following described lot, tract or parcel of land lying and being situated in the County of Travis, State of Texas, to wit:

Being that certain tract of land in Point Venture Section Two, a subdivision in Travis County, Texas, and being more particularly described in Exhibit A attached hereto and made a part hereof for all purposes ("the Property").

And with the further restriction and upon the covenant and condition that the herein conveyed property shall be used for golf course purposes and the uses described in those certain water waste control orders issued by the Texas Water Quality Board nos. 11232 and 11385 both dated 24, January, 1973, or extensions or modifications thereof only. This restriction and

covenant is hereby declared to be a covenant running with the land and shall be fully binding for a period of twenty-five (25) years from the date hereof; at the end of such period, said restriction and covenant shall automatically be extended for a successive period of twenty-five (25) years unless, by a vote of a three-fourths (3/4) majority of the then owners of lots in said subdivision (each lot having one vote), taken prior to the expiration of said twenty-five (25) year period and filed of record in Travis County, Texas, it is agreed to amend or release same.

If any person or persons shall violate or attempt to violate the restriction and covenant herein, it shall be lawful for any person or persons owning any lot in Point Venture, a subdivision in Travis County, Texas, to prosecute proceedings at law or in equity against the person violating or attempting to violate any such restriction and covenant, either to prevent him or them from so doing or to correct such violation or to recover damages or other relief for such violation. Invalidity of all or any part of this restriction by judgment or court order shall in nowise affect any of the other provisions or parts of provisions which shall remain in full force and effect.

This conveyance is made, executed and delivered by Grantor and accepted by Grantee subject to the following:

(1) The reservation by Grantor, for itself and its successors and assigns, of rights of ingress and egress in and to the right-of-way of any streets and roads located or which may be located on or adjacent to the Property; provided, however, that such reservation shall not affect, limit or deny ingress and egress to the Property by any landowner in Point Venture, a subdivision in Travis County, Texas, as recorded in the Real Property Records of Travis County, Texas.

(2) All of the covenants, restrictions, reservations and easements, if any, affecting the Property which are of record in the Real Property Records of Travis County, Texas.

(3) The further covenant and restriction that all persons who become an owner or resident of the Property agree that neither they nor anyone authorized to act for them will refuse to sell or rent, or refuse to negotiate for the sale or rental of, or otherwise make unavailable, or deny the use of the Property to any person because of race, color, religion, sex or national origin. This covenant shall run with the land and shall remain in effect without any limitation on time.

(4) All oil, gas and mineral reservations or conveyances of record, and the reservation by Grantor, for itself and its successors and assigns, of all oil, gas and other minerals on, in or under, or that may be produced from the Property; provided, however, that as to any mineral interest to which title shall remain vested in Grantor by virtue of this reservation, Grantor hereby waives all rights to use the surface of the Property for the purpose of exploring for, developing or producing such minerals.

(5) Rights of Lower Colorado River Authority to inundate and overflow any portion of the subject property lying below the 715 foot Mean Sea Level Contour Line.

TO HAVE AND TO HOLD the above-described premises, together with all and singular the rights and appurtenances thereto in anywise belonging, unto Grantee, its successors and assigns FOREVER; and Grantor does hereby bind itself, its successors and assigns, to WARRANT AND FOREVER DEFEND, all and singular, the premises unto Grantee, its successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof.

It is expressly agreed that the Vendor's Lien, as well as

the Superior Title in and to the above described premises, is retained against the above described property, premises and improvements until the above consideration is fully paid and performed, when this Deed shall become absolute.

Ad valorem taxes for the current year shall be pro-rated and adjusted to the date hereof, and Grantee expressly assumes and agrees to pay the same.

IN WITNESS WHEREOF, this instrument has been executed by Grantor and Grantee on July 22, 1985.

MITCHELL DEVELOPMENT CORPORATION OF THE SOUTHWEST

By: [Signature]
Name: George P. Mitchell
Title: President

VENTURE YACHT AND COUNTRY CLUB, INC.

By: [Signature]
Name: Michael Lehtonen
Title: Director

By: [Signature]
Name: JOHN W. HAZARD
Title: Director

By: [Signature]
Name: JOHN W. BRANDENBERGER
Title: Director

By: [Signature]
Name: J. FREDERICK WALLACE
Title: Director

By: [Signature]
Name: BILL HIGHT
Title: Director

By: [Signature]
Name: Sheridan Kennedy
Title: Director

THE STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 19, 1985, by George P. Mitchell, President of Mitchell Development Corporation of the Southwest, a Delaware corporation, on behalf of said corporation.

[Signature]
Printed Name: PATRICIA TILLER BARNES
Notary Public - State of Texas
My Commission Expires: 9-22-87

PATRICIA TILLER BARNES
Notary Public in the State of Texas
My Commission Expires: 9-22-87

NOTARY SEAL

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 18, 1985, by Alfred Reikonen, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Kathleen Davidson
Printed Name: Kathleen Davidson
Notary Public - State of Texas
My Commission Expires: 10-11-87

KATHLEEN DAVIDSON
Notary Public in and for State of Texas
My Commission Expires 10/11/87

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by John W. Hazard, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Myrta Kaye Applewhite
Printed Name: Myrta Kaye Applewhite
Notary Public - State of Texas
My Commission Expires: 6-30-86

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My Commission Expires: June 30, 1986

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by John W. Branderburger, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Myrta Kaye Applewhite
Printed Name: Myrta Kaye Applewhite
Notary Public - State of Texas
My Commission Expires: 6-30-86

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My Commission Expires: June 30, 1986

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by J. Frederick Welling, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Myrta Kaye Applewhite
Printed Name: Myrta Kaye Applewhite
Notary Public - State of Texas
My Commission Expires: 6-30-86

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My Commission Expires: June 30, 1986

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by BILL HIGHT, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My commission expires: June 30, 1986

Myrta Kaye Applewhite
Printed Name: _____
Notary Public - State of Texas
My Commission Expires: 6-30-86

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by Sherron Kornegay, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

GRANTEE'S MAILING ADDRESS

Venture Yacht and Country Club, Inc.
350 Venture Boulevard
Leander, Texas

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My commission expires: June 30, 1986

Myrta Kaye Applewhite
Printed Name: _____
Notary Public - State of Texas
My Commission Expires: 6-30-86

EXHIBIT "A"

All of Areas One (1) and Five (5) of POINT VENTURE, SECTION TWO (2), subdivision in Travis County, Texas, according to the map or plat of record in Volume 51, Page 36, of the Plat Records of Travis County, Texas,

SAVE and EXCEPT:

POINT VENTURE SECTION TWO-B, according to the map or plat of record in Volume 56, Page 45, of the Plat Records of Travis County, Texas.

Three tracts of land, together with an access easement, situated in Travis County, Texas, more particularly described in Exhibit 2-A attached hereto and made a part hereof for all purposes.

Four tracts of land, situated in Travis County, Texas, more particularly described in Exhibit 2-B attached hereto and made a part hereof for all purposes.

SEE ATTACHED MAP # 3 (SHEET 13 OF 13)

SEE ATTACHED MAP # 2 (SHEET 12 OF 13)

SEE ATTACHED MAP # 1 (SHEET 11 OF 13)

MKA/2BExhibitA/7-1-85/5

09285 0654

SHEET 8

FIELD NOTES FOR THE MITCHELL DEVELOPMENT CORPORATION

Field Notes describing three tracts of land, together with an access easement, situated in Travis County, Texas, and being out of the tract conveyed to Venture Development Company described in a deed recorded in Volume 4861, page 912 of the Deed Records of said County:

Tract One

Beginning at the most southerly corner hereof and being N.10°34'W. 457.47 feet from the Northeast corner of lot 342 in Point Venture, Section Two, a county subdivision found of record in Volume 51, Page 36 of the Plat Records of said County;

Thence N.48°33'W. 55.76 feet to an ell corner hereof;
Thence S.27°23'W. 74.51 feet to an ell corner hereof;
Thence N.62°37'W. 58.40 feet to an ell corner hereof;
Thence N.27°23'E. 89.15 feet to the most westerly corner hereof;
Thence N.03°00'W. 82.59 feet to an angle point hereof;
Thence N.51°45'E. 54.46 feet to the most northerly corner hereof;
Thence S.49°57'E. 58.85 feet to an angle point hereof;
Thence S.34°04'E. 116.14 feet to the most easterly corner hereof;
Thence S.46°19'W. 85.24 feet to the Point of Beginning of this described tract containing 0.492 acres, more or less, out of the Thomas Anderson Survey No. 85.

Tract Two

Beginning at the most southerly corner of Tract One for the most easterly corner hereof;

Thence N.48°33'W. 55.76 feet to the most northerly corner hereof, being an ell corner of said Tract One;
Thence S.27°23'W. 74.51 feet to the most westerly corner hereof, being the most westerly corner of said Tract One;
Thence S.62°37'E. 54.09 feet to the most southerly corner hereof;
Thence N.27°23'E. 60.95 feet to the Point of Beginning of this described tract containing 0.084 acres, more or less, out of the Thomas Anderson Survey No. 85.

Tract Three

Beginning at the most southerly corner of said Tract One for the most westerly corner hereof;

Thence N.46°19'E. 85.24 feet to the most northerly corner hereof, being the most easterly corner of said Tract One;

Thence S.34°04'E. 39.32 feet to an angle point hereof;
Thence S.67°55'E. 128.87 feet to an angle point hereof;
Thence S.45°02'E. 57.44 feet to the most easterly corner hereof;
Thence S.35°12'W. 79.20 feet to the most southerly corner hereof;
Thence N.53°02'W. 64.08 feet to an angle point hereof;
Thence N.52°12'W. 59.10 feet to an angle point hereof;
Thence N.63°16'W. 107.51 feet to the Point of Beginning of this described tract containing 0.377 acres, more or less, out of the Thomas Anderson Survey No. 85 and the Adams, Beaty and Moulton Survey No. 141.

Access Easement

Being a twenty (20) foot wide access easement to the afore described three tracts of land is more fully described as being ten (10) feet in width on each side of its center line, herein after described as follows:

Beginning at a point in the East line of Tract Two, N.27°23'E. 10.09 feet from the most southerly corner of said Tract Two;

Thence southeasterly along said center line S.70°22'E. 100.68 feet, S.68°28'E. 273.79 feet and N.66°47'E. 86.95 feet to a point in the curving West R.O.W. line of Venture Boulevard for the ending center line point hereof and being S.66°00'15"W. 115.47 feet from the Southwest corner of lot 19 in Point Venture Section One, a county subdivision found of record in Volume 49, Page 70 of said Plat Records.

I, Timothy E. Haynie, A REGISTERED PROFESSIONAL ENGINEER, do hereby certify that these field notes accurately represents the results of an on-the-ground survey made under my direction and supervision on the 24th day of August, 1979. All corners located are as shown. There are no encroachments, conflicts or protrusions apparent on the ground except as shown.



HAYNIE & KALLMAN, INC.

Timothy E. Haynie,
Professional Engineer No. 36982

Date

8-27-79

09285

EXHIBIT 2-A

SHEET 9

Being four (4) tracts of land out of the Thomas Anderson Survey No. 85, in Travis County, Texas, and being out of that tract conveyed to Ventura Development Company described in a deed recorded in Volume 4861, Page 912, Deed Records of Travis County, Texas, as follows:

TRACT ONE-A

BEGINNING for point of reference at the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County; thence $N10^{\circ}54'W$, 457.47 feet; thence $N46^{\circ}19'E$, 85.24 feet for the POINT OF BEGINNING of the tract herein described, and being the most Southerly corner of said tract;

THENCE $N34^{\circ}04'W$, 116.14 feet to the Northwest corner hereof;

THENCE $S49^{\circ}22'E$, 115.07 feet to the Northeast corner hereof;

THENCE $S46^{\circ}19'W$, 39.79 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.040 acres, more or less.

TRACT THREE-A

BEGINNING for point of reference at the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, Texas, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County; thence $N10^{\circ}54'W$, 457.47 feet; thence $N46^{\circ}19'E$, 85.24 feet for the POINT OF BEGINNING of the tract herein described and being the Southwest corner of said tract;

THENCE $N46^{\circ}19'E$, 30.79 feet to the Northwest corner hereof;

THENCE $S49^{\circ}22'E$, 157.05 feet to the Northeast corner hereof;

THENCE $N67^{\circ}55'W$, 128.87 feet to the most Southerly Southeast corner hereof;

THENCE $N34^{\circ}04'W$, 39.32 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.022 acres, more or less.

TRACT THREE-B

BEGINNING for point of reference at the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, Texas, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County; thence $N10^{\circ}54'W$, 457.47 feet; thence $N46^{\circ}19'E$, 85.24 feet; thence $N46^{\circ}19'E$ 30.79 feet; thence $S49^{\circ}22'E$, 157.05 feet to the POINT OF BEGINNING of the tract herein described, being the most westerly Northwest corner of said tract;

THENCE $S57^{\circ}06'E$, 99.38 feet to the Northeast corner hereof;

THENCE $S35^{\circ}12'W$, 30.00 feet to the Southeast corner hereof;

THENCE $N68^{\circ}28'W$, 50.00 feet to the Southwest corner hereof;

THENCE $N35^{\circ}12'E$, 79.20 feet to an old corner hereof;

THENCE $N45^{\circ}09'W$, 51.44 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.101 acres, more or less.

TRACT THREE-C

BEGINNING at a point $N10^{\circ}54'W$, 457.47 feet from the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, Texas, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County;

THENCE $S63^{\circ}16'E$, 107.51 feet to an angle point hereof;

THENCE $S52^{\circ}17'E$, 59.10 feet to the most Easterly corner hereof;

THENCE $N64^{\circ}12'W$, 165.71 feet to the Southwest corner hereof;

THENCE $N27^{\circ}23'E$, 15.00 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.042 acres, more or less.

09285

0856



AREA 5
POINT VENTURE SEC. TWO
BK. 51 PG. 36

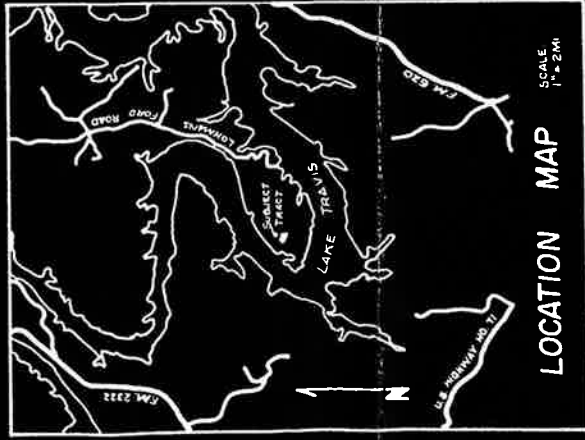
LEGEND:
● IRON PIN FOUND
○ IRON PIN SET
SCALE: 1"=100'



AREA 5
POINT VENTURE SEC. TWO
BK. 51 PG. 36

CURVE DATA:

1	2	3	4	5	6	7	8	9	10	11
I=90°00'	76°58'	76°58'	31°13'	31°13'	39°09'	39°09'	18°23'	18°23'	81°00'	91°57'
R=15.00	89.56	39.56	179.55	129.55	340.59	589.13	639.13	15.00	15.00	15.00
T=15.00	71.20	31.45	50.16	36.19	121.11	138.89	95.33	103.42	12.81	15.52
C=21.21	111.46	49.24	96.62	69.71	228.22	261.73	188.21	204.19	19.48	21.57
Δ=23.56	120.31	53.14	97.83	70.58	232.72	266.89	189.02	205.06	21.21	24.07
12	13	14	15	16	17	18	19	20	21	22
I=52°01'	284°02'	42°00'	42°00'	22°42'	22°42'	142°01'	29°50'	29°50'	23°22'	23°22'
R=15.00	50.00	196.22	146.22	229.68	279.68	15.00	109.43	159.43	483.39	433.39
T=7.32	19.00	75.32	56.13	46.10	56.14	43.58	29.15	42.47	99.96	89.62
C=13.16	61.54	140.64	104.80	90.40	110.08	28.37	56.34	82.08	195.78	175.53
Δ=13.62	247.87	143.84	107.19	91.00	110.81	37.18	56.98	83.01	197.14	176.75



LOCATION MAP

SCALE
1"=2MI

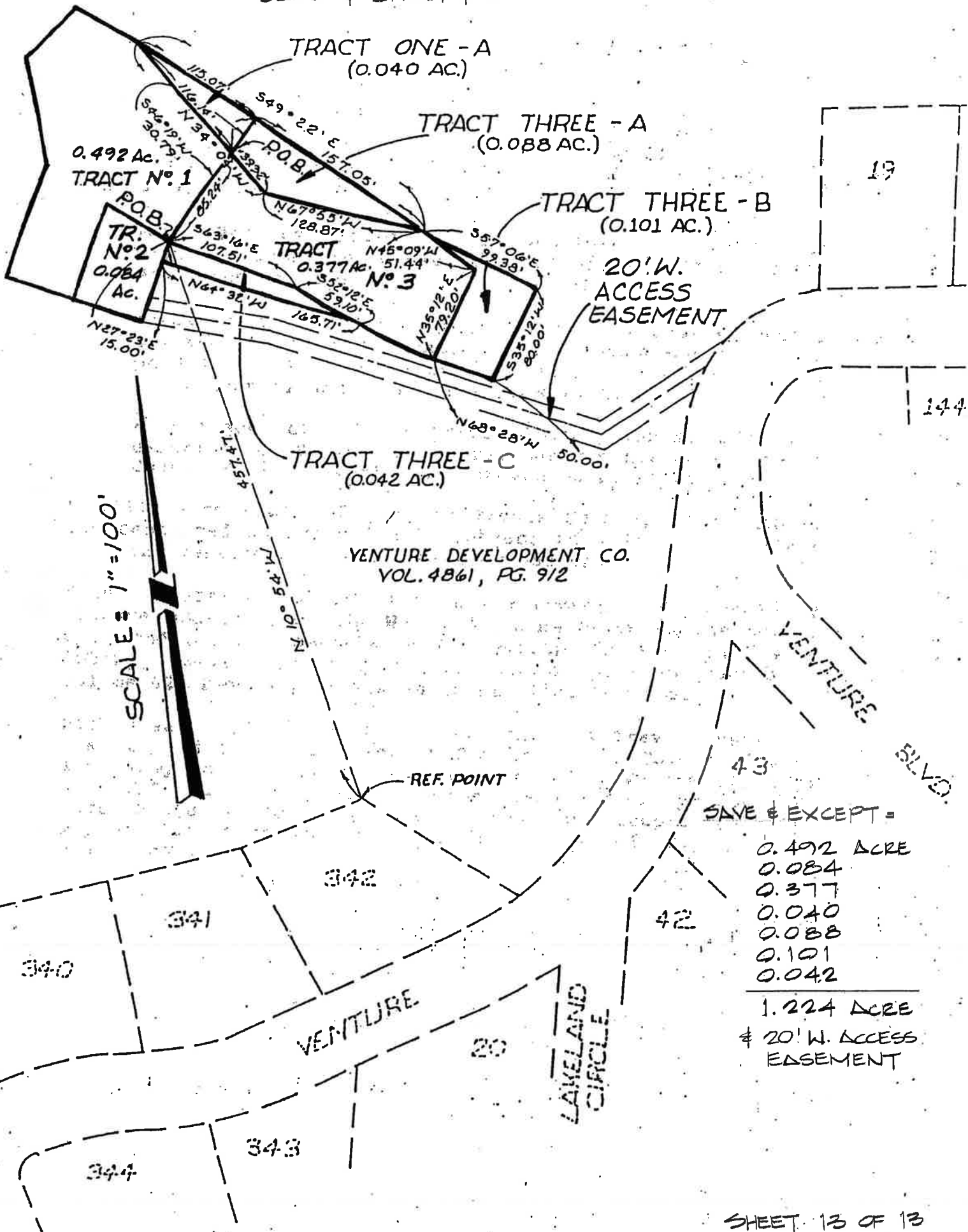
THE SUBDIVISION HEREON IS OUTSIDE OF THE JURISDICTION OF THE CITY
OF AUSTIN, TRAVIS COUNTY, TEXAS AS OF THE 22-DAY OF Oct 1971 A. D.

[Signature]
DIRECTOR OF PUBLIC WORKS

[Signature]
DIRECTOR OF PUBLIC WORKS

POINT VENTURE SECTION TWO-B

MAP #3
SAVE & EXCEPT :



SAVE & EXCEPT =

0.492 ACRE
0.084
0.377
0.040
0.088
0.101
0.042

1.224 ACRE

& 20' W. ACCESS EASEMENT

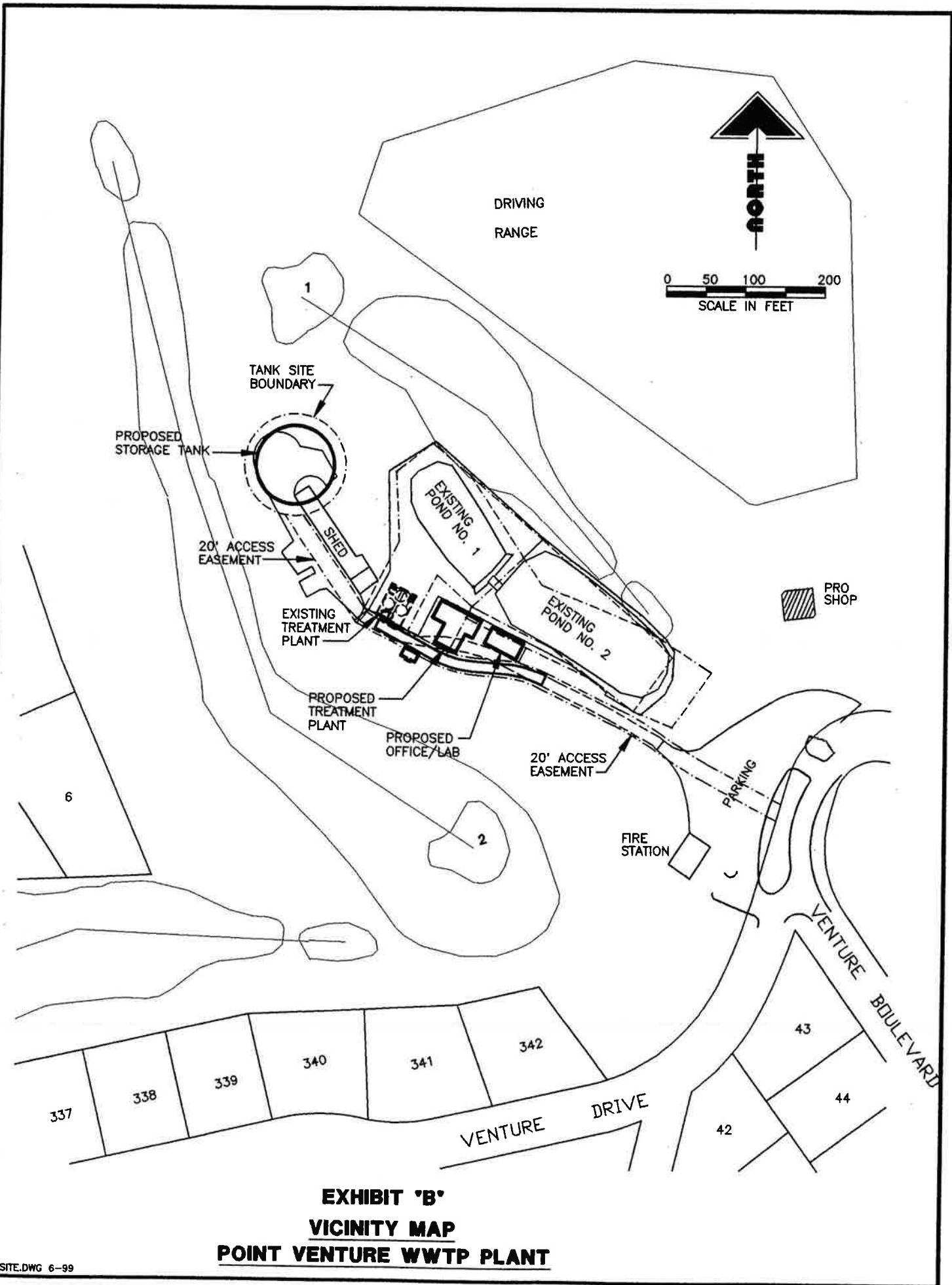


EXHIBIT 'B'
VICINITY MAP
POINT VENTURE WWTP PLANT

FIELD NOTES DESCRIPTION OF A
0.273 ACRE ABOVE GROUND STORAGE TANK SITE

FIELD NOTES DESCRIPTION OF A 0.273 ACRE (11,892 SQ. FT.) TRACT OF LAND OUT OF THE THOMAS ANDERSON SURVEY NO. 85 SITUATED IN TRAVIS COUNTY, TEXAS, SAID 0.273 ACRE TRACT BEING A PORTION OF THAT CERTAIN 74.198 ACRES TRACT CONVEYED TO POINT VENTURE PROPERTY OWNERS, POINT VENTURE GOLF COURSE AS DESCRIBED IN VOLUME 9285, PAGE 649 OF THE TRAVIS COUNTY DEED RECORDS (T.C.D.R.) SAID 0.273 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT AN 1/2" IRON ROD FOUND, SAID POINT BEING THE SOUTHWEST CORNER OF THAT CERTAIN 0.492 ACRE TRACT AS CONVEYED TO TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE (T.C.W.C.I.D.-P.V.) DESCRIBED IN VOLUME 6762, PAGE 873 OF THE T.C.D.R., SAID POINT BEING THE POINT OF REFERENCE FOR THE HEREIN DESCRIBED TRACT;

THENCE, N 26° 37' 29" W, A DISTANCE OF 188.53 FEET TO A POINT, SAID POINT BEING THE CENTER OF A CIRCLE HAVING A RADIUS OF 123.00 FOR THE HEREIN DESCRIBED TRACT, AND FROM SAID POINT N 85° 18' 20" E, A DISTANCE OF 157.24 FEET TO THE NORTHWEST CORNER OF SAID 0.492 ACRE TRACT;

THENCE, NORTH A DISTANCE OF 61.50 FEET TO AN 1/2" IRON ROD SET, SAID POINT BEING THE BEGINNING OF A CURVE TO THE RIGHT FOR THE POINT OF BEGINNING FOR THE HEREIN DESCRIBED TRACT;

THENCE, CONTINUING ALONG SAID CURVE TO THE RIGHT, HAVING A RADIUS OF 61.5 FEET, A CENTRAL ANGLE OF 360° 00' 00", AN ARC LENGTH OF 386.41 FEET TO THE POINT OF BEGINNING AND CONTAINING 0.273 ACRE TRACT (11,892 SQ. FT.) OF LAND MORE OR LESS.

I, TIMOTHY E. HAYNIE, HEREBY CERTIFY THAT THIS DESCRIPTION WAS PREPARED FROM AN ACTUAL SURVEY MADE ON THE GROUND UNDER MY SUPERVISION AND THAT ALL CORNERS ARE MARKED AS DESCRIBED.




 6-30-99
TIMOTHY E. HAYNIE DATE
REGISTERED PUBLIC SURVEYOR NO. 2380

EXHIBIT "C"

SKETCH TO ACCOMPANY FIELD NOTES

OF A 0.273 ACRE ABOVE GROUND STORAGE TANK SITE

BEING A PORTION OUT OF THE TRACT CONVEYED TO

POINT VENTURE PROPERTY OWNERS, POINT VENTURE GOLF COURSE

IN TRAVIS COUNTY, TEXAS



SCALE: 1"=50'



0.492 ACRES
T.C.W.C.I.D. - PV
VOLUME 6762, PAGE 873

PORTION OF 74.198 ACRES
POINT VENTURE PROPERTY OWNERS PT VENTURE GOLF COURSE
VOLUME 9285, PAGE 649
(T.C.D.R.)

NUMBER	DELTA	RADIUS	LENGTH
C1	360°00'00"	61.50	386.41

EXHIBIT "A"

T. B. HAYNIE & ASSOCIATES
Civil Engineers and Land Surveyors
1828 KRAMER LANE, SUITE A
AUSTIN, TEXAS 78758
(512) 837-2446
FAX (512) 837-9463

POINT OF REFERENCE
FOR FIELD NOTES DESC.



Timothy E. Haynie
June 6-30-99

TIMOTHY E. HAYNIE
REGISTERED PROFESSIONAL LAND SURVEYOR No. 2380

REFERENCE
JOB NO. 99-102
POINT VENTURE
FIELD BOOK

EXHIBIT "E"
PERMANENT WATER AND WASTEWATER
FACILITIES AND DISTRIBUTION EASEMENTS

- Sheet 1 Overall map of Point Venture with the Golf Course description shaded - being the property throughout which this blanket easement shall exist
- Sheet 2 Travis Central Appraisal District owner information with legal and deed description over which said blanket easement shall exist
- Sheet 3 - 10 General Warranty Deed as recorded in vol. 9285, pgs 0649 - 0656 (8 total)

Note: on pg 0654 Exhibit "A" is the legal description of the Point Venture Golf Course. the following Maps explain each of the parcels described on pg. 0654 Exhibit "A"

- Sheet 11
Map #1 "Point Venture, Section Two" record plat as recorded in volume 51, page 36- area 1 and area 5 are dedicated herein as a water and wastewater blanket easement to Travis County W.C.I.D. - Point Venture, except...
- Sheet 12
Map #2 (Save and Except)
"Point Venture, Section Two-B" record plat as recorded in volume 56, page 45 - is 11.02 acres taken out of area 5 to be subdivided and developed instead of golf course and not included in this easement...
- Sheet 13
Map #3 (Save and Except)
"Tract One, Tract Two, Tract Three and an Access Easement" - 0.492, 0.084, 0.377 acre respectively for the Point Venture Wastewater Treatment Plant and Effluent Pond instead of Golf Course (see their legal description on page 0655)
and...
"Tract One-A, Tract Three-A, Tract Three-B, Tract Three - C" - 0.040, 0.088, 0.101, 0.042 acre respectively for additional land use by the Wastewater Treatment System (see their legal description on page 0656)

EXHIBIT "E"

A PERMANENT WATER AND WASTEWATER FACILITIES
AND DISTRIBUTION EASEMENT

STATE OF TEXAS §
 §
COUNTY OF TRAVIS §

That **POINT VENTURE PROPERTY OWNERS ASSOCIATION** whose address is 555 Venture Boulevard South, Leander, Texas 78645, in the County of Travis, State of Texas, hereinafter referred to as Grantor, whether one or more, for and in consideration of the recited sum of One Dollar (\$1.00) and other good and valuable consideration to Grantor in hand paid by the Travis County W.C.I.D. - Point Venture the receipt and sufficiency of which is hereby acknowledged and confessed and for which no lien or encumbrance, expressed or implied, is retained, have this day **GRANTED** and **CONVEYED**, and by these presents do **GRANT** and **CONVEY**, unto the Travis County W.C.I.D. - Point Venture situated in the County of Travis, Texas and whose address is P.O. Box 19053 Venture Boulevard, Leander, Texas 78645, subject to the requirements below, a permanent blanket water and wastewater easement for the construction, placement, maintenance, replacement, upgrade and repair of water and wastewater facilities and distribution upon the following described land, ever to-wit:

All that certain tract piece or parcel of land, lying and being situated in the County of Travis, State of Texas, described in **EXHIBIT "E"** attached hereto and made a part hereof for all purposes, to which reference is here made for a more particular description of said property.

GRANTOR further covenants and agrees to use the property only in those ways consistent with the water and wastewater facilities and distribution easement granted and agrees to do nothing which would impair, damage, or destroy said water and wastewater facilities and distribution and it is further understood and agreed that the covenants and agreements set forth above shall be considered covenants running with the land, fully binding upon **GRANTOR** and his successors and assigns. Upon the completion of such construction and installation, **GRANTEE** shall repair **GRANTOR'S** facilities and restore the surrounding construction area to a condition similar to that which existed prior to the preformed work.

TO HAVE AND TO HOLD the same perpetually to the Travis County W.C.I.D. - Point Venture and its successors, together with the right and privilege at any and all times to enter said premises, or any part thereof, for the purpose of constructing, maintaining, replacing, upgrading and repairing said wastewater line. Grantor does hereby covenant and agree to **WARRANT AND FOREVER DEFEND** title to the easement herein granted unto the Travis County W.C.I.D. - Point Venture against all claims of all persons whomsoever lawfully claiming or to claim the same by, through or under Grantor, subject to the matters set forth herein.

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed
on this _____ day of _____, 1999.

POINT VENTURE PROPERTY OWNERS ASSOCIATION, INC.

By: _____

Name: _____

Title: _____

ACKNOWLEDGEMENT

STATE OF _____ §

COUNTY OF _____ §

This instrument was acknowledged before me on the _____ day of
_____, 1999, by _____,
_____ of Point Venture Property Owners Association
a Texas Non-profit Association, on behalf of said Association.

[SEAL]

Notary Public, State of Texas

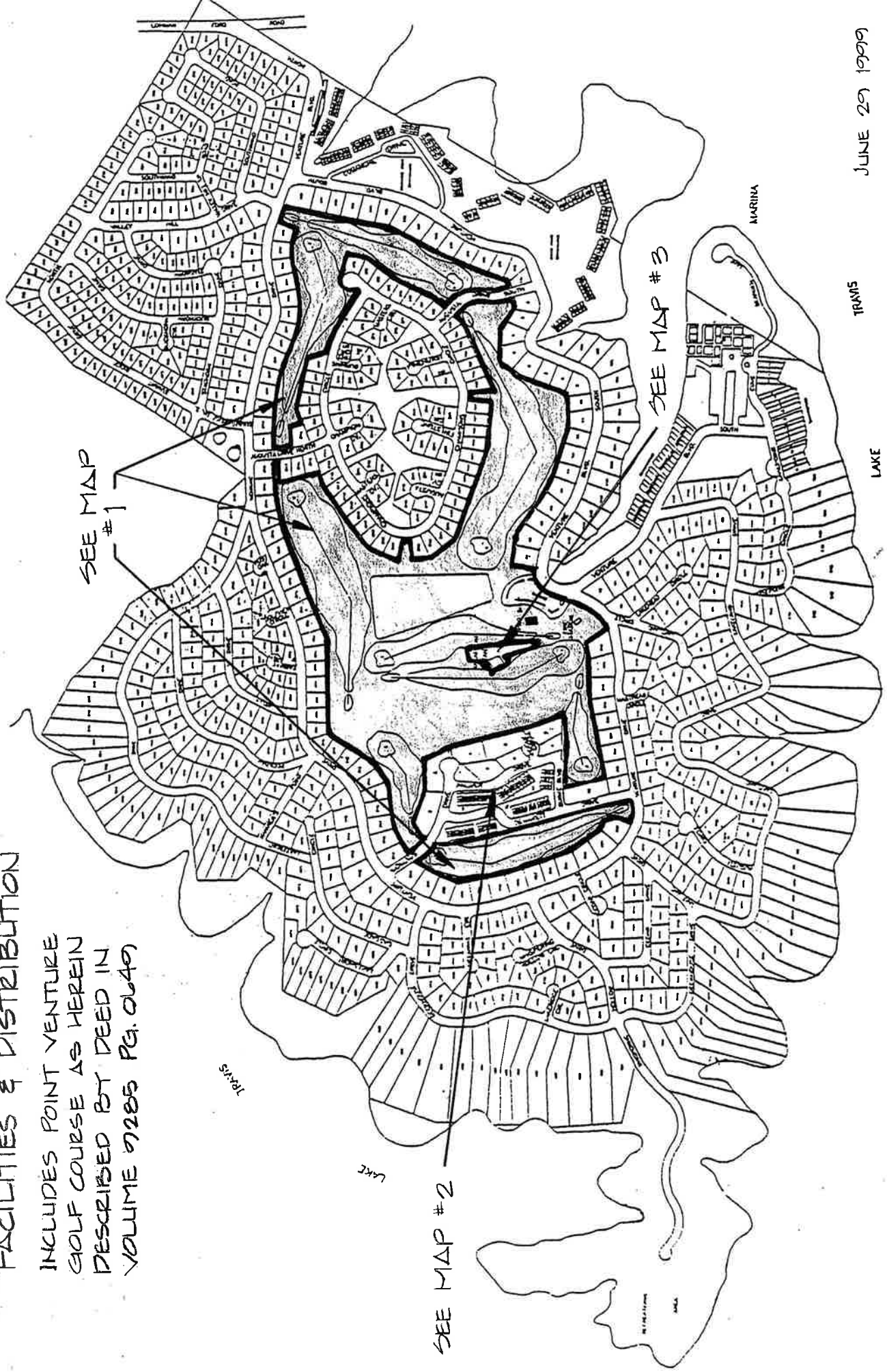
Printed Name of Notary

My Commission Expires

EXHIBIT "E"

EASEMENTS FOR WATER & WASTEWATER
FACILITIES & DISTRIBUTION

INCLUDES POINT VENTURE
GOLF COURSE AS HEREIN
DESCRIBED BY DEED IN
VOLUME 9285 PG. 0649



TRANS

LAKE

JUNE 29 1999

SHEET 1 OF 13

POINT VENTURE

YEAR 1998 OWNER DETAIL INFORMATION 0147800153 0000 TY 1998 03/16/1999
 NXT N SECU OWNER NAME POINT VENTURE PROPERTY OWNERS DEL OWNER ...
 LJO: STRT VENTURE BV HOUSE 000000 FRAC SUF UNT ZIP
 ---MAILING ADDRESS--- DELETE .../.../... LEGAL DESCRIPTION LY 1998
 POINT VENTURE PROPERTY DEED TYPE WD * AREA 1 & AREA 5 (74.198 ACR)
 OWNERS ASSOCIATION INC VOLUME 09285 * (GOLF COURSE & PRO SHOP)
 555 VENTURE BLVD S PAGE 00649 N POINT VENTURE SEC 2
 LEANDER TX DATE 07/22/1985

 ZIP 78645 - ***** OWN HIST Y LOAN CO *****
 RENDERED VALUE ***** LOAN NO ***** LEGAL HIST Y
 APPRAISED VAL 104,687 VENDOR LIEN ***** NOTICE MAILED
 STRUCTURE CODE 20 SQFT IMPR 1,120 INFO REQ
 FINAL VALUE ***** SQFT VALUE 93.64 MAP REF 014287
 DBA PT VENTURE GOLF COURSE CD INIT MH LABEL
 OTH CAD ACCT REF *****
 AREA 9 NBHD (GOLF GROUP ***** MULTI *****
 AGENT START END REGION LD LINK LINK ACRES
 TCAD ADDR RETURNS TCAD NOTICE TAX NOTICE
 ARB FLD INSP LETTER
 COLL EXEMPTIONS ADJZ
 TOTAL TAXES 2957.81

1900

GENERAL WARRANTY DEED

03949171

THE STATE OF TEXAS

§

KNOW ALL PERSONS BY THESE PRESENTS:

COUNTY OF TRAVIS

§

MAR-1-85 8366 * 13:00

THAT MITCHELL DEVELOPMENT CORPORATION OF THE SOUTHWEST ("Grantor"), a Delaware corporation acting by and through its authorized officers, for and in consideration of Ten Dollars (\$10.00), the performance of those covenants contained in that certain contract by and between Grantor and Grantee dated April 11, 1985, and other good and valuable consideration paid to Grantor by VENTURE YACHT AND COUNTRY CLUB, INC., a Texas Non-Profit corporation (hereinafter called "Grantee"), of Travis County, Texas, the receipt of which is hereby acknowledged, and the further covenant, consideration and condition is that the following shall in all things be observed, followed and complied with:

- (1) Grantee shall not encumber the title to the Property during the term of the lease of the Property to Grantor dated July 22, 1985, or during the extension thereof provided for in the lease;
- (2) Grantee shall expend at least Two Hundred Thousand Dollars (\$200,000.00) to improve the amenities at Point Venture I transferred herein to Grantee within three (3) years of the date hereof pursuant to the terms of the Contract by and between Grantor and Grantee dated April 11, 1985, and the Lease by and between Grantor and Grantee dated July 22, 1985;
- (3) Grantee shall pay annually to Grantor a sum equal to twenty-five percent (25%) of the annual maintenance charge assessment levied against all property in Point Venture I and II pursuant to the terms of the Contract by and between Grantor and Grantee dated April 11, 1985;

In the event of any violations or failure to perform any one of the above covenants by Grantee, its successors or assigns, Grantor, its successors or assigns, shall give written notice to Grantee, its successors or assigns, specifying any such violation or failure to perform and, if Grantee its successors or assigns shall fail to cure or come into compliance with or perform the covenant within ninety (90) days after receipt of such notice, fee simple title to all of the properties conveyed herein shall, without entry or suit, immediately revert to and vest in Grantor herein, its successors or assigns, and the conveyance hereunder shall be null and void, and Grantor, its successors or assigns shall be entitled to immediate possession of such properties and the improvements thereon;

has GRANTED, SOLD and CONVEYED, and by these presents does hereby GRANT, SELL and CONVEY unto said Grantee, the following described lot, tract or parcel of land lying and being situated in the County of Travis, State of Texas, to wit:

Being that certain tract of land in Point Venture Section Two, a subdivision in Travis County, Texas, and being more particularly described in Exhibit A attached hereto and made a part hereof for all purposes ("the Property").

And with the further restriction and upon the covenant and condition that the herein conveyed property shall be used for golf course purposes and the uses described in those certain water waste control orders issued by the Texas Water Quality Board nos. 11232 and 11385 both dated 24, January, 1973, or extensions or modifications thereof only. This restriction and

covenant is hereby declared to be a covenant running with the land and shall be fully binding for a period of twenty-five (25) years from the date hereof; at the end of such period, said restriction and covenant shall automatically be extended for a successive period of twenty-five (25) years unless, by a vote of a three-fourths (3/4) majority of the then owners of lots in said subdivision (each lot having one vote), taken prior to the expiration of said twenty-five (25) year period and filed of record in Travis County, Texas, it is agreed to amend or release same.

If any person or persons shall violate or attempt to violate the restriction and covenant herein, it shall be lawful for any person or persons owning any lot in Point Venture, a subdivision in Travis County, Texas, to prosecute proceedings at law or in equity against the person violating or attempting to violate any such restriction and covenant, either to prevent him or them from so doing or to correct such violation or to recover damages or other relief for such violation. Invalidation of all or any part of this restriction by judgment or court order shall in nowise affect any of the other provisions or parts of provisions which shall remain in full force and effect.

This conveyance is made, executed and delivered by Grantor and accepted by Grantee subject to the following:

(1) The reservation by Grantor, for itself and its successors and assigns, of rights of ingress and egress in and to the right-of-way of any streets and roads located or which may be located on or adjacent to the Property; provided, however, that such reservation shall not affect, limit or deny ingress and egress to the Property by any landowner in Point Venture, a subdivision in Travis County, Texas, as recorded in the Real Property Records of Travis County, Texas.

(2) All of the covenants, restrictions, reservations and easements, if any, affecting the Property which are of record in the Real Property Records of Travis County, Texas.

(3) The further covenant and restriction that all persons who become an owner or resident of the Property agree that neither they nor anyone authorized to act for them will refuse to sell or rent, or refuse to negotiate for the sale or rental of, or otherwise make unavailable, or deny the use of the Property to any person because of race, color, religion, sex or national origin. This covenant shall run with the land and shall remain in effect without any limitation on time.

(4) All oil, gas and mineral reservations or conveyances of record, and the reservation by Grantor, for itself and its successors and assigns, of all oil, gas and other minerals on, in or under, or that may be produced from the Property; provided, however, that as to any mineral interest to which title shall remain vested in Grantor by virtue of this reservation, Grantor hereby waives all rights to use the surface of the Property for the purpose of exploring for, developing or producing such minerals.

(5) Rights of Lower Colorado River Authority to inundate and overflow any portion of the subject property lying below the 715 foot Mean Sea Level Contour Line.

TO HAVE AND TO HOLD the above-described premises, together with all and singular the rights and appurtenances thereto in anywise belonging, unto Grantee, its successors and assigns FOREVER; and Grantor does hereby bind itself, its successors and assigns, to WARRANT AND FOREVER DEFEND, all and singular, the premises unto Grantee, its successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof.

It is expressly agreed that the Vendor's Lien, as well as

the Superior Title in and to the above described premises, is retained against the above described property, premises and improvements until the above consideration is fully paid and performed, when this Deed shall become absolute.

Ad valorem taxes for the current year shall be pro-rated and adjusted to the date hereof, and Grantee expressly assumes and agrees to pay the same.

IN WITNESS WHEREOF, this instrument has been executed by Grantor and Grantee on July 22, 1985.

MITCHELL DEVELOPMENT CORPORATION OF THE SOUTHWEST

By: [Signature]
Name: George P. Mitchell
Title: President

VENTURE YACHT AND COUNTRY CLUB, INC.

By: [Signature]
Name: Michael Lehtonen
Title: Director

By: [Signature]
Name: John W. HAZARD
Title: Director

By: [Signature]
Name: JOHN W. BRANDENBERGER
Title: Director

By: [Signature]
Name: J. Frederick K. Walling
Title: Director

By: [Signature]
Name: BILL HIGHT
Title: Director

By: [Signature]
Name: Sherron Kannegar
Title: Director

THE STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 19, 1985, by George P. Mitchell, President of Mitchell Development Corporation of the Southwest, a Delaware corporation, on behalf of said corporation.

[Signature]
Printed Name: _____
Notary Public - State of Texas
My Commission Expires: 9-22-87

PATRICIA TILLER BARNES
Notary Public in the State of Texas
My Commission Expires: 09-22-87

NOTARY SEAL

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 18, 1985, by Alfred Schloer, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Kathleen Davidson
Printed Name: Kathleen Davidson
Notary Public - State of Texas
My Commission Expires: 10-11-87

KATHLEEN DAVIDSON
Notary Public in and for State of Texas
My Commission Expires 10/11/87

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by John W. Hazard, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Myrta Kaye Applewhite
Printed Name: Myrta Kaye Applewhite
Notary Public - State of Texas
My Commission Expires: 6-30-86

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My Commission Expires: June 30, 1986

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by John W. Branderhager, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Myrta Kaye Applewhite
Printed Name: Myrta Kaye Applewhite
Notary Public - State of Texas
My Commission Expires: 6-30-86

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My Commission Expires: June 30, 1986

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by J. Frederick Weiling, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Myrta Kaye Applewhite
Printed Name: Myrta Kaye Applewhite
Notary Public - State of Texas
My Commission Expires: 6-30-86

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My Commission Expires: June 30, 1986

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by BILL HIGHT, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My commission expires: June 30, 1986

Myrta Kaye Applewhite
Printed Name: _____
Notary Public - State of Texas
My Commission Expires: 6-30-86

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by Sherron Kornegay, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

GRANTEE'S MAILING ADDRESS

Venture Yacht and Country Club, Inc.
350 Venture Boulevard
Leander, Texas

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My commission expires: June 30, 1986

Myrta Kaye Applewhite
Printed Name: _____
Notary Public - State of Texas
My Commission Expires: 6-30-86

EXHIBIT "A"

All of Areas One (1) and Five (5) of POINT VENTURE, SECTION TWO (2), subdivision in Travis County, Texas, according to the map or plat of record in Volume 51, Page 36, of the Plat Records of Travis County, Texas,

SAVE and EXCEPT:

POINT VENTURE SECTION TWO-B, according to the map or plat of record in Volume 56, Page 45, of the Plat Records of Travis County, Texas.

Three tracts of land, together with an access easement, situated in Travis County, Texas, more particularly described in Exhibit 2-A attached hereto and made a part hereof for all purposes.

Four tracts of land, situated in Travis County, Texas, more particularly described in Exhibit 2-B attached hereto and made a part hereof for all purposes.

SEE ATTACHED MAP # 3 (SHEET 13 OF 13)

SEE ATTACHED MAP # 2 (SHEET 12 OF 13)

SEE ATTACHED MAP # 1 (SHEET 11 OF 13)

MKA/2BExhibitA/7-1-85/5

09285 0654

SHEET 8

FIELD NOTES FOR THE MITCHELL DEVELOPMENT CORPORATION

Field Notes describing three tracts of land, together with an access easement, situated in Travis County, Texas, and being out of the tract conveyed to Venture Development Company described in a deed recorded in Volume 4861, page 912 of the Deed Records of said County:

Tract One

Beginning at the most southerly corner hereof and being N.10°34'W. 457.47 feet from the Northeast corner of lot 342 in Point Venture, Section Two, a county subdivision found of record in Volume 51, Page 36 of the Plat Records of said County;

Thence N.48°33'W. 55.76 feet to an ell corner hereof;
Thence S.27°23'W. 74.51 feet to an ell corner hereof;
Thence N.62°37'W. 58.40 feet to an ell corner hereof;
Thence N.27°23'E. 89.15 feet to the most westerly corner hereof;
Thence N.03°00'W. 82.59 feet to an angle point hereof;
Thence N.51°45'E. 54.46 feet to the most northerly corner hereof;
Thence S.49°57'E. 58.85 feet to an angle point hereof;
Thence S.34°04'E. 116.14 feet to the most easterly corner hereof;
Thence S.46°19'W. 85.24 feet to the Point of Beginning of this described tract containing 0.492 acres, more or less, out of the Thomas Anderson Survey No. 85.

Tract Two

Beginning at the most southerly corner of Tract One for the most easterly corner hereof;

Thence N.48°33'W. 55.76 feet to the most northerly corner hereof, being an ell corner of said Tract One;
Thence S.27°23'W. 74.51 feet to the most westerly corner hereof, being the most westerly corner of said Tract One;
Thence S.62°37'E. 54.09 feet to the most southerly corner hereof;
Thence N.27°23'E. 60.95 feet to the Point of Beginning of this described tract containing 0.084 acres, more or less, out of the Thomas Anderson Survey No. 85.

Tract Three

Beginning at the most southerly corner of said Tract One for the most westerly corner hereof;

Thence N.46°19'E. 85.24 feet to the most northerly corner hereof, being the most easterly corner of said Tract One;

Thence S.34°04'E. 39.32 feet to an angle point hereof;
Thence S.67°55'E. 128.87 feet to an angle point hereof;
Thence S.45°05'E. 51.44 feet to the most easterly corner hereof;
Thence S.35°12'W. 79.20 feet to the most southerly corner hereof;
Thence N.53°02'W. 64.08 feet to an angle point hereof;
Thence N.52°12'W. 59.10 feet to an angle point hereof;
Thence N.63°16'W. 107.51 feet to the Point of Beginning of this described tract containing 0.377 acres, more or less, out of the Thomas Anderson Survey No. 85 and the Adams, Beaty and Moulton Survey No. 141.

Access Easement

Being a twenty (20) foot wide access easement to the afore described three tracts of land is more fully described as being ten (10) feet in width on each side of its center line, herein after described as follows:

Beginning at a point in the East line of Tract Two, N.27°23'E. 10.09 feet from the most southerly corner of said Tract Two;

Thence southeasterly along said center line S.70°22'E. 100.68 feet, S.68°28'E. 273.79 feet and N.66°47'E. 86.95 feet to a point in the curving West R.O.W. line of Venture Boulevard for the ending center line point hereof and being S.66°00'15"W. 115.47 feet from the Southwest corner of lot 19 in Point Venture Section One, a county subdivision found of record in Volume 48, Page 70 of said Plat Records.

I, Timothy E. Haynie, A REGISTERED PROFESSIONAL ENGINEER, do hereby certify that these field notes accurately represents the results of an on-the-ground survey made under my direction and supervision on the 24th day of August, 1979. All corners located are as shown. There are no encroachments, conflicts or protrusions apparent on the ground except as shown.



HAYNIE & KALLMAN, INC.

Timothy E. Haynie,
Professional Engineer No. 36982

Date

8-27-79

09285

Being four (4) tracts of land out of the Thomas Anderson Survey No. 85, in Travis County, Texas, and being out of that tract conveyed to Venture Development Company described in a deed recorded in Volume 4861, Page 912, Deed Records of Travis County, Texas, as follows:

TRACT ONE-A

BEGINNING for point of reference at the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County; thence $N10^{\circ}54'W$, 457.47 feet; thence $N46^{\circ}19'E$, 85.24 feet for the POINT OF BEGINNING of the tract herein described, and being the most southerly corner of said tract;

THENCE $N34^{\circ}04'W$, 116.14 feet to the Northwest corner hereof;

THENCE $S49^{\circ}22'E$, 115.07 feet to the Northeast corner hereof;

THENCE $S46^{\circ}19'W$, 39.79 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.040 acres, more or less.

TRACT THREE-A

BEGINNING for point of reference at the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, Texas, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County; thence $N10^{\circ}54'W$, 457.47 feet; thence $N46^{\circ}19'E$, 85.24 feet for the POINT OF BEGINNING of the tract herein described and being the Southwest corner of said tract;

THENCE $N46^{\circ}19'E$, 39.79 feet to the Northwest corner hereof;

THENCE $S49^{\circ}22'E$, 157.05 feet to the Northeast corner hereof;

THENCE $N67^{\circ}55'W$, 128.87 feet to the most southerly Southeast corner hereof;

THENCE $N34^{\circ}04'W$, 39.32 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.028 acres, more or less.

TRACT THREE-B

BEGINNING for point of reference at the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, Texas, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County; thence $N10^{\circ}54'W$, 457.47 feet; thence $N46^{\circ}19'E$, 85.24 feet; thence $N46^{\circ}19'E$, 30.79 feet; thence $S49^{\circ}22'E$, 157.05 feet to the POINT OF BEGINNING of the tract herein described, being the most westerly Northwest corner of said tract;

THENCE $S57^{\circ}06'E$, 99.38 feet to the Northeast corner hereof;

THENCE $S15^{\circ}11'W$, 30.00 feet to the Southeast corner hereof;

THENCE $N68^{\circ}28'W$, 50.00 feet to the Southwest corner hereof;

THENCE $N35^{\circ}12'E$, 79.20 feet to an old corner hereof;

THENCE $N45^{\circ}09'W$, 51.44 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.101 acres, more or less.

TRACT THREE-C

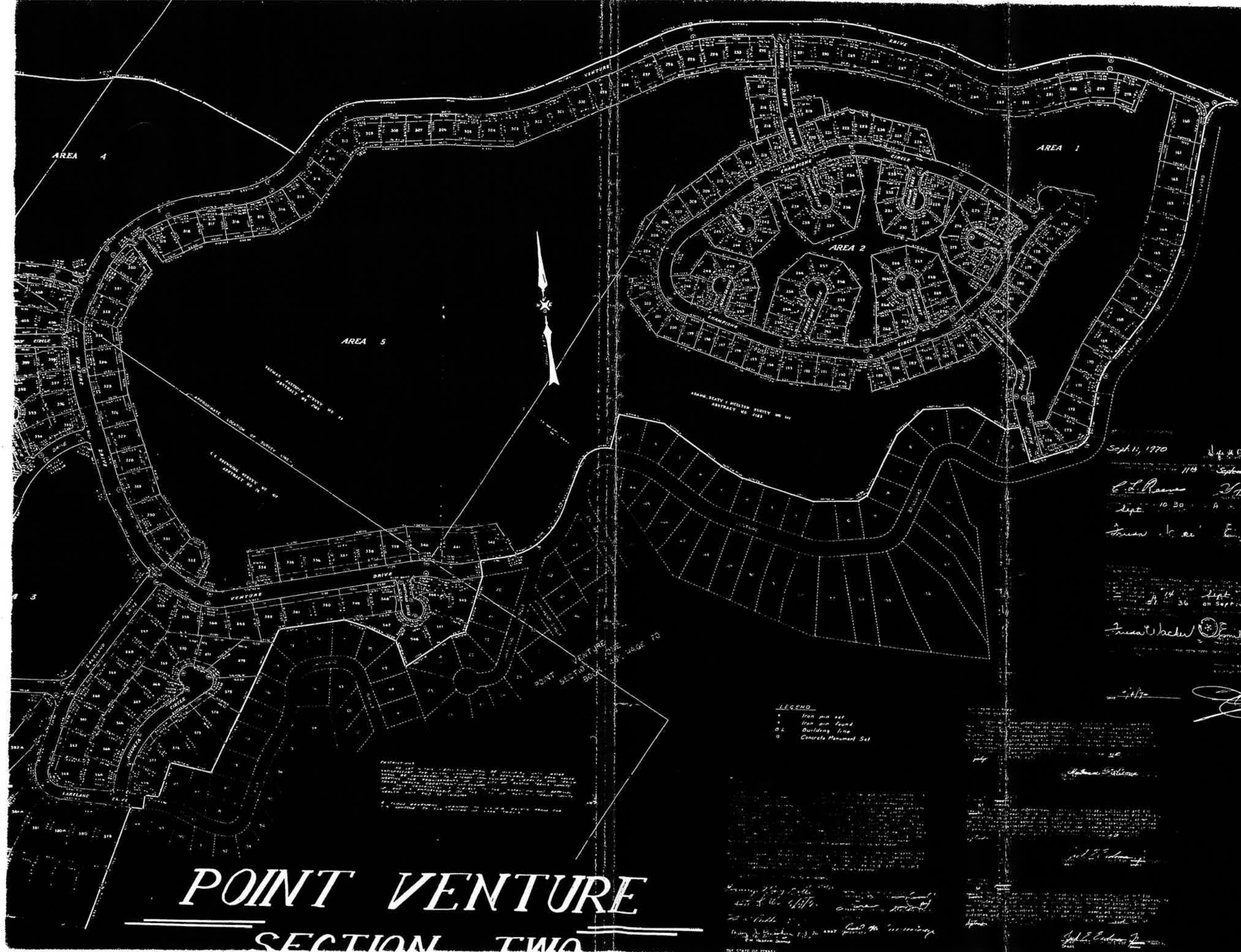
BEGINNING at a point $N10^{\circ}54'W$, 457.47 feet from the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, Texas, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County;

THENCE $S63^{\circ}16'E$, 107.51 feet to an angle point hereof;

THENCE $S32^{\circ}17'E$, 59.10 feet to the most Easterly corner hereof;

THENCE $N64^{\circ}32'W$, 165.71 feet to the Southwest corner hereof;

THENCE $N27^{\circ}23'E$, 15.00 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.042 acres, more or less.



GOLF COURSE AREA 1 & AREA 5

MAP # 1

SHEET 11 OF 13



AREA 5
POINT VENTURE SEC. TWO
BK. 51 PG. 36

LEGEND:
● IRON PIN FOUND
○ IRON PIN SET

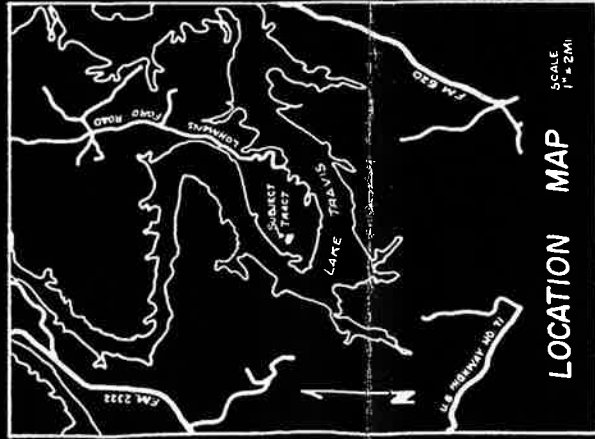
SCALE: 1"=100'



AREA 5
POINT VENTURE SEC. TWO
BK. 51 PG. 36

CURVE DATA

	1	2	3	4	5	6	7	8	9	10	11	12
I-90°00'	76°58'	76°58'	76°58'	31°13'	31°13'	39°09'	39°09'	18°23'	13°23'	81°00'	91°57'	
R-15.00	89.56	89.56	39.56	179.55	129.55	340.59	390.59	589.13	639.13	15.00	15.00	
T-15.00	71.20	71.20	31.45	50.16	36.19	121.11	138.89	95.33	103.42	12.81	15.52	
C-21.21	111.46	111.46	49.24	96.62	69.71	228.22	261.73	188.21	204.19	19.48	21.57	
Δ-23.56	120.31	120.31	53.14	97.83	70.58	232.72	266.89	189.02	205.06	21.21	24.07	
I-52°01'	284°02'	42°00'	14	15	16	17	18	19	20	21	22	
R-15.00	50.00	196.22	146.22	42°00'	22°42'	22°42'	142°01'	29°50'	29°50'	23°22'	23°22'	
T-7.32	-	75.32	56.13	56.13	229.68	279.68	15.00	109.43	159.43	483.39	483.39	
C-13.16	61.54	140.64	104.80	90.40	46.10	56.14	43.58	29.15	42.47	99.96	89.62	
Δ-13.62	247.87	143.84	107.19	91.00	110.81	110.81	28.37	56.34	82.08	195.78	175.53	
							37.18	56.98	85.01	197.14	176.75	



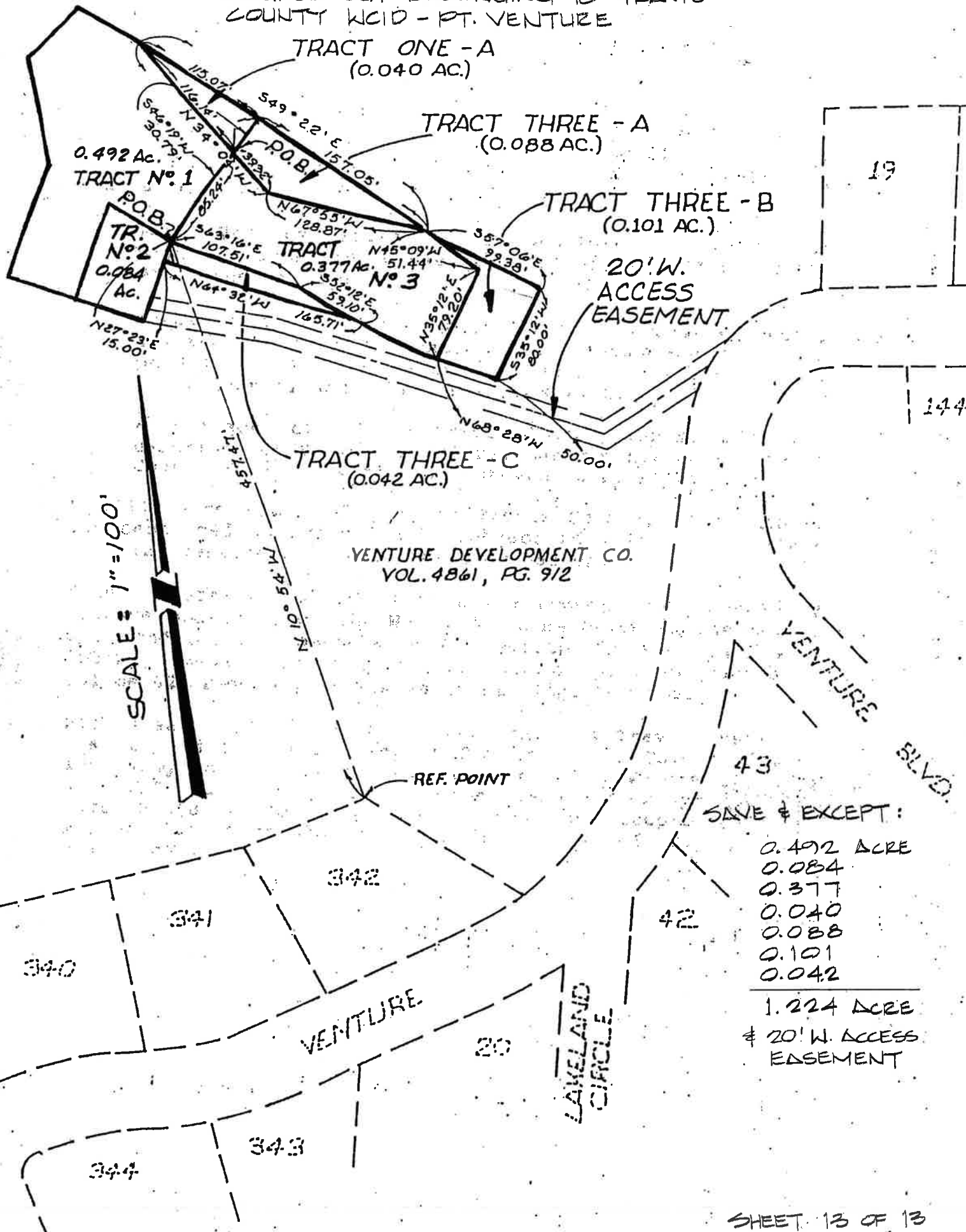
THE SUBDIVISION HEREON IS OUTSIDE OF THE JURISDICTION OF THE CITY OF AUSTIN, TRAVIS COUNTY, TEXAS AS OF THE 15 DAY OF Oct. 1971 A.D.

[Signature]
Surveyor

[Signature]
DIRECTOR OF PUBLIC WORKS

POINT VENTURE
SECTION TWO-B

MAP #3 SAVE & EXCEPT OUT OF GOLF COURSE BUT BELONGING TO TRAVIS COUNTY WCID - PT. VENTURE



SAVE & EXCEPT:

0.492 ACRE
0.084
0.377
0.040
0.088
0.101
0.042

1.224 ACRE

& 20' W. ACCESS EASEMENT

EXHIBIT "F"

Raw water charges under 6.01 of the Effluent Disposal Contract shall be determined by that certain Water Sales Contract For Irrigation Uses dated January 25, 1994 by and between Lower Colorado River Authority (LCRA) and Point Venture Property Owners Association, Inc. The District monthly shall reimburse PVPOA for the amount paid to LCRA for the volumes of water it is required to use because of the use of effluent by others. Should PVPOA be required to additionally pay LCRA for volumes of water on a calendar year basis which are in excess of the Maximum Annual Quantity as defined in the above referenced Contract, then in the event that PVPOA is required to use raw lake water under 6.01 then District shall reimburse PVPOA for such volumes at the rate PVPOA is obligated to pay under the above referenced Contract.

Pumping charges under 6.02 of the Effluent Disposal Contract shall be paid on a monthly basis. Charges for operating and maintaining PVPOA's pumping facilities, should such facilities be used to pump water for the use by others, shall be determined on a calendar year basis by multiplying the total operating and maintenance costs during that year by a fraction. Such fraction shall be determined by dividing the water pumped for use by others by the total volume pumped during such calendar year. Charges for operating and maintaining PVPOA's pumping facilities shall not include the electricity costs of \$0.25 per 1,000 gallons reimbursement and power company increases described in 6.02.

PVPOA shall provide District with monthly and annual statements for the purposes of billing of the above-described charges and District shall make payment to PVPOA within twenty (20) days of such billing.

FIRST AMENDMENT TO
EFFLUENT DISPOSAL CONTRACT
BETWEEN
TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT - POINT VENTURE
AND
POINT VENTURE PROPERTY OWNERS ASSOCIATION, INC.

THE STATE OF TEXAS

§

COUNTY OF TRAVIS

§

§

This First Amendment to Effluent Disposal Contract between Travis County Water Control and Improvement District - Point Venture and Point Venture Property Owners Association, Inc. (the "First Amendment") is entered into as of the 1st day of October, 2008, by and between Point Venture Property Owners Association, Inc., a Texas non-profit corporation ("PVPOA"), and Travis County Water Control and Improvement District - Point Venture, a political subdivision of the State of Texas operating under Chapters 49 and 51, Texas Water Code (the "District").

RECITALS

A. The District and PVPOA entered into that certain Effluent Disposal Contract between Travis County Water Control and Improvement District - Point Venture and Point Venture Property Owners Association, Inc. as of the 15th day of June, 1999 (the "Contract"), and it is now necessary to amend that Contract to provide that the District may pay the PVPOA electric bill for disposal of effluent on the PVPOA golf course during the months of November, December, January and February of each year.

AGREEMENT

In consideration of the foregoing premises, and the benefits arising to both parties, and the mutual covenants and agreements of the parties herein contained, it is agreed as follows:

I.

Addition of New Paragraph 6.05 to the Contract

A new paragraph 6.05 is added to the Contract to read as follows:

6.05 Payment of Electric Bill for Irrigation. Unless and until this obligation is terminated pursuant to the provisions of this paragraph 6.05 the District will reimburse PVPOA for the amount of the electric bills incurred by PVPOA to irrigate the Property during the months of November, December, January and February of each year. On or before June 1 of any calendar year the District shall review the proposed payments during the following November, December, January and February and may decide to discontinue those payments. In that event, the District shall give notice

to the PVPOA that it will no longer be reimbursing the cost of the electric bills incurred by the PVPOA to irrigate the Property. The District shall give this notice in the manner required by Section 11 of the Contract, and the notice must be received by the PVPOA on or before June 30 of the year in which the notice is issued. When the notice has been given the District shall thereafter have no obligation to reimburse PVPOA for electric bills incurred to irrigate the Property

II.

Contract as Amended to Remain in Effect

As amended hereby the Contract shall continue in effect pursuant to its terms.

III.

Effective Date

The Effective Date of this First Amendment is set forth on the first page hereof.

IN WITNESS WHEREOF, PVPOA and the District have executed this contract in multiple copies, each with equal dignity.


TRAVIS COUNTY WATER CONTROL
AND IMPROVEMENT DISTRICT -
POINT VENTURE

By: 
President

ATTEST:


Secretary

POINT VENTURE PROPERTY OWNERS
ASSOCIATION, INC.,
a Texas non-profit corporation

By: , President

ACKNOWLEDGMENTS

THE STATE OF TEXAS

§

COUNTY OF TRAVIS

§

§

This instrument was acknowledged before me on September 20, 2008 by CAROLYN COOK as President of Travis County Water Control and Improvement District - Point Venture, on behalf of said District.

Chance Chatham
Notary Public, State of Texas

[SEAL]



Chance Chatham
Printed Name
My Commission Expires: 9-21-2010

THE STATE OF Texas

§

COUNTY OF TRAVIS

§

§

This instrument was acknowledged before me on September 29, 2008 by Jim Hawkins as President of Point Venture Property Owners Association, Inc. a Texas non-profit corporation, on behalf of said corporation.

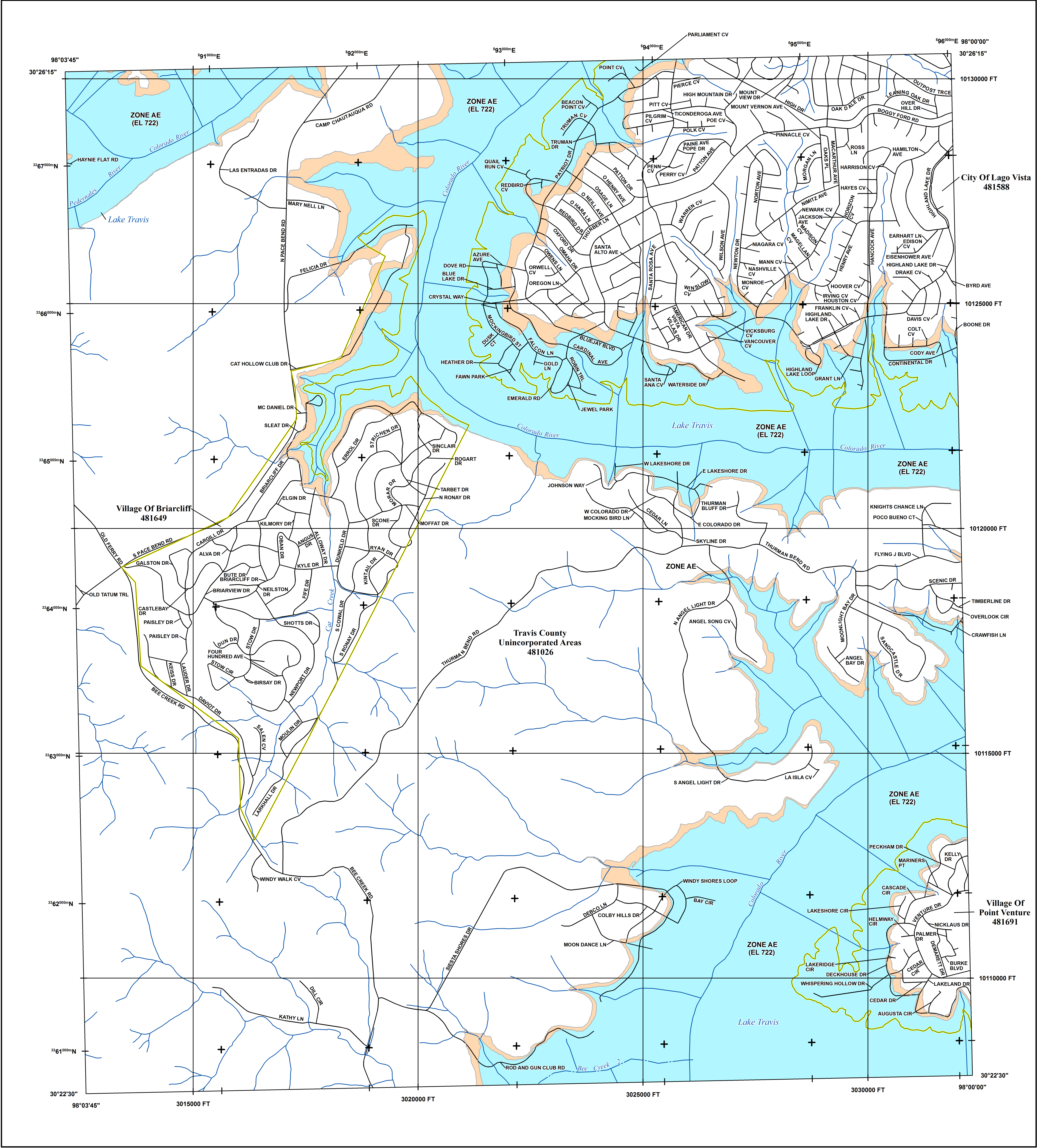
Chance Chatham
Notary Public, State of Texas

[SEAL]



Chance Chatham
Printed Name
My Commission Expires: 9-21-2010

ATTACHMENT G
FEMA FIRM MAPS



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT [HTTPS://MSC.FEMA.GOV](https://MSC.FEMA.GOV)

	Without Base Flood Elevation (BFE) Zone A,V, A99
	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway
	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee See Notes. Zone X
	Area with Flood Risk due to Levee Zone D
	NO SCREEN Area of Minimal Flood Hazard Zone X
	Area of Undetermined Flood Hazard Zone D
	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
	Cross Sections with 1% Annual Chance Water Surface Elevation
	Coastal Transect
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at <https://mfc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

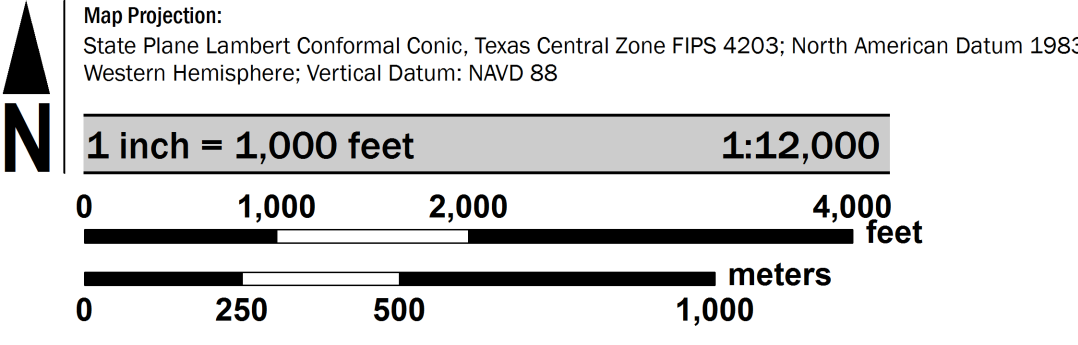
Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

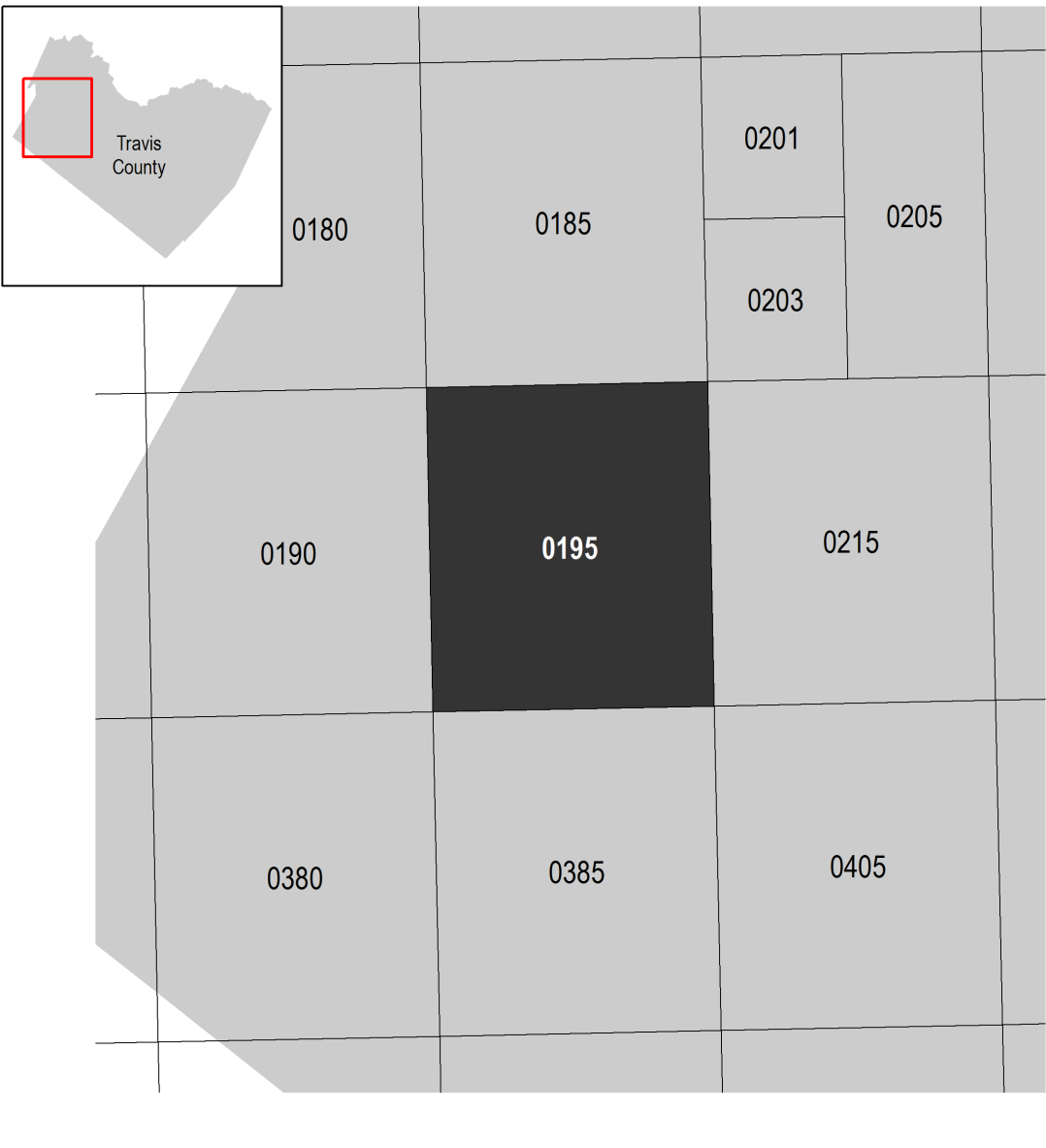
To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was derived from digital data obtained from City of Austin dated 2016, NFHL dated 2014, and CAPCOG dated 2014 and 2016.

SCALE



PANEL LOCATOR



National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

TRAVIS COUNTY, TEXAS
and Incorporated Areas

PANEL 195 OF 730

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
BRIARCLIFF, VILLAGE OF	481649	0195	J
LAGO VISTA, CITY OF	481588	0195	J
POINT VENTURE, VILLAGE OF	481691	0195	J
TRAVIS COUNTY	481026	0195	J

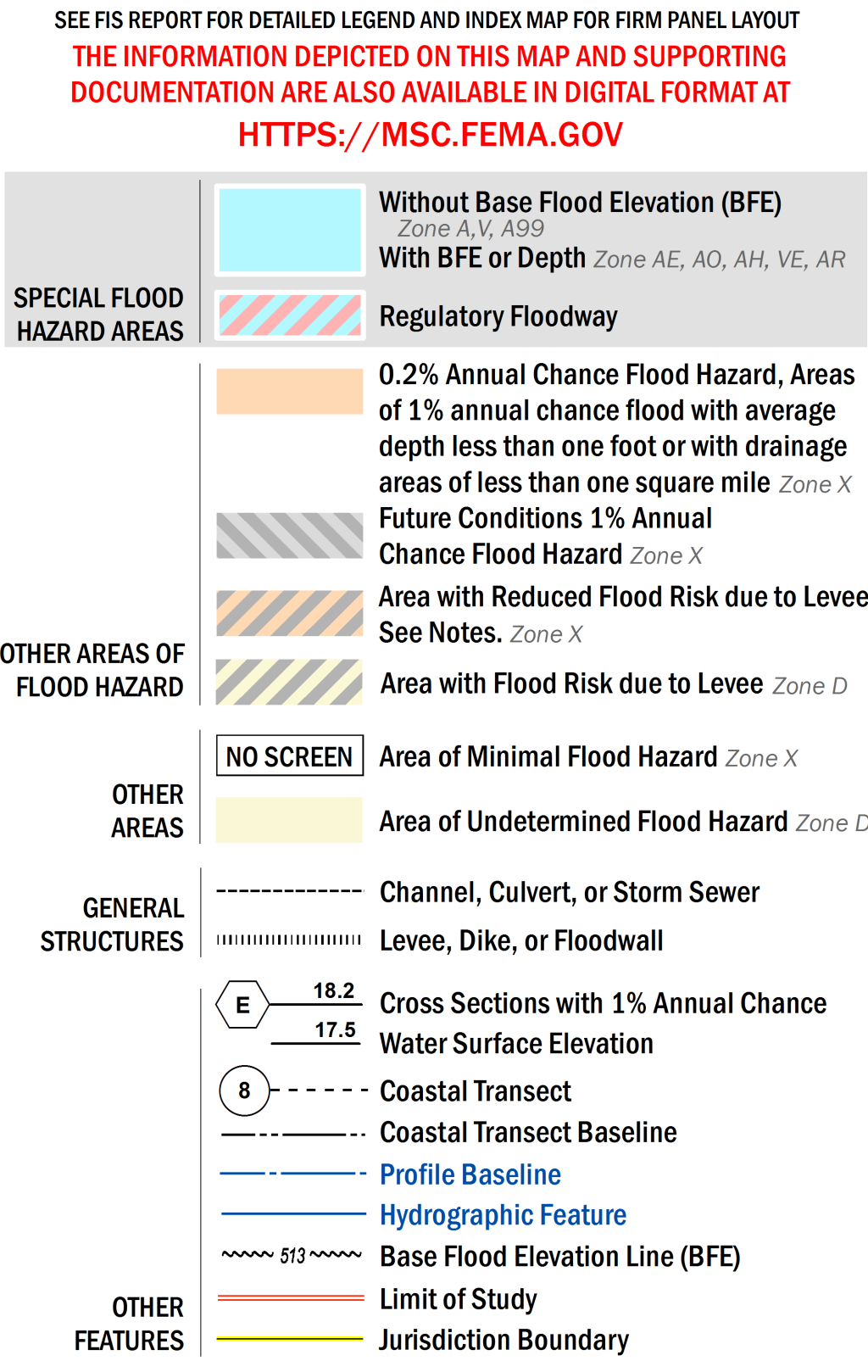
VERSION NUMBER
2.3.3.3

MAP NUMBER
48453C0195J

MAP REVISED
JANUARY 22, 2020



FLOOD HAZARD INFORMATION



NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at <https://mfc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

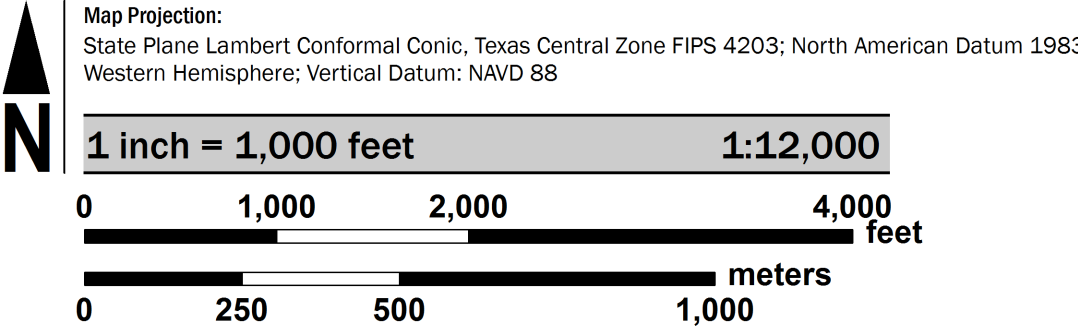
Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

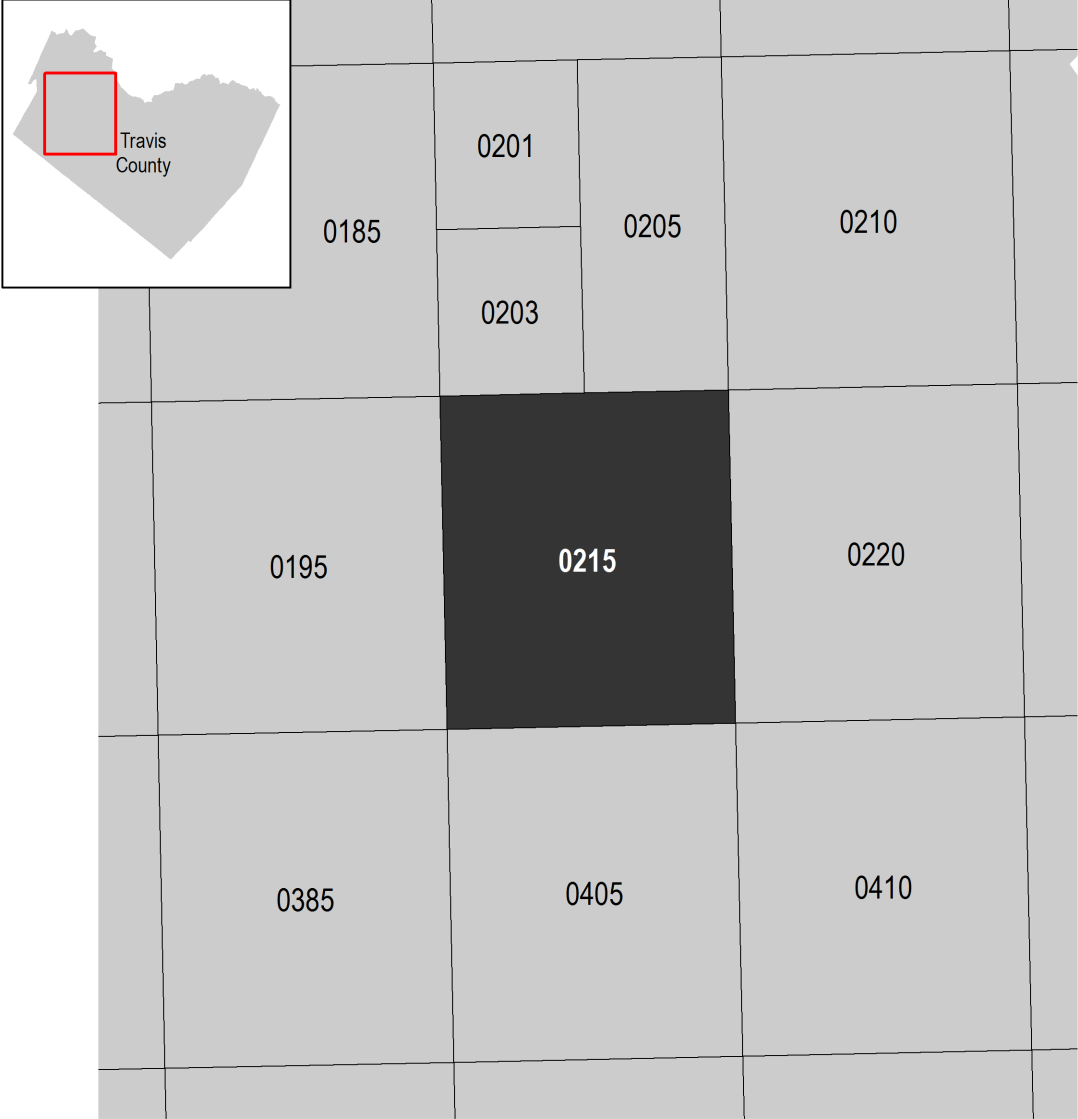
To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was derived from digital data obtained from City of Austin dated 2016, NFHL dated 2014, and CAPCOG dated 2014 and 2016.

SCALE



PANEL LOCATOR



National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

TRAVIS COUNTY, TEXAS
and Incorporated Areas

PANEL 215 OF 730

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
LAGO VISTA, CITY OF	481588	0215	J
LAKEWAY, CITY OF	481303	0215	J
POINT VENTURE, VILLAGE OF	481691	0215	J
TRAVIS COUNTY	481026	0215	J

VERSION NUMBER
2.3.3.3

MAP NUMBER
48453C0215J

MAP REVISED
JANUARY 22, 2020

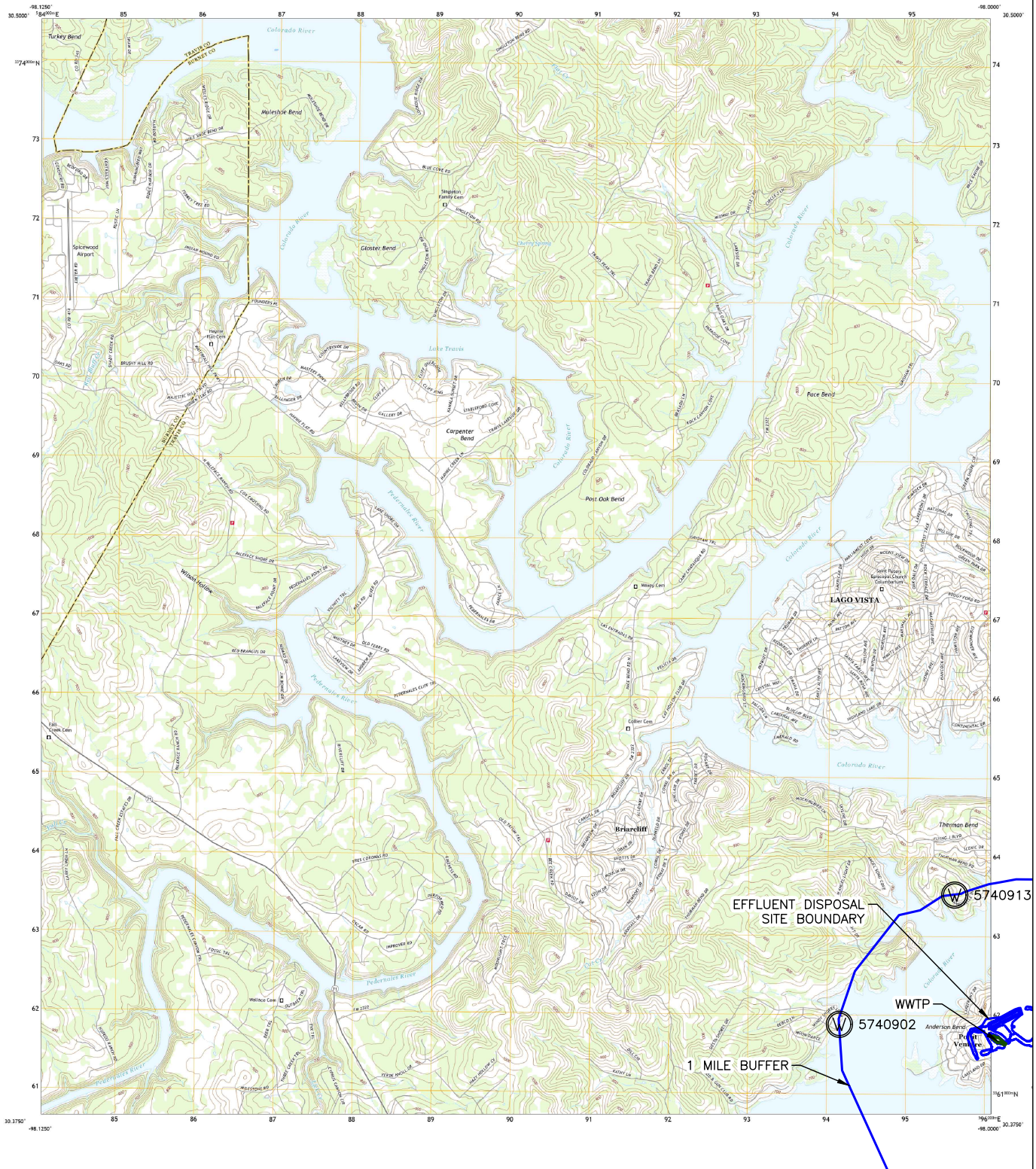
ATTACHMENT H
WELL AND MAP INFORMATION



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



PACE BEND QUADRANGLE
TEXAS
7.5-MINUTE SERIES



Texas Engineering Firm F-131
Texas Survey Firm 10194320
New Braunfels Austin
1672 Independence Dr Suite 315 5508 Highway 290 West Suite 201
New Braunfels, Texas 78132 Austin, Texas 78735
(P) 830/626.3588 (F) 830/626.3544 (P) 512/442.3008 (F) 512/448.7811
www.trihydro.com

ATTACHMENT H (SHEET 1 OF 4)

WELL AND MAP INFORMATION

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT POINT VENTURE

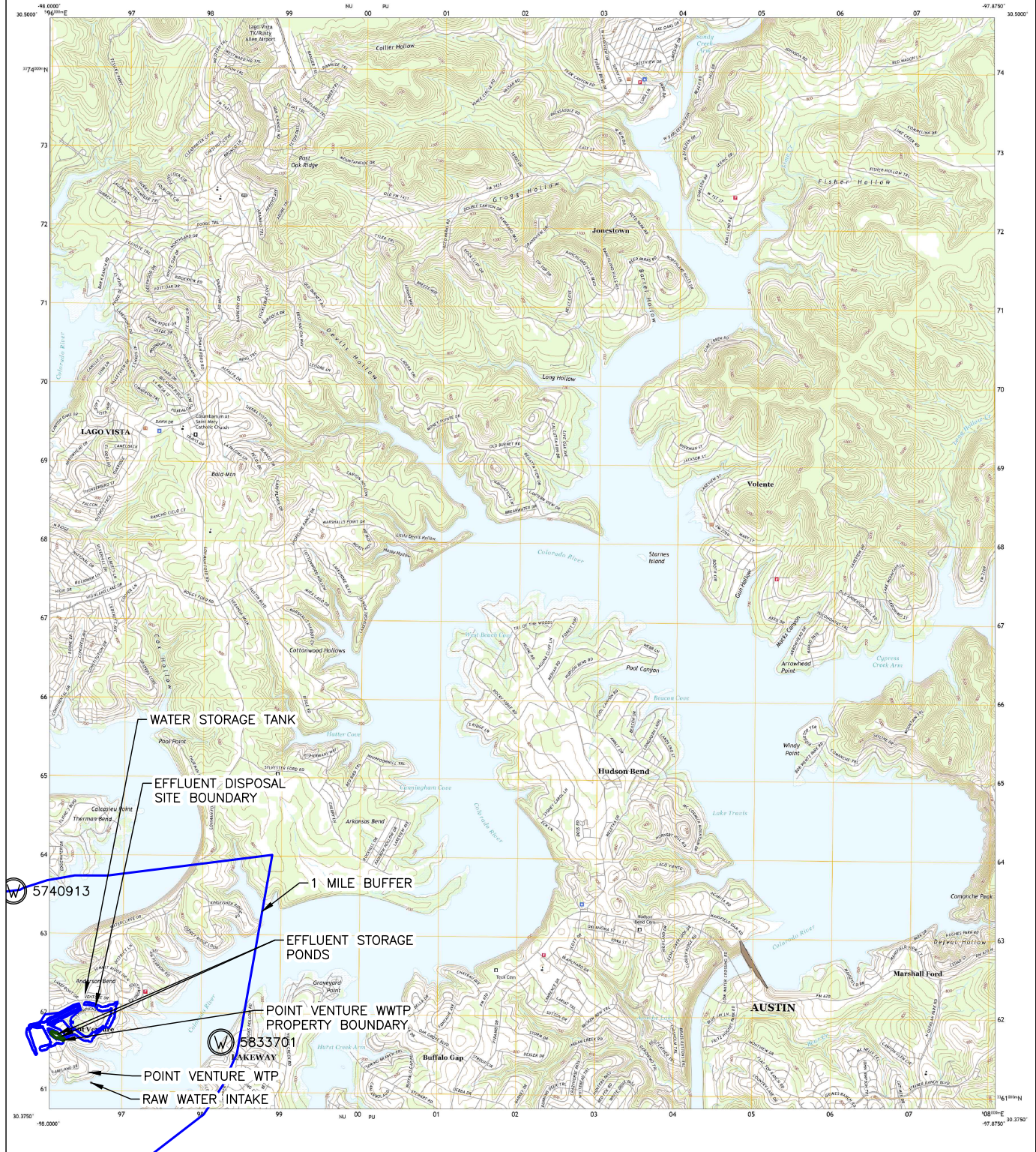
Drawn By: JDM Checked By: FG Scale: NTS Date: 5/29/2024



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



MANSFIELD DAM QUADRANGLE
TEXAS - TRAVIS COUNTY
7.5-MINUTE SERIES



Texas Engineering Firm F-131
Texas Survey Firm 10194320
New Braunfels Austin
1672 Independence Dr Suite 315 5508 Highway 290 West Suite 201
New Braunfels, Texas 78132 Austin, Texas 78735
(P) 830/626.3588 (F) 830/626.3544 (P) 512/442.3008 (F) 512/448.7811
www.trihydro.com

ATTACHMENT H (SHEET 2 OF 4)

WELL AND MAP INFORMATION

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT POINT VENTURE

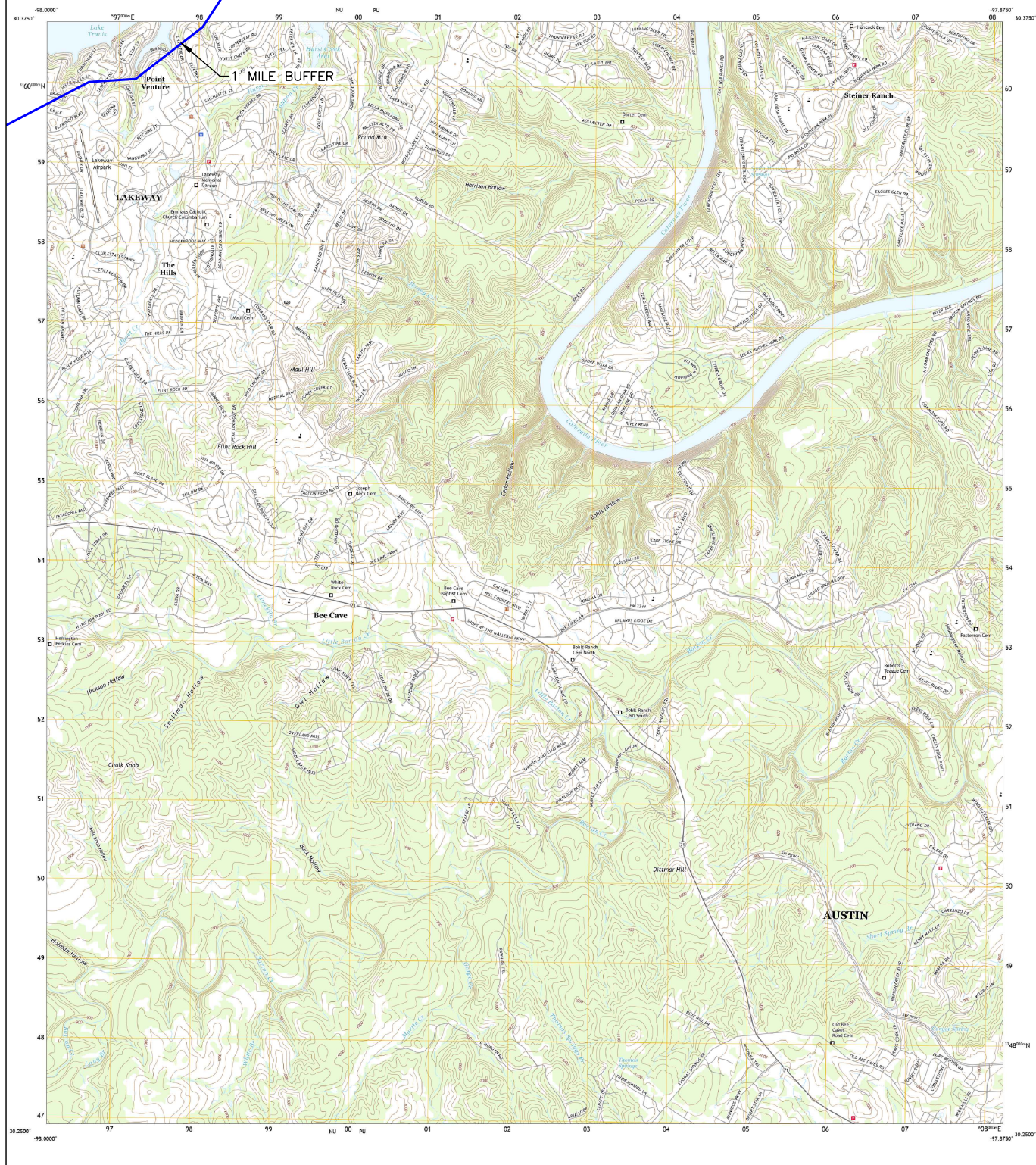
Drawn By: JDM	Checked By: FG	Scale: NTS	Date: 5/29/2024
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U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map
US Topo

BEE CAVE QUADRANGLE
TEXAS - TRAVIS COUNTY
7.5-MINUTE SERIES



Texas Engineering Firm F-131
Texas Survey Firm 10194320 Austin
1672 Independence Dr Suite 315 5508 Highway 290 West Suite 201
New Braunfels, Texas 78132 Austin, Texas 78735
(P) 830/626.3588 (F) 830/626.3544 (P) 512/442.3008 (F) 512/448.7811
www.trihydro.com

ATTACHMENT H (SHEET 3 OF 4)

WELL AND MAP INFORMATION

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT POINT VENTURE

Drawn By: JDM Checked By: FG Scale: NTS Date: 5/29/2024

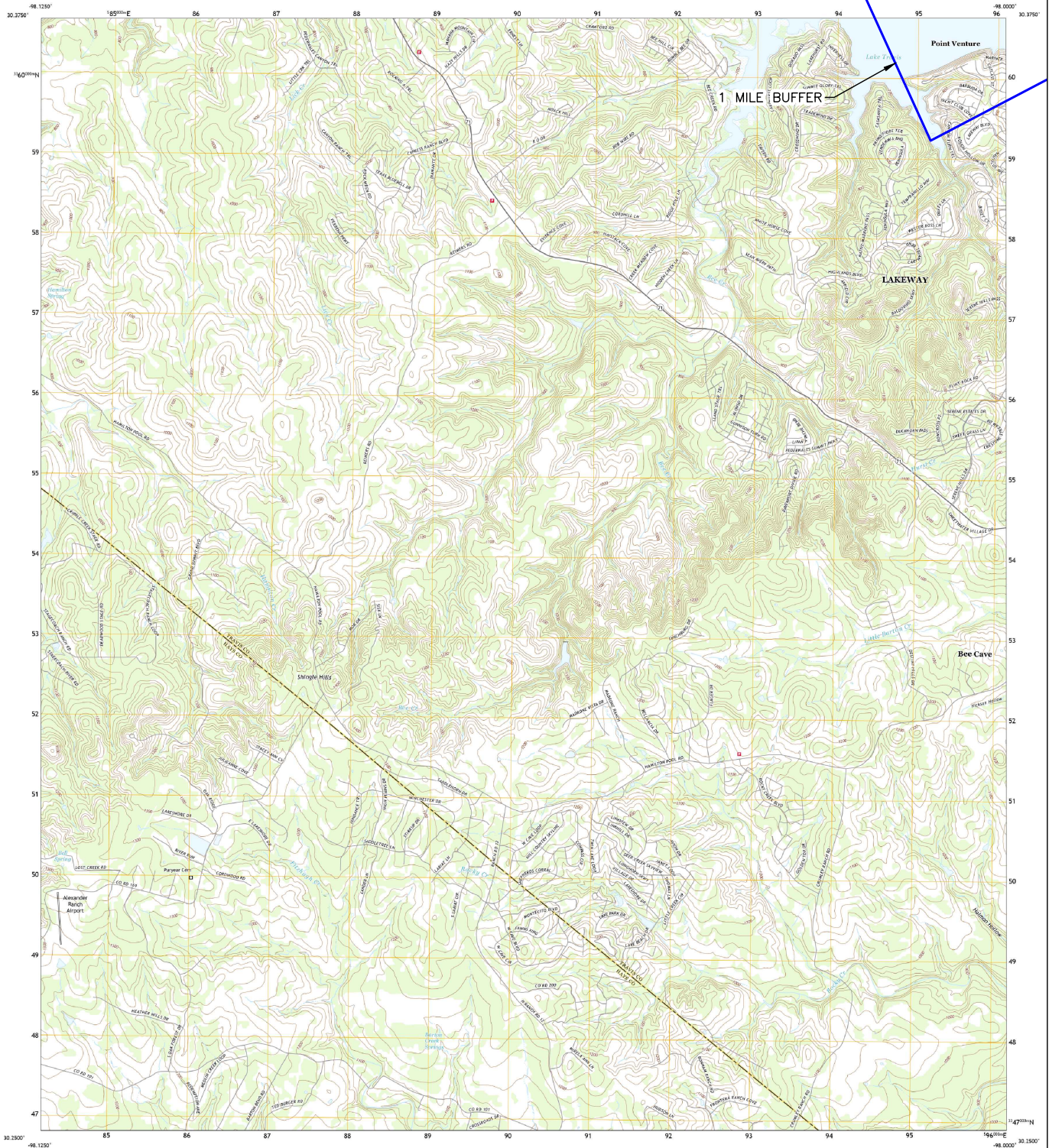


U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



5740902

SHINGLE HILLS QUADRANGLE
TEXAS
7.5-MINUTE SERIES



Texas Engineering Firm F-131
Texas Survey Firm 10194320 Austin
New Braunfels
1672 Independence Dr Suite 315 5508 Highway 290 West Suite 201
New Braunfels, Texas 78132 Austin, Texas 78735
(P) 830/626.3588 (F) 830/626.3544 (P) 512/442.3008 (F) 512/448.7811
www.trihydro.com

ATTACHMENT H (SHEET 4 OF 4)

WELL AND MAP INFORMATION

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT POINT VENTURE

Drawn By: JDM	Checked By: FG	Scale: NTS	Date: 5/29/2024
---------------	----------------	------------	-----------------

**Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number
57-40-902**

[GWDB Reports and Downloads](#)

Well Basic Details

[Scanned Documents](#)

State Well Number	5740902
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)	30.385556
Latitude (degrees minutes seconds)	30° 23' 08" N
Longitude (decimal degrees)	-98.02
Longitude (degrees minutes seconds)	098° 01' 12" W
Coordinate Source	+/- 5 Seconds
Aquifer Code	218GLRSL - Glen Rose Limestone, Lower Member
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	705
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	136
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	0/0/1970
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	No
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	O.L. Riffe
Driller	William Bonnett
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	10/21/1998
Last Update Date	3/4/2020

Remarks Reported yield 40 GPM with 0 feet drawdown after pumping 1 hour in 1970.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

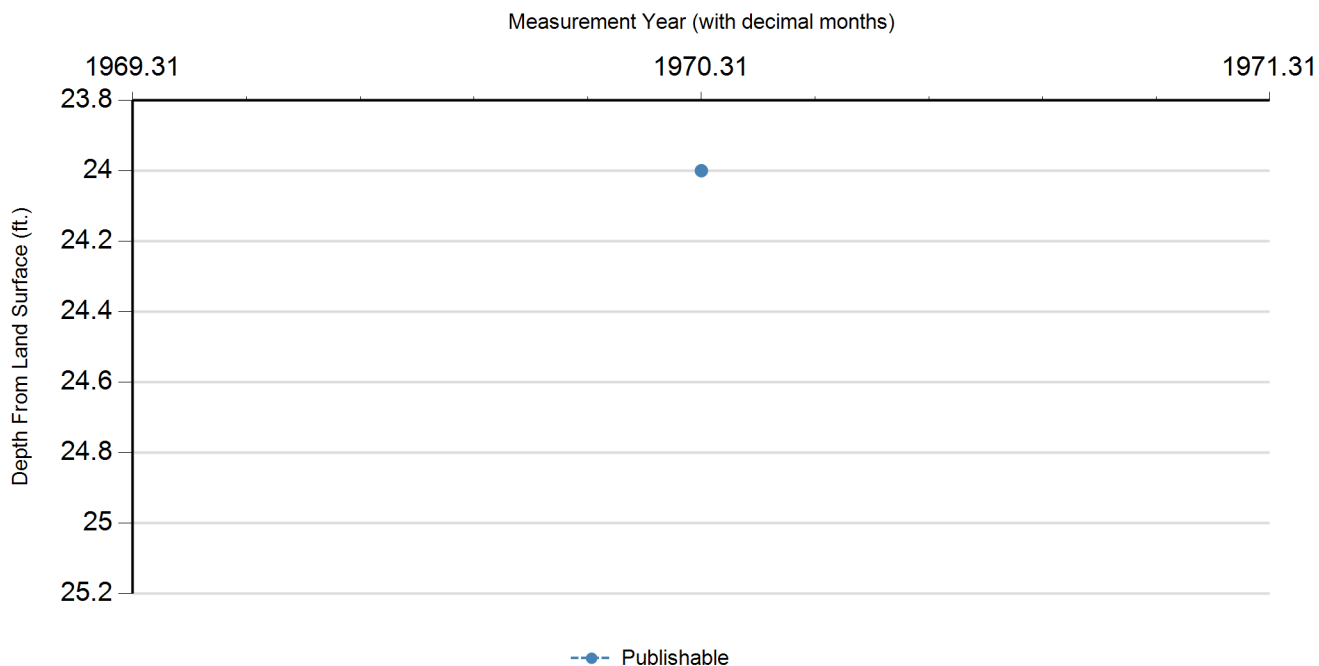
Borehole - No Data

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	4/22/1970		24		681	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis - No Data Available

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/gwdb rpt.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
57-40-913**

[GWDB Reports and Downloads](#)

Well Basic Details

[Scanned Documents](#)

State Well Number	5740913
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)	30.4000278
Latitude (degrees minutes seconds)	30° 24' 00.1" N
Longitude (decimal degrees)	-98.0044778
Longitude (degrees minutes seconds)	098° 00' 16.12" W
Coordinate Source	Global Positioning System - GPS
Aquifer Code	217HSTN - Hosston Formation
Aquifer	Trinity
Aquifer Pick Method	Provided by Groundwater Conservation District
Land Surface Elevation (feet above sea level)	778
Land Surface Elevation Method	Digital Elevation Model -DEM
Well Depth (feet below land surface)	460
Well Depth Source	Driller's Log
Drilling Start Date	9/9/2011
Drilling End Date	9/12/2011
Drilling Method	Air Hammer; Air Rotary
Borehole Completion	Screened

Well Type	Withdrawal of Water
Well Use	Irrigation
Water Level Observation	Miscellaneous Measurements
Water Quality Available	Yes
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	Poured
Surface Completion	Pitless Adapter Used
Owner	Davis Nicol
Driller	Bee Cave Drilling
Other Data Available	Drillers Log; Specific Capacity
Well Report Tracking Number	272610
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	Groundwater Conservation District
Created Date	11/8/2018
Last Update Date	3/4/2020

Remarks	Specific capacity: 0.36 GPM/ft.
---------	---------------------------------

Casing						
Diameter (in.)	Casing Type	Casing Material	Schedule	Gauge	Top Depth (ft.)	Bottom Depth (ft.)
4.5	Blank	Plastic (PVC)			0	420
4.5	Screen	Plastic (PVC)		0.05	420	460

Well Tests				
Test Date	Test Type	Yield (gallons per minute)	Drawdown (ft.)	Test Hours
9/12/2011	Jetted	20		
11/6/2018	measured	20	55.11	0.4

Lithology

Top Depth (ft.)	Bottom Depth (ft.)	Description
0	2	Topsoil
2	15	Caliche
15	20	White limestone
20	55	Tan limestone
55	80	Grey limestone
80	95	Tan limestone
95	100	Grey limestone with clay
100	195	Grey limestone
195	215	White limestone 1st H2O 5 gpm 800 TDS
215	245	Grey limestone
245	255	White rock 2nd H2O 20 gpm 500 TDS
255	290	Grey limestone
290	315	Blue shale
315	340	Grey / red shale
340	355	Grey rock
355	360	Red clay
360	400	Red sandstone
400	415	Red clay
415	460	Red rock 3rd H2O 20 gpm 1,000 TDS

Annular Seal Range

Annular Seal Material	Amount	Unit	Top Depth (ft.)	Bottom Depth (ft.)
Concrete	10	Bags/Sacks	1	20

Borehole

Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
10	0	10
6.75	10	460

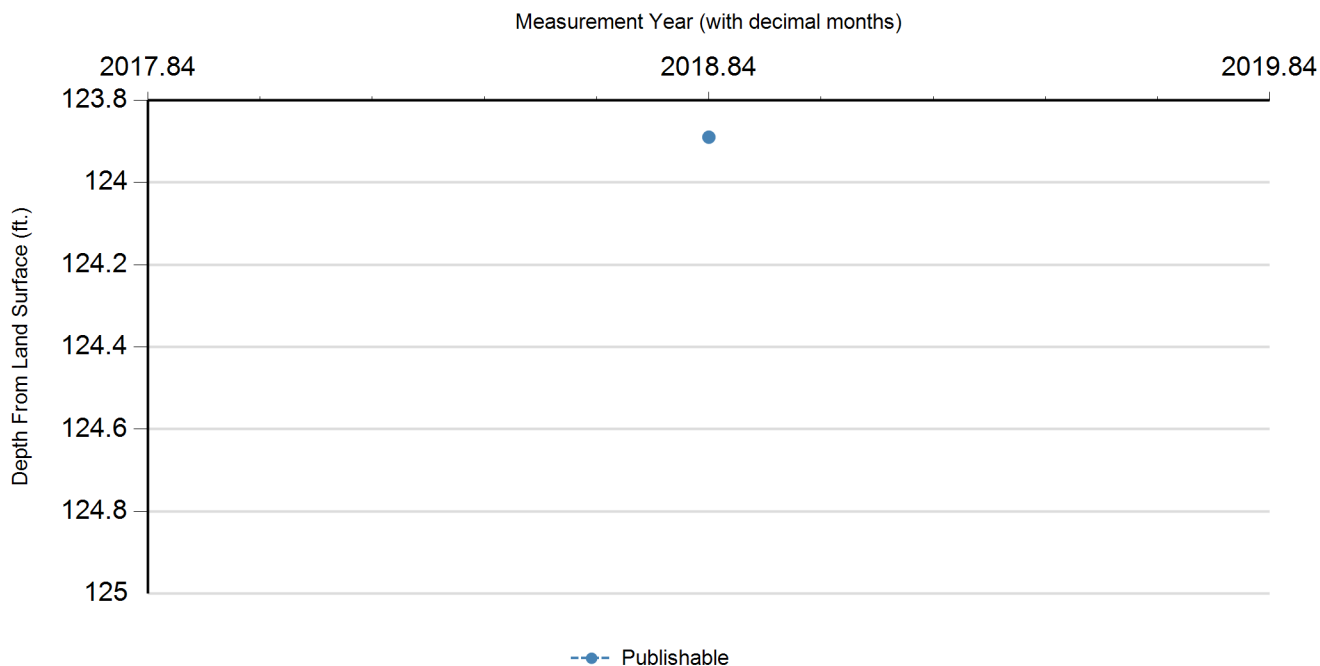
Plugged Back - No Data

Filter Pack - No Data

Packers

Packer Type	Depth (ft.)
Plastic	20
Plastic	150
Plastic	415

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	11/6/2018		123.89		654.11	1	Groundwater Conservation District	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis

Sample Date: 11/6/2018 **Sample Time:** 1551 **Sample Number:** 1 **Collection Entity:** Barton Springs/Edwards Aquifer CD

Sampled Aquifer: Hosston Formation

Analyzed Lab: LCRA - Lower Colorado River Authority

Reliability: Sampled using TWDB protocols

Collection Remarks: Lab Calculated Anion/Cation Chg Bal set to TWDB Calculated Value due to an error in the lab calculated formula

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00425	ALKALINITY, BICARBONATE DISSOLVED (MG/L), LAB		293	mg/L	
00430	ALKALINITY, CARBONATE DISSOLVED (MG/L), LAB		0	mg/L	
00420	ALKALINITY, HYDROXIDE DISSOLVED (MG/L), LAB		0	mg/L	
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CaCO ₃)		293	mg/L as CaCO ₃	
01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	5	ug/L	
50938	ANION/CATION CHG BAL, PERCENT		-0.319	PCT	
01095	ANTIMONY, DISSOLVED (UG/L AS SB)	<	1	ug/L	
01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	1	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		50.6	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO ₃)		357.561	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)		90.6	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.648	mg/L	
01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	1	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		53.6	mg/L	
28004	CARBON-14 DISS APPARENT AGE (YEARS BP)		4340	Y-BP	
82172	CARBON-14 FRACTION MODERN		0.5826		0.0021
00445	CARBONATE ION, CALCULATED (MG/L AS CO ₃)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		27.6	mg/L	
01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	1	ug/L	
01035	COBALT, DISSOLVED (UG/L AS CO)	<	1	ug/L	
01040	COPPER, DISSOLVED (UG/L AS CU)	<	1	ug/L	
82081	DELTA CARBON 13 C13/C12 PER MIL		-7.8	0/00	
50791	DEUTERIUM, EXPRESSED AS PERMIL VSMOW		-21.6	0/00	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.658	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CaCO ₃)		296.503	mg/L as CaCO ₃	
01046	IRON, DISSOLVED (UG/L AS FE)		983	ug/L	
01049	LEAD, DISSOLVED (UG/L AS PB)	<	1	ug/L	
01130	LITHIUM, DISSOLVED (UG/L AS LI)		6.88	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		37.1	mg/L	
01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	1	ug/L	

**Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number
57-40-913**

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	ug/L	
01060	MOLYBDENUM, DISSOLVED (UG/L AS MO)		6.33	ug/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		0.151	mg/L as NO3	
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		0.0341	mg/L as N	
50790	OXYGEN-18, EXPRESSED AS PERMIL VSMOW		-3.47	0/00	
00666	PHOSPHORUS, DISSOLVED (MG/L AS P)	<	0.02	mg/L as P	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		2.72	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0.133		
01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	5	ug/L	
00955	SILICA, DISSOLVED (MG/L AS SiO2)		14.6	mg/L as SiO2	
01075	SILVER, DISSOLVED (UG/L AS AG)	<	1	ug/L	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.509		
00932	SODIUM, CALCULATED, PERCENT		13.072	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		19.8	mg/L	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		8620	ug/L	
48297	STRONTIUM, ISOTOPE OF MASS 86 AND 87 RATIO		0.708302	N/A	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		10.7	mg/L as SO4	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		351.362	mg/L	
07012	TRITIUM IN WATER (TRITIUM UNITS)		0.78	TU	0.09
22703	URANIUM, NATURAL, DISSOLVED (UG/L AS U)	<	1	ug/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)	<	1	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)	<	5	ug/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/gwdb rpt.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.

[GWDB Reports and Downloads](#)
[Well Basic Details](#)
[Scanned Documents](#)

State Well Number	5833701
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)	30.382222
Latitude (degrees minutes seconds)	30° 22' 56" N
Longitude (decimal degrees)	-97.9775
Longitude (degrees minutes seconds)	097° 58' 39" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	681
Land Surface Elevation Method	Digital Elevation Model -DEM
Well Depth (feet below land surface)	100
Well Depth Source	Unknown
Drilling Start Date	
Drilling End Date	0/0/1936
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	
Water Level Observation	None
Water Quality Available	No
Pump	
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	U.S. Bureau of Reclamation
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	3/4/2020

Remarks Foundation test for dam. Well C-66 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 - No Data Available

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ATTACHMENT I
ANNUAL CROPPING PLAN

ATTACHMENT I – ANNUAL CROPPING PLAN

1.0 – Nitrogen Balance

In the Final Phase of the permit the proposed drip irrigation system disposes a maximum average flow rate of 67,800 gallons per day (gpd) of treated wastewater effluent, at a maximum application rate of 0.10 gpd per square foot. The treated wastewater effluent is generated by the Point Venture Wastewater Treatment Plant. A possible limiting factor on irrigation rates is the nitrogen application rate. The nitrogen applied from the effluent shall not be greater than the amount that can be taken up and removed by vegetation, so that excess nitrogen does not leach into the ground water system or surface waters.

According to 30 TAC Section 222.83, the allowable annual hydraulic loading rate based on nitrogen limits is given by the following equation:

$$Lw(n) = [(Cp)(Pr-ET) + (U)(4.4)] / [(1-f)(Cn) - Cp]$$

$Lw(n)$ = allowable annual hydraulic loading rate based upon nitrogen limits in inches per year

Cp = total nitrogen concentration in soil solution in milligrams per liter

Nitrogen concentration of soil solution is equal to 9.0 mg/L

Pr = precipitation rate in inches per year

Average precipitation for Austin, over 25-year period of 1988-2012, according to NOAA average precipitation at Austin Bergstrom Airport, Austin, TX and is equal to 33.21 in/yr

ET = evapotranspiration rate in inches per year

Average evapotranspiration rate, calculated using Blaney-Criddle method as described in FAO's "Irrigation Water Management" paper, was calculated to be 63.56 in/yr

U = nitrogen uptake by crop in pounds per acre per year

Average nitrogen uptake for Bermuda Grass, according to Process Design Manual for Land Treatment of Municipal Wastewater, U.S. Environmental Protection, October 1981, is equal to 200 kg/ha/yr or 178 lb/acre/yr

4.4 = combined conversion factor

Cn = total nitrogen concentration in wastewater at time of application to land in milligrams per liter

Proposed effluent maximum permitted concentration equal to 5.0 mg/L

f = fraction of applied nitrogen removed by denitrification and volatilization and assumed to be 0.20

The above equation gives an allowable hydraulic loading rate, based on nitrogen limits, of 102.01 in/yr. The existing hydraulic application rate is 58.56 in/yr. Therefore, the anticipated nitrogen loading is less than what can be used through crop uptake, and nitrogen loading is not a controlling factor in the hydraulic loading rate.

2.0 – Annual Cropping Plan

The proposed drip irrigation site is predominantly occupied by Bermuda grass. A relatively small number of other native trees and shrubs are also present.

Bermuda grass has a typical growing season lasting from March through October. It will go dormant following the first frost and remain dormant until Spring. Winter Rye has a typical growing season lasting from October through February. Bermuda grass has a maximum height of 15 to 18 inches, and Winter Rye has a maximum height of approximately 12 inches.

As discussed further in Section 1.0 – Nitrogen Balance, the average nitrogen uptake for Bermuda grass is equal to 178 lb/acre/yr. An allowable hydraulic loading rate of 102.01 in/yr, based on nitrogen limits, was established for this system. The existing hydraulic loading rate is 58.56 in/yr. Therefore, the amount of nitrogen applied does not exceed the amount that can be removed by crop uptake. No additional fertilizer is proposed to be applied to the site. No supplemental watering is proposed for this site.

The crop salt tolerances were taken from Table 3 of 30 TAC Section 309.20. Bermuda grass is listed as Highly Salt Tolerant, with a maximum electrical conductivity of 8.0 – 12.0 millimhos/cm at 25 degrees Celsius. Winter Rye is listed as Relatively Salt Tolerant with a maximum electrical conductivity of 6.0 – 8.0 millimhos/cm at 25 degrees Celsius.

ATTACHMENT J
SOIL MAPS

Soil Map—Travis County, Texas (IrrigationBoundary)



Map Scale: 1:6,000 if printed on A landscape (11" x 8.5") sheet.

0 50 100 200 300 Meters

0 250 500 1000 1500 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

5/29/2024
Page 1 of 3

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	20.9	39.4%
DeC	Denton silty clay, 3 to 5 percent slopes	5.3	9.9%
TaD	Eckrant very stony clay, 5 to 18 percent slopes	26.9	50.7%
Totals for Area of Interest		53.1	100.0%

USDA DESIGNATED SOIL SERIES ON LAND APPLICATION AREAS

POINT VENTURE WASTEWATER TREATMENT PLANT

Soil Series	Constituents	Depth from Surface (inches)	K _{sat} (in/hr)	Available Water (inches)	Hydrologic Soil Group
BID Brackett Soils (1-12% Slope)	Gravel Clay Loam	0 -6	0.06 - 1.98	2.4	D
	Clay Loam	6-18			
	Interbedded Soft Limestone and Marl	18-48			
TaD Tarrant Soils	Clay	0 – 8	0.06 – 0.57	0.6	D
	Limestone	8 - 12			
DeC Denton Silty Clay (3-5% Slope)	Silty Clay	0 - 20	0.06 – 0.20	5.3	D
	Silty Clay	20 - 35			
	Limestone	35 - 40			

Dispersal Area

Existing Spray Irrigation

Proposed Drip Irrigation

Soil Type Present

BID, TaD, DeC

BID, TaD, DeC

**ATTACHMENT K
LINER CERTIFICATION**



October 16, 2024

Texas Commission on Environmental Quality
Water Quality Division MC-150
P.O. Box 13087
Austin, TX 78711-3087

RE: Liner Certification

To TCEQ:

Trihydro Corporation (Trihydro) performed a visual inspection of the two existing effluent storage ponds, located at the wastewater treatment plant (WWTP) site, on October 2, 2024. The upper pond (Pond No. 1) has a soil liner, and the lower pond (Pond No. 2) has a high density polyethylene (HDPE) liner with a thickness of 40 mils and incorporates an underdrain leak detection system and inspection manhole. The ponds meet the requirements of 30 TAC 309 and 317 at the time when they were constructed. Please see Attachments K1 and K2 for the August 1994 Effluent Holding Pond Improvements Engineer's Report and January 1995 Change Order No. 1, respectively, for reference.

Sincerely,
Trihydro Corporation

Submitted By:

A handwritten signature in green ink, reading "David Alexander Vargas".

David Alexander Vargas, P.E.
Project Manager
Trihydro Corporation

TRAVI-024-003

Attachments



ATTACHMENT K1

AUGUST 1994 EFFLUENT HOLDING POND IMPROVEMENTS ENGINEER'S REPORT

ENGINEER'S REPORT

TRAVIS COUNTY W.C.I.D. - POINT VENTURE
EFFLUENT HOLDING POND IMPROVEMENTS

PERMIT TO DISPOSE OF WASTE
TNRCC Permit No. 11385-01
Travis County, Texas

Submitted To:

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
WATERSHED MANAGEMENT DIVISION
P. O. BOX 13087, CAPITAL STATION
AUSTIN, TEXAS 78711-3087

Prepared For:

TRAVIS COUNTY W.C.I.D.- POINT VENTURE
LEANDER, TEXAS 78641

Prepared By:

T. E. HAYNIE AND ASSOCIATES
CONSULTING ENGINEERS

1101 Capital Of Texas Highway South
Building H, Suite 101-A
Austin, Texas 78746
(512) 328-2812



EFFLUENT HOLDING POND IMPROVEMENTS

TRAVIS COUNTY W.C.I.D. - POINT VENTURE

GENERAL INFORMATION

The District owns and operates a wastewater treatment plant which services an area known as Point Venture. There were two wastewater treatment plants originally. Treatment Plant #1 has been abandoned. Treatment Plant #2 is in use.

The District's original permit was issued in 1973 and it was amended in 1989. The current permit will expire in October 1999. The plant is permitted for 70,000 gallons per day (gpd). The average flow is about one-half of the permitted amount. A copy of the permit is attached.

EXISTING WASTEWATER TREATMENT PLANT #2

The plant uses the activated sludge process, which uses a bar screen, aeration basin, clarifier, aerobic digester, and chlorine contact chamber. Effluent is routed to existing holding ponds and disposed on the Point Venture Golf Course.

A drawing of the Treatment Plant #2 layout is attached.

LOCATION OF WASTEWATER TREATMENT PLANT #2

Treatment Plant #2 is located roughly 6.5 miles south of the intersection of FM 1431 and Lohmans Crossing Road in Travis County, Texas. The plant site lies adjacent to Venture Boulevard in the Point Venture Development, between the first and second holes of the golf course.

A vicinity map which shows the project site is attached. The treatment plant and irrigated land are located in the drainage area of Lake Travis, Colorado River Basin.

DISCHARGE PERMIT NO. 11385-01

The District's permit is a no-discharge permit. Effluent disposal is through irrigation on the nine-hole golf course.

PROPOSED POND IMPROVEMENTS

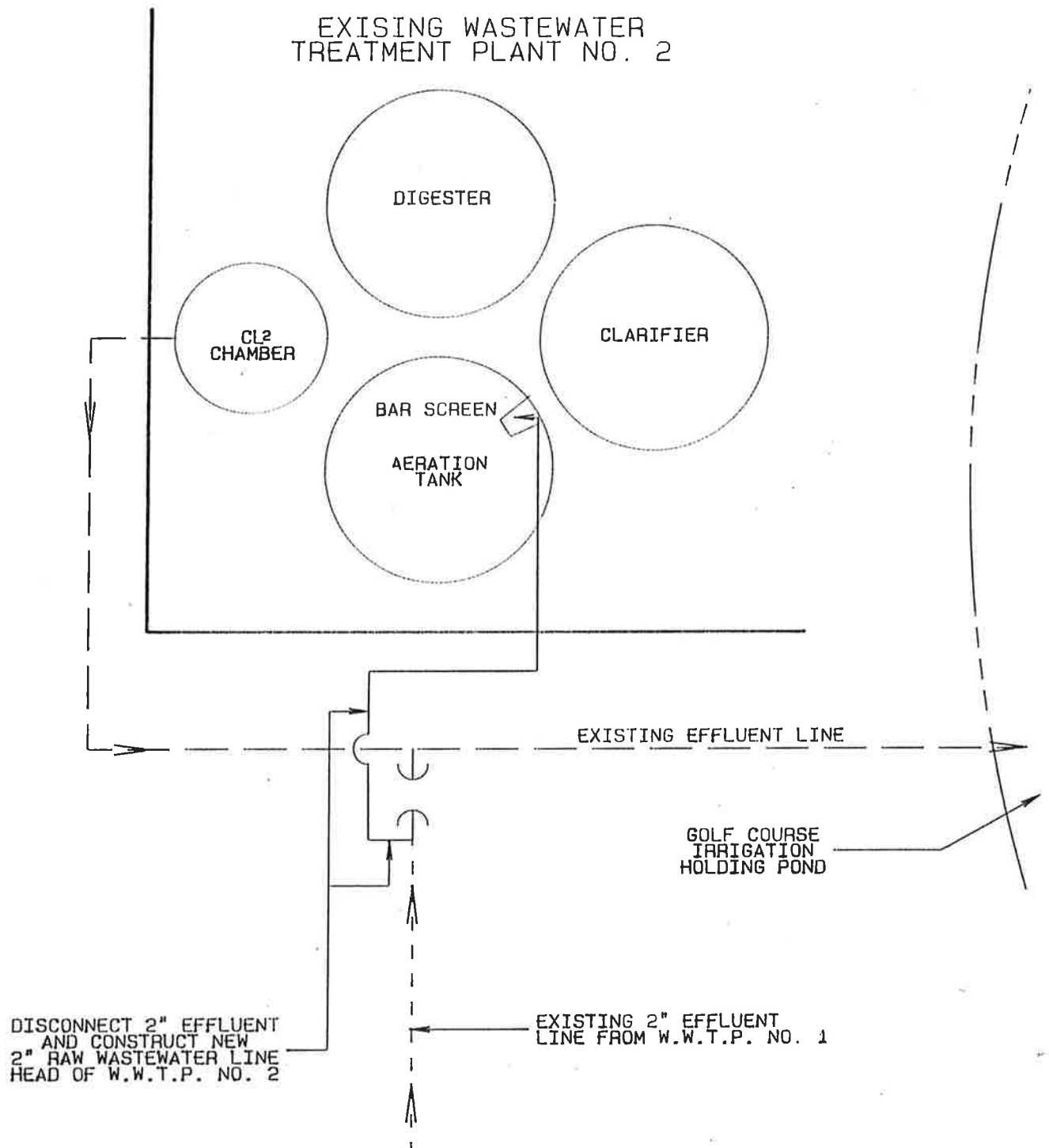
Due to sloping terrain, there are two existing effluent ponds. The upper pond will remain unchanged, and the lower pond will be improved. The proposed improvements will clean, reshape and line the lower pond.

The existing lower pond has a capacity of approximately 400,000 gallons. The improved pond will have a capacity of approximately 900,000 gallons. Based on an average flow rate of 35,000 gpd, the new pond will have a detention time of 25 days.

The improvements will include the installation of an underdrain system and inspection manhole. The lining will be a 36 mil. fabric-reinforced hypalon liner with a 120 mil. polyester, non-woven, geotextile fabric underlayer. Hypalon product literature is attached with this report.

Erosion controls during construction primarily will be the installation of silt fencing. The outside embankment slopes will include soil retention blanket covering. The work will be done during the winter months, which will interfere the least with golf course irrigation demands.

TRAVIS COUNTY W.C. & I.D. - POINT VENTURE
WASTEWATER TREATMENT PLANT NO. 2



TO ROUND ROCK

TO MARBLE FALLS

PROJECT
SITE

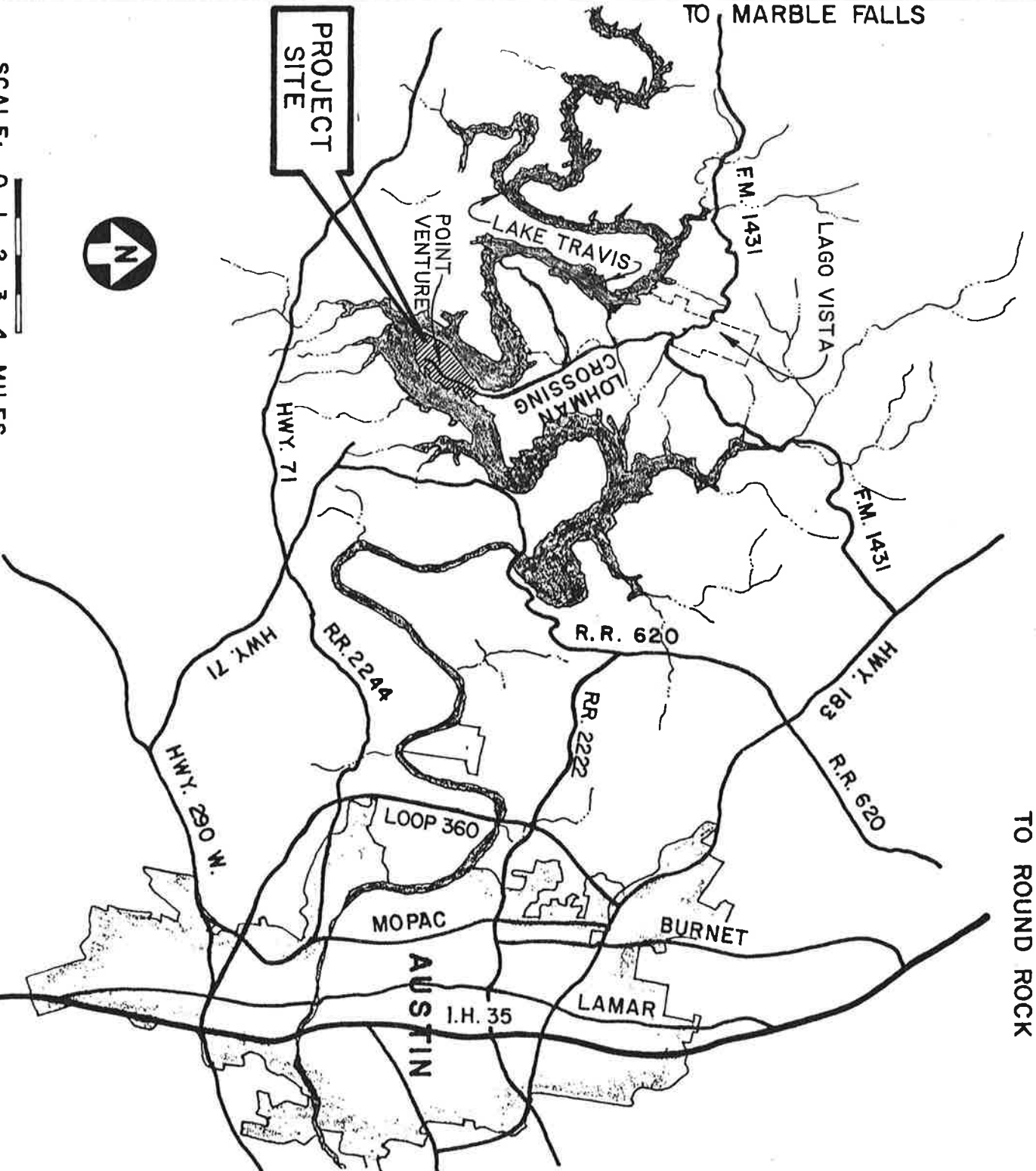


SCALE: 0 1 2 3 4 MILES

TO SAN MARCOS

1

VICINITY MAP





PERMIT NO. 11385-01

TEXAS WATER COMMISSION
Stephen F. Austin State Office Building
Austin, Texas

This minor amendment
supersedes and replaces
Permit Number 11385-01
approved on issued on
January 24, 1973, and
is reissued pursuant
to 31 TAC 305.96(b).

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

I. Name of Permittee:

A. Name

Travis County Water Control and
Improvement District - Point Venture

B. Address

Post Office Box 270 - Venture Boulevard
Leander, Texas 78641

II. Type of Permit: Regular _____ Amended XXX

III. Nature of Business Producing Waste: Domestic Subdivision

IV. General Description and Location of Waste Disposal System:

Description: The facility implements the complete mix mode of the activated sludge process. The process utilizes a bar screen, aeration basin, clarifier, aerobic digester, and a chlorine contact chamber. The effluent is routed to holding ponds. The effluent is disposed on the Point Venture Golf Course.

Location: The plant site (i.e. Plant Number 2) and the irrigated site (i.e. Point Venture Golf Course) are located approximately 6.5 miles south of the intersection, that is within the Village of Lago Vista, of Farm-to-Market Road 1431 and Lohmans Crossing Road in Travis County, Texas. The treatment plant is adjacent to Venture Boulevard in the Point Venture Development, between the 1st and 2nd holes of the golf course.

This permit and the authorization contained herein shall expire at midnight, ten years after the date of Commission approval.

APPROVED, ISSUED, AND EFFECTIVE this 17th day of October,
1989.

ATTEST:

Brenda W. [Signature] [Signature]
For the Commission

- V. Conditions of the Permit: No discharge of pollutants to surface water in the State is authorized.

Character: Treated Domestic Sewage Effluent

Volume: 30-day Average - 0.070 MGD from the treatment system

Quality: The following degree of treatment shall be required:

A. Parameter	Effluent Concentrations (Not to Exceed)
	Single Grab
BOD5, mg/l	30
TSS, mg/l	30

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

B. Monitoring Requirements:

Parameter	Monitoring Frequency	Sample Type
Flow, MGD	Five/week	Instantaneous
BOD5, mg/l	One/month	Grab
pH	One/month	Grab
Chlorine, mg/l	One/month	Grab

The monitoring shall be done after the final treatment unit and prior to irrigation. 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.

Drainage Area: The plant site and irrigated land are located in the drainage area of Lake Travis, Segment Number 1404, Colorado River Basin.

VI. SPECIAL PROVISIONS:

1. 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.

2. Irrigation practices shall be designed and managed so as to prevent ponding of effluent or contamination of ground and surface waters and to prevent the occurrence of nuisance conditions in the area. Tail-water control facilities shall be provided to prevent the discharge of any wastewater from the irrigated land.
3. 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.
4. These public sewerage facilities shall be operated and maintained by a sewage plant operator holding a valid certificate of competency issued pursuant to state law.
5. The sludge from the treatment process shall be disposed of in accordance with all the applicable rules of the Texas Department of Health. The permittee shall ensure that the disposal of sludge does not cause any contamination of the ground or surface waters in the State. The permittee shall keep records of all sludges removed from the wastewater treatment plant site. Such records will include the following information:
 - a. Volume of sludge disposed
 - b. Date of disposal
 - c. Identity of hauler
 - d. Location of disposal site
 - e. Method of final disposal

The above 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.

6. Application rates for the irrigated land shall not exceed 2.7 acre-feet/acre/year. The permittee is responsible for providing equipment to determine application rates and maintaining accurate records of the volume of effluent applied as irrigation water. These records shall be made available for review by the Texas Water Commission and shall be maintained for at least three years.

7. All irrigation practices shall receive approval from the Texas Water Commission.
8. Holding ponds shall conform to the Texas Water Commission "Design Criteria for Sewerage Systems" requirements for stabilization ponds with regard to construction and levee design, and a minimum of 2 feet of freeboard shall be maintained.
9. The plans and specifications for the waste collection and treatment works and disposal system authorized by this permit must be approved pursuant to state law, and failure to secure approval before commencing construction of such works or making a discharge therefrom is a violation of this permit, and each day of discharge is an additional violation until approval has been secured.
10. An annual representative soil sample from the root zone of the irrigated site shall be required. Sampling procedures shall employ accepted techniques of soil science for obtaining representative analytical results. Analysis shall be performed for pH, total nitrogen, potassium, phosphorus and conductivity. The Permittee shall submit the result of the soil samples to Austin Office, Water Quality Division, Enforcement Section and the District Office of the Commission during September of each year.
11. The permittee shall maintain a long term contract with the owner(s) of any irrigated land which is authorized for use in this permit, or own the land authorized for irrigation.
12. 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. A trace chlorine residual shall be maintained in the effluent at the point of irrigation application.
13. Adequate signs shall be erected stating that the irrigation water is from a non-potable water supply. Said 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.
14. Spray fixtures for the irrigation system shall be of such design that they cannot be operated by unauthorized personnel.
15. Irrigation with effluent shall be accomplished only when the area specified is not in use.
16. Permanent transmission lines shall be installed from the holding pond to each tract of land to be irrigated utilizing effluent from that pond.

VII. STANDARD PROVISIONS:

1. 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.
- 2.a. The permittee shall report any noncompliance to the Executive Director (attention: Water Quality Division, Enforcement Section) which may endanger human health or safety, or the environment. Report of such information shall be provided orally within 24 hours from the time the permittee becomes aware of the noncompliance. A written submission of such information shall also be provided within five (5) working days of the time the permittee becomes 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 anticipated 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. Any noncompliance which is 40% over the permitted effluent limitations shall be reported orally within 24 hours and in writing to the District Office within five (5) working days of becoming aware of the condition.
3. Acceptance of this permit constitutes an acknowledgement and agreement that the permittee will comply with all the terms, provisions, conditions, limitations and restrictions embodied in this permit and with the rules and other Orders of the Commission and the laws of the State of Texas. Agreement is a condition precedent to the granting of this permit.
4. Prior to any transfer of this permit, Commission approval must be obtained. The Commission should be notified, in writing, of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Permit Applications Unit in the Water Quality Division.
5. 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.
6. The permittee is subject to the provisions of 31 TAC 305.125.
7. The permittee shall remit an annual waste treatment inspection fee to the Commission as required by 31 TAC Chapter 305 (Subchapter M). Failure to pay this fee may result in revocation of this permit.

**MEMBRANE LINER
ENGINEERING SPECIFICATION GUIDE**



**INDUSTRIAL GRADE HYPALON
CHLOROSULFONATED POLYETHYLENE (CSPE)**

Property	Test Method	TYPE 3-36	TYPE 3-45	TYPE 3-60
Gauge (Mils Nominal)		36.0	45.0	60.0
Plies, Reinforcing 10 × 10 1000d Polyester		1.0	1.0	1.0
Thickness, Minimum Mils	ASTM D751			
1. Overall	Optical Method	34.0	41.0	55.0
2. Over scrim		11.0	11.0	11.0
Breaking Strength—Fabric Minimum (lbs)	ASTM D751, Method A	200.0	250.0	300.0
Tear Strength (pounds, minimum)				
1. Initial	ASTM D751, Modified	80.0	90.0	100.0
2. After Aging		35.0	35.0	35.0
Low Temperature, °F	ASTM D2136, 1/8 in. mandrel, 4 hrs., Pass	-40.0	-40.0	-40.0
Dimensional Stability (each direction percent change maximum)	ASTM D1204 212°F, 1 hr.	2.0	2.0	4.0
Volatile Loss, Maximum, for 30 mil Unsupported Sheet (percent)	ASTM D1203, Method A	0.5	0.5	0.5
Resistance to Soil Burial (percent change maximum in original value)				
a. 30 Mil Unsupported Sheet	ASTM D3084 (per ASTM paragraph 9.5)	0.5	0.5	0.5
1. Breaking Factor		20.0	20.0	20.0
2. Elongation at Break		20.0	20.0	20.0
3. Modulus at 100% Elongation		20.0	20.0	20.0
b. Membrane Fabric Breaking Strength	ASTM D751, Method A	25.0	25.0	25.0
Hydrostatic Resistance, (pounds/sq. in. minimum)	ASTM D751, Method A Procedure 1	250.0	250.0	250.0
Ply Adhesion, Each Direction, (pounds/in. minimum)	ASTM D413, Machine Method	8.0	8.0	8.0
Water Absorption, Maximum 30 Mil Unsupported Sheet (percent weight gain)	ASTM D471			
	14 days @ 70°F	1.5	1.5	1.5
	30 days @ 70°F	2.0	2.0	2.0
	120 days @ 70°F	2.0	2.0	2.0
	14 days @ 158°F	30.0	30.0	30.0
	30 days @ 158°F	30.0	30.0	30.0
	120 days @ 158°F	30.0	30.0	30.0
Factory Seam Requirements**				
Bonded Seam Strength (factory seam, breaking factor, ppi width)	ASTM D751, Modified	160 .0	200.0	240.0

*Hypalon is a Registered Trademark of DuPont

**Factory bonded seam strength is the responsibility of the fabricator.

GENERAL REQUIREMENTS

.01 Scope:

The work covered by these specifications consists of furnishing and installing fabric reinforced chlorosulfonated polyethylene (Hypalon) lining where shown on the drawings or directed by the Engineer. All work shall be done in strict accordance with the drawings and these specifications are subject to the terms and conditions of the contract. It is the intent of these specifications to ensure a first quality finished product is provided.

.02 Description of Materials:

Hypalon (chlorosulfonated polyethylene) lining shall consist of 64" (163 cm) minimum widths of calendered reinforced Hypalon sheeting, fabricated into large sections by means of special factory-bonded seams into a single panel, or into the minimum number of large panels required to complete the project, as supplied by WATERSAVER CO., INC., P.O. BOX 16465, DENVER, COLORADO 80216-0465 (303) 289-1818.

The materials supplied under these specifications shall be first quality products and manufactured specifically for the purposes of this work, and which have been satisfactorily demonstrated by prior use to be suitable and durable for such purposes. The manufacturer of the calendered rolls shall show, upon request, where a minimum of 20,000,000 sq. ft. (1,858,045 sq. m.) of 64" (163 cm) minimum width material has been manufactured for lining hydraulic structures.

.03 Physical Characteristics:

Hypalon utilized for encapsulation of the scrim shall be manufactured from a composition of high quality ingredients, suitably compounded, of which Hypalon 45 synthetic rubber resin is the sole elastomer. Zinc compounds of any kind, including zinc oxide, zinc stearate and zinc dusting agents, are prohibited. Dusting agents of any kind are prohibited on the finished product.

Scrim used in the membrane shall be 10 x 10 1000D polyester of an open type weave that permits strike-through of the Hypalon through the fabric to facilitate adhesion between the plies of Hypalon. The fill yarn must have 2.5 turns per inch maximum and 2.0 turns per inch minimum. All salvage edges must be trimmed prior to applying the Hypalon coating.

The composite membrane material shall consist of thoroughly bonded, fabric-reinforced Hypalon rubber sheeting. It shall be manufactured by the calendering process and shall be uniform in color, thickness, size

and surface texture. The fabric shall be totally encapsulated between plies of Hypalon and shall not extend closer than 1/8 inch to the edge of the Hypalon coating on either side of the fabric. Exposed fabric along longitudinal edges of roll stock and indications of delamination will not be permitted. The composite material shall be a flexible, durable, watertight product free of pinholes, blisters, holes, and contaminants and shall not delaminate in a water environment.

The composite membrane material shall be fabric-reinforced Hypalon consisting of one ply scrim and two plies of Hypalon. It shall be uniform in color, size, and thickness. The material shall have the minimum physical property characteristics, as outlined in the specifications. Certified test results showing that the sheeting meets or exceeds the specification shall be supplied upon request.

.04 Factory Fabrication:

Individual calendered widths of Hypalon shall be factory fabricated into large panels so as to minimize field seaming during installation. Factory fabricated seams shall have a minimum of 5/8" scrim to scrim overlap when fabricated by the dielectric weld. All factory fabricated seams shall have a strength of at least 80% of the specified sheet strength. The fabricator shall be experienced and shall show, upon request, where a minimum of 20,000,000 sq. ft. of this material has been fabricated and successfully installed. Factory fabrication shall be by WATERSAVER CO., INC., P.O. BOX 16465, DENVER, COLORADO 80216-0465 (303) 289-1818.

.05 Packaging and Handling:

After factory fabrication, the panels shall be double accordion folded in both directions and packaged so as to minimize handling at the jobsite. Each factory fabricated panel shall be given prominent, unique indelible identifying, markings indicating proper direction of unrolling and/or unfolding to facilitate layout and positioning in the field. Shipping boxes shall be water resistant, strong enough to prevent damage to the contents, and shall be banded to heavy duty wood pallets. Panels which have been delivered to the jobsite shall be unloaded and stored in their original, unopened containers in a safe dry area and protected from the direct heat of the sun. Whenever possible, a 6" minimum air space between the pallets should be provided, especially for an extended period of time. Pallets shall not be stacked.

.06 Installation:

General—Installation shall be performed by an authorized Installation Contractor who has previously installed a minimum of 2,000,000 sq. ft. (185,000 sq. m.) of this material or by a Contractor who has a Watersaver Field Representative in attendance. The surface (substrate) to receive the liner shall be smooth and free of sharp objects that could puncture the lining. All vegetation must be removed. A soil sterilant may be required at the discretion of the Engineer. The Hypalon lining shall be placed over the prepared surfaces to be lined in such a manner as to assure minimum handling. The panels shall be placed in such a manner as to minimize field seaming. Horizontal field seams on slopes shall be kept to a minimum.

The membrane shall be sealed to all concrete structures and other openings through the lining in accordance with details shown on the drawings submitted by the Contractor and approved by the Engineer. Factory fabricated pipe seals shall be used to seal all pipes penetrating the liner. Any portion of the lining damaged during installation shall be removed or repaired by using an additional piece of the same membrane as specified here-in. The liner shall be installed in a relaxed condition and shall be free of stress or tension upon completion of the installation. Stretching the liner to fit is not permissible.

.07 Protective Cover:

Hypalon membrane lining is one of the most weather resistant materials available. In addition, it is chemically immune to ozone. Therefore, with proper site design and proper installation, it generally is used without a protective cover. However, when a protective cover is used, a nominal 12 inches (10" minimum) of approved cover material shall be placed over the Hypalon lining as shown on the drawings. Cover material shall be approved by the Engineer prior to placement. Soil containing sharp, jagged rocks, roots, debris or any other material, which may puncture the membrane, shall not be used as cover material.

The Contractor may choose the equipment and manner with which to place the cover over the liner, provided: the Contractor satisfactorily demonstrates to the Engineer that both the equipment and manner used to place the chosen cover material over the lining will not have any detrimental effects on the liner.

.08 Field Seams:

Field seams will be made to seal factory fabricated panels of Hypalon together in the field. Seams shall be formed by lapping the edges of panels a minimum of 6 inches (150mm). The contact surfaces of the panels shall be wiped clean to remove all dirt, dust or other substance. Solvent for cleaning contact surfaces of field joints and for other required uses shall be as recommended by the manufacturer or approved fabricator of the fabric-reinforced Hypalon. Sufficient Hypalon to Hypalon bodied solvent adhesive shall be applied to the contact surfaces in the seam area and the two surfaces pressed together immediately. Any wrinkles shall be smoothed out. Field seams shall have a strength of at least 80% of the specified sheet strength.

.09 Joints to Structures:

All curing compounds and coatings shall be completely removed from the joint area. Joining of Hypalon to concrete shall be made with Hypalon to concrete bonding adhesive. Unless otherwise shown on the drawings, the minimum width of concrete to Hypalon joint shall be 6 inches (15 cm). In addition, mechanical attachment may be necessary.

.10 Repairs to Hypalon:

Any necessary repairs to the Hypalon shall be made with the lining material itself and cold applied Hypalon to Hypalon splicing adhesives. Patches should be cut so as to cover the area to be repaired by a minimum of 4" in all directions. Patches should be cut with rounded corners. The splicing adhesive shall be applied to the contact surface between the patch and the lining, and the two surfaces pressed together immediately. Any wrinkles shall be smoothed out.

.11 Quality of Workmanship:

All joints, on completion of the work, shall be tightly bonded. Any lining surface showing injury due to scuffing, penetration by foreign objects, or distress from rough subgrade, shall, as directed by the Engineer, be replaced or covered and sealed with an additional layer of Hypalon of the proper size. A Watersaver Field Service Representative will be required during the liner installation if the installation is not done by an authorized installer. The Contractor will bear the expense of this Field Service Representative. The Field Service Representative is not directly responsible for the quality of the work involved; such responsibility will be solely that of the Contractor.

SPECIFIC INDUSTRIAL GRADE HYPALON FLEXIBLE MEMBRANE LINER INFORMATION

Hypalon membrane liners are widely used in industrial impoundments to provide maximum containment effectiveness. They can withstand a broad range of chemically active substances.

Hypalon based liners are chemically immune to ozone and are one of the most weather resistant materials available. Over 30 years of documented exposure history has been developed on Hypalon based materials.

Exposed liners of Hypalon can withstand above waterline temperatures as high as 200°F (93.3°C) and retain flexibility below -40°F (-40°C).

High strength scrim reinforcement provides added strength for puncture and tear resistance as well as increased dimensional stability. Strength characteristics of Hypalon liners actually improve with age.

Hypalon liners can be factory fabricated by either solvent welding or dielectric welding method. Field seams are made using a Hypalon bodied solvent welding method. Both factory and field seams have the same chemical resistance as the sheet itself, and increase in strength as the membrane ages.

USES OF INDUSTRIAL GRADE HYPALON LINERS

Hypalon liners can be used in many different applications, including:

- | | |
|------------------------|--|
| -solid waste landfills | -tailing impoundments |
| -landfill caps | -industrial waste ponds & impoundments |
| -water treatment ponds | -fly ash disposal cells |
| -sewage lagoons | -leachate collection ponds |
| -sand filter beds | -fire water ponds |
| -golf course ponds | -stormwater detention ponds |
| -decorative lakes | -solar evaporation ponds |
| -irrigation reservoirs | -irrigation canals |

The above information is furnished to aid in selecting Hypalon for use as a geomembrane. Watersaver Company, Inc., as a supplier of materials only, does not assume responsibility for errors in selection, design, engineering, quantities, dimensions or installation.

For additional information, contact Watersaver Company, Inc.

ATTACHMENT K2

JANUARY 1995 CHANGE ORDER NO. 1

CHANGE ORDER

NO. 1

DATE ISSUED: January 9, 1995

TRAVIS COUNTY W.C.I.D. - POINT VENTURE
EFFLUENT HOLDING PONDS - 1994

CONTRACTOR: REDDICO CONSTRUCTION CO., INC.
P. O. BOX 1333
LEANDER, TEXAS 78641

ENGINEER: T. E. HAYNIE AND ASSOCIATES
Consulting Engineers
1826 KRAMER LANE, SUITE A
AUSTIN, TEXAS 78758

You are directed to make the following changes in the Contract Documents.

Description:

Materials, labor and equipment to install 2,800 S.Y. of High Density Polyethylene (HDPE) 40 mil thickness instead of Hypalon for pond liner.

Change in Contract Price:

Original Base Bid Contract Price:	\$97,074.00
Bid Item No. 6: Substitute 40 mil thickness HDPE for Hypalon pond liner.	(\$ 3,500.00)
Net Increase (decrease) of the Change Order:	(\$ 3,500.00)
Contract Price with Approved Change Order #1:	\$93,574.00

RECOMMENDED:

BY: 
ENGINEER

APPROVED:

BY: 
TRAVIS CO. W.C.I.D.
POINT VENTURE


APPROVED:

BY: 
CONTRACTOR

FILE:9404-C01.DOC

ATTACHMENT L
GROUNDWATER AND ENVIRONMENTAL REPORTS

**PRELIMINARY FOCUSED ENVIRONMENTAL
ASSESSMENT FOR TRAVIS COUNTY WCID POINT
VENTURE WASTEWATER TREATMENT PLANT
EXPANSION**

Submitted to

**THE TEXAS WATER
DEVELOPMENT BOARD**

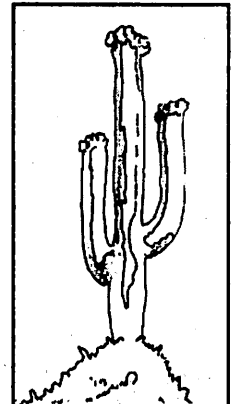
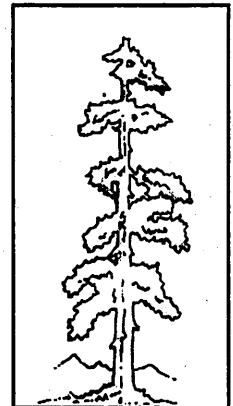
Submitted by

T.E. HAYNIE AND ASSOCIATES

Prepared by

**SWCA, INC.
ENVIRONMENTAL CONSULTANTS**

JULY 1999



**Preliminary Focused Environmental Assessment For
Travis County WCID Point Venture Wastewater Treatment Plant
Expansion**

Based on site visits and a preliminary analysis of existing environmental and archaeological conditions it is recommended that this project be considered for categorical exclusion. Questions concerning this preliminary environmental analysis should be directed to Casey Berkhouse, SWCA, Inc., 1712 Rio Grande, Suite C, Austin, TX, 78701, (512) 476-0891.

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Executive Summary

Section 1 - General Information

- A. Project Name
- B. Applicant
- C. Design Engineer
- D. Source of Financial Assistance
- E. Purpose and Need for the Proposed Project
- F. Estimated Project Cost
- G. Site map

Section 2 - Project Site Description

- A. Project Description
- B. Hydrological Elements
- C. Environmental Review
 - Soils
 - Geology
 - Vegetation
 - Wildlife
 - Listed and Proposed Species
 - Wetlands
- D. Archaeological Review
- E. Land Use, Land Use Planning, and Controls
- F. Evaluation of Impacts
- G. Literature Cited

Section 1 - General Information

A. Project Name

Travis County WCID Point Venture Wastewater Treatment Plant Expansion

B. Applicant

Travis County Water Control and Improvement District Point Venture
270 Venture Boulevard
Leander, Texas 78641

C. Design Engineer

T. E. Haynie and Associates
1826 Kramer Lane, Suite A
Austin, Texas 78758

D. Source of Financial Assistance

The project will be financed through a District Bond Issue. The bonds will be sold to the Texas Water Development Board.

E. Purpose and Need for the Proposed Project

The purpose of the proposed project is to construct new wastewater treatment facilities and an effluent tank for the Travis County Water Control and Improvement District (WCID) Point Venture. The existing facilities are over extended and new facilities are needed to meet present and anticipated future demands.

F. Estimated Project Construction Cost

\$1,309,275.00

G. Site Map

see Figure 1 and Figure 2.

Section 2 - Project Site Description

A. Project Description

The Travis County Water Control and Improvement District (WCID) Point Venture (the "District") is located in western Travis County on the north side of Lake Travis, four miles south of the City of Lago Vista, Texas (Figure 1). The District is located on Anderson Bend, a peninsula formed by a meander of the Colorado River. The existing wastewater treatment plant is located on an approximately 4-acre tract just northwest of the intersection of Venture Boulevard and Venture Drive and is surrounded by a 45-acre golf course (Figure 2). The existing facilities on this tract include the wastewater treatment plant, a maintenance shed, two treated effluent ponds (approximately 0.2 acres and 0.4 acres), a paved access road, and other related

structures. Treated effluent from the plant is discharged into the ponds and then is used to irrigate the approximately 35 acres of the golf course that includes greens, fairways, and tees.

The new wastewater treatment facilities and effluent tank will be constructed on the site of the existing wastewater treatment plant. The new facilities will consist of a wastewater treatment plant designed to handle 150,000 gallons per day, an office and lab building, and a lift station. These structures will be placed on the southern portion of the tract and will necessitate the relocation of approximately 200 feet of the access road to a point approximately adjacent to and south of its current location. Transport of wastewater to the new plant and discharge of treated effluent from the plant and ponds will be accomplished using existing wastewater lines. The existing wastewater treatment plant will be removed in the future.

The new effluent tank will be located on the northern end of tract. The steel tank will be 93 feet in diameter and 62 feet high and will have an operational capacity of 3.0 million gallons. The effluent tank is needed during wet weather conditions to accommodate the increased capacity of the new wastewater treatment plant.

B. Hydrological Elements

There are no hydrological features on the project site or on the adjacent tracts.

C. Environmental Review

Soils

The soils on the project site are classified within the Brackett Association. These soils are typically shallow, gravelly, calcareous, and loamy (Soil Conservation Service 1974). The southeastern portion of the project site traverses Brackett soils, rolling. This series developed over interbedded limestone and marl and typically consists of gravelly clay loams and broken limestone fragments. The northwestern portion of the project site is underlain by Tarrant soils, rolling. This series typically consists of a shallow layer of stony clay underlain by limestone.

Geology

The project site lies near the eastern end of the Edwards Plateau. Surface geology in the project area consists of the upper unit of the Glen Rose Formation. This Lower Cretaceous formation consists mostly of interbedded, fine-grained, hard to soft limestone, marly limestone, and dolomite. The upper unit of this formation is generally not conducive to the formation of karst features.

Vegetation

The project site is located within an area surrounded by wastewater treatment facilities and golf course fairways. Vegetation on the site consists predominately of an Ashe juniper (*Juniperus ashei*, about 5 to 20 feet tall) woodland mixed with

hackberry (*Celtis* sp., about 10 to 15 feet tall), Texas persimmon (*Diospyros texana*, about 5 to 7 feet tall), and live oak (*Quercus virginiana*, about 10 to 20 feet tall), with a relatively open understory. Trees and shrubs occurring with less frequency on the tract include cedar elm (*Ulmus crassifolia*), Texas oak (*Quercus texana*), gum elastic (*Bumelia lanuginosa*), western soapberry (*Sapindus drummondii*), silktassel (*Garrya ovata*), deciduous yaupon (*Ilex decidua*), prairie flameleaf sumac (*Rhus lanceolata*), evergreen sumac (*Rhus virens*), Roosevelt weed (*Baccharis neglecta*), twist-leaf yucca (*Yucca rupicola*), and agarita (*Berberis trifoliolata*). Non-native plants observed include nandina (*Nandina domestica*) and wax ligustrum (*Ligustrum japonicum*).

Maximum canopy height on this tract is about 20 feet. Vegetation cover and canopy closure are both about 85%-90%. Canopy closure is provided by species ≥ 15 feet tall and, on this tract, includes Ashe juniper, hackberry, live oak, cedar elm, and gum elastic. Understory vegetation (i.e., woody species < 15 feet tall) on this tract includes Ashe juniper, hackberry, Texas persimmon, live oak, Texas oak, gum elastic, Western soapberry, silktassel, deciduous yaupon, prairie flameleaf sumac, evergreen sumac, nandina, wax ligustrum, Roosevelt weed, twist-leaf yucca, and agarita.

Listed and Proposed Species

Ten endangered species are listed by the U. S. Fish and Wildlife Service (USFWS) as potentially occurring in Travis County: black-capped vireo (*Vireo atricapillus*), golden-cheeked warbler (*Dendroica chrysoparia*), whooping crane (*Grus americana*), Barton Springs salamander (*Eurycea sosorum*), Bee Creek Cave harvestman (*Texella reddelli*), Bone Cave harvestman (*Texella reyesi*), Kretschmarr Cave mold beetle (*Texamaurops reddelli*), Tooth Cave pseudoscorpion (*Tartarocreagris texana*), Tooth Cave ground beetle (*Rhadine persephone*), and Tooth Cave spider (*Neoleptoneta myopica*).

Black-capped vireos typically nest in shrublands and open woodlands characterized by shrub vegetation extending from the ground to about 6 feet in height and covering 30% or more of the total area. Vegetation on or adjacent to the project site differs in structure from that found in areas regularly occupied by black-capped vireos; therefore, the regular occurrence of the black-capped vireos on the subject tract is considered highly unlikely.

Golden-cheeked warblers typically nest in the Austin area in mature stands of Ashe juniper and deciduous trees especially along drainage bottoms and draws and on slopes. Because of the paucity of mature, deciduous hardwoods, the small overall patch size, and isolated nature of this tract from adjacent patches of appropriate warbler habitat, the regular occurrence of the species on the subject tract is considered highly unlikely.

Whooping cranes winter on the central Gulf Coast of Texas and breed in Alberta, Canada. During migration, whooping cranes typically stop to rest and feed in the bottomlands of larger rivers and in agricultural areas; however, individuals could conceivably alight in any open grassy or marshy area. The project site lies in the general migration corridor for this species, but, vegetation and existing disturbed condition of this area, it is extremely unlikely that whooping cranes would land in the project area or that the project will result in any significant impacts to this species.

The **Barton Springs salamander** is known only from a series of interconnected springs within and in the vicinity of Zilker Park in the City of Austin. It is unknown to what extent this species utilizes subterranean reaches associated with these springs. When located on the surface, the salamander is often found under rocks and in gravel. Water to the springs is supplied by the Barton Springs segment of the Edwards Aquifer located south of the Colorado River (Lake Austin) and extending south to Hays and Blanco counties. The entire project site lies outside of the recharge and contributing zones of the Barton Springs segment and activities at this site should have no direct or indirect effects on the Barton Springs salamander.

The remaining six listed species are cave invertebrates and are believed to be restricted both to a karst geologic region known generally as the Edwards Formation and to Travis and Williamson counties. The Edwards Formation does not occur on the project site. The area is underlain by the Glen Rose Formation which typically does not form caves and subsurface voids known to support the listed cave invertebrates. No caves are known to occur on or immediately adjacent to the project site and the site lies outside of areas identified as potential habitat for any of the federally listed cave invertebrates (Balcones Canyonlands Preserve; RECON/USFWS 1996).

Wetlands

Wetlands are defined by the U. S. Army Corps of Engineers as "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." To qualify as a wetland, three criteria must be met: wetland hydrology, hydric soils, and the presence of wetland indicator plant species. No areas meeting these criteria were observed on the project site.

D. Archaeological Review

A cultural resource assessment of the proposed project site was conducted by an SWCA archaeologist. The assessment included a background literature and records search and a field examination of the project site. The background records search included examining records at the Texas Archaeological Research Laboratory (TARL). Site files, relevant maps, and National Register of Historic Places listings

were investigated for previously conducted surveys and recorded archaeological sites located within the proposed project area. Field examination consisted of a pedestrian survey and shovel testing of the project area.

One archaeological site has been recorded approximately 0.5 miles north of the proposed wastewater treatment plant site. This site (41TV1162) was recorded by a private consultant, but no published report of the findings could be located in TARL files. Site 41TV1162 was recorded as a small, disturbed scatter of burned rock with approximately 20 chert flakes and a few mussel shells in an approximately 45-foot by 60-foot area. In addition to this site, a previous archaeological survey conducted for the Travis County WCID Point Venture Water Treatment Plant Improvement project identified archaeological site 41TV1863 on the grounds of the water treatment plant. This site, approximately 0.3 miles southeast of the proposed wastewater treatment plant site, contained a light scatter of chert debitage, burned limestone, and a bifacial tool fragment. Site 41TV1863 was not considered potentially eligible for the National Register of Historic Places nor as a State Archaeological Landmark.

The wastewater treatment plant project site is highly disturbed by paved roads, existing wastewater facilities, a maintenance shed, and golf course construction. No artifacts were observed on the surface and two shovel tests in the proposed location of the new wastewater plant and the effluent tank revealed shallow, sterile, loamy soils with many limestone gravels. A cutbank near the fairway of the second hole provided a soil profile which confirmed the stratigraphy in the shovel tests. There are no records for archaeological sites on this tract, no cultural materials were observed during field inspections, and shovel testing was negative. Archaeological clearance is recommended for this site.

E. Land Use, Land Use Planning, and Controls

This project is part of a District program to upgrade and improve its water and wastewater service. Land use is unaffected by the proposed project as the new facilities will be integrated with existing infrastructure supporting current and future development.

F. Evaluation of Impacts

Due to the disturbed existing conditions in the proposed project area, the lack of significant environmental or archaeological sites, and the fact that the proposed project will utilize existing transport and discharge lines, no major adverse impacts are expected to result from this project. The potential for a minor temporary increase in the amount of sediment leaving the project area during construction will be minimized using erosion control techniques.

G. Literature Cited

RECON/USFWS. 1996. Habitat conservation plan and final environmental impact statement, Balcones Canyonlands Preserve. Unpubl. document prepared for the executive committee of the Balcones Canyonlands Conservation Plan. Austin, TX.

Soil Conservation Service. 1974. Soil survey of Travis County, Texas. U. S. Dept. of Agriculture. Texas Agriculture Experiment Station.



Figure 1 - Proposed project location.

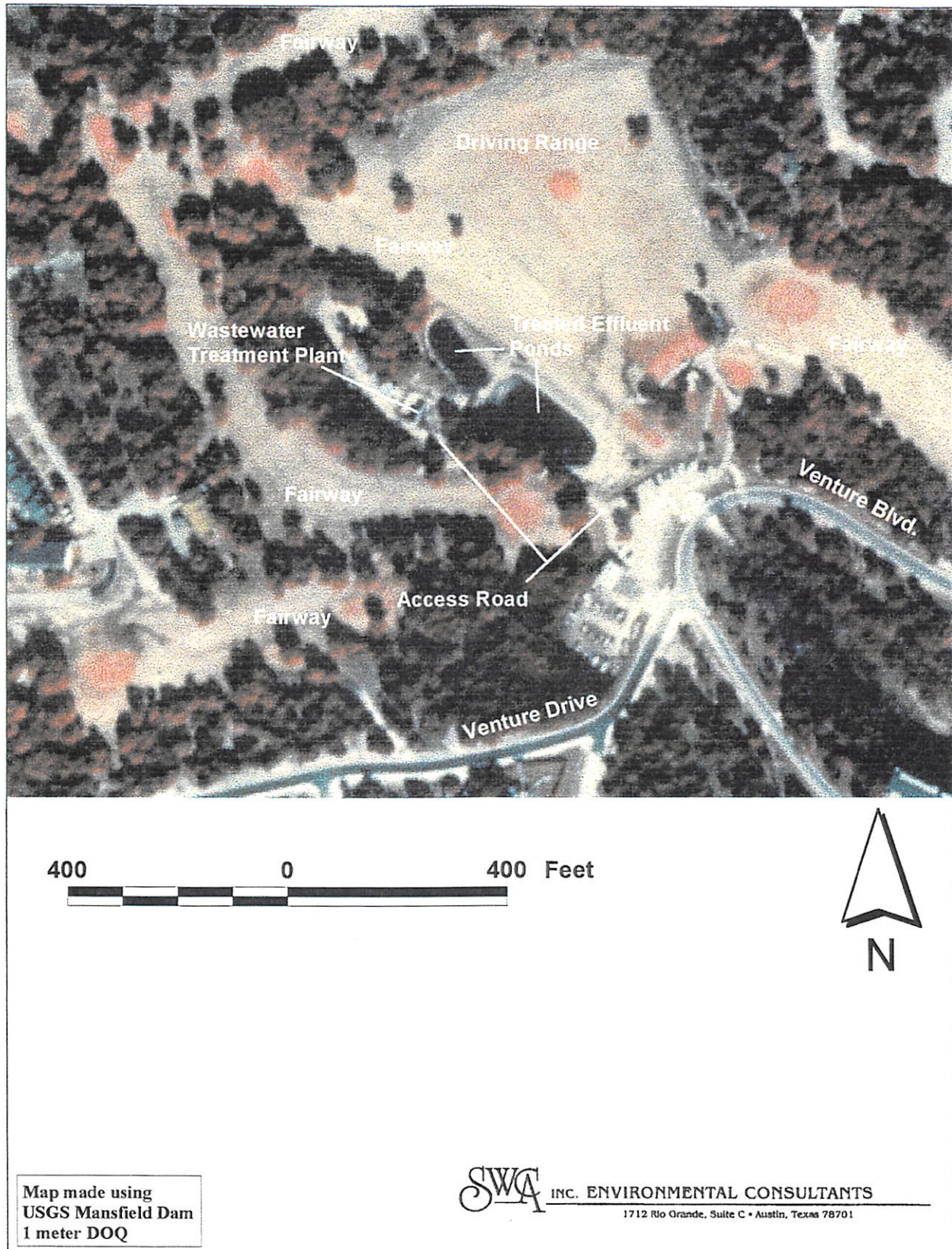


Figure 2 - Proposed project site.



United States Department of the Interior

FISH AND WILDLIFE SERVICES

Austin Ecological Services Office
Hartland Bank Building
10711 Burnet Road, Suite 200
Austin, Texas 78758
(512)490-0057



AUG 30 1999

2-15-99-I-0740

Timothy E. Haynie
T.E. Haynie and Associates
1826 Kramer Lane, Suite A
Austin, Texas 78758-4239

RE: Proposed Point Venture WCID Wastewater Treatment Plant in Travis County, Texas

Dear Mr. Haynie:

This responds to your letter, dated July 14, 1999, requesting the U.S. Fish and Wildlife Service's (Service) comments on the potential impacts to federally listed or proposed threatened or endangered species that may result from Point Venture WCID's proposed wastewater treatment plant in Travis County, Texas. It is our understanding that the proposed project will involve construction of new wastewater treatment plant facilities and an effluent tank. We are providing the following information to assist you and the Environmental Protection Agency (EPA), if federal funds are involved, in assessing and avoiding impacts to federally listed or proposed species and to wetlands.

Threatened and Endangered Species

Based on your conversation with Service biologist Dianne Williams on August 26, 1999, it is our understanding that you are requesting the Service's concurrence with a "no effect" determination for impacts to federally listed or proposed species that may result from the proposed project activities. This determination was not clearly stated in your cover letter nor was it clearly stated in the document, "Preliminary Focused Environmental Assessment for Travis County WCID Point Venture Wastewater Treatment Plant Expansion." This document stated "no major adverse impacts are expected to result from this project." Based on that wording, the Service would have concluded that your determination was "may affect, not likely to adversely affect."

However, upon review of the proposed project's anticipated impacts and further clarification in the telephone conversation, it is our understanding that the proposed project will only involve the removal of two ashe juniper trees. Based on this information and other current biological information, we are able to concur with a "no effect" determination. For future reference, we

have enclosed recommendations for the contents of biological evaluations and biological assessments, not to be confused with Environmental Assessments. In the environmental community the term Environmental Assessment (EA) refers to documents prepared to comply with the National Environmental Policy Act (NEPA) and are designed to provide an analysis of multiple possible alternative actions on a variety of environmental, cultural, and social resources, and often use different definitions or standards.

We recommend you also contact the Texas Parks and Wildlife Department (Endangered Resources Branch), Fountain Park Plaza Building, Suite 100, 3000 South IH-35, Austin, Texas 78704 (telephone 512/912-7011) for information concerning fish, wildlife, and plants of State concern.

Wetlands

Wetlands provide valuable fish and wildlife habitat as well as contribute to flood control, water quality enhancement, and groundwater recharge. According to National Wetland Inventory (NWI) maps, there are no designated wetlands in the proposed project areas, however, they may not identify all wetland areas, thus an "on-site" visit is also recommended and should follow consultation with the maps. These NWI maps correspond to U.S. Geological Survey 7.5-minute quadrangle maps and can be purchased from the Texas Natural Resources Information System, P.O. Box 13231, Austin, Texas 78711-3231 (telephone 512/463-8402). If wetland areas will be dredged and/or filled, you should contact the Fort Worth District Corps of Engineers, Permits Section, CESWF-OD-O, P.O. Box 17300, Fort Worth, TX 76102-0300, 817/334-2681 to determine if a permit is required by that agency prior to commencement of construction activities.

We appreciate the opportunity to comment on this project and your concern for endangered species. If we can be of further assistance, please contact Dianne Williams at 512/490-0057.

Sincerely,

A handwritten signature in cursive script that reads "William Sewell". Below the signature, the word "for" is written in a smaller, simpler script.

David C. Frederick
Supervisor

Enclosure



DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF:

October 4, 1999

Environmental Division
Regulatory Branch

SUBJECT: Project Number 199900658

Mr. Timothy E. Haynie
T.E. Haynie and Associates
1826 Kramer Lane, Suite A
Austin, Texas 78758-4239

Dear Mr. Haynie:

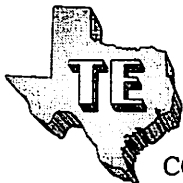
Thank you for your letter of July 14, 1999, concerning a proposal by the Travis County Water Control and Improvement District Point Venture to construct new wastewater treatment facilities and a tank in Travis County, Texas. This project has been assigned Project Number 199900658. Please include this number in all future correspondence concerning this project. Failure to reference the project number may result in a delay.

We have reviewed this project in accordance with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. Under Section 404, the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged and fill material into waters of the United States, including wetlands. The USACE responsibility under Section 10 is to regulate any work in, or affecting, navigable waters of the United States. Based on your description of the proposed work, other information available to us, and current regulations and policy, we have determined that this project will not involve any of the above activities. Therefore, it will not require Department of the Army authorization under the above laws. However, it is incumbent upon you to remain informed of any changes in USACE Regulatory Program regulations and policy as they relate to your project.

Thank you for your interest in our nation's water resources. If you have any questions concerning our regulatory program, please contact Maria Cavazos at the address above or telephone (817)978-2681.

Sincerely,

Presley B. Hatcher
for Wayne A. Lea
Chief, Regulatory Branch



T. E. HAYNIE AND ASSOCIATES
CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

July 14, 1999

RECEIVED
JUL 19 1999
TEXAS HISTORICAL COMMISSION

Dr. James E. Bruseth
Department of Antiquities Protection
Texas Historical Commission
P.O. Box 12276
Austin, Texas 78711

**RE: Preliminary Focused Environmental Assessment for the Point
Venture WCID Improvement Project**

Dear Dr. Bruseth,

Enclosed please find a copy of the final Focused Environmental Assessment for the Wastewater Treatment Plant Expansion portion of the Point Venture WCID Improvement Project. The Water Treatment Plant portion has been submitted separately. Please review the attached assessment and provide your written concurrence that the project will cause no significant environmental impact. Your comments will be forwarded to the Texas Water Development Board.

If you have any questions or concerns feel free to call me 512-837-2446 ext. 208.

Sincerely,

Timothy E. Haynie

Timothy "Timbo" E. Haynie, E.I.T.

T.E. Haynie and Associates

NO EFFECT On National Register-eligible/listed properties or State Archeological Landmarks PROJECT MAY PROCEED by <u><i>William A. Pratt</i></u> for F. Lawrence Oaks State Historic Preservation Officer Date <u>7/29/99</u>
--

CONCUR

by _____
for F. Lawrence Oaks
State Historic Preservation Officer
Date _____

File: timlett



September 28, 1999

Timothy E. Haynie, E.I.T.
T.E. Haynie & Associates
1826 Kramer Lane, Suite A
Austin, TX 78758-4239

RE: Preliminary Focused Environmental Assessment, Point Venture WCID
Improvement Project

Dear Mr. Haynie:

Thank you for coordinating with this agency in your planning activities regarding the expansion of the wastewater treatment plant at Lago Vista. Department staff reviewed the project. Comments in this letter are intended to assist your planning efforts and are provided to minimize effects of this project upon fish, wildlife, and plant resources.

A previous letter concerning the same site was mailed to you around January 20, 1999. The comments in that letter still apply. The Environmental Assessment states that canopy cover at this site is 85-90%, indicating a substantial amount of vegetation. Undeveloped sites are often the only wildlife habitat remaining in urbanized areas and therefore increase in value as the surrounding habitat is developed. Because areas such as these serve as refuges and travel corridors for urban wildlife, it is important to preserve as many of these habitat areas as possible. Wildlife populations existing in urban environments are an important component of our natural resource that provides great benefit to society in general. Therefore, activities leading to direct or indirect losses of the state's fish and wildlife resources and habitat in urban environments are strongly discouraged. Losses should be minimized using site planning and construction techniques designed to avoid and preserve existing native trees, shrubs, grasses and forbs. The Department recommends incorporation of as much of the existing vegetation as is possible into the project design, possibly as a landscape plan.

However, no impacts to listed species are anticipated as a result of the construction of this project.

COMMISSIONERS

LEE M. BASS
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FT. WORTH

ANDREW SANSOM
EXECUTIVE DIRECTOR

*To manage and
conserve the natural
and cultural resources
of Texas for the use and
enjoyment of present
and future generations.*

I appreciate the opportunity to review and comment on your project. If you have any questions or concerns, please do not hesitate to give me a call at (512)389-4638.

Sincerely,

A handwritten signature in cursive script that reads "Kathy Boydston". The signature is written in dark ink and is positioned above the printed name.

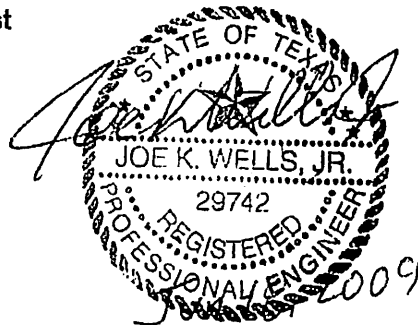
Kathy Boydston
Wildlife Habitat Assessment Program

KKB:ck

**POINT VENTURE SUBDIVISION
SITE SOILS INVESTIGATION REPORT**

Prepared BY:

Waste Water Solutions
9217 Highway 290 West
Suite 100
Austin, TX 78736



June 18, 2009

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Site Investigation & Management Plan for the Point Venture Subdivision, Travis County, Texas

Introduction

This project is located on the north side of Lake Travis in Travis County, Texas. No municipal wastewater services are available in this area, therefore, an organized collection and treatment system, coupled with land application of treated effluent, is practical and feasible to provide services to this development.

In environmentally sensitive areas, such as the Texas Hill Country, wastewater treatment systems can surface irrigate (spray systems) or use drip irrigation technology. Topographically, the typical Hill Country landscapes generally prohibit the use of surface spray systems for treated effluent application. Characteristics of major concern are slope, rock outcrop, potential erosion hazards, and shallow soils.

Due to site characteristics, such as shallow soils, generally believed to be non-arable, and sloping topography, it is being proposed to utilize either surface or subsurface drip irrigation for the ultimate treated effluent disposal system for the Point Venture Subdivision site. The treated effluent irrigation system will utilize a ACT drip Irrigation Management System, or comparable, management system to allow for accurate control of the proposed surface or subsurface drip disposal treated effluent irrigation system.

The surface drip irrigation system will utilize drip tubing that is embedded with compensating drip emitters to ensure accurate and uniform dosing of the irrigation sites. The site will retain all of the trees that are now present. The tubing will be laid on the surface of the ground beneath the trees. Once the tubing has been installed 4" of mulch will be placed over the tubing.

The subsurface drip irrigation system will utilize drip tubing that is embedded with compensating drip emitters to ensure accurate and uniform dosing of the irrigation sites. The tubing will be plowed into the ground using a vibratory cable plow. The tubing will be buried 6" – 8" below the surface of the ground. The tubing will be installed in areas that have a minimum of 12" of suitable soil beneath the dripper tubing. In areas that enough suitable soil is not available the soil may be supplemented with imported soil.

A site investigation was performed to obtain information that would assist in the design of the drip irrigation system. This report will summarize these results and will be utilized to assist in the development of the drip fields to be used for treated effluent application.

Management Plan

The proposed plan for the surface drip irrigation treated effluent application areas is to trim the existing vegetation to provide access for the installation of the tubing. The high evapotranspiration of the existing woody species will be relied upon to take up the treated effluent. The woody species will serve as the warm and cool season vegetation for the uptake of the treated effluent. *Transpirational water use by Ashe juniper trees (Juniperus ashei) can be a substantial part of the annual water budget on native rangelands. In short-term measurements, water use by large juniper trees can be as high as 35 gallons per day when soil moisture is available. This estimate was derived*

high as 35 gallons per day when soil moisture is available. This estimate was derived using instantaneous measurements of leaf gas exchange on native trees near Concan, TX. Samples were collected by enclosing a small sample of leaf material in a chamber and measuring the decrease in CO₂ resulting from carbon uptake and the increase in relative humidity resulting from transpirational loss. Multiple samples were taken throughout the day to calculate diurnal gas exchange patterns, and in different seasons to determine annual patterns. Samples were taken in multiple canopy locations at each sample. A canopy model incorporating leaf distribution within the canopy and gas exchange rates was developed to estimate canopy level water use.(Owens, M.K., Maximum Sustained Water Use for Irrigated Juniper Trees, page 1, Texas Agricultural Experiment Station, Uvalde, Texas, July 17, 2002)

Upslope surface drainage will be diverted from the proposed application areas. Areas where drainage is concentrated should not be utilized for application of treated effluent. These areas should be buffered.

The proposal for the treated effluent application areas via subsurface drip irrigation is to utilize herbaceous vegetation for establishing a cover crop. A mixture of native and turf grass, herbaceous vegetation will be used to vegetate the areas where soils will be imported and areas where clearing will occur.

In developing the irrigation areas, upslope surface drainage will be diverted to prevent run-on onto the treated effluent application areas. Areas where drainage appears to be concentrated, and active, should be buffered from application of treated effluent.

Where soils are not sufficient, a suitable material will need to be imported to ensure that there is at least one foot of rootable material beneath the dripper lines. This will ensure that there is sufficient rooting depth to allow for the growth of herbaceous vegetation that will utilize the treated effluent.

All areas will be seeded with high performance turf grass vegetation and will include warm season and cool season vegetation. This will help ensure that there is a viable cover crop growing at all times to uptake the water and nutrients associated with the treated effluent. Most species can and will utilize N levels much greater than 100-150 lbs of N/acre/yr. These areas will be mowed to ensure that the vegetation continues to exhibit vigorous growth habits and to maximize the uptake potentials and to ensure that a standing crop does not interfere with the establishment of the following seasons vegetation emergence.

Site Details

Geology

According to the Geologic Atlas of Texas, the site is located on the Glen Rose Formation. The official description is; *composed of limestone, dolomite, and marl; alternating resistant and recessive beds forming stairstep topography; limestone aphanitic to fine grained, hard to soft and marly, light gray to yellowish gray; dolomite, fine grained, porous, yellowish brown; marine megafossils include molluscan steinkerns, rudistids, oysters, and echinoids; upper part, relatively thinner bedded, more dolomitic, and less fossiliferous than the lower part; thickness of Glen Rose Formation 380± feet.*

USDA-Soil Survey

A soils map is located in the Appendix of this document. According to the results of the site investigation and visual observations, the soils of this site are variable and do not accurately reflect what is mapped and listed in the soil survey. However, a large part of this variability may be due to past management practices of the site, as will be discussed later in this document.

Climate

According to the USDA-SCS Soil Survey for Travis County, Texas, the climate in Travis County is humid subtropical and is characterized by hot summers and relatively mild winters. Temperature and rainfall are the climatic factors that have the greatest influence on the formation of soils in this area. The pattern of rainfall consists of interspersed wet and dry periods.

Vegetation

Vegetation within the areas to be utilized for the application of treated effluent varies as far as speciation of woody and herbaceous species. Generally, the dominating woody species are Ashe Juniper and Live Oak with some sub-dominate species associated such as abundant herbaceous plant growth.

Soils

According to the Soil Survey, soils of the treated effluent application site consist of clay of the Brackett Soils, rolling (mapped as B1D) and Tarrant Soils (mapped as TaD)

Brackett Soils, rolling (B1D)

Brackett soils, rolling (B1D).—These soils occupy gently undulating to rolling topography, generally on benches 100 to 500 feet wide that are separated by outcrops of the underlying limestone and marl. Slope is dominantly 5 to 12 percent, but it ranges from 1 to 12 percent. These soils developed over interbedded limestone and marl. Individual areas are more than 1,000 acres in size.

These soils have the profile described as representative of the series. About 20 percent of the mapping unit consists of rock outcrop. Broken limestone fragments cover up to 75 percent of the surface. The texture of the surface layer is gravelly clay loam, gravelly loam, loam, or clay loam.

Included in mapping were soils less than 10 inches thick on the outer edges of the benches and some soils resting directly on indurated limestone. Also included, in narrow valleys, were deeper soils, such as those of the Volente, Altoga, and San Saba series. These included soils make up 10 to 15 percent of the mapping unit.

A large part of the annual rainfall is lost through runoff and seepage from the limestone outcrops. These soils are not suited to crops. They are better suited to range or wildlife habitat. (Capability unit VIIc-2, Adobe range site, pasture and hayland group not assigned)

According to the Soil Survey, soils of the treated effluent application site consist of clay of the Tarrant Soils, rolling (mapped as TaD) and the Bracket Soils, rolling (mapped as B1D), a clay loam.

Tarrant soils, rolling (TaD)

Tarrant soils, rolling (TaD).—This soil occupies complex slopes that are dominantly 5 to 12 percent. Areas are broad and range from 100 to 1,000 acres in size. This soil has the profile described as representative of the series.

Random outcrops of limestone that cover 2 to 3 feet of the surface are common. These rock outcrops, in addition to smaller loose stones, cover from 30 to 60 percent of the acreage.

In some areas about 30 percent of the surface is covered with 1- to 3-inch limestone gravel. This inclusion is about 6 percent of the acreage. Small areas of Brackett soils were included in other places, and some slopes up to 18 percent were included.

Because the thin, stony solum prevents the use of farm machinery, this soil is not suitable for crops or improved pasture or hay. It is well suited to native grass range. (Capability unit VIs-1, Rocky Upland range site, pasture and hayland group not assigned)

Test Hole Selection

Joe K. Wells, Jr., P.E. selected 26 representative sites within the proposed effluent irrigation area. The holes were located using a GIS map provided by River City Engineering and a handheld GPS unit. Topographical and visual uniformity of the irrigation sites were easily ascertained. Thus, we feel the number and selection of the test holes was adequate to give representation of the proposed treated effluent application areas.

It is virtually impossible to try and establish a sampling regime that will sufficiently allow for coverage of inclusional features within the application areas. However, if any of these features are discovered at the time of construction, these areas will be noted and sufficiently evaluated to determine their relevance to the construction and ultimate performance of the treated effluent application sites. The soil descriptions will be followed by three pictures for each hole the first picture is an end view of the hole, the second is a sidewall view of the hole, and the final picture is of the area surrounding the hole.

Test Hole #A

Vegetation Characteristics

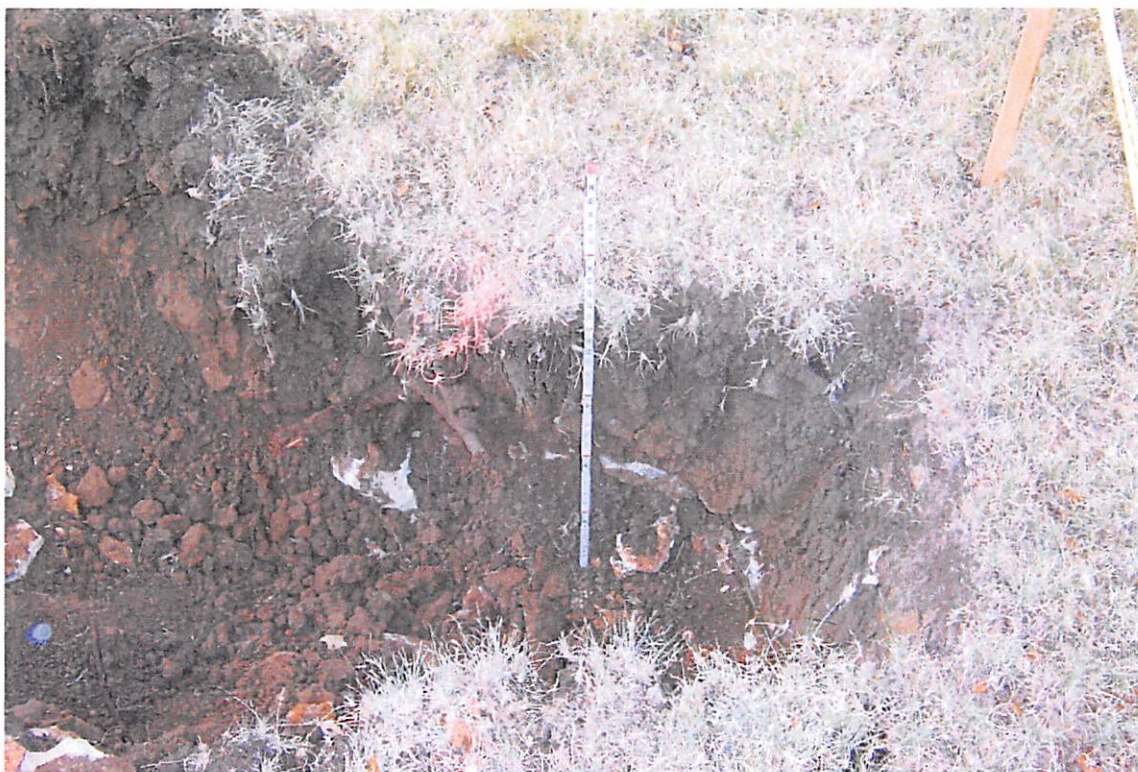
The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 5% canopy cover. There was 100% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 5%. The litter layer coverage was estimated at 0%. Slope of this area was 0-5%.

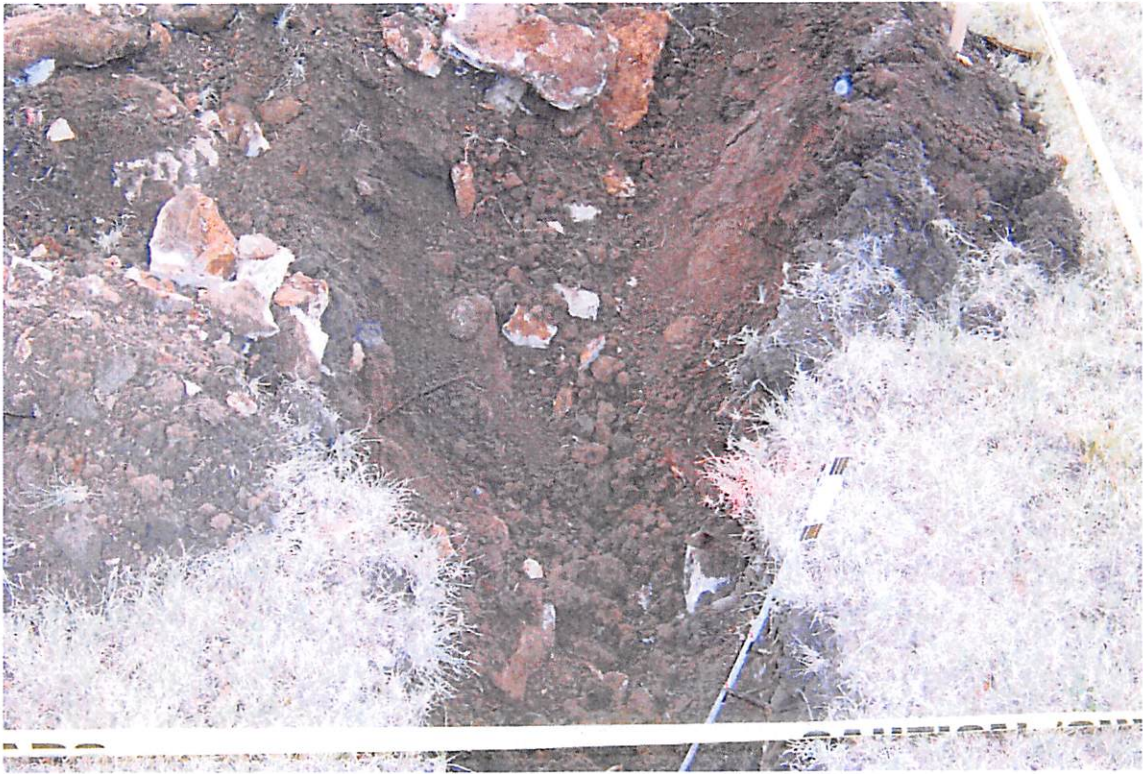
Soil Characteristics

Total soil depth was 28 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 18 inches. The secondary rooting depth was 18 inches.

Depth of the 1st horizon was 28 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 15% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was wavy. The restrictive horizon was reached at 28 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #B

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 20% large Oak and 80% juniper with 100% canopy cover. There was 20% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 100%. Slope of this area was 0-5%.

Soil Characteristics

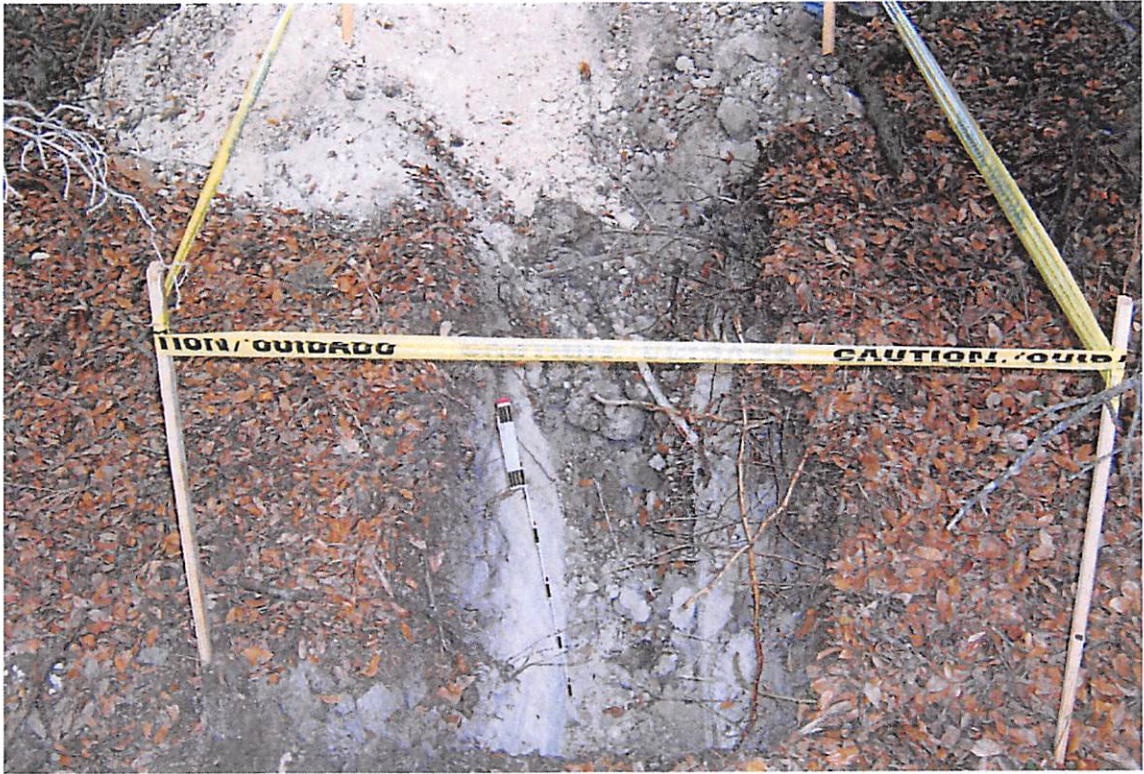
Total soil depth was 30 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 4 inches. The secondary rooting depth was 15 inches.

Depth of the 1st horizon was 6 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 0% limestone fragments.

Depth of the 2nd horizon was 24 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 5% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. No restrictive horizon was reached at 30 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #C

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 20% large Oak and 80% juniper with 50% canopy cover. There was 50% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 20%. The litter layer coverage was estimated at 50%. Slope of this area was 5-10%.

Soil Characteristics

Total soil depth was 32 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 6 inches. The secondary rooting depth was 12 inches.

Depth of the 1st horizon was 6 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 5% limestone fragments.

Depth of the 2nd horizon was 26 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 5% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. The boundary between the 2nd horizon and the restrictive horizon was smooth. A restrictive horizon was reached at 32 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #D

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 10% large Oak and 90% juniper with 80% canopy cover. There was 60% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 10%. The litter layer coverage was estimated at 80%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 31 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 5 inches. The secondary rooting depth was 19 inches.

Depth of the 1st horizon was 5 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 5% limestone fragments.

Depth of the 2nd horizon was 26 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 0% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. No restrictive horizon was reached at 31 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #E

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 20% large Oak and 80% juniper with 40% canopy cover. There was 90% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 15%. The litter layer coverage was estimated at 40%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 31 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 5 inches. The secondary rooting depth was 26 inches.

Depth of the 1st horizon was 5 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

Depth of the 2nd horizon was 26 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 10% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. The boundary between the 2nd horizon and the restrictive horizon was smooth. A restrictive horizon was reached at 31 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #F

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 5% canopy cover. There was 100% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 5%. The litter layer coverage was estimated at 0%. Slope of this area was 0-5%.

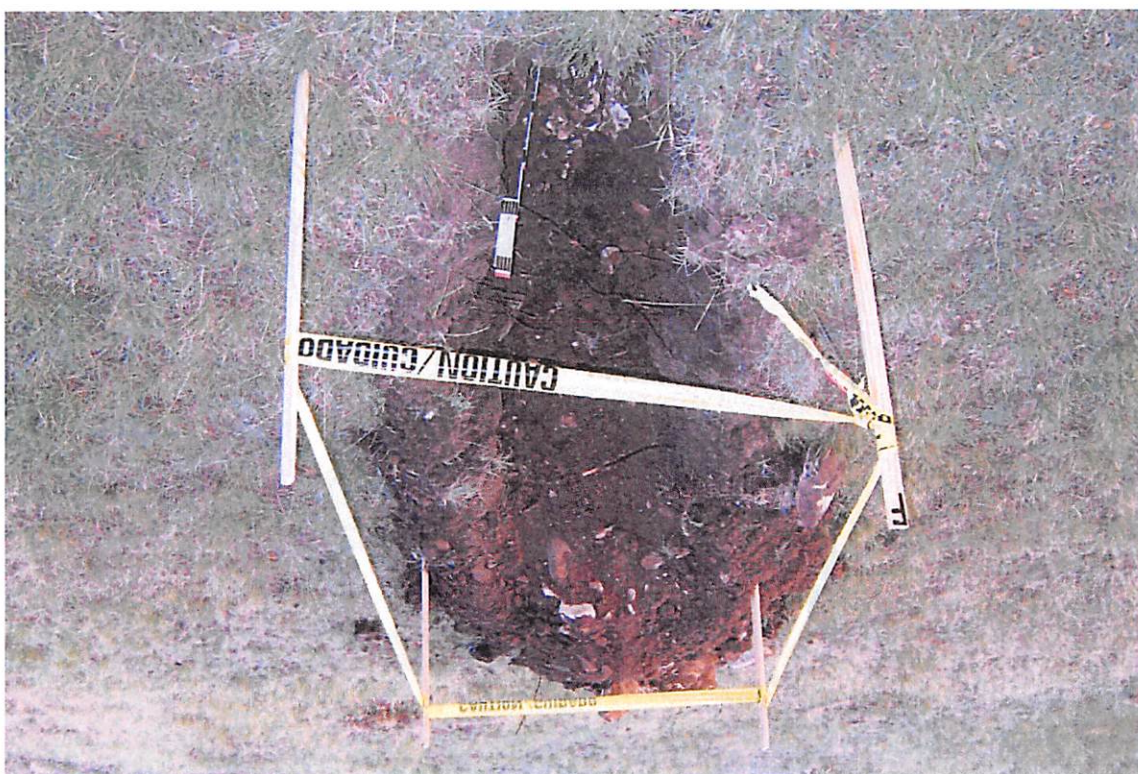
Soil Characteristics

Total soil depth was 21 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 9 inches. The secondary rooting depth was 13 inches.

Depth of the 1st horizon was 21 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 20% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was wavy. The restrictive horizon was reached at 21 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #G

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 5% canopy cover. There was 100% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 5%. The litter layer coverage was estimated at 0%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 25 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 8 inches. The secondary rooting depth was 18 inches.

Depth of the 1st horizon was 25 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was smooth. The restrictive horizon was reached at 25 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #H

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 50% canopy cover. There was 80% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 10%. The litter layer coverage was estimated at 20%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 24 inches where digging was stopped. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 14 inches. The secondary rooting depth was 21 inches.

Depth of the 1st horizon was 24 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 20% limestone fragments.

No restrictive horizon was reached at 24 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #1

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 20% large Oak and 80% juniper with 50% canopy cover. There was 50% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 50%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 29 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 8 inches. The secondary rooting depth was 14 inches.

Depth of the 1st horizon was 11 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 0% limestone fragments.

Depth of the 2nd horizon was 18 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 10% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. No restrictive horizon was reached at 29 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #J

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 10% large Oak and 90% juniper with 70% canopy cover. There was 60% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 15%. The litter layer coverage was estimated at 20%. Slope of this area was 0-5%.

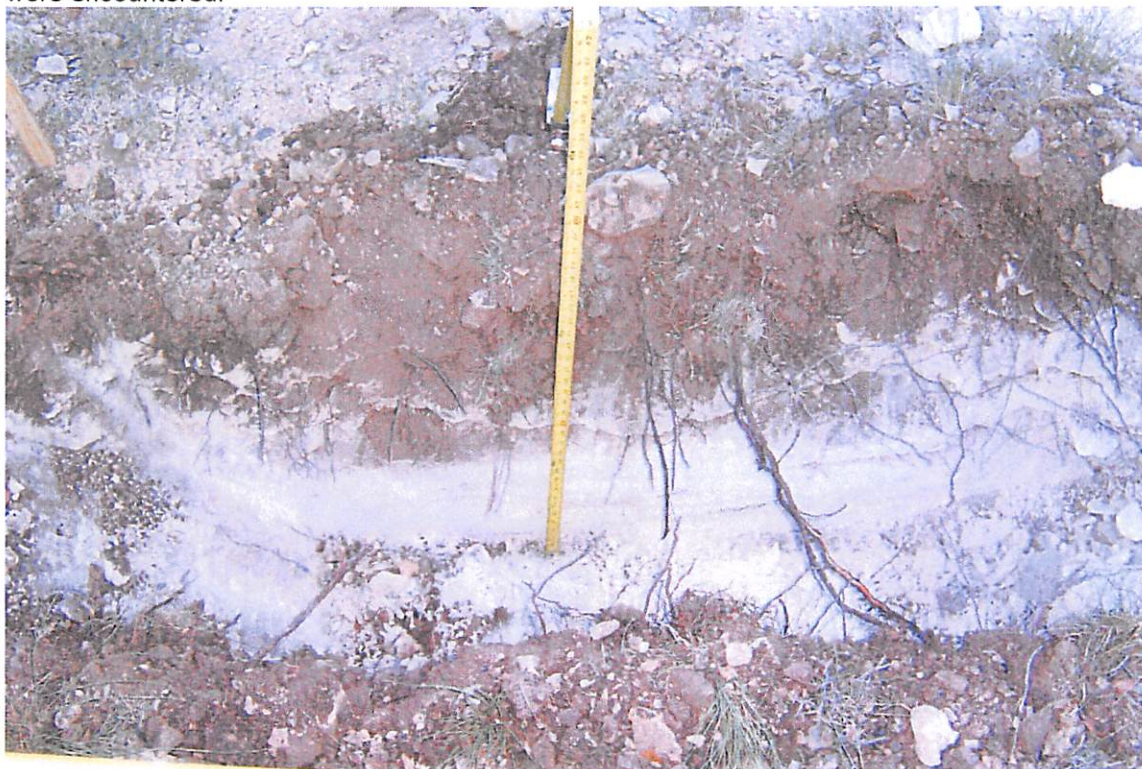
Soil Characteristics

Total soil depth was 26 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 9 inches. The secondary rooting depth was 19 inches.

Depth of the 1st horizon was 3 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

Depth of the 2nd horizon was 23 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 5% limestone fragments.

The boundary between the 1st and 2nd horizon was wavy. The boundary between the 2nd horizon and the restrictive horizon was wavy. A restrictive horizon was reached at 26 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #K

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 10% canopy cover. There was 95% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 10%. The litter layer coverage was estimated at 10%. Slope of this area was 0-5%.

Soil Characteristics

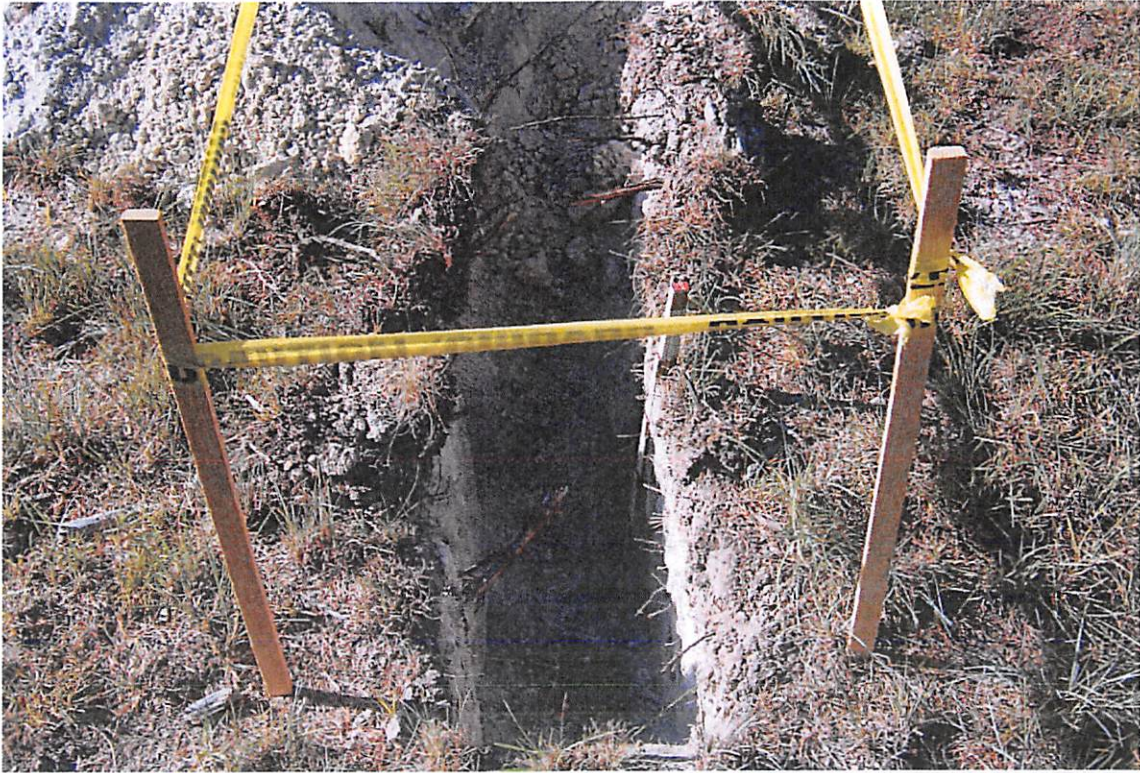
Total soil depth was 28 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 8 inches. The secondary rooting depth was 16 inches.

Depth of the 1st horizon was 3 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 0% limestone fragments.

Depth of the 2nd horizon was 25 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 5% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. The boundary between the 2nd horizon and the restrictive horizon was smooth. A restrictive horizon was reached at 28 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #L

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 80% canopy cover. There was 25% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 20%. The litter layer coverage was estimated at 80%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 14 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 14 inches. The secondary rooting depth was 14 inches.

Depth of the 1st horizon was 14 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 30% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was wavy. The restrictive horizon was reached at 14 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #M

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 10% large Oak and 90% juniper with 50% canopy cover. There was 40% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 50%. The litter layer coverage was estimated at 40%. Slope of this area was 5-10%.

Soil Characteristics

Total soil depth was 35 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 12 inches. The secondary rooting depth was 16 inches.

Depth of the 1st horizon was 4 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 15% limestone fragments.

Depth of the 2nd horizon was 31 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 10% limestone fragments.

The boundary between the 1st and 2nd horizon was wavy. No restrictive horizon was reached at 35 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #N

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 10% large Oak and 90% juniper with 50% canopy cover. There was 50% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 20%. The litter layer coverage was estimated at 50%. Slope of this area was 5-10%.

Soil Characteristics

Total soil depth was 32 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 12 inches. The secondary rooting depth was 16 inches.

Depth of the 1st horizon was 5 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 0% limestone fragments.

Depth of the 2nd horizon was 27 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 0% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. No restrictive horizon was reached at 32 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #O

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 20% large Oak and 80% juniper with 60% canopy cover. There was 20% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 20%. The litter layer coverage was estimated at 40%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 32 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 12 inches. The secondary rooting depth was 16 inches.

Depth of the 1st horizon was 4 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

Depth of the 2nd horizon was 28 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 10% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. No restrictive horizon was reached at 32 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #P

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 10% large Oak and 90% juniper with 90% canopy cover. There was 50% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 80%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 22 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 8 inches. The secondary rooting depth was 18 inches.

Depth of the 1st horizon was 22 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 20% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was smooth. The restrictive horizon was reached at 22 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #Q

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 90% canopy cover. There was 70% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 15%. The litter layer coverage was estimated at 30%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 18 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 4 inches. The secondary rooting depth was 18 inches.

Depth of the 1st horizon was 10 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

Depth of the 2nd horizon was 8 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 15% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. The boundary between the 2nd horizon and the restrictive horizon was smooth. A restrictive horizon was reached at 18 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #R

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 50% large Oak and 50% juniper with 40% canopy cover. There was 90% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 10%. The litter layer coverage was estimated at 20%. Slope of this area was 0-5%.

Soil Characteristics

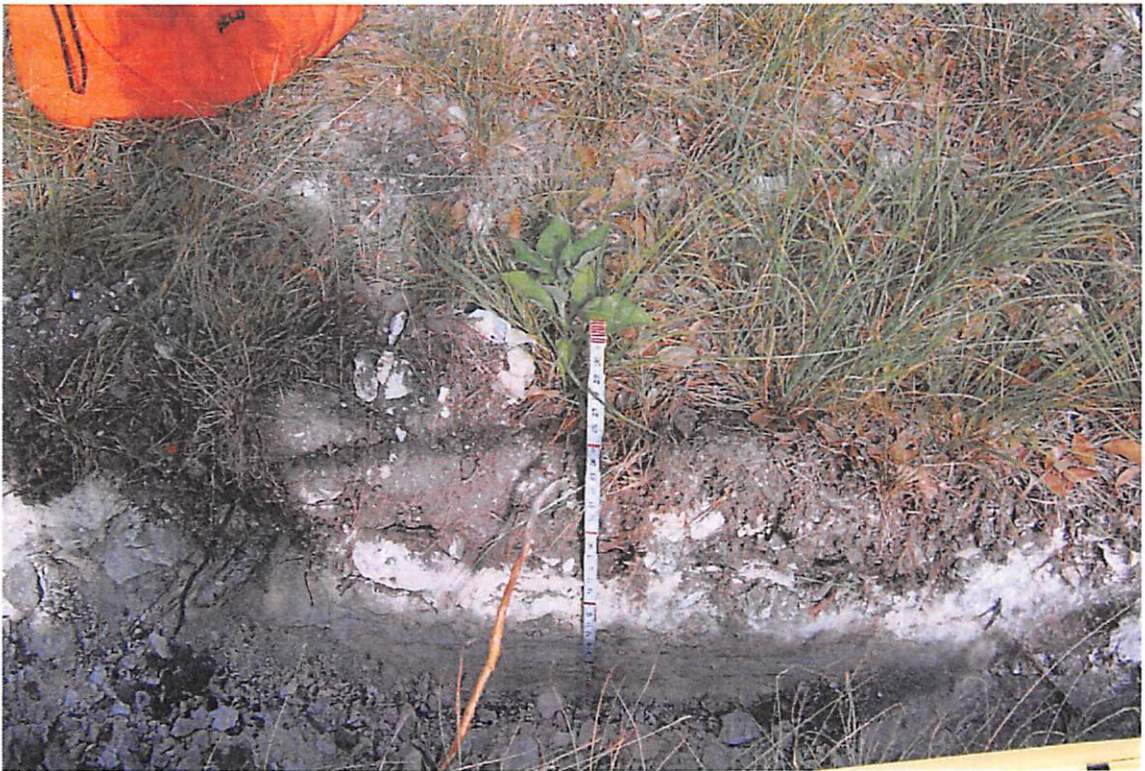
Total soil depth was 22 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 10 inches. The secondary rooting depth was 14 inches.

Depth of the 1st horizon was 6 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

Depth of the 2nd horizon was 16 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 15% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. The boundary between the 2nd horizon and the restrictive horizon was smooth. A restrictive horizon was reached at 22 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #S

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 10% large Oak and 90% juniper with 40% canopy cover. There was 75% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 20%. The litter layer coverage was estimated at 10%. Slope of this area was 0-5%.

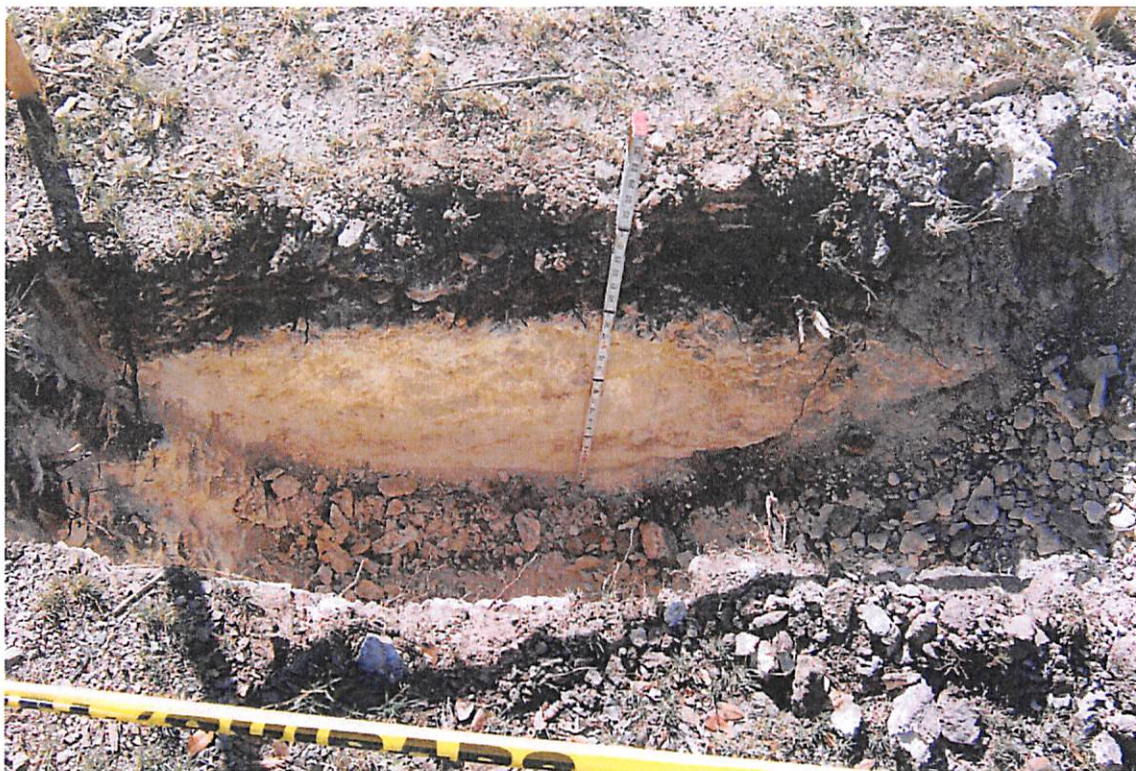
Soil Characteristics

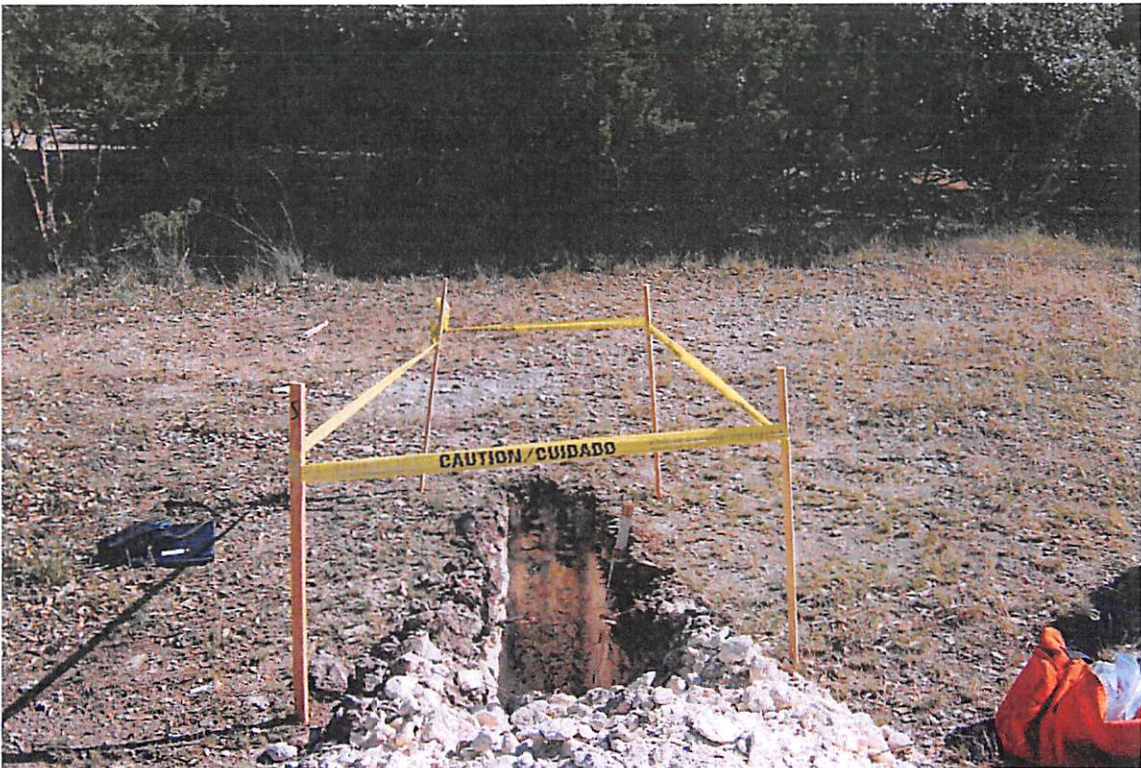
Total soil depth was 23 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 5 inches. The secondary rooting depth was 5 inches.

Depth of the 1st horizon was 5 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 0% limestone fragments.

Depth of the 2nd horizon was 18 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 0% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. The boundary between the 2nd horizon and the restrictive horizon was smooth. A restrictive horizon was reached at 23 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #T

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 50% canopy cover. There was 90% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 15%. The litter layer coverage was estimated at 20%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 20 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 12 inches. The secondary rooting depth was 20 inches.

Depth of the 1st horizon was 20 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 50% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was wavy. The restrictive horizon was reached at 20 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #U

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 50% large Oak and 50% juniper with 20% canopy cover. There was 100% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 20%. Slope of this area was 0-5%.

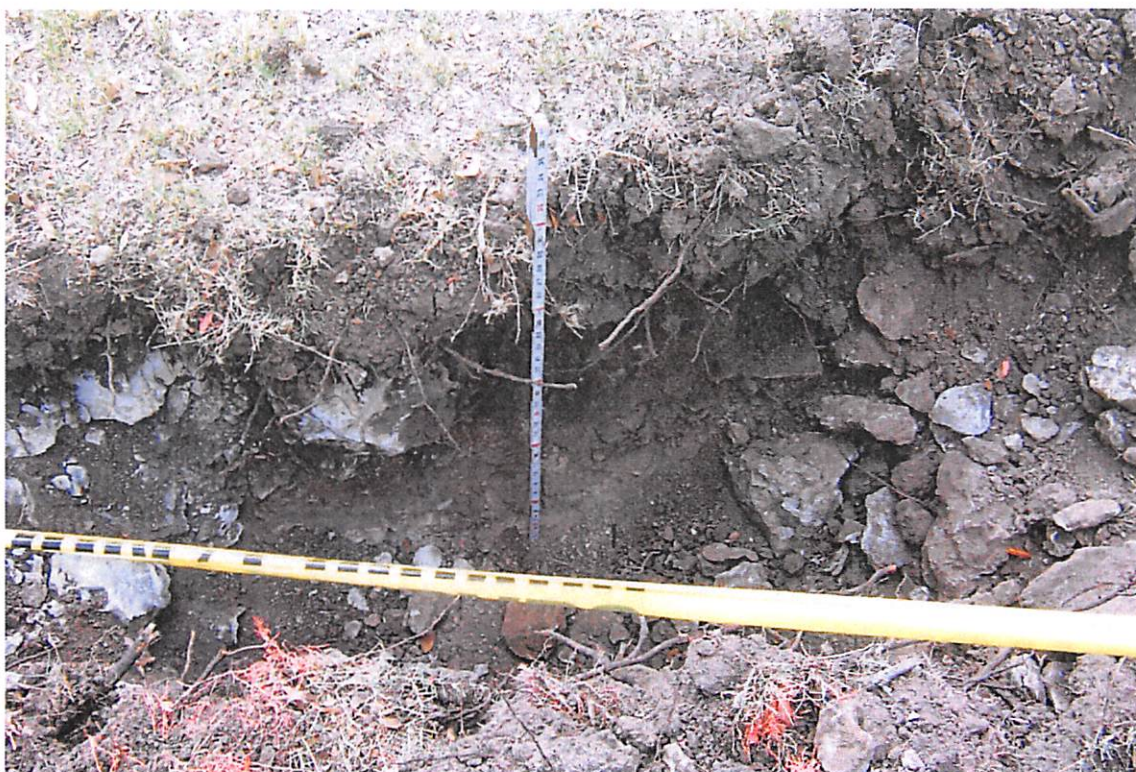
Soil Characteristics

Total soil depth was 29 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 17 inches. The secondary rooting depth was 21 inches.

Depth of the 1st horizon was 14 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 30% limestone fragments.

Depth of the 2nd horizon was 15 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 10% limestone fragments.

The boundary between the 1st and 2nd horizon was wavy. The boundary between the 2nd horizon and the restrictive horizon was wavy. A restrictive horizon was reached at 29 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #V

Vegetation Characteristics

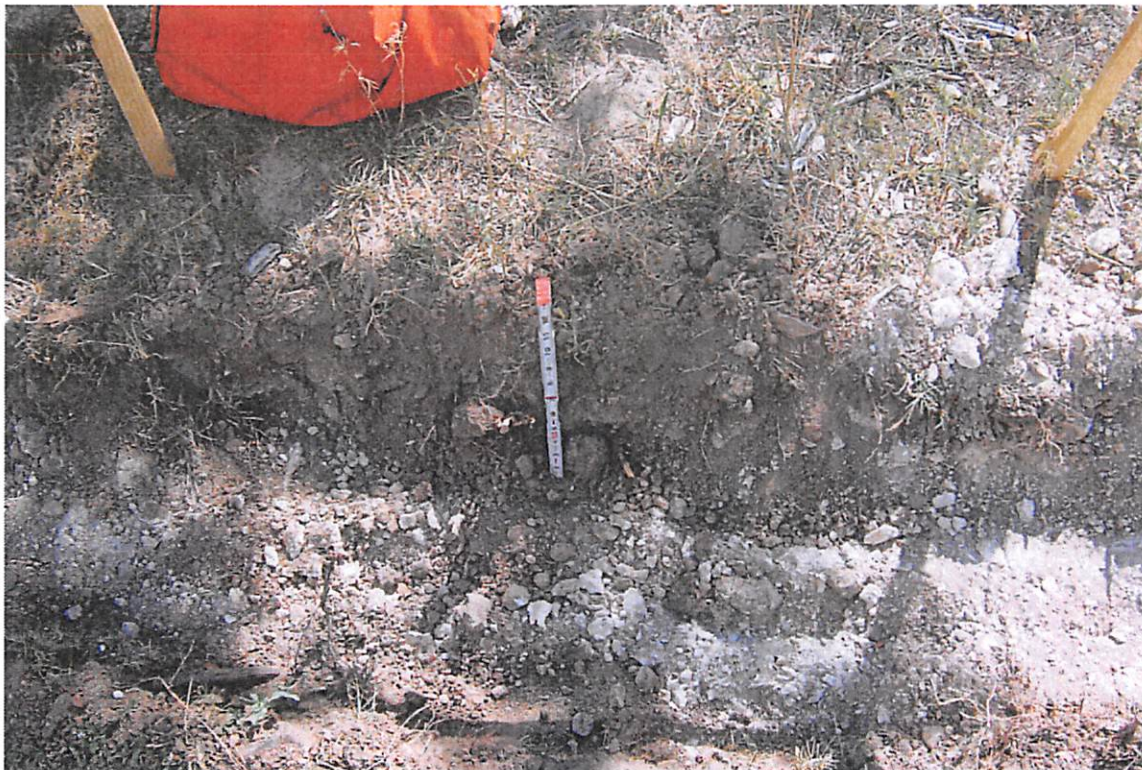
The woody vegetation of this site consisted of approximately 50% large Oak and 50% juniper with 50% canopy cover. There was 90% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 30%. The litter layer coverage was estimated at 20%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 7 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 7 inches. The secondary rooting depth was 7 inches.

Depth of the 1st horizon was 7 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 20% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was smooth. The restrictive horizon was reached at 7 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #W

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 60% large Oak and 40% juniper with 40% canopy cover. There was 80% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 0%. Slope of this area was 0-5%.

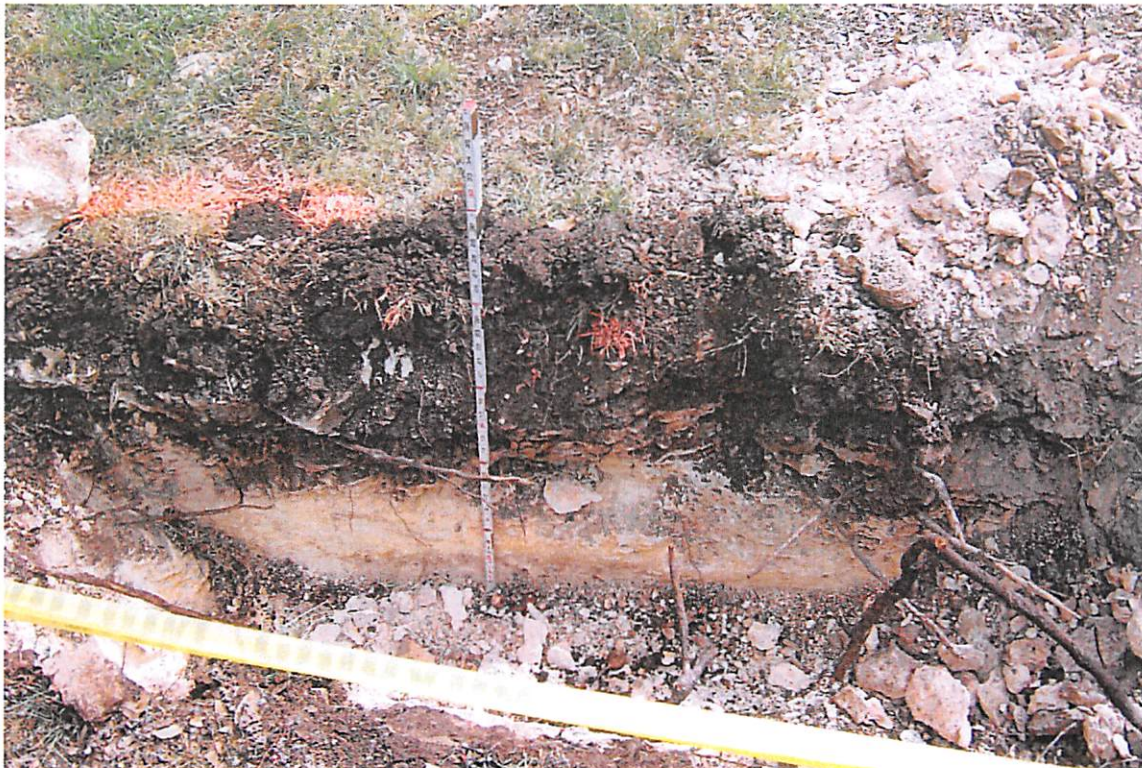
Soil Characteristics

Total soil depth was 22 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 7 inches. The secondary rooting depth was 12 inches.

Depth of the 1st horizon was 6 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 30% limestone fragments.

Depth of the 2nd horizon was 16 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 0% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. The boundary between the 2nd horizon and the restrictive horizon was wavy. A restrictive horizon was reached at 22 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #X

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 40% large Oak and 60% juniper with 40% canopy cover. There was 60% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 0%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 29 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 14 inches. The secondary rooting depth was 25 inches.

Depth of the 1st horizon was 7 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

Depth of the 2nd horizon was 22 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 0% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. No restrictive horizon was reached at 29 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #Y

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 60% large Oak and 40% juniper with 50% canopy cover. There was 60% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 50%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 18 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 10 inches. The secondary rooting depth was 18 inches.

Depth of the 1st horizon was 18 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 5% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was smooth. The restrictive horizon was reached at 18 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #Z

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 10% large Oak and 90% juniper with 40% canopy cover. There was 70% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 20%. Slope of this area was 5-10%.

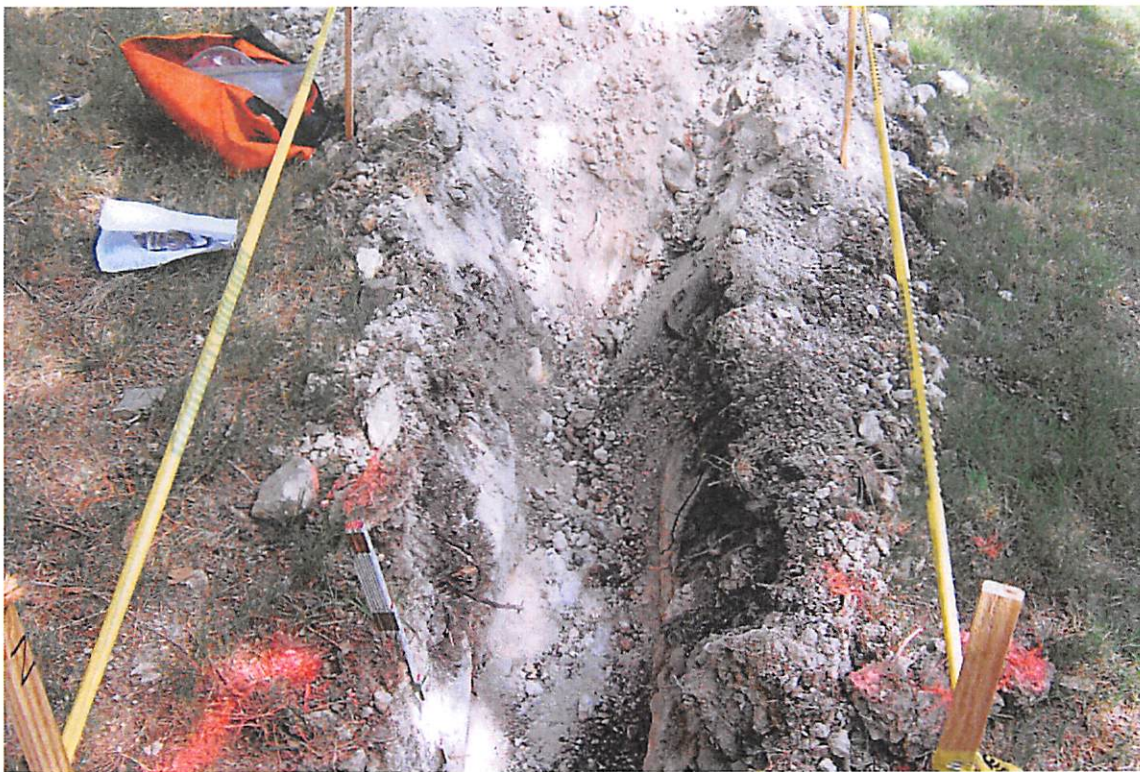
Soil Characteristics

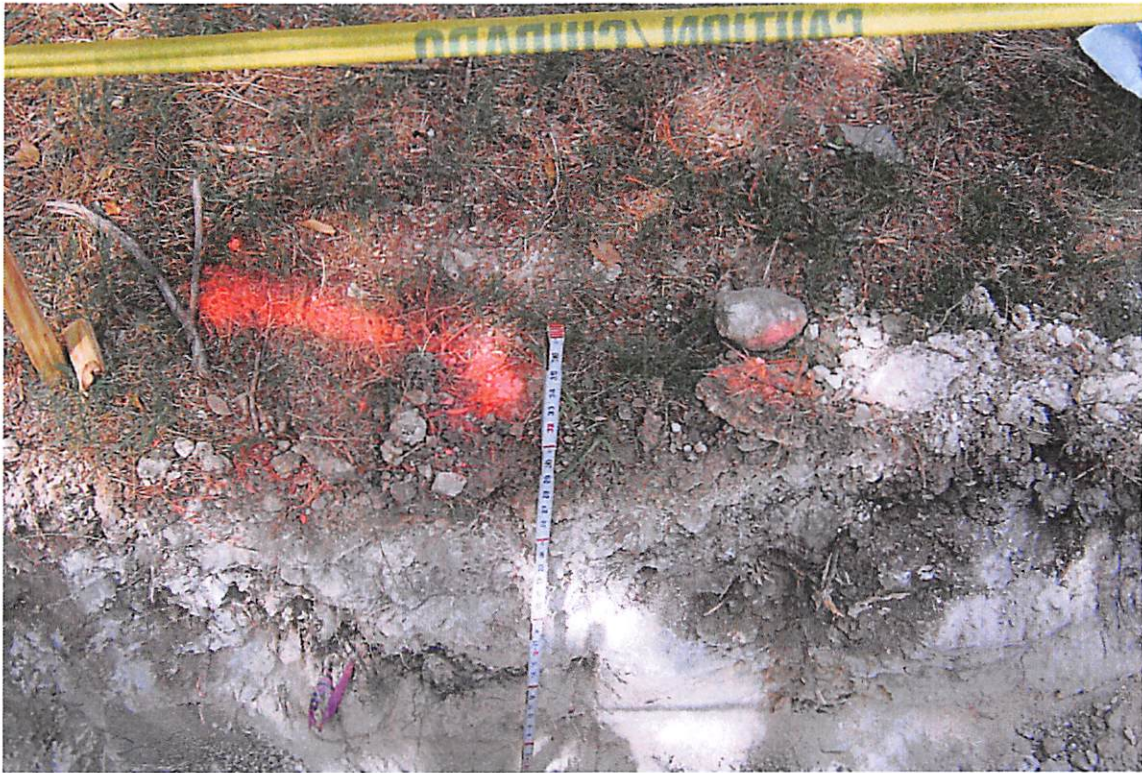
Total soil depth was 27 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 7 inches. The secondary rooting depth was 12 inches.

Depth of the 1st horizon was 3 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

Depth of the 2nd horizon was 24 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 5% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. No restrictive horizon was reached at 27 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.

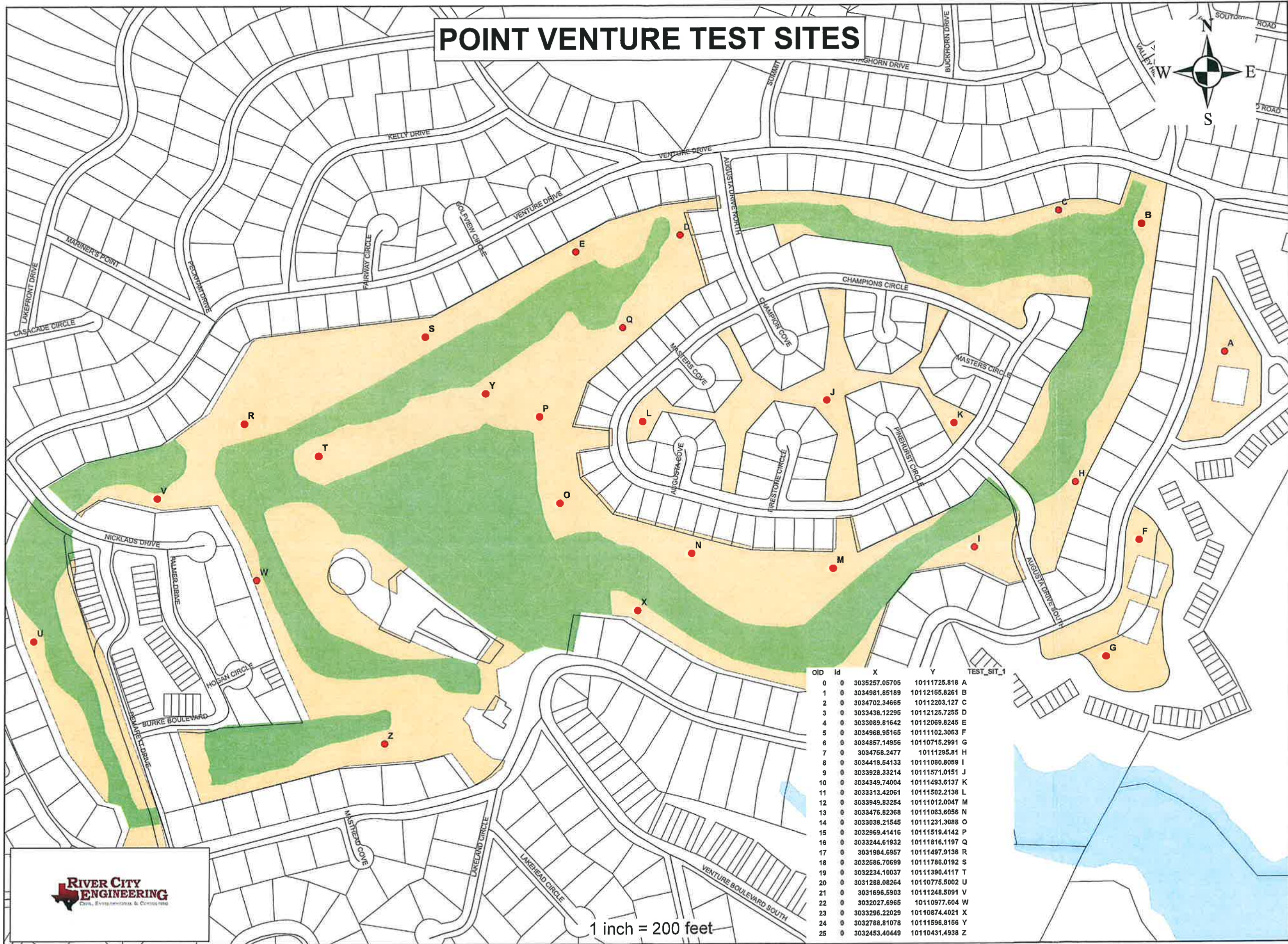




Appendix I

Site Maps

POINT VENTURE TEST SITES



1 inch = 200 feet

OID	Id	X	Y	TEST_SIT_1
0	0	3035257.05705	10111725.818	A
1	0	3034981.85189	10112155.8261	B
2	0	3034702.34665	10112203.127	C
3	0	3033438.12295	10112125.7255	D
4	0	3033089.81642	10112069.8245	E
5	0	3034968.95165	10111102.3063	F
6	0	3034857.14956	10110715.2991	G
7	0	3034758.2477	10111295.81	H
8	0	3034418.54133	10111080.8059	I
9	0	3033928.33214	10111571.0151	J
10	0	3034349.74004	10111493.6137	K
11	0	3033313.42061	10111502.2138	L
12	0	3033949.83254	10111012.0047	M
13	0	3033476.82368	10111063.6056	N
14	0	3033038.21545	10111231.3088	O
15	0	3032969.41416	10111519.4142	P
16	0	3033244.61932	10111816.1197	Q
17	0	3031984.6957	10111497.9138	R
18	0	3032586.70699	10111786.0192	S
19	0	3032234.10037	10111390.4117	T
20	0	3031288.08264	10110775.5002	U
21	0	3031696.5903	10111248.5091	V
22	0	3032027.6965	10110977.604	W
23	0	3033296.22029	10110874.4021	X
24	0	3032788.81078	10111596.8156	Y
25	0	3032453.40449	10110431.4938	Z

Appendix II

Soils Analysis



Report generated for:
 Waste Water Solutions
 9217 Hwy 290 West - Ste 100
 Austin, TX 78736

Travis County
 Laboratory Number: 276820
 Customer Sample ID: PV Smaple 1

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
 Department of Soil and Crop Sciences
 345 Heep Center, 2474 TAMU
 College Station, TX 77843-2474
 979-845-4816 (phone)
 979-845-5958 (FAX)
 Visit our website: <http://soiltesting.tamu.edu>

Sample received on: 6/22/2009
 Printed on: 6/25/2009
 Area Represented: not provided

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
pH	8.3	(5.8)	-	Mod. Alkaline							
Conductivity	235	(-)	umho/cm	None							Fertilizer Recommended
Nitrate-N	4	(-)	ppm								90 lbs N/acre
Phosphorus	4	(50)	ppm								115 lbs P2O5/acre
Potassium	211	(150)	ppm								0 lbs K2O/acre
Calcium	20,810	(180)	ppm								0 lbs Ca/acre
Magnesium	118	(50)	ppm								0 lbs Mg/acre
Sulfur	15	(13)	ppm								0 lbs S/acre
Sodium	78	(-)	ppm								
Iron											
Zinc											
Manganese											
Copper											
Boron											
Limestone Requirement											0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.



Soil Analysis Report

Soil, Water and Forage Testing Laboratory
 Department of Soil and Crop Sciences
 345 Heep Center, 2474 TAMU
 College Station, TX 77843-2474
 979-845-4816 (phone)
 979-845-5958 (FAX)
 Visit our website: <http://soiltesting.tamu.edu>

Report generated for:
 Waste Water Solutions
 9217 Hwy 290 West - Ste 100
 Austin, TX 78736

Sample received on: 6/22/2009
 Printed on: 6/25/2009
 Area Represented: not provided

Travis County
 Laboratory Number: 276821
 Customer Sample ID: PV Sample 2

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
pH	7.5	(5.8)	-	Slightly Alkaline							
Conductivity	208	(-)	umho/cm	None				CL*			Fertilizer Recommended
Nitrate-N	5	(-)	ppm								90 lbs N/acre
Phosphorus	0	(50)	ppm								120 lbs P2O5/acre
Potassium	165	(150)	ppm								0 lbs K2O/acre
Calcium	36,380	(180)	ppm								0 lbs Ca/acre
Magnesium	224	(50)	ppm								0 lbs Mg/acre
Sulfur	34	(13)	ppm								0 lbs S/acre
Sodium	174	(-)	ppm								
Iron											
Zinc											
Manganese											
Copper											
Boron											
Limestone Requirement											0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Report generated for:
Waste Water Solutions
9217 Hwy 290 West - Ste 100
Austin, TX 78736

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
345 Heep Center, 2474 TAMU
College Station, TX 77843-2474
979-845-4816 (phone)
979-845-5958 (FAX)
Visit our website: <http://soiltesting.tamu.edu>

Travis County
Laboratory Number: 276822
Customer Sample ID: PV Comp 1

Sample received on: 6/22/2009
Printed on: 6/25/2009
Area Represented: not provided

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
pH	7.5	(5.8)	-	Slightly Alkaline							
Conductivity	246	(-)	umho/cm	None					CL*		Fertilizer Recommended
Nitrate-N	6	(-)	ppm								85 lbs N/acre
Phosphorus	9	(50)	ppm								100 lbs P2O5/acre
Potassium	267	(150)	ppm								0 lbs K2O/acre
Calcium	19,544	(180)	ppm								0 lbs Ca/acre
Magnesium	230	(50)	ppm								0 lbs Mg/acre
Sulfur	23	(13)	ppm								0 lbs S/acre
Sodium	111	(-)	ppm								
Iron											
Zinc											
Manganese											
Copper											
Boron											
Limestone Requirement											0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Report generated for:
Waste Water Solutions
9217 Hwy 290 West - Ste 100
Austin, TX 78736

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
345 Heep Center, 2474 TAMU
College Station, TX 77843-2474
979-845-4816 (phone)
979-845-5958 (FAX)
Visit our website: <http://soiltesting.tamu.edu>

Travis County
Laboratory Number: 276823
Customer Sample ID: PV Comp 2

Sample received on: 6/22/2009
Printed on: 6/25/2009
Area Represented: not provided

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
pH	7.6	(5.8)	-	Mod. Alkaline							
Conductivity	319	(-)	umho/cm	None							Fertilizer Recommended
Nitrate-N	6	(-)	ppm								85 lbs N/acre
Phosphorus	0	(50)	ppm								120 lbs P2O5/acre
Potassium	138	(150)	ppm								20 lbs K2O/acre
Calcium	37,224	(180)	ppm								0 lbs Ca/acre
Magnesium	174	(50)	ppm								0 lbs Mg/acre
Sulfur	29	(13)	ppm								0 lbs S/acre
Sodium	132	(-)	ppm								
Iron											
Zinc											
Manganese											
Copper											
Boron											
Limestone Requirement											0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.



Report generated for:
Waste Water Solutions
9217 Hwy 290 West - Ste 100
Austin, TX 78736

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
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979-845-5958 (FAX)
Visit our website: <http://soiltesting.tamu.edu>

Sample received on: 6/22/2009
Printed on: 6/25/2009
Area Represented: not provided

Travis County

Laboratory Number: 276824

Customer Sample ID: PV Comp 3

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.
pH	7.7	(5.8)	-	Mod. Alkaline						
Conductivity	189	(-)	umho/cm	None						CL*
Nitrate-N	6	(-)	ppm							
Phosphorus	1	(50)	ppm							
Potassium	115	(150)	ppm							
Calcium	37,522	(180)	ppm							
Magnesium	167	(50)	ppm							
Sulfur	22	(13)	ppm							
Sodium	124	(-)	ppm							
Iron										
Zinc										
Manganese										
Copper										
Boron										
Limestone Requirement										0.00 tons 100ECCE/acre

Fertilizer Recommended

85 lbs N/acre
120 lbs P2O5/acre
55 lbs K2O/acre
0 lbs Ca/acre
0 lbs Mg/acre
0 lbs S/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Appendix III

USDA Soil Survey Map



Appendix IV

Profile Hole Information Sheets

Project Point Venture Profile Hole # A County Travis
Date 6-18-09

- (1) Total depth of the profile hole 28"
- (2) Primary rooting depth 18"
- (3) Secondary rooting depth 18"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 28"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 15%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Wavy
- (6) Restrictive horizons 28"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # A County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 100%	5 % Canopy Cover	100 %	5 % Visible	70 %	0 %- 5 %
Juniper					
Small Oak					

Comments: Pictures 7,8,9

Refusal at 28"	1=DK BRN	Color Key
Stopped Digging At “	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # B County Travis
Date 6-18-09

- (1) Total depth of the profile hole 30"
- (2) Primary rooting depth 4"
- (3) Secondary rooting depth 15"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 6"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon 24"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 5%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons No
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # B County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 20%	100% Canopy Cover	20 %	0 % Visible	100 %	0 %- 5 %
Juniper 80%					
Small Oak					

Comments: Pictures 10,11,12

Color Key

Refusal at	1=DK BRN	2=LT Tan
Stopped Digging At 30 “	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # C County Travis
Date 6-18-09

- (1) Total depth of the profile hole 32"
- (2) Primary rooting depth 6"
- (3) Secondary rooting depth 12"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 6"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 5%
- (A) Depth of the horizon 26"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 5%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 32"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # c County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 20%	50 % Canopy Cover	50% %	20% % Visible	50 %	5 %- 10 %
Juniper 80%					
Small Oak					

Comments: Pictures 13,14,15

Refusal at 32"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # D County Travis
Date 6-18-09

- (1) Total depth of the profile hole 31"
- (2) Primary rooting depth 5"
- (3) Secondary rooting depth 19"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 5"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 5%
- (A) Depth of the horizon 26"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons No
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # D County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 10%	80 % Canopy Cover	60 %	10 % Visible	80 %	0 %- 5 %
Juniper 90%					
Small Oak					

Comments: Pictures 16,17,18

Refusal at	Color Key
	1=DK BRN 2=LT Tan
Stopped Digging At 31 “	3=LT Tan w/ orange Stn 4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn 6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # E County Travis
Date 6-18-09

- (1) Total depth of the profile hole 31"
- (2) Primary rooting depth 5"
- (3) Secondary rooting depth 26"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 5"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon 26"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) smooth
- (6) Restrictive horizons 31"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # E County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 20%	40%	90%	15%	40%	0
Juniper 80%	% Canopy Cover	%	% Visible	%	5 %
Small Oak					

Comments: Pictures 19,20,21

Refusal at 31"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # F County Travis
Date 6-18-09

- (1) Total depth of the profile hole 21"
- (2) Primary rooting depth 9"
- (3) Secondary rooting depth 13"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 21"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 20%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Wavy
- (6) Restrictive horizons 21"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # F County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 100%	5 % Canopy Cover	100 %	5 % Visible	0 %	0 %- 5 %
Juniper					
Small Oak					

Comments: Pictures 1,2,3

Refusal at 21"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # G County Travis
Date 6-18-09

- (1) Total depth of the profile hole 25"
- (2) Primary rooting depth 8"
- (3) Secondary rooting depth 18"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 25"
 - (B) Soil texture Clay Loam
 - (C) Soil structure Granular
 - (D) Soil color Dark Brown
 - (E) Mottling No
 - (F) Percent coarse fragments 10%
 - (A) Depth of the horizon _____
 - (B) Soil texture _____
 - (C) Soil structure _____
 - (D) Soil color _____
 - (E) Mottling _____
 - (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 25"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # G County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 100%	5 % Canopy Cover	100 %	5 % Visible	0 %	0 %- 5 %
Juniper					
Small Oak					

Comments: Pictures 1,2,3

Refusal at 25"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # H County Travis
Date 6-18-09

- (1) Total depth of the profile hole 24"
- (2) Primary rooting depth 14"
- (3) Secondary rooting depth 21"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 24"
 - (B) Soil texture Clay Loam
 - (C) Soil structure granular
 - (D) Soil color Dark Brown
 - (E) Mottling No
 - (F) Percent coarse fragments 20%
 - (A) Depth of the horizon _____
 - (B) Soil texture _____
 - (C) Soil structure _____
 - (D) Soil color _____
 - (E) Mottling _____
 - (F) Percent coarse fragments _____
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) NA
- (6) Restrictive horizons NA
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # H County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak	50 % Canopy Cover	80 %	10 % Visible	20 %	0 %- 5 %
Juniper 100%					
Small Oak					

Comments: Pictures 37,38,39

Color Key

Refusal at	1=DK BRN	2=LT Tan
Stopped Digging At 24 “	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # 1 County Travis
Date 6-18-09

- (1) Total depth of the profile hole 29"
- (2) Primary rooting depth 8"
- (3) Secondary rooting depth 14"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 11"
 - (B) Soil texture Clay Loam
 - (C) Soil structure Granular
 - (D) Soil color Dark Brown
 - (E) Mottling No
 - (F) Percent coarse fragments 0%
 - (A) Depth of the horizon 18"
 - (B) Soil texture Class III Caliche
 - (C) Soil structure Granular
 - (D) Soil color Light Tan
 - (E) Mottling No
 - (F) Percent coarse fragments 10%
 - (A) Depth of the horizon _____
 - (B) Soil texture _____
 - (C) Soil structure _____
 - (D) Soil color _____
 - (E) Mottling _____
 - (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons NA
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # 1 County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 20%	50 % Canopy Cover	50 %	0 % Visible	50 %	0 %- 5 %
Juniper 80%					
Small Oak					

Comments: Pictures 34,35,36

Refusal at	Color Key
Stopped Digging At 29 “	1=DK BRN
	2=LT Tan
	3=LT Tan w/ orange Stn
	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn
	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # J County Travis
Date 6-18-09

- (1) Total depth of the profile hole 26"
- (2) Primary rooting depth 9"
- (3) Secondary rooting depth 19"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 3"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon 23"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 5%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Wavy
- (6) Restrictive horizons 26"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # J County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 10%	70 % Canopy Cover	60 %	15% % Visible	20 %	0 %- 5 %
Juniper 90%					
Small Oak					

Comments: Pictures 28,29,30

Refusal at 26"	1=DK BRN	Color Key
Stopped Digging At “	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # K County Travis
Date 6-18-09

- (1) Total depth of the profile hole 28"
- (2) Primary rooting depth 8"
- (3) Secondary rooting depth 16"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 3"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon 25"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 5%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 28"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # K County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 100%	10 % Canopy Cover	95 %	10 % Visible	10 %	0 %- 5 %
Juniper					
Small Oak					

Comments: Pictures 31,32,33

Refusal at 28"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # L County Travis
Date 6-18-09

- (1) Total depth of the profile hole 14"
- (2) Primary rooting depth 14"
- (3) Secondary rooting depth 14"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 14"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 30%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Wavy
- (6) Restrictive horizons 14"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # L County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 0%	80 % Canopy Cover	25 %	20 % Visible	80 %	0 %- 5 %
Juniper 100%					
Small Oak					

Comments: Pictures 25,26,27

Refusal at 14"	1=DK BRN	Color Key
Stopped Digging At “	3=LT Tan w/ orange Stn	2=LT Tan
	5= LT Tan with Orange and Pink Stn	4=LT Tan w/ pink Stn
		6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # M County Travis
Date 6-18-09

- (1) Total depth of the profile hole 35"
- (2) Primary rooting depth 12"
- (3) Secondary rooting depth 16"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 4"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 15%
- (A) Depth of the horizon 31"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Wavy
- (6) Restrictive horizons NA
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # M County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 10%	50 % Canopy Cover	40 %	50 % Visible	40 %	5 %- 10 %
Juniper 90%					
Small Oak					

Comments: Pictures 40,41,42

Refusal at	Color Key
	1=DK BRN
	2=LT Tan
Stopped Digging At 35 “	3=LT Tan w/ orange Stn
	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn
	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # N County Travis
Date 6-18-09

- (1) Total depth of the profile hole 32"
- (2) Primary rooting depth 12"
- (3) Secondary rooting depth 16"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 5"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Light Brown
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon 27"
- (B) Soil texture Class III Caliche
- (C) Soil structure granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons NA
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # N County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 10%	50 % Canopy Cover	50 %	20 % Visible	50 %	5 %- 10 %
Juniper 90%					
Small Oak					

Comments: Pictures 43,44,45

Refusal at 32"	1=DK BRN	Color Key
Stopped Digging At “	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # 0 County Travis
Date 6-18-09

- (1) Total depth of the profile hole 32"
- (2) Primary rooting depth 12"
- (3) Secondary rooting depth 16"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 4"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon 28"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons No
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # 0 County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 20%	60 % Canopy Cover	20 %	20 % Visible	40 %	0 %- 5 %
Juniper 80%					
Small Oak					

Comments: Pictures 49,50,51

			Color Key	
Refusal at 32"			1=DK BRN	2=LT Tan
Stopped Digging At “			3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
			5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # P County Travis
Date 6-18-09

- (1) Total depth of the profile hole 22"
- (2) Primary rooting depth 8"
- (3) Secondary rooting depth 18"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 22"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 20%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 22"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # P County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 10%	90 % Canopy Cover	50 %	0 % Visible	80 %	0 %- 5 %
Juniper 90%					
Small Oak					

Comments: Pictures 55,56,57

Refusal at 22"	1=DK BRN	Color Key
Stopped Digging At “	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # Q County Travis
Date 6-18-09

- (1) Total depth of the profile hole 18"
- (2) Primary rooting depth 4"
- (3) Secondary rooting depth 48"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 10"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon 8"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 15%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 18"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # Q County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 100%	90 % Canopy Cover	70 %	15 % Visible	30 %	0 %- 5 %
Juniper					
Small Oak					

Comments: Pictures 22,23,24

Refusal at 18"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # R County Travis
Date 6-18-09

- (1) Total depth of the profile hole 22"
- (2) Primary rooting depth 10"
- (3) Secondary rooting depth 14"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 6"
 - (B) Soil texture Clay Loam
 - (C) Soil structure Granular
 - (D) Soil color Dark Brown
 - (E) Mottling No
 - (F) Percent coarse fragments 10%
 - (A) Depth of the horizon 16"
 - (B) Soil texture Class III Caliche
 - (C) Soil structure Granular
 - (D) Soil color Light Tan
 - (E) Mottling No
 - (F) Percent coarse fragments 15%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 22"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # R County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 50%	40 % Canopy Cover	90 %	10 % Visible	20 %	0 %- 5 %
Juniper 50%					
Small Oak					

Comments: Pictures 64,65,66

Refusal at 22"	1=DK BRN	Color Key
Stopped Digging At “	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # S County Travis
Date 6-18-09

- (1) Total depth of the profile hole 23"
- (2) Primary rooting depth 5"
- (3) Secondary rooting depth 5"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 5"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 15%
- (A) Depth of the horizon 18"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 23"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # S County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 10%	40 % Canopy Cover	75% %	20% % Visible	10 %	0 %- 5 %
Juniper 90%					
Small Oak					

Comments: Pictures 58,59,60

Refusal at 23"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # T County Travis
Date 6-18-09

- (1) Total depth of the profile hole 20"
- (2) Primary rooting depth 12"
- (3) Secondary rooting depth 20"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 20"
 - (B) Soil texture Clay Loam
 - (C) Soil structure Granular
 - (D) Soil color Dark Brown
 - (E) Mottling No
 - (F) Percent coarse fragments 50%
 - (A) Depth of the horizon _____
 - (B) Soil texture _____
 - (C) Soil structure _____
 - (D) Soil color _____
 - (E) Mottling _____
 - (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Wavy
- (6) Restrictive horizons 20"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # 1 County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 100%	50 % Canopy Cover	90 %	15 % Visible	20 %	0 %- 5 %
Juniper					
Small Oak					

Comments: Pictures 61,62,63

Color Key

Refusal at 20"	1=DK BRN	2=LT Tan
Stopped Digging At "	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # U County Travis
Date 6-18-09

- (1) Total depth of the profile hole 29"
- (2) Primary rooting depth 17"
- (3) Secondary rooting depth 21"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 14"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 30%
- (A) Depth of the horizon 15"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Wavy
- (6) Restrictive horizons 29"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # U County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 50%	20% % Canopy Cover	100% %	0% % Visible	20% %	0 %- 5 %
Juniper 50%					
Small Oak					

Comments: Pictures 70,71,72

Refusal at 29"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # V County Travis
Date 6-18-09

- (1) Total depth of the profile hole 7"
- (2) Primary rooting depth 7"
- (3) Secondary rooting depth 7"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 7"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 20%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 7"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # v County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 50%	50 % Canopy Cover	90 %	30 % Visible	20 %	0 %- 5 %
Juniper 50%					
Small Oak					

Comments: Pictures 67,68,69

Refusal at 7"	1=DK BRN	Color Key
Stopped Digging At “	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # W County Travis
Date 6-18-09

- (1) Total depth of the profile hole 22"
- (2) Primary rooting depth 7"
- (3) Secondary rooting depth 12"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 6"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 30%
- (A) Depth of the horizon 16"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 22"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # w County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 60%	40 % Canopy Cover	80 %	0 % Visible	0 %	0 %- 5 %
Juniper 40%					
Small Oak					

Comments: Pictures 73,74,75

Refusal at 22"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # X County Travis
Date 6-18-09

- (1) Total depth of the profile hole 29"
- (2) Primary rooting depth 14"
- (3) Secondary rooting depth 25"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 7"
- (B) Soil texture Clay Loam
- (C) Soil structure granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon 22"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons NA
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # x County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 40%	40 % Canopy Cover	60 %	0 % Visible	0 %	0 %- 5 %
Juniper 60%					
Small Oak					

Comments: Pictures 46,47,48

Refusal at	Color Key
1=DK BRN	2=LT Tan
3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # Y County Travis
Date 6-18-09

- (1) Total depth of the profile hole 18"
- (2) Primary rooting depth 10"
- (3) Secondary rooting depth 18"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 18"
 - (B) Soil texture Clay Loam
 - (C) Soil structure Granular
 - (D) Soil color Dark Brown
 - (E) Mottling No
 - (F) Percent coarse fragments 5%
 - (A) Depth of the horizon _____
 - (B) Soil texture _____
 - (C) Soil structure _____
 - (D) Soil color _____
 - (E) Mottling _____
 - (F) Percent coarse fragments _____
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 18"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # Y County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 60%	50 % Canopy Cover	60 %	0 % Visible	50 %	0 %- 5 %
Juniper 40%					
Small Oak					

Comments: Pictures 52,53,54

Refusal at 18	1=DK BRN	Color Key
Stopped Digging At “	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # Z County Travis
Date 6-18-09

- (1) Total depth of the profile hole 27"
- (2) Primary rooting depth 7"
- (3) Secondary rooting depth 12"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 3"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon 24"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 5%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons NA
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # z County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 10%	40 % Canopy Cover	70 %	0% % Visible	20 %	5 %- 10 %
Juniper 90%					
Small Oak					

Comments: Pictures 76,77,78

Refusal at	Color Key
Stopped Digging At 27 “	1=DK BRN 2=LT Tan
	3=LT Tan w/ orange Stn 4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn 6=LT Tan w/ yellow Stn

ATTACHMENT M
ANNUAL SOIL ANALYSES

Email information for report date:
3/19/24 13:30
H005445

INFRAMARK

Attn: Alan Gould
alan.gould@Inframark.com

14050 Summit Drive Suite 103
Austin, TX 78728

Please contact us for your sampling needs or if you have any questions. Some convenient contacts are listed below. You can also access your results and reports through our ClientConnect™ portal on our website (www.aqua-techlabs.com).

For sampling questions:

samplingbryan@aqua-techlabs.com (Bryan area)
samplingaustin@aqua-techlabs.com (Austin area)

reporting@aqua-techlabs.com (report questions)

Aqua-Tech values you as a customer and encourages you to speak with our staff at 979-778-3707 or the above emails if you have questions.

Thank you for your business,
June M. Brien
Executive Technical Director

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The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with TNI and/or through the TCEQ Drinking Water Commercial Laboratory Approval Program.

The following abbreviations indicate certification status:

NEL	TNI accredited parameter.
ANR	Accreditation not offered by the State of Texas.
DWP	Approval through the TCEQ Drinking Water Commercial Laboratory Approval Program.
INF	Aqua-Tech Laboratories, Inc. is not accredited for this parameter. It is reported on an informational basis only.

Certificate: T104704371-23-27



TCEQ Lab ID T104704371

Subcontracted data summarized in this report is indicated by "Sub" in the Lab column.

General Definitions:

NR	Not Reported.
RPD	Relative Percent Difference.
% R	Percent Recovery.
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The Sample Quantitation Limit is the value below which the parameter cannot reliably be detected. The SQL includes all sample preparations, dilutions and / or concentrations.
Adj MDL	The Adjusted Method Detection Limit is the MDL value adjusted for any sample dilutions or concentrations.
MDL	The Method Detection Limit is the lowest theoretical value that is statistically different from zero for a specific method, taking into account all preparation steps and instrument settings.

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Sample Collected" field of this report as "Client" or "CLT".

Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

Record Retention:

All reports, raw data, and associated quality control data are kept on file for 10 years before being destroyed. Any client that would like copies of records must contact Aqua-Tech Laboratories, Inc. no later than six months prior to the scheduled disposal. An administrative fee for retrieval and distribution will apply.

This report was approved by:

June M. Brien, Technical Director

The results in this report apply only to the samples analyzed. This analytical report must be reproduced in its entirety unless written permission is granted by Aqua-Tech Laboratories, Inc.

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Analytical Report

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Report Printed: 3/19/24 13:30
H005445

See attached subcontract report for additional analysis and fertilizer recommendations.

Point Venture WWTP Soil 0-6 Inches			Collected: 02/13/24 09:42 by Received: 02/13/24 14:29 by Bradley Land			Type Comp	Matrix Solid		C-O-C # N/A		
Lab ID#	H005445-01	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch
General Chemistry											
% Solids	79.4	g/100g (%)			0.10	0.10	0.10	Austin	02/19/24 08:45 SR	SM2540 G 2015	M173540 NEL
Total Kjeldahl Nitrogen as N	2000	mg/kg dry			0.13	40.9	62.9	Bryan	02/20/24 14:06 KMA	SM4500-NH3 G 2011	M173599 ANR
Plant Available Parameters											
Total Nitrogen	2010	mg/kg dry wt.				N/A	N/A	Calc	03/14/24 13:09 PMY	Calculation	M174697 ANR
Please see the attached subcontract report for subcontracted data.											

Point Venture WWTP Soil 6-18 Inches			Collected: 02/13/24 09:42 by Received: 02/13/24 14:29 by Bradley Land				Type Comp		Matrix Solid		C-O-C # N/A	
Lab ID#	H005445-02	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
General Chemistry												
% Solids		81.3	g/100g (%)		0.10	0.10	0.10	Austin	02/19/24 08:45 SR	SM2540 G 2015	M173540	NEL
Total Kjeldahl Nitrogen as N		1770	mg/kg dry		0.13	40.0	61.5	Bryan	02/20/24 14:06 KMA	SM4500-NH3 G 2011	M173599	ANR
Plant Available Parameters												
Total Nitrogen		1780	mg/kg dry wt.			N/A	N/A	Calc	03/14/24 13:09 PMY	Calculation	M174697	ANR
Please see the attached subcontract report for subcontracted data.												

Point Venture WWTP Soil 18-30 Inches			Collected: 02/13/24 09:42 by Received: 02/13/24 14:29 by Bradley Land			Type Comp	Matrix Solid		C-O-C # N/A		
Lab ID#	H005445-03	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch
General Chemistry											
% Solids	78.4	g/100g (%)			0.10	0.10	0.10	Austin	02/19/24 08:45 SR	SM2540 G 2015	M173540 NEL
Total Kjeldahl Nitrogen as N	1790	mg/kg dry			0.13	41.4	63.6	Bryan	02/20/24 14:06 KMA	SM4500-NH3 G 2011	M173599 ANR
Plant Available Parameters											
Total Nitrogen	1800	mg/kg dry wt.				N/A	N/A	Calc	03/14/24 13:09 PMY	Calculation	M174697 ANR
Please see the attached subcontract report for subcontracted data.											

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Analytical Report

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Report Printed:

3/19/24 13:30

H005445

General Chemistry - Quality Control

Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch
% Solids - SM2540 G 2015												<i>Austin</i>
Blank	<0.10	g/100g (%)	0.10	0.10	02/19/24 08:45 SR							M173540
Duplicate	85.8	g/100g (%)	0.10	0.10	02/19/24 08:45 SR		85.6			0.338	10	M173540
Duplicate	85.8	%	0.100	0.100	02/19/24 08:45 SR		85.6			0.338	10	M173540
Total Kjeldahl Nitrogen as N - SM4500-NH3 G 2011												<i>Bryan</i>
Initial Cal Check	4.71	mg/L			02/20/24 14:06 KMA	4.56		103	90 - 110			2402227
Low Cal Check	0.22	mg/L			02/20/24 14:06 KMA	0.200		112	70 - 130			2402227
Blank	<0.20	mg/kg wet	0.13	0.20	02/20/24 14:06 KMA							M173599
LCS	4.19	mg/kg wet	0.13	0.20	02/20/24 14:06 KMA	4.00		105	91 - 116			M173599
LCS Dup	4.22	mg/kg wet	0.13	0.20	02/20/24 14:06 KMA	4.00		105	91 - 116	0.738	10	M173599
Matrix Spike	3500	mg/kg dry	80.2	123	02/20/24 14:06 KMA	2470	942	104	88.2 - 119			M173599
Matrix Spike Dup	3470	mg/kg dry	80.2	123	02/20/24 14:06 KMA	2470	942	102	88.2 - 119	1.21	20	M173599

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
H005445-01										
% Solids	SM2540 G 2015	2/19/24 8:45 SR	Austin	C	5.00	g	5.00	mL	1	M173540
Subcontract	Sub Contract Data Entry	3/4/24 17:14 PMY	Bryan	-	-	-	-	-	-	M174206
Total Kjeldahl Nitrogen as N	SM4500-NH3 G 2011	2/20/24 9:13 CTG	Bryan	B	0.100	g	25.0	mL	1	M173599
Total Nitrogen	Calculation	3/14/24 13:09 PMY			1.00	g	1.00	mL	1	M174697
H005445-02										
% Solids	SM2540 G 2015	2/19/24 8:45 SR	Austin	C	5.00	g	5.00	mL	1	M173540
Subcontract	Sub Contract Data Entry	3/4/24 17:14 PMY	Bryan	-	-	-	-	-	-	M174206
Total Kjeldahl Nitrogen as N	SM4500-NH3 G 2011	2/20/24 9:13 CTG	Bryan	B	0.100	g	25.0	mL	1	M173599
Total Nitrogen	Calculation	3/14/24 13:09 PMY			1.00	g	1.00	mL	1	M174697
H005445-03										
% Solids	SM2540 G 2015	2/19/24 8:45 SR	Austin	C	5.00	g	5.00	mL	1	M173540
Subcontract	Sub Contract Data Entry	3/4/24 17:14 PMY	Bryan	-	-	-	-	-	-	M174206
Total Kjeldahl Nitrogen as N	SM4500-NH3 G 2011	2/20/24 9:13 CTG	Bryan	B	0.100	g	25.0	mL	1	M173599
Total Nitrogen	Calculation	3/14/24 13:09 PMY			1.00	g	1.00	mL	1	M174697

BRYAN FACILITY
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193



AUSTIN FACILITY
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

INFRAMARK

Report Printed:

3/19/24

13:30

H005445

Chain-of-Custody Summary

The following record summarizes custody for work orders sampled by Aqua-Tech Laboratories, Inc. personnel on route.

Original signatures are kept on file by Aqua-Tech Laboratories, Inc. and are available upon request.

WORK ORDER H005445

Cooler ID	Temperature °C	Condition Good?	On Ice?	Preservation Correct?	Custody Maintained by ATL?	See comments below or comments and qualifiers with analytical results explaining any "No" answers.	
Y021	3.4	Yes	Yes	Yes	Yes		
H005445-01	Comp	Sampling Begun:	2/13/24	8:40	Sampling Ended:	2/13/24	9:42
Container & Description		pH Checks / Comments		Container & Description		pH Checks / Comments	
A [SUB] TAMU SL 1LP				B SOIL TKN 0.25LP		C SOIL TS 0.1L	

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3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

INFRAMARK

Report Printed:

3/19/24 13:30

H005445

WORK ORDER H005445

Cooler ID	Temperature °C	Condition Good?	On Ice?	Preservation Correct?	Custody Maintained by ATL?	See comments below or comments and qualifiers with analytical results explaining any "No" answers.	
Y021	3.4	Yes	Yes	Yes	Yes		
H005445-03	Comp	Sampling Begun:	2/13/24 8:40		Sampling Ended:	2/13/24 9:42	
Container & Description		pH Checks / Comments		Container & Description		pH Checks / Comments	
A	[SUB] TAMU SL 1LP			B	SOIL TKN 0.25LP	C	SOIL TS 0.1L



Report generated for:
Aqua-Tech Laboratories, Inc.
635 Phil Gramm Blvd
BRYAN, TX 77807

Brazos County
Laboratory Number: 651446
Customer Sample ID: H005445-01A
Crop Grown: TURF FAIRWAYS , ATHLETIC FIELDS , ETC.

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
2478 TAMU
College Station, TX 77843-2478
(979)321-5960

Visit our website: <http://soiltesting.tamu.edu>

Sample received on: 2/20/2024

Printed on: 2/28/2024

Area Represented: 48 acres

SWFTL recommends <40 acres/sample

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.		
pH	8.2	(6.2)	-	Mod. Alkaline								
Conductivity	68	(-)	umho/cm	None							CL*	Fertilizer Recommended
Nitrate-N	8	(-)	ppm**								40 lbs N/acre	
Phosphorus	19	(50)	ppm								30 lbs P2O5/acre	
Potassium	332	(160)	ppm								0 lbs K2O/acre	
Calcium	17,884	(180)	ppm								0 lbs Ca/acre	
Magnesium	351	(50)	ppm								0 lbs Mg/acre	
Sulfur	127	(13)	ppm								0 lbs S/acre	
Sodium	62	(-)	ppm									
Iron												
Zinc												
Manganese												
Copper												
Boron												
Limestone Requirement											0.00 tons 100ECCE/acre	

Detailed Salinity Test (Saturated Paste Extract)			
	pH	7.2	
	Conductivity	0.73	mmhos/cm
	Sodium	46	ppm 2.021 meq/L
	Potassium	18	ppm 0.465 meq/L
	Calcium	67	ppm 3.344 meq/L
	Magnesium	8	ppm 0.639 meq/L
	SAR	1.43	
	SSP	31.25	

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Nitrogen: Apply suggested nitrogen rate and then apply 40 lbs/A of nitrogen every 4 to 6 weeks as needed.

Online fertilizer calculators to determine appropriate fertilizers and application rates.
<http://soiltesting.tamu.edu>



Report generated for:
Aqua-Tech Laboratories, Inc.
635 Phil Gramm Blvd
BRYAN, TX 77807

Brazos County
Laboratory Number: 651447
Customer Sample ID: H005445-02A
Crop Grown: TURF FAIRWAYS , ATHLETIC FIELDS , ETC.

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
2478 TAMU
College Station, TX 77843-2478
(979)321-5960

Visit our website: <http://soiltesting.tamu.edu>

Sample received on: 2/20/2024

Printed on: 2/28/2024

Area Represented: 48 acres

SWFTL recommends <40 acres/sample

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.		
pH	8.2	(6.2)	-	Mod. Alkaline								
Conductivity	75	(-)	umho/cm	None							CL*	Fertilizer Recommended
Nitrate-N	11	(-)	ppm**	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div>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*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Nitrogen: Apply suggested nitrogen rate and then apply 40 lbs/A of nitrogen every 4 to 6 weeks as needed.

Online fertilizer calculators to determine appropriate fertilizers and application rates.
<http://soiltesting.tamu.edu>



Report generated for:
Aqua-Tech Laboratories, Inc.
635 Phil Gramm Blvd
BRYAN, TX 77807

Brazos County
Laboratory Number: 651448
Customer Sample ID: H005445-03A
Crop Grown: TURF FAIRWAYS , ATHLETIC FIELDS , ETC.

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
2478 TAMU
College Station, TX 77843-2478
(979)321-5960

Visit our website: <http://soiltesting.tamu.edu>

Sample received on: 2/20/2024

Printed on: 2/28/2024

Area Represented: 48 acres

SWFTL recommends <40 acres/sample

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
pH	8.1	(6.2)	-	Mod. Alkaline							
Conductivity	51	(-)	umho/cm	None							Fertilizer Recommended
Nitrate-N	5	(-)	ppm**								50 lbs N/acre
Phosphorus	34	(50)	ppm								15 lbs P2O5/acre
Potassium	233	(160)	ppm								0 lbs K2O/acre
Calcium	13,487	(180)	ppm								0 lbs Ca/acre
Magnesium	237	(50)	ppm								0 lbs Mg/acre
Sulfur	101	(13)	ppm								0 lbs S/acre
Sodium	20	(-)	ppm								
Iron											
Zinc											
Manganese											
Copper											
Boron											
Limestone Requirement											0.00 tons 100ECCE/acre
Detailed Salinity Test (Saturated Paste Extract)											
	pH										7.1
	Conductivity										0.60 mmhos/cm
	Sodium										27 ppm 1.168 meq/L
	Potassium										13 ppm 0.334 meq/L
	Calcium										77 ppm 3.847 meq/L
	Magnesium										6 ppm 0.477 meq/L
	SAR										0.79
	SSP										20.05

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Nitrogen: Apply suggested nitrogen rate and then apply 40 lbs/A of nitrogen every 4 to 6 weeks as needed.

Online fertilizer calculators to determine appropriate fertilizers and application rates.
<http://soiltesting.tamu.edu>



Chain-of-Custody and Analysis Request

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

TAMU - Soil Lab

2610 F&B Road
College Station, TX 77845
Phone: (979) 845-4816

SHIPPED TO

DEFINITIONS
P Plastic
G Glass
L Liter
CM Custody Maintained
CTU Custody Transfer Unbroken
ATL Aqua-Tech Laboratories, Inc

Please use Sample ID as PO# and email reports to reporting@aquatechlabs.com.

Lines below document condition at receipt in lab (shipped to) listed above.

Please hold coolers for pick-up.

Cooler ID	Temp Read (C)	Corrected Temp (C)	Thermometer ID
01777			NA LABB

Sample ID
Sampled / Matrix

Analysis Request

H005445-01

2/13/24 09:42

Soil

Mehlich 3 - TAMU

S SL Plant Available	P Plant Available	Na Plant Available
Mg Plant Available	K Plant Available	Ca Plant Available

TAMU - 1:2 Soil Extract

pH	Conductivity (1:2)
----	--------------------

H005445-02

2/13/24 09:42

Soil

Calculation - TAMU

SAR Plant Available

Mehlich 3 - TAMU

Na Plant Available	S SL Plant Available	P Plant Available
NO3N Extractable	K Plant Available	Mg Plant Available
Ca Plant Available		

Saturated Paste - TAMU

Ca Water Soluble	Ca Water Soluble MEQ	Mg Water Soluble MEQ
Na Water Soluble	Na Water Soluble MEQ	Mg Water Soluble

TAMU - 1:2 Soil Extract

pH	Conductivity (1:2)
----	--------------------



T104704371
TX239

Aqua-Tech Laboratories, Inc.
Austin
3512 Montopolis Dr. Suite A
Austin, TX 78744
512.301.9559

Test results meet all accreditation/certification requirements unless stated otherwise.

Sample Custody

Relinquished (print & sign)	Sampler	Date	Time	Refrigerated / Sealed
<i>Michelle Bahr</i>	<input checked="" type="checkbox"/> Client	2-20-24	1350	<input checked="" type="checkbox"/> Sealed
Received (print & sign)	<input type="checkbox"/> Client	Date	Time	Refrigerated / Sealed
Relinquished (print & sign)	<input type="checkbox"/> Client	Date	Time	Refrigerated / Sealed
Received (print & sign)	<input type="checkbox"/> Client	Date	Time	Refrigerated / Sealed
Relinquished (print & sign)	<input type="checkbox"/> Client	Date	Time	Refrigerated / Sealed
Received (print & sign)	<input type="checkbox"/> Client	Date	Time	Refrigerated / Sealed
Relinquished (print & sign)	<input type="checkbox"/> Client	Date	Time	Refrigerated / Sealed
Received (print & sign)	<input type="checkbox"/> Client	Date	Time	Refrigerated / Sealed

(ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed above.)

Lab ID

() H005445-01 [A] - [SUB] TAMU SL 1LP

() H005445-02 [A] - [SUB] TAMU SL 1LP

SHIPPED TO: **TAMU - Soil Lab**

Page 2 of 2

Sample ID Sampled / Matrix	Analysis Request	(ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed above.)	Lab ID
H005445-03 02/13/24 09:42 Soil	SAR Plant Available	() H005445-03 [A] - [SUB] TAMU SL 1LP	
	Na Plant Available Mg Plant Available S SL Plant Available		
	<i>Calculation - TAMU</i> <i>Mehlich 3 - TAMU</i> K Plant Available NO3N Extractable		
	Ca Plant Available P Plant Available		
	<i>Saturated Paste - TAMU</i> Na Water Soluble Ca Water Soluble		
	Mg Water Soluble Mg Water Soluble MEQ		
	<i>TAMU - 1:2 Soil Extract</i> Conductivity (1:2)		
	pH		

ATTACHMENT N
EXISTING TLAP WQ0011385001



PERMIT NO. WQ0011385001

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

This is a renewal of Permit No.
WQ0011385001 issued
December 9, 2010.

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

Travis County Water Control and Improvement District - Point Venture

whose mailing address is

18606 Venture Drive
Point Venture, Texas 78645

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

General Description and Location of Waste Disposal System:

Description: The Point Venture Wastewater Treatment Facility consists of an activated sludge process plant using the complete mix mode. Treatment units include bar screens, aeration basin, final clarifier, aerobic sludge digester and chlorine contact chamber.

Interim I Phase – Surface Irrigation. The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.082 million gallons per day MGD (April - October) and 0.061875 MGD (November - March) via surface irrigation of 48 acres of a golf course. The facility includes two storage ponds with a total surface area of 0.6 acre and total capacity of 3.85 acre-feet and one steel tank with a total capacity of 13.04 acre-feet for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 1.95 acre-feet per year per acre irrigated (April - October) and 1.47 acre-feet per year per acre irrigated (November - March). The irrigated crop is Bermuda grass.

Interim II Phase – Surface Irrigation. The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.10 MGD via surface irrigation of 48 acres of a golf course. The facility includes two storage ponds with a total surface area of 0.6 acre and total capacity of 3.85 acre-feet and two steel tanks with a total capacity of 18.41 acre-feet for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 2.33 acre-feet per year per acre irrigated. The irrigated crop is Bermuda grass.

Final Phase – Surface Irrigation. The permittee is authorized to dispose of treated

domestic wastewater effluent at a daily average flow not to exceed 0.0822 MGD via surface irrigation of 33.576 acres of a golf course. The facility will include two storage ponds with a total surface area of 0.6 acre and total capacity of 3.85 acre-feet and two steel tanks with a total capacity of 18.41 acre-feet for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 2.74 acre-feet per year per acre irrigated. The irrigated crop is Bermuda grass.

Final Phase – Subsurface area drip dispersal system (SADDS). The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.0678 MGD via subsurface area drip irrigation system (SADDS) with a minimum area of 19.464 acres of a golf course. The facility will include one dosing tank with a total capacity of 339,000 gallons for storage of treated effluent prior to subsurface drip irrigation. Application rates shall not exceed 0.1 gallons per square foot per day. The permittee will maintain native grasses, native oaks and juniper trees and, on the open areas, bermuda grass and winter rye, on the SADDS disposal site.

Location: The wastewater treatment facility and disposal site are located approximately 6.5 miles south of the intersection (within the Village of Point Venture) of Farm-to-Market Road 1431 and Lohmans Crossing in Travis County, Texas 78645. The wastewater treatment facility is located adjacent to Venture Drive in the Village of Point Venture between the 1st and 2nd holes of the Point Venture Golf Course in Travis County, Texas 78645. (See Attachment A.)

Drainage Area: The wastewater treatment facility and disposal site are located in the drainage basin of Lake Travis in Segment No. 1404 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 on **December 1, 2024.**

ISSUED DATE: February 4, 2015


For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR SURFACE IRRIGATION

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 – 0.082 MGD (April – October) and 0.061875 MGD (November – March) in the Interim I Phase;
Daily Average Flow – 0.10 MGD in the Interim II Phase;
Daily Average Flow – 0.0822 MGD in the Final Phase from the treatment system

Quality: The following effluent limitations shall be required:

<u>Parameter</u>	<u>Effluent Concentrations</u> (Not to Exceed)			
	<u>Daily Average</u> mg/l	<u>7-Day Average</u> mg/l	<u>Daily Maximum</u> mg/	<u>Single Grab</u> mg/l
Biochemical Oxygen Demand (5-day)	10	15	25	35
Total Suspended Solids	15	25	40	60

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

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. A trace chlorine residual shall be maintained in the effluent at the point of irrigation application.

B. Monitoring Requirements:

<u>Parameter</u>	<u>Monitoring Frequency</u>	<u>Sample Type</u>
Flow	Five/week	Instantaneous
Biochemical Oxygen Demand (5-day)	One/month	Grab
Total Suspended Solids	One/month	Grab
pH	One/month	Grab
Chlorine Residual	One/month	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.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR SADDs

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 -- 0.0678 MGD in the Final Phase from the treatment system

Quality: The following effluent limitations shall be required:

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

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. A trace chlorine residual shall be maintained in the effluent at the point of irrigation application.

B. Monitoring Requirements:

<u>Parameter</u>	<u>Monitoring Frequency</u>	<u>Sample Type</u>
Flow	Five/week	Instantaneous
Biochemical Oxygen Demand (5-day)	One/month	Grab
Total Suspended Solids	One/month	Grab
pH	One/month	Grab
Chlorine Residual	One/month	Grab
<i>E. coli</i>	One/month	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 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. 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 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. 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 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 judgment 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 169) 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 Environmental Cleanup 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.

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SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site or co-disposal landfill. **The disposal of sludge 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 by the TCEQ. This provision does not authorize Distribution and Marketing of sludge. This provision does not authorize land application of Class A Sludge. This provision does not authorize the permittee to land apply sludge on property owned, leased or under the direct control of the permittee.**

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner which protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge 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 to assure compliance with these regulations.
3. 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 disposal practice.

B. Testing Requirements

1. Sewage sludge 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, which receives the prior approval of the TCEQ for the contaminants listed in Table 1 of 40 CFR Section 261.24. Sewage sludge 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 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 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 Remediation Support Division and the Regional Director (MC Region 11) 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 Remediation 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 Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

2. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceed the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration</u> (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 shall be treated by one of the following methods to ensure that the sludge meets either the Class A or Class B pathogen requirements.

- a. Six alternatives are available to demonstrate compliance with Class A sewage sludge. The first 4 options require either the density of fecal coliform in the sewage sludge be less than 1000 Most Probable Number (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. Below are the additional requirements necessary to meet the definition of a Class A sludge.

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 Section 312.82(a)(2)(A) for specific information.

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 degrees 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 percent.

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 Section 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 Section 312.82(a)(2)(C)(iv-vi) for specific information.

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.

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of shall 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.

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of shall 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. Three alternatives are available to demonstrate compliance with Class B criteria for sewage sludge.

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 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, the following site restrictions must be met if Class B sludge is land applied:

- i. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains 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 sewage sludge when the sewage sludge remains 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 sewage sludge.
- v. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.
- vi. Turf grown on land where sewage sludge is 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 sewage sludge.
- viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
- ix. Land application of sludge shall be in accordance with the buffer zone requirements found in 30 TAC Section 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 percent.

- 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 degrees Celsius. Volatile solids must be reduced by less than 17 percent 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 degrees Celsius. Volatile solids must be reduced by less than 15 percent 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 degrees 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 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees 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 percent 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 percent 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. Sewage sludge shall be injected below the surface of the land.
 - ii. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

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

Alternative 10-

- i. Sewage sludge 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 sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge 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):

<u>Amount of sewage sludge (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
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 sewage sludge applied to the land (dry weight basis).*

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

SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A or B 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 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

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

Table 3

<u>Pollutant</u>	<u>Monthly Average Concentration (milligrams per kilogram)*</u>
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 or Class B pathogen reduction requirements as defined above in Section I.B.3.

C. Management Practices

1. Bulk sewage sludge 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 requirements shall be land applied in a manner which complies with the Management Requirements in accordance with 30 TAC Section 312.44.
3. Bulk sewage sludge 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 sewage sludge sold or given away. The information sheet shall contain the following information:
 - a. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.
 - b. A statement that application of the sewage sludge 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 sewage sludge application rate for the sewage sludge 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 sewage sludge is 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 sewage sludge is 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 sewage sludge 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 sewage sludge.
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 sewage sludge disposal practice.

E. Record keeping Requirements

The sludge 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 sewage sludge 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 Section 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 B sludges, 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 Section 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC Section 312.83(b) have been met for each site on which bulk sewage sludge is 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 sewage sludge or a sewage sludge 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 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 Section 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 Section 312.47(a)(4)(A)(ii) or 30 TAC Section 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 report annually to the TCEQ Regional Office (MC Region 11) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30 of each year the following information:

1. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
2. The frequency of monitoring listed in Section I.C. which applies to the permittee.
3. Toxicity Characteristic Leaching Procedure (TCLP) results.
4. Identity of hauler(s) and TCEQ transporter number.
5. PCB concentration in sludge in mg/kg.
6. Date(s) of disposal.
7. Owner of disposal site(s).
8. Texas Commission on Environmental Quality registration number, if applicable.
9. Amount of sludge disposal dry weight (lbs/acre) at each disposal site.
10. The concentration (mg/kg) in the sludge 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.
11. Level of pathogen reduction achieved (Class A or Class B).
12. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B sludge, include information on how site restrictions were met.
13. Vector attraction reduction alternative used as listed in Section I.B.4.
14. Annual sludge production in dry tons/year.
15. Amount of sludge land applied in dry tons/year.

16. The certification statement listed in either 30 TAC Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge treatment activities, shall be attached to the annual reporting form.
17. 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 sewage sludge is applied.
 - c. The date and time bulk sewage sludge is applied to each site.
 - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk sewage sludge applied to each site.
 - e. The amount of sewage sludge (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
DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL**

- A. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 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 meets the requirements in 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge 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 disposal practice.
- D. Sewage sludge 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) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR Section 261.24. Sewage sludge 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 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 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 Remediation 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 Remediation 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 Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

- E. Sewage sludge 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 report annually to the TCEQ Regional Office (MC Region 11) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year the following information:

1. Toxicity Characteristic Leaching Procedure (TCLP) results.
2. Annual sludge production in dry tons/year.
3. Amount of sludge disposed in a municipal solid waste landfill in dry tons/year.
4. Amount of sludge transported interstate in dry tons/year.
5. A certification that the sewage sludge meets the requirements of 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
6. Identity of hauler(s) and transporter registration number.
7. Owner of disposal site(s).
8. Location of disposal site(s).
9. 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.

SPECIAL PROVISIONS FOR SURFACE IRRIGATION:

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 Category 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 Interim II Phase and Final Phase 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 Section 217.6(c). 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 Pages 2 and 4 of the permit.
5. The permittee had submitted evidence of legal restrictions (on file) prohibiting residential structures within the part of the buffer zone not owned by the permittee according to 30 TAC § 309.13(e)(3). The evidence of legal restrictions shall be submitted to the Executive Director in care of the TCEQ Wastewater Permitting Section (MC 148). The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). (See Attachment B.)

6. 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 33.576 acres with no less than 15 subsamples representing each composite sample. Subsamples shall be composited by like sampling depth 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 6 inches, 6 inches to 18 inches and 18 inches to 30 inches below ground level. The permittee shall sample and analyze soils in December to February of each year. Soil samples shall be analyzed within 30 days of sample procurement.

The permittee shall provide annual soil 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	2:1 (v/v) water to soil mixture	0.01	dS/m (same as mmho/cm)
Nitrate-nitrogen	From a 1 <u>N</u> 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 + nitrate-nitrogen (same as, organic-nitrogen + ammonium-nitrogen + nitrate-nitrogen)		mg/kg (dry weight basis)
Plant-available: Phosphorus	Mehlich III with inductively coupled plasma	1	mg/kg (dry weight basis)
Plant-available: Potassium	May be determined in the same Mehlich III extract with inductively coupled plasma	5 (K)	mg/kg (dry weight basis)
Amendment addition, e.g., gypsum	Recommendation from analytical laboratory		Report in <i>short tons/acre</i> in the year effected

The permittee shall provide a copy of this plan 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) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division no later than end of September following the sampling date of each year. If wastewater is not applied in a particular year, the permittee shall notify the same TCEQ offices and indicate that wastewater and/or sludge has not been applied on the approved land disposal sites during that year.

7. The irrigated crops include Bermuda grass for surface irrigation. The permittee will maintain native grasses, native oaks and juniper trees and, on the open areas, bermuda grass and winter rye, on the SADDs disposal site.
8. Application rates to the irrigated land shall not exceed 1.95 acre-feet per year per acre irrigated (April – October) and 1.47 acre-feet per year per acre irrigated (November – March) in the Interim I Phase. Application rates to the irrigated land shall not exceed 2.33 acre-feet per year per acre irrigated in the Interim II Phase. Application rates to the irrigated land shall not exceed 2.74 acre-feet per year per acre irrigated in the Final Phase. The permittee is responsible for providing equipment to determine application rates and maintaining accurate records of the volume of effluent applied. These records shall be made available for review by the Texas Commission on Environmental Quality and shall be maintained for at least three years.
9. Irrigation practices shall be designed and managed so as to prevent ponding of effluent or contamination of ground and surface waters and to prevent the occurrence of nuisance conditions in the area. Bermuda grass, native grasses, native oaks and juniper trees and winter rye shall be established and well maintained in the irrigation area throughout the year for effluent and nutrient uptake by the crop and to prevent pathways for effluent surfacing. Tailwater control facilities shall be provided as necessary to prevent the discharge of any effluent from the irrigated land.
10. Effluent shall not be applied for irrigation during rainfall events or when the ground is frozen or saturated.
11. The permittee shall erect adequate signs stating that the irrigation water is from a non-potable water supply for any area where treated effluent is stored or where there exist hose bibs or faucets. 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.
12. Spray fixtures for the irrigation system shall be of such design that they cannot be operated by unauthorized personnel.
13. Irrigation with effluent shall be accomplished only when the area specified is not in use.
14. The permittee shall maintain a long term contract with the owner(s) of the land application site which is authorized for use in this permit, or own the land authorized for land application of treated effluent.

15. Holding or storage ponds shall conform to the design criteria for stabilization ponds with regard to construction and levee design and shall maintain a minimum freeboard of two feet according to 30 TAC Chapter 217, Design Criteria for Wastewater Treatment Systems.
16. Permanent transmission lines shall be installed from the holding pond to each tract of land to be irrigated utilizing effluent from that pond.
17. Facilities for the retention or storage of treated or untreated wastewater, such as constructed wetlands, ponds and lagoons, shall be adequately lined to control seepage. The liner shall meet the requirements in 30 TAC § 217.203, Design Criteria for Natural Treatment Facilities.

The permittee shall furnish certification by a Texas Licensed Professional Engineer that the completed pond lining meets the appropriate criteria above prior to use of the facilities. The certification shall be submitted to the TCEQ Regional Office (MC Region 11), Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, Water Quality Assessment Team (MC 150) and Wastewater Permitting Section (MC 148) of the Water Quality Division.

18. For existing ponds that were lined and certified under 30 TAC Chapter 317: Facilities for the retention of treated or untreated wastewater shall be adequately lined to control seepage. The following methods of pond lining are acceptable.

a. In-situ clay soils or placed and compacted clay soils meeting the following requirements:

- 1) More than 30% passing a No. 200 mesh sieve
- 2) Liquid limit greater than 30%
- 3) Plasticity index greater than 15
- 4) A minimum thickness of 2 feet
- 5) Permeability equal to or less than 1×10^{-7} cm/sec (*)
- 6) Soil compaction will be 95% standard proctor at optimum moisture content (*)

(*) For new and/or modified ponds only.

- b. Membrane lining with a minimum thickness of 20 mils, and an underdrain leak detection system.
- c. An alternate method of pond lining may be utilized with prior approval from the Executive Director.

The permittee has furnished certification by a Texas Licensed Professional Engineer that the completed pond lining meets the appropriate criteria above (on file). The certification shall be sent to the TCEQ Regional Office (MC Region 11) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division

19. The permittee shall provide automatic shutdown alarm controls for the irrigation system of the future irrigation areas (hatched areas in Attachment C) that will be continuously responsive to the measured wind speed and direction to prevent nuisance spray drift off the stated irrigation areas.

20. The permittee shall provide facilities for the protection of its wastewater treatment facilities from a 100-year flood.

SPECIAL PROVISIONS FOR SADDs:

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 Category 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 Interim II Phase and Final Phase 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 Section 217.6(c). 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.
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. The permittee had submitted evidence of legal restrictions (on file) prohibiting residential structures within the part of the buffer zone not owned by the permittee according to 30 TAC Section 309.13(e)(3). The evidence of legal restrictions shall be submitted to the Executive

Director in care of the TCEQ Wastewater Permitting Section (MC 148). The permittee shall comply with the requirements of 30 TAC Section 309.13(a) through (d). (See Attachment B.)

7. According to the requirements of 30 TAC Section 222.81(a), the permittee shall locate the subsurface area drip dispersal system a minimum horizontal distance of 100 feet from surface waters in the state. The permittee shall locate the subsurface area drip dispersal system 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 water wells as described in 30 TAC Section 309.13(c)(1). The permittee shall not locate a subsurface area drip dispersal system within a floodway according to the requirements of 30 TAC Section 222.81(d).
8. The permittee will maintain native grasses, native oaks and juniper trees and, on the open areas, bermuda grass and winter rye. 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 Section 222.161(d), the permittee shall maintain records documenting all activities associated with maintaining the vegetative cover, 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.
9. Based on the requirements of 30 TAC Section 222.151, the subsurface drip irrigation 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.
10. The subsurface drip irrigation system shall consist of a sufficient number of different dispersal zones. 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.
11. 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.
12. 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 Section 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.
13. According to the requirements of 30 TAC Section 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.
- 14. 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.
 - 15. According to 30 TAC Section 222.163, Closure Requirements, the permittee shall close the system under the standards set forth in this section.
 - 16. Effluent shall not be applied for irrigation when the ground is saturated.
 - 17. Irrigation with effluent shall be accomplished only when the area specified is not in use.
 - 18. The permittee shall erect adequate signs stating that the irrigation water is from a non-potable water supply for any area where treated effluent is stored or where there exist hose bibs or faucets. 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.
 - 19. The permittee shall maintain a long term contract with the owner(s) of the land application site which is authorized for use in this permit, or own the land authorized for land application of treated effluent.
 - 20. According to the requirements of 30 TAC Section 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.
 - 21. The permittee shall comply with the buffer zone requirements of 30 TAC §217; §222.81; §290; §309; and any Best Management Practice (BMP) proposed in the permit application regarding water in the state. Effluent shall not be applied within 150 feet of a private water supply well; 500 feet of a public water supply well, spring, or similar source of public drinking water; 200 feet of a solution channel, sinkhole, or other conduit to groundwater; or 100 feet from surface waters in the state.
 - 22. Any recharge features uncovered by construction activities shall be addressed in an updated and certified Recharge Feature Plan (RFP). The RFP will include the BMPs implemented that will prevent impact to recharge features from wastewater application and prevent groundwater contamination. The updated certified RFP shall be submitted to the TCEQ Water Quality Assessment Team (MC-150) and the TCEQ Region 11 Office within 30 days of discovery of the new recharge feature(s).
 - 23. The permittee shall notify the TCEQ Region 11 Office 30 days before any of the following activities begin in accordance with 30 TAC §222.43: construction start up, drip system field layout, completion of any soil amendments, operation of the subsurface drip system, or completion of the subsurface project.

24. The applicant shall construct berms or swales that will prevent, or divert, stormwater from entering all subsurface wastewater application areas.
25. The shallow groundwater monitoring program shall be implemented per the Drip Irrigation System Engineering Report and Annual Cropping Plan of the application. Additionally:

The applicant shall submit the data from the quarterly shallow groundwater monitoring plan to the Water Quality Assessment Team (MC-150) of the Water Quality Division and the Compliance Monitoring Section (MC-224) during the month of September of each year for review.

The shallow groundwater sampling points are, at a minimum, the same locations as the sampling points used for the annual soil sampling (Locations A through Z) and are shown in Attachment D.

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.

26. The seep/springs sampling program shall be implemented per the Drip Irrigation System Engineering Report and Annual Cropping Plan of the application. Additionally:

The applicant shall submit the data from the quarterly seeps/springs monitoring plan to the Water Quality Assessment Team (MC-150) of the Water Quality Division and the Compliance Monitoring Section (MC-224) during the months of March and September of each year for review.

Any spring and/or seep development found downgradient from the drip irrigation fields will be reported to the TCEQ Region 11 Office within five (5) business days. If laboratory analysis indicates that wastewater is emerging as a spring or seep, corrective measures will be implemented immediately to correct the discharge.

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.

27. 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 19.464 acres with no less than two soil cores per each dispersal zone. Subsamples shall be composited by like sampling depth 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. Soils shall be sampled in December to February and shall be analyzed within 30 days of sample procurement.

The permittee shall provide annual soil 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)
Plant-available: Phosphorus	Mehlich III with inductively coupled plasma	1	mg/kg (dry weight basis)
Plant-available: Potassium Calcium Magnesium Sulfur	May be determined in the same Mehlich III extract with inductively coupled plasma	5 (K) 10 (Ca) 5 (Mg) 1 (S)	mg/kg (dry weight basis)
Water-soluble: Sodium Calcium Magnesium	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 10 or 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	Recommendation from analytical laboratory		Report in <i>short tons/acre</i> in the year effected

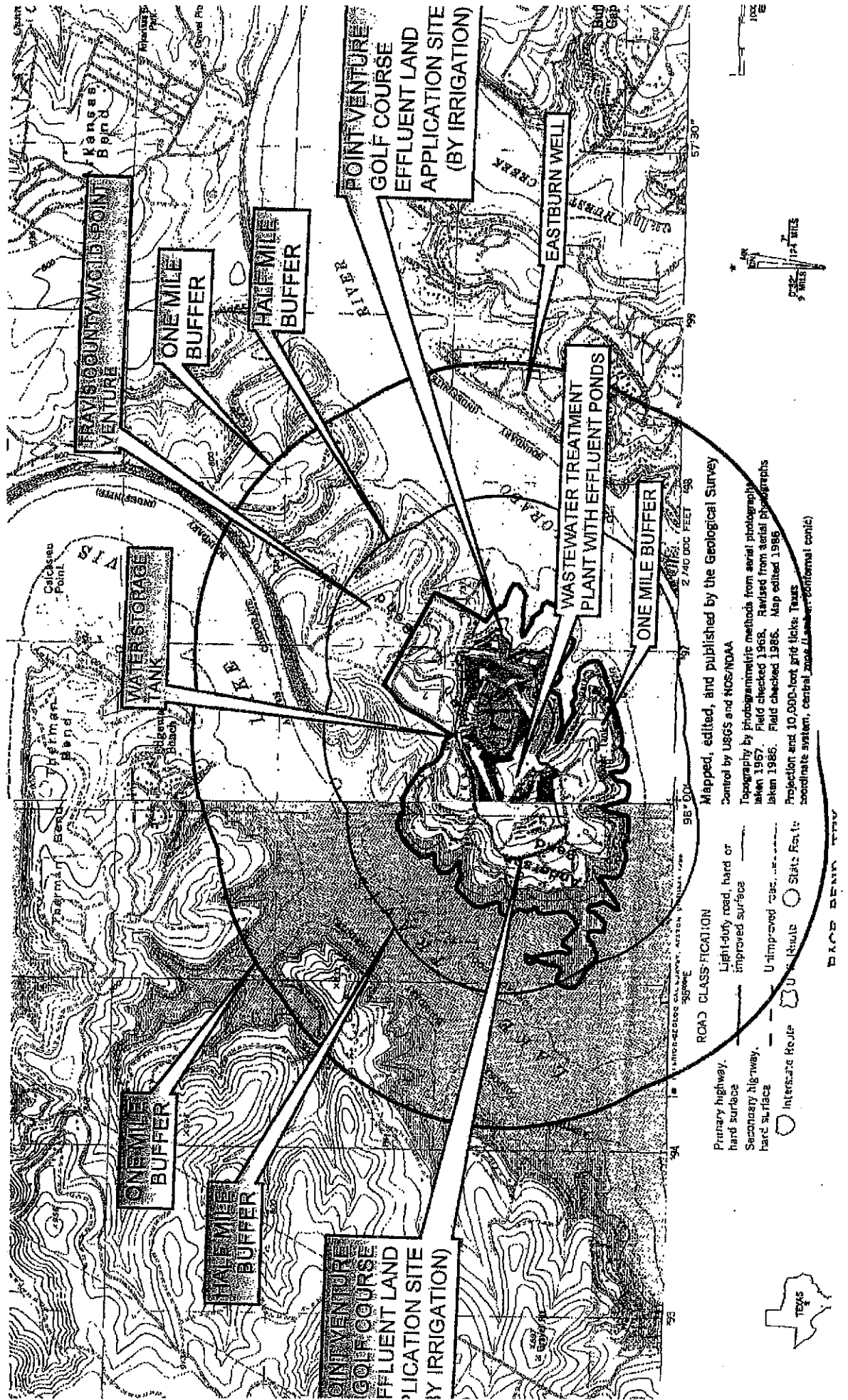
A copy of this soil testing plan shall be provided to the analytical laboratory prior to sample analysis. The permittee shall submit the results of the annual soil sample analyses with copies of the laboratory reports and a map depicting the areas that have received wastewater within the permanent land application fields to the TCEQ Regional Office (MC Region 11), the Water Quality Compliance Monitoring Team (MC 224) of the Water Quality Assessment (MC 150) and Enforcement Division, no later than September 30 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 permittee shall maintain a minimum rootable soil depth below the drip irrigation lines of 12 inches. At least a 6 inch layer of soil shall be maintained over the drip lines. If imported soils are utilized, 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.
29. Each drip field (zone) shall have at least one moisture sensing device placed at 12 inches below the drip lines at the topographic low of each zone that will automatically shut off irrigation to the drip field when the soil becomes saturated. In each zone, the moisture sensing devices will be at least 20 feet apart if more than one moisture sensing device is installed.
30. If complete shutdown of the facility becomes necessary or if the storage capacity is exceeded, the permittee shall employ pump and haul method to prevent the discharge of treated or untreated wastewater. The permittee shall obtain the necessary authorization from the TCEQ Region 11 before undertaking the pump and haul activity.
31. 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 30 TAC Chapter 222 indicating how uneven application of effluent due to back draining will be avoided. The permittee shall notify the TCEQ Region 11 office 30 days prior to installation of the drip lines.
32. All open areas in the 19.464 acres shall be planted to Bermuda grass and rye grass and maintained to ensure a year round non-dormant vegetative cover. The permittee shall mow and/or harvest (cut and remove it from the field at least one time during the year) and manage the grass areas to ensure the health of the plant stand and elevated

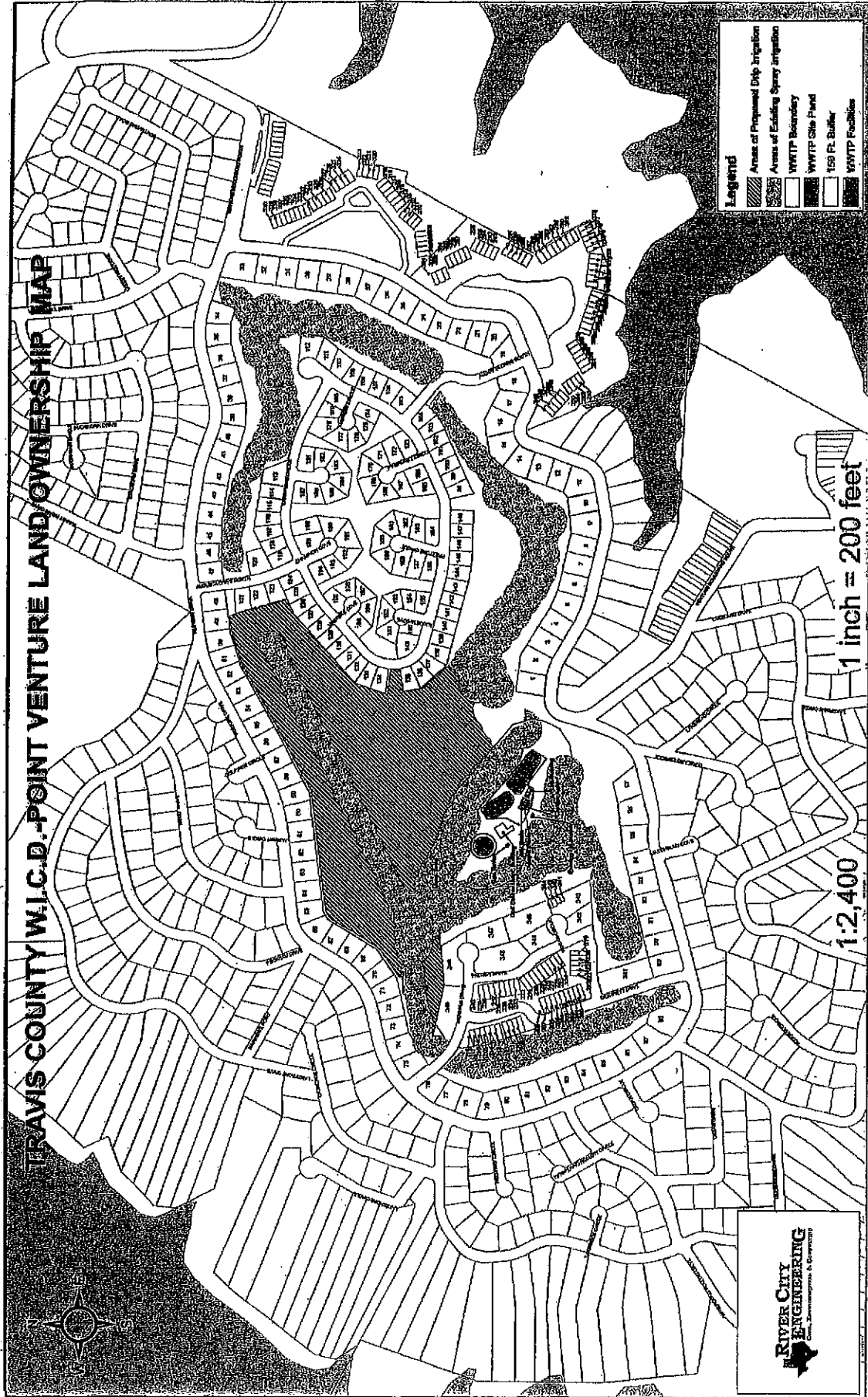
evapotranspiration of the vegetative cover. Harvesting and mowing dates shall be recorded in a log book kept on site to be made available to TCEQ personnel upon request.

33. Each dispersal zone shall meet the flush velocity requirements of 30 TAC §222.117.
34. The physical condition of the land application fields will be monitored on a weekly basis. Any areas with problems such as surface runoff, surficial erosion, stressed or damaged vegetation, etc., will be recorded in the field log kept onsite and corrective measures will be implemented immediately.
35. In open SADDs areas, rocks 12 or more inches in size shall be removed from 12 inches below the drip line placement depth.

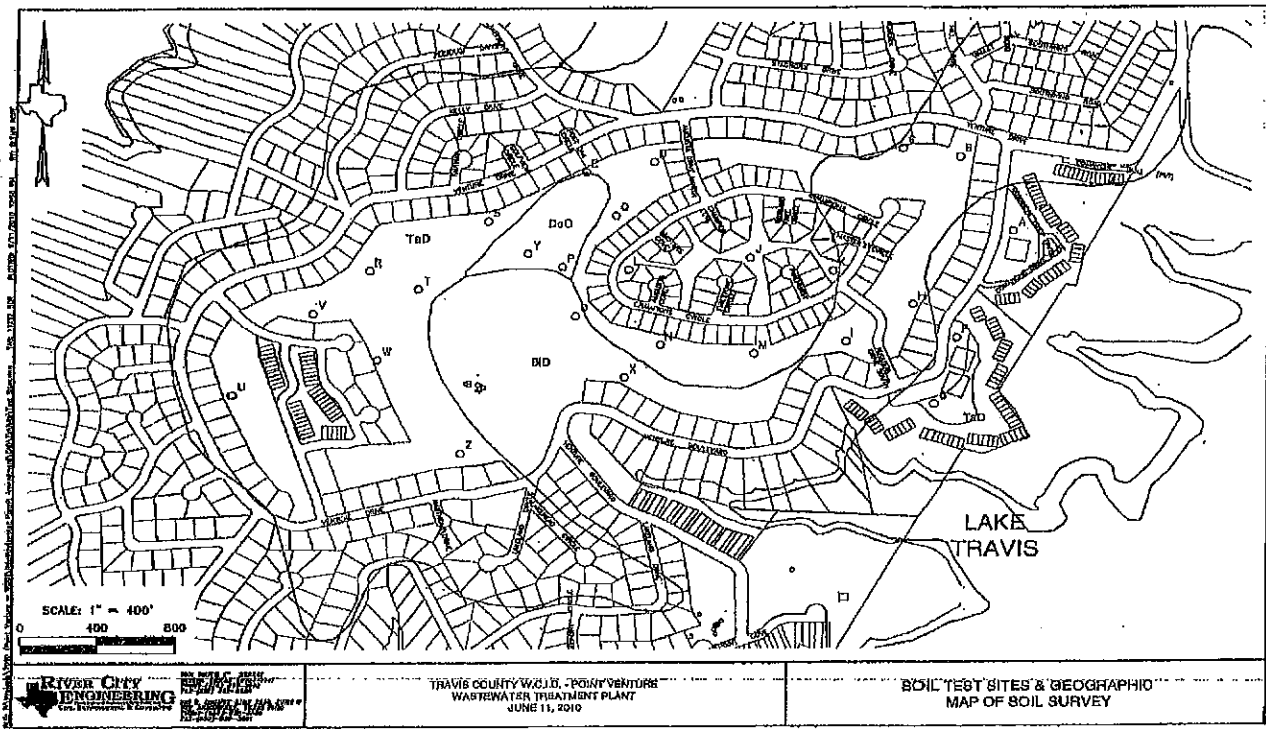
ATTACHMENT A



ATTACHMENT C



ATTACHMENT D **Shallow Groundwater Monitoring Locations
(Locations A through Z)**



ATTACHMENT O
EXISTING 210 AUTHORIZAITON R11385-001

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 30, 2016

Mr. Fred Marshall, Board President
Travis County Water Control and Improvement District-Point Venture
18606 Venture Drive
Point Venture, Texas 78645

Re: Travis County Water Control and Improvement District-Point Venture
Reuse Authorization No. R11385-001
Travis County
CN600644843, RN101916161

Dear Mr. Marshall:

The Texas Commission on Environmental Quality has completed its review of the application for the above referenced authorization. The authorization allows the reuse of Type I and Type II wastewater effluent from Point Venture wastewater treatment facility. Plant improvements adding tertiary filtration must be completed to allow for wastewater effluent to meet the Type I effluent limitations.

Notify this office and the appropriate regional office at least 30 days before reclaimed water is distributed. If the plans and specifications for the project have been approved, the authorization will be activated and the facility will be issued monthly effluent report (MER) forms for reporting quality and quantity of reclaimed water used. See Requirement V (d) on page 8 of the attached authorization.

Thank you for your cooperation during this review process. If you have any questions, please contact Paul A. Brochi of my staff at paul.brochi@tceq.texas.gov or (512) 239-1372.

Sincerely;

A handwritten signature in black ink, appearing to read "Chris Linendoll", written over a large, stylized, circular flourish.

Chris Linendoll, E.I.T., Manager
Wastewater Permitting Section
Water Quality Division

CL/PAB/evm

cc: Mr. David Kneuper, P.E., River City Engineering, Austin, Texas

AUTHORIZATION FOR RECLAIMED WATER



Authorization No. R11385-001

Producer: Travis County Water Control and Improvement District - Point Venture
18606 Venture Drive
Point Venture, Texas 78645

Provider: Travis County Water Control and Improvement District - Point Venture
18606 Venture Drive
Point Venture, Texas 78645

User: Travis County Water Control and Improvement District - Point Venture
18606 Venture Drive
Point Venture, Texas 78645

Location: The wastewater treatment facility is located approximately 6.5 miles south of the intersection of Farm-to-Market road 1431 and Lohman's Crossing within the Village of Point Venture, Travis County, Texas.

Authorization: Type I and Type II reclaimed water from the Travis County Water Control and Improvement District's Point Venture Wastewater Treatment Facility (TLAP Permit No. WQ0011385001) to be used for the irrigation of landscape, public parks, athletic fields, and golf courses; soil compaction; and dust control. The service area is defined as shown in Section XI, Service Area Map.

This authorization contains the conditions that apply for the use of reclaimed water. The approval of reclaimed water use under Chapter 210 does not affect any existing water rights. If applicable, a reclaimed water use authorization in no way affects the need of a producer, provider, or user to obtain a separate water right authorization from the commission. This authorization does not allow irrigation of any area authorized for irrigation under a Texas Land Application Permit.

Issue Date: June 30, 2016

A handwritten signature in black ink, reading "Richard A. Hyde".

Richard A. Hyde, P.E., Executive Director

I. General Requirements

- A. No producer or provider may transfer reclaimed water to a user without first notifying the commission.
- B. Reuse of untreated wastewater is prohibited.
- C. Food crops that may be consumed raw by humans must not be spray irrigated. Food crops including orchard crops that will be substantially processed prior to human consumption may be spray irrigated. Other types of irrigation that avoid contact of reclaimed water with edible portions of food crops are acceptable.
- D. There must be no nuisance conditions resulting from the distribution, the use, or storage of reclaimed water.
- E. Reclaimed water must not be used in a way that degrades groundwater quality to a degree adversely affecting its actual or potential uses.
- F. Reclaimed water stored in ponds must be prevented from discharging into waters in the state, except for discharges directly resulting from rainfall events or in accordance with a permit issued by the commission. All other discharges are unauthorized.
- G. If an overflow of a holding pond occurs causing discharge into or adjacent to water in the state, the user or provider, as appropriate, shall report the noncompliance. A written submission of pertinent information must be provided to both the TCEQ Region 11 office in Austin, and to the TCEQ Enforcement Division (MC-149) in Austin, within five (5) working days after becoming aware of the overflow. The submission must contain:
 - 1. a description of the noncompliance and its cause;
 - 2. the potential danger to human health or safety, or the environment;
 - 3. the period of noncompliance, including exact dates and times;
 - 4. if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
 - 5. steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
- H. Unless otherwise provided in this authorization, there must be no off-site discharge, either airborne or surface runoff of reclaimed water from the user's property except to a wastewater treatment collection system or wastewater treatment facility unless the reclaimed water user applies for and obtains a permit from the commission that authorizes discharge of the water.
- I. All reclaimed water piping must be separated from potable water piping when trenched by a distance of at least nine feet for Type II effluent and four feet For Type I. All buried pipe must be manufactured in purple, painted purple, taped with purple metallic tape or bagged in purple. All exposed piping, hose bibs and faucets must be painted purple, designed to prevent connection to a standard water hose, and stenciled with a warning reading "NON-POTABLE WATER."
- J. The design of any new distribution system that will convey reclaimed water to a user requires the approval of the executive director. Materials must be submitted to the executive director in accordance with the Texas Engineering Practice Act (Article 3271a, Vernon's Annotated Texas Statutes). The plans and specifications for any new

distribution system constructed pursuant to this authorization must be approved by the executive director. Failure to secure approval before commencing construction or making a transfer of reclaimed water is a violation of this authorization. Each day of a transfer is a separate violation until approval has been secured.

- K. Nothing in this authorization modifies any requirements in 30 TAC Chapter 290, Public Drinking Water.
- L. A major change from a prior notification for use of reclaimed water must be approved by the executive director before it can be implemented. A major change includes:
 - 1. a change in the boundary of the approved service area, not including the conversion of individual lots within a subdivision to reclaimed water use;
 - 2. the addition of a new provider;
 - 3. a major change in the intended use, such as conversion from irrigation of a golf course to residential irrigation; or
 - 4. a change from either Type I or Type II use to the other.
- M. The reclaimed water producer, provider, and user shall maintain current operation and maintenance plans on the sites over which they have operational control. The operation and maintenance plan must contain the following, as a minimum:
 - 1. a copy of the signed contract between the user and provider and a copy of the signed contract between the provider and the producer, as applicable;
 - 2. a labeling and separation plan for the prevention of cross connections between reclaimed water distribution lines and potable water lines;
 - 3. the measures that will be implemented to prevent unauthorized access to reclaimed water facilities (e.g., secured valves);
 - 4. procedures for monitoring reclaimed water;
 - 5. a plan for how reclaimed water use will be scheduled to minimize the risk of inadvertent human exposure;
 - 6. schedules for routine maintenance;
 - 7. a plan for worker training and safety; and
 - 8. contingency plan for system failure or upsets.
- N. One of the following requirements must be met by the user or provider, for any area where reclaimed water is stored or where there are hose bibs or faucets:
 - 1. Signs having a minimum size of eight inches by eight inches must be posted at all storage areas and on all hose bibs and faucets reading, in both English and Spanish, "Reclaimed Water, Do Not Drink" or similar warning.
 - 2. The area must be secured to prevent access by the public.
- O. Where a reclaimed water line parallels a sewer line, the reclaimed water line must be constructed in accordance with subsection (p) or (q) of this section. The horizontal separation distance must be three feet (outside to outside) with the reclaimed water line at the level of or above the sewer line. Reclaimed water lines that parallel sewer lines may be placed in the same benched trench. Where a reclaimed water line crosses a sewer line,

the requirement of 30 TAC §290.44(e)(4)(B), Water Line Installation—crossing lines, must be followed with the reclaimed water line substituted for the water line.

- P. Reclaimed water pipes must meet the following requirements:
1. Lines that transport reclaimed water under pressure must be sized according to acceptable engineering practices for the needs of the reclaimed water users.
 2. Reclaimed water force mains must have an expected life of at least as long as that of the associated lift station and must be suitable for the reclaimed water being pumped and operating pressure to which it will be subjected.
 3. Pipes must be identified in the technical specifications with appropriate American Society for Testing and Materials, American National Standard Institute, or American Water Works Association standard numbers for both quality control (dimensions, tolerance, and installation such as bedding or backfill).
 4. Pipes and fittings must have a minimum working pressure rating of 150 pounds per square inch.
 5. Final plans and specifications must describe required pressure testing for all installed reclaimed water force mains.
 6. Minimum test pressure must be 1.5 times the maximum design pressure. Allowable leakage rates must be determined as described in 30 TAC §217.97, Pressure Sewer Systems.
 7. Gravity flow reclaimed water lines must meet the requirements of 30 TAC Chapter 217, Subchapter C, Conventional Collection Systems. The provider shall prevent high velocity scouring and maintain adequate fluid velocity to prevent the deposition of solids in the lines.
- Q. All exposed piping and piping within a building must be either purple pipe or painted purple. All exposed piping should be stenciled in white with a warning reading "NON-POTABLE WATER. All exposed or buried reclaimed water piping constructed at a wastewater treatment facility is exempt from the color-coding requirement of this section.
- R. When applicable, in accordance with 30 TAC Chapter 217, Design Criteria for Domestic Wastewater Systems, the design of the distribution systems that will convey reclaimed water to a user must be submitted to the executive director and must receive an approval before the distribution system may be constructed. The design of the distribution systems must meet the criteria of 30 TAC Chapter 217, Design Criteria for Domestic Wastewater Systems. When a municipality is the plan review authority for certain sewer systems that transport primarily domestic waste, in lieu of the commission, design submittal will not be subject to submittal to the commission and instead must be approved by the municipality.
- S. All ground level and elevated storage tanks must be designed, installed, and constructed in accordance with current AWWA standards with reference to materials to be used and construction practices to be followed, except for health-based standards strictly related to potable water storage and contact practices, where appropriately less restrictive standards may be applied.

II. Storage Requirements for Reclaimed Water

- A. Storage facilities for retaining reclaimed water prior to use must not be located within a floodway.
- B. Storage ponds must be hydraulically separated from waters in the state.
- C. Any holding pond designed to contain Type I effluent or Type II effluent that is located within a DRASTIC Pollution Potential Index Zone of less than 110, shall conform to the following requirements:
 - 1. Ponds with an earthen liner must meet the following requirements
 - a. A permeability of less than 1×10^{-4} cm/sec;
 - b. The ponds must be designed and constructed to prevent groundwater contamination;
 - c. Soils used for pond lining must be free from foreign material such as paper, brush, trees, and large rocks; and
 - d. All soil liners must be of compacted material, at least 24 inches thick, compacted in lifts no greater than 6 inches thick and compacted to 95% of Standard Proctor Density;
 - e. Soil liners must meet the following particle size gradation and Atterberg limits:
 - i. 30% or more passing a number 200 mesh sieve; and
 - ii. a liquid limit of 30% or greater; and
 - iii. a plasticity index of 15 or greater;
 - f. In situ liners at least 24 inches thick meeting a permeability less than or equal to 1×10^{-4} cm/sec are acceptable alternatives; In-situ clay soils meeting the soils liner requirements must be excavated and re-compacted a minimum of 6 inches below planned grade to assure a uniformly compacted finished surface.
- D. Synthetic membrane linings must have a minimum thickness of 40 mils and have a leak detection system;
- E. Certification by a Texas licensed professional engineer must be furnished stating that the pond liner meets the appropriate criteria prior to use of the facilities;
- F. Soil embankment walls must have a top width of at least five feet. The interior and exterior slopes of soil embankment walls must be no steeper than one foot vertical to three feet horizontal unless alternate methods of slope stabilization are used. All soil embankment walls must be protected by a vegetative cover or other stabilizing material to prevent erosion. Erosion stops and water seals must be installed on all pipe penetrating the embankments; and
- G. An alternative method of pond lining that provides equivalent or better water quality protection than provided under this section may be utilized with the prior approval of the executive director; and
- H. Reclaimed water may be stored in leak-proof, fabricated tanks;

- I. Subsequent holding ponds utilized for the receipt and storage of reclaimed water of a quality that could cause or causes a violation of a surface water quality standard or impairment of groundwater for its actual or intended use will be also subject to the storage requirements of this section.

III. Specific Uses and Quality Standards for Reclaimed Water

- A. Numerical parameter limits pertaining to specific reclaimed water use categories are contained in this section. These limits apply to reclaimed water before discharge to initial holding ponds or a reclaimed water distribution system.
- B. The reclaimed water producer shall establish that the reclaimed water meets the quality limits at the sample point for the intended use in accordance with the monitoring requirements identified in Section IV, Sampling and Analysis.
- C. Types and quality standards for reclaimed water.
 1. Type I Reclaimed Water Use. The use of Type I reclaimed water is for situations where the public may come in contact with the reclaimed water. The uses allowed by this authorization are:
 - a. Irrigation: landscape, public parks, and athletic fields.
 - b. Type I reclaimed water may also be used for any of the authorized Type II uses.
 2. The following conditions apply to Type I use of reclaimed water. At a minimum, the reclaimed water producer shall transfer only reclaimed water of the following quality as described for Type I reclaimed water use. Type I reclaimed water on a 30-day average must have a quality of no more than:

Table 1. Type I Quality Requirements

Parameter	Limit	Limit Type
Turbidity	3 NTUs	30-day average
BOD ₅	5 mg/l	30-day average
<i>E. coli</i>	20/100 ml	30-day geometric mean (MPN or CFU)
<i>E. coli</i>	75/100 ml	maximum single grab sample (MPN or CFU)

Type II Reclaimed Water Use. The use of Type II reclaimed water is for situations where the public will not be exposed to the reclaimed water. The uses allowed by this authorization are:

- a. Irrigation of golf course and landscaped areas surrounding commercial or industrial complexes.
- b. Soil compaction or dust control in construction areas.
3. The following conditions apply to Type II use of reclaimed water. At a minimum, the reclaimed water producer shall transfer only reclaimed water of the following quality. Type II reclaimed water on a 30-day average must have a quality of no more than:

Table 2. Type II Quality Requirements

Parameter	Limit	Limit Type
BOD ₅	20 mg/l	30-day average
<i>E. coli</i>	200/100 ml	30-day geometric mean (MPN or CFU)

<u>E. coli</u>	800/100 ml	maximum single grab sample (MPN or CFU)
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D. Test Procedures

1. Test procedures for the analysis of pollutants must comply with procedures specified in 30 TAC §§319.11 - 319.12. Measurements, tests, and calculations must accurately represent the reclaimed water.
2. All laboratory tests submitted to demonstrate compliance with this authorization must meet the requirements of 30 TAC Chapter 25, *Environmental Testing Laboratory Accreditation and Certification*.

IV. Sampling and Analysis

- A. The reclaimed water producer shall sample the reclaimed water prior to distribution to the entity that first received the reclaimed water after it leaves the wastewater treatment facility (provider or user) to assure that the water quality meets the standard for the contracted use.
- B. Analytical methods must be in compliance with 30 TAC Chapter 319, *Monitoring and Reporting*.
- C. The minimum sampling and analysis frequency for Type I reclaimed water is twice per week when reclaimed water is being produced and shall be reported as outfall 800.
- D. The minimum sampling and analysis frequency for Type II reclaimed water is once per week when reclaimed water is being produced and shall be reported as outfall 900.
- E. The monitoring must be done after the final treatment unit.
- F. The records of the monitoring must be kept on a monthly basis and be available at the facility site for inspection by representatives of the Commission for at least five years.

V. Record Keeping and Reporting

- A. The reclaimed water provider and user shall maintain records on site for a period of at least five years.
- B. The producer shall maintain the following records:
 1. copies of notifications made to the commission concerning reclaimed water projects;
 2. as applicable, copies of contracts with each reclaimed water user (this requirement does not include reclaimed water users at residences that have separate distribution lines for potable water);
 3. records of the volume of water delivered to each reclaimed water user per delivery (this requirement does not apply to reclaimed water users at residences that have separate distribution lines for potable water); and
 4. reclaimed water quality analyses.
- C. The reclaimed water provider or producer shall report to the commission on a monthly basis the following information on forms furnished by the executive director. The reports

are due by the 20th day of the month following the reporting period.

1. volume of reclaimed water delivered to each user; and
 2. quality of reclaimed water delivered to a user or provider reported as a monthly average for each quality criteria, except those listed as "not to exceed" that must be reported as individual analyses.
- D. Monitoring requirements contained in the authorization are suspended from the effective date of the authorization until the reclaimed water is transferred. The provider shall provide written notice to the Water Quality Application Team (MC 148) and the appropriate TCEQ regional office at least thirty (30) days prior to transfer of reclaimed water.

VI. Transfer of Reclaimed Water

- A. Reclaimed water must be transferred from a provider to a user on a demand only basis. A reclaimed water user may refuse delivery of reclaimed water at any time.
- B. All reclaimed water transferred to a user must be of at least the quality specified in Section IV, *Sampling and Analysis*.
- C. Transfer must be by pipes or tank trucks.
- D. The transfer of reclaimed water must be terminated immediately if a provider becomes aware of the misuse of the reclaimed water by the user, regardless of contract provisions.

VII. Restrictions

- A. This authorization does not convey any property right and does not grant any exclusive privilege.
- B. This authorization does not allow the use of reclaimed water on land that is authorized as a disposal site under either a Texas Pollutant Discharge Elimination System (TPDES) permit or a Texas Land Application Permit (TLAP).

VIII. Responsibilities and Contracts

- A. The producer of reclaimed water is not liable for misapplication of reclaimed water by users, except as provided in this section. Both the reclaimed water provider and user have at least but are not limited to the following responsibilities:
 1. The reclaimed water producer shall: transfer reclaimed water of at least the minimum quality required by this chapter at the point of delivery to the user;
 - a. sample and analyze the reclaimed water and report the analyses in accordance with Section IV, *Sampling and Analysis*, and Section V, *Recordkeeping and Reporting*; and
 - b. notify the executive director in writing within five (5) days after obtaining knowledge of reclaimed water use not authorized by the executive director.
 2. The reclaimed water provider shall:

Travis County Water Control and Improvement District – Point Venture
Reclaimed Authorization No. R11385-001

- a. ensure construction of reclaimed water distribution systems in accordance with 30 TAC Chapter 217, Design of Domestic Wastewater Systems, and in accordance with approved plans and specifications;
 - b. transfer reclaimed water of at least the minimum quality required by this authorization at the point of delivery to the user;
 - c. notify the executive director in writing within five (5) days after obtaining knowledge of reclaimed water use not authorized by the executive director; and
 - d. not be found in violation of this chapter for the misuse of the reclaimed water by the user if transfer of such water is shut off promptly upon knowledge of misuse regardless of contract provisions.
3. The reclaimed water user shall:
- a. use the reclaimed water in accordance with this authorization; and
 - b. maintain and provide records as required by Section V, Record Keeping and Reporting.

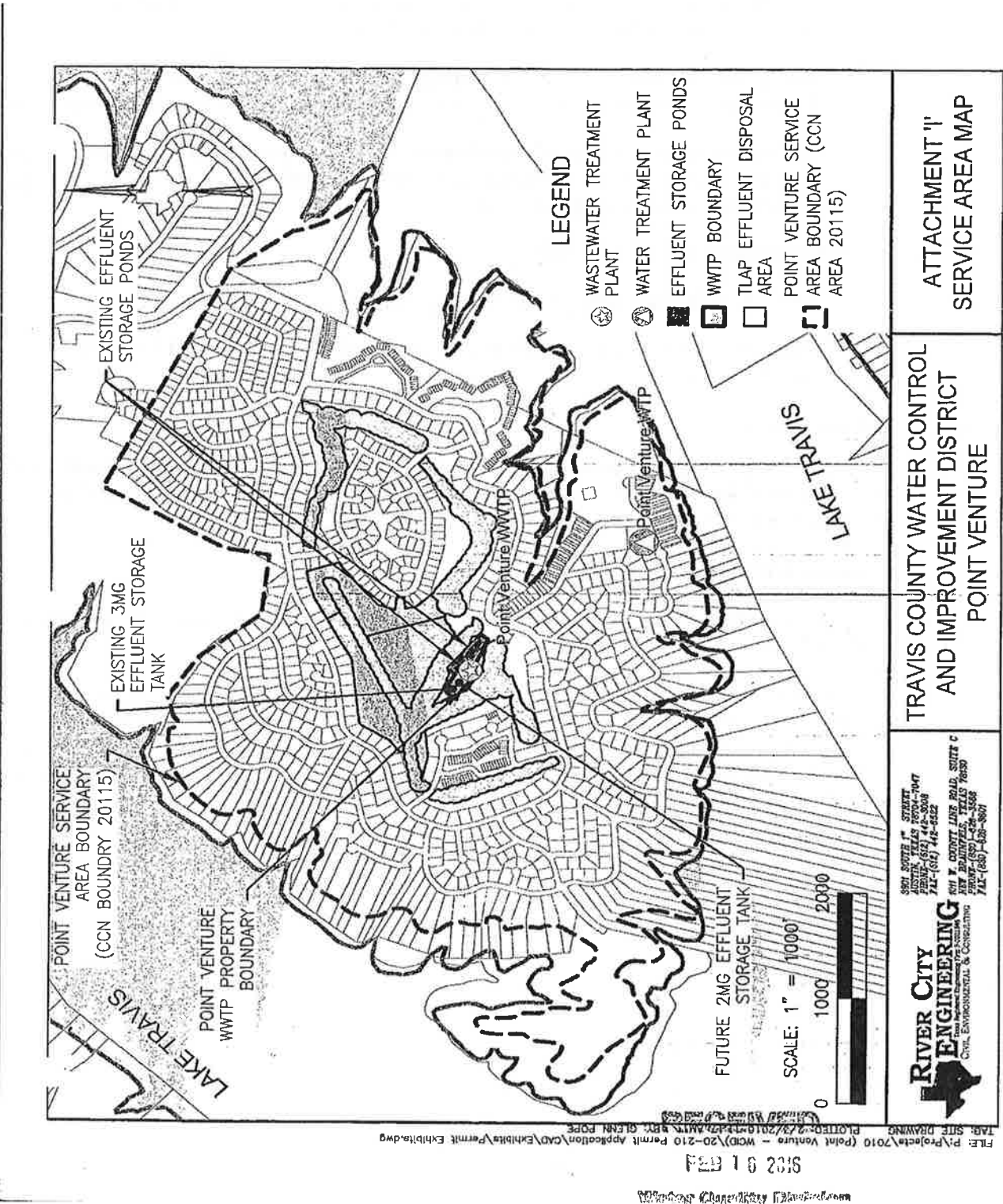
IX. Enforcement

If the producer, provider, or user fail to comply with the terms of this authorization, the executive director may take enforcement action provided by the Texas Water Code §26.019 and §26.136.

X. Standard Provisions

- A. This authorization is granted in accordance with the rules and orders of the commission and the laws of the state of Texas.
- B. Acceptance of this authorization constitutes an acknowledgment and agreement that the producer, provider and user will comply with all the terms, provisions, conditions, limitations and restrictions embodied in this authorization and with the rules and other orders of the commission and the laws of the state of Texas. Agreement is a condition precedent to the granting of this authorization.

XI. Service Area Map



Jon Niermann, *Chairman*
Bobby Janecka, *Commissioner*
Catarina R. Gonzales, *Commissioner*
Kelly Keel, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 29, 2024

Mr. David Vargas
Project Manager
Trihydro Corporation
5508 West Highway 290, Suite 201
Austin, Texas 78735

RE: Application to Renew Permit No.: WQ0011385001
Applicant Name: Travis County Water Control and Improvement District - Point
Venture (CN600644843)
Site Name: Point Venture WWTP (RN101916161)
Type of Application: Renewal

VIA EMAIL

Dear Mr. Vargas:

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. Application Fee on page 1 of the administrative report: The application fee provided is incorrect. The application fee amount is based on the final flow listed in the current permit. The application fee for your application is \$1,615.00. Please provide the remaining \$800.00. Please submit payment to: TCEQ, Revenue Section (MC 214), P.O. Box 13088, Austin, Texas 78711-3088. Also, provide a copy of the check along with the response to this letter.

2. Our records indicate that an original paper copy of the application was not received. The original paper copy and e-copy of the application are both required. Please submit the original paper copy of the application by:

By regular U.S. mail:

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, TX 78711-3088

By overnight/express mail:

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, TX 78753

3. Administrative Report 1.0

Section 2, Item a - an incorrect authorization type was marked. The box listed as "Conventional Wastewater treatment" is incorrect and should be "Conventional Water Treatment". Please provide an updated section with the correct box marked.

Section 5, Items A & B - the mailing address listed for both permit contacts could not be verified. Please provide an updated section with a valid USPS verified mailing address. Also, please update the address in sections 7 & 8.

4. USGS Topographic Map

The items labeled on the USGS map provided were unclear. Please provide a clearly labeled USGS map.

5. Plain Language Summary (PLS)

The Plain Language Summary (PLS), in English language, was missing from the application. Please use the attached template to provide a completed PLS.

6. Technical Report 1.0

Section 1, Item C - the final flow listed does not match the final flow listed in the current permit. Please provide an updated Technical Report 1.0 to show the correct final flow.

7. 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. Travis County Water Control and Improvement District - Point Venture, 18606 Venture Drive, Lago Vista, Texas 78645, has applied to the Texas Commission on Environmental Quality (TCEQ) to renew Texas Land Application Permit (TLAP) No. WQ0011385001 to authorize the disposal of treated wastewater and stormwater at a volume not to exceed a daily average flow of 67,800 gallons per day via subsurface area drip irrigation system (SADDs) with a minimum area of 19.464 acres of a golf course. The domestic wastewater treatment facility and disposal area are located at 19053 Venture Drive, near the city of Lago Vista, in Travis County, Texas 78645. TCEQ received this application on October 25, 2024. The permit application will be available for viewing and copying at Travis County Water Control and Improvement District - Point Venture, main office, conference room, 18606 Venture Drive, Lago Vista, in Travis County, 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.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-97.999166,30.383333&level=18>

Further information may also be obtained from Travis County Water Control and Improvement District - Point Venture at the address stated above or by calling Mr. David Vargas, Trihydro Corporation, at 512-442-3008.

Please submit the complete response, addressed to my attention by November 12, 2024. If you should have any questions, please do not hesitate to contact me by phone at (512) 239-4312 or by email at candice.calhoun@tceq.texas.gov

Sincerely,



Candice Calhoun-Courville
Applications Review and Processing Team (MC148)
Water Quality Division
Texas Commission of Environmental Quality

cgc

Mr. David Vargas
Page 4
October 29, 2024
Permit No. WQ0011385001

Enclosure(s)

Attachment 1 - Municipal TPDES and TLAP PLS Form (English)

cc: Ms. Dodie Erickson, District Account Manager, Inframark Services, 18606 Venture Drive, Lago Vista, Texas 78645

Jon Niermann, *Chairman*
Bobby Janecka, *Commissioner*
Catarina R. Gonzales, *Commissioner*
Kelly Keel, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

November 13, 2024

Ms. Vanessa Chapa
Compliance Manager - Texas MUDS
Inframark Services
2002 West Grand Parkway North, Suite 100
Katy, Texas 77449

RE: Declaration of Administrative Completeness
Applicant Name: Travis County Water Control and Improvement District - Point
Venture (CN600644843)
Permit No.: WQ0011385001
Site Name: Point Venture WWTP (RN101916161)
Type of Application: Renewal

Dear Ms. Chapa:

The executive director has declared the above referenced application, received on October 25, 2024 administratively complete on November 12, 2024.

You are now required to publish notice of your proposed activity and make a copy of the application available for public review. The following items are included to help you meet the regulatory requirements associated with this notice:

- Instructions for Public Notice
- Notice for Newspaper Publication
- Public Notice Verification Form
- Publisher's Affidavits

You must follow all the directions in the enclosed instructions. The most common mistakes are the unauthorized changing of notice, wording, or font. If you fail to follow these instructions, you may be required to republish the notices.

The following requirements are also described in the enclosed instructions. However, due to their importance, they are highlighted here as well.

1. Publish the enclosed notice within **30 calendar days** after your application is declared administratively complete. (See this letter's first paragraph for the declaration date.) **You may be required to publish the notice in more than one newspaper, including a newspaper published in an alternative language, to satisfy all of the notice requirements.**
2. On or before the date you publish notice, place a copy of your permit application in a public place in the county where the facility is or will be located. This copy must be

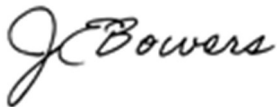
accessible to the public for review and copying, must be updated to reflect changes to the application, and must remain in place throughout the comment period.

3. For each publication, submit proof of publication of the notice that shows the publication date and newspaper name to the Office of the Chief Clerk within **30 calendar days** after notice is published in the newspaper.
4. Return the original enclosed Public Notice Verification and the Publisher's Affidavits to the Office of the Chief Clerk within **30 calendar days** after the notice is published in the newspaper.

If you do not comply with **all** the requirements described in the instructions, further processing of your application may be suspended, or the agency may take other actions.

If you have any questions regarding publication requirements, please contact the Office of Legal Services at (512) 239-0600. If you have any questions regarding the content of the notice, please contact Candice Calhoun-Courville at (512) 239-4312 or candice.calhoun@tceq.texas.gov.

Sincerely,



Jennifer E. Bowers
Section Manager, Water Quality Division Support
Office of Water
Texas Commission of Environmental Quality

JEB/cgc

Enclosures

Jon Niermann, *Chairman*
Bobby Janecka, *Commissioner*
Catarina R. Gonzales, *Commissioner*
Kelly Keel, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

November 12, 2024

Ms. Vanessa Chapa
Compliance Manager - Texas MUDS
Inframark Services
2002 West Grand Parkway North, Suite 100
Katy, Texas 77449

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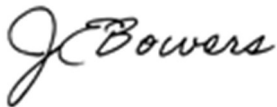
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4. Return the original enclosed Public Notice Verification and the Publisher's Affidavits to the Office of the Chief Clerk within **30 calendar days** after the notice is published in the newspaper.

If you do not comply with **all** the requirements described in the instructions, further processing of your application may be suspended, or the agency may take other actions.

If you have any questions regarding publication requirements, please contact the Office of Legal Services at (512) 239-0600. If you have any questions regarding the content of the notice, please contact Candice Calhoun-Courville at (512) 239-4312 or candice.calhoun@tceq.texas.gov.

Sincerely,



Jennifer E. Bowers
Section Manager, Water Quality Division Support
Office of Water
Texas Commission of Environmental Quality

JEB/cgc

Enclosures

Candice Calhoun

From: David Vargas <dvargas@trihydro.com>
Sent: Friday, November 1, 2024 2:39 PM
To: Candice Calhoun
Cc: dodie.erickson@inframark.com; Derek Klenke
Subject: RE: Application to Renew Permit No. WQ0011385001 - Notice of Deficiency (NOD)
Attachments: wq0011385001-nod1(markups).pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Candice,
Attached below is the link to download the revised permit application submittal package per your review comments:

<https://trihydrocorp.sharepoint.com/:b:/s/traviscountywcidpointventure/ERgFLEEtLOZAIUGGiPNUY-YBca4c2G7vy4C4EIJZZeFgFg?email=candice.calhoun%40tceq.texas.gov&e=rNycB5>

I've also attached the NOD letter with markups to Review Comment #7.

I'm in the process of mailing the hard copy of the submittal package.

Let me know if you have any questions and if you have any issues with the link.

Best,
David Alexander Vargas, P.E.
Assistant Project Engineer



OUR SAFETY IS MY RESPONSIBILITY

5508 Highway 290 West, Suite 201
Austin, Texas 78735
(512) 442-3008 (Office)
(512) 646-0137 (Direct)
(210) 896-3233 (Mobile)
dvargas@trihydro.com

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From: Candice Calhoun <Candice.Calhoun@tceq.texas.gov>
Sent: Friday, November 1, 2024 11:52 AM
To: David Vargas <dvargas@trihydro.com>
Cc: dodie.erickson@inframark.com
Subject: RE: Application to Renew Permit No. WQ0011385001 - Notice of Deficiency (NOD)

You don't often get email from candice.calhoun@tceq.texas.gov. [Learn why this is important](#)

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Yes sir, of course!

You as well! 😊



Candice Courville
Texas Commission on Environmental
Quality
Water Quality Division
512-239-4312
candice.calhoun@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at
www.tceq.texas.gov/customersurvey

From: David Vargas <dvargas@trihydro.com>
Sent: Friday, November 1, 2024 10:26 AM
To: Candice Calhoun <Candice.Calhoun@tceq.texas.gov>
Cc: dodie.erickson@inframark.com
Subject: RE: Application to Renew Permit No. WQ0011385001 - Notice of Deficiency (NOD)

Thanks Candice for clarifying, we appreciate it.
You take and have a good rest of your day and a wonderful weekend.

Best,
David Alexander Vargas, P.E.
Assistant Project Engineer



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From: Candice Calhoun <Candice.Calhoun@tceq.texas.gov>
Sent: Friday, November 1, 2024 10:10 AM
To: David Vargas <dvargas@trihydro.com>
Cc: dodie.erickson@inframark.com
Subject: RE: Application to Renew Permit No. WQ0011385001 - Notice of Deficiency (NOD)
Importance: High

You don't often get email from candice.calhoun@tceq.texas.gov. [Learn why this is important](#)

Caution: This email is from an external sender. Please report suspicious emails using the **Report Message** button in Outlook.

Good morning, David,

My apologies for the confusion, I made a mistake within my NOD. Please disregard items 1 and 6. The fee amount we received is correct, as well as the Technical Report 1.0 is correct.

Please feel free to reach out to me via phone or email if you have any additional questions.

Thank you,



Candice Courville
Texas Commission on Environmental
Quality
Water Quality Division
512-239-4312
candice.calhoun@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at
www.tceq.texas.gov/customersurvey

From: Candice Calhoun
Sent: Tuesday, October 29, 2024 4:31 PM
To: dvargas@trihydro.com
Cc: dodie.erickson@inframark.com
Subject: Application to Renew Permit No. WQ0011385001 - Notice of Deficiency (NOD)
Importance: High

Good afternoon, Mr. Vargas,

The attached Notice of Deficiency (NOD) letter dated **October 29, 2024**, requests additional information needed to declare the application administratively complete. Please send complete response, to my attention, by **November 12, 2024**.

Please let me know if you have any questions.

Regards,



Candice Courville
Texas Commission on Environmental
Quality
Water Quality Division
512-239-4312
candice.calhoun@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at
www.tceq.texas.gov/customersurvey

Jon Niermann, *Chairman*
Bobby Janecka, *Commissioner*
Catarina R. Gonzales, *Commissioner*
Kelly Keel, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 29, 2024

Mr. David Vargas
Project Manager
Trihydro Corporation
5508 West Highway 290, Suite 201
Austin, Texas 78735

RE: Application to Renew Permit No.: WQ0011385001
Applicant Name: Travis County Water Control and Improvement District - Point
Venture (CN600644843)
Site Name: Point Venture WWTP (RN101916161)
Type of Application: Renewal

VIA EMAIL

Dear Mr. Vargas:

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. Application Fee on page 1 of the administrative report: The application fee provided is incorrect. The application fee amount is based on the final flow listed in the current permit. The application fee for your application is \$1,615.00. Please provide the remaining \$800.00. Please submit payment to: TCEQ, Revenue Section (MC 214), P.O. Box 13088, Austin, Texas 78711-3088. Also, provide a copy of the check along with the response to this letter.

2. Our records indicate that an original paper copy of the application was not received. The original paper copy and e-copy of the application are both required. Please submit the original paper copy of the application by:

By regular U.S. mail:

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, TX 78711-3088

By overnight/express mail:

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, TX 78753

3. Administrative Report 1.0

Section 2, Item a - an incorrect authorization type was marked. The box listed as "Conventional Wastewater treatment" is incorrect and should be "Conventional Water Treatment". Please provide an updated section with the correct box marked.

Section 5, Items A & B - the mailing address listed for both permit contacts could not be verified. Please provide an updated section with a valid USPS verified mailing address. Also, please update the address in sections 7 & 8.

4. USGS Topographic Map

The items labeled on the USGS map provided were unclear. Please provide a clearly labeled USGS map.

5. Plain Language Summary (PLS)

The Plain Language Summary (PLS), in English language, was missing from the application. Please use the attached template to provide a completed PLS.

6. Technical Report 1.0

Section 1, Item C - the final flow listed does not match the final flow listed in the current permit. Please provide an updated Technical Report 1.0 to show the correct final flow.

7. 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. Travis County Water Control and Improvement District - Point Venture, 18606 Venture Drive, Lago Vista, Texas 78645, has applied to the Texas Commission on Environmental Quality (TCEQ) to renew Texas Land Application Permit (TLAP) No. WQ0011385001 to authorize the disposal of treated wastewater and stormwater at a volume not to exceed a daily average flow of 67,800 gallons per day via subsurface area drip irrigation system (SADDs) with a minimum area of 19.464 acres of a golf course. The domestic wastewater treatment facility and disposal area are located at 19053 Venture Drive, near the city of Lago Vista, in Travis County, Texas 78645. TCEQ received this application on October 25, 2024. The permit application will be available for viewing and copying at Travis County Water Control and Improvement District - Point Venture, main office, conference room, 18606 Venture Drive, Lago Vista, in Travis County, 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.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-97.999166,30.383333&level=18>

Further information may also be obtained from Travis County Water Control and Improvement District - Point Venture at the address stated above or by calling Mr. David Vargas, Trihydro Corporation, at 512-442-3008.

Please submit the complete response, addressed to my attention by November 12, 2024. If you should have any questions, please do not hesitate to contact me by phone at (512) 239-4312 or by email at candice.calhoun@tceq.texas.gov

Sincerely,



Candice Calhoun-Courville
Applications Review and Processing Team (MC148)
Water Quality Division
Texas Commission of Environmental Quality

cgc

Mr. David Vargas
Page 4
October 29, 2024
Permit No. WQ0011385001

Enclosure(s)

Attachment 1 - Municipal TPDES and TLAP PLS Form (English)

cc: Ms. Dodie Erickson, District Account Manager, Inframark Services, 18606 Venture Drive, Lago Vista, Texas 78645



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 <input type="checkbox"/>	\$315.00 <input type="checkbox"/>
≥0.05 but <0.10 MGD	\$550.00 <input type="checkbox"/>	\$515.00 <input type="checkbox"/>
≥0.10 but <0.25 MGD	\$850.00 <input type="checkbox"/>	\$815.00 <input checked="" type="checkbox"/>
≥0.25 but <0.50 MGD	\$1,250.00 <input type="checkbox"/>	\$1,215.00 <input type="checkbox"/>
≥0.50 but <1.0 MGD	\$1,650.00 <input type="checkbox"/>	\$1,615.00 <input type="checkbox"/>
≥1.0 MGD	\$2,050.00 <input type="checkbox"/>	\$2,015.00 <input type="checkbox"/>

Minor Amendment (for any flow) \$150.00 ☐

Payment Information:

Mailed Check/Money Order Number: 3213
Check/Money Order Amount: \$815.00
Name Printed on Check: Travis County WCID Point Venture

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 Water Treatment

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

- ☒ Active ☐ Inactive

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: N/A

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: N/A

Last Name, First Name: N/A

Title: N/A

Credential: N/A

Provide a brief description of the need for a co-permittee: N/A

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. [Click to enter text.](#)

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: VARGAS, DAVID
Title: PROJECT MANAGER Credential: PROFESSIONAL ENGINEER
Organization Name: TRIHYDRO CORPORATION
Mailing Address: 5508 HIGHWAY 290 WEST SUITE 201 City, State, Zip Code: AUSTIN, TEXAS 78735
Phone No.: (512) 442-3008 E-mail Address: dvargas@trihydro.com
Check one or both: ☒ Administrative Contact ☒ Technical Contact
- B. Prefix: MS. Last Name, First Name: ERICKSON, DODIE
Title: DISTRICT ACCT. MANAGER Credential: [Click to enter text.](#)
Organization Name: INFRAMARK SERVICES
Mailing Address: 18606 VENTURE DRIVE City, State, Zip Code: POINT VENTURE, TX 78645
Phone No.: 512-921-5863 E-mail Address: dodie.erickson@inframark.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: BOND, PATRICK
Title: ENVIRONMENTAL QUALITY SPECIALIST Credential: [Click to enter text.](#)
Organization Name: INFRAMARK SERVICES
Mailing Address: 2002 W GRAND PKWY N STE 100 City, State, Zip Code: KATY, TX 77449-1964
Phone No.: 281-505-0452 E-mail Address: patrick.bond@inframark.com

B. Prefix: MR. Last Name, First Name: JACINTO, ALLAN
Title: ENVIRONMENTAL QUALITY SPECIALIST Credential: [Click to enter text.](#)
Organization Name: INFRAMARK SERVICES
Mailing Address: 2002 W GRAND PKWY N STE 100 City, State, Zip Code: KATY, TX 77449-1964
Phone No.: 832-435-5688 E-mail Address: allan.jacinto@inframark.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: MS. Last Name, First Name: CECALA, JEAN
Title: OFFICE MANAGER Credential: [Click to enter text.](#)
Organization Name: TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE
Mailing Address: 18606 VENTURE DRIVE City, State, Zip Code: POINT VENTURE, TX, 78645
Phone No.: (512) 267-1641 E-mail Address: office@wcidpv.org

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: BOND, PATRICK
Title: ENVIRONMENTAL QUALITY SPECIALIST Credential: [Click to enter text.](#)
Organization Name: INFRAMARK SERVICES
Mailing Address: 2002 W GRAND PKWY N STE 100 City, State, Zip Code: KATY, TX 77449-1964
Phone No.: 281-505-0452 E-mail Address: patrick.bond@inframark.com

Section 8. Public Notice Information (Instructions Page 27)

A. Individual Publishing the Notices

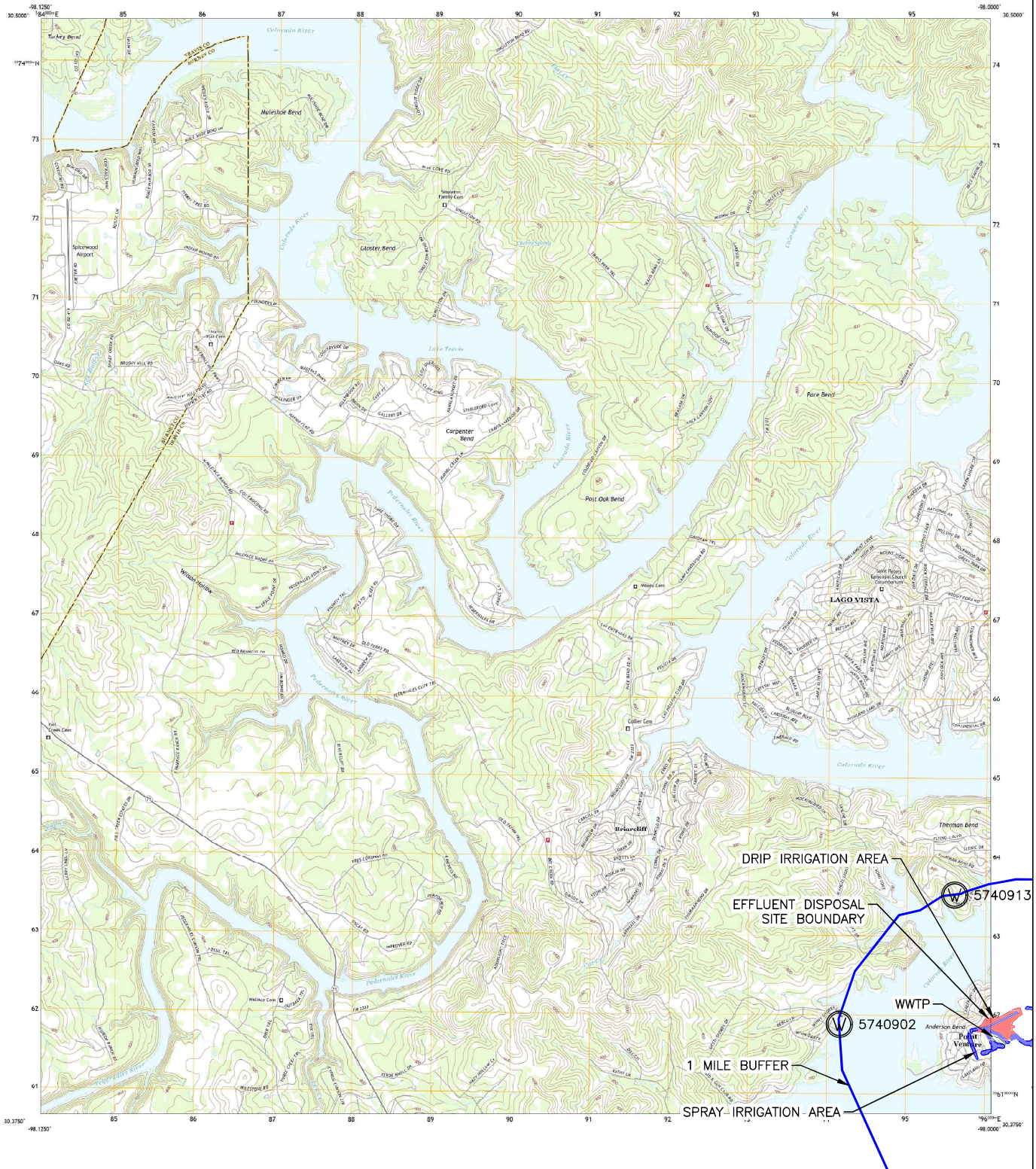
Prefix: MS. Last Name, First Name: CHAPA, VANESSA
Title: COMPLIANCE MANAGER, TEXAS MUDS Credential: [Click to enter text.](#)
Organization Name: INFRAMARK SERVICES
Mailing Address: 2002 W GRAND PKWY N STE 100 City, State, Zip Code: KATY, TX 77449-1964
Phone No.: 281-877-2612 E-mail Address: vanessa.chapa@inframark.com



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www.trihydro.com

ATTACHMENT A (SHEET 1 OF 4)

ORIGINAL USGS TOPOGRAPHIC MAP

TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT POINT VENTURE

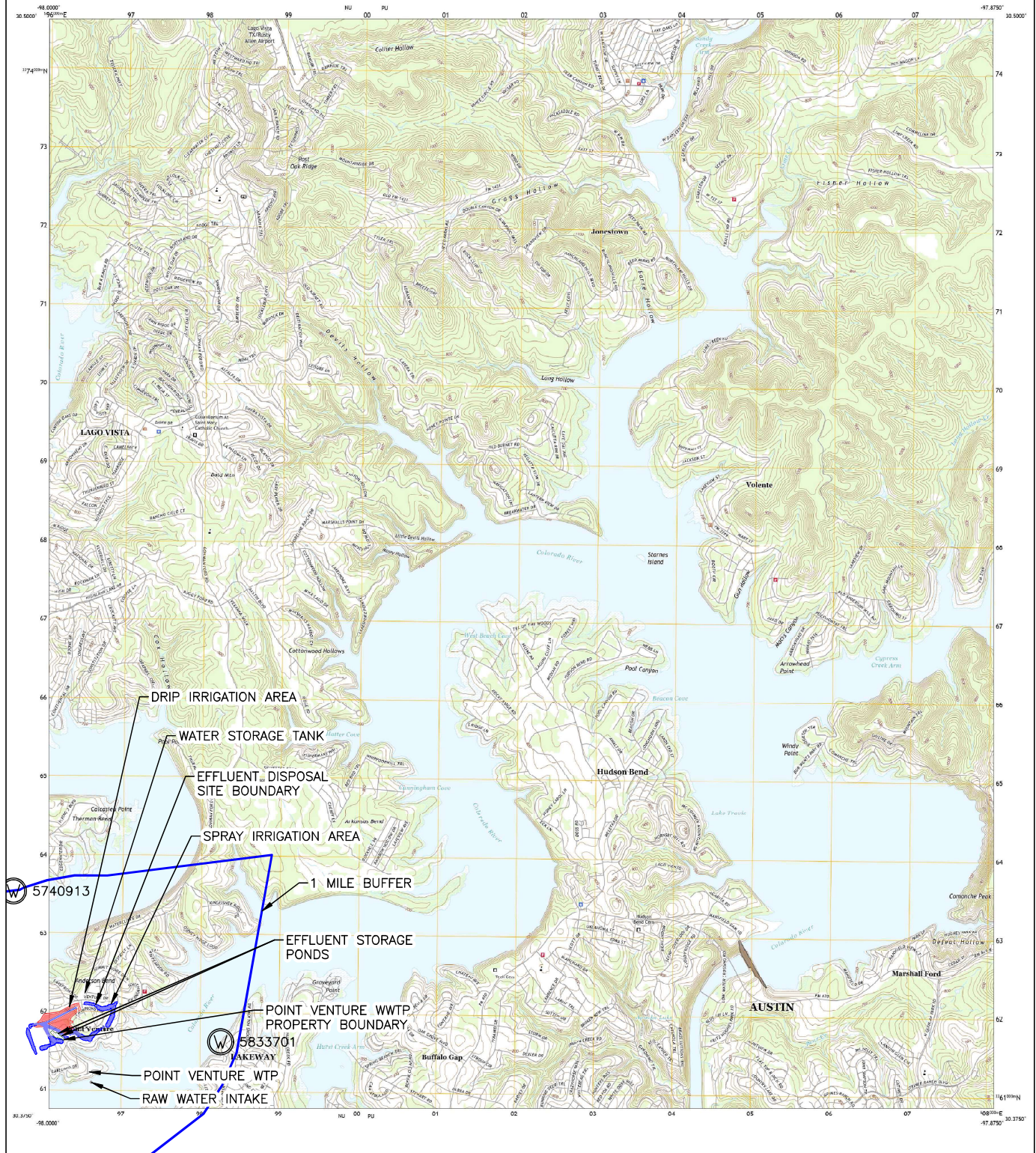
Drawn By: JDM | Checked By: DV | Scale: NTS | Date: 11/1/2024



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ATTACHMENT A (SHEET 2 OF 4)

ORIGINAL USGS TOPOGRAPHIC MAP

TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT POINT VENTURE

Drawn By: JDM | Checked By: DV | Scale: NTS | Date: 11/1/2024



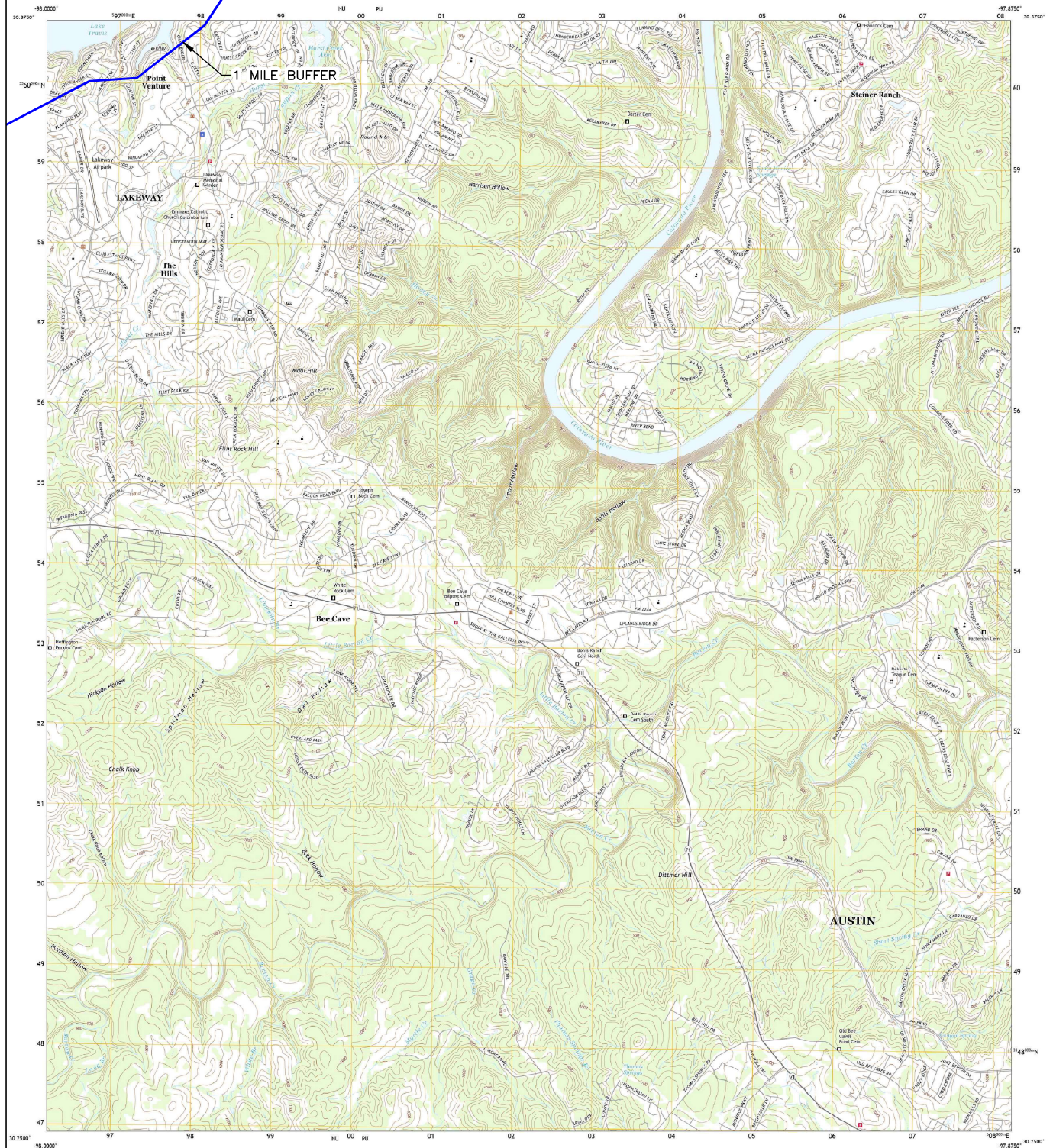
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ATTACHMENT A (SHEET 3 OF 4)

ORIGINAL USGS TOPOGRAPHIC MAP

TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT POINT VENTURE

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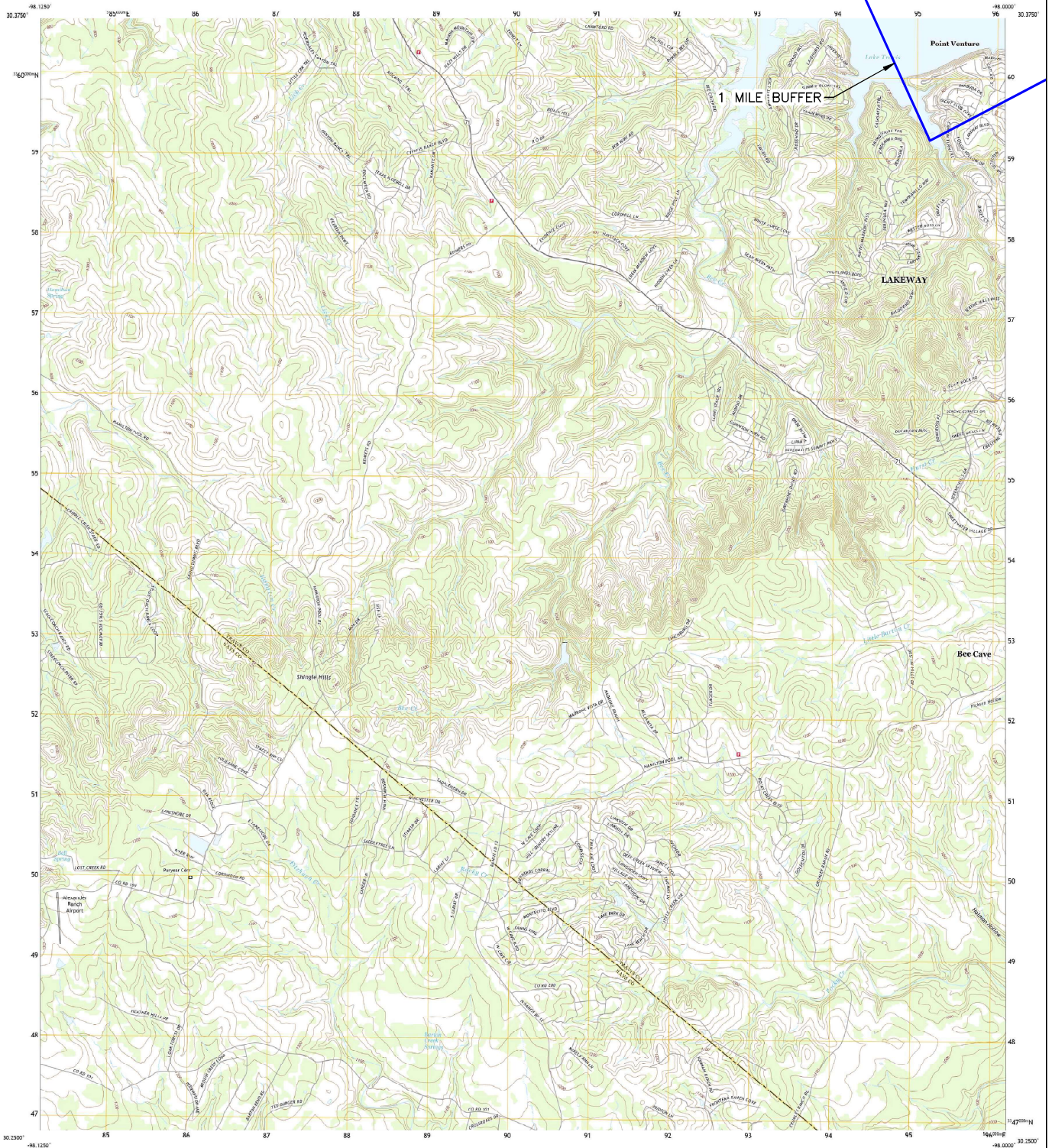


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ORIGINAL USGS TOPOGRAPHIC MAP

TRAVIS COUNTY WATER CONTROL AND
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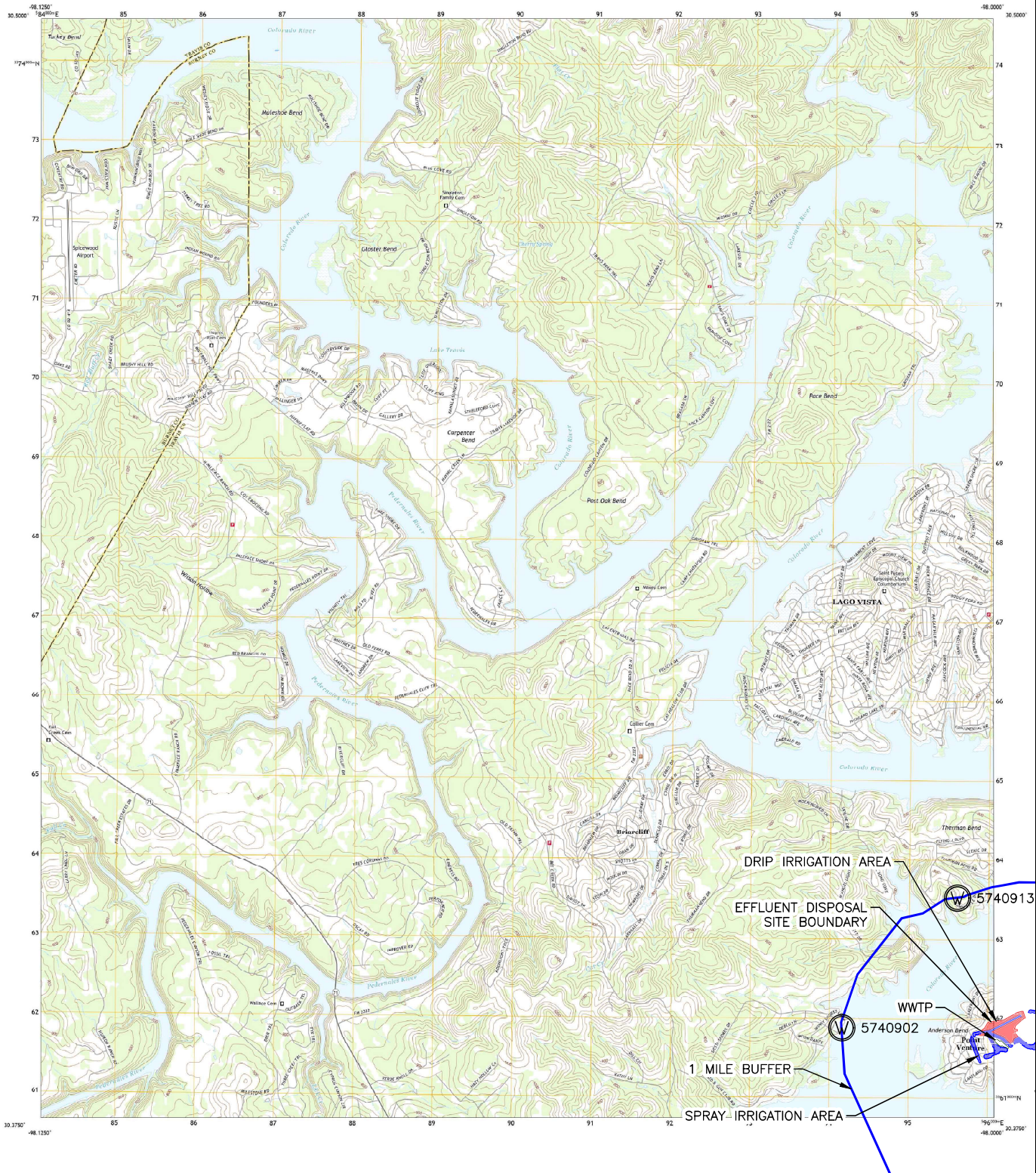
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ATTACHMENT A (SHEET 1 OF 4)

ORIGINAL USGS TOPOGRAPHIC MAP

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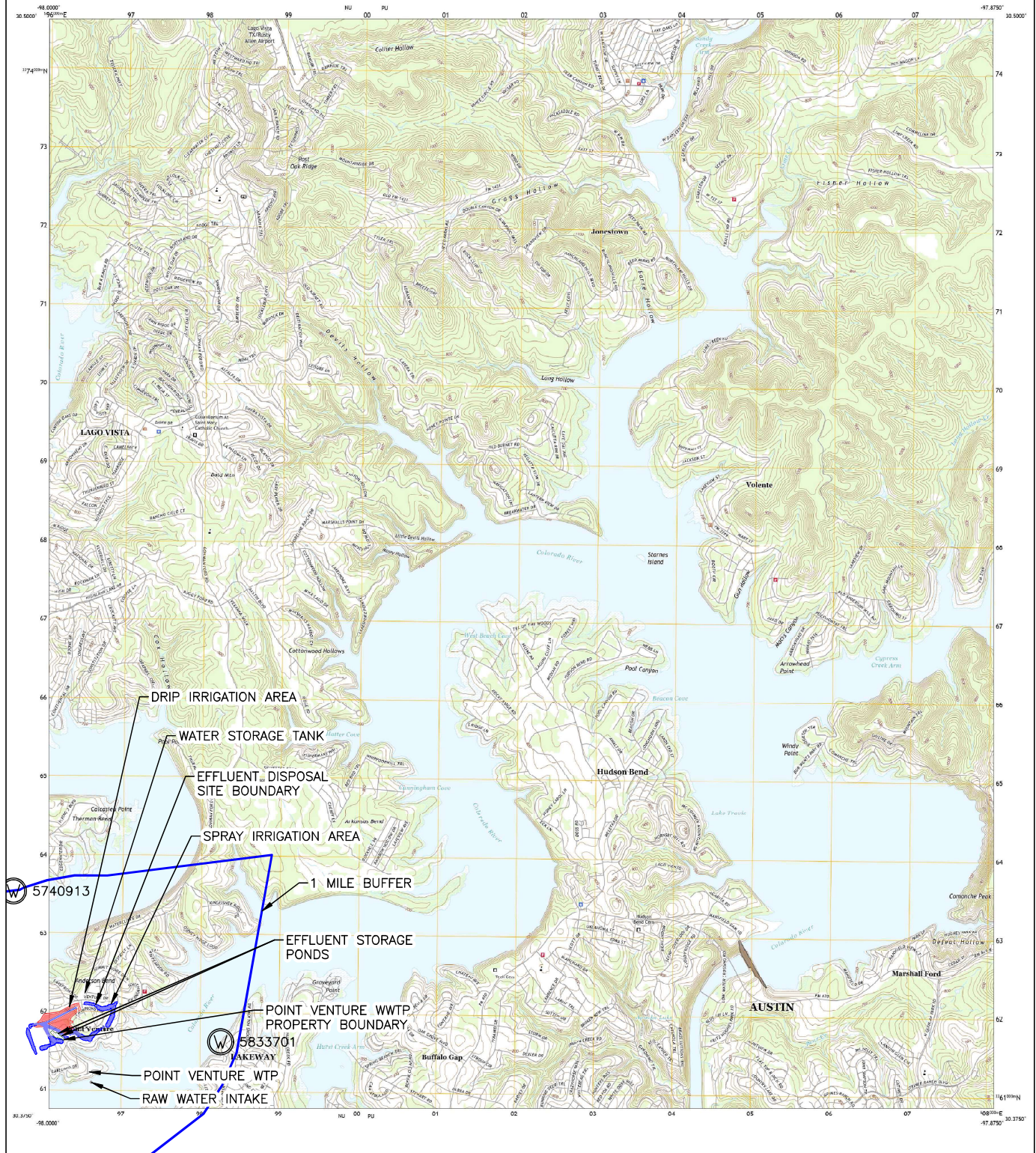
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ATTACHMENT A (SHEET 2 OF 4)

ORIGINAL USGS TOPOGRAPHIC MAP

TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT POINT VENTURE

Drawn By: JDM	Checked By: DV	Scale: NTS	Date: 11/1/2024
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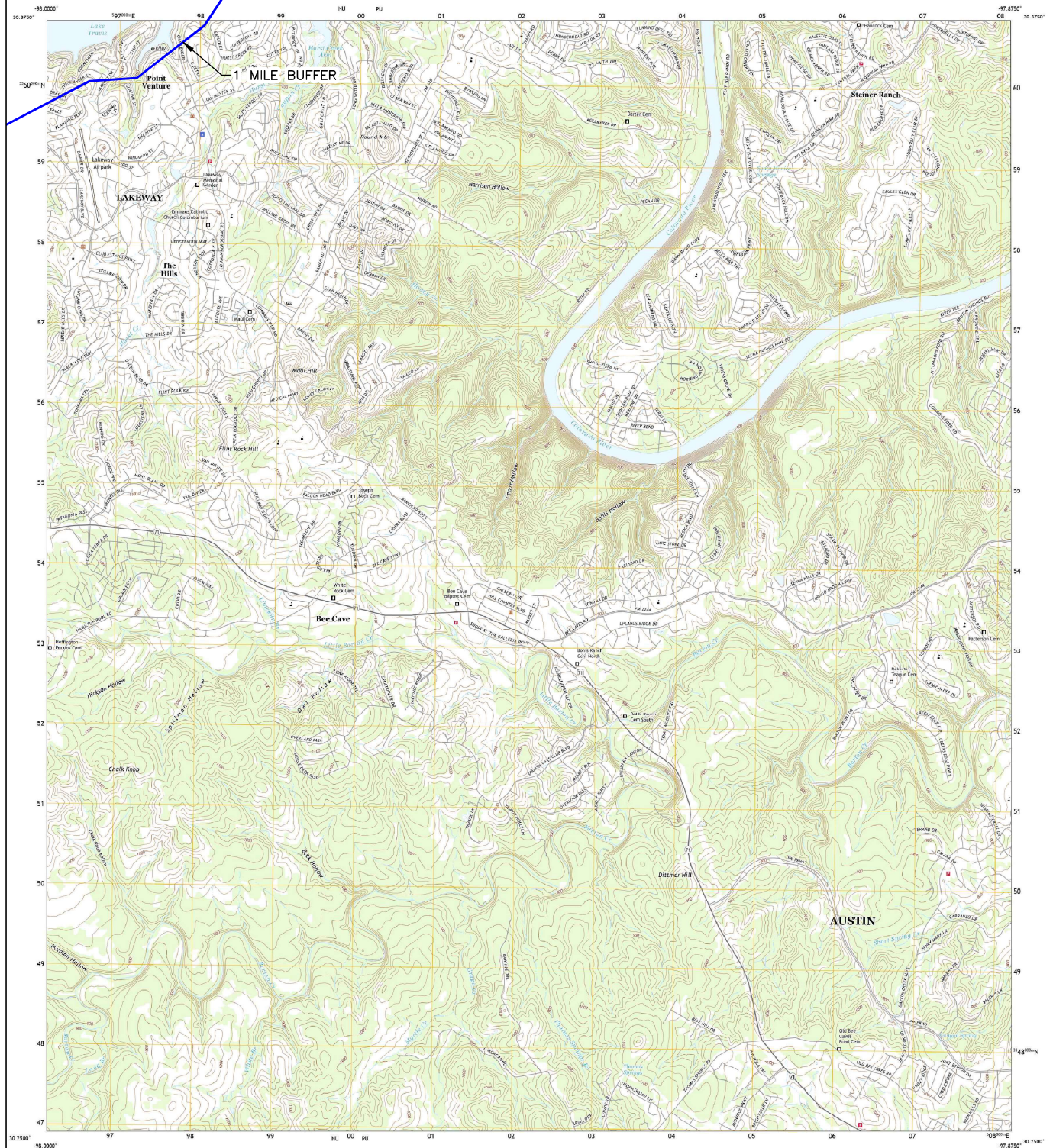
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ATTACHMENT A (SHEET 3 OF 4)

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TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT POINT VENTURE

Drawn By: JDM	Checked By: DV	Scale: NTS	Date: 11/1/2024
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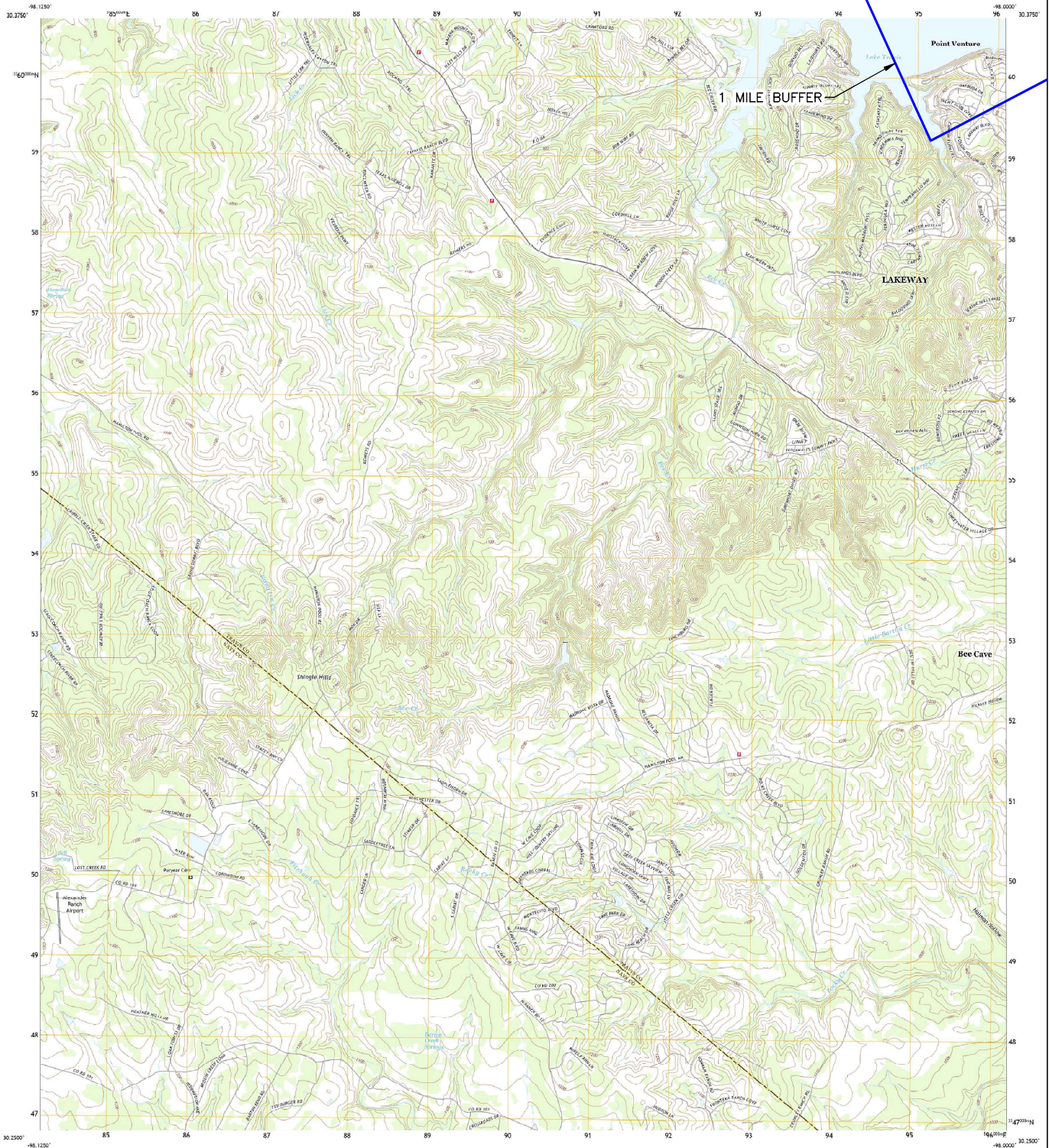


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ATTACHMENT A (SHEET 4 OF 4)

ORIGINAL USGS TOPOGRAPHIC MAP

TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT POINT VENTURE

Drawn By: JDM | Checked By: DV | Scale: NTS | Date: 11/1/2024



Compliance History Report

Compliance History Report for CN600644843, RN101916161, Rating Year 2024 which includes Compliance History (CH) components from September 1, 2019, through August 31, 2024.

Customer, Respondent, or Owner/Operator:	CN600644843, Travis County Water Control and Improvement District Point Venture	Classification: HIGH	Rating: 0.00
Regulated Entity:	RN101916161, POINT VENTURE PLANT	Classification: HIGH	Rating: 0.00
Complexity Points:	3	Repeat Violator:	NO
CH Group:	08 - Sewage Treatment Facilities		
Location:	LOCATED APPROX 6.5 MI S OF THE INTERX WITHIN THE VILLAGE OF POINT VENTURE OF FM1431 AND LOHMANS CROSSING TRAVIS, TX, TRAVIS COUNTY		
TCEQ Region:	REGION 11 - AUSTIN		
ID Number(s):			
WASTEWATER PERMIT WQ0011385001	WASTEWATER AUTHORIZATION R11385001		
Compliance History Period:	September 01, 2019 to August 31, 2024	Rating Year: 2024	Rating Date: 09/01/2024
Date Compliance History Report Prepared:	November 18, 2024		
Agency Decision Requiring Compliance History:	Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.		
Component Period Selected:	October 25, 2019 to November 18, 2024		
TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.			
Name: PT	Phone: (512) 239-3581		

Site and Owner/Operator History:

- | | |
|--|-----|
| 1) Has the site been in existence and/or operation for the full five year compliance period? | YES |
| 2) Has there been a (known) change in ownership/operator of the site during the compliance period? | NO |

Components (Multimedia) for the Site Are Listed in Sections A - J

A. Final Orders, court judgments, and consent decrees:

N/A

B. Criminal convictions:

N/A

C. Chronic excessive emissions events:

N/A

D. The approval dates of investigations (CCEDS Inv. Track. No.):

E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

N/A

F. Environmental audits:

N/A

G. Type of environmental management systems (EMSs):

N/A

H. Voluntary on-site compliance assessment dates:

N/A

I. Participation in a voluntary pollution reduction program:

N/A

J. Early compliance:

N/A

Sites Outside of Texas:

N/A

Senate Bill 709 (84th Legislative Session, 2015) amended the Texas Water Code by adding new Section 5.5553, which requires the Texas Commission on Environmental Quality (TCEQ) to provide written notice to you at least thirty (30) days prior to the TCEQ's issuance of draft permits for applications that are located in your district.

Travis County Water Control and Improvement District - Point Venture, 18606 Venture Drive, Lago Vista, Texas 78645, has applied to the TCEQ to renew Texas Land Application Permit No. WQ0011385001 to authorize the disposal of treated wastewater at a volume not to exceed a daily average flow of 82,200 gallons per day via surface irrigation of 33.576 acres of a golf course and a daily average flow not to exceed 67,800 gallons per day via subsurface area drip irrigation system with a minimum area of 19.464 acres of a golf course. The domestic wastewater treatment facility and disposal area are located at 19053 Venture Drive, near the city of Point Venture, in Travis County, Texas 78645. TCEQ received this application on October 25, 2024. The permit application will be available for viewing and copying at Travis County Water Control and Improvement District - Point Venture, main office, conference room, 18606 Venture Drive, Lago Vista, in Travis County, Texas. 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 is not part of the application or notice. For the exact location, refer to the application. <https://gisweb.tceq.texas.gov/LocationMapper/?marker=-97.999166,30.383333&level=18>

TCEQ is preparing the initial draft permit. At the time the draft permit is issued, the applicant will be required to publish notice in a newspaper of general circulation, and the TCEQ will provide a copy of the notice of draft permit to persons who have requested to be on a mailing list.

Questions regarding this application may be directed to Mr. Deba Dutta, P.E., by calling 512-239-4608.

Issuance Date: _____

From: [Chapa, Vanessa](#)
To: [Kimberly Kendall](#); [Erickson, Dodie](#)
Subject: RE: WQ0011385001 TRAVIS COUNTY WCID POINT VENTURE
Date: Wednesday, April 9, 2025 4:34:23 PM
Attachments: [image001.png](#)

Hi Kimberly,

We are good with the draft as-is and do not have any comments.

Thank you,

Vanessa Chapa | Compliance Manager, Texas
(M) 281.877.2612 | TXMUDCompliance@inframark.com



From: Kimberly Kendall <Kimberly.Kendall@tceq.texas.gov>
Sent: Wednesday, April 9, 2025 3:59 PM
To: Chapa, Vanessa <vanessa.chapa@inframark.com>; Erickson, Dodie <dodie.erickson@inframark.com>
Subject: FW: WQ0011385001 TRAVIS COUNTY WCID POINT VENTURE

Some people who received this message don't often get email from kimberly.kendall@tceq.texas.gov. [Learn why this is important](#)

This Message Is From an External Sender

This message came from outside your organization. Please use caution when clicking links.

Good afternoon,

I'm following up with this draft permit approval. Please respond immediately so I can move forward with this permit.

Kimberly Kendall

Kimberly Kendall, P.E.
Municipal Permits Team, MC-148
Wastewater Permitting Section
Water Quality Division, TCEQ
12100 Park 35 Circle, Austin, Texas 78753
Phone: 512-239-4540

Email: Kimberly.Kendall@tceq.texas.gov

From: Sophia Houston <Sophia.Houston@tceq.texas.gov>
Sent: Monday, March 24, 2025 3:33 PM
To: vanessa.chapa@inframark.com; dodie.erickson@inframark.com
Cc: Kimberly Kendall <Kimberly.Kendall@tceq.texas.gov>
Subject: WQ0011385001 TRAVIS COUNTY WCID POINT VENTURE

To whom it may concern,

Attached for your review, is the letter, DRAFT permit, NAPD, and statement of basis/technical summary, for Permit WQ0011385001 TRAVIS COUNTY WCID POINT VENTURE.

Please submit any **comments and/or approval** no later than, **Monday March 31, 2025**. If the comments and/ or approval are not received by the given deadline, it may cause significant delays in the permit process. Please contact Kimberly Kendall with your comments and/ or approval to: Kimberly.Kendall@tceq.texas.gov

Thank you,

Sophia L. Houston

Sophia Houston, Administrative Assistant V
Water Quality Division
Customer Information Assistance (CIA)
Texas Commission on Environmental Quality (TCEQ)
Sophia.houston@tceq.texas.gov
512-239-6053

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Deba Dutta, P.E., Team Leader
Municipal Permits Team, Wastewater Permitting Section

Date:

From: Kimberly Kendall, P.E., Municipal Permits Team

APPLICANT: Travis County Water Control and Improvement District - Point Venture
PLANT NAME: Point Venture WWTP
TCEQ PERMIT NO: WQ0011385001

FILE NAME: [WQ0011385001 Travis WCID Draft Permit Package.docx](#)

Admin Complete:	11/12/24	Tech Complete:	
Groundwater Impact Evaluation:	11/15/24	RFI Letter Date:	N/A
Assign Date:	11/18/24	Response Letter:	N/A

PERMIT TYPE

<input checked="" type="checkbox"/> Public Domestic	<input checked="" type="checkbox"/> Minor (< 1 MGD)	<input type="checkbox"/> Permitted Sludge or Biosolids Disposal
<input type="checkbox"/> Private Domestic	<input type="checkbox"/> Major (≥ 1 MGD)	<input type="checkbox"/> Water Treatment Plant
<input checked="" type="checkbox"/> Surface Irrigation	<input checked="" type="checkbox"/> Subsurface Disposal (SADDS)	<input type="checkbox"/> Evaporation

PERMIT ACTION:

Renewal

YES	NO	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Transmittal letter to applicant
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Statement of Basis/Technical Summary and ED Preliminary Decision
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Permit Draft
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Authorization to land apply or dispose of Class B WWTP Biosolids or sewage sludge on property adjacent to WWTP in draft permit:
<input type="checkbox"/>	<input checked="" type="checkbox"/>	includes appropriate other requirements (including quarterly and annual reporting, soil monitoring, language in notice and fact sheet, attachments:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	FACILITY PROCESS FORM for PARIS
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NOTICE for admin complete on or after 9/1/99
<input checked="" type="checkbox"/>	<input type="checkbox"/>	CAPTION (also saved in I:\EVERYONE\wq\CAPTION)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Legislative Notice (SB709) required (saved in I:\WQ\Muni\ LEGISLATIVE NOTICE)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	LOCATED IN THE COASTAL ZONE (if located in coastal zone, include CMP Threshold Review Sheet)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	SPELLCHECK: DRAFT PERMIT/TECH SUM/SOB/FACT SHEET/NOTICE/LETTER(S)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	SCHEDULE FOR ERC Part A: Permits in Edwards Aquifer are scheduled for ERC Part A.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	COMPLIANCE HISTORY: CN=0.00 (High) and RN=0.00 (High)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Enforcement orders; ERC Part C
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Changes to the draft permit made based on discussion at ERC

COMMENTS: A renewal to authorize the disposal of treated wastewater at a volume not to exceed a daily average flow of 0.10 MGD via surface irrigation of 48 acres of a golf course in the Interim phase and 82,200 gallons per day via surface irrigation of 33.576 acres of a golf course and a daily average flow not to exceed 67,800 gallons per day via subsurface area drip

irrigation system (SADDS) with a minimum area of 19.464 acres of a golf course in the Final phase. The Interim I phase of the existing permit has been removed since the facility is currently operating at the 0.10 MGD capacity. The Interim II phase of the existing permit has been updated to the Interim phase, and the Final phase remains the same. SECTION IV, REQUIREMENTS APPLYING TO SLUDGE OR BIOSOLIDS TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING, has been added to the Sludge Provisions of the draft permit to allow the transportation of sludge or biosolids to another facility. Based on the Agronomy Recommendation and the Geology Compliance Review, Surface Irrigation Special Provision Nos. 6, 9, 11, and 18 in the existing permit were updated in the draft permit; Surface Irrigation Special Provision Nos. 19 through 24, 27, and 28 were added to the draft permit; and SADDS Special Provision Nos. 16, 18, 27, 34, and 35 in the existing permit were updated in the draft permit.

Request for Comments on Draft Permit
TCEQ – Water Quality Division
Phone: (512)239-4671
Fax: (512)239-4430
Mailing Address: TCEQ, Water Quality Division, P.O. Box 13087, Austin, TX 78711-3087

TO: Region: **11**

Submitted by: **Kimberly Kendall, P.E.**

E-Mail ID: **kimberly.kendall@tceq.texas.gov**

Phone: **(512) 239-4540**

Date Request Submitted:

Comments Deadline: Within 7 days

Date Application Received by TCEQ in Austin: **October 25, 2024**

REGIONAL OFFICES: The entity below has submitted an application for the project referenced below in accordance with regulations of the TCEQ. Please return comments ASAP, but no later than the comments deadline, which is 10 days from the submittal date. Permit disposition will proceed after comments are received or after the comments deadline has passed. If no comments are received within this time frame, we will assume you have no comments or objections to the project as proposed. Please return a complete copy of the form (both sides) with your comments.

PROJECT TYPE: **Renewal**

TEAM ASSIGNED: **MUNICIPAL**

APPLICATION TYPE: **TLAP**

REGULATED ENTITY NO.: **RN101916161**

PERMIT NO.: **WQ0011385001**

CUSTOMER REFERENCE NO.: **CN600644843**

COMPANY NAME: **Travis County Water Control and Improvement District - Point Venture**

PLANT NAME: **Point Venture WWTP**

ADDRESS: **18606 Venture Drive, Lago Vista, Texas 78645**

SEGMENT: **1404**

COUNTY: **Travis**

TECHNICAL CONTACT: **Mr. David Vargas**

PHONE: **512-442-3008**

PERMIT CLASSIFICATION: **MINOR**

COMPLIANCE RATING: **CN=0.00 (High) and RN=0.00 (High)**

SUMMARY OF APPLICATION REQUEST: A renewal to authorize the disposal of treated wastewater at a volume not to exceed a daily average flow of 0.10 MGD via surface irrigation of 48 acres of a golf course in the Interim phase and 82,200 gallons per day via surface irrigation of 33.576 acres of a golf course and a daily average flow not to exceed 67,800 gallons per day via subsurface area drip irrigation system (SADDS) with a minimum area of 19.464 acres of a golf course in the Final phase.

PERMIT WRITER COMMENTS: The Interim I phase of the existing permit has been removed since the facility is currently operating at the 0.10 MGD capacity. The Interim II phase of the existing permit has been updated to the Interim phase, and the Final phase remains the same. SECTION IV, REQUIREMENTS APPLYING TO SLUDGE OR BIOSOLIDS TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING, has been added to the Sludge Provisions of the draft permit to allow the transportation of sludge or biosolids to another facility. Based on the Agronomy Recommendation and the Geology Compliance Review, Surface Irrigation Special Provision Nos. 6, 9, 11, and 18 in the existing permit were updated in the draft permit; Surface Irrigation Special Provision Nos. 19 through 24, 27, and 28 were added to the draft permit; and SADDs Special Provision Nos. 16, 18, 27, 34, and 35 in the existing permit were updated in the draft permit.

RESPONSE TO REQUEST FOR COMMENTS ON DRAFT PERMIT

TO: **Kimberly Kendall, P.E.**

FROM: Region: **11**

Copy of Application Received by your Office: ☐ YES ☐ NO Date Received: _____

COMPANY NAME: Travis County Water Control and Improvement District - Point Venture

PERMIT NO.: WQ0011385001

REGULATED ENTITY NO: RN101916161

Investigator's/Compliance Officer's Name (Please Print): _____

Phone: _____

Comments Deadline (from pg. 1):

Date of Last Site Visit: _____

COMMENTS ON CONDITIONS: (Please mark up the draft special conditions with your comments. Please address applicability and enforceability. List any additional conditions below):

Compliance Determination Conditions: _____

Operational Limitations: _____

General Comments: _____

Brooke T. Paup, *Chairwoman*
Bobby Janecka, *Commissioner*
Catarina R. Gonzales, *Commissioner*
Kelly Keel, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

Mr. David Vargas
Trihydro Corporation
5508 West Highway 290 West, Suite 201
Austin, Texas 78735

Re: Travis County Water Control and Improvement District - Point Venture - Proposed
TCEQ Permit No. WQ0011385001
(CN600644843; RN101916161)

Dear Mr. Vargas:

Enclosed for your review and comment is a copy of a draft proposed permit and technical summary for the above-referenced operation. This draft permit is subject to further staff review and modification; however, we believe it generally includes the terms and conditions that are appropriate to your discharge. **Please read the entire draft carefully as there may be changes from the existing permit and note the following:**

1. The draft permit will be issued to expire **ten years from the date of issuance**, according to 30 Texas Administrative Code (TAC) Section 305.127(1)(C)(ii)(III), Conditions to be Determined for Individual Permits.
2. The Sludge Provisions, Special Provisions, and Standard Provisions have been revised in the draft permit.
3. Certain accidental discharges or spills of treated or untreated wastewater from wastewater treatment facilities or collection systems owned or operated by a local government may be reported on a monthly basis in accordance with 30 TAC § 305.132.
4. The draft permit includes all updates based on the 30 TAC 312 rule change effective April 23, 2020.
5. The Interim I phase of the existing permit has been removed since the facility is currently operating at the 0.10 MGD capacity. The Interim II phase of the existing permit has been updated to the Interim phase, and the Final phase remains the same.

6. SECTION IV, REQUIREMENTS APPLYING TO SLUDGE OR BIOSOLIDS TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING, has been added to the Sludge Provisions of the draft permit to allow the transportation of sludge or biosolids to another facility.
7. Based on the Agronomy Recommendation and the Geology Compliance Review, Surface Irrigation Special Provision Nos. 6, 9, 11, and 18 in the existing permit were updated in the draft permit; Surface Irrigation Special Provision Nos. 19 through 24, 27, and 28 were added to the draft permit; and SADDs Special Provision Nos. 16, 18, 27, 34, and 35 in the existing permit were updated in the draft permit.

Also enclosed for your review and comment is a copy of the draft second notice, the Notice of Application and Preliminary Decision (NAPD), that was prepared for your application. Please review this notice and provide comments if there are any inaccuracies or any information that is not consistent with your application. Please do not publish the notice at this time; after the draft permit is filed with the Office of the Chief Clerk, you will receive instructions for publishing this notice in a newspaper from the Office of the Chief Clerk. Please note that these instructions will not be mailed if the Office of the Chief Clerk has not received the requested proof that the first notice (Notice of Receipt and Intent to Obtain a Permit) has been published. This could cause delays in the processing of your application and the final issuance of the proposed draft permit. When the NAPD notice is received, please publish promptly and submit proof of publication (affidavit and tearsheet) to the Office of the Chief Clerk. Failure to publish notice and submit proof of publication in a timely manner may result in returning of the application and loss of authorization to operate.

It is your responsibility to submit your comments on the draft permit prior to the deadline that is indicated in the email. Comments can be sent to kimberly.kendall@tceq.texas.gov in place of or in addition to a hard copy.

If you have any comments or questions, please contact me at (512) 239-4540 or if by correspondence, include MC 148 in the letterhead address following my name.

Sincerely,

Kimberly Kendall

Kimberly Kendall, P.E., Permit Coordinator
Municipal Permits Team
Wastewater Permitting Section (MC 148)

Mr. David Vargas
Page 3

Water Quality Division
Texas Commission on Environmental Quality

Enclosures

cc: Ms. Dodie Erickson, District Account Manager, Inframark Services, 18606 Venture Drive, Lago Vista, Texas 78645

Brooke T. Paup, *Chairwoman*
Bobby Janecka, *Commissioner*
Catarina R. Gonzales, *Commissioner*
Kelly Keel, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

Date, 2025

Mr. David Vargas
Trihydro Corporation
5508 West Highway 290 West, Suite 201
Austin, Texas 78735

RE: Notice of Preliminary Decision and Draft Permit
Applicant Name: Travis County Water Control and Improvement District - Point Venture
Facility Name: Point Venture WWTP
Permit No.: WQ0011385001
Customer Reference Number: CN600644843
Regulated Entity Number: RN101916161
Type of Application: Renewal

Dear Mr. Vargas:

The executive director has completed the technical review of the above referenced application, received on October 25, 2024 and has prepared a preliminary decision and draft permit.

You are now required to publish another notice of your proposed activity. To help you meet the requirements associated with this notice, we have included the following items:

- Instructions for Public Notice
- Notice for Newspaper Publication
- Publisher's Affidavits
- Draft Permit
- Executive Director's Preliminary Decision
- Public Notice Verification Form

You must follow all the directions in the enclosed instructions. The most common mistakes are the unauthorized changing of notice, wording, or font. If you fail to follow these instructions, you may be required to republish the notices.

The following requirements are also described in the enclosed instructions. However, due to their importance, they are highlighted here as well.

1. You must publish the enclosed notice within as soon as possible, but no later than 45 days from the date on the cover letter. **You may be required to publish the notice in more than one newspaper, including a newspaper published in an alternative language, to satisfy all of the notice requirements.**
2. On or before the date you publish notice, you must place the following items in a public place in the county where the facility is or will be located.
 - (a) a copy of your permit application, including any subsequent revisions;
 - (b) the executive director's preliminary decision as contained in the technical summary and fact sheet; and
 - (c) the draft permit, including any subsequent revisions.

These items must be accessible to the public for review and copying, must be updated to reflect changes to the application, and must remain in place until the commission has taken action on the application or the commission refers issues to the State Office of Administrative Hearings.

3. For each publication, submit proof of publication of the notice that shows the publication date and newspaper name to the Office of the Chief Clerk within **30 calendar days** after notice is published in the newspaper.
4. Return the original enclosed Public Notice Verification and the Publisher's Affidavits to the Office of the Chief Clerk within **30 calendar days** after the notice is published in the newspaper.

If you do not comply with **all** the requirements described in the instructions, further processing of your application may be suspended or the agency may take other actions.

If you have any questions regarding publication requirements, please contact the Office of Legal Services at (512) 239-0600. If you have any questions regarding the content of the notice, please contact the individual in the permitting area assigned to your application.

Sincerely,

Laurie Gharis
Chief Clerk
Office of the Chief Clerk
Texas Commission on Environmental Quality

LG/KK/CIA team member initials

Enclosures

Mr. David Vargas, Page 3
Date, 2025
Permit No. WQ0011385001

bcc: TCEQ Region 11, Water Program Manager

Brooke T. Paup, *Chairwoman*
Bobby Janecka, *Commissioner*
Catarina R. Gonzales, *Commissioner*
Kelly Keel, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

Date, 2025

Mr. David Vargas
Trihydro Corporation
5508 West Highway 290 West, Suite 201
Austin, Texas 78735

RE: Permit Application
Permit No.: WQ0011385001
Travis County Water Control and Improvement District - Point Venture
Point Venture WWTP
Lago Vista, Texas 78645, Travis County
Customer Reference Number: CN600644843
Regulated Entity Number: RN101916161

Dear Mr. Vargas:

The Texas Commission on Environmental Quality (TCEQ) has made a preliminary decision on the above-referenced permit applications. In accordance with Title 30 Texas Administrative Code § 39.419(b), you are now required to publish Notice of Application and Preliminary Decision. You must provide a copy of the preliminary decision letter with the draft permit at the public place referenced in the public notice.

If you have any questions, please contact the individual in the permitting area assigned to your application, or write to the TCEQ, Office of Water, Water Quality Division, MC-148, Austin, Texas, 78711-3087.

Sincerely,

Matthew Udenenwu
Section Manager, Wastewater Permitting
Office of Water
Texas Commission on Environmental Quality

MU/KK/CIA team member initials

Enclosures

Mr. David Vargas, Page 2
Date, 2025
Permit No. WQ0011385001

cc: TCEQ Region 11, Water Program Manager

AGENDA CAPTION FOR PERMIT NO. WQ0011385001

Travis County Water Control and Improvement District - Point Venture has applied for a renewal of TCEQ Permit No. WQ0011385001 which authorizes the disposal of treated domestic wastewater at a daily average flow not to exceed 82,200 gallons per day via surface irrigation of 33.576 acres of a golf course and a daily average flow not to exceed 67,800 gallons per day via subsurface area drip irrigation system (SADDS) with a minimum area of 19.464 acres of a golf course. This permit will not authorize a discharge of pollutants into water in the state. The wastewater treatment facility and disposal site are located at 19053 Venture Drive, in Travis County, Texas 78645.

PARIS FACILITY EXTENSION - TREATMENT PROCESS
TCEQ PERMIT NO. WQ0011385001

Permittee: Travis County Water Control and Improvement District - Point Venture
Plant Point Venture WWTP
Appl. Type: Renewal ☐ Interim I ☒ Interim II ☐ Interim III ☒ Final

WASTEWATER TREATMENT

Primary Treatment

02 Preliminary treatment – bar screen

03 Preliminary treatment – grit removal
04 Preliminary treatment -
05 Preliminary treatment - others
B1 Imhoff tank
06 Scum removal
07 Flow equalization basins
08 Preaeration
09 Primary sedimentation
D2 Septic tank
A5 Facultative lagoon

Secondary Treatment

10 Trickling filter – rock media
11 Trickling filter – plastic media
12 Trickling filter – redwood slats
13 Trickling filter – other media
14 Activate sludge – conventional
15 Activate sludge – complete mix
16 Activate sludge – contact
17 Activated sludge – extended aeration
18 Pure oxygen activate sludge
19 Bio-Disc (rotating biological filter)
20 Oxidation ditch
21 Clarification using tube settlers
22 Secondary clarification
B6 Constructed wetlands
E5 Natural treatment
E6 Overland flow

Advanced Treatment - Biological

23 Biological nitrification – separate
24 Biological nitrification – combined
25 Biological denitrification
26 Post aeration (reaeration)

Advanced Treatment –

27 Microstrainers – primary
28 Microstrainers – secondary
D1 Dunbar Beds
29 Sand filters
30 Mix media filters (sand and coal)
31 Other filtrations
B2 Bubble diffuser (compressor)
32 Activated carbon – granular
B3 Mechanical surface aerator
33 Activated carbon-powered
34 Two stage lime treatment of raw
35 Two stage tertiary lime treatment
36 Single stage lime treatment of raw
37 Single stage tertiary lime treatment
38 Recarbonation
39 Neutralization
40 Alum addition to primary

41 Alum addition to secondary
42 Alum addition to separate state
43 Ferri-chloride addition to primary
44 Ferri-chloride addition to secondary
45 Ferri-chloride addition to separate
46 Other chemical additions
47 Ion exchange
48 Breakpoint chlorination
49 Ammonia stripping
50 Dechlorination

Disinfection

51 Chlorination for disinfection

52 Ozonation for disinfection
53 Other disinfection
D3 Ultra violet light

Land Treatment

54 Land treatment of primary effluent
55 Land treatment of secondary effluent
56 Land treatment of intermediate
(less than secondary)

Other Treatment

57 Stabilization ponds
58 Aerated lagoons
59 Outfall pumping
60 Outfall diffuser
61 Effluent to other plants
62 Effluent outfall
63 Other treatment
64 Evapo-transpiration beds
64 Recalcination

Disposal Method

A7 Irrigation – public access

A8 Irrigation – agricultural
B4 Evapo-transpiration beds
B6 Constructed wetlands
C1 Irrigation – pastureland
D4 Pressure dosing system
D5 Percolation system
D8 Other reuse method
E1 Evaporation/plays
E2 Discharge only
E3 Discharge and (use other #)
E4 Injection well(s)

SLUDGE TREATMENT

65 Aerobic digestion – air

66 Aerobic digestion – oxygen
67 Composting
68 Anaerobic digestion
69 Sludge lagoons
70 Heat treatment – dryer
71 Chlorine oxidation of sludge
72 Lime stabilization

73 Wet air oxidation
74 Dewatering – sludge drying beds,
F2 Dewatering – fluidized beds
75 Dewatering – mechanical-vacuum
76 Dewatering – mechanical – centrifuge
77 Dewatering – mechanical – filter press
78 Dewatering – others
79 Gravity thickening
80 Air flotation thickening
D6 Sludge holding tank

Incineration

81 Incineration – multiple hearth
82 Incineration – fluidized beds
83 Incineration – rotary kiln
84 Incineration – others
85 Pyrolysis
86 Co-incineration with solid waste
87 Co-pyrolysis with solid waste
88 Co-incineration - others

SLUDGE DISPOSAL

89 Co-disposal landfill

D7 Sludge – only monofill
90 Land application (permitted)
91 Commercial land application
92 Trenching
B5 Transport to another WWTP
F3 Transport to Regional compost facility
94 Other sludge handling
95 Digest gas utilization facilities
E7 Commercial land application
F4 Dedicated land disposal
F5 Marketing and distribution
F6 Marketing and distribution non-

MISCELLANEOUS

01 Pumping raw wastewater
96 Control/lab/maintenance buildings
97 Fully automated using digital control -
98 Fully automated using analog control
99 Semi-automated plant
A1 Manually operated and controlled
A2 Package plant
A3 Semi-package plant
A4 Custom built plant
A7 Irrigation – public access
A8 Irrigation – agriculture
A9 Effluent storage ponds (irrigation)
C1 Irrigation – pastureland
D8 Other reuse method
D9 Emergency holding ponds
E1 Evaporation or playa
E8 Monitoring wells
E9 Biomonitoring
F7 Stormwater (SSO)
F8 Unconventional

PERMIT Kimberly Kendall, P.E.
 Municipal Permits Team
 Water Quality Division, Wastewater Permitting Section
Date: March 21, 2025

TCEQ Interoffice Memorandum

To: Deba Dutta, P.E., Lead, Municipal Permits Team

From: Andrew Gorton, P.G., Geologist, Water Quality Assessment Team

Date: November 15, 2024

Subject: Geology Compliance Review of Groundwater-Related Special Provisions for Permit No. WQ0011385-001, Travis Co. WCID – Point Venture WWTP, Renewal, Travis County

Based upon the review of the existing permit language the WQA Team reviewing geologist recommends the following modifications to special provisions:

Recommendations:

Revise Special Provision 18 of the Surface Irrigation section with the following changes in bold:

18. For the existing wastewater ponds that were lined and certified under 30 TAC Chapter 317: Facilities for the retention of treated or untreated wastewater shall be adequately lined to control seepage. The following methods of pond lining are acceptable:

- a. In-situ clay soils or placed and compacted clay soils meeting the following requirements:
 1. More than 30% passing a No. 200 mesh sieve
 2. Liquid limit greater than 30%
 3. Plasticity index greater than 15
 4. A minimum thickness of 2 feet
 - 5. Permeability equal to or less than 1×10^{-7} cm/sec (*)**
 - 6. Soil compaction will be 95% standard proctor at optimum moisture content (*)**
- (*) For new and/or modified ponds only.**
- b. Membrane lining with a minimum thickness of 20 mils, and an underdrain leak detection system.
- c. An alternate method of pond lining may be utilized with prior approval from the Executive Director.

The permittee has furnished certification by a Texas Licensed Professional Engineer that the completed pond lining meets the appropriate criteria above (on file). ~~The certification shall be sent to the TCEQ Regional Office (MC Region 5), Water Quality Assessment Team (MC 150), and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division.~~

Add the following as new special provisions immediately following Special Provision 18:

19. The existing wastewater ponds shall be maintained and operated in a manner that prevents unauthorized discharge to water in the state and contamination of groundwater.
20. Facilities for the retention of treated or untreated wastewater shall be adequately managed and lined to control seepage. At least once per month, the Permittee shall inspect the sides

and bottom (if visible) of all wastewater ponds for signs of damage and leakage, and any pond leak detection systems that are in service. Leaking ponds shall be removed from service, or operated in a manner to prevent discharge, until repairs are made or replacement ponds are constructed.

21. Any new or modified wastewater pond shall be adequately lined to control seepage in accordance with 30 TAC §217.203 **and** 30 TAC §309.13(d) since the facility overlies the recharge zone of an aquifer. New or modified wastewater ponds shall not be put into service until the permittee demonstrates that the pond liners meet the requirements of 30 TAC §217.203 **and** 30 TAC §309.13(d). The permittee shall demonstrate that the number, location, and test results of samples collected for geotechnical testing are in accordance with 30 TAC §217.203(d) and (e), and that the liner has a minimum thickness of 3 feet in accordance with 30 TAC §309.13(d) since the facility overlies the recharge zone of an aquifer. The report providing this demonstration shall be submitted to the Water Quality Assessment Team (MC-150) and the TCEQ Regional Office (MC-Region 11) for review and approval prior to use of the wastewater ponds. If a synthetic liner is to be used, the liner thickness shall be a minimum of 40 mils and be constructed with an underground leak detection system with appropriate sampling points.
22. The permittee shall submit the liner certification for a newly-constructed or modified wastewater pond to the Water Quality Assessment Team (MC-150), the TCEQ Regional Office (MC-Region 11), and the TCEQ Compliance Monitoring Section (MC-224) within 30 days of completion and prior to use. The certification shall be signed and sealed by a Texas-licensed professional engineer and include a description of how the liner meets the requirements of 30 TAC §217.203 **and** 30 TAC §309.13(d).
23. Pond liner certifications and all liner construction and repair documentation shall be maintained by the Permittee for the life of the facility and be made available for TCEQ personnel for inspection and review.
24. The permittee shall comply with buffer zone requirements of 30 TAC §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 ft from a private well and a minimum horizontal distance of 500 ft from a public water well site, spring, or other similar sources of public drinking water, as provided by §290.41(c)(1)(C) of this title.

Travis County Water Control and Improvement District - Point Venture WWTP
Permit Application No. WQ0011385001
Application for a Renewal
Technical Completeness Review

Please address the following items:

GEOLOGY ITEMS

1. Domestic Worksheet 3.0, Section 6 and Attachment H – Well and Map Information: This reviewer identified approximately 19 water wells within one mile of the facility property boundary (with 5 being within one-half mile of the property boundary, and in addition to wells 5740913, 5740902, and 5833701 shown in the application). Please confirm (or deny) this. If confirmed, please include these wells on the USGS topographic map or well map. Complete Table 3.0(3) and provide the well logs for wells within one-half mile of the property or disposal area. Note – the “TWDB Groundwater” and “Well Reports” layers must be activated to see each water well. See the Texas Water Development Board Water Data Interactive website for water well information:
<https://www3.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer#>.
2. For Best Management Practices regarding water wells, please indicate on Table 3.0(3) that the minimum buffer distances of 150 feet (for domestic wells), and 500 feet (for public supply wells), will be maintained between the water wells and the wastewater pond and effluent irrigation areas.
3. Domestic Worksheet 3.0, Section 7 and Attachment L – Groundwater Technical Report: The Groundwater Quality Technical Report was identified in the application but needs additional information. This Report must assess the impact (if any) of the wastewater disposal system on groundwater. This report shall include an evaluation of water wells in the area (e.g., depth to groundwater, etc.), the aquifer(s) under the proposed facility, and use of groundwater in the area (e.g., irrigation public supply, domestic, etc.), the wastewater application rate, and any wastewater pond liners. An example Groundwater Quality Technical Report can be provided upon request.

AGRONOMY ITEMS

1. No Comments.

For geology/groundwater-related questions, please contact Andrew Gorton, P.G. via email at Andrew.Gorton@tceq.texas.gov (preferred) or at 512-239-4585 and for agronomy related questions, please contact Sara Holmes via email at Sara.Holmes@tceq.texas.gov (preferred) or at 512-239-4534.



Compliance History Report

Compliance History Report for CN600644843, RN101916161, Rating Year 2024 which includes Compliance History (CH) components from September 1, 2019, through August 31, 2024.

Customer, Respondent, or Owner/Operator:	CN600644843, Travis County Water Control and Improvement District Point Venture	Classification: HIGH	Rating: 0.00
Regulated Entity:	RN101916161, POINT VENTURE PLANT	Classification: HIGH	Rating: 0.00
Complexity Points:	3	Repeat Violator:	NO
CH Group:	08 - Sewage Treatment Facilities		
Location:	LOCATED APPROX 6.5 MI S OF THE INTERX WITHIN THE VILLAGE OF POINT VENTURE OF FM1431 AND LOHMANS CROSSING TRAVIS, TX, TRAVIS COUNTY		
TCEQ Region:	REGION 11 - AUSTIN		
ID Number(s):			
WASTEWATER PERMIT WQ0011385001	WASTEWATER AUTHORIZATION R11385001		
Compliance History Period:	September 01, 2019 to August 31, 2024	Rating Year: 2024	Rating Date: 09/01/2024
Date Compliance History Report Prepared:	November 18, 2024		
Agency Decision Requiring Compliance History:	Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.		
Component Period Selected:	October 25, 2019 to November 18, 2024		
TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.			
Name: PT	Phone: (512) 239-3581		

Site and Owner/Operator History:

- | | |
|--|-----|
| 1) Has the site been in existence and/or operation for the full five year compliance period? | YES |
| 2) Has there been a (known) change in ownership/operator of the site during the compliance period? | NO |

Components (Multimedia) for the Site Are Listed in Sections A - J

A. Final Orders, court judgments, and consent decrees:

N/A

B. Criminal convictions:

N/A

C. Chronic excessive emissions events:

N/A

D. The approval dates of investigations (CCEDS Inv. Track. No.):

E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

N/A

F. Environmental audits:

N/A

G. Type of environmental management systems (EMSs):

N/A

H. Voluntary on-site compliance assessment dates:

N/A

I. Participation in a voluntary pollution reduction program:

N/A

J. Early compliance:

N/A

Sites Outside of Texas:

N/A

Senate Bill 709 (84th Legislative Session, 2015) amended the Texas Water Code by adding new Section 5.5553, which requires the Texas Commission on Environmental Quality (TCEQ) to provide written notice to you at least thirty (30) days prior to the TCEQ's issuance of draft permits for applications that are located in your district.

Travis County Water Control and Improvement District - Point Venture, 18606 Venture Drive, Lago Vista, Texas 78645, has applied to the TCEQ to renew Texas Land Application Permit No. WQ0011385001 to authorize the disposal of treated wastewater at a volume not to exceed a daily average flow of 82,200 gallons per day via surface irrigation of 33.576 acres of a golf course and a daily average flow not to exceed 67,800 gallons per day via subsurface area drip irrigation system with a minimum area of 19.464 acres of a golf course. The domestic wastewater treatment facility and disposal area are located at 19053 Venture Drive, near the city of Point Venture, in Travis County, Texas 78645. TCEQ received this application on October 25, 2024. The permit application will be available for viewing and copying at Travis County Water Control and Improvement District - Point Venture, main office, conference room, 18606 Venture Drive, Lago Vista, in Travis County, Texas. 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>.

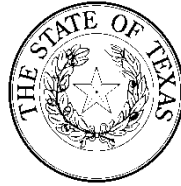
This link to an electronic map of the site or facility's general location is provided as a public courtesy and is not part of the application or notice. For the exact location, refer to the application. <https://gisweb.tceq.texas.gov/LocationMapper/?marker=-97.999166,30.383333&level=18>

TCEQ is preparing the initial draft permit. At the time the draft permit is issued, the applicant will be required to publish notice in a newspaper of general circulation, and the TCEQ will provide a copy of the notice of draft permit to persons who have requested to be on a mailing list.

Questions regarding this application may be directed to Mr. Deba Dutta, P.E., by calling 512-239-4608.

Issuance Date: _____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



NOTICE OF APPLICATION AND PRELIMINARY DECISION FOR WATER QUALITY LAND APPLICATION PERMIT FOR MUNICIPAL WASTEWATER

RENEWAL

PERMIT NO. WQ0011385001

APPLICATION AND PRELIMINARY DECISION. Travis County Water Control and Improvement District - Point Venture, 18606 Venture Drive, Lago Vista, Texas 78645, has applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of TCEQ Permit No. WQ0011385001 which authorizes the disposal of treated domestic wastewater at a daily average flow not to exceed 82,200 gallons per day via surface irrigation of 33.576 acres of a golf course and a daily average flow not to exceed 67,800 gallons per day via subsurface area drip irrigation system (SADDs) with a minimum area of 19.464 acres of a golf course. This permit will not authorize a discharge of pollutants into water in the state. TCEQ received this application on October 25, 2024.

The wastewater treatment facility and disposal site are located at 19053 Venture Drive, in Travis County, Texas 78645. The wastewater treatment facility and disposal site are located in the drainage basin of Lake Travis in Segment No. 1404 of the Colorado River Basin. This link to an electronic map of the site or facility's general location is provided as a public courtesy and is not part of the application or notice. For the exact location, refer to the application.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-97.999166,30.383333&level=18>

The TCEQ Executive Director has completed the technical review of the application and prepared a draft permit. The draft permit, if approved, would establish the conditions under which the facility must operate. The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The permit application, Executive Director's preliminary decision, and draft permit are available for viewing and copying at Travis County Water Control and Improvement District - Point Venture, main office, conference room, 18606 Venture Drive, Lago Vista, in Travis County, Texas. 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>.

PUBLIC COMMENT / PUBLIC MEETING. You may submit public comments or request a public meeting about this application. The purpose of a public meeting is to

provide the opportunity to submit comments or to ask questions about the application. TCEQ holds a public meeting if the Executive Director determines that there is a significant degree of public interest in the application or if requested by a local legislator. A public meeting is not a contested case hearing.

OPPORTUNITY FOR A CONTESTED CASE HEARING. After the deadline for submitting public comments, the Executive Director will consider all timely comments and prepare a response to all relevant and material, or significant public comments. **Unless the application is directly referred for a contested case hearing, the response to comments will be mailed to everyone who submitted public comments and to those persons who are on the mailing list for this application. If comments are received, the mailing will also provide instructions for requesting a contested case hearing or reconsideration of the Executive Director's decision.** A contested case hearing is a legal proceeding similar to a civil trial in a state district court.

TO REQUEST A CONTESTED CASE HEARING, YOU MUST INCLUDE THE FOLLOWING ITEMS IN YOUR REQUEST: your name, address, phone number; applicant's name and proposed permit number; the location and distance of your property/activities relative to the proposed facility; a specific description of how you would be adversely affected by the facility in a way not common to the general public; a list of all disputed issues of fact that you submit during the comment period; and the statement "[I/we] request a contested case hearing." If the request for contested case hearing is filed on behalf of a group or association, the request must designate the group's representative for receiving future correspondence; identify by name and physical address an individual member of the group who would be adversely affected by the proposed facility or activity; provide the information discussed above regarding the affected member's location and distance from the facility or activity; explain how and why the member would be affected; and explain how the interests the group seeks to protect are relevant to the group's purpose.

Following the close of all applicable comment and request periods, the Executive Director will forward the application and any requests for reconsideration or for a contested case hearing to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

The Commission may only grant a request for a contested case hearing on issues the requestor submitted in their timely comments that were not subsequently withdrawn. **If a hearing is granted, the subject of a hearing will be limited to disputed issues of fact or mixed questions of fact and law relating to relevant and material water quality concerns submitted during the comment period. TCEQ may act on an application to renew a permit for discharge of wastewater without providing an opportunity for a contested case hearing if certain criteria are met.**

EXECUTIVE DIRECTOR ACTION. The Executive Director may issue final approval of the application unless a timely contested case hearing request or request for reconsideration is filed. If a timely hearing request or request for reconsideration is filed, the Executive Director will not issue final approval of the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

MAILING LIST. If you submit public comments, a request for a contested case hearing or a reconsideration of the Executive Director's decision, you will be added to the mailing list for this

specific application to receive future public notices mailed by the Office of the Chief Clerk. In addition, you may request to be placed on: (1) the permanent mailing list for a specific applicant name and permit number; and/or (2) the mailing list for a specific county. If you wish to be placed on the permanent and/or the county mailing list, clearly specify which list(s) and send your request to TCEQ Office of the Chief Clerk at the address below.

All written public comments and public meeting requests must be submitted to the Office of the Chief Clerk, MC 105, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, TX 78711-3087 or electronically at www.tceq.texas.gov/goto/comment within 30 days from the date of newspaper publication of this notice.

INFORMATION AVAILABLE ONLINE. For details about the status of the application, visit the Commissioners' Integrated Database at www.tceq.texas.gov/goto/cid. Search the database using the permit number for this application, which is provided at the top of this notice.

AGENCY CONTACTS AND INFORMATION. Public comments and requests must be submitted either electronically at www.tceq.texas.gov/goto/comment, or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC 105, P.O. Box 13087, Austin, Texas 78711-3087. Any personal information you submit to the TCEQ will become part of the agency's record; this includes email addresses. For more information about this permit application or the permitting process, please call the TCEQ Public Education Program, Toll Free, at 1-800-687-4040 or visit their website at www.tceq.texas.gov/goto/pep. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Travis County Water Control and Improvement District - Point Venture at the address stated above or by calling Mr. David Vargas, Trihydro Corporation, at 512-442-3008.

Issuance Date _____

TCEQ Interoffice Memorandum

To: Deba Dutta, P.E., Team Leader
Municipal Permits Team

From: Sara Holmes
Water Quality Assessment Team

Date: November 13, 2024

Subject: Agronomy Recommendation, Travis County Water Control and Improvement District – Point Venture, Renewal, Permit WQ0011385001, Travis County

Based upon review of the permit application and an evaluation of soils and agronomy information, the WQA Team reviewing agronomist recommends the following:

SPECIAL PROVISIONS FOR SURFACE IRRIGATION:

1. Replace the first paragraph of Special Provision 6 with the following:

The permittee shall obtain representative soil samples from the root zones of the land application area. Composite sampling techniques shall be used. Each composite sample shall represent no more than 33.576 acres with no fewer than 15 subsamples representing each composite sample. For analysis and reporting, subsamples shall be composited by like sampling depth, type of crop, and soil type. Soil types are soils that have like topsoil or plow layer textures. These soils shall be sampled individually from 0 to 6 inches, 6 to 18 inches and 18 to 30 below ground level. The permittee shall sample soils in December to February of each. Soil samples shall be analyzed within 30 days of sample collection.

2. Replace Special Provision 9 with the following:

Irrigation practices shall be designed and managed as to prevent ponding of effluent or contamination of ground and surface waters and to prevent the occurrence of nuisance conditions in the area. To promote effluent and nutrient uptake by the crop, and to prevent pathways for effluent surfacing, the Bermuda grass, native grasses, native oaks, and juniper trees and winter rye shall be established and well maintained in the irrigation area throughout the year. Tailwater control facilities shall be provided as necessary to prevent the discharge of any effluent from the irrigated land.

3. Replace Special Provision 11 with the following:

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.

4. Add Special Provision:

The permittee shall use cultural practices to promote and maintain the health and propagation of the Bermuda grass, native grasses, native oaks, juniper trees, and winter rye crops and avoid plant lodging. The permittee shall harvest the crops (cut and remove it from the field) at least one time during the year. Harvesting and mowing dates shall be recorded in a log book kept on site to be made available to TCEQ personnel upon request.

5. Add Special Provision:

The physical condition of the spray irrigation fields will be monitored on a weekly basis when the fields are being utilized for the purpose of wastewater irrigation. Any areas with problems such as surface runoff, surficial erosion, stressed or damaged vegetation will be recorded in the field log kept onsite and corrective measures will be initiated within 24 hours of discovery.

SPECIAL PROVISIONS FOR SADDs:

6. Replace the first paragraph of Special Provision 27 with the following:

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 19.464 acres with no less than two soil cores per each dispersal zone. For analysis and reporting, subsamples shall be composited by like sampling depth, type of crop, and soil type. 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 below ground level. The permittee shall sample soils in December to February of each. Soil samples shall be analyzed within 30 days of sample collection.

7. Replace Special Provision 16 with the following:

Irrigation practices shall be designed and managed as to prevent ponding of effluent or contamination of ground and surface waters and to prevent the occurrence of nuisance conditions in the area. To promote effluent and nutrient uptake by the crop, and to prevent pathways for effluent surfacing, the Bermuda grass, native grasses, native oaks, and juniper trees and winter rye shall be established and well maintained in the irrigation area throughout the year. Tailwater control facilities shall be provided as necessary to prevent the discharge of any effluent from the irrigated land.

8. Replace Special Provision 18 with the following:

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.

9. Replace Special Provision 35 with the following:

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.

10. Replace Special Provision 34 with the following:

The physical condition of the land application fields will be monitored on a weekly basis when the fields are being utilized for the purpose of wastewater irrigation. Any areas with problems such as surface runoff, surficial erosion, stressed or damaged vegetation will be recorded in the field log kept onsite and corrective measures will be initiated within 24 hours of discovery.

TCEQ Interoffice Memorandum

To: Deba Dutta, P.E., Lead, Municipal Permits Team

From: Andrew Gorton, P.G., Geologist, Water Quality Assessment Team

Date: November 15, 2024

Subject: Geology Compliance Review of Groundwater-Related Special Provisions for Permit No. WQ0011385-001, Travis Co. WCID – Point Venture WWTP, Renewal, Travis County

Based upon the review of the existing permit language the WQA Team reviewing geologist recommends the following modifications to special provisions:

Recommendations:

Revise Special Provision 18 of the Surface Irrigation section with the following changes in bold:

18. For the existing wastewater ponds that were lined and certified under 30 TAC Chapter 317: Facilities for the retention of treated or untreated wastewater shall be adequately lined to control seepage. The following methods of pond lining are acceptable:

- a. In-situ clay soils or placed and compacted clay soils meeting the following requirements:
 1. More than 30% passing a No. 200 mesh sieve
 2. Liquid limit greater than 30%
 3. Plasticity index greater than 15
 4. A minimum thickness of 2 feet
 - 5. Permeability equal to or less than 1×10^{-7} cm/sec (*)**
 - 6. Soil compaction will be 95% standard proctor at optimum moisture content (*)**
- (*) For new and/or modified ponds only.**
- b. Membrane lining with a minimum thickness of 20 mils, and an underdrain leak detection system.
- c. An alternate method of pond lining may be utilized with prior approval from the Executive Director.

The permittee has furnished certification by a Texas Licensed Professional Engineer that the completed pond lining meets the appropriate criteria above (on file). ~~The certification shall be sent to the TCEQ Regional Office (MC Region 5), Water Quality Assessment Team (MC 150), and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division.~~

Add the following as new special provisions immediately following Special Provision 18:

19. The existing wastewater ponds shall be maintained and operated in a manner that prevents unauthorized discharge to water in the state and contamination of groundwater.
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Travis County Water Control and Improvement District - Point Venture WWTP
Permit Application No. WQ0011385001
Application for a Renewal
Technical Completeness Review

Please address the following items:

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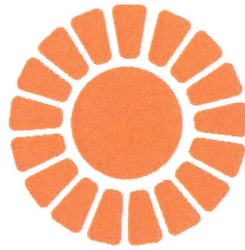
AGRONOMY ITEMS

1. No Comments.

For geology/groundwater-related questions, please contact Andrew Gorton, P.G. via email at Andrew.Gorton@tceq.texas.gov (preferred) or at 512-239-4585 and for agronomy related questions, please contact Sara Holmes via email at Sara.Holmes@tceq.texas.gov (preferred) or at 512-239-4534.



TRAVIS COUNTY W.C.&I.D. POINT VENTURE
TCEQ DOMESTIC WASTEWATER
TEXAS LAND APPLICATION PERMIT RENEWAL



October 2024

Project #: TRAVI-024-0003



A handwritten signature in blue ink, which appears to read "David Alexander Vargas", written over the bottom right portion of the professional engineer seal.

SUBMITTED BY: Trihydro Corporation

5508 Highway 290 West, Suite 201, Austin, TX 78735

PREPARED FOR: Travis County Water Control and Improvement District - Point Venture

18606 Venture Drive, Point Venture, TX 78645

SOLUTIONS YOU CAN COUNT ON.
PEOPLE YOU CAN TRUST.

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PERMIT APPLICATION SUMMARY LETTER



October 17, 2024

Erwin Madrid
Texas Commission on Environmental Quality
Applications Review and Processing Team (MC 145)
P.O. Box 13087
Austin, Texas 78711-3087

RE: Permit Application Summary Letter
Travis County Water Control & Improvement District Point Venture
Point Venture Wastewater Treatment Plant
TLAP Permit No: WQ0011385001

Dear Mr. Madrid:

Travis County Water Control & Improvement District Point Venture (the District) is seeking to renew their existing Texas Land Application Permit (TLAP) WQ0011385001.

The Point Venture Wastewater Treatment Plant (WWTP) has a treatment capacity of 0.15 million gallons per day (MGD). In Interim I Phase, the District is authorized to dispose treated domestic wastewater effluent at a daily average flow not to exceed 0.082 MGD via surface irrigation between the months of April and October, and 0.061875 MGD via surface irrigation between the months of November and March on 48 acres of the Point Venture Property Owners Association (POA) Golf Course.

The current phase, Interim II Phase, the District is authorized to dispose treated domestic wastewater effluent at a daily average flow not to exceed 0.1 MGD via surface irrigation on 48 acres of the POA Golf Course.

In the Final Phase, the District is authorized to dispose treated domestic wastewater effluent at a daily average flow not to exceed 0.0822 MGD via surface irrigation on 33.576 acres of the POA Golf Course, and a daily average flow not to exceed 0.0678 MGD via subsurface area drip irrigation system (SADDs) on 19.464 acres of the POA Golf Course.

No changes to the existing permit are being proposed. If you have questions, or need additional information, please do not hesitate to contact us. My email address is dvargas@trihydro.com and I can be reached at (512) 442-3008.



Mr. Erwin Madrid
October 17, 2024
Page 2

Sincerely,
Trihydro Corporation

A handwritten signature in green ink that reads "David Alexander Vargas". The signature is written in a cursive, flowing style.

David Alexander Vargas, P.E.
Project Manager

ADMINISTRATIVE REPORT 1.0



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the application.

APPLICANT NAME: TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE

PERMIT NUMBER (If new, leave blank): WQ0011385001

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

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

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 <input type="checkbox"/>	\$315.00 <input type="checkbox"/>
≥0.05 but <0.10 MGD	\$550.00 <input type="checkbox"/>	\$515.00 <input type="checkbox"/>
≥0.10 but <0.25 MGD	\$850.00 <input type="checkbox"/>	\$815.00 <input checked="" type="checkbox"/>
≥0.25 but <0.50 MGD	\$1,250.00 <input type="checkbox"/>	\$1,215.00 <input type="checkbox"/>
≥0.50 but <1.0 MGD	\$1,650.00 <input type="checkbox"/>	\$1,615.00 <input type="checkbox"/>
≥1.0 MGD	\$2,050.00 <input type="checkbox"/>	\$2,015.00 <input type="checkbox"/>

Minor Amendment (for any flow) \$150.00 ☐

Payment Information:

Mailed Check/Money Order Number: 3213
Check/Money Order Amount: \$815.00
Name Printed on Check: Travis County WCID Point Venture

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 Water 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

- | | |
|---|---|
| <input type="checkbox"/> New | |
| <input type="checkbox"/> Major Amendment <u>with</u> Renewal | <input type="checkbox"/> Minor Amendment <u>with</u> Renewal |
| <input type="checkbox"/> Major Amendment <u>without</u> Renewal | <input type="checkbox"/> Minor Amendment <u>without</u> Renewal |
| <input checked="" type="checkbox"/> Renewal without changes | <input type="checkbox"/> Minor Modification of permit |

e. For amendments or modifications, describe the proposed changes: N/A

f. For existing permits:

Permit Number: WQ00 11385001

EPA I.D. (TPDES only): TX N/A

Expiration Date: 12/01/2024

Section 3. Facility Owner (Applicant) and Co-Applciant 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?

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE

(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: CN600644843

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: TABASKA, STEVE

Title: DISTRICT BOARD PRESIDENT

Credential: N/A

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?

N/A

(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: N/A

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: N/A

Last Name, First Name: N/A

Title: N/A

Credential: N/A

Provide a brief description of the need for a co-permittee: N/A

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. [Click to enter text.](#)

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: VARGAS, DAVID
Title: PROJECT MANAGER Credential: PROFESSIONAL ENGINEER
Organization Name: TRIHYDRO CORPORATION
Mailing Address: 5508 HIGHWAY 290 WEST SUITE 201 City, State, Zip Code: AUSTIN, TEXAS 78735
Phone No.: (512) 442-3008 E-mail Address: dvargas@trihydro.com
Check one or both: ☒ Administrative Contact ☒ Technical Contact
- B. Prefix: MS. Last Name, First Name: ERICKSON, DODIE
Title: DISTRICT ACCT. MANAGER Credential: [Click to enter text.](#)
Organization Name: INFRAMARK SERVICES
Mailing Address: 18606 VENTURE DRIVE City, State, Zip Code: POINT VENTURE, TX 78645
Phone No.: 512-921-5863 E-mail Address: dodie.erickson@inframark.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: BOND, PATRICK
Title: ENVIRONMENTAL QUALITY SPECIALIST Credential: [Click to enter text.](#)
Organization Name: INFRAMARK SERVICES
Mailing Address: 2002 W GRAND PKWY N STE 100 City, State, Zip Code: KATY, TX 77449-1964
Phone No.: 281-505-0452 E-mail Address: patrick.bond@inframark.com

B. Prefix: MR. Last Name, First Name: JACINTO, ALLAN
Title: ENVIRONMENTAL QUALITY SPECIALIST Credential: [Click to enter text.](#)
Organization Name: INFRAMARK SERVICES
Mailing Address: 2002 W GRAND PKWY N STE 100 City, State, Zip Code: KATY, TX 77449-1964
Phone No.: 832-435-5688 E-mail Address: allan.jacinto@inframark.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: MS. Last Name, First Name: CECALA, JEAN
Title: OFFICE MANAGER Credential: [Click to enter text.](#)
Organization Name: TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE
Mailing Address: 18606 VENTURE DRIVE City, State, Zip Code: POINT VENTURE, TX, 78645
Phone No.: (512) 267-1641 E-mail Address: office@wcidpv.org

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: BOND, PATRICK
Title: ENVIRONMENTAL QUALITY SPECIALIST Credential: [Click to enter text.](#)
Organization Name: INFRAMARK SERVICES
Mailing Address: 2002 W GRAND PKWY N STE 100 City, State, Zip Code: KATY, TX 77449-1964
Phone No.: 281-505-0452 E-mail Address: patrick.bond@inframark.com

Section 8. Public Notice Information (Instructions Page 27)

A. Individual Publishing the Notices

Prefix: MS. Last Name, First Name: CHAPA, VANESSA
Title: COMPLIANCE MANAGER, TEXAS MUDS Credential: [Click to enter text.](#)
Organization Name: INFRAMARK SERVICES
Mailing Address: 2002 W GRAND PKWY N STE 100 City, State, Zip Code: KATY, TX 77449-1964
Phone No.: 281-877-2612 E-mail Address: vanessa.chapa@inframark.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: VARGAS, DAVID

Title: PROJECT MANAGER

Credential: PROFESSIONAL ENGINEER

Organization Name: TRIHIDRO CORPORATION

Mailing Address: 5508 HWY 290 W, STE 201 City, State, Zip Code: AUSTIN, TX 78735

Phone No.: 512-442-3008

E-mail Address: dvargas@trihydro.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: TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE - MAIN OFFICE

Location within the building: CONFERENCE ROOM

Physical Address of Building: 18606 VENTURE DRIVE

City: POINT VENTURE

County: TRAVIS

Contact (Last Name, First Name): ERICKSON, DODIE

Phone No.: 512-267-1641 Ext.: N/A

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? [Click to enter text.](#)

F. Plain Language Summary Template

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

Attachment: [Click to enter text.](#)

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: [Click to enter text.](#)

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 101916161

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):

POINT VENTURE WASTEWATER TREATMENT PLANT

C. Owner of treatment facility: TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE

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

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

Prefix: MS.

Last Name, First Name: CECALA, JEAN

Title: OFFICE MANAGER

Credential: [Click to enter text.](#)

Organization Name: TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE

Mailing Address: 18606 VENTURE DRIVE City, State, Zip Code: POINT VENTURE, TX 78645

Phone No.: 512-267-1641

E-mail Address: office@wcidpv.org

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: N/A

E. Owner of effluent disposal site:

Prefix: MS.

Last Name, First Name: MARTIN, LORI

Title: GENERAL MANAGER

Credential: Click to enter text.

Organization Name: POINT VENTURE PROPERTY OWNERS ASSOCIATION

Mailing Address: 555 VENTURE BLVD S City, State, Zip Code: POINT VENTURE, TX 78645

Phone No.: 512-267-1128 Ext 2 E-mail Address: lori@pointventure.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: SEE ATTACHMENT 'F'

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

Prefix: N/A

Last Name, First Name: N/A

Title: N/A

Credential: N/A

Organization Name: N/A

Mailing Address: N/A

City, State, Zip Code: N/A

Phone No.: N/A

E-mail Address: N/A

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: N/A

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:

N/A

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:

N/A

City nearest the outfall(s): N/A

County in which the outfalls(s) is/are located: N/A

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: N/A

- 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: N/A

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:

Click to enter text.

- B. City nearest the disposal site: VILLAGE OF POINT VENTURE

- C. County in which the disposal site is located: TRAVIS

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

TREATED WASTEWATER EFFLUENT IS TRANSFERRED FROM THE WASTEWATER TREATMENT PLANT (WWTP) TO (2) EXISTING EFFLUENT STORAGE TANKS AND (2) EXISTING EFFLUENT STORAGE PONDS, LOCATED ADJACENT TO THE WWTP. EFFLUENT IS PUMPED FROM THE LOWER STORAGE POND THROUGH A PRESSURE MAIN TO THE EXISTING SPRAY IRRIGATION AND EFFLUENT WILL BE PUMPED FROM THE CONCRETE EFFLUENT STORAGE TANK THROUGH A PROPOSED PUMP STATION AND PRESSURE MAIN TO THE PROPOSED DRIP IRRIGATION SITES.

- E. For **TLAPs**, please identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: LAKE TRAVIS

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.

N/A

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: Plain Language Summary

Section 14. Signature Page (Instructions Page 34)

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

Permit Number: WQ0011385001

Applicant: TRAVIS COUNTY WATER CONTROL & IMPROVEMENT DISTRICT - POINT VENTURE


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): STEVE TABASKA

Signatory title: DISTRICT BOARD PRESIDENT

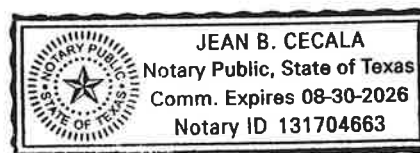
Signature:  Date: 10/21/2024
(Use blue ink)

Subscribed and Sworn to before me by the said Steve Tabaska
on this 21st day of October, 2024.
My commission expires on the 30th day of August, 2026.


Notary Public

[SEAL]

Travis
County, Texas



PLAIN LANGUAGE SUMMARY

Plain Language Summary Template and Instructions for Texas Pollutant Discharge Elimination System (TPDES) and Texas Land Application (TLAP) Permit Applications

This template is a guide to assist applicant's in developing a plain language summary as required by [30 Texas Administrative Code Chapter 39 Subchapter H](#). Applicant's may modify the template as necessary to accurately describe their facility as long as the summary includes the following information: (1) the function of the proposed plant or facility; (2) the expected output of the proposed plant or facility; (3) the expected pollutants that may be emitted or discharged by the proposed plant or facility; and (4) how the applicant will control those pollutants, so that the proposed plant will not have an adverse impact on human health or the environment.

Fill in the blanks below to describe your facility and application. Instructions and examples are provided below. Make any other edits necessary to improve readability or grammar and to comply with the rule requirements.

If you are subject to the alternative language notice requirements in [30 Texas Administrative Code §39.426](#), **you must provide a translated copy of the completed plain language summary in the appropriate alternative language as part of your application package**. For your convenience, a Spanish template has been provided below.

ENGLISH TEMPLATE FOR TPDES or TLAP NEW/RENEWAL/AMENDMENT APPLICATIONS

DOMESTIC WASTEWATER

The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 30 Texas Administrative Code Chapter 39. The information provided in this summary may change during the technical review of the application and are not federal enforceable representations of the permit application.

Travis County Water Control and Improvement District – Point Venture (CN600644843) operates the Point Venture Wastewater Treatment Plant (WWTP) (RN101916161), a complete mix activated sludge suspended growth biological process plant. The facility is located at 19053 Venture Drive, near the City of Lago Vista, in Travis County, Texas 78645.

This application is for a renewal to dispose a daily average flow not to exceed 0.1 million gallons per day (MGD) of treated domestic wastewater via surface irrigation of 48 acres of a golf course. This permit will not authorize a discharge of pollutants into water in the state.

Discharges from the facility are expected to contain five-day biochemical oxygen demand (BOD₅), total suspended solids (TSS), and *Escherichia coli*. Domestic wastewater

is treated by an activated sludge process plant and the treatment units include a lift station, headworks, flow splitter box, an aeration basin, a final clarifier, a tertiary filter unit, a chlorine contact chamber, an effluent transfer basin, and a sludge holding basin.

INSTRUCTIONS

1. Enter the name of applicant in this section. The applicant name should match the name associated with the customer number.
2. Enter the Customer Number in this section. Each Individual or Organization is issued a unique 11-digit identification number called a CN (e.g., CN123456789).
3. Choose “operates” in this section for existing facility applications or choose “proposes to operate” for new facility applications.
4. Enter the name of the facility in this section. The facility name should match the name associated with the regulated entity number.
5. Enter the Regulated Entity number in this section. Each site location is issued a unique 11-digit identification number called an RN (e.g., RN123456789).
6. Choose the appropriate article (a or an) to complete the sentence.
7. Enter a description of the facility in this section. For example, a domestic permit might specify: city ISD, MUD, etc.
8. Choose “is” for an existing facility or “will be” for a new facility.
9. Enter the location of the facility in this section.
10. Enter the City nearest the facility in this section.
11. Enter the County nearest the facility in this section.
12. Enter the zip code for the facility address in this section.
13. Enter a summary of the application request in this section. For example: renewal to discharge 25,000 gallons per day of treated domestic wastewater, new application to discharge process wastewater and stormwater on an intermittent and flow-variable basis, major amendment to reduce monitoring frequency for pH, etc. If more than one outfall is included in the application, provide applicable information for each individual outfall.
14. List all pollutants expected in the discharge from this facility in this section. If applicable, refer to the pollutants from any federal numeric effluent limitations that apply to your facility.
15. Enter the discharge types from your facility in this section (e.g., domestic wastewater.)
16. Choose the appropriate verb tense to complete the sentence.
17. Enter a description of the wastewater treatment used at your facility. Include a description of each process, starting with initial treatment and finishing with the outfall/point of disposal. Use additional lines for individual discharge types if necessary.

Examples

Example 1: Domestic Wastewater TPDES Renewal application

The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 30 Texas Administrative Code Chapter 39. The information provided in this summary may change during the technical review of the application and are not federal enforceable representations of the permit application.

The City of Texas (CN0000000000) operates the City of Texas wastewater treatment plant (RN0000000000), an activated sludge process plant operated in the complete mix mode. The facility is located at 123 Texas Street, near the City of More Texas, Texas County, Texas 71234.

This application is for a renewal to discharge at an annual average flow of 1,200,000 gallons per day of treated domestic wastewater via Outfalls 001 and 002.

Discharges from the facility are expected to contain five-day carbonaceous biochemical oxygen demand (CBOD₅), total suspended solids (TSS), ammonia nitrogen (NH₃-N), and *Escherichia coli*. Additional potential pollutants are included in the Domestic Technical Report 1.0, Section 7. Pollutant Analysis of Treated Effluent and Domestic Worksheet 4.0 in the permit application package. Domestic wastewater is treated by an activated sludge process plant and the treatment units include a bar screen, a grit chamber, aeration basins, final clarifiers, sludge digesters, a belt filter press, chlorine contact chambers and a dechlorination chamber.

Example 2: TPDES New Application

The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 30 Texas Administrative Code Chapter 39. The information provided in this summary may change during the technical review of the application and are not federal enforceable representations of the permit application.

The City of Texas (CN0000000000) proposes to operate the City of Texas wastewater treatment plant (RN0000000000), an activated sludge process plant operated in the extended aeration mode. The facility will be located at 123 Texas Street, in the City of More Texas, Texas County, Texas 71234.

This application is for a new application to discharge at a daily average flow of 200,000 gallons per day of treated domestic wastewater.

Discharges from the facility are expected to contain five-day carbonaceous biochemical oxygen demand (CBOD₅), total suspended solids (TSS), ammonia nitrogen (NH₃-N), and *Escherichia coli*. Additional potential pollutants are included in the Domestic Technical Report 1.0, Section 7. Pollutant Analysis of Treated Effluent in the permit application package. Domestic wastewater will be treated by an activated sludge process plant and the treatment units will include a bar screen, a grit chamber, aeration basins, final clarifiers, sludge digesters, a belt filter press, chlorine contact chambers and a dechlorination chamber.

Example 3: TLAP Renewal application

The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 30 Texas Administrative Code Chapter 39. The information provided in this summary may change during the technical review of the application and are not federal enforceable representations of the permit application.

The City of Texas (CN000000000) operates the City of Texas wastewater treatment plant (RN000000000), an activated sludge process plant operated in the complete mix mode. The facility is located at 123 Texas Street, near the City of More Texas, Texas County, Texas 71234.

This application is for a renewal to dispose a daily average flow not to exceed 76,500 gallons per day of treated domestic wastewater via public access subsurface drip irrigation system with a minimum area of 32 acres. This permit will not authorize a discharge of pollutants into water in the state.

Land application of domestic wastewater from the facility are expected to contain five-day biochemical oxygen demand (BOD₅), total suspended solids (TSS), and *Escherichia coli*. Additional potential pollutants are included in the Domestic Technical Report 1.0, Section 7. Pollutant Analysis of Treated Effluent in the permit application package. Domestic wastewater is treated by an activated sludge process plant and the treatment units include a bar screen, an equalization basin, an aeration basin, a final clarifier, an aerobic sludge digester, tertiary filters, and a chlorine contact chamber. In addition, the facility includes a temporary storage that equals to at least three days of the daily average flow.

CORE DATA FORM



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.)		
<input type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input checked="" type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> 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 600644843		RN 101916161

SECTION II: Customer Information

4. General Customer Information		5. Effective Date for Customer Information Updates (mm/dd/yyyy)		10/17/2024			
<input type="checkbox"/> New Customer <input checked="" type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership							
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)							
<i>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).</i>							
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)				<i>If new Customer, enter previous Customer below:</i>			
TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE							
7. TX SOS/CPA Filing Number		8. TX State Tax ID (11 digits)		9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)		
N/A		N/A		74-1815633	N/A		
11. Type of Customer:		<input type="checkbox"/> Corporation		<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited		
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Local <input type="checkbox"/> State <input checked="" type="checkbox"/> Other		<input type="checkbox"/> Sole Proprietorship		<input type="checkbox"/> Other:			
12. Number of Employees				13. Independently Owned and Operated?			
<input checked="" type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following							
<input checked="" type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Owner & Operator <input type="checkbox"/> Other:							
<input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant							
15. Mailing Address:	18606 VENTURE DRIVE						
	City	POINT VENTURE	State	TX	ZIP	78645	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) 267-1641		(512) 267-0818

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If 'New Regulated Entity' is selected, a new permit application is also required.)								
<input type="checkbox"/> New Regulated Entity <input checked="" type="checkbox"/> Update to Regulated Entity Name <input checked="" type="checkbox"/> Update to Regulated Entity Information								
<i>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).</i>								
22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)								
POINT VENTURE WWTP								
23. Street Address of the Regulated Entity: (No PO Boxes)	19053 VENTURE DRIVE							
	City	POINT VENTURE	State	TX	ZIP	78645	ZIP + 4	
24. County	TRAVIS							

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

25. Description to Physical Location:	LOCATED APPROXIMATELY 8 MILES SOUTH OF INTERSECTION OF FM 1431 AND LOHMAN FORD RD WITHIN VILLAGE OF POINT VENTURE.							
26. Nearest City					State	Nearest ZIP Code		
LAGO VISTA					TX		78645	
<i>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).</i>								
27. Latitude (N) In Decimal:		30.383169			28. Longitude (W) In Decimal:		97.999097	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds			
30	22	59.41	97	59	56.75			
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.)								
MUNICIPAL SEWER TREATMENT PLANT								
34. Mailing Address:	18606 VENTURE DRIVE							
	City	POINT VENTURE	State	TX	ZIP	78645	ZIP + 4	
35. E-Mail Address:	office@wcidpv.org							
36. Telephone Number	37. Extension or Code				38. Fax Number (if applicable)			
(512) 267-1641					(512) 267-818			

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.


<input type="checkbox"/> Dam Safety	<input checked="" type="checkbox"/> Districts	<input type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
<input type="checkbox"/> Sludge	<input type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Voluntary Cleanup	<input checked="" type="checkbox"/> Wastewater	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

SECTION IV: Preparer Information

40. Name:	DAVID VARGAS, P.E.			41. Title:	PROJECT MANAGER
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address		
(512) 442-3008	5307	(512) 448-7811	dvargas@trihydro.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:	TRIHYDRO CORPORATION		Job Title:	PROJECT MANAGER	
Name (In Print):	DAVID VARGAS, P.E.			Phone:	(512) 442- 3008
Signature:				Date:	10/17/2024

TECHNICAL REPORT 1.0



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): 0.082

2-Hr Peak Flow (MGD): 0.328

Estimated construction start date: EXISTING

Estimated waste disposal start date: EXISTING

B. Interim II Phase

Design Flow (MGD): 0.10

2-Hr Peak Flow (MGD): 0.40

Estimated construction start date: EXISTING

Estimated waste disposal start date: EXISTING

C. Final Phase

Design Flow (MGD): 0.15

2-Hr Peak Flow (MGD): 0.45

Estimated construction start date: 2030

Estimated waste disposal start date: 2032

D. Current Operating Phase

Provide the startup date of the facility: INTERIM II; Sept. 2001 startup date of existing WWTP.

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.**

SEE ATTACHMENT 'B'

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)
SEE ATTACHMENT 'B'		

C. Process Flow Diagram

Provide flow diagrams for the existing facilities and **each** proposed phase of construction.

Attachment: SEE ATTACHMENT 'C'

Section 3. Site Information and Drawing (Instructions Page 44)

Provide the TPDES discharge outfall latitude and longitude. Enter N/A if not applicable.

- Latitude: N/A
- Longitude: N/A

Provide the TLAP disposal site latitude and longitude. Enter N/A if not applicable.

- Latitude: SEE ATTACHMENT 'F'
- Longitude: SEE ATTACHMENT 'F'

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: SEE ATTACHMENT 'E'

Provide the name **and** a description of the area served by the treatment facility.

The WWTP serves the Village of Point Venture, located approximately 7 miles south of Lago Vista, Texas.

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
N/A	N/A	Choose an item.	N/A
		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.**

TCEQ approved a \$14.5M Bond Issuance (Unlimited Tax Bonds, Series 2020) that included expansion of a new 0.15 MGD WWTP, reclaimed water system improvements, conveyance improvements, and drainage improvements. Due to rising costs and inflation from the COVID-19 pandemic, the WWTP project exhausted the original bond issuance cost and the reclaimed water system improvements, consisting of a drip irrigation pump station, conveyance line, and drip irrigation system, will have to be funded through another source in the future. The reclaimed water system improvements, including the new WWTP, will lead to transitioning to the Final Phase of the Permit.

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.

N/A

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: 2005: Interim Phase I; 8/18/2016: Interim II Phase; Final Phase to occur at a future date

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.

The existing WWTP meets the buffer zone requirements and have no environmental impacts when it was constructed. See Attachment L for the 1999 Environmental Assessment Report. The new WWTP is being constructed next to the existing WWTP on the same site, meeting the buffer zone requirements.

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*.

Surface Irrigation, Special Provision #4: submit summary transmittal letter prior to construction of Final Phase – construction has not started.
SADDS, Special Provision #4: submit summary transmittal letter prior to construction of Final Phase – construction has not started.

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.

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.

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.

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.
N/A

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 BOD₅ concentration of the sludge, and the design BOD₅ concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

N/A

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 BOD₅ concentration of the septic waste, and the design BOD₅ concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

N/A

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.

N/A

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). **Water 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	8	35	1	GRAB	5/15/2024 8:23
Total Suspended Solids, mg/l	9	60	1	GRAB	5/15/2024 8:23
Ammonia Nitrogen, mg/l	30.9	N/A	1	GRAB	5/15/2024 8:23
Nitrate Nitrogen, mg/l	2.7	N/A	1	GRAB	5/15/2024 8:23
Total Kjeldahl Nitrogen, mg/l	35.5	N/A	1	GRAB	5/15/2024 8:23
Sulfate, mg/l	51.6	N/A	1	GRAB	5/15/2024 8:23
Chloride, mg/l	149	N/A	1	GRAB	5/15/2024 8:23
Total Phosphorus, mg/l	6.84	N/A	1	GRAB	5/15/2024 8:23
pH, standard units	8.0	>6.0 & <9.0	1	GRAB	5/15/2024 8:23
Dissolved Oxygen*, mg/l	N/A	N/A	N/A	N/A	N/A
Chlorine Residual, mg/l	3.9	N/A	1	GRAB	5/15/2024 8:23
<i>E.coli</i> (CFU/100ml) freshwater	<1.0	N/A	1	GRAB	5/15/2024 8:23
Enterococci (CFU/100ml) saltwater	N/A	N/A	N/A	N/A	N/A
Total Dissolved Solids, mg/l	380	N/A	1	GRAB	5/15/2024 8:23
Electrical Conductivity, µmohs/cm, †	1170	N/A	1	GRAB	5/15/2024 8:23
Oil & Grease, mg/l	<5.1	N/A	1	GRAB	5/15/2024 8:23
Alkalinity (CaCO ₃)*, mg/l	N/A	N/A	N/A	N/A	N/A

*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	N/A	N/A	N/A	N/A	N/A
Total Dissolved Solids, mg/l	N/A	N/A	N/A	N/A	N/A
pH, standard units	N/A	N/A	N/A	N/A	N/A
Fluoride, mg/l	N/A	N/A	N/A	N/A	N/A
Aluminum, mg/l	N/A	N/A	N/A	N/A	N/A
Alkalinity (CaCO ₃), mg/l	N/A	N/A	N/A	N/A	N/A

Section 8. Facility Operator (Instructions Page 50)

Facility Operator Name: Christian Dickerson & Gerald Connell

Facility Operator's License Classification and Level: B Wastewater (Christian) & A Wastewater (Gerald)

Facility Operator's License Number: WW0058578 (Christian) & WW0057523 (Gerald)

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 \geq 1 MGD
- ☐ Serves \geq 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: existing sludge holding basin; weekly sludge haul off

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
Other	Off-site Third-Party Handler or Preparer	Not Applicable		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): weekly sludge haul off by Wastewater Transport Services (WWTS) via 7,000-gal tanker truck; sludge disposed at Austin Wastewater Processing Facility.

D. Disposal site

Disposal site name: Austin Wastewater Processing Facility

TCEQ permit or registration number: TCEQ Type V 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

Hauler registration number: TCEQ Type V MSW#2384

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	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Marketing and Distribution of sludge	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Sludge Surface Disposal or Sludge Monofill	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Temporary storage in sludge lagoons	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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: N/A
- USDA Natural Resources Conservation Service Soil Map:
Attachment: N/A
- Federal Emergency Management Map:
Attachment: N/A
- Site map:
Attachment: N/A

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: N/A

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:

N/A

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: N/A

Total Kjeldahl Nitrogen, mg/kg: N/A

Total Nitrogen (=nitrate nitrogen + TKN), mg/kg: N/A

Phosphorus, mg/kg: N/A

Potassium, mg/kg: N/A

pH, standard units: N/A

Ammonia Nitrogen mg/kg: N/A

Arsenic: N/A

Cadmium: N/A

Chromium: N/A

Copper: N/A

Lead: N/A

Mercury: N/A

Molybdenum: N/A

Nickel: N/A

Selenium: N/A

Zinc: N/A

Total PCBs: N/A

Provide the following information:

Volume and frequency of sludge to the lagoon(s): N/A

Total dry tons stored in the lagoons(s) per 365-day period: N/A

Total dry tons stored in the lagoons(s) over the life of the unit: N/A

C. Liner information

Does the active/proposed sludge lagoon(s) have a liner with a maximum hydraulic conductivity of 1×10^{-7} cm/sec?

☐ Yes ☐ No

If yes, describe the liner below. Please note that a liner is required.

N/A

D. Site development plan

Provide a detailed description of the methods used to deposit sludge in the lagoon(s):

N/A

Attach the following documents to the application.

- Plan view and cross-section of the sludge lagoon(s)
Attachment: N/A
- Copy of the closure plan
Attachment: N/A
- Copy of deed recordation for the site
Attachment: N/A
- Size of the sludge lagoon(s) in surface acres and capacity in cubic feet and gallons
Attachment: N/A
- Description of the method of controlling infiltration of groundwater and surface water from entering the site
Attachment: N/A
- Procedures to prevent the occurrence of nuisance conditions
Attachment: N/A

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: N/A

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:

210 Reuse Authorization No. R11385-001 – reuse of Type I & Type II wastewater effluent from Point Venture wastewater treatment facility.

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:

N/A

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: N/A

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.

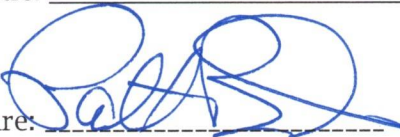
The following certification statement shall be signed and submitted with every application. See the Signature Page section in the Instructions, for a list of designated representatives who may sign the certification.

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: Patrick Bond

Title: Environmental Quality Specialist

Signature: 

Date: 10.23.2024

TCEQ WORKSHEET 3.0
LAND DISPOSAL OF EFFLUENT

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:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Surface application | <input type="checkbox"/> Subsurface application |
| <input checked="" type="checkbox"/> Irrigation | <input type="checkbox"/> Subsurface soils absorption |
| <input type="checkbox"/> Drip irrigation system | <input checked="" type="checkbox"/> Subsurface area drip dispersal system |
| <input type="checkbox"/> Evaporation | <input type="checkbox"/> Evapotranspiration beds |
| <input type="checkbox"/> 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: R11385-001

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 - GOLF COURSE	19.464	67,800	Y
BERMUDA - GOLF COURSE	33.576	82,200	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
1 (Upper) & 2 (Lower)	0.6 ac Total	3.85 ac-ft Total 1.09 ac-ft (Upper) 2.76 ac-ft (Lower)	No record information.	Soil (Upper) HDPE 40 mil thickness (Lower)
GST #1	0.2	9.21	93' I.D. x 60'	Steel Tank (open top)
GST #2	0.0	6.44	77' I.D. x 60'	Concrete Tank (w/ proposed dome roof)

Attach a copy of a liner certification that was prepared, signed, and sealed by a Texas licensed professional engineer for each pond.

Attachment: SEE ATTACHMENT 'K'

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.

N/A

Provide the source used to determine the 100-year frequency flood level:

FEMA FIRM MAPS - SEE ATTACHMENT 'G'

Provide a description of tailwater controls and rainfall run-on controls used for the land application site.

Golf course has sand bunkers, roughs and rip-rap that controls run-off when effluent is applied to tee boxes, fairways, and greens.

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:** SEE ATTACHMENT 'I'

- 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:** SEE ATTACHMENT 'H'

- 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
50267	Monitor	N	Plugged	Maintain minimum buffer distance of 150-feet

Well ID	Well Use	Producing? Y/N	Open, cased, capped, or plugged?	Proposed Best Management Practice
50268	Monitor	N	Plugged	Maintain minimum buffer distance of 150-feet
50269	Monitor	N	Plugged	Maintain minimum buffer distance of 150-feet
187761	Unknown	N	Plugged	Maintain minimum buffer distance of 150-feet
155587	Monitor	N	Plugged	Maintain minimum buffer distance of 150-feet
655914	Domestic	Y	Cased	Maintain minimum buffer distance of 150-feet
16185	Domestic	Y	Cased	Maintain minimum buffer distance of 150-feet
519663	Domestic	Y	Cased	Maintain minimum buffer distance of 150-feet
607370	Domestic	Y	Cased	Maintain minimum buffer distance of 150-feet
111079	Irrigation	Y	Cased	Maintain minimum buffer distance of 150-feet
396533	Monitor	Y	Cased	Maintain minimum buffer distance of 150-feet

If water quality data or well log information is available please include the information in an attachment listed by Well ID.

Attachment: [Click to enter text.](#)

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: [See ATTACHMENT 'L'](#)

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: [N/A](#)

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: [SEE ATTACHMENT 'J'](#)

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: SEE ATTACHMENT 'M'

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
SEE ATTACHMENT 'J'				

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
09/2024	0.061	4.3	9.0	7.4	N/A	48
08/2024	0.062	3.5	9.3	7.5	N/A	48
07/2024	0.076	2.0	2.6	7.8	N/A	48
06/2024	0.066	1.8	2.3	7.7	N/A	48
05/2024	0.065	6.7	11.3	7.7	N/A	48
04/2024	0.067	17.5	18.0	7.6	N/A	48
03/2024	0.071	3.5	6.0	7.8	N/A	48
02/2024	0.060	5.3	13.0	7.8	N/A	48
01/2024	0.064	9.8	12.4	7.6	N/A	48

Date	30 Day Avg Flow MGD	BOD5 mg/l	TSS mg/l	pH	Chlorine Residual mg/l	Acres irrigated
12/2023	0.065	5.5	11.3	7.5	N/A	48
11/2023	0.066	2.8	6.2	7.4	N/A	48
10/2023	0.061	2.5	5.8	7.6	N/A	48
09/2023	0.065	2.8	9.3	7.6	N/A	48
08/2023	0.060	7.0	32.8	7.6	N/A	48
07/2023	0.064	18.4	11.6	7.7	N/A	48
06/2023	0.060	10.0	4.5	7.6	N/A	48
05/2023	0.057	4.8	6.6	7.6	N/A	48
04/2023	0.059	7.5	11.8	7.5	N/A	48
03/2023	0.055	7.0	15.8	7.5	N/A	48
02/2023	0.054	8.3	10.5	7.4	N/A	48
01/2023	0.061	10.0	15.5	7.6	N/A	48
12/2022	0.067	5.3	10.3	7.5	N/A	48
11/2022	0.073	13.0	26.6	7.3	N/A	48
10/2022	0.082	10.0	14.8	7.3	N/A	48
09/2022	0.077	6.0	9.3	7.5	N/A	48

Provide a discussion of all persistent excursions above the permitted limits and any corrective actions taken.

November 2022, transfer pumps failed; Inframark replaced one pump and repaired other pump. July & August 2023, the RAS line at the WWTP clogged, which Inframark later repaired. April 2024, clarifier was not working due to leaking gear box, which Inframark later replaced with a new gear box.

TCEQ WORKSHEET 6.0
INDUSTRIAL WASTE CONTRIBUTION

DOMESTIC WASTEWATER PERMIT APPLICATION

WORKSHEET 6.0: INDUSTRIAL WASTE CONTRIBUTION

The following is required for all publicly owned treatment works.

Section 1. All POTWs (Instructions Page 89)

A. Industrial users (IUs)

Provide the number of each of the following types of industrial users (IUs) that discharge to your POTW and the daily flows from each user. See the Instructions for definitions of Categorical IUs, Significant IUs - non-categorical, and Other IUs.

If there are no users, enter 0 (zero).

Categorical IUs:

Number of IUs: 0

Average Daily Flows, in MGD: 0

Significant IUs - non-categorical:

Number of IUs: 0

Average Daily Flows, in MGD: 0

Other IUs:

Number of IUs: 0

Average Daily Flows, in MGD: 0

B. Treatment plant interference

In the past three years, has your POTW experienced treatment plant interference (see instructions)?

☐ Yes ☒ No

If yes, identify the dates, duration, description of interference, and probable cause(s) and possible source(s) of each interference event. Include the names of the IUs that may have caused the interference.

N/A

C. Treatment plant pass through

In the past three years, has your POTW experienced pass through (see instructions)?

☐ Yes ☒ No

If **yes**, identify the dates, duration, a description of the pollutants passing through the treatment plant, and probable cause(s) and possible source(s) of each pass through event. Include the names of the IUs that may have caused pass through.

N/A

D. Pretreatment program

Does your POTW have an approved pretreatment program?

☐ Yes ☒ No

If **yes**, complete Section 2 only of this Worksheet.

Is your POTW required to develop an approved pretreatment program?

☐ Yes ☒ No

If **yes**, complete Section 2.c. and 2.d. only, and skip Section 3.

If **no to either question above**, skip Section 2 and complete Section 3 for each significant industrial user and categorical industrial user.

Section 2. POTWs with Approved Programs or Those Required to Develop a Program (Instructions Page 90)

A. Substantial modifications

Have there been any **substantial modifications** to the approved pretreatment program that have not been submitted to the TCEQ for approval according to *40 CFR §403.18*?

☐ Yes ☐ No

If **yes**, identify the modifications that have not been submitted to TCEQ, including the purpose of the modification.

Click to enter text.

B. Non-substantial modifications

Have there been any **non-substantial modifications** to the approved pretreatment program that have not been submitted to TCEQ for review and acceptance?

☐ Yes ☐ No

If yes, identify all non-substantial modifications that have not been submitted to TCEQ, including the purpose of the modification.

Click to enter text.

C. Effluent parameters above the MAL

In Table 6.0(1), list all parameters measured above the MAL in the POTW's effluent monitoring during the last three years. Submit an attachment if necessary.

Table 6.0(1) – Parameters Above the MAL

Pollutant	Concentration	MAL	Units	Date

D. Industrial user interruptions

Has any SIU, CIU, or other IU caused or contributed to any problems (excluding interferences or pass throughs) at your POTW in the past three years?

☐ Yes ☐ No

If yes, identify the industry, describe each episode, including dates, duration, description of the problems, and probable pollutants.

Click to enter text.

Section 3. Significant Industrial User (SIU) Information and Categorical Industrial User (CIU) (Instructions Page 90)

A. General information

Company Name: N/A

SIC Code: N/A

Contact name: N/A

Address: N/A

City, State, and Zip Code: N/A

Telephone number: N/A

Email address: N/A

B. Process information

Describe the industrial processes or other activities that affect or contribute to the SIU(s) or CIU(s) discharge (i.e., process and non-process wastewater).

N/A

C. Product and service information

Provide a description of the principal product(s) or services performed.

N/A

D. Flow rate information

See the Instructions for definitions of “process” and “non-process wastewater.”

Process Wastewater:

Discharge, in gallons/day: N/A

Discharge Type: ☐ Continuous ☐ Batch ☐ Intermittent

Non-Process Wastewater:

Discharge, in gallons/day: N/A

Discharge Type: ☐ Continuous ☐ Batch ☐ Intermittent

E. Pretreatment standards

Is the SIU or CIU subject to technically based local limits as defined in the instructions?

☐ Yes ☒ No

Is the SIU or CIU subject to categorical pretreatment standards found in *40 CFR Parts 405-471*?

☐ Yes ☒ No

If subject to categorical pretreatment standards, indicate the applicable category and subcategory for each categorical process.

Category: Subcategories: N/A

[Click or tap here to enter text.](#) N/A

Category: N/A

Subcategories: N/A

Category: N/A

Subcategories: N/A

Category: N/A

Subcategories: N/A

Category: N/A

Subcategories: N/A

F. Industrial user interruptions

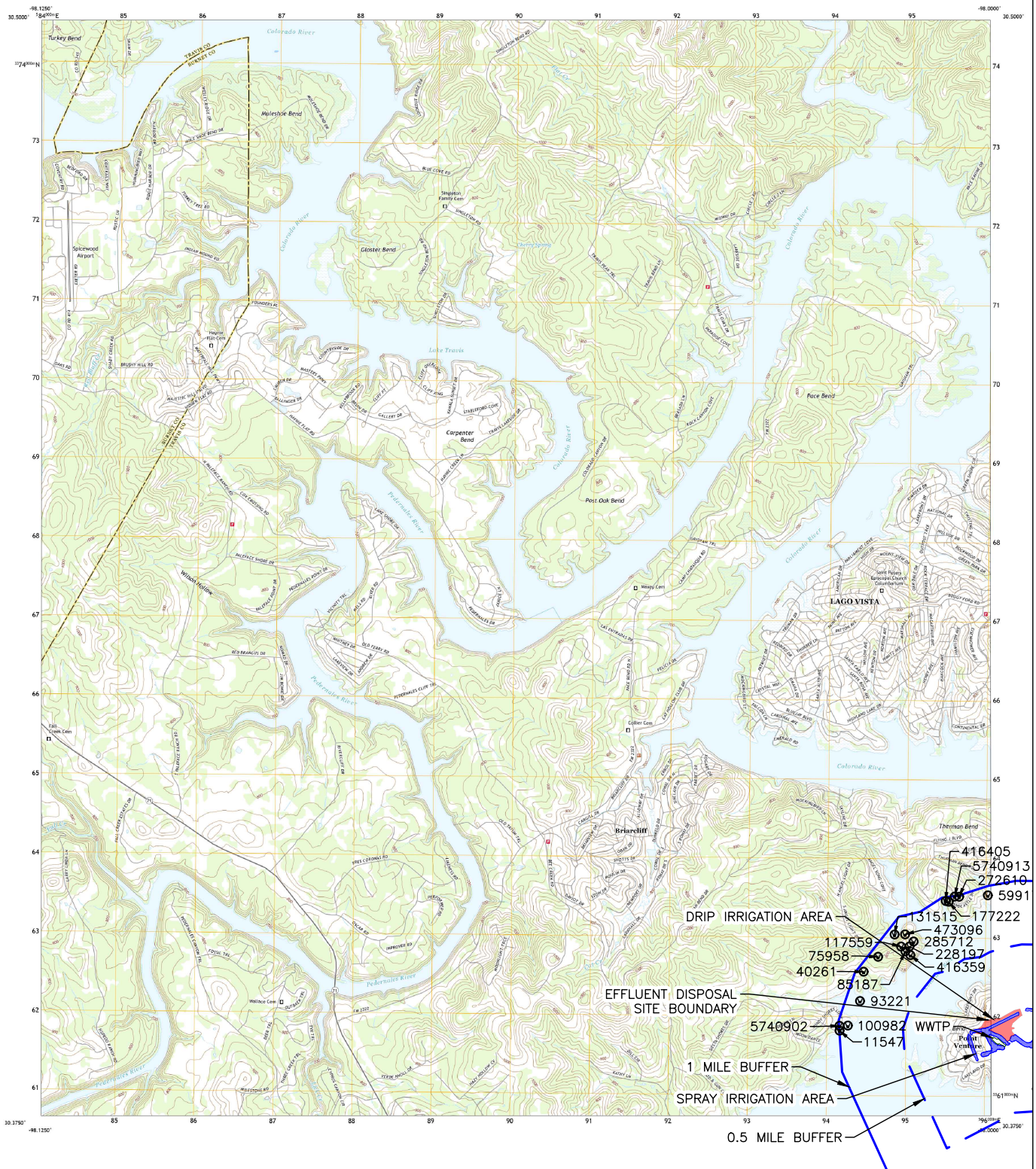
Has the SIU or CIU caused or contributed to any problems (e.g., interferences, pass through, odors, corrosion, blockages) at your POTW in the past three years?

☐ Yes ☒ No

If yes, identify the SIU, describe each episode, including dates, duration, description of problems, and probable pollutants.

N/A

ATTACHMENT A
ORIGINAL USGS TOPOGRAPHIC MAPS



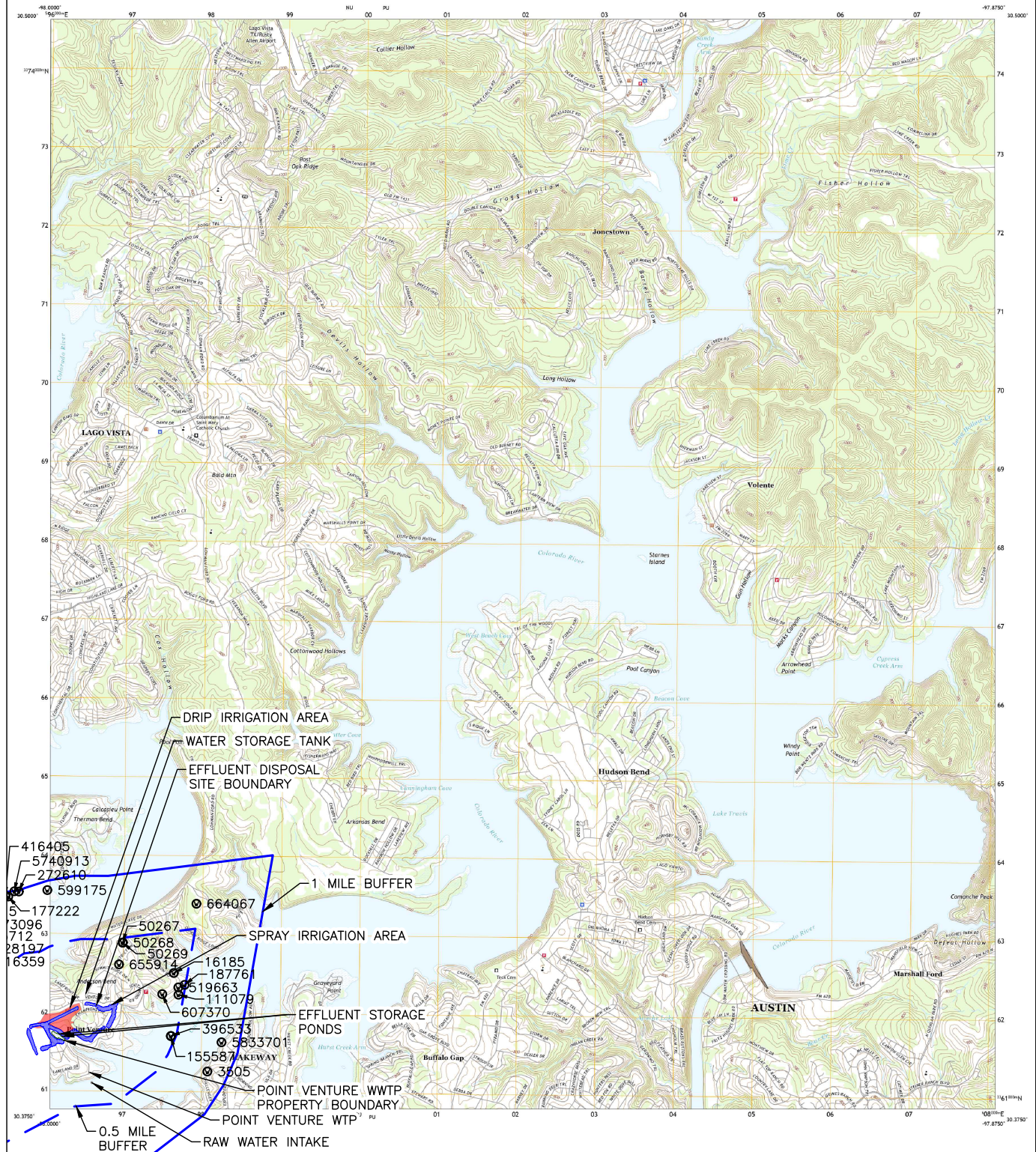
TEXAS CORPORATION
Texas Engineering Firm F-131
Texas Survey Firm 10194320
New Braunfels Austin
1672 Independence Dr Suite 315 5508 Highway 290 West Suite 201
New Braunfels, Texas 78132 Austin, Texas 78735
(P) 830/626.3588 (F) 830/626.3544 (P) 512/442.3008 (F) 512/448.7811
www.trihydro.com

ATTACHMENT A (SHEET 1 OF 4)

ORIGINAL USGS TOPOGRAPHIC MAP

**TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT POINT VENTURE**

Drawn By: JDM	Checked By: DV	Scale: NTS	Date: 11/6/2024
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Trihydro
CORPORATION

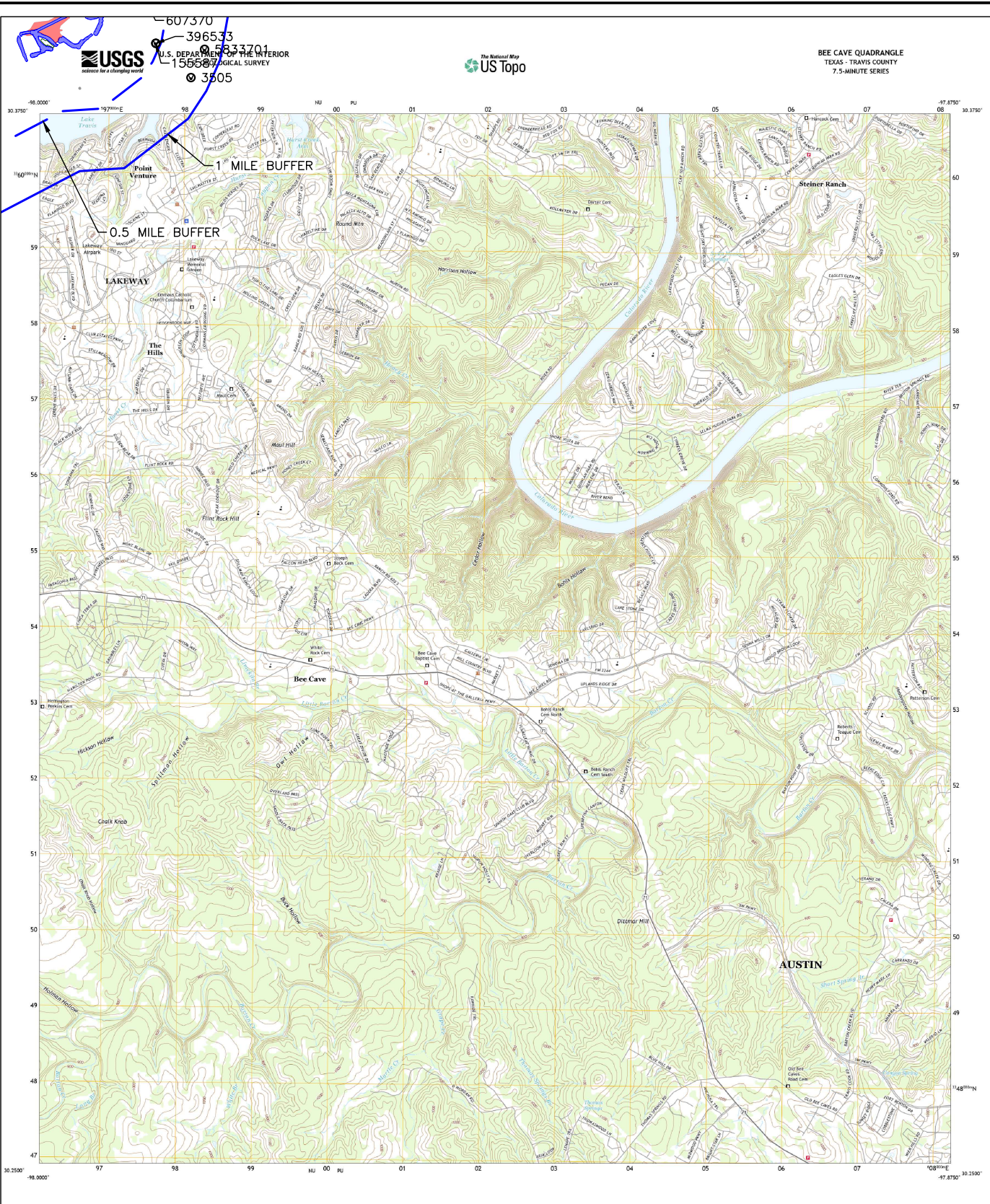
TEXAS CORPORATION
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ATTACHMENT A (SHEET 2 OF 4)

ORIGINAL USGS TOPOGRAPHIC MAP

**TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT POINT VENTURE**

Drawn By: JDM	Checked By: DV	Scale: NTS	Date: 11/6/2024
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Texas Engineering Firm F-131
Texas Survey Firm 10194320 Austin
1672 Independence Dr Suite 315 5508 Highway 290 West Suite 201
New Braunfels, Texas 78132 Austin, Texas 78735
(P) 830/626.3588 (F) 830/626.3544 (P) 512/442.3008 (F) 512/448.7811
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ATTACHMENT A (SHEET 3 OF 4)

ORIGINAL USGS TOPOGRAPHIC MAP

TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT POINT VENTURE

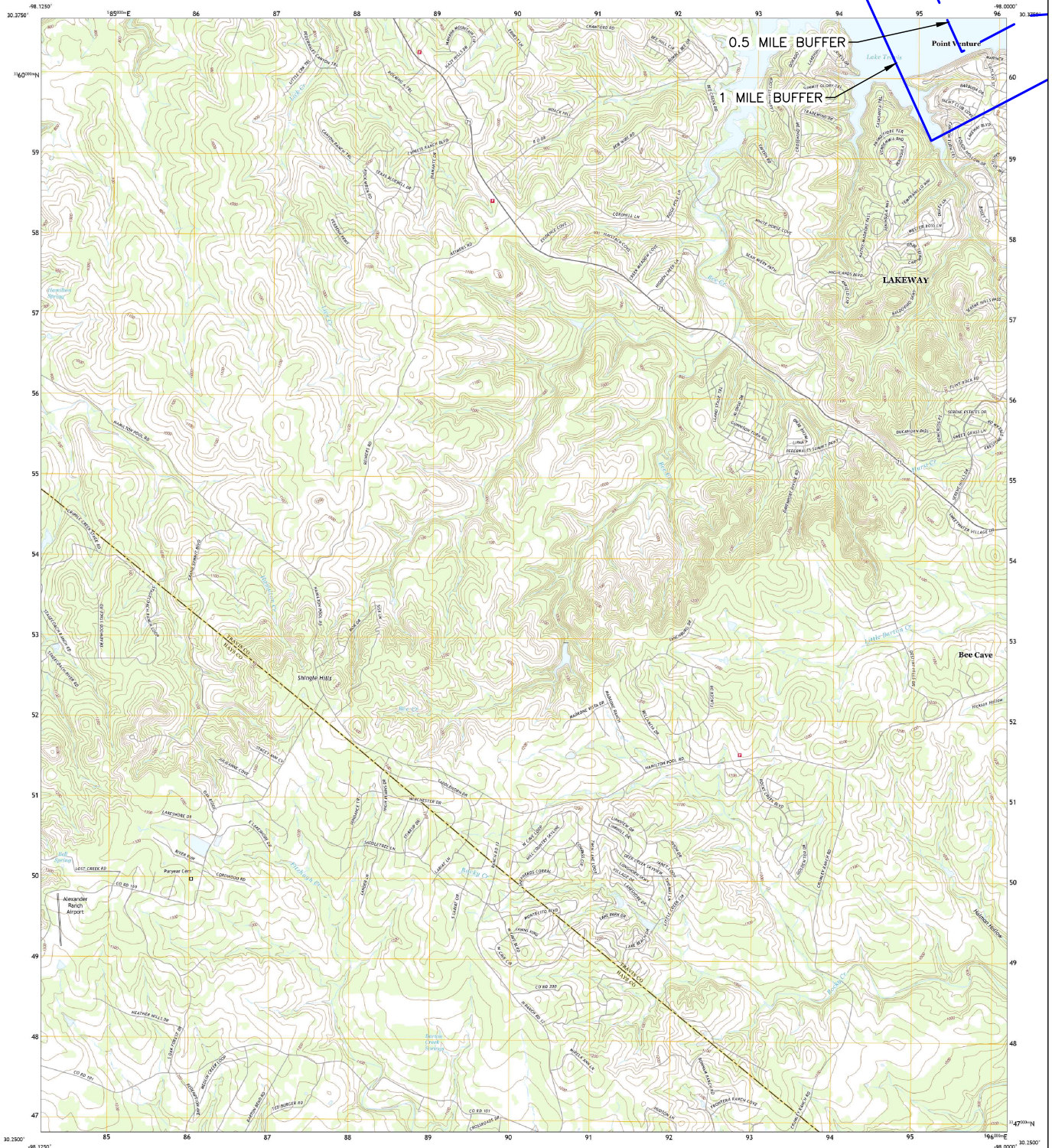
Drawn By: JDM Checked By: DV Scale: NTS Date: 11/6/2024



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



5740902 100982
11547
SHINGLE HILLS QUADRANGLE
TEXAS
7.5-MINUTE SERIES



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New Braunfels
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ATTACHMENT A (SHEET 4 OF 4)

ORIGINAL USGS TOPOGRAPHIC MAP

TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT POINT VENTURE

Drawn By: JDM Checked By: DV Scale: NTS Date: 11/6/2024

ATTACHMENT B
TREATMENT UNIT DETAIL

Treatment Process Description

The existing 0.1 million gallon per day (MGD) wastewater treatment plant (WWTP) is a complete mix activated sludge (CMAS) suspended growth biological process. The process consists of an Aeration Basin, Clarifier, Chlorine Contact Basin, Effluent Transfer Basin, and a Sludge Holding Basin. Municipal raw wastewater (influent) is pumped from a duplex lift station to the head of the plant where it then flows by gravity through the treatment process. Influent is pumped from the lift station to the Aeration Basin then flows to the Clarifier, then to the Chlorine Contact Basin, then to the Effluent Transfer Basin. From the Effluent Transfer Basin, effluent (Type II) either flows by gravity to the existing upper storage pond (Pond #1), or is pumped to the two existing ground storage tanks (GSTs). Effluent from the GSTs flows into Pond #1, then into the lower pond (Pond #2). Point Venture Property Owners Association (POA) pump station draws effluent from Pond #2 and pumps the effluent into the existing spray irrigation system. Scum and Waste Activated Sludge (WAS) flows to the Sludge Holding Basin where sludge is hauled off by a TCEQ registered hauler to a TCEQ permitted site.

Interim Phase I Treatment Unit Type & Dimensions

Treatment Unit (Exist. Plant)	# of Total Units	Dimensions (L x W x D)
Aeration	1	27.5' x 19.833' x 16.5'
Clarifier	1	25' x 25' x 16.5'
Chlorine Contact	1	16.92' x 6.667' x 16.5'
Sludge Holding	1	22' x 19.833' x 16.5'
Effluent Transfer	1	6.75' x 6.667' x 16.5'

A new 0.15 MGD WWTP is currently being constructed next to the existing 0.1 MGD WWTP. The existing plant exceeded 75% organic loading capacity. The new plant will maintain compliance with the existing TLAP and handle increased flows resulting from continued development and population growth. The new plant project is funded through the TCEQ approved Unlimited Tax Bonds, Series 2020.

The new plant will be a CMAS suspended growth biological process similar to the existing plant. The new plant will maintain the current permitted capacity at an average daily flow of 0.15 MGD with a peaking factor of 3, resulting in peak flow of 0.45 MGD, and will stay in the current Interim Phase II. The new plant will replace the existing plant, with exception to the Sludge Holding Basin. The existing plant will remain in place until future capacity requirements prompt its reactivation. The new plant will produce Type I effluent and the project will include installing a new dome cover for the existing concrete effluent GST to meet TLAP requirements for the future subsurface area drip dispersal system (SADDS).

The new plant process consists of a triplex Lift Station, Fine Screen Headworks, Flow Splitter Box, Aeration Basin, Clarifier, Tertiary Filtration Packaged Unit, Chlorine Contact Basin, Effluent Transfer Basin, and existing Sludge Holding Basin. Influent will be pumped from the triplex Lift Station to the Fine Screen Headworks, then to the Flow Splitter Box, then flows to the Aeration Basin then flows to the Clarifier, then to the Tertiary Filtration Unit, then to the Chlorine Contact Basin, then to the Effluent Transfer Basin. From the Effluent Transfer Basin, effluent (Type I) will be pumped to the two existing ground storage tanks (GSTs). Effluent from the GSTs will flow into Pond #1, then into Pond #2. POA pump station will draw effluent from Pond #2 and pump the effluent into the existing spray irrigation system. Scum and return activated sludge (RAS) will be returned to the head of the plant, and WAS will

be pumped to the existing Sludge Holding Basin where sludge will hauled off by a TCEQ registered hauler to a TCEQ permitted site. Please see Attachment 'B1' for copy of the June 2023 Summary Transmittal Letter for the new plant for reference.

A flow diagram is provided in Attachment 'C' of this application.

Interim Phase II (Current) Treatment Unit Type & Dimensions

Treatment Unit (New Plant)	# of Total Units	Dimensions (L x W x D)
Headworks	1	23.833' x 1.33' x 2.25'
Flow Splitter Box	1	7.833' x 2.5' x 3.0'
Aeration	1	28.0' x 58.0' x 17.0'
Clarifier	1	28.0' dia. x 14.0'
Filter Unit	1	6.5' x 4.5' x 8.0'
Chlorine Contact	1	16.0' x 12.0' x 9.083'
Effluent Transfer	1	12.0' x 8.0' x 8.0'
Sludge Holding	1	22' x 19.833' x 16.5'

Final Phase Treatment Unit Type & Dimensions

Treatment Unit (New Plant)	# of Total Units	Dimensions (L x W x D)
Headworks	1	23.833' x 1.33' x 2.25'
Flow Splitter Box	1	7.833' x 2.5' x 3.0'
Aeration	1	28.0' x 58.0' x 17.0'
Clarifier	1	28.0' dia. x 14.0'
Filter Unit	1	6.5' x 4.5' x 8.0'
Chlorine Contact	1	16.0' x 12.0' x 9.083'
Effluent Transfer	1	12.0' x 8.0' x 8.0'
Sludge Holding	1	22' x 19.833' x 16.5'

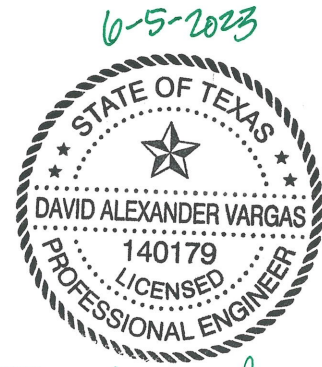
ATTACHMENT B1

JUNE 2023 SUMMARY TRANSMITTAL LETTER



June 5, 2023

Mr. Louis C. Herrin III, P.E.
TCEQ – MC 148
P.O. Box 13087
Austin, Texas 78711-3087



A handwritten signature in green ink that reads 'David Alexander Vargas'.

RE: Chapter 217.6 Summary Transmittal Letter
Permittee: Travis County Water Control and Improvement District Point Venture
Treatment Facility & TLAP Permit Numbers: WQ0011385001
Project Name: 0.15 MGD WWTP
County: Travis
Unlimited Tax Bonds, Series 2020

Dear Mr. Herrin:

The purpose of this letter is to provide the Texas Commission on Environmental Quality (TCEQ) with the information necessary to comply with the requirements of 217.6(d) of the TCEQ's rules entitled "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS." The necessary information is provided below. The project is funded through the Unlimited Tax Bonds, Series 2020. In addition to the summary transmittal letter, the design plans, project manual, and design calculations will be furnished for review and approval.

1. Engineering Firm
Trihydro Corporation
Firm No. F-131
5508 Highway 290 West, Suite 201
Austin, Texas 78735
2. Design Engineer
David Alexander Vargas, P.E.
Phone: (512) 646-0137
dvargas@trihydro.com
3. Project Location
Travis County



Mr. Louis C. Herrin III, P.E.

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4. Project Name

0.15 MGD WWTP

5. Entity to Own, Operate, and Maintain Project through its Design Life

Travis County Water Control and Improvement District Point Venture
18606 Venture Drive
Point Venture, Texas 78645

6. Compliance:

The plans and specifications are in substantial compliance with the rules and regulations of Chapter 217, and no variances are requested.

7. Variance Request and Public Health

The plans and specifications do not contain any variance requests. The project will not threaten public health nor the environment.

8. Project Scope

Travis County Water Control and Improvement District Point Venture (the District) are proposing to construct a new 0.15 million gallons per day (MGD) wastewater treatment plant (WWTP) due to the existing 0.1 MGD plant exceeding 75% of organic loading capacity. The new plant will maintain compliance with the District's existing TCEQ Texas Land Application Permit (TLAP) and handle increased flows resulting from continued development and population growth.

The new plant will be a Complete Mix Activated Sludge (CMAS) suspended growth biological process similar to the existing plant. The new plant will maintain the current permitted capacity at an average daily flow of 0.15 MGD with a peaking factor of 3, resulting in a peak flow of 0.45 MGD. The influent wastewater flow consists of 300 milligrams per liter (mg/L) 5-day biological oxygen demand (BOD₅) and 300 mg/L total suspended solids (TSS), based on 3 years of historical data. The treatment plant loadings are 376 pounds per day (lbs/day) BOD₅ and 376 lbs/day TSS at average flow.

The proposed treatment plant will replace the existing plant. The existing plant will remain in place until future capacity requirements prompt its reactivation. That expansion will consist of both plants operating at build-out capacity with average daily flows of 0.15 MGD (new plant) and 0.1 MGD (existing plant), for a total build-out average flow of 0.25 MGD. With a peaking factor of 3, the build-out peak flow is 0.75 MGD.

Treated effluent for the proposed treatment plant will have the following water quality concentrations that will meet the TCEQ TLAP requirements for Type I effluent:



Mr. Louis C. Herrin III, P.E.

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- 5 mg/L BOD5
- 5 mg/L TSS
- 3 NTU Turbidity

Incoming wastewater will collect at the main lift station, which will contain three solids handling submersible pumps, each rated 354 gpm at 40' TDH. Firm capacity is 708 gpm with two pumps operating and third pump serving as an in-place spare. Primary control is a submersible level transmitter and secondary control (backup) is a series of float switches.

Wastewater from the main lift station will discharge into the fine screen channel for primary influent screening. A manual bar screen is located in a channel adjacent to the fine screen and serves as an emergency backup or secondary screen when the primary mechanical fine screen is unable to operate. Discharge from both channels passes over a Cipolletti weir and enters the aeration basin.

Wastewater from the headworks enters the 190,000-gal aeration basin in the northwest corner and the mixed liquor suspended solids (MLSS) exits the basin through a level control slide gate in the southeast corner of the basin. Symmetrically located in the middle of the basin will be two, 20 Hp slow speed mechanical surface aerators, controlled by variable frequency drives (VFD). The aerators will be platform mounted, and designed to both oxygenate and provide a complete mix in the aeration basin. The optimum oxygen level in the basin will be 2 mg/L. The actual oxygen level can be adjusted by increasing/decreasing the aerator speed or by adjusting the aerator submergence via the level control slide gate.

The secondary clarifier will receive MLSS from the aeration basin and separate the flow into bacteria rich sludge and decant effluent. Solids will be removed from the basin bottom through a return activated sludge (RAS) line. RAS flow will be set proportionally to the incoming average wastewater flow. A magnetic flow meter will log and record the RAS flow, totalize the flow, and display instantaneous flow and historical values versus time. A manual telescoping valve will regulate the RAS flow. RAS will flow out of the telescoping valve and enter the basin portion of the telescoping valve structure. From there, it is either returned to the head of the plant or pumped out as waste activated sludge (WAS) to the existing sludge holding basin. The telescoping valve structure will contain two WAS submersible grinder pumps, each rated 24 gpm at 63' TDH, that will run on timers at approximately 5 minutes per hour. In the Clarifier, the decant effluent will pass over a series of v-notch weirs at the top of the clarifier and will be piped to the tertiary filtration unit. The clarifier is sized to handle average and peak flows of 0.15 MGD and 0.45 MGD, respectively. The clarifier will be 28' diameter with a side water depth of 14', which meets the TCEQ requirements for detention time, weir loading, and surface loading rate.



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June 5, 2023

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The District's latest TLAP permit modification changed the effluent disposal from spray irrigation to a combination of spray and drip irrigation. Although the permit modification occurred in 2015, the change in effluent disposal was not required until the next plant expansion or upgrade, which is this project. Since the existing plant does not contain a filter component, the new tertiary filtration unit has been designed for easy upgrade to a filter unit capable of processing the entire flow of both the proposed plant and eventual reactivation of the existing plant. The proposed unit is sized to handle the current average flow of 0.15 MGD and with additional filter cartridges, the eventual average flow of 0.25 MGD and peak flow of 0.75 MGD. This will not exceed the TCEQ maximum filtration rate. The unit is a self-contained filter assembly that is housed in a stainless steel tank. The unit is fed by the clarifier using gravity flow. The clarified effluent passes through the filter media panels resulting in the final effluent meeting the 5 mg/L TSS required by the permit.

Subsequently, both the chlorine contact and effluent transfer basins are sized to handle the average and peak flows of 0.25 MGD and 0.75 MGD, respectively. The chlorine contact basin has a volume of 1,455 cubic feet, which provides the TCEQ required 20 minutes of contact time before the effluent leaves the basin. Between the chlorine contact and effluent transfer basins will be a 60 degree v-notch weir. The height of the effluent, as it passes through the weir, will produce a record of the plant's daily wastewater discharge. An ultrasonic transmitter measures the height of the effluent, as it passes through the weir, and will transmit the data to the Main Control Panel (MCP) and the Supervisory Control and Data Acquisition (SCADA) system for a totalized record of flow.

The effluent transfer basin will contain two vertical turbine pumps (VTP), each rated 521 gpm at 78' TDH. During normal operation, the northern VTP will pump effluent to the concrete tank dedicated to drip irrigation and the southern VTP will pump effluent to the welded steel tank dedicated to spray irrigation. Should either pump be unable to operate, the valving in the discharge manifold can be adjusted so that either pump can pump to either tank. Effluent level in the basin will be constantly monitored via an ultrasonic level transmitter for pump control with a backup float system. Levels in the effluent storage tanks will be monitored by pressure transmitters mounted on the discharge piping and will direct the effluent flow to the appropriate storage tank.

Because the drip irrigation system requires a closed storage tank, the existing 2.1 MG prestressed concrete effluent ground storage tank will receive a new aluminum geodesic dome cover, which will allow the tank to be used for the drip irrigation system.

The disinfection system will utilize 12.5% sodium hypochlorite and will be delivered via a triplex metering pump skid system. Each of the pumps will be dedicated to a particular location, but a piping manifold will allow any pump to deliver chlorine to any discharge location. Chlorine will be dosed at the clarifier effluent drop box to chlorinate the clarified effluent prior to the filtration unit reducing algae growth in the filters. Chlorine will also be dosed to the filtered effluent prior to entering the



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chlorine contact basin, and dosed to the stored effluent prior to entering the drip irrigation system. Currently, the Point Venture Property Owners Associated (POA) utilizes a separate chlorine system to dose 12.5% sodium hypochlorite prior to the effluent entering the existing spray irrigation system.

The plant's non-potable water (NPW) system will consist of two submersible well pumps, each rated 25 gpm at 185' TDH, a 212-gal hydropneumatic tank, and associated piping. The NPW will provide high pressure effluent required for cleaning the fine screen unit and for treatment basin washdown. Flow records for the NPW system will be collected manually at a flow meter located in the NPW valve vault.

Demolition and/or abandonment of identified site features include but are not limited to the following: existing lift station and adjacent manhole; chemical feed building and its associated equipment; sludge holding basin diffused aeration system; yard piping; concrete pads; site fencing; and concrete pavement. New concrete access drive pavement and chain link fencing and gates will be installed.

Once the new plant is placed online, the existing plant will be placed offline for renovations. Each basin at the existing plant will be drained and cleaned. Renovation work will occur at the existing sludge holding basin. A new diffused aeration system, and decant system will be installed to improve treatment and operation of the sludge process. Two positive displacement blower packages will be installed to provide aeration and mixing to the renovated sludge holding basin. Each blower is rated 85 scfm at 6 psig and will include a common pipe and valve manifold.

The District owns and operates three offsite wastewater lift stations and the associated wastewater collection system. Two lift stations, Whispering Hollow & POA, will be renovated to address operational deficiencies and deteriorating condition of existing piping and equipment.

At the Whispering Hollow Lift Station, the existing wet well and vault, including all piping, equipment, appurtenances, storage shed, and fencing, will be demolished. A proposed precast concrete wet well will be installed containing two proposed submersible grinder pumps, each rated 46 gpm at 100' TDH, and associated piping and appurtenances. These improvements will increase the rated capacity of the lift station from 35 gpm to 46 gpm. A proposed precast concrete valve vault will be installed containing 4" discharge piping, valving, and appurtenances. Existing 3" and 4" pressure sewer influent piping will be redirected and connect to the proposed wet well. An 8' tall precast concrete security fence with a 12' wide privacy panel double swing gate will be installed around the site. Additional improvements include provisions for portable davit crane, and upgraded electrical and control components.



Mr. Louis C. Herrin III, P.E.

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At the proposed POA Lift Station site, four trees will be removed, and various 2" and 4" sewer lines will be abandoned in place. The existing wet well, including all piping and equipment, 6" gravity sewer piping, junction box, hose bibb, and fencing, will be demolished. The proposed POA Lift Station site will be situated at a higher elevation to move it out of the Lake Travis floodplain. A proposed precast concrete wet well will be installed containing two proposed submersible grinder pumps, each rated 24 gpm at 63' TDH, and associated piping and appurtenances. These improvements will increase the rated capacity of the lift station from 15 gpm to 24 gpm. A proposed precast concrete valve vault will be installed containing 2" discharge piping and appurtenances. Proposed 6" and 8" gravity sewer lines and appurtenances will connect the existing wastewater system to the proposed lift station. Proposed 2" force main line and appurtenances will be installed to connect to existing 2" force main. An 8' tall chain link fence with a 12' wide double swing chain link gate will be installed around the new lift station site. Additional improvements include portable davit crane, and upgraded electrical and control components.

Additionally, four substandard manholes will be demolished and replaced and one proposed manhole will be installed to improve the existing wastewater collection system.

The project contains no innovative or nonconforming technologies, nor variances from the requirements of Chapter 217.

If you have questions, or need additional information, please do not hesitate to contact us. My email address is dvargas@trihydro.com and I can be reached at (512) 442-3008.

Sincerely,
Trihydro Corporation
Firm No. F-131

David Alexander Vargas, P.E.
Assistant Project Engineer/Project Manager

701-023-300



Mr. Louis C. Herrin III, P.E.

June 5, 2023

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cc: Steve Tabaska, Board President – Travis County W.C.&I.D. Point Venture
Steven Young, Sr. Design Technician – Trihydro Corporation
Dodie Erickson, District Account Manager – Inframark
Shawn Stewart, Region 11 Water Section Manager – TCEQ

Attachments:

1. 0.15 MGD WWTP Design Plans
2. 0.15 MGD WWTP Project Manual
3. 0.15 MGD WWTP Design Calculations
4. Offsite Lift Stations Design Calculations
5. Wastewater System Overview Exhibit

ATTACHMENT C
FLOW DIAGRAM

ATTACHMENT D
POLLUTANT ANALYSES OF EXISTING EFFLUENT

Email information for report date:
6/1/24 09:55
H016330

INFRAMARK

Attn: Alan Gould
alan.gould@Inframark.com

14050 Summit Drive Suite 103
Austin, TX 78728

Please contact us for your sampling needs or if you have any questions. Some convenient contacts are listed below. You can also access your results and reports through our ClientConnect™ portal on our website (www.aqua-techlabs.com).

For sampling questions:

samplingbryan@aqua-techlabs.com (Bryan area)
samplingaustin@aqua-techlabs.com (Austin area)

reporting@aqua-techlabs.com (report questions)

Aqua-Tech values you as a customer and encourages you to speak with our staff at 979-778-3707 or the above emails if you have questions.

Thank you for your business,
June M. Brien
Executive Technical Director

BRYAN FACILITY
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193



AUSTIN FACILITY
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with TNI and/or through the TCEQ Drinking Water Commercial Laboratory Approval Program.

The following abbreviations indicate certification status:

NEL	TNI accredited parameter.
ANR	Accreditation not offered by the State of Texas.
DWP	Approval through the TCEQ Drinking Water Commercial Laboratory Approval Program.
INF	Aqua-Tech Laboratories, Inc. is not accredited for this parameter. It is reported on an informational basis only.

Certificate: T104704371-23-27



TCEQ Lab ID T104704371

Subcontracted data summarized in this report is indicated by "Sub" in the Lab column.

General Definitions:

NR	Not Reported.
RPD	Relative Percent Difference.
% R	Percent Recovery.
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The Sample Quantitation Limit is the value below which the parameter cannot reliably be detected. The SQL includes all sample preparations, dilutions and / or concentrations.
Adj MDL	The Adjusted Method Detection Limit is the MDL value adjusted for any sample dilutions or concentrations.
MDL	The Method Detection Limit is the lowest theoretical value that is statistically different from zero for a specific method, taking into account all preparation steps and instrument settings.

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

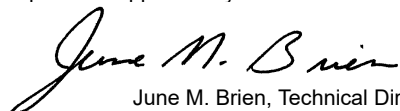
Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Sample Collected" field of this report as "Client" or "CLT".

Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

Record Retention:

All reports, raw data, and associated quality control data are kept on file for 10 years before being destroyed. Any client that would like copies of records must contact Aqua-Tech Laboratories, Inc. no later than six months prior to the scheduled disposal. An administrative fee for retrieval and distribution will apply.

This report was approved by:


June M. Brien, Technical Director

The results in this report apply only to the samples analyzed. This analytical report must be reproduced in its entirety unless written permission is granted by Aqua-Tech Laboratories, Inc.

corp@aqua-techlabs.com

www.aqua-techlabs.com

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Analytical Report

INFRAMARK

Report Printed:

6/1/24 9:55

H016330

Point Venture WWTP Effluent			Collected: 05/15/24 08:23 by Brendan Bourland Received: 05/15/24 14:23 by Brendan Bourland				Type Grab	Matrix Non Potable		C-O-C # N/A		
Lab ID#	H016330-01	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
Field Parameters												
Field pH		8.0	pH Units		0.01	0.01	0.1	Austin	At Collection	SM4500-H+ B 2011	M177179	ANR
Temperature		22.7	Deg. C		0.1	0.1	0.1	Austin	At Collection	SM2550 B 2000	M177179	ANR
Total Residual Chlorine		3.9	mg Cl as CL2/L			0.10	0.10	Calc	At Collection	SM4500-Cl F 2011	[CALC]	ANR
General Chemistry												
Carbonaceous BOD (5 day)		8	mg/L		1	2	2	Austin	05/16/24 06:45 MSA	SM5210 B 2016	M177361	NEL
Total Suspended Solids		9	mg/L		1	2	2	Austin	05/17/24 12:56 KHA	SM2540 D 2015	M177490	NEL
Total Dissolved Solids		380	mg/L		25.0	100	100	Austin	05/20/24 11:57 BEB	SM2540 C 2015	M177536	NEL
Total Kjeldahl Nitrogen as N		35.5	mg/L		0.13	0.78	1.20	Bryan	05/21/24 13:52 KMA	EPA 351.2 R2.0	M177534	NEL
Nitrate as N		2.7	mg/L			0.17	0.50	Calc	05/22/24 11:26 BEB	SM4500-NO3-F 2011	[CALC]	NEL
Nitrite as N		3.1	mg/L		0.002	0.10	0.50	Austin	05/16/24 14:33 BEB	SM4500 NO2- B 2011	M177410	NEL
Nitrate/Nitrite as N		5.8	mg/L		0.02	0.17	0.20	Bryan	05/22/24 11:26 KMA	SM4500-NO3-F 2011	M177631	ANR
Oil & Grease (HEM)		<5.1	mg/L		4.4	5.1	5.1	Bryan	05/21/24 09:36 HDH	EPA 1664B	M177568	NEL
Chloride		149	mg/L		0.60	2.41	20.0	Austin	05/20/24 11:15 MSA	SM4500-Cl- B 2011	M177532	NEL
Sulfate as SO4(2-)		51.6	mg/L		2.63	10.5	20.0	Austin	05/20/24 09:22 KFB	ASTM D0516-16	M177517	NEL
Specific Conductance (adjusted to 25.0°C)		1170	uS/cm		2.00	2.00	2.00	Austin	05/20/24 08:00 MSA	SM2510 B 2011	M177505	NEL
Microbiological Analyses												
E. Coli		<1.0	MPN/100 mL		1.0	1.0	1.0	Austin	05/15/24 15:26 ACG	SM9223 B 2004	M177357	NEL
Results run by SM 9223B are reported as MPN (Most Probable Number). MPN is comparable to CFU (Colony Forming Units). Both MPN and CFU are allowed in most permits.												
Metals (Total)												
Phosphorus-Total		6.84	mg/L		0.082	0.041	0.050	Austin	05/17/24 14:10 KT	EPA 200.7 R4.4	M177414	NEL

H016330-01 - re-analysis	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch
General Chemistry										
Ammonia as N	30.9	mg/L		0.05	0.27	3.00	Bryan	05/27/24 13:00 KMA	SM4500-NH3 G 2011	M177855

Explanation of Notes

J	Analyte detected below the SQL but above the MDL.
RPD-01	Duplicate RPD is outside acceptable range. Acceptance of run is not based on matrix QC.
SL-01	The dried residue did not yield between 2.5 and 200 mg as specified in the method. Due to holding time constraints or insufficient sample volume, the sample cannot be reanalyzed.

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Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

INFRAMARK

Report Printed:

6/1/24 9:55

H016330

Field Parameters - Quality Control

Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch
Chlorine Residual, Total - SM4500-Cl F 2011												Austin
Duplicate	1.5	mg/L	RPD-01	0.1	0.1	05/15/24 13:23 BGB	1.9			23.5	10.2	M177179
Duplicate	<0.1	mg/L		0.1	0.1	05/15/24 13:23 BGB	<0.1				10.2	M177179
Field pH - SM4500-H+ B 2011												Austin
Duplicate	<0.1	pH Units		0.01	0.1	05/15/24 13:23 BGB	<0.1				0.551	M177179
Duplicate	7.0	pH Units		0.01	0.1	05/15/24 13:23 BGB	7.1			0.283	0.551	M177179
Temperature - SM2550 B 2000												Austin
Duplicate	<0.1	Deg. C		0.1	0.1	05/15/24 13:23 BGB	<0.1				2.48	M177179
Duplicate	28.4	Deg. C	RPD-01	0.1	0.1	05/15/24 13:23 BGB	27.6			2.86	2.48	M177179

General Chemistry - Quality Control

Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch
Ammonia as N - SM4500-NH3 G 2011												Bryan
Initial Cal Check	1.00	mg/L			05/23/24 12:21 KMA	1.00		99.6	90 - 110			2405290
Low Cal Check	0.05	mg/L			05/23/24 12:21 KMA	0.0500		102	70 - 130			2405290
Blank	<0.05	mg/L	0.05	0.05	05/23/24 12:21 KMA							M177705
LCS	0.47	mg/L	0.05	0.05	05/23/24 12:21 KMA	0.500		94.6	85 - 115			M177705
LCS Dup	0.49	mg/L	0.05	0.05	05/23/24 12:21 KMA	0.500		98.8	85 - 115	4.34	20	M177705
Matrix Spike	1.06	mg/L	0.05	0.05	05/23/24 12:21 KMA	0.500	0.55	102	70 - 130			M177705
Matrix Spike Dup	1.05	mg/L	0.05	0.05	05/23/24 12:21 KMA	0.500	0.55	100	70 - 130	2.18	20	M177705
Initial Cal Check	5.15	mg/L			05/27/24 13:00 KMA	5.00		103	90 - 110			2405334
Low Cal Check	0.46	mg/L			05/27/24 13:00 KMA	0.500		92.6	70 - 130			2405334
Blank	<0.50	mg/L	0.05	0.50	05/27/24 13:00 KMA							M177855
LCS	1.98	mg/L	0.05	0.51	05/27/24 13:00 KMA	2.00		98.8	85 - 115			M177855
LCS Dup	2.01	mg/L	0.05	0.51	05/27/24 13:00 KMA	2.00		100	85 - 115	1.61	20	M177855
Matrix Spike	8.29	mg/L	0.05	0.51	05/27/24 13:00 KMA	2.00	5.86	121	70 - 130			M177855
Matrix Spike Dup	8.45	mg/L	0.05	0.51	05/27/24 13:00 KMA	2.00	5.86	129	70 - 130	6.38	20	M177855

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Analytical Report

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6/1/24 9:55

H016330

General Chemistry - Quality Control

Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch
Carbonaceous BOD (5 day) - SM5210 B 2016												<i>Austin</i>
Diln Water Blk	<0.20	mg/L	1	1	05/16/24 06:45 MSA		0.1		< or = 0.2 mg/L			2405186
GGA	183	mg/L	1	1	05/16/24 06:45 MSA	199		92.0	84.6 - 115.4			2405186
GGA	192	mg/L	1	1	05/16/24 06:45 MSA	199		96.5	84.6 - 115.4			2405186
GGA	186	mg/L	1	1	05/16/24 06:45 MSA	199		93.5	84.6 - 115.4			2405186
Seed Blank	<1	mg/L	1	1	05/16/24 06:45 MSA							2405186
Seed Blank	<1	mg/L	1	1	05/16/24 06:45 MSA							2405186
Seed Blank	<1	mg/L	1	1	05/16/24 06:45 MSA							2405186
Duplicate	2	mg/L	1	1	05/16/24 06:45 MSA		2			35.4	47.7	M177361
Chloride - SM4500-Cl- B 2011												<i>Austin</i>
Initial Cal Check	50.5	mg/L			05/20/24 11:15 MSA	50.0		101	90 - 110			2405237
Blank	<5.00	mg/L	0.60	5.00	05/20/24 11:15 MSA							M177532
LCS	20.6	mg/L	0.60	5.00	05/20/24 11:15 MSA	19.8		104	90 - 110			M177532
LCS Dup	20.6	mg/L	0.60	5.00	05/20/24 11:15 MSA	19.8		104	90 - 110	0.00	5.86	M177532
Matrix Spike	207	mg/L	2.41	20.0	05/20/24 11:15 MSA	79.2	131	96.7	83.4 - 113			M177532
Matrix Spike Dup	207	mg/L	2.41	20.0	05/20/24 11:15 MSA	79.2	131	96.7	83.4 - 113	0.00	10.7	M177532
MRL Check	5.14	mg/L	0.60	5.00	05/20/24 11:15 MSA	4.95		104	70 - 130			M177532
Mn Interference - SM4500-Cl F 2011												<i>Austin</i>
Duplicate	0.3	mg/L	0.1	0.1	05/20/24 13:17 BAL		0.3			0.00	7.47	M177551
Nitrate/Nitrite as N - SM4500-NO3-F 2011												<i>Bryan</i>
Initial Cal Check	1.0	mg/L			05/22/24 11:26 KMA	0.959		106	90 - 110			2405271
Low Cal Check	0.02	mg/L			05/22/24 11:26 KMA	0.0200		110	70 - 130			2405271
Blank	<0.02	mg/L	0.02	0.02	05/22/24 11:26 KMA							M177631
LCS	0.51	mg/L	0.02	0.02	05/22/24 11:26 KMA	0.500		101	89.5 - 111			M177631
LCS Dup	0.51	mg/L	0.02	0.02	05/22/24 11:26 KMA	0.500		102	89.5 - 111	0.394	10	M177631
Matrix Spike	9.3	mg/L	0.10	0.12	05/22/24 11:26 KMA	5.00	4.5	96.4	80.1 - 118			M177631
Matrix Spike Dup	9.4	mg/L	0.10	0.12	05/22/24 11:26 KMA	5.00	4.5	96.9	80.1 - 118	0.476	10	M177631

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Analytical Report

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General Chemistry - Quality Control

Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch
Nitrite as N - SM4500 NO2- B 2011												Austin
Initial Cal Check	0.07	mg/L			05/16/24 14:33 BEB	0.0736		93.3	90 - 110			2405204
Blank	<0.01	mg/L	0.002	0.01	05/16/24 14:33 BEB							M177410
filtered blank	<0.01	mg/L	0.002	0.01	05/16/24 14:33 BEB							M177410
LCS	0.08	mg/L	0.002	0.01	05/16/24 14:33 BEB	0.0800		106	90 - 110			M177410
LCS Dup	0.09	mg/L	0.002	0.01	05/16/24 14:33 BEB	0.0800		109	90 - 110	3.34	10	M177410
Matrix Spike	7.2	mg/L	0.10	0.50	05/16/24 14:33 BEB	4.00	3.1	103	57 - 116			M177410
Matrix Spike Dup	7.4	mg/L	0.10	0.50	05/16/24 14:33 BEB	4.00	3.1	107	57 - 116	3.42	10	M177410
MRL Check	<0.01	mg/L	0.002	0.01	05/16/24 14:33 BEB	0.0100		88.0	70 - 130			M177410
Initial Cal Check	0.08	mg/L			10/06/23 11:00 MSA	0.0800		106	90 - 110			2310075
Oil & Grease (HEM) - EPA 1664B												Bryan
Blank	<5.0	mg/L	5.0	5.0	05/21/24 09:36 HDH							M177568
LCS	36.3	mg/L	4.9	4.9	05/21/24 09:36 HDH	39.5		91.8	78 - 114			M177568
LCS Dup	35.3	mg/L	5.1	5.1	05/21/24 09:36 HDH	41.0		86.2	78 - 114	6.26	200	M177568
Matrix Spike	38.1	mg/L	4.9	4.9	05/21/24 09:36 HDH	39.4	<4.9	96.7	78 - 114			M177568
Specific Conductance (adjusted to 25.0°C) - SM2510 B 2011												Austin
Initial Cal Check	529	uS/cm			05/20/24 08:00 MSA	545		97.1	90 - 110			2405228
Blank	<2.00	uS/cm	2.00	2.00	05/20/24 08:00 MSA							M177505
Duplicate	1040	uS/cm	2.00	2.00	05/20/24 08:00 MSA		1040			0.192	10	M177505
LCS	1400	uS/cm	2.00	2.00	05/20/24 08:00 MSA	1410		99.5	90 - 110			M177505
Sulfate as SO4(2-) - ASTM D0516-16												Austin
Initial Cal Check	28.9	mg/L			05/19/23 13:33 BEB	30.0		96.4	85 - 115			2305280
Initial Cal Check	32.5	mg/L			05/20/24 09:22 KFB	30.0		108	90 - 110			2405234
Low Cal Check	4.99	mg/L			05/20/24 09:22 KFB	5.00		99.9	70 - 130			2405234
Blank	<5.00	mg/L	2.63	5.00	05/20/24 09:22 KFB							M177517
Duplicate	52.7	mg/L	10.5	20.0	05/20/24 09:22 KFB		51.6			1.99	11.8	M177517
LCS	10.3	mg/L	2.63	5.00	05/20/24 09:22 KFB	10.0		103	85 - 115			M177517
LCS Dup	10.3	mg/L	2.63	5.00	05/20/24 09:22 KFB	10.0		103	85 - 115	0.653	13.5	M177517
Matrix Spike	95.4	mg/L	10.5	20.0	05/20/24 09:22 KFB	40.0	51.6	109	67.7 - 129			M177517
Matrix Spike Dup	98.2	mg/L	10.5	20.0	05/20/24 09:22 KFB	40.0	51.6	116	67.7 - 129	6.31	15	M177517
Total Dissolved Solids - SM2540 C 2015												Austin
Blank	<50.0	mg/L	50.0	50.0	05/20/24 11:57 BEB							M177536
Duplicate	628	mg/L	100	100	05/20/24 11:57 BEB		672			6.77	11.2	M177536
Reference	448	mg/L	100	100	05/20/24 11:57 BEB	507		88.4	74.9 - 127			M177536

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Analytical Report

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General Chemistry - Quality Control

Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch
Total Kjeldahl Nitrogen as N - EPA 351.2 R2.0												Bryan
Initial Cal Check	4.55	mg/L			05/21/24 13:52 KMA	4.56		99.8	90 - 110			2405250
Low Cal Check	0.21	mg/L			05/21/24 13:52 KMA	0.200		106	70 - 130			2405250
Blank	<0.20	mg/L	0.13	0.20	05/21/24 13:52 KMA							M177534
LCS	4.09	mg/L	0.13	0.20	05/21/24 13:52 KMA	4.00		102	87.4 - 119			M177534
LCS Dup	4.10	mg/L	0.13	0.20	05/21/24 13:52 KMA	4.00		103	87.4 - 119	0.269	5.44	M177534
Matrix Spike	173	mg/L	3.25	5.00	05/21/24 13:52 KMA	100	71.8	101	62.1 - 130			M177534
Matrix Spike Dup	175	mg/L	3.25	5.00	05/21/24 13:52 KMA	100	71.8	103	62.1 - 130	1.79	17.5	M177534
Total Suspended Solids - SM2540 D 2015												Austin
Blank	<1	mg/L	1	1	05/17/24 12:56 KHA							M177490
Duplicate	3	mg/L	1	1	05/17/24 12:56 KHA		2			11.8	20	M177490
Reference	104	mg/L	10	10	05/17/24 12:56 KHA	101		103	80 - 120			M177490

Metals (Total) - Quality Control

Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch
Phosphorus-Total - EPA 200.7 R4.4												Austin
Blank	<0.050	mg/L	0.041	0.050	05/17/24 13:30 KT							M177414
LCS	2.46	mg/L	0.041	0.050	05/17/24 13:33 KT	2.50		98.4	84.5 - 115.4			M177414
LCS Dup	2.51	mg/L	0.041	0.050	05/17/24 13:35 KT	2.50		100	84.5 - 115.4	1.91	20	M177414
Duplicate	0.255	mg/L	0.041	0.050	05/17/24 13:38 KT		0.235			8.16	20	M177414
Matrix Spike	3.12	mg/L	0.041	0.050	05/17/24 13:40 KT	2.50	0.235	115	69.5 - 130.4			M177414

Microbiological Analyses - Quality Control

Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	Log10 Comparison Range	Control Limit	Batch
E. Coli - SM9223 B 2004												Austin
Blank	<1.0	MPN/100 mL	1.0	1.0	05/15/24 14:38 ACG							M177357
Dup Log10 Range		MPN/100 mL	1.0	1.0	05/15/24 15:26 ACG					0.000		M177357
Duplicate	<1.0	MPN/100 mL	1.0	1.0	05/15/24 15:26 ACG		<1.0				0.5	M177357

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Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
H016330-01										
Carbonaceous BOD (5 day)	SM5210 B 2016	5/16/24 6:45 MSA	Austin	B	150	mL	300	mL	1	M177361
Chloride	SM4500-Cl- B 2011	5/20/24 11:15 MSA	Austin	C	25.0	mL	100	mL	1	M177532
E. Coli	SM9223 B 2004	5/15/24 15:14 ACG	Austin	D	100	N/A	100	N/A	1	M177357
Nitrate/Nitrite as N	SM4500-NO3-F 2011	5/22/24 9:35 KMA	Bryan	A	1.00	mL	10.0	mL	1	M177631
Nitrite as N	SM4500 NO2- B 2011	5/16/24 14:33 BEB	Austin	F	0.500	mL	25.0	mL	1	M177410
Oil & Grease (HEM)	EPA 1664B	5/21/24 9:36 HDH	Bryan	H	989	mL	1000	mL	1	M177568
Phosphorus-Total	EPA 200.7 R4.4	5/16/24 14:57 BGB	Austin	J	50.0	mL	25.0	mL	1	M177414
Specific Conductance (adjusted to 25.0°C)	SM2510 B 2011	5/20/24 8:00 MSA	Austin	C	25.0	mL	25.0	mL	1	M177505
Sulfate as SO4(2-)	ASTM D0516-16	5/20/24 9:22 KFB	Austin	C	25.0	mL	100	mL	1	M177517
Total Dissolved Solids	SM2540 C 2015	5/20/24 11:57 BEB	Austin	C	25.0	mL	100	mL	1	M177536
Total Kjeldahl Nitrogen as N	EPA 351.2 R2.0	5/20/24 11:08 CTG	Bryan	A	25.0	mL	25.0	mL	6	M177534
Total Suspended Solids	SM2540 D 2015	5/17/24 12:56 KHA	Austin	K	600	mL	1000	mL	1	M177490
H016330-01RE1										
Ammonia as N	SM4500-NH3 G 2011	5/27/24 9:57 KMA	Bryan	A	1.00	mL	6.00	mL	1	M177855

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AQUA-TECH
LABORATORIES

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Chain-of-Custody Summary

The following record summarizes custody for work orders sampled by Aqua-Tech Laboratories, Inc. personnel on route.

Original signatures are kept on file by Aqua-Tech Laboratories, Inc. and are available upon request.

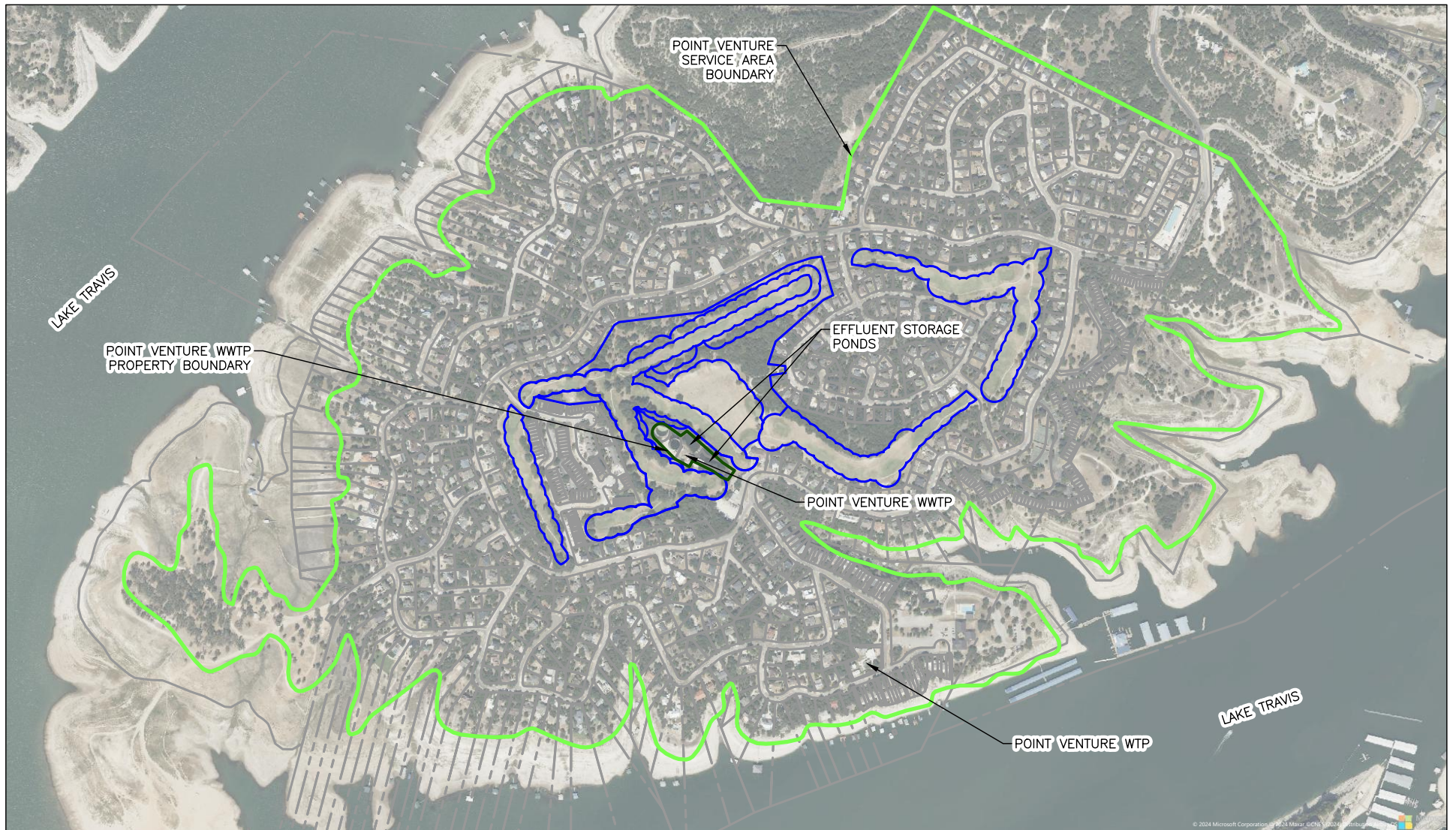
WORK ORDER H016330

Cooler ID	Temperature °C	Condition Good?	On Ice?	Preservation Correct?	Custody Maintained by ATL?	See comments below or comments and qualifiers with analytical results explaining any "No" answers.
T08	2.4	Yes	Yes	Yes	Yes	
H016330-01		Grab		Sampling Begun: 5/15/24 8:23		Sampling Ended: 5/15/24 8:23
Container & Description		pH Checks / Comments		Container & Description		pH Checks / Comments
A	AMM NO3 TKN 0.25LP H2SO4			B	CBOD 1LP	
D	Ecoli 0.1L StP Na2S2O3			E	Mn Corr 0.25 LP	
G	OG pH Chk - 1LP HCl	pH<2		H	OG - 1LG Amber HCl	
J	P 0.25LP H2SO4	pH<2		K	TSS 2LP	
C	CI Cond SO4 TDS 1LP					
F	NO2 0.25LP					
I	OG - 1LG Amber HCl					

Sampled & Submitted to Lab by: Brendan Bourland (Route Driver)

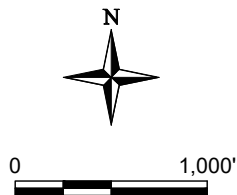
Received: 5/15/24 14:23 By Brendan Bourland (Austin)

ATTACHMENT E
SITE DRAWING



EXPLANATION

- PROPERTY BOUNDARY
- CCN BOUNDARY
- EFFLUENT DISPOSAL AREA
- WWTP BOUNDARY



Texas Engineering Firm F-131
Texas Survey Firm 10194320
Austin
1672 Independence Dr Suite 315 5508 Highway 290 West Suite 201
New Braunfels, Texas 78132 Austin, Texas 78735
(P) 830/626.3588 (F) 830/626.3544 (P) 512/442.3008 (F) 512/448.7811
www.trihydro.com

ATTACHMENT E

SITE DRAWING

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT POINT VENTURE

Drawn By: JDM | Checked By: FG | Scale: 1" = 1000' | Date: 5/29/2024

ATTACHMENT F
EFFLUENT DISPOSAL AGREEMENT

EFFLUENT DISPOSAL CONTRACT
BETWEEN
TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT - POINT VENTURE
AND
POINT VENTURE PROPERTY OWNERS ASSOCIATION, INC.

THE STATE OF TEXAS §
 §
COUNTY OF TRAVIS §

This Effluent Disposal Contract (the "Contract") is entered into as of the 15th day of June, 1999, by and between Point Venture Property Owners Association, Inc., a Texas non-profit corporation ("PVPOA"), and Travis County Water Control and Improvement District - Point Venture, a political subdivision of the State of Texas operating under Chapters 49 and 51, Texas Water Code (the "District").

RECITALS

The District provides water and wastewater services to property within its boundaries, including the Point Venture Golf Course (the "PVGC") owned by PVPOA, which golf course is more fully described in the attached Exhibit "A" (the "Property"). The District and PVPOA want to enter into this Contract that supersedes any and all previous agreements, whether written or oral.

AGREEMENT

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the District and PVPOA agree as follows:

SECTION 1.

USE OF EFFLUENT FROM THE DISTRICT'S WASTEWATER
TREATMENT FACILITIES FOR IRRIGATION OF PVGC

1.01 Agreement to Supply and Use Effluent. The approximately 45-acre PVGC shall serve as the primary irrigation area for the effluent from the District's existing wastewater treatment plant operated under TNRCC Permit No. 11495-01, and the second plant that the District intends to construct from the proceeds of bonds issued pursuant to the election held on January 17, 1998, and any expansions of or improvements to those plants (hereafter called the "District's Plants," whether singularly or collectively, as determined by the context), under the following terms and conditions. The District will make available for PVGC, and PVPOA, subject to the capacity of PVPOA's facilities to take and dispose of the effluent in its irrigation facilities and the other provisions of this

Contract, shall take, all of the effluent produced at the District's Plants except for the effluent reused pursuant to paragraph 1.02 of this Contract. When there is insufficient effluent to satisfy all needs PVPOA shall have priority.

1.02 Use of Effluent by Others. The District may make effluent from its District's Plants available to others, to the extent permitted by the TNRCC reuse rules, and to the extent it is not needed by PVPOA to irrigate the PVGC, pursuant to the following conditions:

i. The District will not make the effluent available to others when PVPOA is unable to divert raw lake water by reason of low lake level or other reason, unless consented to in writing by PVPOA.

ii. PVPOA will cooperate with the District in transporting the effluent through the PVGC irrigation system to deliver to other persons or entities using the effluent. The connection of other irrigation systems to the PVGC irrigation system shall be at no cost to PVPOA. PVPOA shall be compensated by the District for its pumping costs pursuant to Paragraph 6.02 of this Contract.

iii. Effluent shall not be used by persons or entities other than PVPOA while PVPOA's irrigation system is in use, unless agreed to in advance by PVPOA's golf course superintendent.

1.03 Volumes of Effluent Use. During the months of October, November, December, January, February, March and April of each year PVPOA will use its best efforts to operate its irrigation system to the maximum possible extent so as to keep the contents of Storage Ponds Nos. 1 and 2 (as those ponds are later described) at levels satisfactory to the District's manager. The District may commence irrigation of the PVGC at any time the effluent in Storage Ponds 1 and 2 reach an emergency level, as determined by the District's manager. This will be coordinated between the District's manager and the PVGC personnel designated in writing by PVPOA. In no event shall PVPOA or PVGC be required to irrigate in such a manner as to violate the then existing rules and regulations governing either party.

SECTION 2.

STORAGE PONDS, STORAGE TANK AND POINT OF DELIVERY

2.01 Pond Locations. Attached as Exhibit "B" is a map showing the approximate location of Storage Ponds Nos. 1 and 2, as they are located on the site that is owned by the District.

2.02 Pond Maintenance. The District shall be responsible for adequate maintenance of Storage Ponds Nos. 1 and 2, including without limitation, algae treatment and prevention, mowing, vegetation control, and signs or safety warnings required by any authorized regulatory entity. Any changes in the pond landscape or the construction of additional pond facilities shall require prior written approval by PVPOA.

2.03 Storage Tank. PVPOA will sell the land described by metes and bounds on Exhibit "C" attached hereto in form and under the terms and conditions of the attached Exhibit "D." The approximate location of this tank site is shown on Exhibit "B." The District will build a three million gallon ~~open~~ storage tank described in Exhibit "C" (the "Storage Tank") on this site.

2.04 Points of Delivery. Effluent from the District's Plants may be pumped to the Storage Tank, or allowed to flow by gravity to Storage Pond No. 1. Effluent may be delivered from the Storage Tank to Storage Pond No. 1 by drain line, and may be delivered to Storage Pond No. 2 by overflow from Storage Pond No. 1. PVPOA will grant to the District, in form satisfactory to each party's counsel, easements for the effluent lines between the District's Plants and the Storage Tank and between the Storage Tank and Storage Pond No. 1. The effluent shall be delivered to Storage Pond No. 2 from where it may be pumped by PVPOA to the PVGC irrigation system. The inlet of PVPOA's main irrigation pump located on Storage Pond No. 2 shall be the District's point of delivery to PVPOA for the PVGC (the "PVGC Point of Delivery"). Title to all water delivered by the District to PVPOA pursuant to Section 1 of this Contract shall be in the District up to the PVGC Point of Delivery, at which point title shall pass to PVPOA. Each of the parties agree to save and hold harmless and shall indemnify the other party, its officers, directors, employees, agents, and persons acting in concert with any of them, ("Indemnified Parties"), from all claims, demands, losses, and causes of actions, including but not limited to attorney's fees, expenses of investigation or litigation, expert witness or consultant fees, judgments or settlements, which may be asserted by anyone on account or alleged to be the result of the transportation and or delivery of said water while title remains in said party, including but not limited to claims, demands, losses, and causes of actions alleged to arise, in whole or in part, from the negligence of the indemnified party.

SECTION 3.

IRRIGATION FACILITIES

3.01 PVPOA Existing Irrigation System. PVPOA represents that its existing irrigation facilities are presently in good working condition and have the capacity to accept deliveries of effluent in the maximum amounts previously tendered to PVPOA by the District. PVPOA shall be responsible for maintenance and operation of the existing irrigation facilities.

SECTION 4.

IRRIGATION WITH LAKE WATER

4.01 Irrigation with Lake Water. The District shall accept and take possession of water purchased by PVPOA for supplemental irrigation water from the Lower Colorado River Authority (the "LCRA") and delivered to District at the existing delivery point at Storage Pond No. 2. Title to the purchased water shall pass to the District at that pond. Water purchased from the LCRA shall be commingled in Storage Pond No. 2 with District effluent and then delivered to PVPOA at the PVGC Point of Delivery.

The District shall be responsible for delivering effluent and LCRA water, of the quality required by the TNRCC for irrigation of the PVGC. PVPOA shall not deliver purchased LCRA water to the District's Storage Pond No. 2 of a quality which, when commingled with effluent, shall lower the quality of water in Storage Pond No. 2 below that required by the TNRCC for irrigation of PVGC.

SECTION 5.

LINE AND PLANT LOCATIONS AND EASEMENTS

5.01 Plant Location. The locations of the District's existing plant, and the second plant that the District intends to construct from the proceeds of bonds issued pursuant to the election held on January 17, 1998, are shown on Exhibit "B" attached hereto.

5.02 Line Easements. The District currently has an easement for its gravity sewer line across the golf course, a copy of which is attached hereto as Exhibit "E." PVPOA will grant to the District an easement or easements for additional lines at a location or locations mutually agreeable to the District and PVPOA, in a form satisfactory to each party's counsel.

SECTION 6.

MISCELLANEOUS PROVISIONS

6.01 Raw Water Charges. If the use of effluent by others during June, July, August or September requires PVPOA to use raw lake water for irrigation of the PVGC, the District will reimburse PVPOA for certain expenses as follows:

- a. The District will reimburse PVPOA for the amount it has to pay to the Lower Colorado River Authority ("LCRA") for the quantity of raw lake water required because of the effluent taken by others during those months.

- b. The District will reimburse PVPOA for the cost of pumping the raw water from Lake Travis to Storage Pond No. 2, as provided in Section 6.02 of this Contract.

6.02 Pumping Charge. If PVPOA pumps water for use by others pursuant to paragraph 1.02 of this Contract, and if PVPOA pumps lake water in the manner described by Paragraph 6.01(b) of this Contract, the District shall pay PVPOA \$0.25 per 1,000 gallons to compensate for the cost of pumping. If the power company increases the cost of electricity for the pumping, the \$0.25 per 1,000 gallons shall be increased by the same percentage as the increase in the cost of electricity. The District shall reimburse PVPOA on a pro rata basis for its costs of operating and maintaining its pumping facilities should PVPOA pump water for use by others.

6.03 Payment of Charges. Payment of charges under 6.01 and 6.02 shall be made in the manner described on the attached Exhibit "F."

6.04 Runoff Control. PVPOA shall diligently operate and maintain its irrigation systems on PVGC to prevent unauthorized run-off, contamination of underground or surface water, creation of a nuisance, and discharge of effluent in area streams, subject to the conditions set forth in this Contract. District shall not require PVPOA to operate and maintain its irrigation systems of PVGC which would cause the above stated conditions.

SECTION 7.

FUTURE CHANGES

In the event of changes in future conditions that require an amendment to this Contract to accomplish the purposes of this Contract, the parties agree to submit to mediation should the parties not mutually agree to such an amendment.

SECTION 8.

INDEMNIFICATIONS

The District and PVPOA hereby agree to save and hold harmless and shall indemnify, to the fullest extent of the law, the other party, its officers, director, employees, agents, and persons acting in concert with any of them, ("Indemnified Parties"), from all claims, demands, losses, fines, penalties, and causes of actions, including but not limited to attorney's fees, expenses of investigation or litigation, expert witness or consultant fees, judgments or settlements, which may be asserted by anyone on account or alleged to be the result of or arising out of or resulting from the failure of said indemnifying party to comply with any and all obligations hereunder, including but not limited to claims, demands, losses, fines, penalties, and causes of actions alleged to arise, in whole or in part, from the

negligence of the indemnified party, provided that neither party shall be responsible for indirect, special or consequential damages of the other.

SECTION 9.

REMEDIES UPON DEFAULT

9.01 Notice and Cure. If either party determines that the other party is in default under this Contract, the party claiming default by the other party shall give written notice to the defaulting party at the address set forth herein for notice. The defaulting party shall have thirty (30) days in which to cure the default, or if such default cannot be reasonably cured within such thirty (30) day period, the defaulting party shall use reasonable efforts to undertake to cure such default within such thirty (30) day period. If the defaulting party does not cure the default within thirty (30) days, or if the default cannot be reasonably cured within such thirty (30) day period, or if the defaulting party does not use reasonable efforts to undertake to cure the default within such thirty (30) day period, the party claiming default shall be entitled to the rights and remedies hereinafter set forth.

9.02 Mandamus and Specific Performance. It is not intended hereby to specify (and this Contract shall not be considered as specifying) an exclusive remedy for any default, but all such other remedies (other than termination by rescission or by any other means) existing at law or in equity may be availed of by any party hereto and shall be cumulative. Recognizing, however, that the District's undertaking to provide and maintain a supply of water hereunder is an obligation, failure in the performance of which cannot be adequately compensated in money damages alone, the District agrees, in the event of any default on its part, that the PVPOA shall have available to it the equitable remedy of mandamus and specific performance in addition to any other legal or equitable remedies (other than termination) which may also be available. Recognizing that failure in the performance of the PVPOA's obligations hereunder could not be adequately compensated in money damages alone, the PVPOA agrees in the event of any default on its part that the District shall have available to it the equitable remedy of mandamus and specific performance in addition to any other legal or equitable remedies (other than termination by rescission or by any other means) which may also be available to the District. No waiver or waivers of any breach or default (or any breaches or defaults) by any party hereto or of performance shall be deemed a waiver thereof in the future, nor shall any such waiver or waivers be deemed or construed to be waiver of subsequent breaches or defaults of any kind, character, or description, under any circumstances.

SECTION 10.

ATTORNEY'S FEES

If any legal action is brought by either of the parties hereto, it is expressly agreed that the prevailing party in such legal action shall be entitled to recovery from the other party reasonable attorney's fees, and expert witness fees, in addition to any other relief that may be awarded. For the purpose of this clause, the prevailing party is the party who obtains the net damage recovery, or the party in whose favor final judgment is entered. In the event that declaratory or injunctive relief alone is granted, the court may determine which, if either, of the parties shall be considered to be the prevailing party. The amount of reasonable attorney's fees shall be determined by the court, in the trial of such action or in a separate action brought for that purpose. Attorney's fees awarded under the provisions of this paragraph shall be in addition to any other relief that may be awarded.

SECTION 11.

NOTICE

Any notice provided for under the terms of this Contract by either party to the other shall be in writing and may be effected by personal delivery or by registered or certified mail, return receipt requested. Notice to the District shall be sufficient if made or addressed to:

General Manager
Travis County Water Control and
Improvement District - Point Venture
19053 Venture Drive
Leander, Texas 78645

With Copy to:

Mike Willatt
Willatt & Flickinger
2001 North Lamar
Austin, Texas 78705

Notice to PVPOA shall be sufficient if made or addressed to:

Point Venture Property Owners Association, Inc.
555 Venture Boulevard South
Leander, Texas 78645

Each party may change the address which notice may be sent to that party by giving notice of such change to the other party in accordance with the provisions of this Paragraph.

SECTION 12.

SUCCESSORS AND ASSIGNS

This Contract shall be binding on and inure to the benefit of the successors and assigns of the respective parties to this Contract. The obligations of PVPOA under this Contract shall run with the Property and shall be binding on all parties having any right, title, or interest in the Property in whole or in part, and their heirs, successors and assigns. An original of this Contract shall be recorded in the Real Property Records of Travis County, Texas.

SECTION 13.

TERM

Unless terminated by mutual agreement of the parties hereto or their successors and assigns, this Contract shall continue in force and effect for a period of thirty (30) years from its effective date and may thereafter be continuously renewed by mutual agreement of the parties.

SECTION 14.

SEVERABILITY

If any provision of this Contract is held to be invalid, illegal or unenforceable in any respect, this invalidity, illegality or unenforceability will not affect any other provision, and this Contract will be construed as if the invalid, illegal or unenforceable provision had never been contained herein.

SECTION 15.

SOLE AGREEMENT; MODIFICATION

This Contract represents the entire agreement between the parties relating to the subject matter and supersedes all prior oral or written agreements between the District and PVPOA's predecessor(s) in title to the Property. This Contract may be modified or varied only by a written instrument executed by both the District and PVPOA.

SECTION 16.

APPLICABLE LAW

This Contract will be construed and interpreted under the laws of the State of Texas.

SECTION 17.

GOOD FAITH

The parties to this Contract are obligated to use good faith in trying to perform their obligations under this Contract, and in making it possible for the other party to perform its obligations under this Contract.

SECTION 18.

EFFECTIVE DATE

The effective date of this Contract is the date set forth on the first page.

IN WITNESS WHEREOF, PVPOA and the District have executed this Contract in multiple copies, each of equal dignity.


TRAVIS COUNTY WATER CONTROL
AND IMPROVEMENT DISTRICT -
POINT VENTURE

By: Chadbourne B. Smith
President

ATTEST:

Elisabeth Strickler
Secretary

POINT VENTURE PROPERTY OWNERS
ASSOCIATION, INC.,
a Texas non-profit corporation

By: , President

ACKNOWLEDGMENTS

THE STATE OF TEXAS

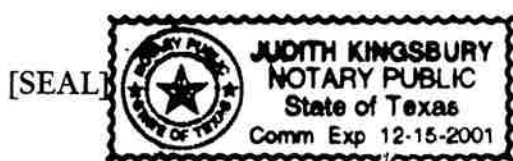
§

COUNTY OF TRAVIS

§

§

This instrument was acknowledged before me on JUNE 30, 1999 by Chadbourne B. Smith as President of Travis County Water Control and Improvement District - Point Venture, on behalf of said District.



Judith Kingsbury
Notary Public, State of Texas

Printed Name

My Commission Expires: 12-15-2001

THE STATE OF TEXAS

§

COUNTY OF TRAVIS

§

§

This instrument was acknowledged before me on July 1, 1999 by James J. Strong as President of Point Venture Property Owners Association, Inc. a Texas non-profit corporation, on behalf of said corporation.



Emma Lou Hight
Notary Public, State of TEXAS

EMMA LOU HIGHT
Printed Name

My Commission Expires: 04-28-01

LIST OF EXHIBITS

- Exhibit "A" - Metes and Bounds Description of the Point Venture Golf Course.
- Exhibit "B" - Map showing location of Storage Ponds, Storage Tank and Plants.
- Exhibit "C" - Site for Storage Tank.
- Exhibit "D" - Contract for Purchase and Sale of Storage Tank Site.
- Exhibit "E" - Existing Easement for Gravity Sewer Line.
- Exhibit "F" - Payment of Charges Under 6.01 and 6.02.

EXHIBIT "A"

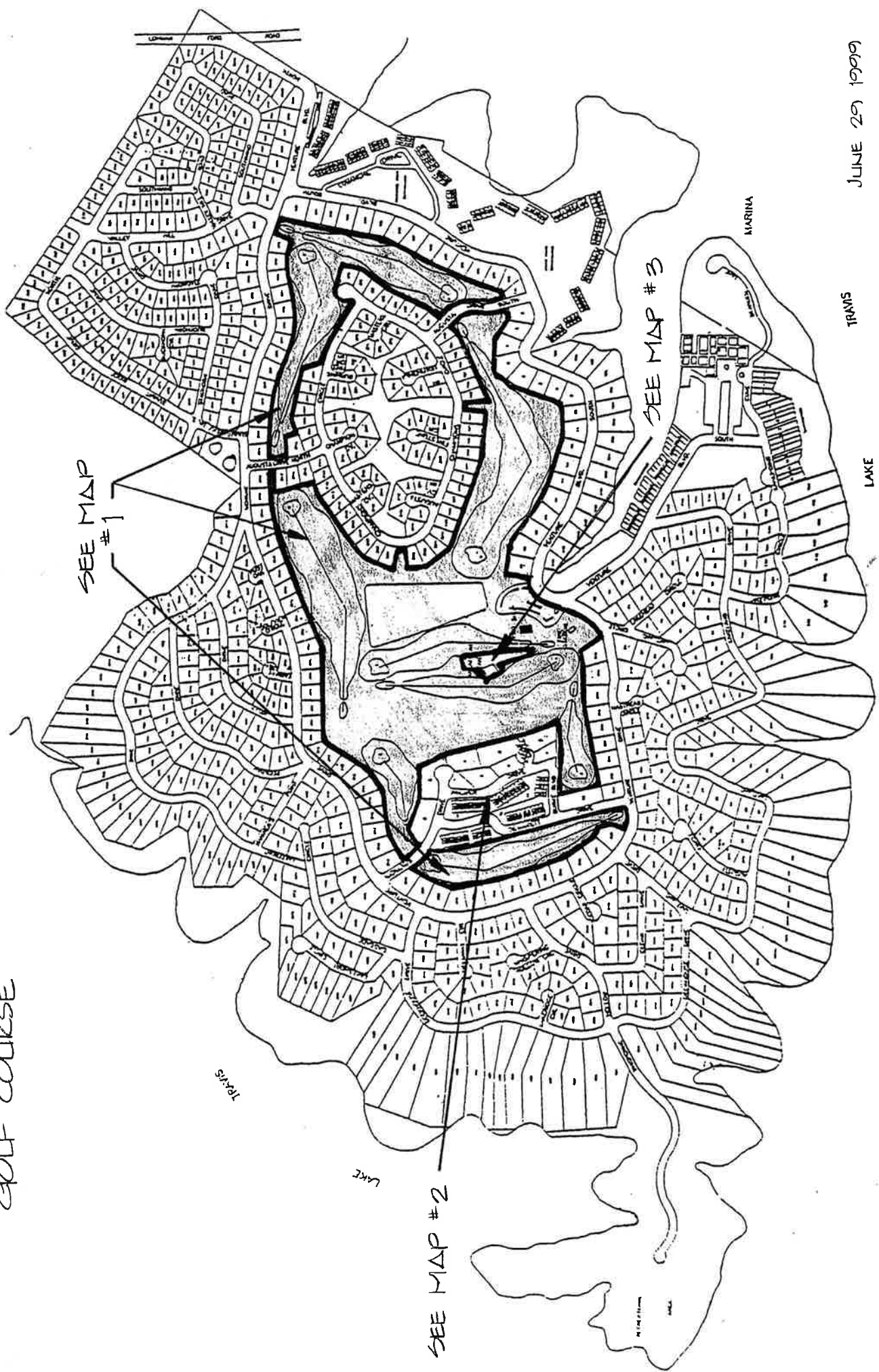
LEGAL DESCRIPTION OF POINT VENTURE GOLF COURSE

- Sheet 1 Overall map of Point Venture with the Golf Course description shaded.
- Sheet 2 Travis Central Appraisal District owner information with legal and deed
- Sheet 3 - 10 General Warranty Deed as recorded in vol. 9285, pgs.0649 - 0656 (8 total)

Note: on pg 0654 Exhibit "A" is the legal description of the Point Venture Golf Course... the following Maps explain each of the parcels described on pg. 0654 Exhibit "A"

- Sheet 11
Map #1 "Point Venture, Section Two" record plat as recorded in volume 51, page 36- area 1 and area 5 are dedicated to Golf Course except...
- Sheet 12
Map #2 "Point Venture, Section Two B" record plat as recorded in volume 56, page 45 - is 11.02 acres taken out of area 5 to be subdivided and developed instead of golf course and...
- Sheet 13
Map #3 "Tract One, Tract Two, Tract Three and an Access Easement" - 0.492, 0.084, 0.377 acre respectively for the Point Venture Wastewater Treatment Plant and Effluent Pond instead of Golf Course (see their legal description on page 0655) and...
"Tract One-A, Tract Three-A, Tract Three-B, Tract Three - C" - 0.040, 0.088, 0.101, 0.042 acre respectively for additional land use by the Wastewater Treatment System (see their legal description on page 0656)

EXHIBIT "A"
LEGAL DESCRIPTION OF POINT VENTURE
GOLF COURSE



LAKE
TRANS

JUNE 29 1999

SHEET 1 OF 13

POINT VENTURE

YEAR 1998 OWNER DETAIL INFORMATION 0147500153 0000 TY 1998 03/16/1999
 NXT N SECU OWNER NAME POINT VENTURE PROPERTY OWNERS DEL OWNER ...
 LEC: STRT VENTURE BV HOUSE 000000 FRAC SUF UNT ZIP
 ---MAILING ADDRESS---
 POINT VENTURE PROPERTY DEED TYPE WD * AREA 1 & AREA 5 (74.198 ACR)
 OWNERS ASSOCIATION INC VOLUME 09285 * (GOLF COURSE & PRO SHOP)
 555 VENTURE BLVD S (143) PAGE 00649 N POINT VENTURE SEC 2
 LEANDER TX DATE 07/22/1985

 ZIP 78645 - ***** OWN HIST Y
 RENDERED VALUE *****
 APPRAISED VAL 104,687 SQFT IMPR 1,120
 STRUCTURE CODE 20 SQFT VALUE 93.64
 FINAL VALUE ***** CD INIT
 DBA PT VENTURE GOLF COURSE REF
 OTH CAD ACCT MULTI
 AREA 9 NBHD 1GOLF GROUP REGION LD LINK LINK ACRES
 AGENT START END ADDR RETURNS TCAD NOTICE TAX NOTICE
 TCAD ***** FLD INSP LETTER
 ARB ***** EXEMPTIONS ADJX
 COLL *****
 TOTAL TAXES 2957.81

1900

03949171

GENERAL WARRANTY DEED

THE STATE OF TEXAS §
 § KNOW ALL PERSONS BY THESE PRESENTS:
 COUNTY OF TRAVIS §

~~Aug-17-85~~ 8366 * 19:00

THAT MITCHELL DEVELOPMENT CORPORATION OF THE SOUTHWEST ("Grantor"), a Delaware corporation acting by and through its authorized officers, for and in consideration of Ten Dollars (\$10.00), the performance of those covenants contained in that certain contract by and between Grantor and Grantee dated April 11, 1985, and other good and valuable consideration paid to Grantor by VENTURE YACHT AND COUNTRY CLUB, INC., a Texas Non-Profit corporation (hereinafter called "Grantee"), of Travis County, Texas, the receipt of which is hereby acknowledged, and the further covenant, consideration and condition is that the following shall in all things be observed, followed and complied with:

- (1) Grantee shall not encumber the title to the Property during the term of the lease of the Property to Grantor dated July 22, 1985, or during the extension thereof provided for in the lease;
- (2) Grantee shall expend at least Two Hundred Thousand Dollars (\$200,000.00) to improve the amenities at Point Venture I transferred herein to Grantee within three (3) years of the date hereof pursuant to the terms of the Contract by and between Grantor and Grantee dated April 11, 1985, and the Lease by and between Grantor and Grantee dated July 22, 1985;
- (3) Grantee shall pay annually to Grantor a sum equal to twenty-five percent (25%) of the annual maintenance charge assessment levied against all property in Point Venture I and II pursuant to the terms of the Contract by and between Grantor and Grantee dated April 11, 1985;

In the event of any violations or failure to perform any one of the above covenants by Grantee, its successors or assigns, Grantor, its successors or assigns, shall give written notice to Grantee, its successors or assigns, specifying any such violation or failure to perform and, if Grantee its successors or assigns shall fail to cure or come into compliance with or perform the covenant within ninety (90) days after receipt of such notice, fee simple title to all of the properties conveyed herein shall, without entry or suit, immediately revert to and vest in Grantor herein, its successors or assigns, and the conveyance hereunder shall be null and void, and Grantor, its successors or assigns shall be entitled to immediate possession of such properties and the improvements thereon;

has GRANTED, SOLD and CONVEYED, and by these presents does hereby GRANT, SELL and CONVEY unto said Grantee, the following described lot, tract or parcel of land lying and being situated in the County of Travis, State of Texas, to wit:

Being that certain tract of land in Point Venture Section Two, a subdivision in Travis County, Texas, and being more particularly described in Exhibit A attached hereto and made a part hereof for all purposes ("the Property").

And with the further restriction and upon the covenant and condition that the herein conveyed property shall be used for golf course purposes and the uses described in those certain water waste control orders issued by the Texas Water Quality Board nos. 11232 and 11385 both dated 24, January, 1973, or extensions or modifications thereof only. This restriction and

covenant is hereby declared to be a covenant running with the land and shall be fully binding for a period of twenty-five (25) years from the date hereof; at the end of such period, said restriction and covenant shall automatically be extended for a successive period of twenty-five (25) years unless, by a vote of a three-fourths (3/4) majority of the then owners of lots in said subdivision (each lot having one vote), taken prior to the expiration of said twenty-five (25) year period and filed of record in Travis County, Texas, it is agreed to amend or release same.

If any person or persons shall violate or attempt to violate the restriction and covenant herein, it shall be lawful for any person or persons owning any lot in Point Venture, a subdivision in Travis County, Texas, to prosecute proceedings at law or in equity against the person violating or attempting to violate any such restriction and covenant, either to prevent him or them from so doing or to correct such violation or to recover damages or other relief for such violation. Invalidity of all or any part of this restriction by judgment or court order shall in nowise affect any of the other provisions or parts of provisions which shall remain in full force and effect.

This conveyance is made, executed and delivered by Grantor and accepted by Grantee subject to the following:

(1) The reservation by Grantor, for itself and its successors and assigns, of rights of ingress and egress in and to the right-of-way of any streets and roads located or which may be located on or adjacent to the Property; provided, however, that such reservation shall not affect, limit or deny ingress and egress to the Property by any landowner in Point Venture, a subdivision in Travis County, Texas, as recorded in the Real Property Records of Travis County, Texas.

(2) All of the covenants, restrictions, reservations and easements, if any, affecting the Property which are of record in the Real Property Records of Travis County, Texas.

(3) The further covenant and restriction that all persons who become an owner or resident of the Property agree that neither they nor anyone authorized to act for them will refuse to sell or rent, or refuse to negotiate for the sale or rental of, or otherwise make unavailable, or deny the use of the Property to any person because of race, color, religion, sex or national origin. This covenant shall run with the land and shall remain in effect without any limitation on time.

(4) All oil, gas and mineral reservations or conveyances of record, and the reservation by Grantor, for itself and its successors and assigns, of all oil, gas and other minerals on, in or under, or that may be produced from the Property; provided, however, that as to any mineral interest to which title shall remain vested in Grantor by virtue of this reservation, Grantor hereby waives all rights to use the surface of the Property for the purpose of exploring for, developing or producing such minerals.

(5) Rights of Lower Colorado River Authority to inundate and overflow any portion of the subject property lying below the 715 foot Mean Sea Level Contour Line.

TO HAVE AND TO HOLD the above-described premises, together with all and singular the rights and appurtenances thereto in anywise belonging, unto Grantee, its successors and assigns FOREVER; and Grantor does hereby bind itself, its successors and assigns, to WARRANT AND FOREVER DEFEND, all and singular, the premises unto Grantee, its successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof.

It is expressly agreed that the Vendor's Lien, as well as

the Superior Title in and to the above described premises, is retained against the above described property, premises and improvements until the above consideration is fully paid and performed, when this Deed shall become absolute.

Ad valorem taxes for the current year shall be pro-rated and adjusted to the date hereof, and Grantee expressly assumes and agrees to pay the same.

IN WITNESS WHEREOF, this instrument has been executed by Grantor and Grantee on July 22, 1985.

MITCHELL DEVELOPMENT CORPORATION OF THE SOUTHWEST

By: [Signature]
Name: George P. Mitchell
Title: President

VENTURE YACHT AND COUNTRY CLUB, INC.

By: [Signature]
Name: Michael Lehtonen
Title: Director

By: [Signature]
Name: JOHN W. HAZARD
Title: Director

By: [Signature]
Name: JOHN W. BRANDENBERGER
Title: Director

By: [Signature]
Name: J. FREDERICK WALLACE
Title: Director

By: [Signature]
Name: BILL HIGHT
Title: Director

By: [Signature]
Name: Sheridan Kennedy
Title: Director

THE STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 19, 1985, by George P. Mitchell, President of Mitchell Development Corporation of the Southwest, a Delaware corporation, on behalf of said corporation.

[Signature]
Printed Name: PATRICIA TILLER BARNES
Notary Public - State of Texas
My Commission Expires: 9-22-87

PATRICIA TILLER BARNES
Notary Public in the State of Texas
My Commission Expires: 9-22-87

NOTARY SEAL

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 18, 1985, by Alfred Reikonen, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Kathleen Davidson
Printed Name: Kathleen Davidson
Notary Public - State of Texas
My Commission Expires: 10-11-87

KATHLEEN DAVIDSON
Notary Public in and for State of Texas
My Commission Expires 10/11/87

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by John W. Hazard, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Myrta Kaye Applewhite
Printed Name: Myrta Kaye Applewhite
Notary Public - State of Texas
My Commission Expires: 6-30-86

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My Commission Expires: June 30, 1986

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by John W. Branderburger, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Myrta Kaye Applewhite
Printed Name: Myrta Kaye Applewhite
Notary Public - State of Texas
My Commission Expires: 6-30-86

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My Commission Expires: June 30, 1986

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by J. Frederick Welling, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Myrta Kaye Applewhite
Printed Name: Myrta Kaye Applewhite
Notary Public - State of Texas
My Commission Expires: 6-30-86

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My Commission Expires: June 30, 1986

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by BILL HIGHT, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My commission expires: June 30, 1986

Myrta Kaye Applewhite
Printed Name: _____
Notary Public - State of Texas
My Commission Expires: 6-30-86

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by Sherron Kornegay, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

GRANTEE'S MAILING ADDRESS

Venture Yacht and Country Club, Inc.
350 Venture Boulevard
Leander, Texas

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My commission expires: June 30, 1986

Myrta Kaye Applewhite
Printed Name: _____
Notary Public - State of Texas
My Commission Expires: 6-30-86

EXHIBIT "A"

All of Areas One (1) and Five (5) of POINT VENTURE, SECTION TWO (2), subdivision in Travis County, Texas, according to the map or plat of record in Volume 51, Page 36, of the Plat Records of Travis County, Texas,

SAVE and EXCEPT:

POINT VENTURE SECTION TWO-B, according to the map or plat of record in Volume 56, Page 45, of the Plat Records of Travis County, Texas.

Three tracts of land, together with an access easement, situated in Travis County, Texas, more particularly described in Exhibit 2-A attached hereto and made a part hereof for all purposes.

Four tracts of land, situated in Travis County, Texas, more particularly described in Exhibit 2-B attached hereto and made a part hereof for all purposes.

SEE ATTACHED MAP # 3 (SHEET 13 OF 13)

SEE ATTACHED MAP # 2 (SHEET 12 OF 13)

SEE ATTACHED MAP # 1 (SHEET 11 OF 13)

MKA/2BExhibitA/7-1-85/5

09285 0654

SHEET 8

FIELD NOTES FOR THE MITCHELL DEVELOPMENT CORPORATION

Field Notes describing three tracts of land, together with an access easement, situated in Travis County, Texas, and being out of the tract conveyed to Venture Development Company described in a deed recorded in Volume 4861, page 912 of the Deed Records of said County:

Tract One

Beginning at the most southerly corner hereof and being N.10°34'W. 457.47 feet from the Northeast corner of lot 342 in Point Venture, Section Two, a county subdivision found of record in Volume 51, Page 36 of the Plat Records of said County;

Thence N.48°33'W. 55.76 feet to an ell corner hereof;
Thence S.27°23'W. 74.51 feet to an ell corner hereof;
Thence N.62°37'W. 58.40 feet to an ell corner hereof;
Thence N.27°23'E. 89.15 feet to the most westerly corner hereof;
Thence N.03°00'W. 82.59 feet to an angle point hereof;
Thence N.51°45'E. 54.46 feet to the most northerly corner hereof;
Thence S.49°57'E. 58.85 feet to an angle point hereof;
Thence S.34°04'E. 116.14 feet to the most easterly corner hereof;
Thence S.46°19'W. 85.24 feet to the Point of Beginning of this described tract containing 0.492 acres, more or less, out of the Thomas Anderson Survey No. 85.

Tract Two

Beginning at the most southerly corner of Tract One for the most easterly corner hereof;

Thence N.48°33'W. 55.76 feet to the most northerly corner hereof, being an ell corner of said Tract One;
Thence S.27°23'W. 74.51 feet to the most westerly corner hereof, being the most westerly corner of said Tract One;
Thence S.62°37'E. 54.09 feet to the most southerly corner hereof;
Thence N.27°23'E. 60.95 feet to the Point of Beginning of this described tract containing 0.084 acres, more or less, out of the Thomas Anderson Survey No. 85.

Tract Three

Beginning at the most southerly corner of said Tract One for the most westerly corner hereof;

Thence N.46°19'E. 85.24 feet to the most northerly corner hereof, being the most easterly corner of said Tract One;

Thence S.34°04'E. 39.32 feet to an angle point hereof;
Thence S.67°55'E. 128.87 feet to an angle point hereof;
Thence S.45°02'E. 57.44 feet to the most easterly corner hereof;
Thence S.35°12'W. 79.20 feet to the most southerly corner hereof;
Thence N.53°02'W. 64.08 feet to an angle point hereof;
Thence N.52°12'W. 59.10 feet to an angle point hereof;
Thence N.63°16'W. 107.51 feet to the Point of Beginning of this described tract containing 0.377 acres, more or less, out of the Thomas Anderson Survey No. 85 and the Adams, Beaty and Moulton Survey No. 141.

Access Easement

Being a twenty (20) foot wide access easement to the afore described three tracts of land is more fully described as being ten (10) feet in width on each side of its center line, herein after described as follows:

Beginning at a point in the East line of Tract Two, N.27°23'E. 10.09 feet from the most southerly corner of said Tract Two;

Thence southeasterly along said center line S.70°22'E. 100.68 feet, S.68°28'E. 273.79 feet and N.66°47'E. 86.95 feet to a point in the curving West R.O.W. line of Venture Boulevard for the ending center line point hereof and being S.66°00'15"W. 115.47 feet from the Southwest corner of lot 19 in Point Venture Section One, a county subdivision found of record in Volume 49, Page 70 of said Plat Records.

I, Timothy E. Haynie, A REGISTERED PROFESSIONAL ENGINEER, do hereby certify that these field notes accurately represents the results of an on-the-ground survey made under my direction and supervision on the 24th day of August, 1979. All corners located are as shown. There are no encroachments, conflicts or protrusions apparent on the ground except as shown.



HAYNIE & KALLMAN, INC.

Timothy E. Haynie,
Professional Engineer No. 36982

Date

8-27-79

09285

EXHIBIT 2-A

SHEET 9

Being four (4) tracts of land out of the Thomas Anderson Survey No. 85, in Travis County, Texas, and being out of that tract conveyed to Ventura Development Company described in a deed recorded in Volume 4861, Page 912, Deed Records of Travis County, Texas, as follows:

TRACT ONE-A

BEGINNING for point of reference at the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County; thence $N10^{\circ}54'W$, 457.47 feet; thence $N46^{\circ}19'E$, 85.24 feet for the POINT OF BEGINNING of the tract herein described, and being the most Southerly corner of said tract;

THENCE $N34^{\circ}04'W$, 116.14 feet to the Northwest corner hereof;

THENCE $S49^{\circ}22'E$, 115.07 feet to the Northeast corner hereof;

THENCE $S46^{\circ}19'W$, 39.79 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.040 acres, more or less.

TRACT THREE-A

BEGINNING for point of reference at the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, Texas, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County; thence $N10^{\circ}54'W$, 457.47 feet; thence $N46^{\circ}19'E$, 85.24 feet for the POINT OF BEGINNING of the tract herein described and being the Southwest corner of said tract;

THENCE $N46^{\circ}19'E$, 30.79 feet to the Northwest corner hereof;

THENCE $S49^{\circ}22'E$, 157.05 feet to the Northeast corner hereof;

THENCE $N67^{\circ}55'W$, 128.87 feet to the most Southerly Southeast corner hereof;

THENCE $N34^{\circ}04'W$, 39.32 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.022 acres, more or less.

TRACT THREE-B

BEGINNING for point of reference at the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, Texas, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County; thence $N10^{\circ}54'W$, 457.47 feet; thence $N46^{\circ}19'E$, 85.24 feet; thence $N46^{\circ}19'E$ 30.79 feet; thence $S49^{\circ}22'E$, 157.05 feet to the POINT OF BEGINNING of the tract herein described, being the most westerly Northwest corner of said tract;

THENCE $S57^{\circ}06'E$, 99.38 feet to the Northeast corner hereof;

THENCE $S35^{\circ}12'W$, 30.00 feet to the Southeast corner hereof;

THENCE $N68^{\circ}28'W$, 50.00 feet to the Southwest corner hereof;

THENCE $N35^{\circ}12'E$, 79.20 feet to an old corner hereof;

THENCE $N45^{\circ}09'W$, 51.44 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.101 acres, more or less.

TRACT THREE-C

BEGINNING at a point $N10^{\circ}54'W$, 457.47 feet from the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, Texas, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County;

THENCE $S63^{\circ}16'E$, 107.51 feet to an angle point hereof;

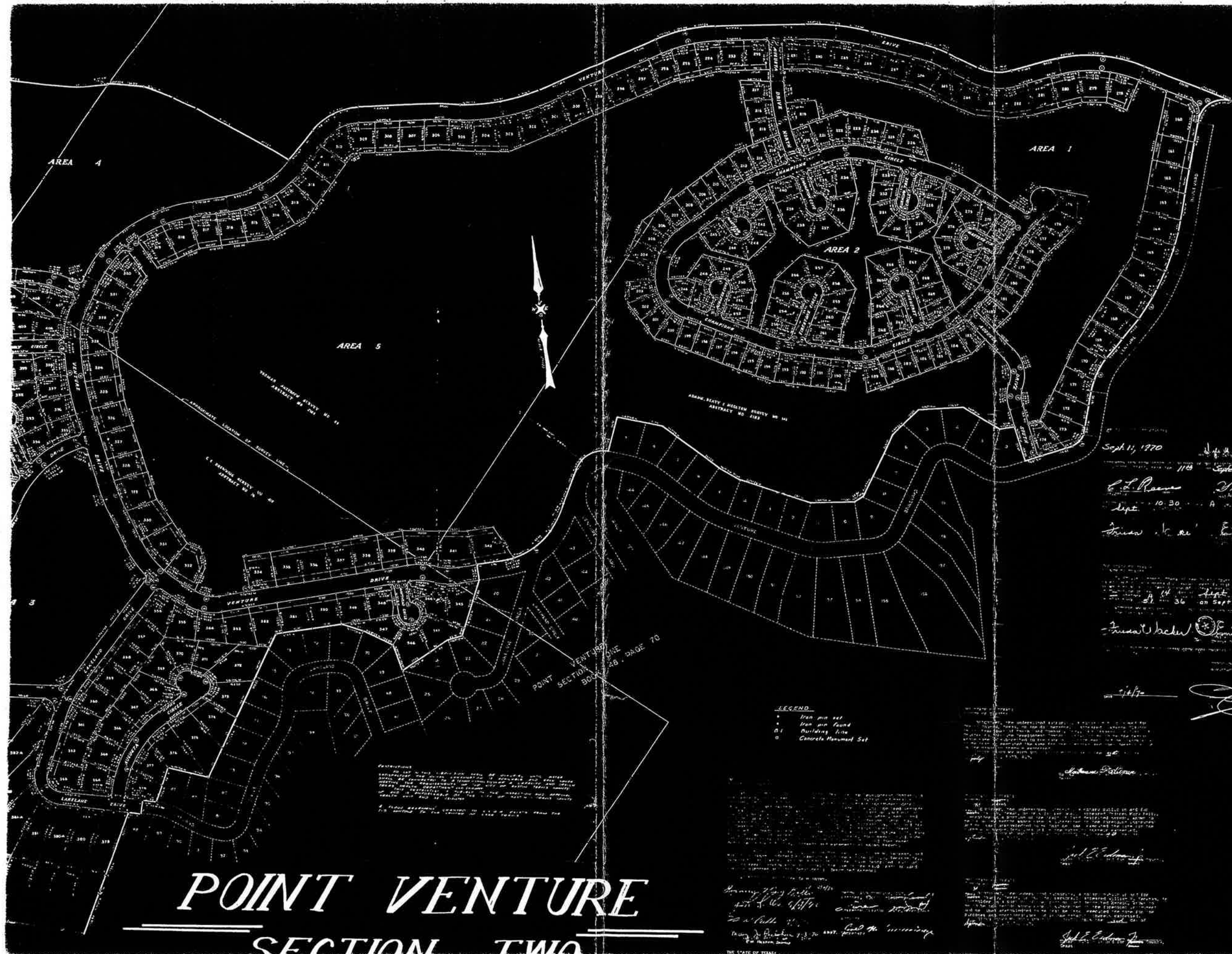
THENCE $S52^{\circ}17'E$, 59.10 feet to the most Easterly corner hereof;

THENCE $N64^{\circ}12'W$, 165.71 feet to the Southwest corner hereof;

THENCE $N27^{\circ}23'E$, 15.00 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.042 acres, more or less.

09285

0856



POINT VENTURE SECTION TWO

GOLF COURSE AREA 1 & AREA 5

MAP #1

SHEET 11 OF 13



AREA 5
POINT VENTURE SEC. TWO
BK. 51 PG. 36

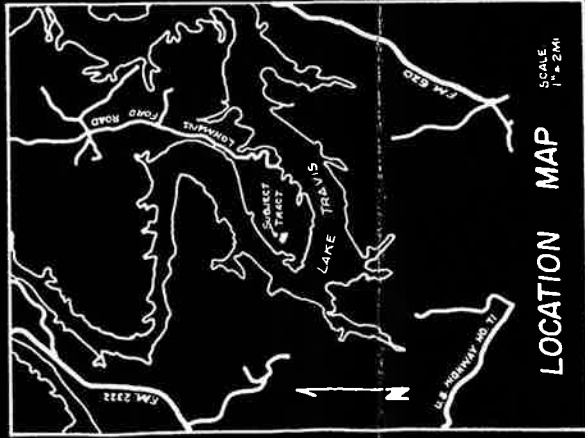
LEGEND:
● IRON PIN FOUND
○ IRON PIN SET
SCALE: 1"=100'



AREA 5
POINT VENTURE SEC. TWO
BK. 51 PG. 36

CURVE DATA:

1- 90°00'	76°58'	76°58'	31°13'	31°13'	39°09'	39°09'	18°23'	18°23'	81°00'	91°57'
R- 15.00	89.56	39.56	179.55	129.55	340.59	589.13	639.13	15.00	15.00	15.00
T- 15.00	71.20	31.45	50.16	36.19	121.11	138.89	103.42	12.81	15.52	15.52
C- 21.21	111.46	49.24	96.62	69.71	228.22	261.73	204.19	19.48	21.57	21.57
Δ- 23.56	120.31	53.14	97.83	70.58	232.72	266.89	205.06	21.21	24.07	24.07
12	13	14	15	16	17	18	19	20	21	22
I- 52°01'	284°02'	42°00'	42°00'	22°42'	22°42'	142°01'	29°50'	29°50'	23°22'	23°22'
R- 15.00	50.00	196.22	146.22	229.68	279.68	15.00	109.43	159.43	483.39	433.39
T- 7.32	-	75.32	56.13	46.10	56.14	43.58	29.15	42.47	99.96	89.62
C- 13.16	61.54	140.64	104.80	90.40	110.08	28.37	56.34	82.08	195.78	175.53
Δ- 13.62	247.87	143.84	107.19	91.00	110.81	37.18	56.98	83.01	197.14	176.75



LOCATION MAP

SCALE
1"=2MI

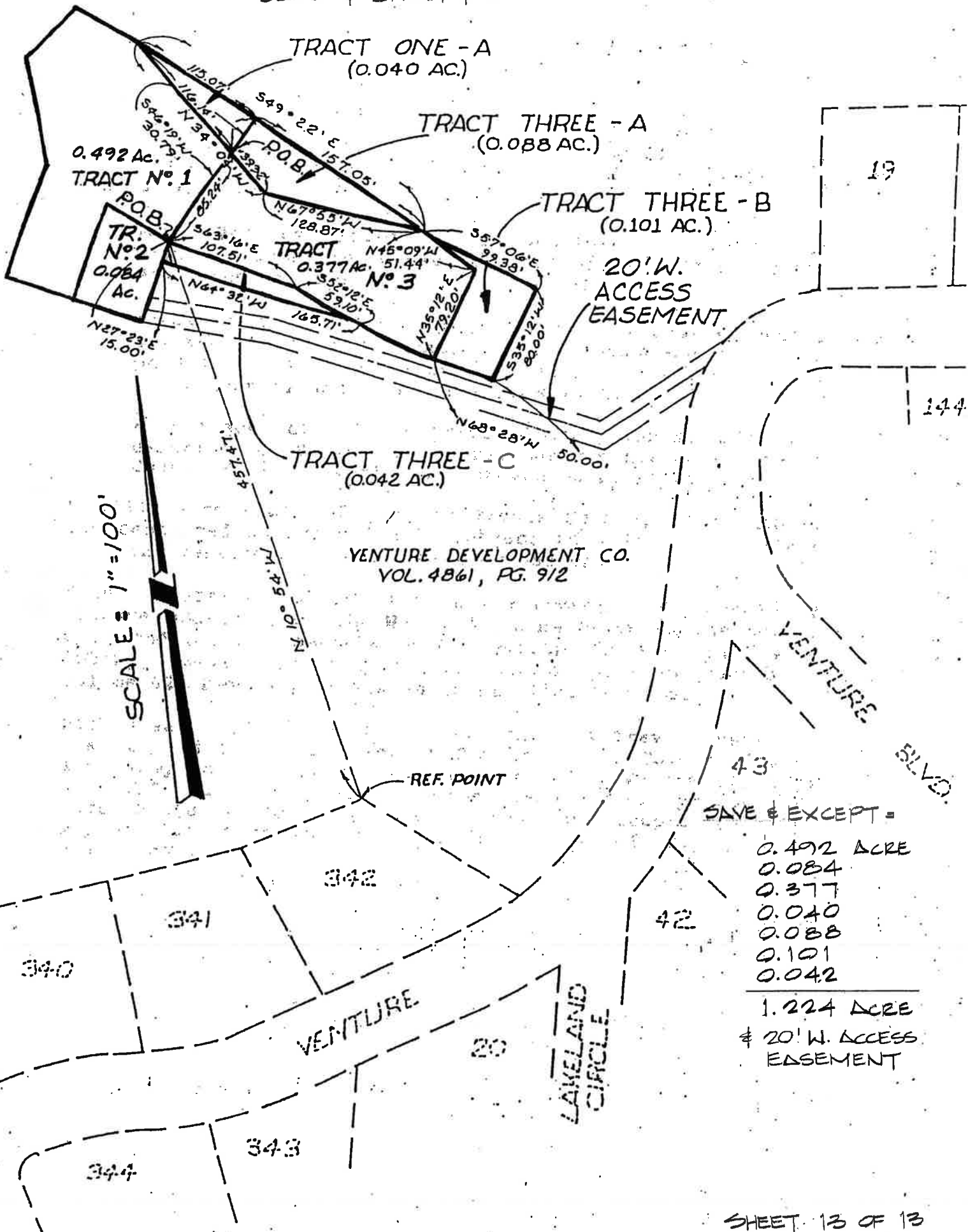
THE SUBDIVISION HEREON IS OUTSIDE OF THE JURISDICTION OF THE CITY
OF AUSTIN, TRAVIS COUNTY, TEXAS AS OF THE 22-DAY OF ~~Oct~~ 1971 A. D.

[Signature]
DIRECTOR OF PUBLIC WORKS

[Signature]
DIRECTOR OF PUBLIC WORKS

POINT VENTURE SECTION TWO-B

MAP #3
SAVE & EXCEPT :



SAVE & EXCEPT =

0.492 ACRE
0.084
0.377
0.040
0.088
0.101
0.042

1.224 ACRE

& 20' W. ACCESS
EASEMENT

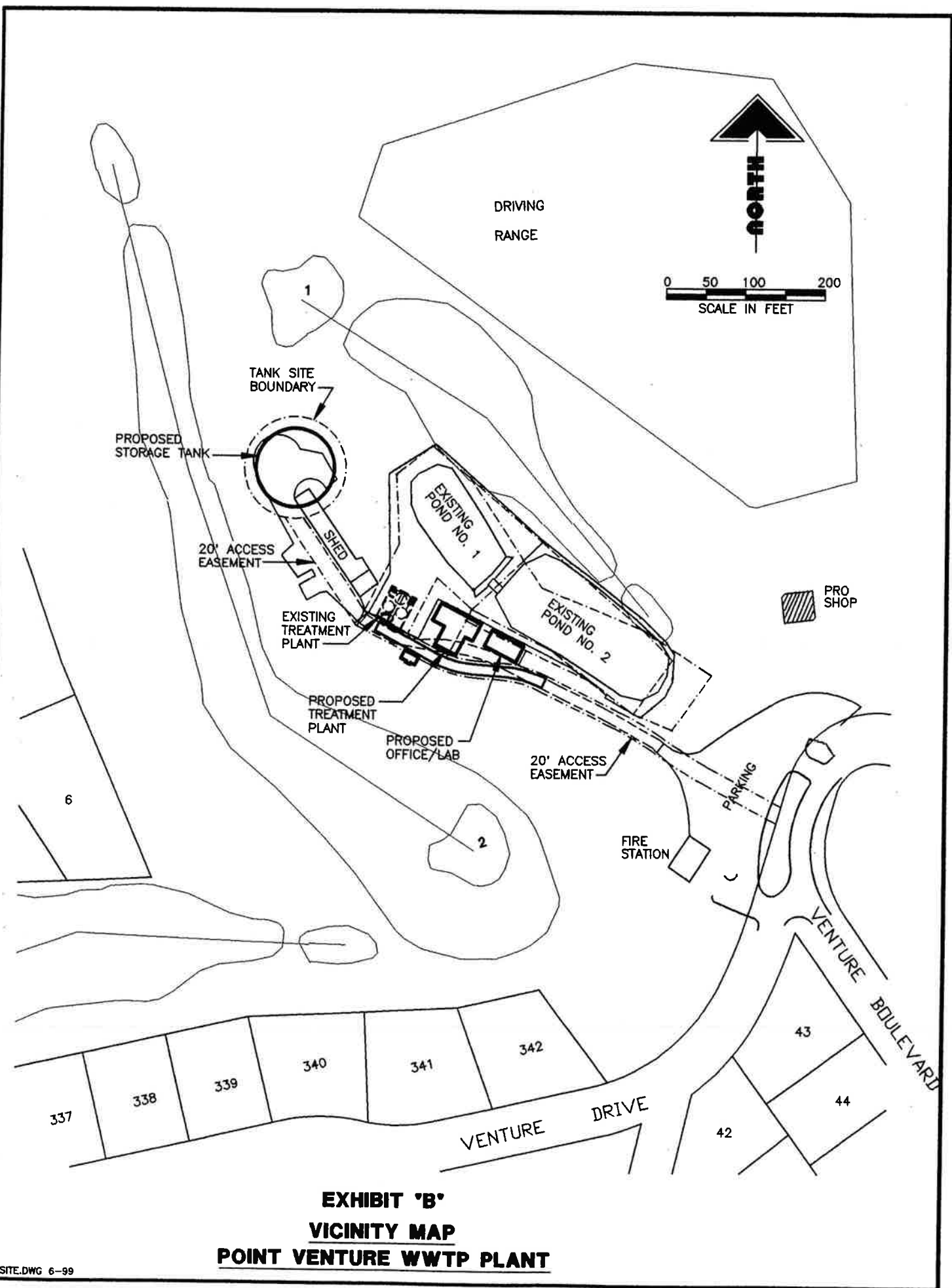


EXHIBIT 'B'
VICINITY MAP
POINT VENTURE WWTP PLANT

FIELD NOTES DESCRIPTION OF A
0.273 ACRE ABOVE GROUND STORAGE TANK SITE

FIELD NOTES DESCRIPTION OF A 0.273 ACRE (11,892 SQ. FT.) TRACT OF LAND OUT OF THE THOMAS ANDERSON SURVEY NO. 85 SITUATED IN TRAVIS COUNTY, TEXAS, SAID 0.273 ACRE TRACT BEING A PORTION OF THAT CERTAIN 74.198 ACRES TRACT CONVEYED TO POINT VENTURE PROPERTY OWNERS, POINT VENTURE GOLF COURSE AS DESCRIBED IN VOLUME 9285, PAGE 649 OF THE TRAVIS COUNTY DEED RECORDS (T.C.D.R.) SAID 0.273 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT AN 1/2" IRON ROD FOUND, SAID POINT BEING THE SOUTHWEST CORNER OF THAT CERTAIN 0.492 ACRE TRACT AS CONVEYED TO TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT - POINT VENTURE (T.C.W.C.I.D.-P.V.) DESCRIBED IN VOLUME 6762, PAGE 873 OF THE T.C.D.R., SAID POINT BEING THE POINT OF REFERENCE FOR THE HEREIN DESCRIBED TRACT;

THENCE, N 26° 37' 29" W, A DISTANCE OF 188.53 FEET TO A POINT, SAID POINT BEING THE CENTER OF A CIRCLE HAVING A RADIUS OF 123.00 FOR THE HEREIN DESCRIBED TRACT, AND FROM SAID POINT N 85° 18' 20" E, A DISTANCE OF 157.24 FEET TO THE NORTHWEST CORNER OF SAID 0.492 ACRE TRACT;

THENCE, NORTH A DISTANCE OF 61.50 FEET TO AN 1/2" IRON ROD SET, SAID POINT BEING THE BEGINNING OF A CURVE TO THE RIGHT FOR THE POINT OF BEGINNING FOR THE HEREIN DESCRIBED TRACT;

THENCE, CONTINUING ALONG SAID CURVE TO THE RIGHT, HAVING A RADIUS OF 61.5 FEET, A CENTRAL ANGLE OF 360° 00' 00", AN ARC LENGTH OF 386.41 FEET TO THE POINT OF BEGINNING AND CONTAINING 0.273 ACRE TRACT (11,892 SQ. FT.) OF LAND MORE OR LESS.

I, TIMOTHY E. HAYNIE, HEREBY CERTIFY THAT THIS DESCRIPTION WAS PREPARED FROM AN ACTUAL SURVEY MADE ON THE GROUND UNDER MY SUPERVISION AND THAT ALL CORNERS ARE MARKED AS DESCRIBED.




 6-30-99
TIMOTHY E. HAYNIE DATE
REGISTERED PUBLIC SURVEYOR NO. 2380

EXHIBIT "C"

SKETCH TO ACCOMPANY FIELD NOTES

OF A 0.273 ACRE ABOVE GROUND STORAGE TANK SITE

BEING A PORTION OUT OF THE TRACT CONVEYED TO

POINT VENTURE PROPERTY OWNERS, POINT VENTURE GOLF COURSE

IN TRAVIS COUNTY, TEXAS



SCALE: 1"=50'



0.492 ACRES
T.C.W.C.I.D. - PV
VOLUME 6762, PAGE 873

PORTION OF 74.198 ACRES
POINT VENTURE PROPERTY OWNERS PT VENTURE GOLF COURSE
VOLUME 9285, PAGE 649
(T.C.D.R.)

NUMBER	DELTA	RADIUS	LENGTH
C1	360°00'00"	61.50	386.41

EXHIBIT "A"

T. B. HAYNIE & ASSOCIATES
Civil Engineers and Land Surveyors
1828 KRAMER LANE, SUITE A
AUSTIN, TEXAS 78758
(512) 837-2446
FAX (512) 837-9463

POINT OF REFERENCE
FOR FIELD NOTES DESC.



Timothy E. Haynie
June 6-30-99

TIMOTHY E. HAYNIE
REGISTERED PROFESSIONAL LAND SURVEYOR No. 2380

REFERENCE
JOB NO. 99-102
POINT VENTURE
FIELD BOOK

EXHIBIT "E"
PERMANENT WATER AND WASTEWATER
FACILITIES AND DISTRIBUTION EASEMENTS

- Sheet 1 Overall map of Point Venture with the Golf Course description shaded - being the property throughout which this blanket easement shall exist
- Sheet 2 Travis Central Appraisal District owner information with legal and deed description over which said blanket easement shall exist
- Sheet 3 - 10 General Warranty Deed as recorded in vol. 9285, pgs 0649 - 0656 (8 total)

Note: on pg 0654 Exhibit "A" is the legal description of the Point Venture Golf Course. the following Maps explain each of the parcels described on pg. 0654 Exhibit "A"

- Sheet 11
Map #1 "Point Venture, Section Two" record plat as recorded in volume 51, page 36- area 1 and area 5 are dedicated herein as a water and wastewater blanket easement to Travis County W.C.I.D. - Point Venture, except...
- Sheet 12
Map #2 (Save and Except)
"Point Venture, Section Two-B" record plat as recorded in volume 56, page 45 - is 11.02 acres taken out of area 5 to be subdivided and developed instead of golf course and not included in this easement...
- Sheet 13
Map #3 (Save and Except)
"Tract One, Tract Two, Tract Three and an Access Easement" - 0.492, 0.084, 0.377 acre respectively for the Point Venture Wastewater Treatment Plant and Effluent Pond instead of Golf Course (see their legal description on page 0655)
and...
"Tract One-A, Tract Three-A, Tract Three-B, Tract Three - C" - 0.040, 0.088, 0.101, 0.042 acre respectively for additional land use by the Wastewater Treatment System (see their legal description on page 0656)

EXHIBIT "E"

A PERMANENT WATER AND WASTEWATER FACILITIES
AND DISTRIBUTION EASEMENT

STATE OF TEXAS §
 §
COUNTY OF TRAVIS §

That **POINT VENTURE PROPERTY OWNERS ASSOCIATION** whose address is 555 Venture Boulevard South, Leander, Texas 78645, in the County of Travis, State of Texas, hereinafter referred to as Grantor, whether one or more, for and in consideration of the recited sum of One Dollar (\$1.00) and other good and valuable consideration to Grantor in hand paid by the Travis County W.C.I.D. - Point Venture the receipt and sufficiency of which is hereby acknowledged and confessed and for which no lien or encumbrance, expressed or implied, is retained, have this day **GRANTED** and **CONVEYED**, and by these presents do **GRANT** and **CONVEY**, unto the Travis County W.C.I.D. - Point Venture situated in the County of Travis, Texas and whose address is P.O. Box 19053 Venture Boulevard, Leander, Texas 78645, subject to the requirements below, a permanent blanket water and wastewater easement for the construction, placement, maintenance, replacement, upgrade and repair of water and wastewater facilities and distribution upon the following described land, ever to-wit:

All that certain tract piece or parcel of land, lying and being situated in the County of Travis, State of Texas, described in **EXHIBIT "E"** attached hereto and made a part hereof for all purposes, to which reference is here made for a more particular description of said property.

GRANTOR further covenants and agrees to use the property only in those ways consistent with the water and wastewater facilities and distribution easement granted and agrees to do nothing which would impair, damage, or destroy said water and wastewater facilities and distribution and it is further understood and agreed that the covenants and agreements set forth above shall be considered covenants running with the land, fully binding upon **GRANTOR** and his successors and assigns. Upon the completion of such construction and installation, **GRANTEE** shall repair **GRANTOR'S** facilities and restore the surrounding construction area to a condition similar to that which existed prior to the preformed work.

TO HAVE AND TO HOLD the same perpetually to the Travis County W.C.I.D. - Point Venture and its successors, together with the right and privilege at any and all times to enter said premises, or any part thereof, for the purpose of constructing, maintaining, replacing, upgrading and repairing said wastewater line. Grantor does hereby covenant and agree to **WARRANT AND FOREVER DEFEND** title to the easement herein granted unto the Travis County W.C.I.D. - Point Venture against all claims of all persons whomsoever lawfully claiming or to claim the same by, through or under Grantor, subject to the matters set forth herein.

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed
on this _____ day of _____, 1999.

POINT VENTURE PROPERTY OWNERS ASSOCIATION, INC.

By: _____

Name: _____

Title: _____

ACKNOWLEDGEMENT

STATE OF _____ §

COUNTY OF _____ §

This instrument was acknowledged before me on the _____ day of
_____, 1999, by _____,
_____ of Point Venture Property Owners Association
a Texas Non-profit Association, on behalf of said Association.

[SEAL]

Notary Public, State of Texas

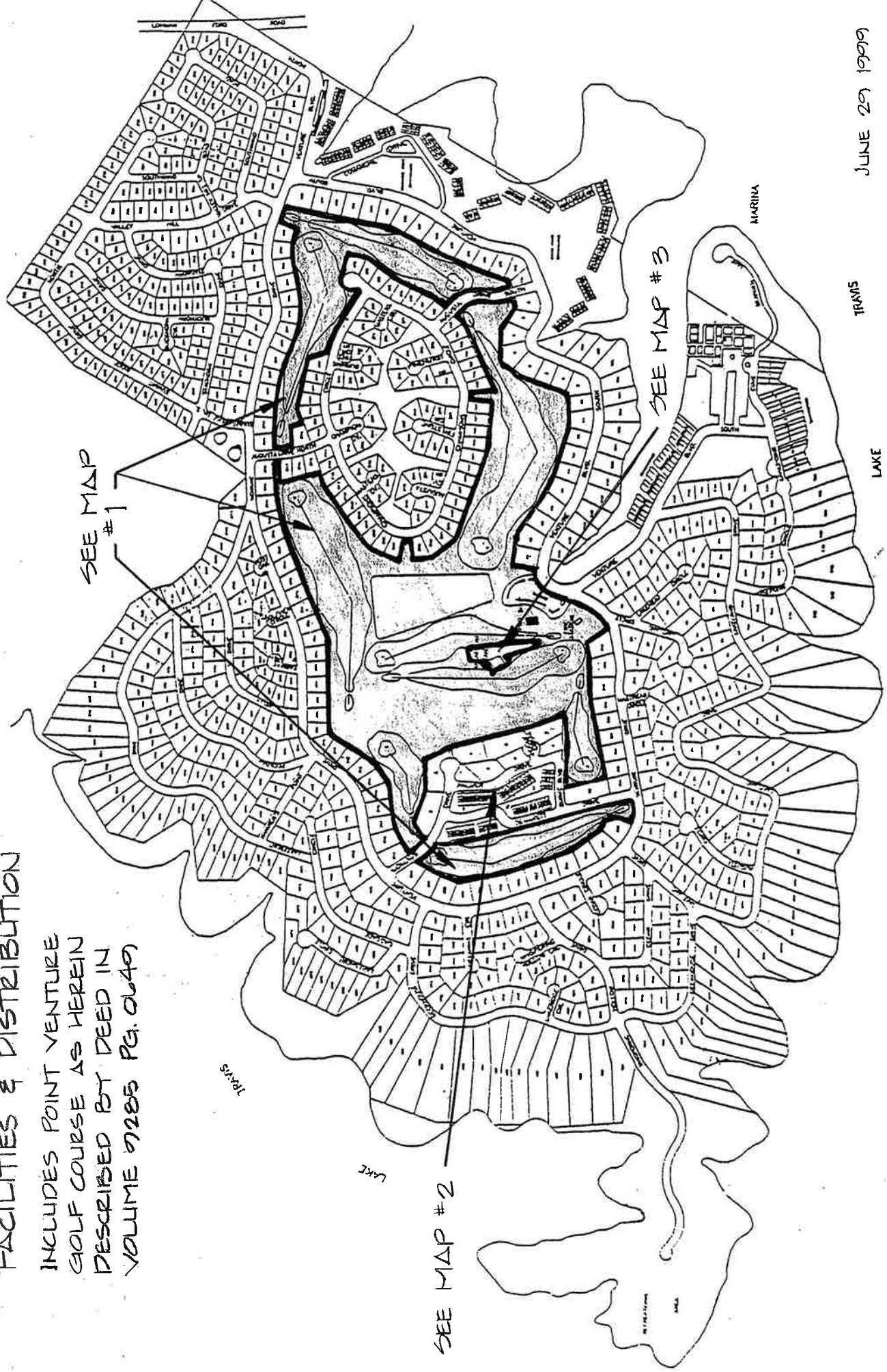
Printed Name of Notary

My Commission Expires

EXHIBIT "E"

EASEMENTS FOR WATER & WASTEWATER
FACILITIES & DISTRIBUTION

INCLUDES POINT VENTURE
GOLF COURSE AS HEREIN
DESCRIBED BY DEED IN
VOLUME 9285 PG. 0649



TRANS

LAKE

JUNE 29 1999

SHEET 1 OF 13

POINT VENTURE

YEAR 1998 OWNER DETAIL INFORMATION 0147800153 0000 TY 1998 03/16/1999
 NXT N SECU OWNER NAME POINT VENTURE PROPERTY OWNERS DEL OWNER ...
 LJO: STRT VENTURE BV HOUSE 000000 FRAC SUF UNT ZIP
 ---MAILING ADDRESS--- DELETE .../.../... LEGAL DESCRIPTION LY 1998
 POINT VENTURE PROPERTY DEED TYPE WD * AREA 1 & AREA 5 (74.198 ACR)
 OWNERS ASSOCIATION INC VOLUME 09285 * (GOLF COURSE & PRO SHOP)
 555 VENTURE BLVD S PAGE 00649 N POINT VENTURE SEC 2
 LEANDER TX DATE 07/22/1985

 ZIP 78645 - OWN HIST Y LOAN CO *****
 RENDERED VALUE ***** LOAN NO ***** LEGAL HIST Y
 APPRAISED VAL 104,687 VENDOR LIEN ***** NOTICE MAILED
 STRUCTURE CODE 20 SQFT IMPR 1,120 INFO REQ
 FINAL VALUE ***** SQFT VALUE 93.64 MAP REF 014287
 DBA PT VENTURE GOLF COURSE CD INIT MH LABEL
 OTH CAD ACCT REF *****
 AREA 9 NBHD (GOLF GROUP REGION LD LINK LINK ACRES
 AGENT START END ADDR RETURNS TCAD NOTICE TAX NOTICE
 TCAD .../.../... FLD INSP LETTER .../.../...
 ARB .../.../... EXEMPTIONS ADJZ
 COLL .../.../...
 TOTAL TAXES 2957.81

1900

GENERAL WARRANTY DEED

03949171

THE STATE OF TEXAS

§

KNOW ALL PERSONS BY THESE PRESENTS:

COUNTY OF TRAVIS

§

MAR-1-85 8366 * 13:00

THAT MITCHELL DEVELOPMENT CORPORATION OF THE SOUTHWEST ("Grantor"), a Delaware corporation acting by and through its authorized officers, for and in consideration of Ten Dollars (\$10.00), the performance of those covenants contained in that certain contract by and between Grantor and Grantee dated April 11, 1985, and other good and valuable consideration paid to Grantor by VENTURE YACHT AND COUNTRY CLUB, INC., a Texas Non-Profit corporation (hereinafter called "Grantee"), of Travis County, Texas, the receipt of which is hereby acknowledged, and the further covenant, consideration and condition is that the following shall in all things be observed, followed and complied with:

- (1) Grantee shall not encumber the title to the Property during the term of the lease of the Property to Grantor dated July 22, 1985, or during the extension thereof provided for in the lease;
- (2) Grantee shall expend at least Two Hundred Thousand Dollars (\$200,000.00) to improve the amenities at Point Venture I transferred herein to Grantee within three (3) years of the date hereof pursuant to the terms of the Contract by and between Grantor and Grantee dated April 11, 1985, and the Lease by and between Grantor and Grantee dated July 22, 1985;
- (3) Grantee shall pay annually to Grantor a sum equal to twenty-five percent (25%) of the annual maintenance charge assessment levied against all property in Point Venture I and II pursuant to the terms of the Contract by and between Grantor and Grantee dated April 11, 1985;

In the event of any violations or failure to perform any one of the above covenants by Grantee, its successors or assigns, Grantor, its successors or assigns, shall give written notice to Grantee, its successors or assigns, specifying any such violation or failure to perform and, if Grantee its successors or assigns shall fail to cure or come into compliance with or perform the covenant within ninety (90) days after receipt of such notice, fee simple title to all of the properties conveyed herein shall, without entry or suit, immediately revert to and vest in Grantor herein, its successors or assigns, and the conveyance hereunder shall be null and void, and Grantor, its successors or assigns shall be entitled to immediate possession of such properties and the improvements thereon;

has GRANTED, SOLD and CONVEYED, and by these presents does hereby GRANT, SELL and CONVEY unto said Grantee, the following described lot, tract or parcel of land lying and being situated in the County of Travis, State of Texas, to wit:

Being that certain tract of land in Point Venture Section Two, a subdivision in Travis County, Texas, and being more particularly described in Exhibit A attached hereto and made a part hereof for all purposes ("the Property").

And with the further restriction and upon the covenant and condition that the herein conveyed property shall be used for golf course purposes and the uses described in those certain water waste control orders issued by the Texas Water Quality Board nos. 11232 and 11385 both dated 24, January, 1973, or extensions or modifications thereof only. This restriction and

covenant is hereby declared to be a covenant running with the land and shall be fully binding for a period of twenty-five (25) years from the date hereof; at the end of such period, said restriction and covenant shall automatically be extended for a successive period of twenty-five (25) years unless, by a vote of a three-fourths (3/4) majority of the then owners of lots in said subdivision (each lot having one vote), taken prior to the expiration of said twenty-five (25) year period and filed of record in Travis County, Texas, it is agreed to amend or release same.

If any person or persons shall violate or attempt to violate the restriction and covenant herein, it shall be lawful for any person or persons owning any lot in Point Venture, a subdivision in Travis County, Texas, to prosecute proceedings at law or in equity against the person violating or attempting to violate any such restriction and covenant, either to prevent him or them from so doing or to correct such violation or to recover damages or other relief for such violation. Invalidation of all or any part of this restriction by judgment or court order shall in nowise affect any of the other provisions or parts of provisions which shall remain in full force and effect.

This conveyance is made, executed and delivered by Grantor and accepted by Grantee subject to the following:

(1) The reservation by Grantor, for itself and its successors and assigns, of rights of ingress and egress in and to the right-of-way of any streets and roads located or which may be located on or adjacent to the Property; provided, however, that such reservation shall not affect, limit or deny ingress and egress to the Property by any landowner in Point Venture, a subdivision in Travis County, Texas, as recorded in the Real Property Records of Travis County, Texas.

(2) All of the covenants, restrictions, reservations and easements, if any, affecting the Property which are of record in the Real Property Records of Travis County, Texas.

(3) The further covenant and restriction that all persons who become an owner or resident of the Property agree that neither they nor anyone authorized to act for them will refuse to sell or rent, or refuse to negotiate for the sale or rental of, or otherwise make unavailable, or deny the use of the Property to any person because of race, color, religion, sex or national origin. This covenant shall run with the land and shall remain in effect without any limitation on time.

(4) All oil, gas and mineral reservations or conveyances of record, and the reservation by Grantor, for itself and its successors and assigns, of all oil, gas and other minerals on, in or under, or that may be produced from the Property; provided, however, that as to any mineral interest to which title shall remain vested in Grantor by virtue of this reservation, Grantor hereby waives all rights to use the surface of the Property for the purpose of exploring for, developing or producing such minerals.

(5) Rights of Lower Colorado River Authority to inundate and overflow any portion of the subject property lying below the 715 foot Mean Sea Level Contour Line.

TO HAVE AND TO HOLD the above-described premises, together with all and singular the rights and appurtenances thereto in anywise belonging, unto Grantee, its successors and assigns FOREVER; and Grantor does hereby bind itself, its successors and assigns, to WARRANT AND FOREVER DEFEND, all and singular, the premises unto Grantee, its successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof.

It is expressly agreed that the Vendor's Lien, as well as

the Superior Title in and to the above described premises, is retained against the above described property, premises and improvements until the above consideration is fully paid and performed, when this Deed shall become absolute.

Ad valorem taxes for the current year shall be pro-rated and adjusted to the date hereof, and Grantee expressly assumes and agrees to pay the same.

IN WITNESS WHEREOF, this instrument has been executed by Grantor and Grantee on July 22, 1985.

MITCHELL DEVELOPMENT CORPORATION OF THE SOUTHWEST

By: [Signature]
Name: George P. Mitchell
Title: President

VENTURE YACHT AND COUNTRY CLUB, INC.

By: [Signature]
Name: Michael Lehtonen
Title: Director

By: [Signature]
Name: John W. Hazard
Title: Director

By: [Signature]
Name: John W. Brandenberger
Title: Director

By: [Signature]
Name: J. Frederick Walling
Title: Director

By: [Signature]
Name: BILL HIGHT
Title: Director

By: [Signature]
Name: Sherron Kannekay
Title: Director

THE STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 19, 1985, by George P. Mitchell, President of Mitchell Development Corporation of the Southwest, a Delaware corporation, on behalf of said corporation.

[Signature]
Printed Name: PATRICIA TILLER BARNES
Notary Public - State of Texas
My Commission Expires: 9-22-87

PATRICIA TILLER BARNES
Notary Public in the State of Texas
My Commission Expires: 09285 0851

NOTARY SEAL

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 18, 1985, by Alfred Schloer, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Kathleen Davidson
Printed Name: Kathleen Davidson
Notary Public - State of Texas
My Commission Expires: 10-11-87

KATHLEEN DAVIDSON
Notary Public in and for State of Texas
My Commission Expires 10/11/87

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by John W. Hazard, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Myrta Kaye Applewhite
Printed Name: Myrta Kaye Applewhite
Notary Public - State of Texas
My Commission Expires: 6-30-86

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My Commission Expires: June 30, 1986

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by John W. Branderhager, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Myrta Kaye Applewhite
Printed Name: Myrta Kaye Applewhite
Notary Public - State of Texas
My Commission Expires: 6-30-86

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My Commission Expires: June 30, 1986

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by J. Frederick Welling, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

Myrta Kaye Applewhite
Printed Name: Myrta Kaye Applewhite
Notary Public - State of Texas
My Commission Expires: 6-30-86

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My Commission Expires: June 30, 1986

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by BILL HIGHT, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My commission expires: June 30, 1986

Myrta Kaye Applewhite
Printed Name:
Notary Public - State of Texas
My Commission Expires: 6-30-86

STATE OF TEXAS §
COUNTY OF TRAVIS §

This instrument was acknowledged before me on July 22, 1985, by Sherron Kornegay, a director of Venture Yacht and Country Club, Inc., a Texas Non-Profit corporation, on behalf of said corporation.

NOTARY SEAL

GRANTEE'S MAILING ADDRESS

Venture Yacht and Country Club, Inc.
350 Venture Boulevard
Leander, Texas

MYRTA KAYE APPLEWHITE, Notary Public
In and for the State of Texas
My commission expires: June 30, 1986

Myrta Kaye Applewhite
Printed Name:
Notary Public - State of Texas
My Commission Expires: 6-30-86

EXHIBIT "A"

All of Areas One (1) and Five (5) of POINT VENTURE, SECTION TWO (2), subdivision in Travis County, Texas, according to the map or plat of record in Volume 51, Page 36, of the Plat Records of Travis County, Texas,

SAVE and EXCEPT:

POINT VENTURE SECTION TWO-B, according to the map or plat of record in Volume 56, Page 45, of the Plat Records of Travis County, Texas.

Three tracts of land, together with an access easement, situated in Travis County, Texas, more particularly described in Exhibit 2-A attached hereto and made a part hereof for all purposes.

Four tracts of land, situated in Travis County, Texas, more particularly described in Exhibit 2-B attached hereto and made a part hereof for all purposes.

SEE ATTACHED MAP # 3 (SHEET 13 OF 13)

SEE ATTACHED MAP # 2 (SHEET 12 OF 13)

SEE ATTACHED MAP # 1 (SHEET 11 OF 13)

MKA/2BExhibitA/7-1-85/5

09285 0654

SHEET 8

FIELD NOTES FOR THE MITCHELL DEVELOPMENT CORPORATION

Field Notes describing three tracts of land, together with an access easement, situated in Travis County, Texas, and being out of the tract conveyed to Venture Development Company described in a deed recorded in Volume 4861, page 912 of the Deed Records of said County:

Tract One

Beginning at the most southerly corner hereof and being N.10°34'W. 457.47 feet from the Northeast corner of lot 342 in Point Venture, Section Two, a county subdivision found of record in Volume 51, Page 36 of the Plat Records of said County;

Thence N.48°33'W. 55.76 feet to an ell corner hereof;
Thence S.27°23'W. 74.51 feet to an ell corner hereof;
Thence N.62°37'W. 58.40 feet to an ell corner hereof;
Thence N.27°23'E. 89.15 feet to the most westerly corner hereof;
Thence N.03°00'W. 82.59 feet to an angle point hereof;
Thence N.51°45'E. 54.46 feet to the most northerly corner hereof;
Thence S.49°57'E. 58.85 feet to an angle point hereof;
Thence S.34°04'E. 116.14 feet to the most easterly corner hereof;
Thence S.46°19'W. 85.24 feet to the Point of Beginning of this described tract containing 0.492 acres, more or less, out of the Thomas Anderson Survey No. 85.

Tract Two

Beginning at the most southerly corner of Tract One for the most easterly corner hereof;

Thence N.48°33'W. 55.76 feet to the most northerly corner hereof, being an ell corner of said Tract One;
Thence S.27°23'W. 74.51 feet to the most westerly corner hereof, being the most westerly corner of said Tract One;
Thence S.62°37'E. 54.09 feet to the most southerly corner hereof;
Thence N.27°23'E. 60.95 feet to the Point of Beginning of this described tract containing 0.084 acres, more or less, out of the Thomas Anderson Survey No. 85.

Tract Three

Beginning at the most southerly corner of said Tract One for the most westerly corner hereof;

Thence N.46°19'E. 85.24 feet to the most northerly corner hereof, being the most easterly corner of said Tract One;

Thence S.34°04'E. 39.32 feet to an angle point hereof;
Thence S.67°55'E. 128.87 feet to an angle point hereof;
Thence S.45°05'E. 51.44 feet to the most easterly corner hereof;
Thence S.35°12'W. 79.20 feet to the most southerly corner hereof;
Thence N.53°02'W. 64.08 feet to an angle point hereof;
Thence N.52°12'W. 59.10 feet to an angle point hereof;
Thence N.63°16'W. 107.51 feet to the Point of Beginning of this described tract containing 0.377 acres, more or less, out of the Thomas Anderson Survey No. 85 and the Adams, Beaty and Moulton Survey No. 141.

Access Easement

Being a twenty (20) foot wide access easement to the afore described three tracts of land is more fully described as being ten (10) feet in width on each side of its center line, herein after described as follows:

Beginning at a point in the East line of Tract Two, N.27°23'E. 10.09 feet from the most southerly corner of said Tract Two;

Thence southeasterly along said center line S.70°22'E. 100.68 feet, S.68°28'E. 273.79 feet and N.66°47'E. 86.95 feet to a point in the curving West R.O.W. line of Venture Boulevard for the ending center line point hereof and being S.66°00'15"W. 115.47 feet from the Southwest corner of lot 19 in Point Venture Section One, a county subdivision found of record in Volume 48, Page 70 of said Plat Records.

I, Timothy E. Haynie, A REGISTERED PROFESSIONAL ENGINEER, do hereby certify that these field notes accurately represents the results of an on-the-ground survey made under my direction and supervision on the 24th day of August, 1979. All corners located are as shown. There are no encroachments, conflicts or protrusions apparent on the ground except as shown.



HAYNIE & KALLMAN, INC.

Timothy E. Haynie,
Professional Engineer No. 36982

Date

8-27-79

09285

Being four (4) tracts of land out of the Thomas Anderson Survey No. 85, in Travis County, Texas, and being out of that tract conveyed to Venture Development Company described in a deed recorded in Volume 4861, Page 912, Deed Records of Travis County, Texas, as follows:

TRACT ONE-A

BEGINNING for point of reference at the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County; thence $N10^{\circ}54'W$, 457.47 feet; thence $N46^{\circ}19'E$, 85.24 feet for the POINT OF BEGINNING of the tract herein described, and being the most southerly corner of said tract;

THENCE $N34^{\circ}04'W$, 116.14 feet to the Northwest corner hereof;

THENCE $S49^{\circ}22'E$, 115.07 feet to the Northeast corner hereof;

THENCE $S46^{\circ}19'W$, 39.79 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.040 acres, more or less.

TRACT THREE-A

BEGINNING for point of reference at the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, Texas, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County; thence $N10^{\circ}54'W$, 457.47 feet; thence $N46^{\circ}19'E$, 85.24 feet for the POINT OF BEGINNING of the tract herein described and being the Southwest corner of said tract;

THENCE $N46^{\circ}19'E$, 39.79 feet to the Northwest corner hereof;

THENCE $S49^{\circ}22'E$, 157.05 feet to the Northeast corner hereof;

THENCE $N67^{\circ}55'W$, 128.87 feet to the most southerly Southeast corner hereof;

THENCE $N34^{\circ}04'W$, 39.32 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.028 acres, more or less.

TRACT THREE-B

BEGINNING for point of reference at the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, Texas, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County; thence $N10^{\circ}54'W$, 457.47 feet; thence $N46^{\circ}19'E$, 85.24 feet; thence $N46^{\circ}19'E$, 30.79 feet; thence $S49^{\circ}22'E$, 157.05 feet to the POINT OF BEGINNING of the tract herein described, being the most westerly Northwest corner of said tract;

THENCE $S57^{\circ}06'E$, 99.38 feet to the Northeast corner hereof;

THENCE $S15^{\circ}11'W$, 30.00 feet to the Southeast corner hereof;

THENCE $N68^{\circ}28'W$, 50.00 feet to the Southwest corner hereof;

THENCE $N35^{\circ}12'E$, 79.20 feet to an old corner hereof;

THENCE $N45^{\circ}09'W$, 51.44 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.101 acres, more or less.

TRACT THREE-C

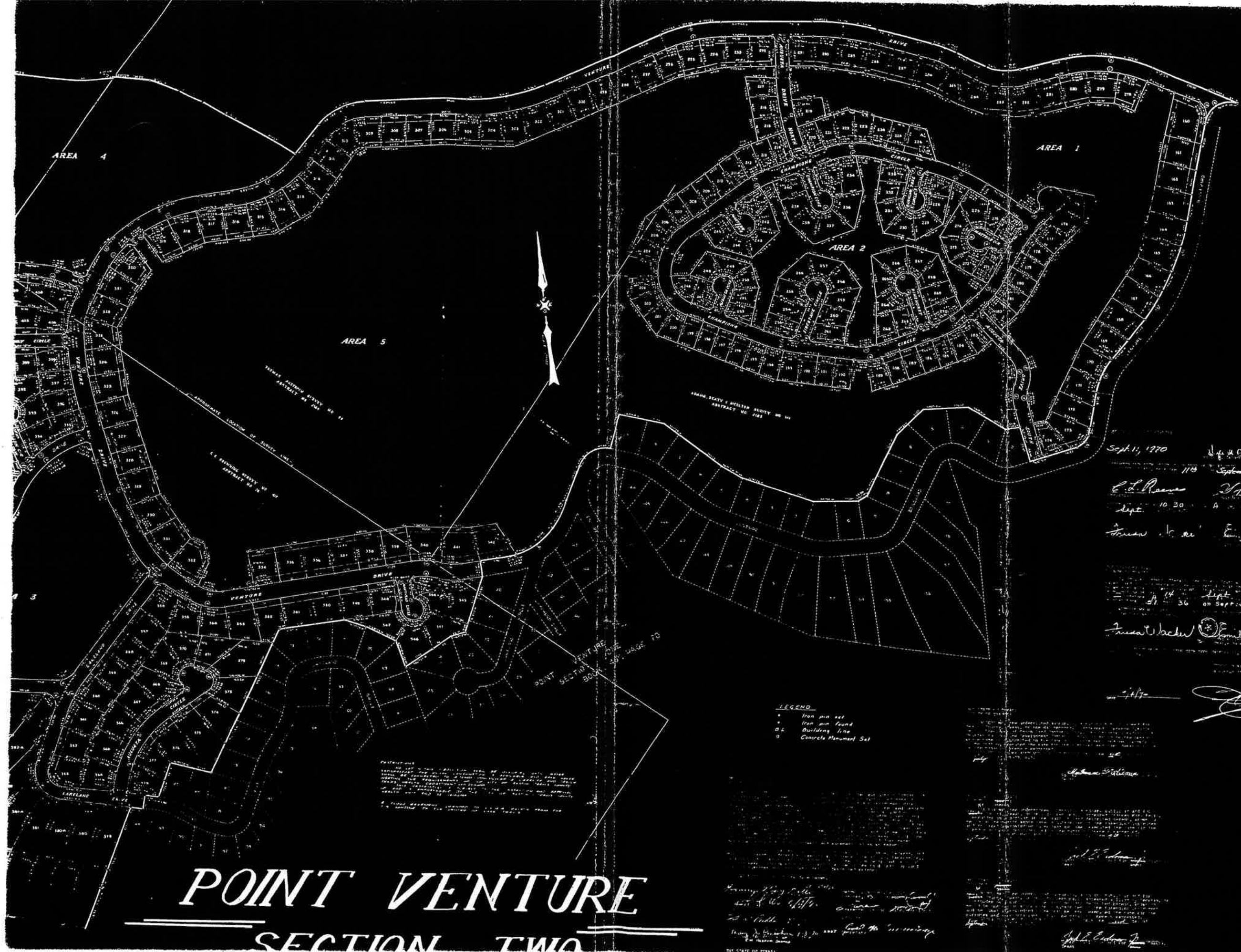
BEGINNING at a point $N10^{\circ}54'W$, 457.47 feet from the Northeast corner of Lot 342, Point Venture, Section Two, a subdivision in Travis County, Texas, according to the map or plat thereof recorded in Volume 51, Page 36, of the Plat Records of said County;

THENCE $S63^{\circ}16'E$, 107.51 feet to an angle point hereof;

THENCE $S32^{\circ}17'E$, 59.10 feet to the most Easterly corner hereof;

THENCE $N64^{\circ}32'W$, 165.71 feet to the Southwest corner hereof;

THENCE $N27^{\circ}23'E$, 15.00 feet to the POINT OF BEGINNING of the tract herein described, and containing 0.042 acres, more or less.

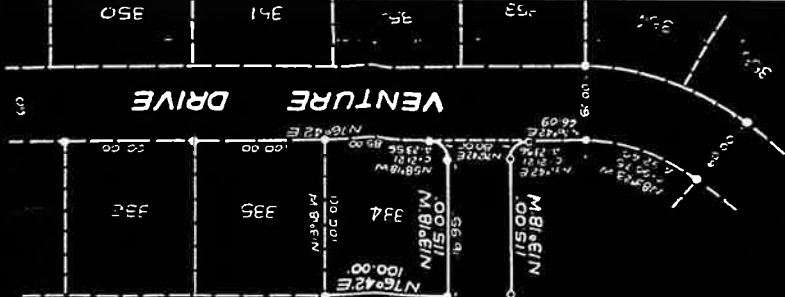


GOLF COURSE AREA 1 & AREA 5

MAP # 1

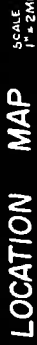
SHEET 11 OF 13

SCALE: 1" = 100'



AREA 5
POINT VENTURE
BK.5! PG.

CURVE DATA



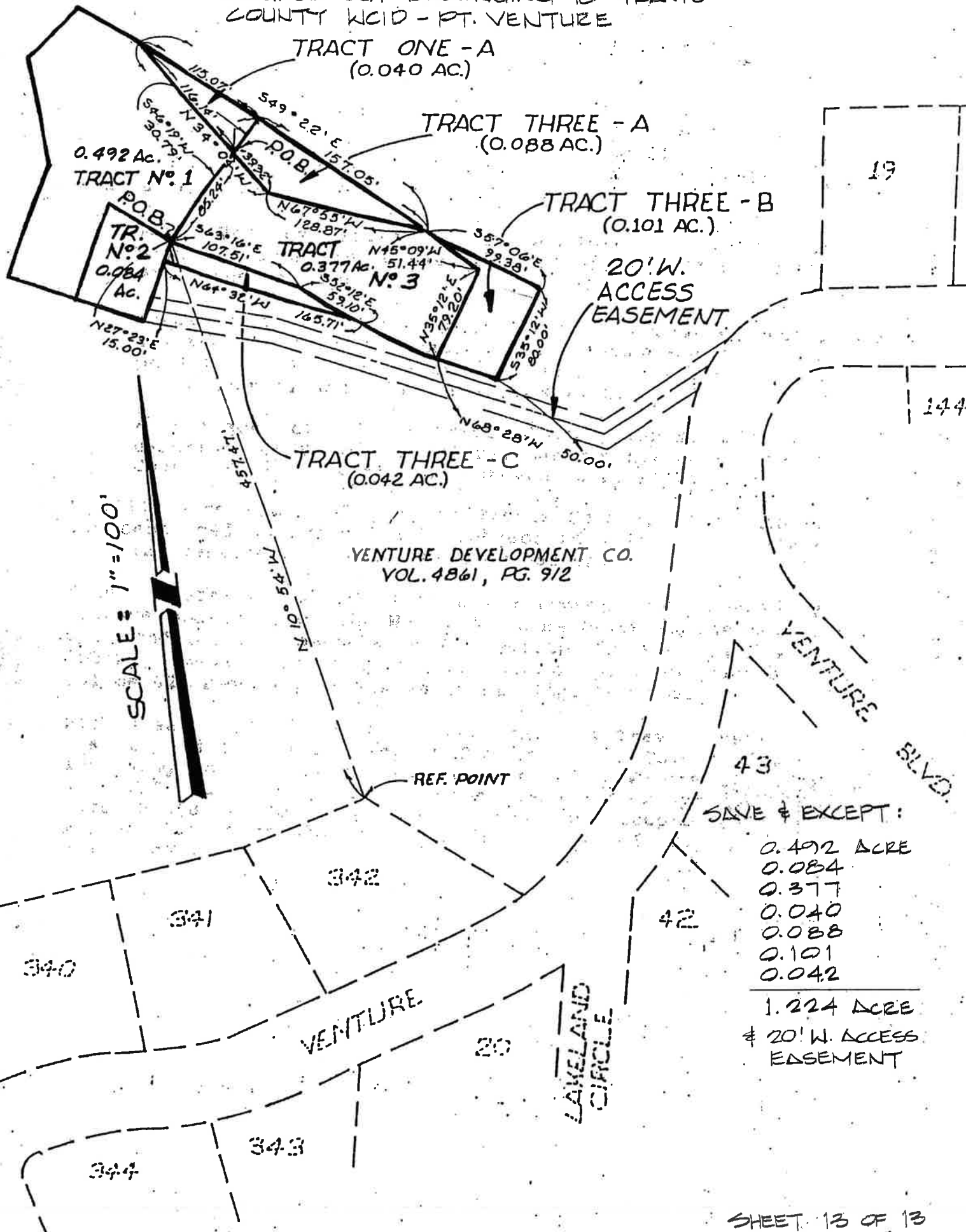
For this *St. Bernard*
#000000 R-56037

DIRECTOR OF PUBLIC WORKS

POINT VENTURE SECTION TWO-B

SAVE & EXCEPT 11.02 ACRES
MAP #2 SHEET 12 OF 13

MAP #3 SAVE & EXCEPT OUT OF GOLF COURSE BUT BELONGING TO TRAVIS COUNTY WCID - PT. VENTURE



SAVE & EXCEPT:

0.492 ACRE
0.084
0.377
0.040
0.088
0.101
0.042

1.224 ACRE

& 20' W. ACCESS EASEMENT

EXHIBIT "F"

Raw water charges under 6.01 of the Effluent Disposal Contract shall be determined by that certain Water Sales Contract For Irrigation Uses dated January 25, 1994 by and between Lower Colorado River Authority (LCRA) and Point Venture Property Owners Association, Inc. The District monthly shall reimburse PVPOA for the amount paid to LCRA for the volumes of water it is required to use because of the use of effluent by others. Should PVPOA be required to additionally pay LCRA for volumes of water on a calendar year basis which are in excess of the Maximum Annual Quantity as defined in the above referenced Contract, then in the event that PVPOA is required to use raw lake water under 6.01 then District shall reimburse PVPOA for such volumes at the rate PVPOA is obligated to pay under the above referenced Contract.

Pumping charges under 6.02 of the Effluent Disposal Contract shall be paid on a monthly basis. Charges for operating and maintaining PVPOA's pumping facilities, should such facilities be used to pump water for the use by others, shall be determined on a calendar year basis by multiplying the total operating and maintenance costs during that year by a fraction. Such fraction shall be determined by dividing the water pumped for use by others by the total volume pumped during such calendar year. Charges for operating and maintaining PVPOA's pumping facilities shall not include the electricity costs of \$0.25 per 1,000 gallons reimbursement and power company increases described in 6.02.

PVPOA shall provide District with monthly and annual statements for the purposes of billing of the above-described charges and District shall make payment to PVPOA within twenty (20) days of such billing.

FIRST AMENDMENT TO
EFFLUENT DISPOSAL CONTRACT
BETWEEN
TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT - POINT VENTURE
AND
POINT VENTURE PROPERTY OWNERS ASSOCIATION, INC.

THE STATE OF TEXAS

§

COUNTY OF TRAVIS

§

§

This First Amendment to Effluent Disposal Contract between Travis County Water Control and Improvement District - Point Venture and Point Venture Property Owners Association, Inc. (the "First Amendment") is entered into as of the 1st day of October, 2008, by and between Point Venture Property Owners Association, Inc., a Texas non-profit corporation ("PVPOA"), and Travis County Water Control and Improvement District - Point Venture, a political subdivision of the State of Texas operating under Chapters 49 and 51, Texas Water Code (the "District").

RECITALS

A. The District and PVPOA entered into that certain Effluent Disposal Contract between Travis County Water Control and Improvement District - Point Venture and Point Venture Property Owners Association, Inc. as of the 15th day of June, 1999 (the "Contract"), and it is now necessary to amend that Contract to provide that the District may pay the PVPOA electric bill for disposal of effluent on the PVPOA golf course during the months of November, December, January and February of each year.

AGREEMENT

In consideration of the foregoing premises, and the benefits arising to both parties, and the mutual covenants and agreements of the parties herein contained, it is agreed as follows:

I.

Addition of New Paragraph 6.05 to the Contract

A new paragraph 6.05 is added to the Contract to read as follows:

6.05 Payment of Electric Bill for Irrigation. Unless and until this obligation is terminated pursuant to the provisions of this paragraph 6.05 the District will reimburse PVPOA for the amount of the electric bills incurred by PVPOA to irrigate the Property during the months of November, December, January and February of each year. On or before June 1 of any calendar year the District shall review the proposed payments during the following November, December, January and February and may decide to discontinue those payments. In that event, the District shall give notice

to the PVPOA that it will no longer be reimbursing the cost of the electric bills incurred by the PVPOA to irrigate the Property. The District shall give this notice in the manner required by Section 11 of the Contract, and the notice must be received by the PVPOA on or before June 30 of the year in which the notice is issued. When the notice has been given the District shall thereafter have no obligation to reimburse PVPOA for electric bills incurred to irrigate the Property

II.

Contract as Amended to Remain in Effect

As amended hereby the Contract shall continue in effect pursuant to its terms.

III.

Effective Date

The Effective Date of this First Amendment is set forth on the first page hereof.

IN WITNESS WHEREOF, PVPOA and the District have executed this contract in multiple copies, each with equal dignity.

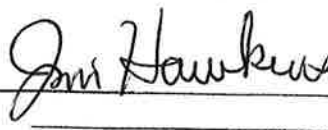
TRAVIS COUNTY WATER CONTROL
AND IMPROVEMENT DISTRICT -
POINT VENTURE

By: 
President

ATTEST:


Secretary

POINT VENTURE PROPERTY OWNERS
ASSOCIATION, INC.,
a Texas non-profit corporation

By: , President

ACKNOWLEDGMENTS

THE STATE OF TEXAS

§

COUNTY OF TRAVIS

§

§

This instrument was acknowledged before me on September 20, 2008 by CAROLYN COOK as President of Travis County Water Control and Improvement District - Point Venture, on behalf of said District.

Chance Chatham
Notary Public, State of Texas

[SEAL]



Chance Chatham
Printed Name
My Commission Expires: 9-21-2010

THE STATE OF Texas

§

COUNTY OF TRAVIS

§

§

This instrument was acknowledged before me on September 29, 2008 by Jim Hawkins as President of Point Venture Property Owners Association, Inc. a Texas non-profit corporation, on behalf of said corporation.

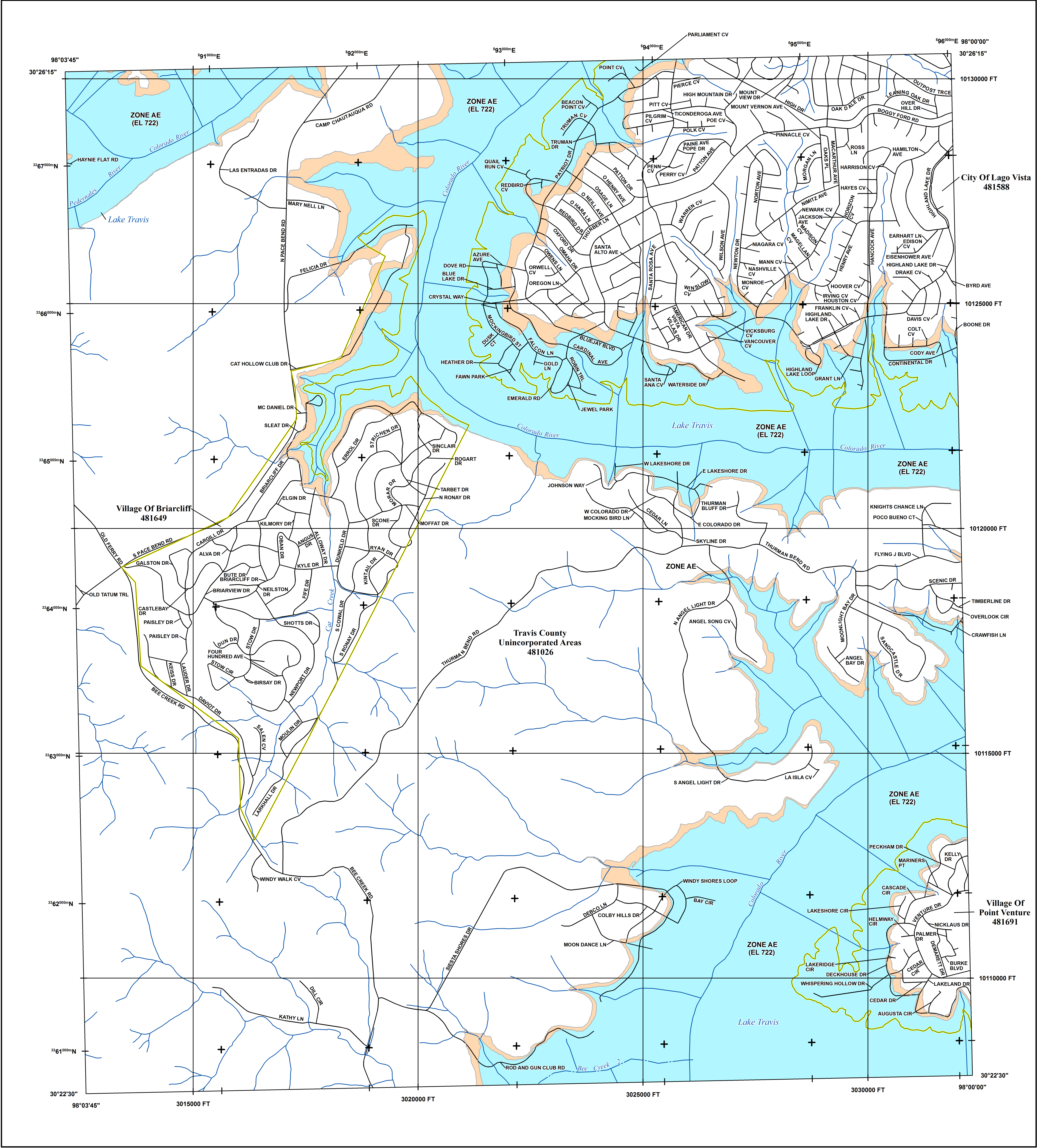
Chance Chatham
Notary Public, State of Texas

[SEAL]

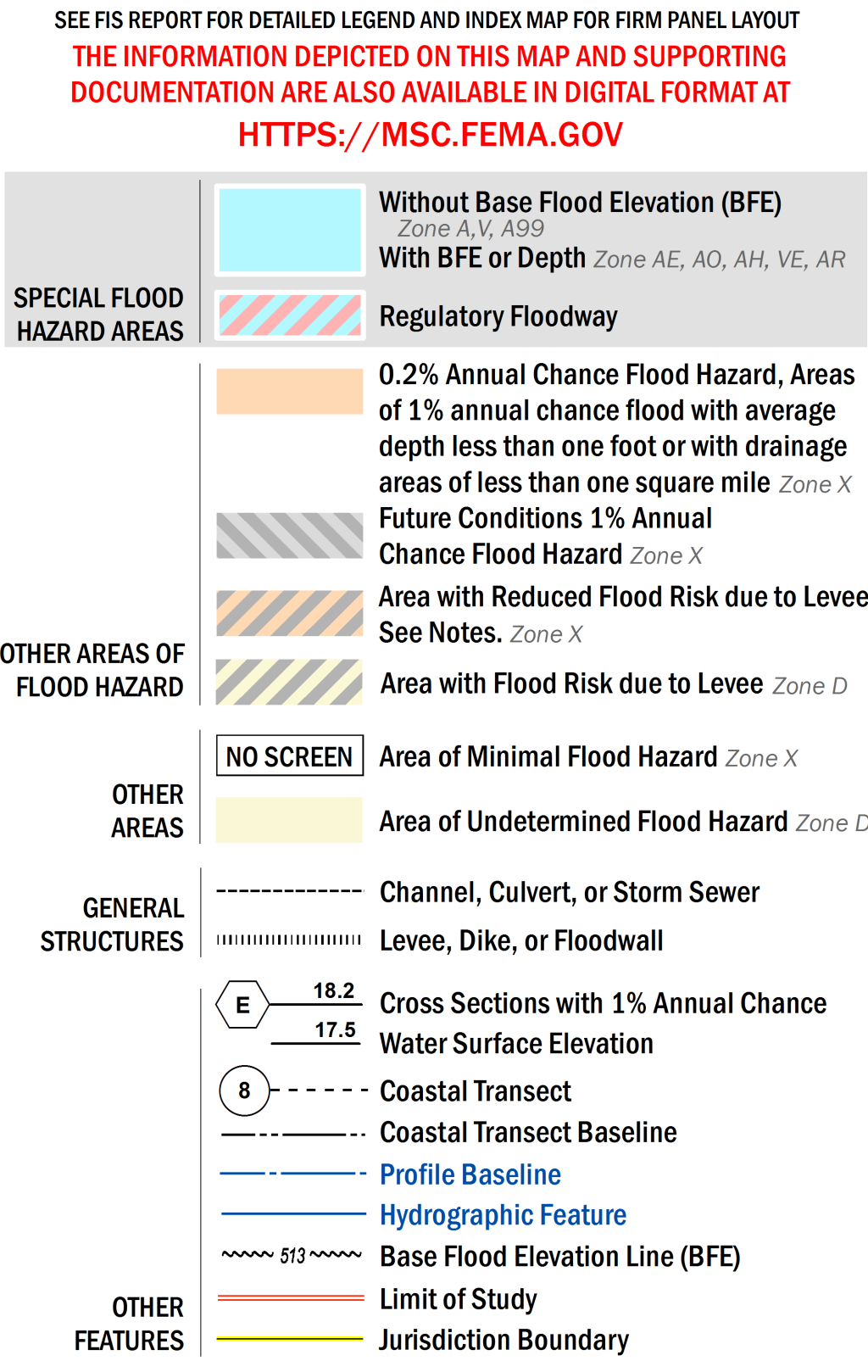


Chance Chatham
Printed Name
My Commission Expires: 9-21-2010

ATTACHMENT G
FEMA FIRM MAPS



FLOOD HAZARD INFORMATION



NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at <https://mfc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

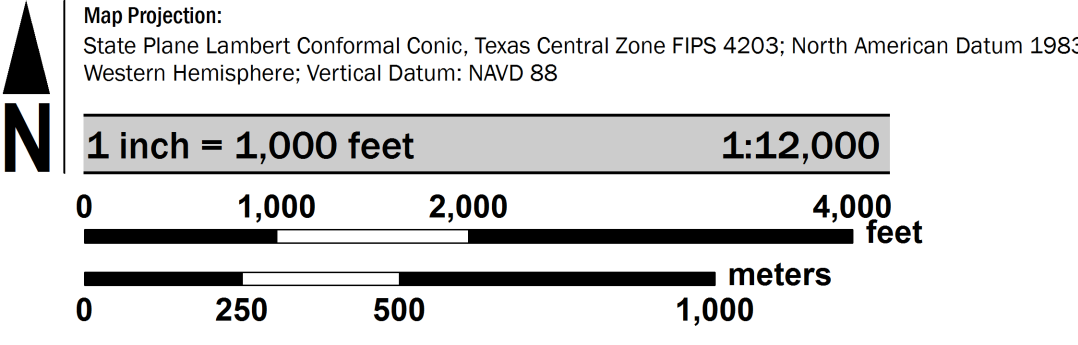
Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

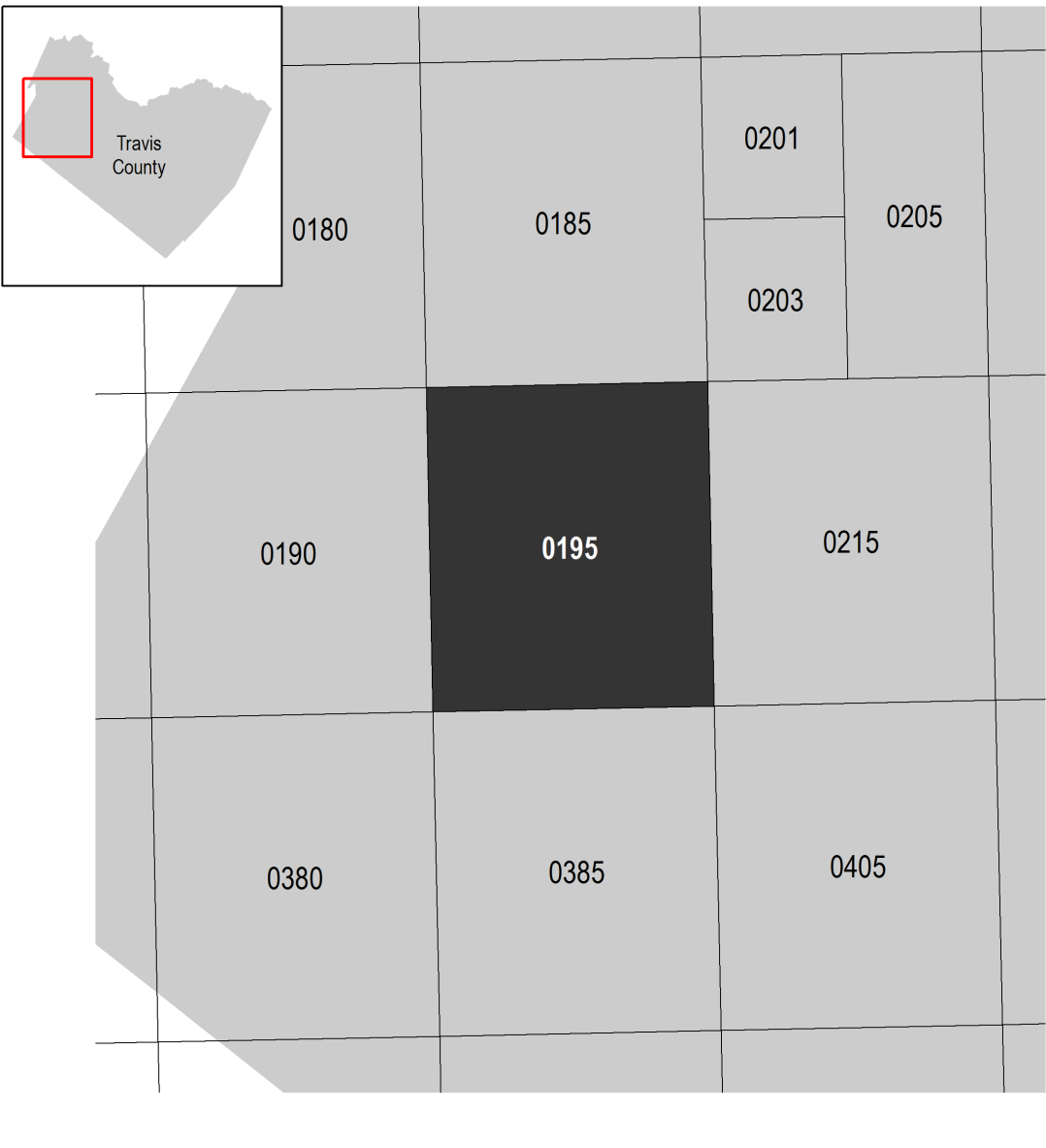
To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was derived from digital data obtained from City of Austin dated 2016, NFHL dated 2014, and CAPCOG dated 2014 and 2016.

SCALE



PANEL LOCATOR



National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

TRAVIS COUNTY, TEXAS
and Incorporated Areas

PANEL 195 OF 730

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
BRIARCLIFF, VILLAGE OF	481649	0195	J
LAGO VISTA, CITY OF	481588	0195	J
POINT VENTURE, VILLAGE OF	481691	0195	J
TRAVIS COUNTY	481026	0195	J

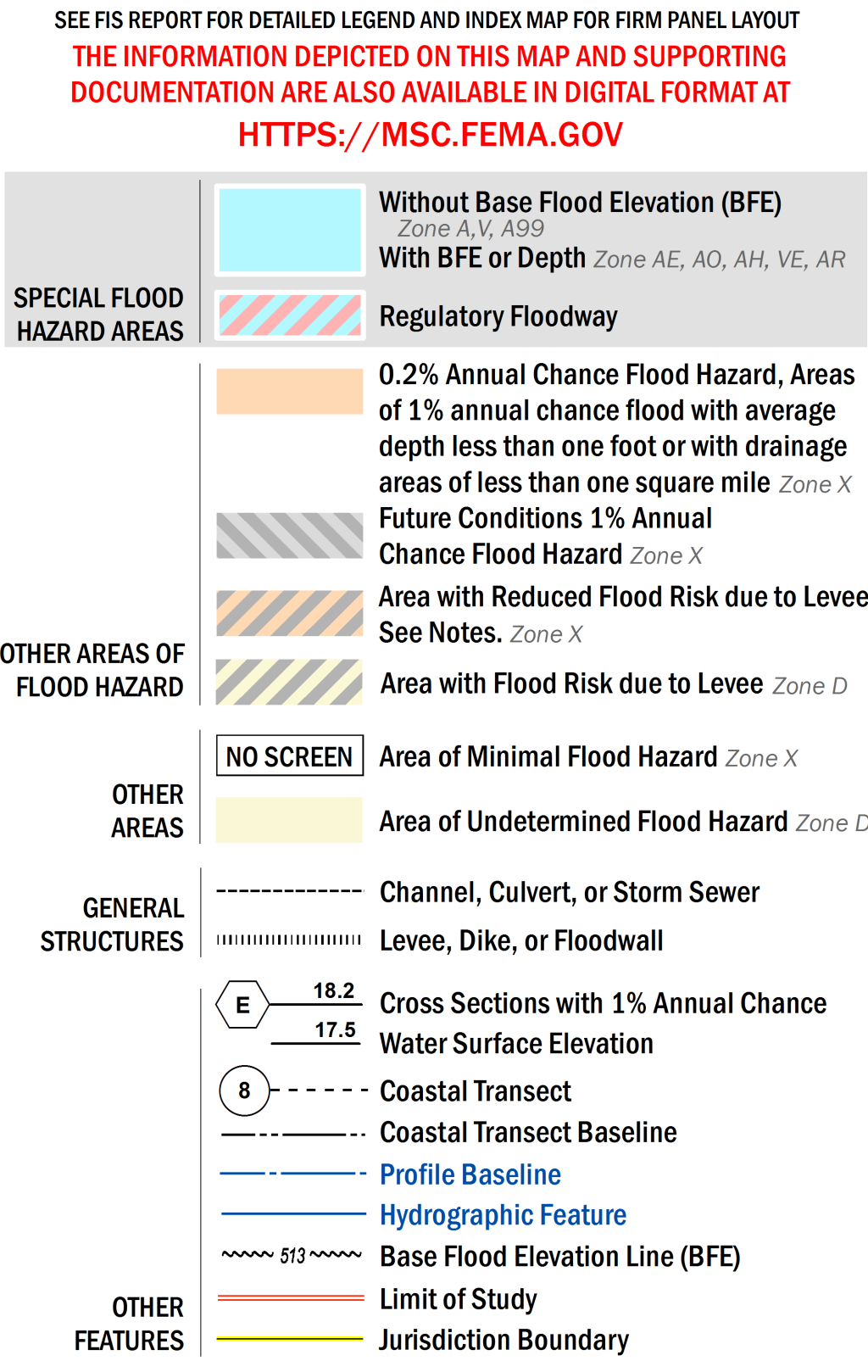
VERSION NUMBER
2.3.3.3

MAP NUMBER
48453C0195J

MAP REVISED
JANUARY 22, 2020



FLOOD HAZARD INFORMATION



NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at <https://mfc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

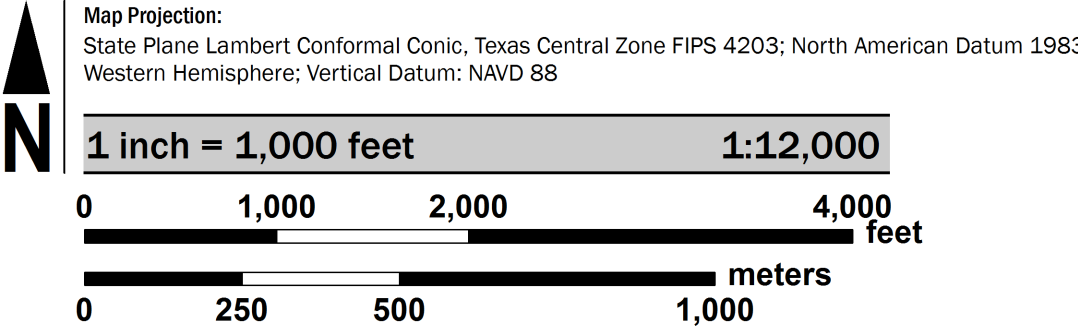
Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

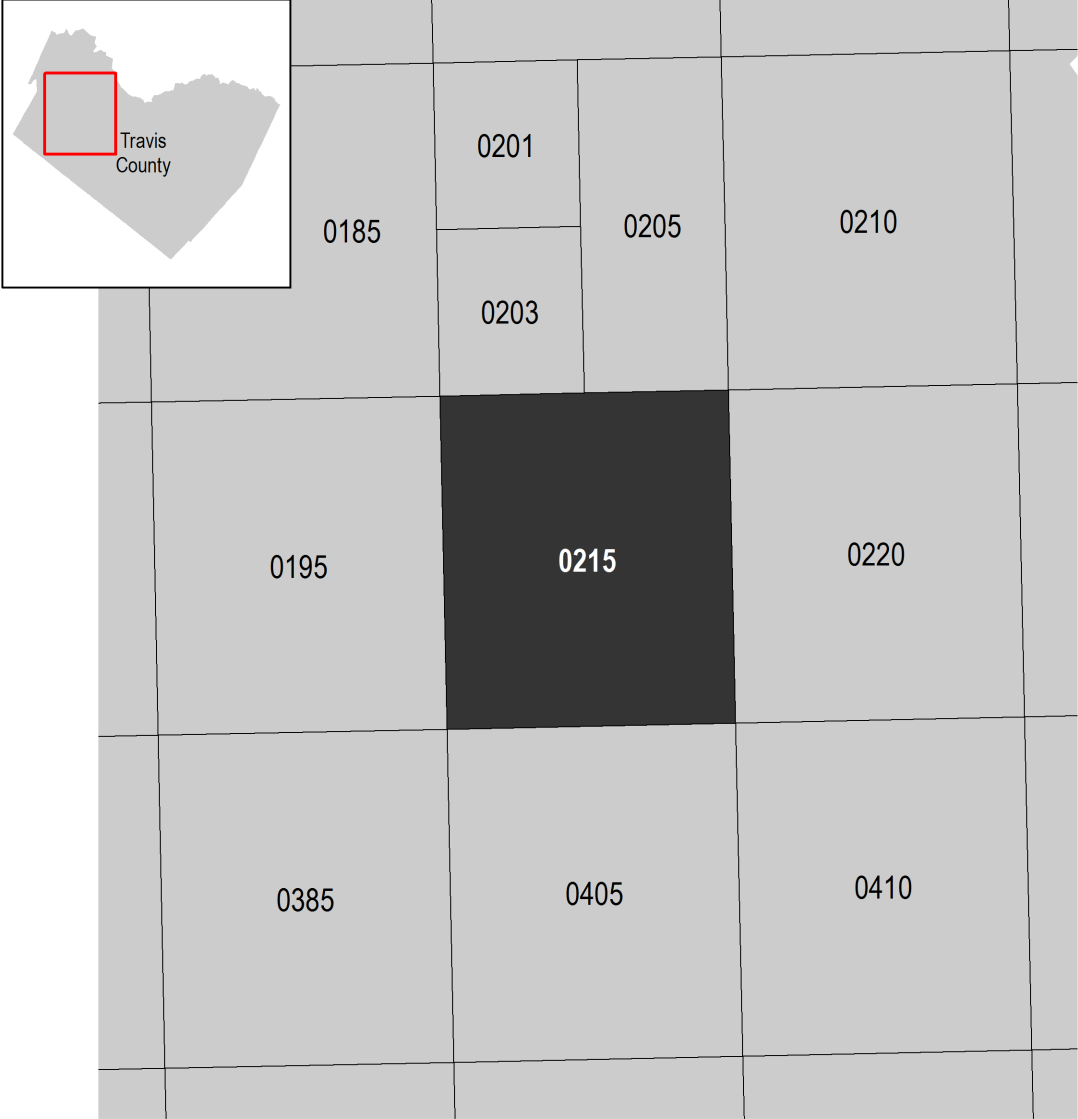
To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was derived from digital data obtained from City of Austin dated 2016, NFHL dated 2014, and CAPCOG dated 2014 and 2016.

SCALE



PANEL LOCATOR



National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

TRAVIS COUNTY, TEXAS
and Incorporated Areas

PANEL 215 OF 730

Panel Contains:

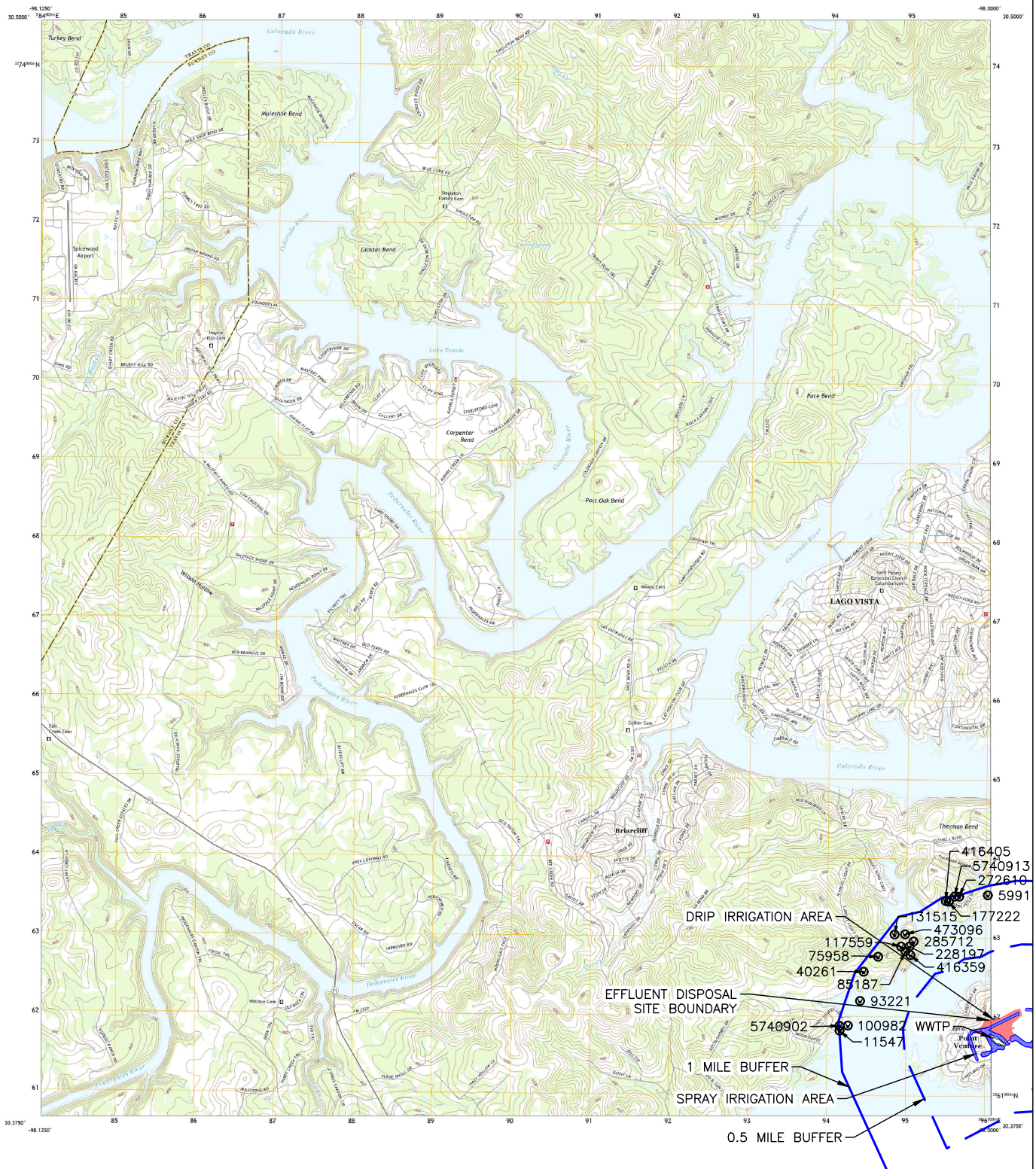
COMMUNITY	NUMBER	PANEL	SUFFIX
LAGO VISTA, CITY OF	481588	0215	J
LAKEWAY, CITY OF	481303	0215	J
POINT VENTURE, VILLAGE OF	481691	0215	J
TRAVIS COUNTY	481026	0215	J

VERSION NUMBER
2.3.3.3

MAP NUMBER
48453C0215J

MAP REVISED
JANUARY 22, 2020

ATTACHMENT H
WELL AND MAP INFORMATION



TEXAS CORPORATION
Texas Engineering Firm F-131
Texas Survey Firm 10194320
New Braunfels Austin
1672 Independence Dr Suite 315 5508 Highway 290 West Suite 201
New Braunfels, Texas 78132 Austin, Texas 78735
(P) 830/626.3588 (F) 830/626.3544 (P) 512/442.3008 (F) 512/448.7811
www.trihydro.com

ATTACHMENT H (SHEET 1 OF 4)

WELL AND MAP INFORMATION

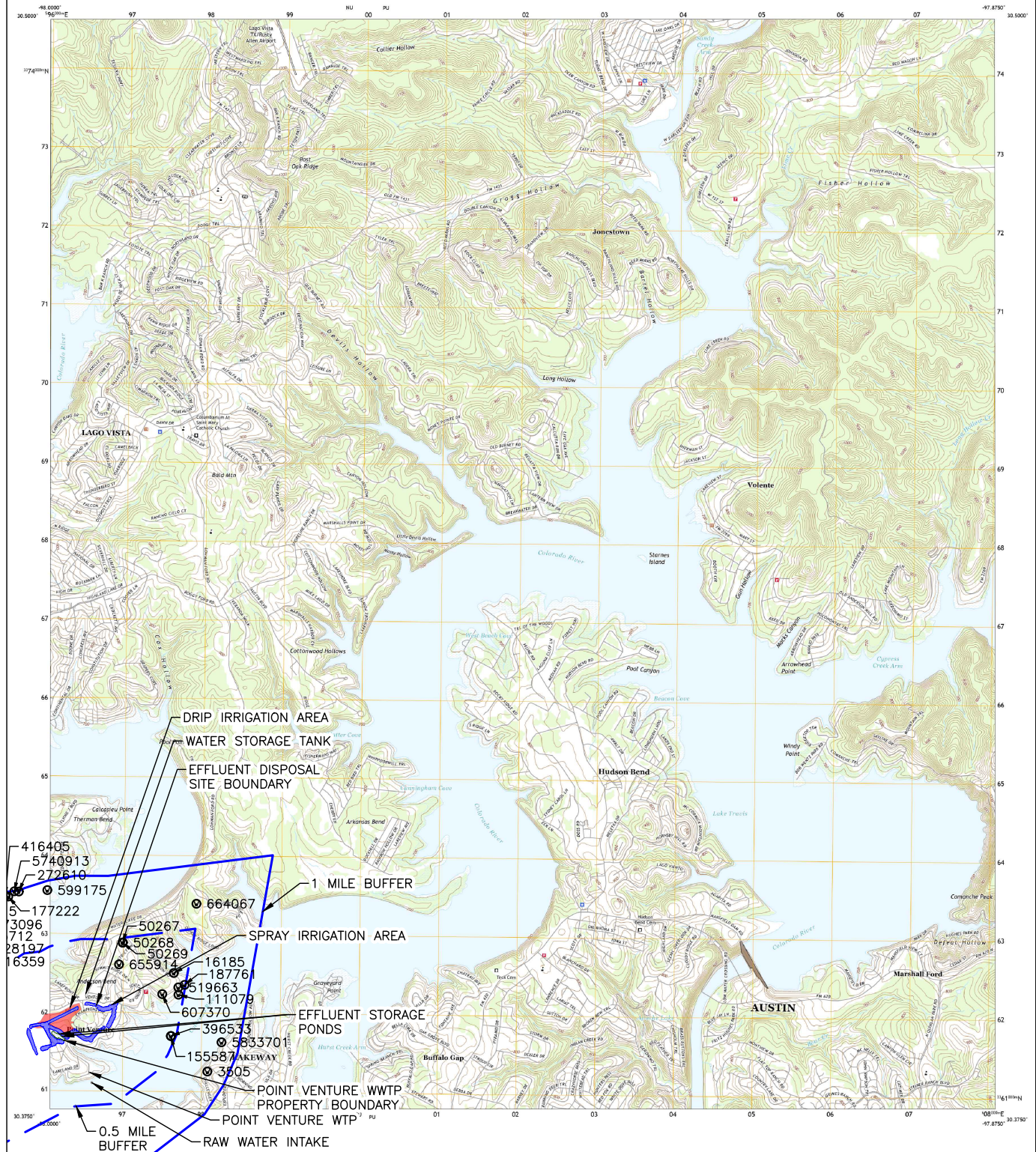
**TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT POINT VENTURE**

Drawn By: JDM

Checked By: DV

Scale: NTS

Date: 11/6/2024



TEXAS CORPORATION
Texas Engineering Firm F-131
Texas Survey Firm 10194320
New Braunfels Austin
1672 Independence Dr Suite 315 5508 Highway 290 West Suite 201
New Braunfels, Texas 78132 Austin, Texas 78735
(P) 830/626.3588 (F) 830/626.3544 (P) 512/442.3008 (F) 512/448.7811
www.trihydro.com

ATTACHMENT H (SHEET 2 OF 4)

WELL AND MAP INFORMATION

**TRAVIS COUNTY WATER CONTROL AND
IMPROVEMENT DISTRICT POINT VENTURE**

Drawn By: JDM

Checked By: DV

Scale: NTS

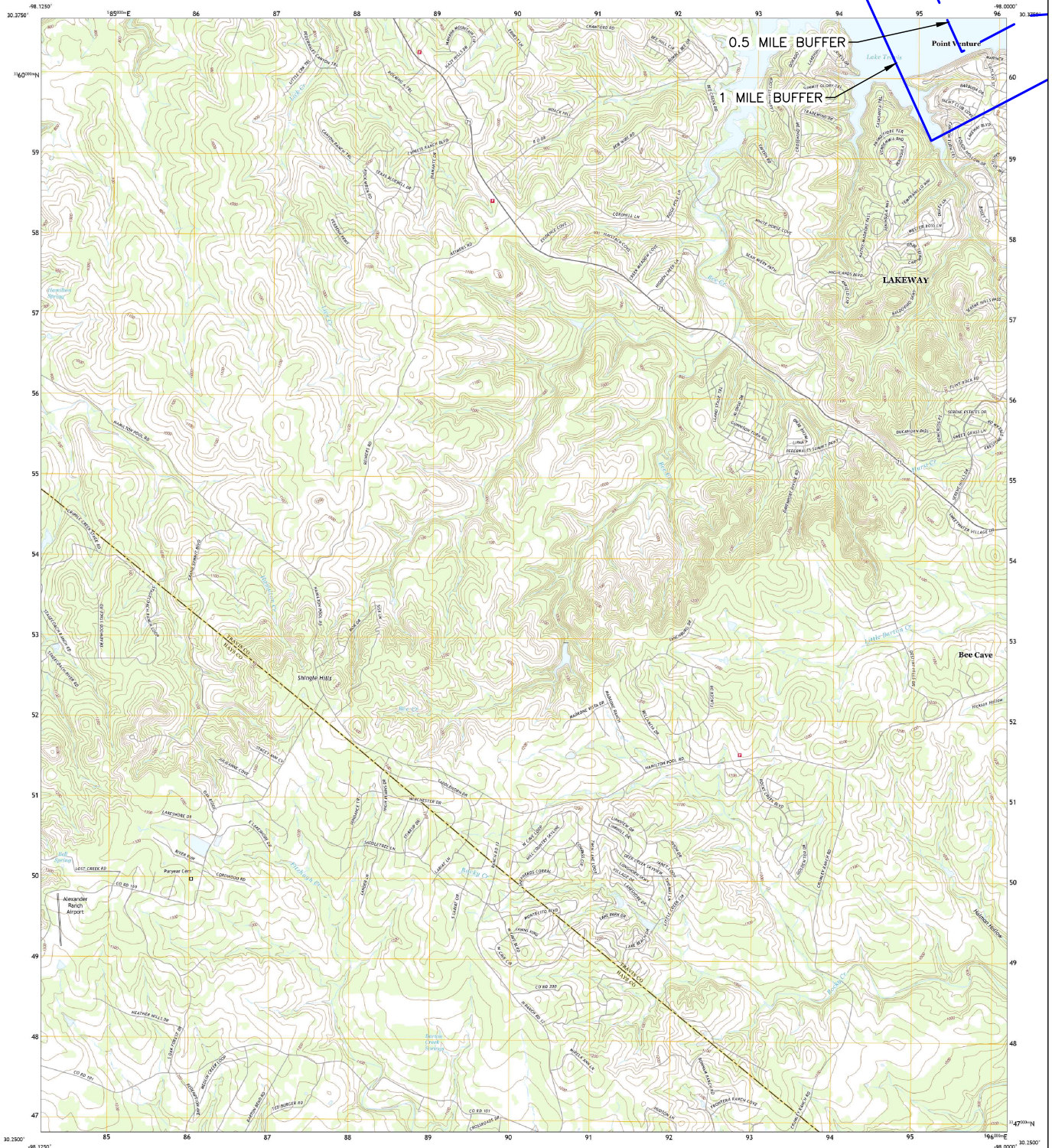
Date: 11/6/2024



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



5740902 100982
11547
SHINGLE HILLS QUADRANGLE
TEXAS
7.5-MINUTE SERIES



Texas Engineering Firm F-131
Texas Survey Firm 10194320 Austin
New Braunfels
1672 Independence Dr Suite 315 5508 Highway 290 West Suite 201
New Braunfels, Texas 78132 Austin, Texas 78735
(P) 830/626.3588 (F) 830/626.3544 (P) 512/442.3008 (F) 512/448.7811
www.trihydro.com

ATTACHMENT H (SHEET 4 OF 4)

WELL AND MAP INFORMATION

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT POINT VENTURE

Drawn By: JDM Checked By: DV Scale: NTS Date: 11/6/2024

**Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number
57-40-902**

[GWDB Reports and Downloads](#)

Well Basic Details

[Scanned Documents](#)

State Well Number	5740902
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)	30.385556
Latitude (degrees minutes seconds)	30° 23' 08" N
Longitude (decimal degrees)	-98.02
Longitude (degrees minutes seconds)	098° 01' 12" W
Coordinate Source	+/- 5 Seconds
Aquifer Code	218GLRSL - Glen Rose Limestone, Lower Member
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	705
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	136
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	0/0/1970
Drilling Method	Cable Tool
Borehole Completion	Open Hole

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	No
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	O.L. Riffe
Driller	William Bonnett
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	10/21/1998
Last Update Date	3/4/2020

Remarks Reported yield 40 GPM with 0 feet drawdown after pumping 1 hour in 1970.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

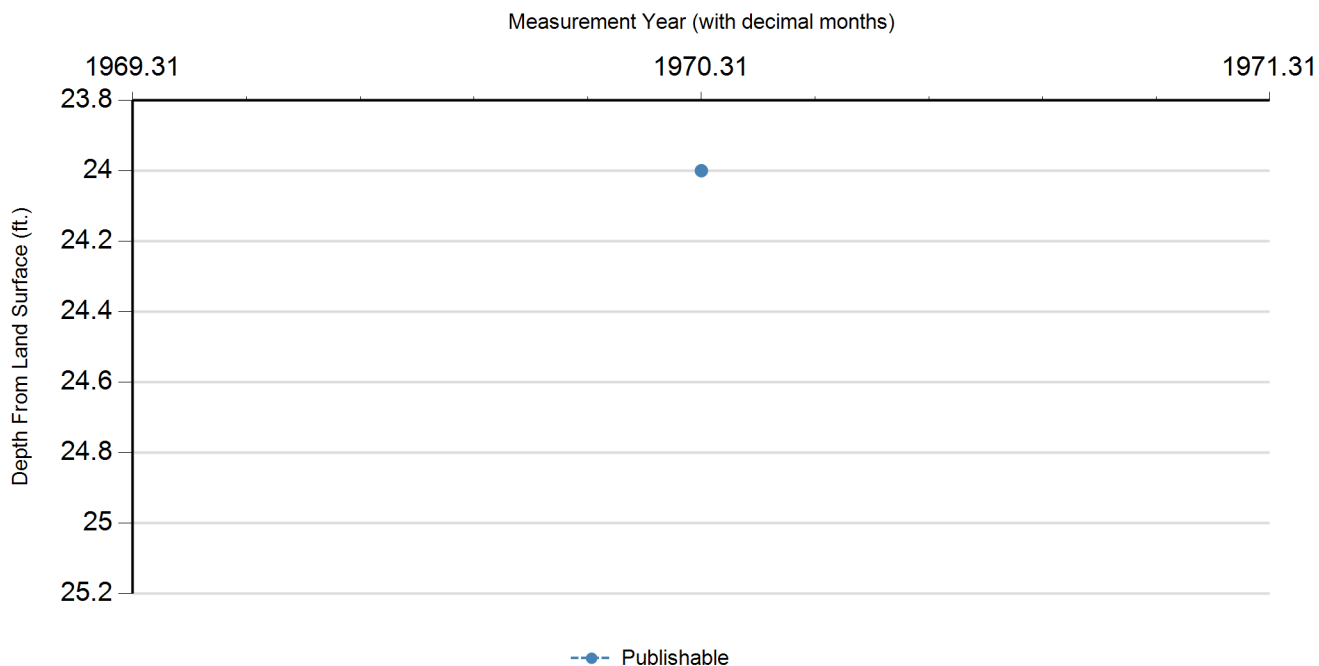
Borehole - No Data

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	4/22/1970		24		681	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis - No Data Available

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/gwdb rpt.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
WELL SCHEDULE

Aquifer Kyle Kyle Field No. _____ State Well No. 57-40-902
Owner's Well No. _____ County TRAVIS

1. Location: 1/4, 1/4 Sec., Block _____ Survey _____
AT SIESTA SHORES SUBD. ON LAKE TRAVIS

2. Owner: O.L. Riffe Address: AUSTIN, TEXAS
Tenant: LAKEHOUSE Address: 1604 ALAMEDA, AUSTIN
Driller: BONNETT WTR. WELL DRG. CO. Address: RT 2, BOX 44, BERTON, TEXAS

3. Elevation of 150 is 1705 ft. above msl, determined by 7/2 TOPO

4. Drilled: 3-19-70; Dug, Cable Tool, Rotary, _____

5. Depth: Rept. 166 ft. Meas. 136 ft.

6. Completion: Open Hole, Straight Well, Underreamed, Gravel Packed _____

7. Pump: Mfr. _____ Type Subm
No. Stages _____, Bowl Diam. _____ in., Setting _____ ft.
Column Diam. _____ in., Length Tailpipe _____ ft.

8. Motor: Fuel E/C Make & Model _____ HP _____

9. Yield: Flow _____ gpm, Pump _____ gpm, Meas., Rept., Est. _____

10. Performance Test: Date 3/14/70 Length of Test 1 hr. Made by Duillet - Bailey Test
Static Level _____ ft. Pumping Level _____ ft. Drawdown 0 ft.
Production 40 gpm Specific Capacity _____ gpm/ft.

11. Water Level: 25 ft. 4-22-1970 above Top Edge of 9 1/2" Casing which is 1.0 ft. below surface.
_____ ft. rept. 19 above _____ which is _____ ft. above surface.
_____ ft. meas. 19 below _____ which is _____ ft. below surface.
_____ ft. rept. 19 above _____ which is _____ ft. above surface.
_____ ft. meas. 19 below _____ which is _____ ft. below surface.

12. Use: Dom., Stock, Public Supply, Ind., Irr., Waterflooding, Observation, Not Used, _____

13. Quality: (Remarks on taste, odor, color, etc.) _____
Temp. _____ °F, Date sampled for analysis _____ Laboratory _____
Temp. _____ °F, Date sampled for analysis _____ Laboratory _____
Temp. _____ °F, Date sampled for analysis _____ Laboratory _____

14. Other data available as circled: Driller's Log, Radioactivity Log, Electric Log,
Formation Samples, Pumping Test, D-Log (see back), E-log - See Files

15. Record by: Howard Nichols & RLB Date 4-22-1970
Source of Data OWNER - FIELD AND WATER WELL REPORT

16. Remarks: * Logged by TWDB - 4-22-70

Cemented From _____ ft. to _____ ft.		Setting, ft.	
Diam. (in.)	Type	from	to
8 ID	steel	0	18

Screen Openings		Setting, ft.	
Diam. (in.)	Type	from	to
	OPEN Hole	18	166

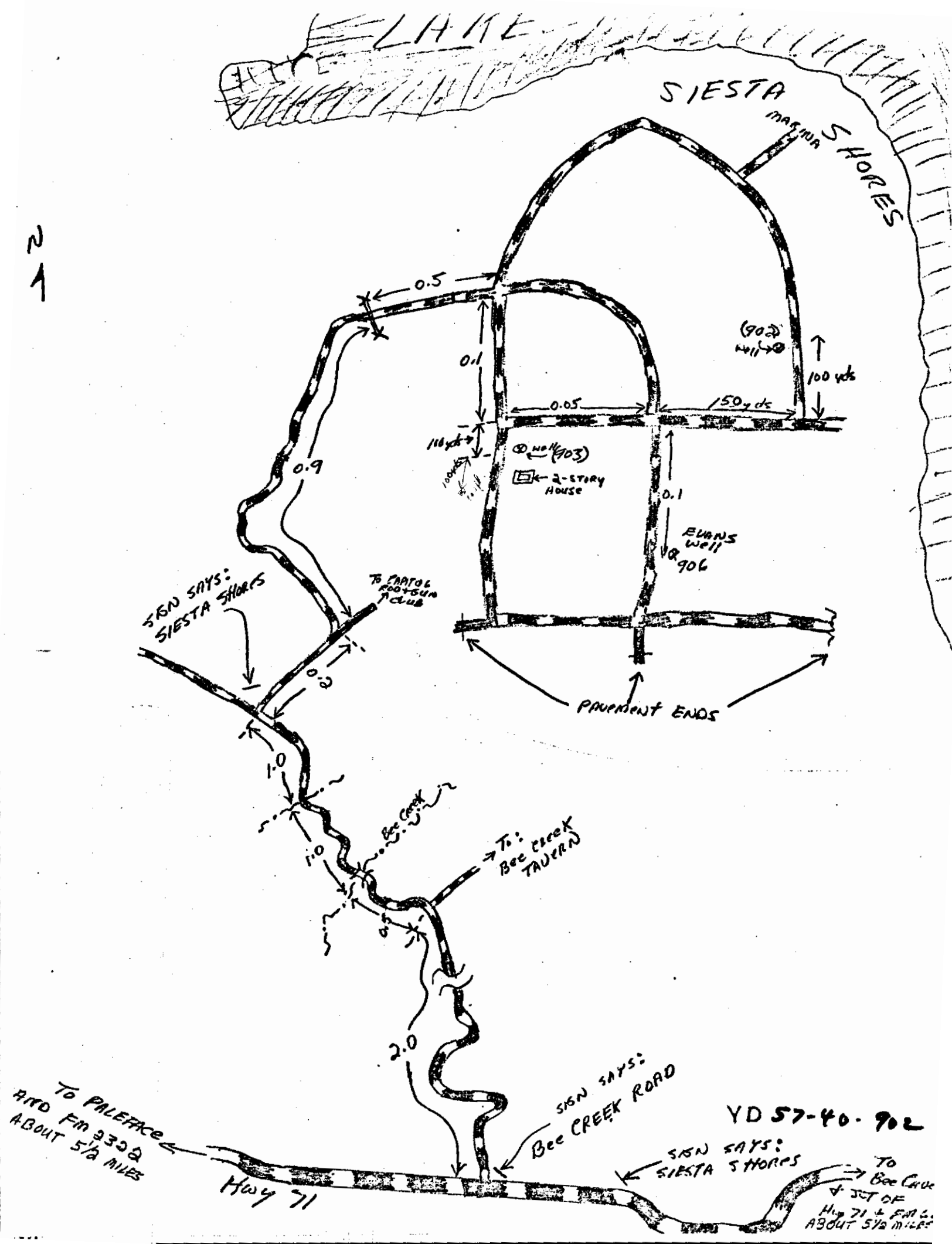
SEE: 57-40-903

Q-48

FOR DETAIL SKETCH

Drillers Log

- 0-2 Top soil
- 2-59 Alt. Limestone
- 59-63 Honey comb and sand
- 63-83 White Limestone
- 83-86 Glenrose sand
- 86-148 Blue Limestone
- 148-149 Blue clay
- 149-159 Hard caprock
- 159-162 Trinity Sand
- 162-166 Blue Limestone



Send original copy by
certified mail to the
Texas Water Development Board
P. O. Box 12386
Austin, Texas 78711

State of Texas
WATER WELL REPORT

For TWDB use only
Well No. 57-42-98
Located on map 14-25
Received: 11-15
85

1) OWNER:
Person having well drilled O. L. Riffe Address 1604 Alameda Dr. Austin, Tex
(Name) (Street or RFD) (City) (State)

Landowner Jesse Address _____
(Name) (Street or RFD) (City) (State)

2) LOCATION OF WELL:
County TRAVIS 11 1/2 miles in NW direction from Bee Cave
(N.E., S.W., etc.) (Town)

Locate by sketch map showing landmarks, roads, creeks,
highway number, etc.*

Give legal location with distances and directions from
adjacent sections or survey lines.

Labor _____ League _____

Block _____ Survey _____

Abstract No. _____

(NW 1/4 NE 1/4 SW 1/4 SE 1/4) of Section _____

(Use reverse side if necessary)

North
↑

3) TYPE OF WORK (Check):
☒ New Well Deepening
Reconditioning Plugging

4) PROPOSED USE (Check):
☒ Domestic Industrial Municipal
Irrigation Test Well Other

5) TYPE OF WELL (Check):
☒ Rotary Driven Dug
Cable Jetted Bored

6) WELL LOG:
Diameter of hole 8 in. Depth drilled _____ ft. Depth of completed well 166 ft. Date drilled 11-14-70
All measurements made from 1 ft. above ground level.

From (ft.)	To (ft.)	Description and color of formation material
0 - 2		Top Soil
2 - 59		All Lime stone
59 - 63		Honey Comb + Sands
63 - 83		White Lime Stone
83 - 86		Glenrose Sand
86 - 148		Blue Lime stone
148 - 149		Blue Clay
149 - 159		Hard cap rock
159 - 162		Trinity sand
162 - 166		Blue Lime stone

9) Casing:
Type: ☒ Old New ☒ Steel Plastic Other
Cemented from _____ ft. to _____ ft.

Diameter (inches)	Setting		Cage
	From (ft.)	To (ft.)	
8 ID	1	18	

10) SCREEN:
Type _____
Perforated _____ Slotted _____
Diameter (inches) _____ Setting From (ft.) _____ To (ft.) _____ Slot Size _____

7) COMPLETION (Check):
Straight wall Gravel packed Other
Under reamed ☒ Open Hole

8) WATER LEVEL:
Static level _____ ft. below land surface Date _____
Artesian pressure _____ lbs. per square inch Date _____
Depth to pump bowls, cylinder, jet, etc., _____ ft. below land surface.

11) WELL TESTS:
Was a pump test made? Yes ☒ No ☐ If yes, by whom? _____
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.
Bailer test 40 gpm with NONE ft. drawdown after 1 hrs.
Artesian flow _____ gpm
Temperature of water _____

12) WATER QUALITY:
Was a chemical analysis made? Yes _____ No _____
Did any strata contain undesirable water? Yes _____ No _____
Type of water? _____ depth of strata _____

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME R. B. Bonnet Water Well Drillers Registration No. 1075
(Type or Print)

ADDRESS RT 2 Box 44 Bertram Texas
(Street or RFD) (City) (State)

(Signed) R. B. Bonnet Bonnets Water Well Drilling Co
(Water Well Driller) (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

YD 57-40-902

*Additional instructions on reverse side.

Xerox Back

**Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number
57-40-913**

[GWDB Reports and Downloads](#)

Well Basic Details

[Scanned Documents](#)

State Well Number	5740913
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)	30.4000278
Latitude (degrees minutes seconds)	30° 24' 00.1" N
Longitude (decimal degrees)	-98.0044778
Longitude (degrees minutes seconds)	098° 00' 16.12" W
Coordinate Source	Global Positioning System - GPS
Aquifer Code	217HSTN - Hosston Formation
Aquifer	Trinity
Aquifer Pick Method	Provided by Groundwater Conservation District
Land Surface Elevation (feet above sea level)	778
Land Surface Elevation Method	Digital Elevation Model -DEM
Well Depth (feet below land surface)	460
Well Depth Source	Driller's Log
Drilling Start Date	9/9/2011
Drilling End Date	9/12/2011
Drilling Method	Air Hammer; Air Rotary
Borehole Completion	Screened

Well Type	Withdrawal of Water
Well Use	Irrigation
Water Level Observation	Miscellaneous Measurements
Water Quality Available	Yes
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	Poured
Surface Completion	Pitless Adapter Used
Owner	Davis Nicol
Driller	Bee Cave Drilling
Other Data Available	Drillers Log; Specific Capacity
Well Report Tracking Number	272610
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	Groundwater Conservation District
Created Date	11/8/2018
Last Update Date	3/4/2020

Remarks	Specific capacity: 0.36 GPM/ft.
---------	---------------------------------

Casing						
Diameter (in.)	Casing Type	Casing Material	Schedule	Gauge	Top Depth (ft.)	Bottom Depth (ft.)
4.5	Blank	Plastic (PVC)			0	420
4.5	Screen	Plastic (PVC)		0.05	420	460

Well Tests				
Test Date	Test Type	Yield (gallons per minute)	Drawdown (ft.)	Test Hours
9/12/2011	Jetted	20		
11/6/2018	measured	20	55.11	0.4

Lithology

Top Depth (ft.)	Bottom Depth (ft.)	Description
0	2	Topsoil
2	15	Caliche
15	20	White limestone
20	55	Tan limestone
55	80	Grey limestone
80	95	Tan limestone
95	100	Grey limestone with clay
100	195	Grey limestone
195	215	White limestone 1st H2O 5 gpm 800 TDS
215	245	Grey limestone
245	255	White rock 2nd H2O 20 gpm 500 TDS
255	290	Grey limestone
290	315	Blue shale
315	340	Grey / red shale
340	355	Grey rock
355	360	Red clay
360	400	Red sandstone
400	415	Red clay
415	460	Red rock 3rd H2O 20 gpm 1,000 TDS

Annular Seal Range

Annular Seal Material	Amount	Unit	Top Depth (ft.)	Bottom Depth (ft.)
Concrete	10	Bags/Sacks	1	20

Borehole

Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
10	0	10
6.75	10	460

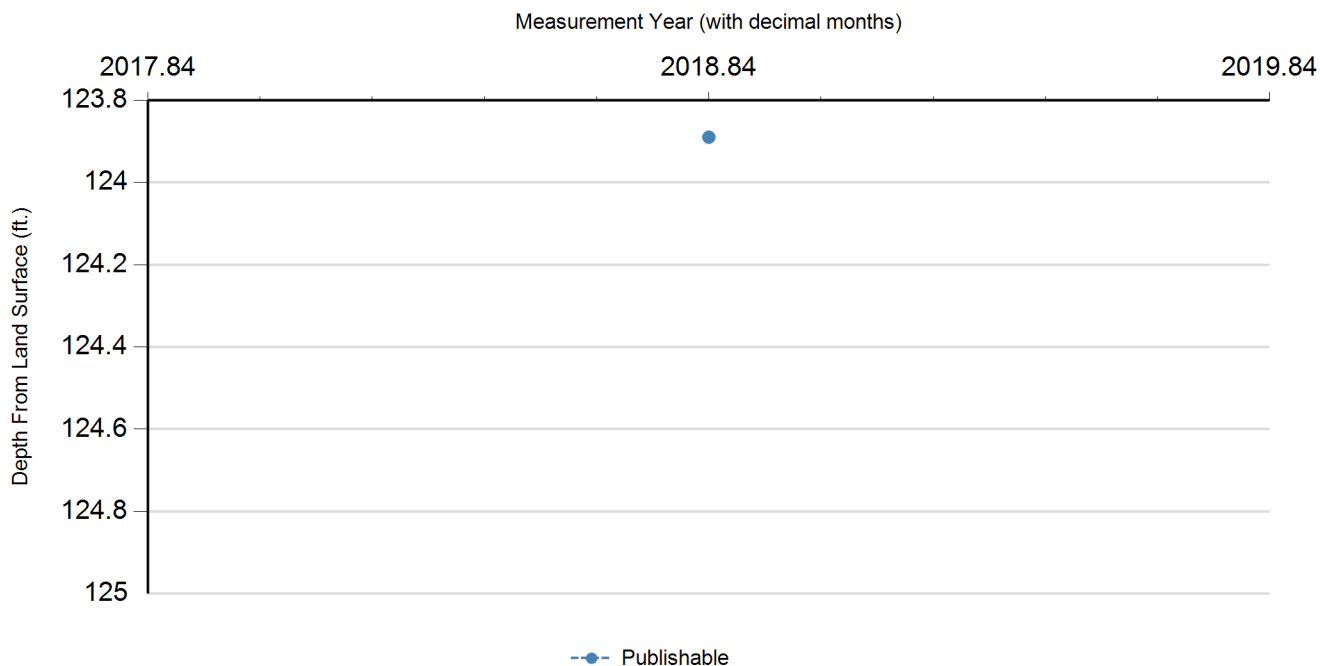
Plugged Back - No Data

Filter Pack - No Data

Packers

Packer Type	Depth (ft.)
Plastic	20
Plastic	150
Plastic	415

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	11/6/2018		123.89		654.11	1	Groundwater Conservation District	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis

Sample Date: 11/6/2018 **Sample Time:** 1551 **Sample Number:** 1 **Collection Entity:** Barton Springs/Edwards Aquifer CD

Sampled Aquifer: Hosston Formation

Analyzed Lab: LCRA - Lower Colorado River Authority

Reliability: Sampled using TWDB protocols

Collection Remarks: Lab Calculated Anion/Cation Chg Bal set to TWDB Calculated Value due to an error in the lab calculated formula

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00425	ALKALINITY, BICARBONATE DISSOLVED (MG/L), LAB		293	mg/L	
00430	ALKALINITY, CARBONATE DISSOLVED (MG/L), LAB		0	mg/L	
00420	ALKALINITY, HYDROXIDE DISSOLVED (MG/L), LAB		0	mg/L	
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CaCO ₃)		293	mg/L as CaCO ₃	
01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	5	ug/L	
50938	ANION/CATION CHG BAL, PERCENT		-0.319	PCT	
01095	ANTIMONY, DISSOLVED (UG/L AS SB)	<	1	ug/L	
01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	1	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		50.6	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO ₃)		357.561	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)		90.6	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.648	mg/L	
01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	1	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		53.6	mg/L	
28004	CARBON-14 DISS APPARENT AGE (YEARS BP)		4340	Y-BP	
82172	CARBON-14 FRACTION MODERN		0.5826		0.0021
00445	CARBONATE ION, CALCULATED (MG/L AS CO ₃)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		27.6	mg/L	
01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	1	ug/L	
01035	COBALT, DISSOLVED (UG/L AS CO)	<	1	ug/L	
01040	COPPER, DISSOLVED (UG/L AS CU)	<	1	ug/L	
82081	DELTA CARBON 13 C13/C12 PER MIL		-7.8	0/00	
50791	DEUTERIUM, EXPRESSED AS PERMIL VSMOW		-21.6	0/00	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.658	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CaCO ₃)		296.503	mg/L as CaCO ₃	
01046	IRON, DISSOLVED (UG/L AS FE)		983	ug/L	
01049	LEAD, DISSOLVED (UG/L AS PB)	<	1	ug/L	
01130	LITHIUM, DISSOLVED (UG/L AS LI)		6.88	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		37.1	mg/L	
01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	1	ug/L	

**Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number
57-40-913**

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	ug/L	
01060	MOLYBDENUM, DISSOLVED (UG/L AS MO)		6.33	ug/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		0.151	mg/L as NO3	
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		0.0341	mg/L as N	
50790	OXYGEN-18, EXPRESSED AS PERMIL VSMOW		-3.47	0/00	
00666	PHOSPHORUS, DISSOLVED (MG/L AS P)	<	0.02	mg/L as P	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		2.72	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0.133		
01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	5	ug/L	
00955	SILICA, DISSOLVED (MG/L AS SiO2)		14.6	mg/L as SiO2	
01075	SILVER, DISSOLVED (UG/L AS AG)	<	1	ug/L	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.509		
00932	SODIUM, CALCULATED, PERCENT		13.072	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		19.8	mg/L	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		8620	ug/L	
48297	STRONTIUM, ISOTOPE OF MASS 86 AND 87 RATIO		0.708302	N/A	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		10.7	mg/L as SO4	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		351.362	mg/L	
07012	TRITIUM IN WATER (TRITIUM UNITS)		0.78	TU	0.09
22703	URANIUM, NATURAL, DISSOLVED (UG/L AS U)	<	1	ug/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)	<	1	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)	<	5	ug/L	

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

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TWDB Water Quality Field Data Sheet

SWN: 57-40-913 Site Name: NICOL WELL
 County: Travis (453); Mays (209) Address or Location: DAVID NICOL
 County Code: 19545 SANDCASTLE DR.
 Aquifer Code: 217 HSTN (HOUSTON) SPICEWOOD, TX 78669
 Aquifer Id: Edwards (44); Trinity (28)

Project TWDB Sampling
 Newly Invented Well YES
 ID Number: 1029
 Date: 11/6
 Sampler(s): B4, LC BSEACD

Standard TWDB suite			Isotopes (unfiltered, no ice)					
1	2	3	4	5	6	7		
250 ml filtered	500ml filtered	250 ml filtered	250 ml	250 ml	1 L	1L		
Cation	Anion	Nitrate	Sr 87/86	Deut. / O18	Tritium	C14		
Ice + HNO3	Total Alk.	Ice + H2SO4	unpreserved	unpreserved	unpreserved	unpreserved		

All acidified samples pH <2.0. (*) If natural pH is <7, then add NaOH until pH is between 7 and 8. If natural pH is ≥7, no NaOH required.

Calibration Verification Readings		
	Pre Sample	Post Sample
PH		
4	4.00	4.30
Cond		
0 (air)	0	0
4.49	4.49	4.60

Time In: 15:30 Time Out: 16:00
 Water Level: 123.89 M.P. = 11.5" ft W.L. remark: _____
 Pumping time: 20 MIN Sampling Point: SPIGOT AT WELL
 Well Use: DOM IRR FIELD G.P.S. readings
 Lift: ELEC SUB Latitude: 30.4000266
 Power: ELEC Longitude: -98.0044788
 Casing Type: PVC Casing Size: 4.5 inches
 Sample Time: 15:51 Filtered: Yes / No
 Filter pressure: hand pump / line / gravity

Water Quality Stabilization Parameters Table (At least 3 readings @ 5 min. intervals)

Time	15:33	15:40	15:45	15:50				
pH	6.93	6.83	6.85	6.88				
Fahrenheit Temp.	22.74	22.61	22.42	22.45				
Turbidity	9.9	6.7	15.0	23.4				
uS/Cm Conductivity	638	625	643	645				

Comments PITLESS ADAPTER

Items Below Calculated Later From Results:

Dissolved Solids (mg/L): _____

Hardness (as CaCO3): _____

Balanced: _____

Notes: ESTIMATED YIELD: 20 GPM

Field Data entered into TWDB GWDB: yes / no

**Texas Water Development Board
Well Schedule**

State Well Number 5740913 Prev. Well No. County TRAVIS County Code 453

Basin COLORADO 14 GMA 09 RWPA K GCD Aquifer HUSTON 217#STN

Latitude 302400 Longitude 0980016 Coord Accuracy 0 Aquifer ID1 28 Aquifer ID2 Aquifer ID3

Owner/ DAVID NICOL Driller BEE CAVE DRILLING

Well No.

Address 19545 SANDCASTLE DR., SPICEWOOD 78669 Tenant/Oper. CHARLES COFFENDAFFER

Well Depth 460 Source of Depth D Altitude 778 Source of Alt. Datum Z

Date Drilled 09122011 Well Type W User Code

Lift Data Pump Mfr. Type of Lift SUB. S Pump Depth Setting (ft) ft.
Motor Mfg Type of Power ELEC. E Horsepower

Water Use Primary DOM H Secondary Tertiary

Other Data Available Water Level M Water Quality Y Well Logs Other Data

Well Construction Const Method AIR ROTARY A Casing Material PVC P
Completion Method SCREEN S Screen Material

Water Levels Date 11062018 Meas. 12389 Remarks M.P. 0.96

Date Meas. Remarks

Date Meas. Remarks

Water Quality (Remarks:)

Yield Flow Rate Pump Rate GPM Circle how rate was determined
Meas Rept Est Date of Test

Performance Test Length of test 0.4 hr Production Rate 20 GPM Circle how rate was determined
Meas Rept Est Date of Test 11/06/2018

Static Level 123.89 ft. Pumping Level 179.0 ft. Amount of Drawdown 55.11 ft. Specific Capacity 0.36 GPM ft.

Date Record Collected or Information Updated 11062018 Reporting Agency 05 Recorded by LANE COCKRELL

Other Remarks

Casing Records:			
Casing or Blank Pipe (C)			
Well Screen or Slotted Zone (S)			
Open Hole (O)			
Cemented from <u>1</u> to <u>20</u>			
	Diam. (in.)	Interval of C.S. or O. From	To
1	C 4.5	0	420
2	S 4.5	420	460
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			

Aquifer

Well Number

[GWDB Reports and Downloads](#)
[Well Basic Details](#)
[Scanned Documents](#)

State Well Number	5833701
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)	30.382222
Latitude (degrees minutes seconds)	30° 22' 56" N
Longitude (decimal degrees)	-97.9775
Longitude (degrees minutes seconds)	097° 58' 39" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	681
Land Surface Elevation Method	Digital Elevation Model -DEM
Well Depth (feet below land surface)	100
Well Depth Source	Unknown
Drilling Start Date	
Drilling End Date	0/0/1936
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	
Water Level Observation	None
Water Quality Available	No
Pump	
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	U.S. Bureau of Reclamation
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	3/4/2020

Remarks	Foundation test for dam. Well C-66 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 - No Data Available

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TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer

Kth
Hwy 1

Field No.

C-66 (83)

State Well No.

58 33 701

Owner's Well No.

Lohman's Pond
Foundation Site #1

County

Travis

1. Location: 1/4, 1/4 Sec. Block Survey

2. Owner: Bureau of Reclamation (USDI)

Tenant:

Address:

Driller:

Address:

3. Elevation of LSD is 572.5 ft. above sea, determined by old W.S.

4. Drilled: 2/19/36; Dig, Cable Tool, Rotary, 3" hole

5. Depth: Rept. 100 ft. Meas. ft.

6. Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed

7. Pump: Mfr.

Type

No. Stages, Bore Dia. in., Setting ft.

Column Dia. in., Length Tailpipe ft.

8. Motor: Fuel Make & Model HP.

9. Yield: Flow gpm, Pump gpm, Meas., Rept., Est.

10. Performance Test: Date Length of Test Made by

Static Level ft. Pumping Level ft. Drawdown ft.

Production gpm Specific Capacity gpm/ft.

11. Water Level: ft. rept. 19 above which is ft. above surface.
 meas. below
 ft. rept. 19 above which is ft. above surface.
 meas. below
 ft. rept. 19 above which is ft. above surface.
 meas. below
 ft. rept. 19 above which is ft. above surface.
 meas. below

12. Use: Dom., Stock, Public Supply, Ind., Irr., Waterflooding, Observation, Not Used, Foundation Test For Dam

13. Quality: (Remarks on taste, odor, color, etc.)

Temp. °F, Date sampled for analysis

Laboratory

Temp. °F, Date sampled for analysis

Laboratory

Temp. °F, Date sampled for analysis

Laboratory

14. Other data available as circled Driller's Log, Radioactivity Log, Electric Log,

Formation Samples, Pumping Test, D-log Bull 5708, P-56

15. Record by: R. Blunt Date 5/11/66

Source of Data Bull 5708 & Old W.S.

16. Remarks:

CASINO & BLANK PIPE			
Cemented From		ft. to	
Diam. (in.)	Type	Setting, ft.	
		from	to

WELL SCREEN			
Screen Openings		Setting, ft.	
Diam. (in.)	Type	from	to

(Sketch)

6-66

58-33-701

STATE OF TEXAS PLUGGING REPORT for Tracking #3505

Owner:	Alex Tradd	Owner Well #:	No Data
Address:	12405 Hwy 71 Austin, TX 78738	Grid #:	58-33-7
Well Location:	3754 Pawnee South Austin, TX	Latitude:	30° 22' 44" N
Well County:	Travis	Longitude:	097° 58' 46" W
		Elevation:	No Data

Well Type: **Withdrawal of Water**

Drilling Information

Company:	No Data	Date Drilled:	11/16/1995
Driller:	ADC	License Number:	1955

	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
Borehole:	7		950

Plugging Information

Date Plugged: **5/26/2001** Plugger: **Byron Benoit**

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.)
5	0	800

Plug(s) Placed in Well:

Top (ft.)	Bottom (ft.)	Description (number of sacks & material)
0	50	12 CEM
50	950	180 C/B

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: **Associated Drilling Co.**
P.O. Box 1060
Manchaca, TX 78652

Driller Name: **Byron Beniot** License Number: **1955**

Comments: **logged by TF**

STATE OF TEXAS PLUGGING REPORT for Tracking #50267

Owner: **Tex-Con Oil Co.**
Address: **P.O. Box 18463
Austin, TX 78760**
Well Location: **4906 Burleson Rd
Austin, TX 78760**
Well County: **Travis**

Owner Well #: **Mw-1,4**
Grid #: **58-33-7**
Latitude: **30° 23' 38" N**
Longitude: **097° 59' 25" W**
Elevation: **No Data**

Well Type: **Monitor**

Drilling Information

Company: **No Data**

Date Drilled: **No Data**

Driller: **N/A**

License Number: **No Data**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	2		15

Plugging Information

Date Plugged: **9/22/2008**

Plugger: **Johnny Body**

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

Casing Left in Well:

<i>Dia (in.)</i>	<i>Top (ft.)</i>	<i>Bottom (ft.)</i>
2	2	15

Plug(s) Placed in Well:

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description (number of sacks & material)</i>
0	2	2 Sacks Cement
2	15	1- Sacks Chips

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: **ACA Mangement
2708 Quannah Dr.
Round Rock, TX 78681**

Driller Name: **Johnny Body**

License Number: **3060**

Apprentice Name: **Dan Airey**

Apprentice Number: **57707**

Comments: **No Data**

STATE OF TEXAS PLUGGING REPORT for Tracking #50268

Owner: **Tex-Con Oil Co.**

Owner Well #: **Mw-7**

Address: **P.O. Box 18463
Austin, TX 78760**

Grid #: **58-33-7**

Well Location: **4906 Burleson Rd
Austin, TX 78760**

Latitude: **30° 23' 38" N**

Longitude: **097° 59' 25" W**

Well County: **Travis**

Elevation: **No Data**

Well Type: **Monitor**

Drilling Information

Company: **No Data**

Date Drilled: **No Data**

Driller: **N/A**

License Number: **No Data**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	2		20

Plugging Information

Date Plugged: **9/22/2008**

Plugger: **Johnny Body**

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

Casing Left in Well:

<i>Dia (in.)</i>	<i>Top (ft.)</i>	<i>Bottom (ft.)</i>
2	2	20

Plug(s) Placed in Well:

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description (number of sacks & material)</i>
0	2	2 Sacks Cement
2	20	1.5 Sacks Chips

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: **ACA Mangement
2708 Quannah Dr.
Round Rock, TX 78681**

Driller Name: **Johnny Body**

License Number: **3060**

Apprentice Name: **Dan Airey**

Apprentice Number: **57707**

Comments: **No Data**

STATE OF TEXAS PLUGGING REPORT for Tracking #50269

Owner: **Tex-Con Oil Co.**

Owner Well #: **Mw-21**

Address: **P.O. Box 18463
Austin, TX 78760**

Grid #: **58-33-7**

Well Location: **4906 Burleson Rd
Austin, TX 78760**

Latitude: **30° 23' 38" N**

Longitude: **097° 59' 25" W**

Well County: **Travis**

Elevation: **No Data**

Well Type: **Monitor**

Drilling Information

Company: **No Data**

Date Drilled: **No Data**

Driller: **N/A**

License Number: **No Data**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	2		25

Plugging Information

Date Plugged: **9/22/2008**

Plugger: **Johnny Body**

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

Casing Left in Well:

<i>Dia (in.)</i>	<i>Top (ft.)</i>	<i>Bottom (ft.)</i>
2	2	25

Plug(s) Placed in Well:

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description (number of sacks & material)</i>
0	2	2 Sacks Cement
2	25	1.5 Sacks Chips

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: **ACA Mangement
2708 Quanah Dr.
Round Rock, TX 78681**

Driller Name: **Johnny Body**

License Number: **3060**

Apprentice Name: **Dan Airey**

Apprentice Number: **57707**

Comments: **No Data**

STATE OF TEXAS PLUGGING REPORT for Tracking #89943

Owner:	Jim Ross	Owner Well #:	1
Address:	801 Windy Shores Loop Spicewood, TX 78669	Grid #:	57-40-9
Well Location:	801 Windy Shores Loop Spicewood, TX 78669	Latitude:	30° 23' 06" N
Well County:	Travis	Longitude:	098° 01' 14" W
		Elevation:	No Data

Well Type: **Withdrawal of Water**

Drilling Information

Company:	No Data	Date Drilled:	No Data
Driller:	no data	License Number:	No Data

	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
Borehole:	6.5		150

Plugging Information

Date Plugged: **8/1/2013** Plugger: **Jay Ledbetter**

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

Variance Number: **n/a**

Casing Left in Well:

Dia (in.)	Top (ft.)	Bottom (ft.)
5	2	20

Plug(s) Placed in Well:

Top (ft.)	Bottom (ft.)	Description (number of sacks & material)
0	10	3 cement
10	150	29 3/8 clay chips

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: **Action Water Well Service**
100 Spanish Oak Trail
Spicewood, TX 78669

Driller Name: **JCLedbetter** License Number: **54182**

Apprentice Name: **n/a** Apprentice Number: **n/a**

Comments: **No removable casing, old stovepipe type, demo slab @ top, cut off case below grade**

STATE OF TEXAS PLUGGING REPORT for Tracking #155587

Owner: **Triple S. Petroleum Co.**

Owner Well #: **MW-3**

Address: **4911 E. 7th St.
Austin, TX 78704**

Grid #: **58-33-7**

Well Location: **525 W. Ben White Blvd.
Austin, TX 78704**

Latitude: **30° 22' 59" N**

Longitude: **097° 59' 03" W**

Well County: **Travis**

Elevation: **No Data**

Well Type: **Monitor**

Drilling Information

Company: **ALPINE FIELD SERVICES**

Date Drilled: **12/10/2014**

Driller: **Patrick L Stephens**

License Number: **4850**

Well Report Tracking #396532

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	8.25	0	18

Plugging Information

Date Plugged: **2/11/2016**

Plugger: **Pat Stephens**

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:

Plug(s) Placed in Well:

No Data

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description (number of sacks & material)</i>
0	2	Cement
2	18	Bentonite

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: **Alpine Field Services Inc.**
6830 Barney Rd.
Houston, TX 77092

Driller Name: **Pat Stephens**

License Number: **4850**

Comments: **No Data**

STATE OF TEXAS PLUGGING REPORT for Tracking #187761

Owner:	Doug Malone	Owner Well #:	No Data
Address:	10500 Medinah Greens Dr. Austin , TX 78717	Grid #:	58-33-7
Well Location:	701 Ivean Pearson Rd Lago Vista, TX 78645	Latitude:	30° 23' 20" N
Well County:	Travis	Longitude:	097° 58' 56" W
		Elevation:	No Data
Well Type:	Unknown		

Drilling Information

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

Borehole:	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
	6	0	200

Plugging Information

Date Plugged: **6/20/2019** Plugger: **Michael G. Becker P.G.**

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	0	40

Plug(s) Placed in Well:

Top (ft.)	Bottom (ft.)	Description (number of sacks & material)
0	3	Portland 1 Bags/Sacks
3	200	Benseal 15 Bags/Sacks

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

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**

STATE OF TEXAS WELL REPORT for Tracking #664067

Owner:	Travis Mud 10	Owner Well #:	No Data
Address:	18214 Kingfisher Ridge Dr. Lago Vista , TX 78645	Grid #:	58-33-7
Well Location:	18214 Kingfisher Ridge Dr. Lago Vista, TX 78645	Latitude:	30° 23' 53.4" N
Well County:	Travis	Longitude:	097° 58' 49.5" W
		Elevation:	844 ft. above sea level
Type of Work:	New Well	Proposed Use:	Public Supply

Drilling Start Date: 3/7/2024

Drilling End Date: 3/12/2024

Plans Approved by TCEQ - YES
PWS# 2270333

Borehole:

Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
10.625	0	10
9	10	460

Drilling Method: Air Rotary

Borehole Completion: Filter Packed

Filter Pack Intervals:

Top Depth (ft.)	Bottom Depth (ft.)	Filter Material	Size
310	460	Gravel	3/8

Annular Seal Data:

Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
0	310	Cement 87

Seal Method: Pressure

Sealed By: Driller

Distance to Property Line (ft.): 100+

Distance to Septic Field or other
concentrated contamination (ft.): 150+

Distance to Septic Tank (ft.): 150+

Method of Verification: No Data

Surface Completion: Surface Slab Installed

Water Level: 242 ft. below land surface on 2024-03-15 Measurement Method: Electric Line

Packers: No Data

Type of Pump: Submersible Pump Depth (ft.): 400

Well Tests: Jetted Yield: 25+ GPM

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
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 Angel Fire Rd.
Dripping Springs, TX 78620

Driller Name: **Michael Scott**

License Number: **59719**

Apprentice Name: **Austin Cook**

Apprentice Number: **60597**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
0	1	topsoil
1	25	tan limestone
25	150	grey limestone
150	180	grey limestone / shale
180	300	tan and grey limestone
300	310	grey clay
310	360	tan / grey limestone
360	450	grey limestone wb 25-35 gpm
450	460	grey clay

Casing:
BLANK PIPE & WELL SCREEN DATA

<i>Dia (in.)</i>	<i>Type</i>	<i>Material</i>	<i>Sch./Gage</i>	<i>Top (ft.)</i>	<i>Bottom (ft.)</i>
5	Blank	New Plastic (PVC)		0	400
5	Screen	New Plastic (PVC)		400	460

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 #16185

Owner: **Gary McMullen**

Owner Well #: **No Data**

Address: **2910 Fontana
Houston, TX 77043**

Grid #: **58-33-7**

Well Location: **817 Ivan Pierson Road
Lago Vista, TX 78645**

Latitude: **30° 23' 25" N**

Longitude: **097° 59' 01" W**

Well County: **Travis**

Elevation: **No Data**

Type of Work: **New Well**

Proposed Use: **Domestic**

Drilling Start Date: **11/14/2002** Drilling End Date: **11/14/2002**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	8	0	100
	6	100	500

Drilling Method: **Air Rotary**

Borehole Completion: **cased**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	100	12

Seal Method: **Pressure Tremmie**

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

Sealed By: **Driller**

Distance to Septic Field or other
concentrated contamination (ft.): **100+**

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

Method of Verification: **as per landowner**

Surface Completion: **Surface Sleeve Installed**

Water Level: **No Data**

Packers: **Burlap 100',380',370'**

Type of Pump: **No Data**

Well Tests: **Estimated Yield: 30-40 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
380-490	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: **APEX Drilling**
P.O. Box 867
Marble Falls, TX 78654

Driller Name: **Michael Becker** License Number: **54516**

Apprentice Name: **Andrew Johnson** Apprentice Number: **1116**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	42	Caliche-Fractured
42	105	Blue Clay
105	205	Lt Gry-Tan LS
205	237	Tan Wht LS
237	270	Brown LS
270	290	Wht Tan LS
290	320	Gry LS w/Clay
320	358	Blue Clay-Hammid
358	380	Gry SS-Clay
380	490	Red Sand-Clay
490	500	Tan LS-Clay

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
5 New PVC +2 to 500 SDR17			

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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 #655914

Owner:	Doug Kincheloe	Owner Well #:	1
Address:	505 District Ln Lago Vista, TX 78645	Grid #:	58-33-7
Well Location:	505 District Ln Lago Vista, TX 78645	Latitude:	30° 23' 29" N
		Longitude:	097° 59' 27" W
Well County:	Travis	Elevation:	829 ft. above sea level
Type of Work:	New Well	Proposed Use:	Domestic

Drilling Start Date: **12/18/2023** Drilling End Date: **12/18/2023**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	8.75	0	20
	6.75	20	510

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data: **No Data**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **50+**

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

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

Method of Verification: **Tape Measure**

Surface Completion: **Surface Sleeve Installed**

Surface Completion by Driller

Water Level: **No Data**

Packers: **Rubber at 20 ft.
Rubber at 340 ft.
Rubber at 400 ft.**

Type of Pump: **No Data**

Well Tests: **Jetted** **Yield: 25 GPM after 1 hours, no drawdown 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: **Lucy Creek Water Well Service****PO Box 1847
Lampasas, TX 76550**Driller Name: **Juan Munoz**License Number: **54176**Apprentice Name: **Mario Munoz**Apprentice Number: **60427**Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	1	Soil
1	26	Overburden
26	50	Grey L.S.
50	51	Moisture Pocket
51	153	Grey L.S. + Shale
153	160	Tan L.S.
160	163	Void, Loss of Circulation
163	290	L.S.
290	390	Re-gain Circulation. Grey Lime, Tan Lime + Conglomerate
390	478	Green/Grey Lime, Shale
478	485	Red Shale, Sand
485	510	Shale + Sand

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	Blank	New Plastic (PVC)	SDR-17	0	290
4.5	Perforated or Slotted	New Plastic (PVC)	SDR-17 0.125	290	330
4.5	Blank	New Plastic (PVC)	SDR-17	330	470
4.5	Perforated or Slotted	New Plastic (PVC)	SDR-17 0.125	470	510

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P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #396533

Owner: **Triple S. Petroleum Co.**

Owner Well #: **MW-4**

Address: **4911 E. 7th St.
Austin, TX 78704**

Grid #: **58-33-7**

Well Location: **525 W. Ben White Blvd.
Austin, TX 78704**

Latitude: **30° 22' 59" N**

Longitude: **097° 59' 03" W**

Well County: **Travis**

Elevation: **No Data**

Type of Work: **New Well**

Proposed Use: **Monitor**

Drilling Start Date: **12/10/2014**

Drilling End Date: **12/10/2014**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	8.25	0	25

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Filter Material</i>	<i>Size</i>
Filter Pack Intervals:	4	25	Gravel	20/40

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	1	Cement
	1	4	Bentonite

Seal Method: **Unknown**

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

Sealed By: **Unknown**

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: **0 ft. below land surface on No Data**

Measurement Method: **Unknown**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
Well was dry	Well was dry

Chemical Analysis Made: **No**

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: **ALPINE FIELD SERVICES**

**6830 BARNEY RD
Houston, TX 77092**

Driller Name: **Patrick Stephens**

License Number: **4850**

Comments: **This report replaces Well Report: Tracking #:389861**

Replaces Tr.#389861 6/5/15 Ref.# 13450

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

From (ft)	To (ft)	Description
0-1		Asphalt / Fill
1- 6		Dark Gray & Reddish Brown Clay
6-25		Yellow Brown Limestone With Gravel

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
2"	New	Sch. 40 PVC	0.10 Screen Setting From 25' To 5'
2"	New	Sch. 40 PVC	Riser Setting From 5' To 0

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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 #607370

Owner:	John & Laura Tittsworth	Owner Well #:	No Data
Address:	1233 Piedmont Dr Abilene , TX 79601	Grid #:	58-33-7
Well Location:	639 Ivan Peason Rd Lago Vista, TX 78645	Latitude:	30° 23' 16.4" N
		Longitude:	097° 59' 06.7" W
Well County:	Travis	Elevation:	728 ft. above sea level
Type of Work:	New Well	Proposed Use:	Domestic

Drilling Start Date: **4/13/2022** Drilling End Date: **4/14/2022**

Borehole:	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
	10.625	0	10
	8.5	10	100
	6.75	100	300

Drilling Method: **Air Rotary**

Borehole Completion: **Perforated or Slotted**

Annular Seal Data:	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
	0	10	Cement 3
	10	100	Bentonite 14

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **6**

Distance to Septic Field or other
concentrated contamination (ft.): **57**

Distance to Septic Tank (ft.): **57**

Method of Verification: **No Data**

Surface Completion: **Pitless Adapter Used**

Water Level: **95 ft. below land surface on 2022-04-26** Measurement Method: **Electric Line**

Packers: **Rubber at 105 ft.
Rubber at 110 ft.
Rubber at 220 ft.
Rubber at 225 ft.
Rubber at 230 ft.**

Type of Pump: **Submersible** Pump Depth (ft.): **260**

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

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
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 Angel Fire Rd.
Dripping Springs, TX 78620

Driller Name: **Michael Scott**

License Number: **59719**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
0	2	topsoil
2	22	caliche
22	200	white / grey limestone
200	210	grey shale / clay
210	230	grey limestone wb 15 gpm
230	300	grey / white limestone wb 20 gpm

Casing:
BLANK PIPE & WELL SCREEN DATA

<i>Dia (in.)</i>	<i>Type</i>	<i>Material</i>	<i>Sch./Gage</i>	<i>Top (ft.)</i>	<i>Bottom (ft.)</i>
4.5	Blank	New Plastic (PVC)	sdr-17	0	240
4.5	Perforated or Slotted	New Plastic (PVC)	sdr-17	240	300

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 #111079

Owner:	DAN DAVIS	Owner Well #:	No Data
Address:	655 IVEAN PEARSON ROAD LAGO VISTA, TX 78645	Grid #:	58-33-7
Well Location:	655 IVEAN PEARSON ROAD SAME, TX 78645	Latitude:	30° 23' 16" N
Well County:	Travis	Longitude:	097° 58' 59" W
		Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Irrigation

Drilling Start Date: **4/29/2004** Drilling End Date: **5/18/2004**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	12	0	38
	6.5	38	205

Drilling Method: **Air Hammer**

Borehole Completion: **Straight Wall**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	20	12

Seal Method: **HAND POURED**

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

Sealed By: **Driller**

Distance to Septic Field or other
concentrated contamination (ft.): **180**

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

Method of Verification: **TAPE MEASURE**

Surface Completion: **Surface Sleeve Installed**

Water Level:	30 ft. below land surface on 2004-05-18	Measurement Method:	Unknown
Packers:	SHALE 165 TRAP		
Type of Pump:	No Data		
Well Tests:	Estimated	Yield: 30 GPM	

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
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: **TOM ARNOLD DRILLING**
1147 CR 170
ROUND ROCK, TX 78664

Driller Name: **Tommy D Arnold**

License Number: **2096**

Comments: **LCS\$**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
0	24	YELLOW LIMESTONE
24	30	BROKEN YELLOW LIMESTONE
30	65	BLUE LIMESTONE & SHALE
65	71	BROWN LIMESTONE
71	89	GREY LIMESTONE
89	95	BROWN LIMESTONE
95	165	GREY LIMESTONE
165	198	BROWN LIMESTONE
198	205	GREY LIMESTONE

<i>Dia. (in.)</i>	<i>New/Used</i>	<i>Type</i>	<i>Setting From/To (ft.)</i>
8	NEW	STEEL	0 38
4 1/2	NEW	PLASTIC	0 205
PERF	175	205	

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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 #519663

Owner:	Doug Malone	Owner Well #:	No Data
Address:	10500 Medinah Green Dr Austin, TX 78717	Grid #:	58-33-7
Well Location:	701 Ivean Pearson Rd Lago Vista, TX 78645	Latitude:	30° 23' 19" N
Well County:	Travis	Longitude:	097° 58' 59" W
		Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Domestic

Drilling Start Date: **7/16/2019** Drilling End Date: **7/16/2019**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	8	0	100
	6.25	100	545

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	100	7 Benseal 2 Portland 9 Bags/Sacks

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **10**

Distance to Septic Field or other
concentrated contamination (ft.): **50**

Distance to Septic Tank (ft.): **50**

Method of Verification: **Land Owner**

Surface Completion: **Surface Sleeve Installed**

Surface Completion by Driller

Water Level: **No Data**

Packers: **Burlap/Neoprene at 100 ft.
Burlap/Neoprene at 105 ft.
Burlap/Neoprene at 400 ft.
Burlap/Neoprene at 405 ft.
Burlap/Neoprene at 410 ft.**

Type of Pump: **No Data**

Well Tests: **Jetted Yield: 30 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
420 - 545	Trinity - TDS 510

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.**
P.O. Box 867
Marble Falls, TX 78654

Driller Name: **Andrew Jackson Johnson** License Number: **54989**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	1	Top SOil
1	31	Tan LS
31	203	Gray Tan LS
203	236	Tan LS
236	275	Brown LS
275	285	White LS
285	300	Gray Tan LS
300	338	Gray LS w/ Clay
338	360	Gray Clay
360	380	Gray LS w/ Sand
380	500	Red Tan LS w/ Sand
500	545	Gravel

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	Blank	New Plastic (PVC)	SDR17	2	485
4.5	Screen	New Plastic (PVC)	.035	485	545

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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 #11547

Owner:	Bill Haskins	Owner Well #:	No Data
Address:	2722 Mid Lane Houston, TX 77027	Grid #:	57-40-9
Well Location:	Enclave Subdivision Lot #6 Spicewood, TX 78669	Latitude:	30° 23' 06" N
Well County:	Travis	Longitude:	098° 01' 12" W
		Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Domestic

Drilling Start Date: **5/20/2002** Drilling End Date: **5/20/2002**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	8	0	10
	6	10	460

Drilling Method: **Air Rotary**

Borehole Completion: **cased**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	20	0

Seal Method: **Slurry**

Sealed By: **Driller**

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

Distance to Septic Field or other
concentrated contamination (ft.): **100+**

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

Method of Verification: **as per landowner**

Surface Completion: **Surface Sleeve Installed**

Water Level: **No Data**

Packers: **Burlap 310',300',20'**

Type of Pump: **No Data**

Well Tests: **Estimated Yield: 40 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
310-456	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: **APEX Drilling**
P.O. Box 867
Marble Falls, TX 78654

Driller Name: **Michael Becker**

License Number: **54516**

Apprentice Name: **Andrew Johnson**

Apprentice Number: **1116**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	25	Caliche
25	155	LT Gry-Tan LS
155	180	Gry LS w/Clay
180	210	Tan LS
210	235	Wht-Tan LS
235	250	Gry-Tan LS
250	265	Gry LS w/Clay
265	290	Blue Clay
290	310	Gry SS & Sand
310	335	Red SS-Sand-H20
335	345	Tan LS
345	370	Red Sandstone-Sand
370	425	Tan LS
425	456	Gravel
456	460	Tan LS w/Clay

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
5 New PVC +2 to 460 Sch40			

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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 #100982

Owner: **TOMMY REAGAN**

Owner Well #: **No Data**

Address: **836 WINDY SHORES LOOP
SPICEWOOD, TX 78669**

Grid #: **57-40-9**

Well Location: **836 WINDY SHORES LOOP
SPICEWOOD, TX 78669**

Latitude: **30° 23' 08" N**

Longitude: **098° 01' 08" W**

Well County: **Travis**

Elevation: **No Data**

Type of Work: **New Well**

Proposed Use: **Domestic**

Drilling Start Date: **9/19/2006**

Drilling End Date: **9/19/2006**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	8.625	0	100
	6.5	100	250

Drilling Method: **Air Rotary**

Borehole Completion: **CASED**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	110	10 CEMENT
	0	110	15 VOLCLAY

Seal Method: **PRESSURE TRIMMY
CEMENTING**

Distance to Property Line (ft.): **N/A**

Sealed By: **Driller**

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: **3 BURLAP,PVC,RUBBER 110',130',150'**

Type of Pump: **Submersible**

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

Water Quality:

Strata Depth (ft.)	Water Type
70	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

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	1	TOP SOIL
1	35	TAN LIMESTONE
35	40	BLUE LIMESTONE
40	45	GRAY LIMESTONE
45	80	TAN LIMESTONE
80	100	GRAY LIMESTONE
100	120	HAMMID CLAY
120	140	HAMMID CLAY W/RED CLAY
140	180	GRAY/TAN SANDSTONE
180	210	RED/TAN LIMESTONE
210	250	RED SAND W/GRAVEL

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
5"	OD	N PVC SDR17	+4 TO 250
5"	OD	N PVC SDR17	SLOT 170 TO 250 .032

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 #93221

Owner:	SUSAN CRUMPLEY	Owner Well #:	No Data
Address:	853 WINDY SHORES LOOP SPICEWOOD, TX 78669	Grid #:	57-40-9
Well Location:	853 WINDY SHORES LOOP SPICEWOOD, TX 78669	Latitude:	30° 23' 18" N
		Longitude:	098° 01' 02" W
Well County:	Travis	Elevation:	759 ft. above sea level
Type of Work:	New Well	Proposed Use:	Domestic

Drilling Start Date: **8/21/2006** Drilling End Date: **8/22/2006**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	8	0	100
	6.75	100	315

Drilling Method: **Air Rotary**

Borehole Completion: **Open Hole**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	100	8

Seal Method: **PRESSURE CEMENTED**

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

Sealed By: **Driller**

Distance to Septic Field or other
concentrated contamination (ft.): **225**

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

Method of Verification: **STEEL TAPE**

Surface Completion: **Surface Sleeve Installed**

Water Level: **167 ft. below land surface on 2006-08-30** Measurement Method: **Unknown**

Packers: **NEOPRENE 110
NEOPRENE 275
NEOPRENE 277**

Type of Pump: **Submersible** Pump Depth (ft.): **300**

Well Tests: **Jetted** Yield: **30 GPM**

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
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: **BOBBY ROBERTS** License Number: **54416**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
0	28	WHTIE ROCK
28	60	TAN ROCK
60	65	GREY CLAY
65	80	GREY ROCK
80	100	WHITE ROCK W/B 6 GPM TDS 510
100	138	GREY ROCK
138	180	GREY SHALE
180	190	GREY ROCK
190	195	BROWN CLAY
195	270	BROWN ROCK W/B 8 GPM TDS 610
270	275	BROWN CLAY
275	315	BROWN ROCK W/B 30 GPM TDS 610

<i>Dia. (in.)</i>	<i>New/Used</i>	<i>Type</i>	<i>Setting From/To (ft.)</i>
4.5	NEW	PLASTIC	0-275
4.5	NEW	SCREEN MFG.	275-315 .050

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P.O. Box 12157
Austin, TX 78711
(512) 334-5540**

STATE OF TEXAS WELL REPORT for Tracking #416359

Owner:	Jay Blegen	Owner Well #:	1
Address:	19701 La Isla Cove Spicewood, TX 78669	Grid #:	57-40-9
Well Location:	19701 La Isla Cove Spicewood, TX 78669	Latitude:	30° 23' 36.44" N
Well County:	Travis	Longitude:	098° 00' 37.68" W
		Elevation:	804 ft. above sea level
Type of Work:	New Well	Proposed Use:	Domestic

Drilling Start Date: 1/20/2016 Drilling End Date: 1/21/2016

Borehole:	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
	10	0	10
	8.5	10	100
	6.75	100	330

Drilling Method: Air Rotary

Borehole Completion: Open Hole

Annular Seal Data:	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
	0	30	Cement 6 Bags/Sacks
	30	100	Bentonite 14 Bags/Sacks

Seal Method: Pressure

Sealed By: Driller

Distance to Property Line (ft.): No Data

Distance to Septic Field or other
concentrated contamination (ft.): 72

Distance to Septic Tank (ft.): No Data

Method of Verification: Steel Tape

Surface Completion: Pitless Adapter Used

Surface Completion by Driller

Water Level: 126 ft. below land surface on 2016-01-25 Measurement Method: Electric Line

Packers: Rubber at 100 ft.
Rubber at 105 ft.
Rubber at 200 ft.
Rubber at 205 ft.

Type of Pump: Submersible Pump Depth (ft.): 300

Well Tests: Jetted Yield: 60+ GPM

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
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 Angel Fire Dr.
Dripping Springs, TX 78620

Driller Name: **Jim Blair**

License Number: **54416**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
0	1	Overburden
1	30	Tan Lime
30	170	Grey Lime
170	230	Grey and White Lime
230	260	Grey and Tan Lime, WB 40GPM
260	320	Grey Lime, WB 20GPM 400TDS
320	330	Grey Clay

<i>Dia (in.)</i>	<i>Type</i>	<i>Material</i>	<i>Sch./Gage</i>	<i>Top (ft.)</i>	<i>Bottom (ft.)</i>
4.5	Blank	New Plastic (PVC)	SDR-17	-2	260
4.5	Perforated or Slotted	New Plastic (PVC)	SDR-17	260	320
4.5	Blank	New Plastic (PVC)	SDR-17	320	330

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P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #51016

Owner: **DENNIS GILLET**

Owner Well #: **No Data**

Address: **4301 BELL SPRINGS RD.
DRIPPING SPRINGS, TX 78620**

Grid #: **57-40-9**

Well Location: **310 ANGEL SKY, LOT18
SPICEWOOD, TX**

Latitude: **30° 23' 26" N**

Longitude: **098° 01' 07" W**

Well County: **Travis**

Elevation: **No Data**

Type of Work: **New Well**

Proposed Use: **Domestic**

Drilling Start Date: **11/6/2004**

Drilling End Date: **11/6/2004**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	9	0	40
	6.5	40	330

Drilling Method: **Air Rotary**

Borehole Completion: **Open Hole**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	40	7 CEMENT

Seal Method: **Slurry**

Distance to Property Line (ft.): **N/A**

Sealed By: **C. T. D.**

Distance to Septic Field or other
concentrated contamination (ft.): **N/A**

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

Method of Verification: **WELL DRILLED
FIRST/OWNER**

Surface Completion: **Surface Sleeve Installed**

Water Level: **No Data**

Packers: **4 RUBBER & BURLAP 40',140',260',280'**

Type of Pump: **Submersible**

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

Water Quality:

Strata Depth (ft.)	Water Type
45	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: **CENTRAL TEXAS DRILLING, INC.**
2520 HWY. 290 WEST
DRIPPING SPRINGS, TX 78620

Driller Name: **AARON GLASS**

License Number: **4227**

Comments: **Amended 1-6-05 Ref#912**

Report Amended on by Request #912

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	1	TOP SOIL
1	40	CALICHE
40	42	BLUE LIME
42	60	GRAY W/TAN LIME
60	70	GRAY LIME
70	110	TAN LIME
110	130	GRAY/TAN LIME
130	150	GRAY W/SHELL LIME
150	155	GRAY LIME
155	165	GRAY CLAY HENZIL
165	180	HAMMID CLAY/RED CLAY
180	190	GRAY LIME
190	200	BLUE/GRAY W/RED CLAY
200	220	RED SHELL
220	250	RED SANDSTONE
250	270	RED W/BUE SHELL
270	325	RED SANDSTONE

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
5"	OD	N PVC SDR17	+2 TO 330 .025

325	330	SHELL W/STRIPS BLUE SAND
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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 #40261

Owner: **Signature Homes**

Owner Well #: **No Data**

Address: **925-B Cap. of Tx. Hwy. Ste.110
Austin, TX 78746**

Grid #: **57-40-9**

Well Location: **Angel Bay Subd.
Austin, TX**

Latitude: **30° 23' 30" N**

Longitude: **098° 01' 00" W**

Well County: **Travis**

Elevation: **No Data**

Type of Work: **New Well**

Proposed Use: **Domestic**

Drilling Start Date: **7/22/2003**

Drilling End Date: **7/22/2003**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	8	0	100
	6	100	360

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	100	20

Seal Method: **Pressure Trimmy
Cementing**

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

Sealed By: **C.T.D.**

Distance to Septic Field or other
concentrated contamination (ft.): **100+**

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

Method of Verification: **Owner**

Surface Completion: **Surface Sleeve Installed**

Water Level: **No Data**

Packers: **PVC and Burlap 100
PVC and Burlap 160
PVC and Burlap 260**

Type of Pump: **Submersible**

Well Tests: **Jetted** **Yield: 20-30 GPM**

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
40	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: **Frank Glass**

License Number: **1313**

Comments: **Logged by DT\$**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
0	1	Top Soil
1	65	Caliche and Rock
65	120	Blue Lime
120	145	Dark Brown Lime
145	160	Gray Lime
160	180	White Lime
180	205	Gray and Brown Lime
205	250	Hammid
250	260	Brown Lime
260	360	Trinity

<i>Dia. (in.)</i>	<i>New/Used</i>	<i>Type</i>	<i>Setting From/To (ft.)</i>
5 N PVC Plastic +2/360 Sch 40			

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 #75958

Owner: **Stadler Custom Homes**

Owner Well #: **No Data**

Address: **P. O. Box 340165
Austin, TX 78734**

Grid #: **57-40-9**

Well Location: **601 Angel Light Drive
Spicewood, TX 78669**

Latitude: **30° 23' 36" N**

Longitude: **098° 00' 53" W**

Well County: **Travis**

Elevation: **No Data**

Type of Work: **New Well**

Proposed Use: **Domestic**

Drilling Start Date: **3/23/2004**

Drilling End Date: **3/23/2004**

Borehole:

<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
9	0	50
6.25	50	270

Drilling Method: **Air Rotary**

Borehole Completion: **Open Hole**

Annular Seal Data:

<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
0	100	6

Seal Method: **Pressure Trimmy
Cementing**

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

Sealed By: **C.T.D.**

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: **Pitless Adapter Used**

Water Level: **No Data**

Packers: **4 Burlap, PVC 100',110',120',240'**

Type of Pump: **Submersible**

Well Tests: **Jetted** **Yield: 50 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
60	Glen Rose

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 Highway 290 West
Dripping Springs, TX 78620

Driller Name: **Aaron Glass**

License Number: **4227**

Comments: **\$dfs**

Report Amended on 8/15/2018 by Request #25792

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	1	Top Soil
1	45	Caliche
45	50	Blue Lime
50	110	Gray Limestone
110	140	Tan Limestone
140	170	White/Tan Limestone
170	195	Gray Limestone w/Tan Limestone
195	240	Tan Limestone
240	250	Gray Shale
250	260	Gray Limestone
260	270	Hammid Clay

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
5	OD New	PVC -2 270 SDR17	

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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 #131515

Owner:	La Isla Service Corp C/O Ken Watts	Owner Well #:	No Data
Address:	801 S Angel Light Dr Spicewood, TX 78669	Grid #:	57-40-9
Well Location:	817 S Angel Light Dr Spicewood, TX 78669	Latitude:	30° 23' 45" N
Well County:	Travis	Longitude:	098° 00' 45" W
		Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Domestic

Drilling Start Date: 10/5/2007 Drilling End Date: 10/5/2007

	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
Borehole:	8	0	100
	6.25	100	265

Drilling Method: Air Rotary

Borehole Completion: Straight Wall

	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
Annular Seal Data:	0	100	11 of Portland

Seal Method: Pressure Tremmie

Distance to Property Line (ft.): 15

Sealed By: Driller

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/Neoprene 145', 140', 100'

Type of Pump: No Data

Well Tests: Jetted Yield: 100+ GPM

Water Quality:

Strata Depth (ft.)	Water Type
145-255	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**

Report Amended on 10/1/2020 by Request #32780

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	28	Tan Limestone
28	145	Grey-Tan Limestone
145	165	Tan Limestone H2O 150
165	170	Grey Limestone
170	205	Grey-Tan Limestone
205	225	Tan Limestone H2O
225	255	Grey-Tan Limestone
255	265	Grey Clay

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
4.5"	(5" OD)	New PVC	+2' to 185' SDR17
4.5"	(5" OD)	New Slotted PVC	185' to 245' .035
4.5"	(5" OD)	New PVC	245' to 265' SDR17

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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 #285712

Owner:	Shoberg Homes	Owner Well #:	1
Address:	5824 Sunset Ridge Austin, TX 78735	Grid #:	57-40-9
Well Location:	8205 Angel Light Drive Spicewood, TX 78669	Latitude:	30° 23' 42" N
		Longitude:	098° 00' 36" W
Well County:	Travis	Elevation:	746 ft. above sea level

Type of Work:	New Well	Proposed Use:	Domestic
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Drilling Start Date: **3/30/2012** Drilling End Date: **4/2/2012**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	7.875	0	220

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	2	100	1h1pg9ptln4bns1

Seal Method: **Pos. Displacement**

Sealed By: **Driller**

Distance to Property Line (ft.): **12'**

Distance to Septic Field or other
concentrated contamination (ft.): **N/A**

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

Method of Verification: **Measured**

Surface Completion: **Pitless Adapter Used**

Water Level:	100 ft. below land surface on 2012-04-02	Measurement Method:	Unknown
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Packers: **6MIL Poly 100'**
6MIL Poly 120
6MIL Poly - Shale Packer 140'

Type of Pump:	Submersible	Pump Depth (ft.):	140
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Well Tests:	Jetted	Yield:	20+ GPM
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Water Quality:

Strata Depth (ft.)	Water Type
140'-200'	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**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	1	Topsoil
1	5	Brown Limestone
5	6	Tan Limestone
6	8	Brown Limestone
8	13	Tan Limestone
13	25	Brown Limestone
25	28	Gray Shale
28	30	Brown Tan Limestone
30	40	Gray Shale
40	110	Gray Limestone
110	130	Dark Gray Limestone
130	140	Light Gray Tan Limestone
140	158	Brown Limestone
158	180	Gray Limestone
180	200	Brown Limestone
200	220	Gray Limestone

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
4.5	New	PVC-SDR 17IB +2' - 140'	
4.5	New	PVC-17 Slotted .035 140'-200'	
4.5	New	PVC-SDR 17IB 200'-220'	

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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 #85187

Owner:	CAROLYN JOHNSON	Owner Well #:	No Data
Address:	5313 BORDLEY DR. HOUSTON, TX 77056	Grid #:	57-40-9
Well Location:	708 S. ANGEL LIGHT SPICEWOOD, TX 78669	Latitude:	30° 23' 38" N
		Longitude:	098° 00' 40" W
Well County:	Travis	Elevation:	871 ft. above sea level
Type of Work:	New Well	Proposed Use:	Domestic

Drilling Start Date: 4/27/2006 Drilling End Date: 4/28/2006

	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
Borehole:	8	0	12
	6.75	12	342

Drilling Method: Air Rotary

Borehole Completion: Open Hole

	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
Annular Seal Data:	0	12	8

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: 158 ft. below land surface on 2006-05-04 Measurement Method: Unknown

Packers: NEOPRENE 12
NEOPRENE 195
NEOPRENE 200

Type of Pump: Submersible Pump Depth (ft.): 300

Well Tests: Jetted Yield: 125 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**

Comments: **No Data**

Report Amended on 3/9/2023 by Request #38891

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	12	CALICHE
12	35	TAN ROCK
35	45	GREY LIMESTONE
45	65	TAN ROCK
65	70	TAN CLAY
70	85	TAN ROCK
85	185	GREY LIMESTONE
185	215	GREY & WHITE ROCK
215	238	TAN ROCK W/B 75 GPM TDS 430
238	267	GREY ROCK
267	285	TAN & WHITE ROCK
285	342	GREY ROCK W/B 50 GPM TDS 400

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
4.5	NEW	PLASTIC	0-232
4.5	NEW	SCREEN MFG.	232-292 .050
4.5	NEW	PLASTIC	292-342

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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 #228197

Owner:	Chris Cokins	Owner Well #:	1
Address:	325 RR 620 S. Austin, TX 78734	Grid #:	57-40-9
Well Location:	19712 La Isla Spicewood, TX 78669	Latitude:	30° 23' 40" N
		Longitude:	098° 00' 38" W
Well County:	Travis	Elevation:	782 ft. above sea level
Type of Work:	New Well	Proposed Use:	Domestic

Drilling Start Date: **6/28/2010** Drilling End Date: **7/1/2010**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	10	0	12
	8	12	100
	6.75	100	300

Drilling Method: **Air Rotary**

Borehole Completion: **Open Hole**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:			29
	0	10	5 cement
	10	100	24 bentonite

Seal Method: **pressure cemented**

Distance to Property Line (ft.): **15**

Sealed By: **Alonzo Duke**

Distance to Septic Field or other
concentrated contamination (ft.): **not yet inst**

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

Method of Verification: **customer**

Surface Completion: **Surface Sleeve Installed**

Water Level: **No Data**

Packers: **Neoprene 100
neoprene 155
neoprene 160**

Type of Pump: **Submersible**

Pump Depth (ft.): **280**

Well Tests: **Jetted** **Yield: 35 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: **Jim Blair**

License Number: **54416**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	3	Loose Fill
3	24	Caliche
24	35	Brown Rock
35	165	Grey Rock
165	170	White Rock WB
170	295	Grey Rock WB
295	300	Grey Clay

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
4.5	New	Plastic	0 240
4.5	New	Plastic Perf	240 280
4.5	New	Plastic	280 300

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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 #117559

Owner:	Kevin Foxx	Owner Well #:	No Data
Address:	3050 Post Oak Dr, Suite 1500 Houston, TX 77056	Grid #:	57-40-9
Well Location:	715 South Angel Light Dr Spicewood, TX 78669	Latitude:	30° 23' 40" N
		Longitude:	098° 00' 42" W
Well County:	Travis	Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Domestic

Drilling Start Date: **4/9/2007**

Drilling End Date: **4/9/2007**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	8	0	100
	6.5	100	325

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	100	9 of Portland

Seal Method: **Pressure Tremie**

Distance to Property Line (ft.): **20**

Sealed By: **Driller**

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: **Neoprene 200', 190', 100'**

Type of Pump: **No Data**

Well Tests: **Estimated** **Yield: 60 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
200-310	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

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	1	Top Soil
1	75	Tan Limestone
75	200	Grey-Tan Limestone
200	245	Tan Limestone
245	270	Grey-Tan Limestone
270	290	Tan Limestone
290	310	Grey-Tan Limestone
310	325	Grey Limestone w/ Clay

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
4.5" (5" OD)	New	PVC	+2' to 250' SDR17
4.5" (5" OD)	New	Slotted PVC	250' to 310' .035
4.5" (5"OD)	New	PVC	310' to 325' SDR17

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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 #473096

Owner: **Lake Travis Builders (Gramling)**

Owner Well #: **No Data**

Address: **P O Box 342105
Austin , TX 78734**

Grid #: **57-40-9**

Well Location: **821 Angel Light Dr.
Spicewood, TX 78669**

Latitude: **30° 23' 45" N**

Longitude: **098° 00' 40" W**

Well County: **Travis**

Elevation: **No Data**

Type of Work: **New Well**

Proposed Use: **Domestic**

Drilling Start Date: **1/30/2018**

Drilling End Date: **1/30/2018**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	8	0	100
	6.25	100	260

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	100	7 Benseal 1 Portland 8 Bags/Sacks

Seal Method: **Pressure**

Distance to Property Line (ft.): **5**

Sealed By: **Driller**

Distance to Septic Field or other
concentrated contamination (ft.): **50+**

Distance to Septic Tank (ft.): **50+**

Method of Verification: **Land Owner**

Surface Completion: **Surface Sleeve Installed**

Surface Completion by Driller

Water Level: **No Data**

Packers: **Burlap/Neoprene at 100 ft.
Burlap/Neoprene at 110 ft.
Burlap/Neoprene at 120 ft.**

Type of Pump: **No Data**

Well Tests: **Jetted** **Yield: 60 GPM**

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
143 - 242	M 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: **Apex Drilling, Inc.**
P.O. Box 867
Marble Falls, TX 78654

Driller Name: **Andrew Jackson Johnson** License Number: **54989**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
0	1	Top Soil
1	25	Tan LS
25	143	Gray Tan LS
143	168	Tan LS
168	196	Gray Tan LS
196	214	Tan LS
214	242	Gray Tan LS
242	260	Gray Clay

<i>Dia (in.)</i>	<i>Type</i>	<i>Material</i>	<i>Sch./Gage</i>	<i>Top (ft.)</i>	<i>Bottom (ft.)</i>
4.5	Blank	New Plastic (PVC)	SDR17	2	180
4.5	Screen	New Plastic (PVC)	.035	180	240
4.5	Blank	New Plastic (PVC)	SDR17	240	260

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 #599175

Owner:	Blain Shanklin	Owner Well #:	No Data
Address:	20811 Hamilton Pool Rd. Dripping Springs, TX 78620	Grid #:	57-40-9
Well Location:	19915 Scenic Dr. Spicewood, TX 78669	Latitude:	30° 24' 00.3" N
Well County:	Travis	Longitude:	098° 00' 00.42" W
		Elevation:	797 ft. above sea level
Type of Work:	New Well	Proposed Use:	Domestic

Drilling Start Date: **3/2/2022**

Drilling End Date: **3/2/2022**

Borehole:	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
	9	0	100
	6.125	100	470

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data:	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
	0	100	Portland 12 Bags/Sacks

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **51**

Distance to Septic Field or other
concentrated contamination (ft.): **N/A**

Distance to Septic Tank (ft.): **N/A**

Method of Verification: **Well drilled 1st**

Surface Completion: **Surface Sleeve Installed**

Surface Completion by Driller

Water Level: **264 ft. below land surface, and 60 GPM** Measurement Method: **Electric Line**
artesian flow on **2022-03-03**

Packers: **Burlap at 100 ft.**
Burlap/Plastic at 120 ft.
Burlap/Plastic at 300 ft.
Burlap/Plastic at 450 ft.
Burlap/Plastic at 470 ft.

Type of Pump: **Submersible** Pump Depth (ft.): **440**

Well Tests: **Jetted** Yield: **50 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
470 - 570	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

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	2	Top Soil
2	5	Clay
5	15	Red
15	60	Gray
60	85	Tan
85	210	Gray Tan Strip Clay
210	235	Gray
235	250	Tan
250	270	Gray w/ Clay
270	290	Clay
290	310	Clay w/ Lime
310	330	Red Sand Stone Gravel
330	350	Red Sand Stone w/ Clay
350	370	White
370	390	Red Sand Stone
390	470	Gravel

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	Blank	New Plastic (PVC)	SDR17	2	390
4.5	Perforated or Slotted	New Plastic (PVC)	SDR17	390	470

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 #272610

Owner:	David Nicol	Owner Well #:	#1
Address:	19545 Sandcastle Drive Spicewood, TX 78669	Grid #:	57-40-9
Well Location:	19545 Sandcastle Drive Spicewood, TX 78669	Latitude:	30° 24' 00" N
Well County:	Travis	Longitude:	098° 00' 14" W
		Elevation:	780 ft. above sea level
Type of Work:	New Well	Proposed Use:	Irrigation

Drilling Start Date: 9/9/2011

Drilling End Date: 9/12/2011

Borehole:	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
	10	0	10
	6.75	10	460

Drilling Method: Air Hammer; Air Rotary

Borehole Completion: Open Hole

Annular Seal Data:	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
	1	20	10 / Concrete

Seal Method: Slurry and poured

Distance to Property Line (ft.): No Data

Sealed By: Driller

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

Distance to Septic Tank (ft.): No Data

Method of Verification: Tape - wheel

Surface Completion: Pitless Adapter Used

Water Level: No Data

Packers: Neoprene 20'
Neoprene 150'
Neoprene 415'

Type of Pump: Submersible

Well Tests: Jetted Yield: 20 GPM

Plug Information:	Description (number of sacks & material)	Top Depth (ft.)	Bottom Depth (ft.)
	N/A		

Water Quality:

Strata Depth (ft.)	Water Type
No Data	Fresh

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**
185 Angelfire Drive
Dripping Springs, TX 78620

Driller Name: **Charles Coffindaffer #58658** License Number: **58658**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

From (ft)	To (ft)	Description
0	2	Topsoil
2	15	Caliche
15	20	White limestone
20	55	Tan limestone
55	80	Grey limestone
80	95	Tan limestone
95	100	Grey limestone with clay
100	195	Grey limestone
195	215	White sandstone 1st H2O-5gpm
800		TDS
215	245	Grey limestone
245	255	White rock 2nd H2O-20 gpm
500		TDS
255	290	Grey limestone
290	315	Blue shale
315	340	Grey / red clay
340	355	Grey rock
355	360	Red clay

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
4.5	New	Plastic	0 to 420'
4.5	New	Screen	Mfg. 420' to 460' .050

360 to 400 Red sandstone
400 to 415 Red clay
415 to 460 Red rock 3rd H2O-20 gpm
1000 TDS

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 #177222

Owner:	KEN ADNEY	Owner Well #:	No Data
Address:	5008 CREEK MEADOW COVE SPICEWOOD, TX 78669	Grid #:	57-40-9
Well Location:	19552 SANDCASTLE SPICEWOOD, TX 78669	Latitude:	30° 23' 58" N
		Longitude:	098° 00' 19" W
Well County:	Travis	Elevation:	740 ft. above sea level
Type of Work:	New Well	Proposed Use:	Domestic

Drilling Start Date: **3/12/2009** Drilling End Date: **3/12/2009**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	10	0	12
	8	12	100
	6.75	100	450

Drilling Method: **Air Rotary**

Borehole Completion: **Open Hole**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	2	2
	2	100	24

Seal Method: **PRESSURE CEMENTED**

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: **108 ft. below land surface on 2009-03-13** Measurement Method: **Unknown**

Packers: **NEOPRENE 100
NEOPRENE 105
NEOPRENE 300
NEOPRENE 305
NEOPRENE 400
NEOPRENE 401**

Type of Pump: **Submersible** Pump Depth (ft.): **420**

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

Water Quality:	<i>Strata Depth (ft.)</i>	<i>Water Type</i>
	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

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	7	GRAY ROCK
7	175	GREY LIMESTONE
175	220	GREY ROCK
220	250	WHITE ROCK W/B 15 GPM TDS 500
250	280	BLUE SHALE
280	300	RED SHALE
300	330	RED SANDSTONE
330	360	RED SHALE
360	450	RED ROCK W/B 20 GPM TDS 900

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
4.5	NEW	PLASTIC	0-400
4.5	NEW	SCREEN MFG	400-440 .050
4.5	NEW	PLASTIC	440-450

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 #416405

Owner:	Shoberg Homes	Owner Well #:	1
Address:	101 Westlake Dr, Suite 143 Austin, TX 78746	Grid #:	57-40-9
Well Location:	19536 Sandcastle Spicewood, TX 78669	Latitude:	30° 23' 58.34" N
		Longitude:	098° 00' 20.38" W
Well County:	Travis	Elevation:	730 ft. above sea level
Type of Work:	New Well	Proposed Use:	Domestic

Drilling Start Date: **2/1/2016**

Drilling End Date: **2/1/2016**

Borehole:	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
	10	0	9
	8.5	9	20
	6.75	20	470

Drilling Method: **Air Rotary**

Borehole Completion: **Open Hole**

Annular Seal Data:	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
	0	20	Cement 4 Bags/Sacks
	20	50	Bentonite 4 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: **Pitless Adapter Used**

Surface Completion by Driller

Water Level: **No Data**

Packers: **Rubber at 50 ft.
Rubber at 140 ft.
Rubber at 350 ft.
Rubber at 355 ft.**

Type of Pump: **No Data**

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

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
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 Angel Fire Dr.
Dripping Springs, TX 78620

Driller Name: **Jim Blair**

License Number: **54416**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
0	1	Topsoil
1	15	Tan Lime
15	35	Tan Lime/Clay Stringers
35	110	Grey Lime
110	135	Grey Lime w/ Shale
135	150	Grey Lime
150	180	White Sandstone, WB 5GPM 300 TDS
180	270	Grey Lime, WB 210-230, 30GPM 300TDS
270	280	Gray Clay
280	330	Red Clay
330	470	Trinity Mix, WB 410-450, 20GPM 500TDS

<i>Dia (in.)</i>	<i>Type</i>	<i>Material</i>	<i>Sch./Gage</i>	<i>Top (ft.)</i>	<i>Bottom (ft.)</i>
4.5	Blank	New Plastic (PVC)	SDR-17	-2	410
4.5	Perforated or Slotted	New Plastic (PVC)	SDR-17	410	470

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**

ATTACHMENT I
ANNUAL CROPPING PLAN

ATTACHMENT I – ANNUAL CROPPING PLAN

1.0 – Nitrogen Balance

In the Final Phase of the permit the proposed drip irrigation system disposes a maximum average flow rate of 67,800 gallons per day (gpd) of treated wastewater effluent, at a maximum application rate of 0.10 gpd per square foot. The treated wastewater effluent is generated by the Point Venture Wastewater Treatment Plant. A possible limiting factor on irrigation rates is the nitrogen application rate. The nitrogen applied from the effluent shall not be greater than the amount that can be taken up and removed by vegetation, so that excess nitrogen does not leach into the ground water system or surface waters.

According to 30 TAC Section 222.83, the allowable annual hydraulic loading rate based on nitrogen limits is given by the following equation:

$$Lw(n) = [(Cp)(Pr-ET) + (U)(4.4)] / [(1-f)(Cn) - Cp]$$

$Lw(n)$ = allowable annual hydraulic loading rate based upon nitrogen limits in inches per year

Cp = total nitrogen concentration in soil solution in milligrams per liter

Nitrogen concentration of soil solution is equal to 9.0 mg/L

Pr = precipitation rate in inches per year

Average precipitation for Austin, over 25-year period of 1988-2012, according to NOAA average precipitation at Austin Bergstrom Airport, Austin, TX and is equal to 33.21 in/yr

ET = evapotranspiration rate in inches per year

Average evapotranspiration rate, calculated using Blaney-Criddle method as described in FAO's "Irrigation Water Management" paper, was calculated to be 63.56 in/yr

U = nitrogen uptake by crop in pounds per acre per year

Average nitrogen uptake for Bermuda Grass, according to Process Design Manual for Land Treatment of Municipal Wastewater, U.S. Environmental Protection, October 1981, is equal to 200 kg/ha/yr or 178 lb/acre/yr

4.4 = combined conversion factor

Cn = total nitrogen concentration in wastewater at time of application to land in milligrams per liter

Proposed effluent maximum permitted concentration equal to 5.0 mg/L

f = fraction of applied nitrogen removed by denitrification and volatilization and assumed to be 0.20

The above equation gives an allowable hydraulic loading rate, based on nitrogen limits, of 102.01 in/yr. The existing hydraulic application rate is 58.56 in/yr. Therefore, the anticipated nitrogen loading is less than what can be used through crop uptake, and nitrogen loading is not a controlling factor in the hydraulic loading rate.

2.0 – Annual Cropping Plan

The proposed drip irrigation site is predominantly occupied by Bermuda grass. A relatively small number of other native trees and shrubs are also present.

Bermuda grass has a typical growing season lasting from March through October. It will go dormant following the first frost and remain dormant until Spring. Winter Rye has a typical growing season lasting from October through February. Bermuda grass has a maximum height of 15 to 18 inches, and Winter Rye has a maximum height of approximately 12 inches.

As discussed further in Section 1.0 – Nitrogen Balance, the average nitrogen uptake for Bermuda grass is equal to 178 lb/acre/yr. An allowable hydraulic loading rate of 102.01 in/yr, based on nitrogen limits, was established for this system. The existing hydraulic loading rate is 58.56 in/yr. Therefore, the amount of nitrogen applied does not exceed the amount that can be removed by crop uptake. No additional fertilizer is proposed to be applied to the site. No supplemental watering is proposed for this site.

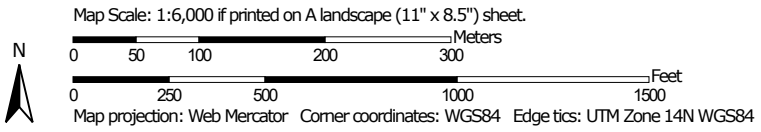
The crop salt tolerances were taken from Table 3 of 30 TAC Section 309.20. Bermuda grass is listed as Highly Salt Tolerant, with a maximum electrical conductivity of 8.0 – 12.0 millimhos/cm at 25 degrees Celsius. Winter Rye is listed as Relatively Salt Tolerant with a maximum electrical conductivity of 6.0 – 8.0 millimhos/cm at 25 degrees Celsius.

ATTACHMENT J
SOIL MAPS

Soil Map—Travis County, Texas (IrrigationBoundary)



Soil Map may not be valid at this scale.



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	20.9	39.4%
DeC	Denton silty clay, 3 to 5 percent slopes	5.3	9.9%
TaD	Eckrant very stony clay, 5 to 18 percent slopes	26.9	50.7%
Totals for Area of Interest		53.1	100.0%

USDA DESIGNATED SOIL SERIES ON LAND APPLICATION AREAS

POINT VENTURE WASTEWATER TREATMENT PLANT

Soil Series	Constituents	Depth from Surface (inches)	K _{sat} (in/hr)	Available Water (inches)	Hydrologic Soil Group
BID Brackett Soils (1-12% Slope)	Gravel Clay Loam	0 -6	0.06 - 1.98	2.4	D
	Clay Loam	6-18			
	Interbedded Soft Limestone and Marl	18-48			
TaD Tarrant Soils	Clay	0 – 8	0.06 – 0.57	0.6	D
	Limestone	8 - 12			
DeC Denton Silty Clay (3-5% Slope)	Silty Clay	0 - 20	0.06 – 0.20	5.3	D
	Silty Clay	20 - 35			
	Limestone	35 - 40			

Dispersal Area

Existing Spray Irrigation

Proposed Drip Irrigation

Soil Type Present

BID, TaD, DeC

BID, TaD, DeC

**ATTACHMENT K
LINER CERTIFICATION**



October 16, 2024

Texas Commission on Environmental Quality
Water Quality Division MC-150
P.O. Box 13087
Austin, TX 78711-3087

RE: Liner Certification

To TCEQ:

Trihydro Corporation (Trihydro) performed a visual inspection of the two existing effluent storage ponds, located at the wastewater treatment plant (WWTP) site, on October 2, 2024. The upper pond (Pond No. 1) has a soil liner, and the lower pond (Pond No. 2) has a high density polyethylene (HDPE) liner with a thickness of 40 mils and incorporates an underdrain leak detection system and inspection manhole. The ponds meet the requirements of 30 TAC 309 and 317 at the time when they were constructed. Please see Attachments K1 and K2 for the August 1994 Effluent Holding Pond Improvements Engineer's Report and January 1995 Change Order No. 1, respectively, for reference.

Sincerely,
Trihydro Corporation

Submitted By:

A handwritten signature in green ink, reading 'David Alexander Vargas'.

David Alexander Vargas, P.E.
Project Manager
Trihydro Corporation

TRAVI-024-003

Attachments



ATTACHMENT K1

AUGUST 1994 EFFLUENT HOLDING POND IMPROVEMENTS ENGINEER'S REPORT

ENGINEER'S REPORT

TRAVIS COUNTY W.C.I.D. - POINT VENTURE
EFFLUENT HOLDING POND IMPROVEMENTS

PERMIT TO DISPOSE OF WASTE
TNRCC Permit No. 11385-01
Travis County, Texas

Submitted To:

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
WATERSHED MANAGEMENT DIVISION
P. O. BOX 13087, CAPITAL STATION
AUSTIN, TEXAS 78711-3087

Prepared For:

TRAVIS COUNTY W.C.I.D.- POINT VENTURE
LEANDER, TEXAS 78641

Prepared By:

T. E. HAYNIE AND ASSOCIATES
CONSULTING ENGINEERS

1101 Capital Of Texas Highway South
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EFFLUENT HOLDING POND IMPROVEMENTS

TRAVIS COUNTY W.C.I.D. - POINT VENTURE

GENERAL INFORMATION

The District owns and operates a wastewater treatment plant which services an area known as Point Venture. There were two wastewater treatment plants originally. Treatment Plant #1 has been abandoned. Treatment Plant #2 is in use.

The District's original permit was issued in 1973 and it was amended in 1989. The current permit will expire in October 1999. The plant is permitted for 70,000 gallons per day (gpd). The average flow is about one-half of the permitted amount. A copy of the permit is attached.

EXISTING WASTEWATER TREATMENT PLANT #2

The plant uses the activated sludge process, which uses a bar screen, aeration basin, clarifier, aerobic digester, and chlorine contact chamber. Effluent is routed to existing holding ponds and disposed on the Point Venture Golf Course.

A drawing of the Treatment Plant #2 layout is attached.

LOCATION OF WASTEWATER TREATMENT PLANT #2

Treatment Plant #2 is located roughly 6.5 miles south of the intersection of FM 1431 and Lohmans Crossing Road in Travis County, Texas. The plant site lies adjacent to Venture Boulevard in the Point Venture Development, between the first and second holes of the golf course.

A vicinity map which shows the project site is attached. The treatment plant and irrigated land are located in the drainage area of Lake Travis, Colorado River Basin.

DISCHARGE PERMIT NO. 11385-01

The District's permit is a no-discharge permit. Effluent disposal is through irrigation on the nine-hole golf course.

PROPOSED POND IMPROVEMENTS

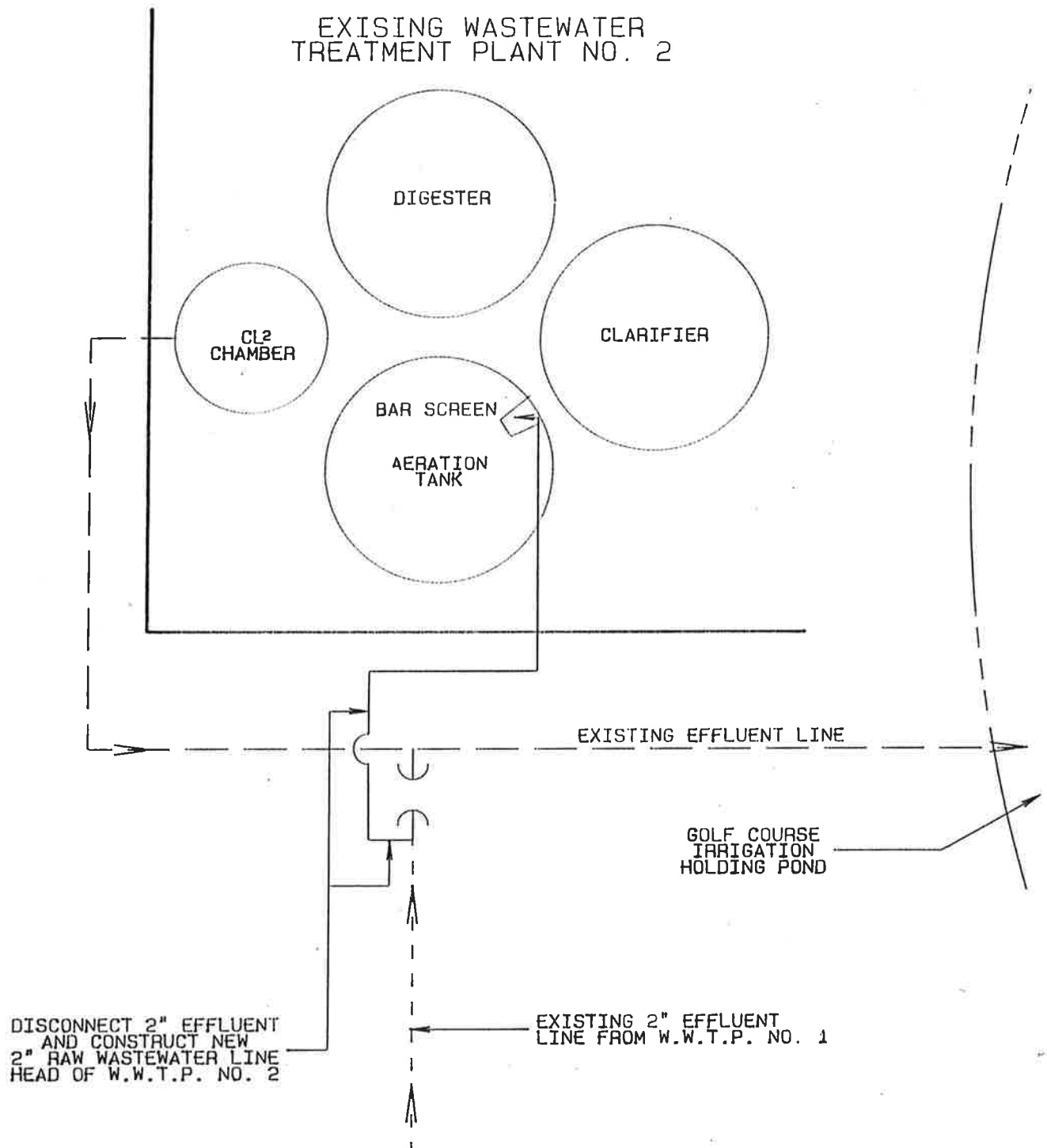
Due to sloping terrain, there are two existing effluent ponds. The upper pond will remain unchanged, and the lower pond will be improved. The proposed improvements will clean, reshape and line the lower pond.

The existing lower pond has a capacity of approximately 400,000 gallons. The improved pond will have a capacity of approximately 900,000 gallons. Based on an average flow rate of 35,000 gpd, the new pond will have a detention time of 25 days.

The improvements will include the installation of an underdrain system and inspection manhole. The lining will be a 36 mil. fabric-reinforced hypalon liner with a 120 mil. polyester, non-woven, geotextile fabric underlayer. Hypalon product literature is attached with this report.

Erosion controls during construction primarily will be the installation of silt fencing. The outside embankment slopes will include soil retention blanket covering. The work will be done during the winter months, which will interfere the least with golf course irrigation demands.

TRAVIS COUNTY W.C. & I.D. - POINT VENTURE
WASTEWATER TREATMENT PLANT NO. 2



TO ROUND ROCK

TO MARBLE FALLS

PROJECT
SITE

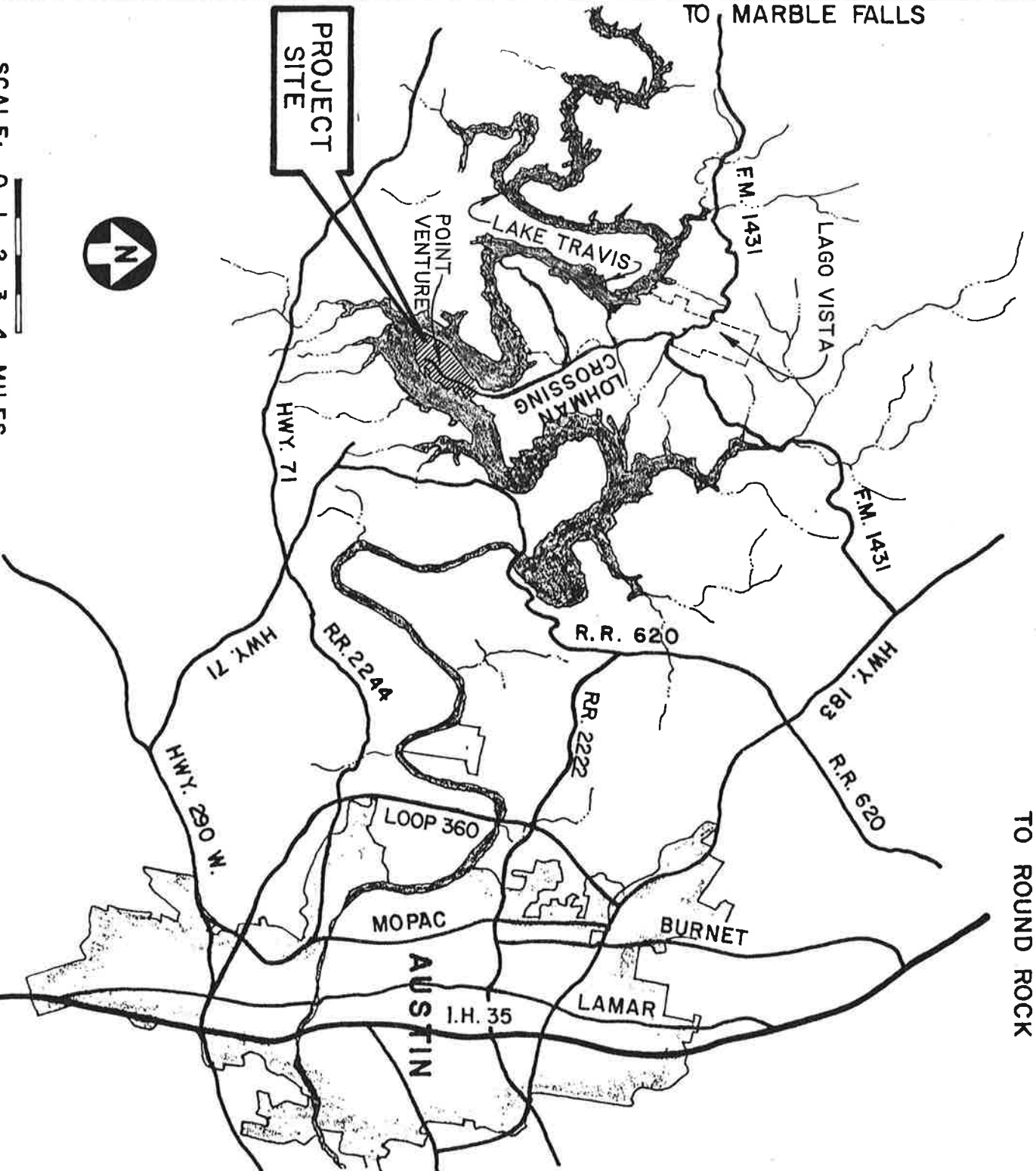


SCALE: 0 1 2 3 4 MILES

TO SAN MARCOS

1

VICINITY MAP





PERMIT NO. 11385-01

TEXAS WATER COMMISSION
Stephen F. Austin State Office Building
Austin, Texas

This minor amendment
supersedes and replaces
Permit Number 11385-01
approved on issued on
January 24, 1973, and
is reissued pursuant
to 31 TAC 305.96(b).

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

I. Name of Permittee:

A. Name

Travis County Water Control and
Improvement District - Point Venture

B. Address

Post Office Box 270 - Venture Boulevard
Leander, Texas 78641

II. Type of Permit: Regular _____ Amended XXX

III. Nature of Business Producing Waste: Domestic Subdivision

IV. General Description and Location of Waste Disposal System:

Description: The facility implements the complete mix mode of the activated sludge process. The process utilizes a bar screen, aeration basin, clarifier, aerobic digester, and a chlorine contact chamber. The effluent is routed to holding ponds. The effluent is disposed on the Point Venture Golf Course.

Location: The plant site (i.e. Plant Number 2) and the irrigated site (i.e. Point Venture Golf Course) are located approximately 6.5 miles south of the intersection, that is within the Village of Lago Vista, of Farm-to-Market Road 1431 and Lohmans Crossing Road in Travis County, Texas. The treatment plant is adjacent to Venture Boulevard in the Point Venture Development, between the 1st and 2nd holes of the golf course.

This permit and the authorization contained herein shall expire at midnight, ten years after the date of Commission approval.

APPROVED, ISSUED, AND EFFECTIVE this 17th day of October,
1989.

ATTEST:

Brenda W. [Signature] [Signature]
For the Commission

- V. Conditions of the Permit: No discharge of pollutants to surface water in the State is authorized.

Character: Treated Domestic Sewage Effluent

Volume: 30-day Average - 0.070 MGD from the treatment system

Quality: The following degree of treatment shall be required:

A. Parameter	Effluent Concentrations (Not to Exceed)
	Single Grab
BOD5, mg/l	30
TSS, mg/l	30

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

B. Monitoring Requirements:

Parameter	Monitoring Frequency	Sample Type
Flow, MGD	Five/week	Instantaneous
BOD5, mg/l	One/month	Grab
pH	One/month	Grab
Chlorine, mg/l	One/month	Grab

The monitoring shall be done after the final treatment unit and prior to irrigation. 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.

Drainage Area: The plant site and irrigated land are located in the drainage area of Lake Travis, Segment Number 1404, Colorado River Basin.

VI. SPECIAL PROVISIONS:

1. 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.

2. Irrigation practices shall be designed and managed so as to prevent ponding of effluent or contamination of ground and surface waters and to prevent the occurrence of nuisance conditions in the area. Tail-water control facilities shall be provided to prevent the discharge of any wastewater from the irrigated land.
3. 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.
4. These public sewerage facilities shall be operated and maintained by a sewage plant operator holding a valid certificate of competency issued pursuant to state law.
5. The sludge from the treatment process shall be disposed of in accordance with all the applicable rules of the Texas Department of Health. The permittee shall ensure that the disposal of sludge does not cause any contamination of the ground or surface waters in the State. The permittee shall keep records of all sludges removed from the wastewater treatment plant site. Such records will include the following information:
 - a. Volume of sludge disposed
 - b. Date of disposal
 - c. Identity of hauler
 - d. Location of disposal site
 - e. Method of final disposal

The above 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.

6. Application rates for the irrigated land shall not exceed 2.7 acre-feet/acre/year. The permittee is responsible for providing equipment to determine application rates and maintaining accurate records of the volume of effluent applied as irrigation water. These records shall be made available for review by the Texas Water Commission and shall be maintained for at least three years.

7. All irrigation practices shall receive approval from the Texas Water Commission.
8. Holding ponds shall conform to the Texas Water Commission "Design Criteria for Sewerage Systems" requirements for stabilization ponds with regard to construction and levee design, and a minimum of 2 feet of freeboard shall be maintained.
9. The plans and specifications for the waste collection and treatment works and disposal system authorized by this permit must be approved pursuant to state law, and failure to secure approval before commencing construction of such works or making a discharge therefrom is a violation of this permit, and each day of discharge is an additional violation until approval has been secured.
10. An annual representative soil sample from the root zone of the irrigated site shall be required. Sampling procedures shall employ accepted techniques of soil science for obtaining representative analytical results. Analysis shall be performed for pH, total nitrogen, potassium, phosphorus and conductivity. The Permittee shall submit the result of the soil samples to Austin Office, Water Quality Division, Enforcement Section and the District Office of the Commission during September of each year.
11. The permittee shall maintain a long term contract with the owner(s) of any irrigated land which is authorized for use in this permit, or own the land authorized for irrigation.
12. 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. A trace chlorine residual shall be maintained in the effluent at the point of irrigation application.
13. Adequate signs shall be erected stating that the irrigation water is from a non-potable water supply. Said 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.
14. Spray fixtures for the irrigation system shall be of such design that they cannot be operated by unauthorized personnel.
15. Irrigation with effluent shall be accomplished only when the area specified is not in use.
16. Permanent transmission lines shall be installed from the holding pond to each tract of land to be irrigated utilizing effluent from that pond.

VII. STANDARD PROVISIONS:

1. 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.
- 2.a. The permittee shall report any noncompliance to the Executive Director (attention: Water Quality Division, Enforcement Section) which may endanger human health or safety, or the environment. Report of such information shall be provided orally within 24 hours from the time the permittee becomes aware of the noncompliance. A written submission of such information shall also be provided within five (5) working days of the time the permittee becomes 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 anticipated 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. Any noncompliance which is 40% over the permitted effluent limitations shall be reported orally within 24 hours and in writing to the District Office within five (5) working days of becoming aware of the condition.
3. Acceptance of this permit constitutes an acknowledgement and agreement that the permittee will comply with all the terms, provisions, conditions, limitations and restrictions embodied in this permit and with the rules and other Orders of the Commission and the laws of the State of Texas. Agreement is a condition precedent to the granting of this permit.
4. Prior to any transfer of this permit, Commission approval must be obtained. The Commission should be notified, in writing, of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Permit Applications Unit in the Water Quality Division.
5. 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.
6. The permittee is subject to the provisions of 31 TAC 305.125.
7. The permittee shall remit an annual waste treatment inspection fee to the Commission as required by 31 TAC Chapter 305 (Subchapter M). Failure to pay this fee may result in revocation of this permit.

**MEMBRANE LINER
ENGINEERING SPECIFICATION GUIDE**



**INDUSTRIAL GRADE HYPALON
CHLOROSULFONATED POLYETHYLENE (CSPE)**

Property	Test Method	TYPE 3-36	TYPE 3-45	TYPE 3-60
Gauge (Mils Nominal)		36.0	45.0	60.0
Plies, Reinforcing 10 × 10 1000d Polyester		1.0	1.0	1.0
Thickness, Minimum Mils	ASTM D751			
1. Overall	Optical Method	34.0	41.0	55.0
2. Over scrim		11.0	11.0	11.0
Breaking Strength—Fabric Minimum (lbs)	ASTM D751, Method A	200.0	250.0	300.0
Tear Strength (pounds, minimum)				
1. Initial	ASTM D751, Modified	80.0	90.0	100.0
2. After Aging		35.0	35.0	35.0
Low Temperature, °F	ASTM D2136, 1/8 in. mandrel, 4 hrs., Pass	-40.0	-40.0	-40.0
Dimensional Stability (each direction percent change maximum)	ASTM D1204 212°F, 1 hr.	2.0	2.0	4.0
Volatile Loss, Maximum, for 30 mil Unsupported Sheet (percent)	ASTM D1203, Method A	0.5	0.5	0.5
Resistance to Soil Burial (percent change maximum in original value)				
a. 30 Mil Unsupported Sheet	ASTM D3084 (per ASTM paragraph 9.5)	0.5	0.5	0.5
1. Breaking Factor		20.0	20.0	20.0
2. Elongation at Break		20.0	20.0	20.0
3. Modulus at 100% Elongation		20.0	20.0	20.0
b. Membrane Fabric Breaking Strength	ASTM D751, Method A	25.0	25.0	25.0
Hydrostatic Resistance, (pounds/sq. in. minimum)	ASTM D751, Method A Procedure 1	250.0	250.0	250.0
Ply Adhesion, Each Direction, (pounds/in. minimum)	ASTM D413, Machine Method	8.0	8.0	8.0
Water Absorption, Maximum 30 Mil Unsupported Sheet (percent weight gain)	ASTM D471			
	14 days @ 70°F	1.5	1.5	1.5
	30 days @ 70°F	2.0	2.0	2.0
	120 days @ 70°F	2.0	2.0	2.0
	14 days @ 158°F	30.0	30.0	30.0
	30 days @ 158°F	30.0	30.0	30.0
	120 days @ 158°F	30.0	30.0	30.0
Factory Seam Requirements**				
Bonded Seam Strength (factory seam, breaking factor, ppi width)	ASTM D751, Modified	160 .0	200.0	240.0

*Hypalon is a Registered Trademark of DuPont

**Factory bonded seam strength is the responsibility of the fabricator.

GENERAL REQUIREMENTS

.01 Scope:

The work covered by these specifications consists of furnishing and installing fabric reinforced chlorosulfonated polyethylene (Hypalon) lining where shown on the drawings or directed by the Engineer. All work shall be done in strict accordance with the drawings and these specifications are subject to the terms and conditions of the contract. It is the intent of these specifications to ensure a first quality finished product is provided.

.02 Description of Materials:

Hypalon (chlorosulfonated polyethylene) lining shall consist of 64" (163 cm) minimum widths of calendered reinforced Hypalon sheeting, fabricated into large sections by means of special factory-bonded seams into a single panel, or into the minimum number of large panels required to complete the project, as supplied by WATERSAVER CO., INC., P.O. BOX 16465, DENVER, COLORADO 80216-0465 (303) 289-1818.

The materials supplied under these specifications shall be first quality products and manufactured specifically for the purposes of this work, and which have been satisfactorily demonstrated by prior use to be suitable and durable for such purposes. The manufacturer of the calendered rolls shall show, upon request, where a minimum of 20,000,000 sq. ft. (1,858,045 sq. m.) of 64" (163 cm) minimum width material has been manufactured for lining hydraulic structures.

.03 Physical Characteristics:

Hypalon utilized for encapsulation of the scrim shall be manufactured from a composition of high quality ingredients, suitably compounded, of which Hypalon 45 synthetic rubber resin is the sole elastomer. Zinc compounds of any kind, including zinc oxide, zinc stearate and zinc dusting agents, are prohibited. Dusting agents of any kind are prohibited on the finished product.

Scrim used in the membrane shall be 10 × 10 1000D polyester of an open type weave that permits strike-through of the Hypalon through the fabric to facilitate adhesion between the plies of Hypalon. The fill yarn must have 2.5 turns per inch maximum and 2.0 turns per inch minimum. All salvage edges must be trimmed prior to applying the Hypalon coating.

The composite membrane material shall consist of thoroughly bonded, fabric-reinforced Hypalon rubber sheeting. It shall be manufactured by the calendering process and shall be uniform in color, thickness, size

and surface texture. The fabric shall be totally encapsulated between plies of Hypalon and shall not extend closer than 1/8 inch to the edge of the Hypalon coating on either side of the fabric. Exposed fabric along longitudinal edges of roll stock and indications of delamination will not be permitted. The composite material shall be a flexible, durable, watertight product free of pinholes, blisters, holes, and contaminants and shall not delaminate in a water environment.

The composite membrane material shall be fabric-reinforced Hypalon consisting of one ply scrim and two plies of Hypalon. It shall be uniform in color, size, and thickness. The material shall have the minimum physical property characteristics, as outlined in the specifications. Certified test results showing that the sheeting meets or exceeds the specification shall be supplied upon request.

.04 Factory Fabrication:

Individual calendered widths of Hypalon shall be factory fabricated into large panels so as to minimize field seaming during installation. Factory fabricated seams shall have a minimum of 5/8" scrim to scrim overlap when fabricated by the dielectric weld. All factory fabricated seams shall have a strength of at least 80% of the specified sheet strength. The fabricator shall be experienced and shall show, upon request, where a minimum of 20,000,000 sq. ft. of this material has been fabricated and successfully installed. Factory fabrication shall be by WATERSAVER CO., INC., P.O. BOX 16465, DENVER, COLORADO 80216-0465 (303) 289-1818.

.05 Packaging and Handling:

After factory fabrication, the panels shall be double accordion folded in both directions and packaged so as to minimize handling at the jobsite. Each factory fabricated panel shall be given prominent, unique indelible identifying, markings indicating proper direction of unrolling and/or unfolding to facilitate layout and positioning in the field. Shipping boxes shall be water resistant, strong enough to prevent damage to the contents, and shall be banded to heavy duty wood pallets. Panels which have been delivered to the jobsite shall be unloaded and stored in their original, unopened containers in a safe dry area and protected from the direct heat of the sun. Whenever possible, a 6" minimum air space between the pallets should be provided, especially for an extended period of time. Pallets shall not be stacked.

.06 Installation:

General—Installation shall be performed by an authorized Installation Contractor who has previously installed a minimum of 2,000,000 sq. ft. (185,000 sq. m.) of this material or by a Contractor who has a Watersaver Field Representative in attendance. The surface (substrate) to receive the liner shall be smooth and free of sharp objects that could puncture the lining. All vegetation must be removed. A soil sterilant may be required at the discretion of the Engineer. The Hypalon lining shall be placed over the prepared surfaces to be lined in such a manner as to assure minimum handling. The panels shall be placed in such a manner as to minimize field seaming. Horizontal field seams on slopes shall be kept to a minimum.

The membrane shall be sealed to all concrete structures and other openings through the lining in accordance with details shown on the drawings submitted by the Contractor and approved by the Engineer. Factory fabricated pipe seals shall be used to seal all pipes penetrating the liner. Any portion of the lining damaged during installation shall be removed or repaired by using an additional piece of the same membrane as specified here-in. The liner shall be installed in a relaxed condition and shall be free of stress or tension upon completion of the installation. Stretching the liner to fit is not permissible.

.07 Protective Cover:

Hypalon membrane lining is one of the most weather resistant materials available. In addition, it is chemically immune to ozone. Therefore, with proper site design and proper installation, it generally is used without a protective cover. However, when a protective cover is used, a nominal 12 inches (10" minimum) of approved cover material shall be placed over the Hypalon lining as shown on the drawings. Cover material shall be approved by the Engineer prior to placement. Soil containing sharp, jagged rocks, roots, debris or any other material, which may puncture the membrane, shall not be used as cover material.

The Contractor may choose the equipment and manner with which to place the cover over the liner, provided: the Contractor satisfactorily demonstrates to the Engineer that both the equipment and manner used to place the chosen cover material over the lining will not have any detrimental effects on the liner.

.08 Field Seams:

Field seams will be made to seal factory fabricated panels of Hypalon together in the field. Seams shall be formed by lapping the edges of panels a minimum of 6 inches (150mm). The contact surfaces of the panels shall be wiped clean to remove all dirt, dust or other substance. Solvent for cleaning contact surfaces of field joints and for other required uses shall be as recommended by the manufacturer or approved fabricator of the fabric-reinforced Hypalon. Sufficient Hypalon to Hypalon bodied solvent adhesive shall be applied to the contact surfaces in the seam area and the two surfaces pressed together immediately. Any wrinkles shall be smoothed out. Field seams shall have a strength of at least 80% of the specified sheet strength.

.09 Joints to Structures:

All curing compounds and coatings shall be completely removed from the joint area. Joining of Hypalon to concrete shall be made with Hypalon to concrete bonding adhesive. Unless otherwise shown on the drawings, the minimum width of concrete to Hypalon joint shall be 6 inches (15 cm). In addition, mechanical attachment may be necessary.

.10 Repairs to Hypalon:

Any necessary repairs to the Hypalon shall be made with the lining material itself and cold applied Hypalon to Hypalon splicing adhesives. Patches should be cut so as to cover the area to be repaired by a minimum of 4" in all directions. Patches should be cut with rounded corners. The splicing adhesive shall be applied to the contact surface between the patch and the lining, and the two surfaces pressed together immediately. Any wrinkles shall be smoothed out.

.11 Quality of Workmanship:

All joints, on completion of the work, shall be tightly bonded. Any lining surface showing injury due to scuffing, penetration by foreign objects, or distress from rough subgrade, shall, as directed by the Engineer, be replaced or covered and sealed with an additional layer of Hypalon of the proper size. A Watersaver Field Service Representative will be required during the liner installation if the installation is not done by an authorized installer. The Contractor will bear the expense of this Field Service Representative. The Field Service Representative is not directly responsible for the quality of the work involved; such responsibility will be solely that of the Contractor.

SPECIFIC INDUSTRIAL GRADE HYPALON FLEXIBLE MEMBRANE LINER INFORMATION

Hypalon membrane liners are widely used in industrial impoundments to provide maximum containment effectiveness. They can withstand a broad range of chemically active substances.

Hypalon based liners are chemically immune to ozone and are one of the most weather resistant materials available. Over 30 years of documented exposure history has been developed on Hypalon based materials.

Exposed liners of Hypalon can withstand above waterline temperatures as high as 200°F (93.3°C) and retain flexibility below -40°F (-40°C).

High strength scrim reinforcement provides added strength for puncture and tear resistance as well as increased dimensional stability. Strength characteristics of Hypalon liners actually improve with age.

Hypalon liners can be factory fabricated by either solvent welding or dielectric welding method. Field seams are made using a Hypalon bodied solvent welding method. Both factory and field seams have the same chemical resistance as the sheet itself, and increase in strength as the membrane ages.

USES OF INDUSTRIAL GRADE HYPALON LINERS

Hypalon liners can be used in many different applications, including:

- | | |
|------------------------|--|
| -solid waste landfills | -tailing impoundments |
| -landfill caps | -industrial waste ponds & impoundments |
| -water treatment ponds | -fly ash disposal cells |
| -sewage lagoons | -leachate collection ponds |
| -sand filter beds | -fire water ponds |
| -golf course ponds | -stormwater detention ponds |
| -decorative lakes | -solar evaporation ponds |
| -irrigation reservoirs | -irrigation canals |

The above information is furnished to aid in selecting Hypalon for use as a geomembrane. Watersaver Company, Inc., as a supplier of materials only, does not assume responsibility for errors in selection, design, engineering, quantities, dimensions or installation.

For additional information, contact Watersaver Company, Inc.

ATTACHMENT K2

JANUARY 1995 CHANGE ORDER NO. 1

CHANGE ORDER

NO. 1

DATE ISSUED: January 9, 1995

TRAVIS COUNTY W.C.I.D. - POINT VENTURE
EFFLUENT HOLDING PONDS - 1994

CONTRACTOR: REDDICO CONSTRUCTION CO., INC.
P. O. BOX 1333
LEANDER, TEXAS 78641

ENGINEER: T. E. HAYNIE AND ASSOCIATES
Consulting Engineers
1826 KRAMER LANE, SUITE A
AUSTIN, TEXAS 78758

You are directed to make the following changes in the Contract Documents.

Description:

Materials, labor and equipment to install 2,800 S.Y. of High Density Polyethylene (HDPE) 40 mil thickness instead of Hypalon for pond liner.

Change in Contract Price:

Original Base Bid Contract Price:	\$97,074.00
Bid Item No. 6: Substitute 40 mil thickness HDPE for Hypalon pond liner.	(\$ 3,500.00)
Net Increase (decrease) of the Change Order:	(\$ 3,500.00)
Contract Price with Approved Change Order #1:	\$93,574.00

RECOMMENDED:

BY: T. E. Haynie
ENGINEER

APPROVED:

BY: H. W. Went
TRAVIS CO. W.C.I.D.
POINT VENTURE
WRD
R.F.
GC

APPROVED:

BY: Charles Costello
CONTRACTOR

FILE:9404-C01.DOC

ATTACHMENT L
GROUNDWATER QUALITY TECHNICAL REPORT

Groundwater Quality Technical Report

In accordance with 30 Texas Administrative Code (TAC) §309.20(a)(4)(A&B), this report provides an assessment of the impact of the wastewater effluent disposal operation on the uses of local groundwater resources.

Texas Water Development Board (TWDB) groundwater data viewer indicates that the wastewater treatment plant (WWTP) and the effluent disposal site overlies the Trinity (outcrop) Aquifer. A BRACS (Brackish Resources Aquifer Characterization System) Study on the Trinity Aquifer was completed in 2017, completed by Southwest Research Institute (SwRI) for TWDB. The Trinity Aquifer is a TWDB-designated major aquifer in the state of Texas and extends across the central and northeastern part of the state. It is composed of several small aquifers contained within the Trinity Group, which includes the Antlers, Glen Rose, Paluxy, Twin Mountains, Travis Peak, Hensell, and Hosston aquifers. These aquifers consist of limestones, sands, clays, gravels, and conglomerates. Their combined freshwater saturate thickness averages approximately 600 feet in north Texas and approximately 1,900 feet in central Texas. Typically, groundwater is fresh but very hard in the outcrop of the aquifer. Total dissolved solids (TDS) increase from less than 1,000 milligrams per liter (mg/L) in the east and southeast to between 1,000 and 5,000 mg/L, or slightly to moderately saline, as the depth of the aquifer increases. Sulfate and chloride concentrations also tend to increase with depth.

TWDB groundwater data viewer indicates that the wastewater treatment plant (WWTP) and the effluent disposal site are located on the Upper Glen Rose Limestone (Kgru). The description of the Upper Glen Rose Limestone is limestone, dolomite, and marl in alternating resistant and recessive beds forming stairstep topography; limestone, aphanitic to fine-grained, hard to soft and marly, light-gray to yellowish-gray; dolomite, fine-grained, porous, yellowish-brown; marine mega fossils include molluscan steinkems, rudistids, oysters, and echinoids; upper part relatively thinner bedded, more dolomitic and less fossiliferous than lower part, thickness about 220 feet.

Per Table 3.0(3) in Domestic Worksheet 3.0, Section 6, there appear to be eleven private groundwater wells within a half-mile radius of the irrigation site boundaries, of which five (#50267, #50268, #50269, #187761, #155587) are plugged and six are active wells. Out of the active wells, four wells (#655914, #16185, #519663, #607370) are used for domestic purposes, one well (#396533) is a monitoring well, and one well (#111079) is used for irrigation purposes. The total depths reported for these wells varied from 15 to 500 feet below ground surface. It appears that wells #155587 & #396533 were completed in Lake Travis and the remaining wells completed in the Upper Glen Rose Limestone of the Trinity Outcrop Aquifer. None of the wells are located within 150 feet of the WWTP and effluent disposal site. None of the wells are used for public water supply. There are no known recharge features such as wells, springs, sinkholes, wetlands, or similar on the WWTP and effluent disposal site. None of these wells are located within Travis County WCID Point Venture's Certificate of Convenience and Necessity (CCN) boundaries (#10296 Water & #20115 Sewer). The best management practice for these wells is maintaining the minimum buffer distance of 150 feet per 30 TAC §309.13(c)(1).

Vegetation consists of Ashe juniper woodland mixed with Texas persimmon, hackberry, and cedar & live oak. The irrigated crop consists of Bermuda, a warm-season grass, and Winter Rye, a cool-season grass, for surface irrigation, which provides year-round vegetative growth. Per TAC 30 §309.20(b)(3)(B), Table 3, Bermuda is classified as Highly Salt Tolerant with an electrical conductivity range of 8.0 to 12.0 milliohms per centimeter (mmho/cm) and Winter-Rye is classified as Relatively Salt Tolerant with an electrical conductivity range of 6.0 to 8.0 mmho/cm. The effluent applied has a maximum application rate of 2.33 acre-feet per year per acre irrigated, which will ensure that the effluent is taken up by the crop root systems.

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey indicate Brackett (BID), Eckrant (TaD), and Denton Silty Clay (DeC) soils. BID consists of gravelly clay loams and bedrock; TaD consists of stony clay and bedrock; and DeC consists of silty clay and bedrock.

Adjacent to the WWTP are two effluent storage ponds. The upper pond (Pond No. 1) has a soil liner, and the lower pond (Pond No. 2) has a high density polyethylene (HDPE) liner with a thickness of 40 mils and incorporates an underdrain leak detection system and inspection manhole. The ponds meets the requirements of 30 TAC §309 & §317 at the time when they were constructed.

Based on the assessment, the WWTP and effluent disposal site are not anticipated to negatively impact the uses of local groundwater resources.

ATTACHMENT L1
1999 ENVIRONMENTAL ASSESSMENT REPORT

**PRELIMINARY FOCUSED ENVIRONMENTAL
ASSESSMENT FOR TRAVIS COUNTY WCID POINT
VENTURE WASTEWATER TREATMENT PLANT
EXPANSION**

Submitted to

**THE TEXAS WATER
DEVELOPMENT BOARD**

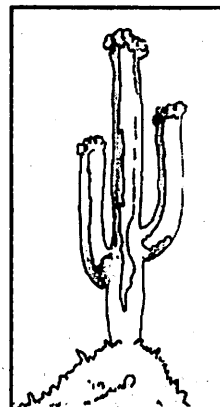
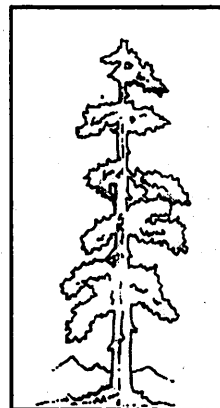
Submitted by

T.E. HAYNIE AND ASSOCIATES

Prepared by

**SWCA, INC.
ENVIRONMENTAL CONSULTANTS**

JULY 1999



**Preliminary Focused Environmental Assessment For
Travis County WCID Point Venture Wastewater Treatment Plant
Expansion**

Based on site visits and a preliminary analysis of existing environmental and archaeological conditions it is recommended that this project be considered for categorical exclusion. Questions concerning this preliminary environmental analysis should be directed to Casey Berkhouse, SWCA, Inc., 1712 Rio Grande, Suite C, Austin, TX, 78701, (512) 476-0891.

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- A. Project Name
- B. Applicant
- C. Design Engineer
- D. Source of Financial Assistance
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- F. Estimated Project Cost
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Section 2 - Project Site Description

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- B. Hydrological Elements
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 - Geology
 - Vegetation
 - Wildlife
 - Listed and Proposed Species
 - Wetlands
- D. Archaeological Review
- E. Land Use, Land Use Planning, and Controls
- F. Evaluation of Impacts
- G. Literature Cited

Section 1 - General Information

A. Project Name

Travis County WCID Point Venture Wastewater Treatment Plant Expansion

B. Applicant

Travis County Water Control and Improvement District Point Venture
270 Venture Boulevard
Leander, Texas 78641

C. Design Engineer

T. E. Haynie and Associates
1826 Kramer Lane, Suite A
Austin, Texas 78758

D. Source of Financial Assistance

The project will be financed through a District Bond Issue. The bonds will be sold to the Texas Water Development Board.

E. Purpose and Need for the Proposed Project

The purpose of the proposed project is to construct new wastewater treatment facilities and an effluent tank for the Travis County Water Control and Improvement District (WCID) Point Venture. The existing facilities are over extended and new facilities are needed to meet present and anticipated future demands.

F. Estimated Project Construction Cost

\$1,309,275.00

G. Site Map

see Figure 1 and Figure 2.

Section 2 - Project Site Description

A. Project Description

The Travis County Water Control and Improvement District (WCID) Point Venture (the "District") is located in western Travis County on the north side of Lake Travis, four miles south of the City of Lago Vista, Texas (Figure 1). The District is located on Anderson Bend, a peninsula formed by a meander of the Colorado River. The existing wastewater treatment plant is located on an approximately 4-acre tract just northwest of the intersection of Venture Boulevard and Venture Drive and is surrounded by a 45-acre golf course (Figure 2). The existing facilities on this tract include the wastewater treatment plant, a maintenance shed, two treated effluent ponds (approximately 0.2 acres and 0.4 acres), a paved access road, and other related

structures. Treated effluent from the plant is discharged into the ponds and then is used to irrigate the approximately 35 acres of the golf course that includes greens, fairways, and tees.

The new wastewater treatment facilities and effluent tank will be constructed on the site of the existing wastewater treatment plant. The new facilities will consist of a wastewater treatment plant designed to handle 150,000 gallons per day, an office and lab building, and a lift station. These structures will be placed on the southern portion of the tract and will necessitate the relocation of approximately 200 feet of the access road to a point approximately adjacent to and south of its current location. Transport of wastewater to the new plant and discharge of treated effluent from the plant and ponds will be accomplished using existing wastewater lines. The existing wastewater treatment plant will be removed in the future.

The new effluent tank will be located on the northern end of tract. The steel tank will be 93 feet in diameter and 62 feet high and will have an operational capacity of 3.0 million gallons. The effluent tank is needed during wet weather conditions to accommodate the increased capacity of the new wastewater treatment plant.

B. Hydrological Elements

There are no hydrological features on the project site or on the adjacent tracts.

C. Environmental Review

Soils

The soils on the project site are classified within the Brackett Association. These soils are typically shallow, gravelly, calcareous, and loamy (Soil Conservation Service 1974). The southeastern portion of the project site traverses Brackett soils, rolling. This series developed over interbedded limestone and marl and typically consists of gravelly clay loams and broken limestone fragments. The northwestern portion of the project site is underlain by Tarrant soils, rolling. This series typically consists of a shallow layer of stony clay underlain by limestone.

Geology

The project site lies near the eastern end of the Edwards Plateau. Surface geology in the project area consists of the upper unit of the Glen Rose Formation. This Lower Cretaceous formation consists mostly of interbedded, fine-grained, hard to soft limestone, marly limestone, and dolomite. The upper unit of this formation is generally not conducive to the formation of karst features.

Vegetation

The project site is located within an area surrounded by wastewater treatment facilities and golf course fairways. Vegetation on the site consists predominately of an Ashe juniper (*Juniperus ashei*, about 5 to 20 feet tall) woodland mixed with

hackberry (*Celtis* sp., about 10 to 15 feet tall), Texas persimmon (*Diospyros texana*, about 5 to 7 feet tall), and live oak (*Quercus virginiana*, about 10 to 20 feet tall), with a relatively open understory. Trees and shrubs occurring with less frequency on the tract include cedar elm (*Ulmus crassifolia*), Texas oak (*Quercus texana*), gum elastic (*Bumelia lanuginosa*), western soapberry (*Sapindus drummondii*), silktassel (*Garrya ovata*), deciduous yaupon (*Ilex decidua*), prairie flameleaf sumac (*Rhus lanceolata*), evergreen sumac (*Rhus virens*), Roosevelt weed (*Baccharis neglecta*), twist-leaf yucca (*Yucca rupicola*), and agarita (*Berberis trifoliolata*). Non-native plants observed include nandina (*Nandina domestica*) and wax ligustrum (*Ligustrum japonicum*).

Maximum canopy height on this tract is about 20 feet. Vegetation cover and canopy closure are both about 85%-90%. Canopy closure is provided by species ≥ 15 feet tall and, on this tract, includes Ashe juniper, hackberry, live oak, cedar elm, and gum elastic. Understory vegetation (i.e., woody species < 15 feet tall) on this tract includes Ashe juniper, hackberry, Texas persimmon, live oak, Texas oak, gum elastic, Western soapberry, silktassel, deciduous yaupon, prairie flameleaf sumac, evergreen sumac, nandina, wax ligustrum, Roosevelt weed, twist-leaf yucca, and agarita.

Listed and Proposed Species

Ten endangered species are listed by the U. S. Fish and Wildlife Service (USFWS) as potentially occurring in Travis County: black-capped vireo (*Vireo atricapillus*), golden-cheeked warbler (*Dendroica chrysoparia*), whooping crane (*Grus americana*), Barton Springs salamander (*Eurycea sosorum*), Bee Creek Cave harvestman (*Texella reddelli*), Bone Cave harvestman (*Texella reyesi*), Kretschmarr Cave mold beetle (*Texamaurops reddelli*), Tooth Cave pseudoscorpion (*Tartarocreagris texana*), Tooth Cave ground beetle (*Rhadine persephone*), and Tooth Cave spider (*Neoleptoneta myopica*).

Black-capped vireos typically nest in shrublands and open woodlands characterized by shrub vegetation extending from the ground to about 6 feet in height and covering 30% or more of the total area. Vegetation on or adjacent to the project site differs in structure from that found in areas regularly occupied by black-capped vireos; therefore, the regular occurrence of the black-capped vireos on the subject tract is considered highly unlikely.

Golden-cheeked warblers typically nest in the Austin area in mature stands of Ashe juniper and deciduous trees especially along drainage bottoms and draws and on slopes. Because of the paucity of mature, deciduous hardwoods, the small overall patch size, and isolated nature of this tract from adjacent patches of appropriate warbler habitat, the regular occurrence of the species on the subject tract is considered highly unlikely.

Whooping cranes winter on the central Gulf Coast of Texas and breed in Alberta, Canada. During migration, whooping cranes typically stop to rest and feed in the bottomlands of larger rivers and in agricultural areas; however, individuals could conceivably alight in any open grassy or marshy area. The project site lies in the general migration corridor for this species, but, vegetation and existing disturbed condition of this area, it is extremely unlikely that whooping cranes would land in the project area or that the project will result in any significant impacts to this species.

The **Barton Springs salamander** is known only from a series of interconnected springs within and in the vicinity of Zilker Park in the City of Austin. It is unknown to what extent this species utilizes subterranean reaches associated with these springs. When located on the surface, the salamander is often found under rocks and in gravel. Water to the springs is supplied by the Barton Springs segment of the Edwards Aquifer located south of the Colorado River (Lake Austin) and extending south to Hays and Blanco counties. The entire project site lies outside of the recharge and contributing zones of the Barton Springs segment and activities at this site should have no direct or indirect effects on the Barton Springs salamander.

The remaining six listed species are cave invertebrates and are believed to be restricted both to a karst geologic region known generally as the Edwards Formation and to Travis and Williamson counties. The Edwards Formation does not occur on the project site. The area is underlain by the Glen Rose Formation which typically does not form caves and subsurface voids known to support the listed cave invertebrates. No caves are known to occur on or immediately adjacent to the project site and the site lies outside of areas identified as potential habitat for any of the federally listed cave invertebrates (Balcones Canyonlands Preserve; RECON/USFWS 1996).

Wetlands

Wetlands are defined by the U. S. Army Corps of Engineers as "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." To qualify as a wetland, three criteria must be met: wetland hydrology, hydric soils, and the presence of wetland indicator plant species. No areas meeting these criteria were observed on the project site.

D. Archaeological Review

A cultural resource assessment of the proposed project site was conducted by an SWCA archaeologist. The assessment included a background literature and records search and a field examination of the project site. The background records search included examining records at the Texas Archaeological Research Laboratory (TARL). Site files, relevant maps, and National Register of Historic Places listings

were investigated for previously conducted surveys and recorded archaeological sites located within the proposed project area. Field examination consisted of a pedestrian survey and shovel testing of the project area.

One archaeological site has been recorded approximately 0.5 miles north of the proposed wastewater treatment plant site. This site (41TV1162) was recorded by a private consultant, but no published report of the findings could be located in TARL files. Site 41TV1162 was recorded as a small, disturbed scatter of burned rock with approximately 20 chert flakes and a few mussel shells in an approximately 45-foot by 60-foot area. In addition to this site, a previous archaeological survey conducted for the Travis County WCID Point Venture Water Treatment Plant Improvement project identified archaeological site 41TV1863 on the grounds of the water treatment plant. This site, approximately 0.3 miles southeast of the proposed wastewater treatment plant site, contained a light scatter of chert debitage, burned limestone, and a bifacial tool fragment. Site 41TV1863 was not considered potentially eligible for the National Register of Historic Places nor as a State Archaeological Landmark.

The wastewater treatment plant project site is highly disturbed by paved roads, existing wastewater facilities, a maintenance shed, and golf course construction. No artifacts were observed on the surface and two shovel tests in the proposed location of the new wastewater plant and the effluent tank revealed shallow, sterile, loamy soils with many limestone gravels. A cutbank near the fairway of the second hole provided a soil profile which confirmed the stratigraphy in the shovel tests. There are no records for archaeological sites on this tract, no cultural materials were observed during field inspections, and shovel testing was negative. Archaeological clearance is recommended for this site.

E. Land Use, Land Use Planning, and Controls

This project is part of a District program to upgrade and improve its water and wastewater service. Land use is unaffected by the proposed project as the new facilities will be integrated with existing infrastructure supporting current and future development.

F. Evaluation of Impacts

Due to the disturbed existing conditions in the proposed project area, the lack of significant environmental or archaeological sites, and the fact that the proposed project will utilize existing transport and discharge lines, no major adverse impacts are expected to result from this project. The potential for a minor temporary increase in the amount of sediment leaving the project area during construction will be minimized using erosion control techniques.

G. Literature Cited

RECON/USFWS. 1996. Habitat conservation plan and final environmental impact statement, Balcones Canyonlands Preserve. Unpubl. document prepared for the executive committee of the Balcones Canyonlands Conservation Plan. Austin, TX.

Soil Conservation Service. 1974. Soil survey of Travis County, Texas. U. S. Dept. of Agriculture. Texas Agriculture Experiment Station.



Figure 1 - Proposed project location.

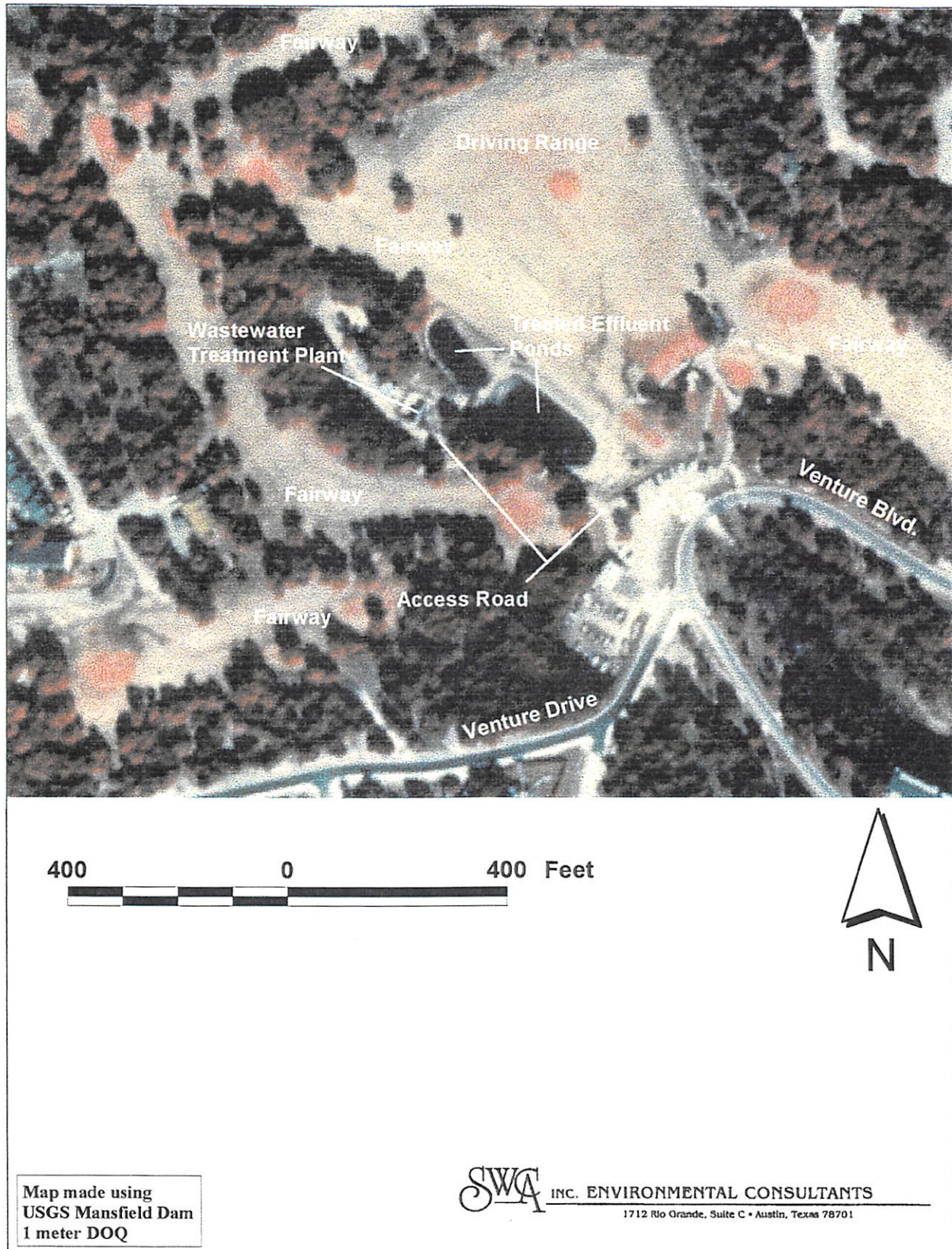


Figure 2 - Proposed project site.



United States Department of the Interior

FISH AND WILDLIFE SERVICES

Austin Ecological Services Office
Hartland Bank Building
10711 Burnet Road, Suite 200
Austin, Texas 78758
(512)490-0057



AUG 30 1999

2-15-99-I-0740

Timothy E. Haynie
T.E. Haynie and Associates
1826 Kramer Lane, Suite A
Austin, Texas 78758-4239

RE: Proposed Point Venture WCID Wastewater Treatment Plant in Travis County, Texas

Dear Mr. Haynie:

This responds to your letter, dated July 14, 1999, requesting the U.S. Fish and Wildlife Service's (Service) comments on the potential impacts to federally listed or proposed threatened or endangered species that may result from Point Venture WCID's proposed wastewater treatment plant in Travis County, Texas. It is our understanding that the proposed project will involve construction of new wastewater treatment plant facilities and an effluent tank. We are providing the following information to assist you and the Environmental Protection Agency (EPA), if federal funds are involved, in assessing and avoiding impacts to federally listed or proposed species and to wetlands.

Threatened and Endangered Species

Based on your conversation with Service biologist Dianne Williams on August 26, 1999, it is our understanding that you are requesting the Service's concurrence with a "no effect" determination for impacts to federally listed or proposed species that may result from the proposed project activities. This determination was not clearly stated in your cover letter nor was it clearly stated in the document, "Preliminary Focused Environmental Assessment for Travis County WCID Point Venture Wastewater Treatment Plant Expansion." This document stated "no major adverse impacts are expected to result from this project." Based on that wording, the Service would have concluded that your determination was "may affect, not likely to adversely affect."

However, upon review of the proposed project's anticipated impacts and further clarification in the telephone conversation, it is our understanding that the proposed project will only involve the removal of two ashe juniper trees. Based on this information and other current biological information, we are able to concur with a "no effect" determination. For future reference, we

have enclosed recommendations for the contents of biological evaluations and biological assessments, not to be confused with Environmental Assessments. In the environmental community the term Environmental Assessment (EA) refers to documents prepared to comply with the National Environmental Policy Act (NEPA) and are designed to provide an analysis of multiple possible alternative actions on a variety of environmental, cultural, and social resources, and often use different definitions or standards.

We recommend you also contact the Texas Parks and Wildlife Department (Endangered Resources Branch), Fountain Park Plaza Building, Suite 100, 3000 South IH-35, Austin, Texas 78704 (telephone 512/912-7011) for information concerning fish, wildlife, and plants of State concern.

Wetlands

Wetlands provide valuable fish and wildlife habitat as well as contribute to flood control, water quality enhancement, and groundwater recharge. According to National Wetland Inventory (NWI) maps, there are no designated wetlands in the proposed project areas, however, they may not identify all wetland areas, thus an "on-site" visit is also recommended and should follow consultation with the maps. These NWI maps correspond to U.S. Geological Survey 7.5-minute quadrangle maps and can be purchased from the Texas Natural Resources Information System, P.O. Box 13231, Austin, Texas 78711-3231 (telephone 512/463-8402). If wetland areas will be dredged and/or filled, you should contact the Fort Worth District Corps of Engineers, Permits Section, CESWF-OD-O, P.O. Box 17300, Fort Worth, TX 76102-0300, 817/334-2681 to determine if a permit is required by that agency prior to commencement of construction activities.

We appreciate the opportunity to comment on this project and your concern for endangered species. If we can be of further assistance, please contact Dianne Williams at 512/490-0057.

Sincerely,

A handwritten signature in cursive script that reads "William Sewell". Below the signature, the word "for" is written in a smaller, simpler script.

David C. Frederick
Supervisor

Enclosure



DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF:

October 4, 1999

Environmental Division
Regulatory Branch

SUBJECT: Project Number 199900658

Mr. Timothy E. Haynie
T.E. Haynie and Associates
1826 Kramer Lane, Suite A
Austin, Texas 78758-4239

Dear Mr. Haynie:

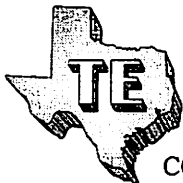
Thank you for your letter of July 14, 1999, concerning a proposal by the Travis County Water Control and Improvement District Point Venture to construct new wastewater treatment facilities and a tank in Travis County, Texas. This project has been assigned Project Number 199900658. Please include this number in all future correspondence concerning this project. Failure to reference the project number may result in a delay.

We have reviewed this project in accordance with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. Under Section 404, the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged and fill material into waters of the United States, including wetlands. The USACE responsibility under Section 10 is to regulate any work in, or affecting, navigable waters of the United States. Based on your description of the proposed work, other information available to us, and current regulations and policy, we have determined that this project will not involve any of the above activities. Therefore, it will not require Department of the Army authorization under the above laws. However, it is incumbent upon you to remain informed of any changes in USACE Regulatory Program regulations and policy as they relate to your project.

Thank you for your interest in our nation's water resources. If you have any questions concerning our regulatory program, please contact Maria Cavazos at the address above or telephone (817)978-2681.

Sincerely,

Presley B. Hatcher
for Wayne A. Lea
Chief, Regulatory Branch



T. E. HAYNIE AND ASSOCIATES
CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

July 14, 1999

RECEIVED
JUL 19 1999
TEXAS HISTORICAL COMMISSION

Dr. James E. Bruseth
Department of Antiquities Protection
Texas Historical Commission
P.O. Box 12276
Austin, Texas 78711

**RE: Preliminary Focused Environmental Assessment for the Point
Venture WCID Improvement Project**

Dear Dr. Bruseth,

Enclosed please find a copy of the final Focused Environmental Assessment for the Wastewater Treatment Plant Expansion portion of the Point Venture WCID Improvement Project. The Water Treatment Plant portion has been submitted separately. Please review the attached assessment and provide your written concurrence that the project will cause no significant environmental impact. Your comments will be forwarded to the Texas Water Development Board.

If you have any questions or concerns feel free to call me 512-837-2446 ext. 208.

Sincerely,

Timothy E. Haynie

Timothy "Timbo" E. Haynie, E.I.T.

T.E. Haynie and Associates

NO EFFECT On National Register-eligible/listed properties or State Archeological Landmarks PROJECT MAY PROCEED by <u><i>William A. Pratt</i></u> for F. Lawrence Oaks State Historic Preservation Officer Date <u>7/29/99</u>
--

CONCUR

by _____
for F. Lawrence Oaks
State Historic Preservation Officer
Date _____

File: timlett



September 28, 1999

Timothy E. Haynie, E.I.T.
T.E. Haynie & Associates
1826 Kramer Lane, Suite A
Austin, TX 78758-4239

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ANDREW SANSOM
EXECUTIVE DIRECTOR

RE: Preliminary Focused Environmental Assessment, Point Venture WCID
Improvement Project

Dear Mr. Haynie:

Thank you for coordinating with this agency in your planning activities regarding the expansion of the wastewater treatment plant at Lago Vista. Department staff reviewed the project. Comments in this letter are intended to assist your planning efforts and are provided to minimize effects of this project upon fish, wildlife, and plant resources.

A previous letter concerning the same site was mailed to you around January 20, 1999. The comments in that letter still apply. The Environmental Assessment states that canopy cover at this site is 85-90%, indicating a substantial amount of vegetation. Undeveloped sites are often the only wildlife habitat remaining in urbanized areas and therefore increase in value as the surrounding habitat is developed. Because areas such as these serve as refuges and travel corridors for urban wildlife, it is important to preserve as many of these habitat areas as possible. Wildlife populations existing in urban environments are an important component of our natural resource that provides great benefit to society in general. Therefore, activities leading to direct or indirect losses of the state's fish and wildlife resources and habitat in urban environments are strongly discouraged. Losses should be minimized using site planning and construction techniques designed to avoid and preserve existing native trees, shrubs, grasses and forbs. The Department recommends incorporation of as much of the existing vegetation as is possible into the project design, possibly as a landscape plan.

However, no impacts to listed species are anticipated as a result of the construction of this project.

*To manage and
conserve the natural
and cultural resources
of Texas for the use and
enjoyment of present
and future generations.*

I appreciate the opportunity to review and comment on your project. If you have any questions or concerns, please do not hesitate to give me a call at (512)389-4638.

Sincerely,

A handwritten signature in cursive script that reads "Kathy Boydston". The signature is written in dark ink and is positioned above the printed name.

Kathy Boydston
Wildlife Habitat Assessment Program

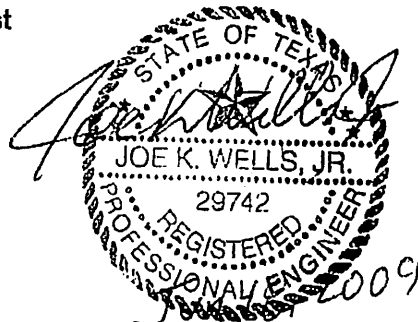
KKB:ck

ATTACHMENT L2
2009 SITE SOILS INVESTIGATION REPORT

POINT VENTURE SUBDIVISION
SITE SOILS INVESTIGATION REPORT

Prepared BY:

Waste Water Solutions
9217 Highway 290 West
Suite 100
Austin, TX 78736



June 18, 2009

TABLE OF CONTENTS

1	Introduction
1	Management Plan
2	Geology
2	USDA-Soil Survey
2	Climate
2	Vegetation
2	Soil Descriptions
5	On-site Soils Descriptions

Site Investigation & Management Plan for the Point Venture Subdivision, Travis County, Texas

Introduction

This project is located on the north side of Lake Travis in Travis County, Texas. No municipal wastewater services are available in this area, therefore, an organized collection and treatment system, coupled with land application of treated effluent, is practical and feasible to provide services to this development.

In environmentally sensitive areas, such as the Texas Hill Country, wastewater treatment systems can surface irrigate (spray systems) or use drip irrigation technology. Topographically, the typical Hill Country landscapes generally prohibit the use of surface spray systems for treated effluent application. Characteristics of major concern are slope, rock outcrop, potential erosion hazards, and shallow soils.

Due to site characteristics, such as shallow soils, generally believed to be non-arable, and sloping topography, it is being proposed to utilize either surface or subsurface drip irrigation for the ultimate treated effluent disposal system for the Point Venture Subdivision site. The treated effluent irrigation system will utilize a ACT drip Irrigation Management System, or comparable, management system to allow for accurate control of the proposed surface or subsurface drip disposal treated effluent irrigation system.

The surface drip irrigation system will utilize drip tubing that is embedded with compensating drip emitters to ensure accurate and uniform dosing of the irrigation sites. The site will retain all of the trees that are now present. The tubing will be laid on the surface of the ground beneath the trees. Once the tubing has been installed 4" of mulch will be placed over the tubing.

The subsurface drip irrigation system will utilize drip tubing that is embedded with compensating drip emitters to ensure accurate and uniform dosing of the irrigation sites. The tubing will be plowed into the ground using a vibratory cable plow. The tubing will be buried 6" – 8" below the surface of the ground. The tubing will be installed in areas that have a minimum of 12" of suitable soil beneath the dripper tubing. In areas that enough suitable soil is not available the soil may be supplemented with imported soil.

A site investigation was performed to obtain information that would assist in the design of the drip irrigation system. This report will summarize these results and will be utilized to assist in the development of the drip fields to be used for treated effluent application.

Management Plan

The proposed plan for the surface drip irrigation treated effluent application areas is to trim the existing vegetation to provide access for the installation of the tubing. The high evapotranspiration of the existing woody species will be relied upon to take up the treated effluent. The woody species will serve as the warm and cool season vegetation for the uptake of the treated effluent. *Transpirational water use by Ashe juniper trees (Juniperus ashei) can be a substantial part of the annual water budget on native rangelands. In short-term measurements, water use by large juniper trees can be as high as 35 gallons per day when soil moisture is available. This estimate was derived*

high as 35 gallons per day when soil moisture is available. This estimate was derived using instantaneous measurements of leaf gas exchange on native trees near Concan, TX. Samples were collected by enclosing a small sample of leaf material in a chamber and measuring the decrease in CO₂ resulting from carbon uptake and the increase in relative humidity resulting from transpirational loss. Multiple samples were taken throughout the day to calculate diurnal gas exchange patterns, and in different seasons to determine annual patterns. Samples were taken in multiple canopy locations at each sample. A canopy model incorporating leaf distribution within the canopy and gas exchange rates was developed to estimate canopy level water use.(Owens, M.K., Maximum Sustained Water Use for Irrigated Juniper Trees, page 1, Texas Agricultural Experiment Station, Uvalde, Texas, July 17, 2002)

Upslope surface drainage will be diverted from the proposed application areas. Areas where drainage is concentrated should not be utilized for application of treated effluent. These areas should be buffered.

The proposal for the treated effluent application areas via subsurface drip irrigation is to utilize herbaceous vegetation for establishing a cover crop. A mixture of native and turf grass, herbaceous vegetation will be used to vegetate the areas where soils will be imported and areas where clearing will occur.

In developing the irrigation areas, upslope surface drainage will be diverted to prevent run-on onto the treated effluent application areas. Areas where drainage appears to be concentrated, and active, should be buffered from application of treated effluent.

Where soils are not sufficient, a suitable material will need to be imported to ensure that there is at least one foot of rootable material beneath the dripper lines. This will ensure that there is sufficient rooting depth to allow for the growth of herbaceous vegetation that will utilize the treated effluent.

All areas will be seeded with high performance turf grass vegetation and will include warm season and cool season vegetation. This will help ensure that there is a viable cover crop growing at all times to uptake the water and nutrients associated with the treated effluent. Most species can and will utilize N levels much greater than 100-150 lbs of N/acre/yr. These areas will be mowed to ensure that the vegetation continues to exhibit vigorous growth habits and to maximize the uptake potentials and to ensure that a standing crop does not interfere with the establishment of the following seasons vegetation emergence.

Site Details

Geology

According to the Geologic Atlas of Texas, the site is located on the Glen Rose Formation. The official description is; *composed of limestone, dolomite, and marl; alternating resistant and recessive beds forming stairstep topography; limestone aphanitic to fine grained, hard to soft and marly, light gray to yellowish gray; dolomite, fine grained, porous, yellowish brown; marine megafossils include molluscan steinkerns, rudistids, oysters, and echinoids; upper part, relatively thinner bedded, more dolomitic, and less fossiliferous than the lower part; thickness of Glen Rose Formation 380± feet.*

USDA-Soil Survey

A soils map is located in the Appendix of this document. According to the results of the site investigation and visual observations, the soils of this site are variable and do not accurately reflect what is mapped and listed in the soil survey. However, a large part of this variability may be due to past management practices of the site, as will be discussed later in this document.

Climate

According to the USDA-SCS Soil Survey for Travis County, Texas, the climate in Travis County is humid subtropical and is characterized by hot summers and relatively mild winters. Temperature and rainfall are the climatic factors that have the greatest influence on the formation of soils in this area. The pattern of rainfall consists of interspersed wet and dry periods.

Vegetation

Vegetation within the areas to be utilized for the application of treated effluent varies as far as speciation of woody and herbaceous species. Generally, the dominating woody species are Ashe Juniper and Live Oak with some sub-dominate species associated such as abundant herbaceous plant growth.

Soils

According to the Soil Survey, soils of the treated effluent application site consist of clay of the Brackett Soils, rolling (mapped as B1D) and Tarrant Soils (mapped as TaD)

Brackett Soils, rolling (B1D)

Brackett soils, rolling (B1D).—These soils occupy gently undulating to rolling topography, generally on benches 100 to 500 feet wide that are separated by outcrops of the underlying limestone and marl. Slope is dominantly 5 to 12 percent, but it ranges from 1 to 12 percent. These soils developed over interbedded limestone and marl. Individual areas are more than 1,000 acres in size.

These soils have the profile described as representative of the series. About 20 percent of the mapping unit consists of rock outcrop. Broken limestone fragments cover up to 75 percent of the surface. The texture of the surface layer is gravelly clay loam, gravelly loam, loam, or clay loam.

Included in mapping were soils less than 10 inches thick on the outer edges of the benches and some soils resting directly on indurated limestone. Also included, in narrow valleys, were deeper soils, such as those of the Volente, Altoga, and San Saba series. These included soils make up 10 to 15 percent of the mapping unit.

A large part of the annual rainfall is lost through runoff and seepage from the limestone outcrops. These soils are not suited to crops. They are better suited to range or wildlife habitat. (Capability unit VIIc-2, Adobe range site, pasture and hayland group not assigned)

According to the Soil Survey, soils of the treated effluent application site consist of clay of the Tarrant Soils, rolling (mapped as TaD) and the Bracket Soils, rolling (mapped as B1D), a clay loam.

Tarrant soils, rolling (TaD)

Tarrant soils, rolling (TaD).—This soil occupies complex slopes that are dominantly 5 to 12 percent. Areas are broad and range from 100 to 1,000 acres in size. This soil has the profile described as representative of the series.

Random outcrops of limestone that cover 2 to 3 feet of the surface are common. These rock outcrops, in addition to smaller loose stones, cover from 30 to 60 percent of the acreage.

In some areas about 30 percent of the surface is covered with 1- to 3-inch limestone gravel. This inclusion is about 6 percent of the acreage. Small areas of Brackett soils were included in other places, and some slopes up to 18 percent were included.

Because the thin, stony solum prevents the use of farm machinery, this soil is not suitable for crops or improved pasture or hay. It is well suited to native grass range. (Capability unit VIs-1, Rocky Upland range site, pasture and hayland group not assigned)

Test Hole Selection

Joe K. Wells, Jr., P.E. selected 26 representative sites within the proposed effluent irrigation area. The holes were located using a GIS map provided by River City Engineering and a handheld GPS unit. Topographical and visual uniformity of the irrigation sites were easily ascertained. Thus, we feel the number and selection of the test holes was adequate to give representation of the proposed treated effluent application areas.

It is virtually impossible to try and establish a sampling regime that will sufficiently allow for coverage of inclusional features within the application areas. However, if any of these features are discovered at the time of construction, these areas will be noted and sufficiently evaluated to determine their relevance to the construction and ultimate performance of the treated effluent application sites. The soil descriptions will be followed by three pictures for each hole the first picture is an end view of the hole, the second is a sidewall view of the hole, and the final picture is of the area surrounding the hole.

Test Hole #A

Vegetation Characteristics

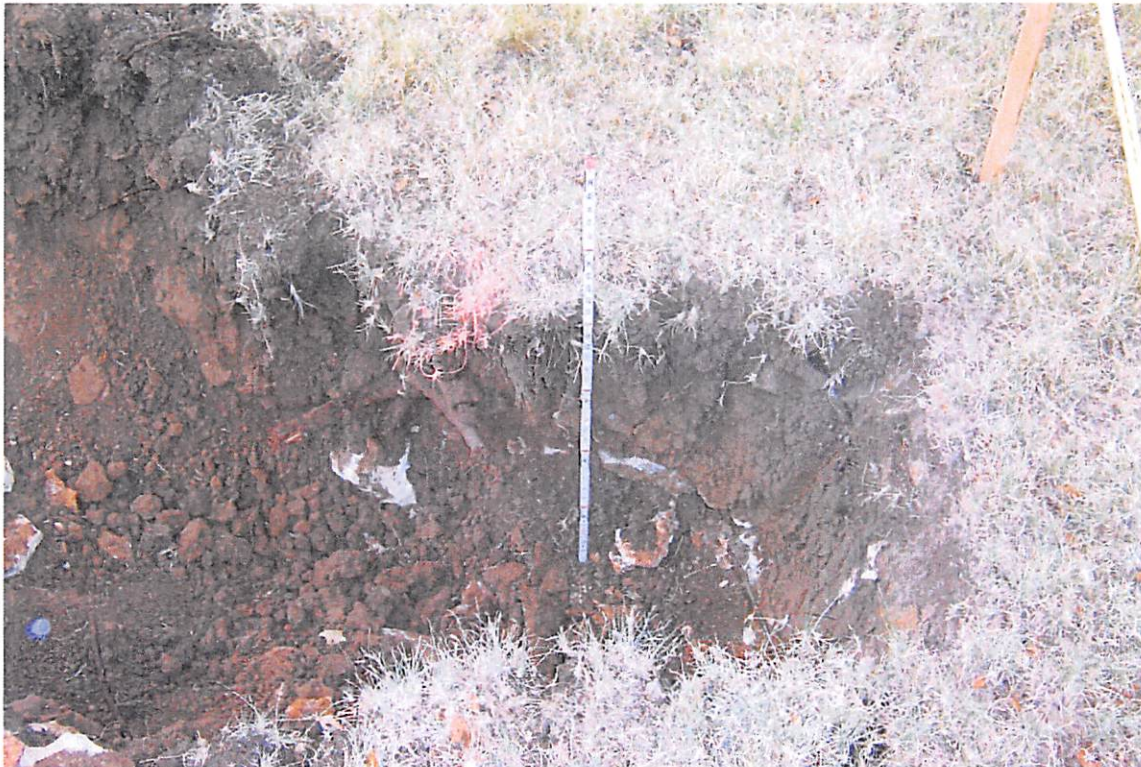
The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 5% canopy cover. There was 100% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 5%. The litter layer coverage was estimated at 0%. Slope of this area was 0-5%.

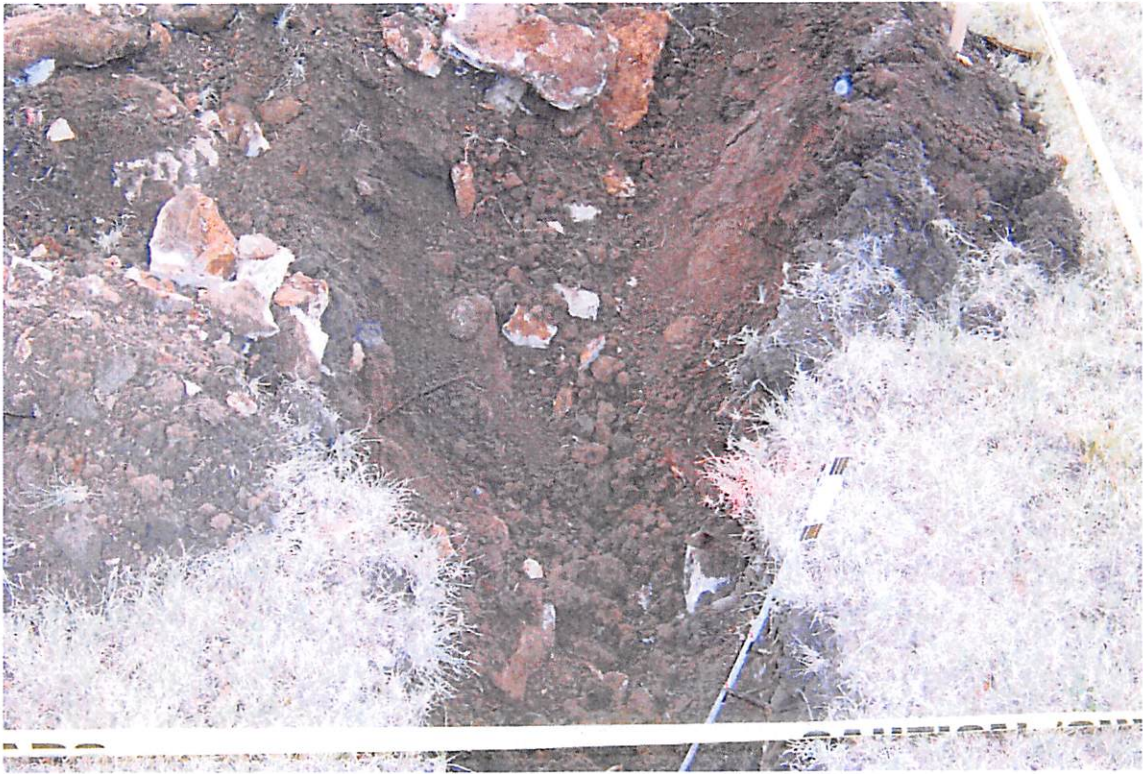
Soil Characteristics

Total soil depth was 28 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 18 inches. The secondary rooting depth was 18 inches.

Depth of the 1st horizon was 28 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 15% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was wavy. The restrictive horizon was reached at 28 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #B

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 20% large Oak and 80% juniper with 100% canopy cover. There was 20% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 100%. Slope of this area was 0-5%.

Soil Characteristics

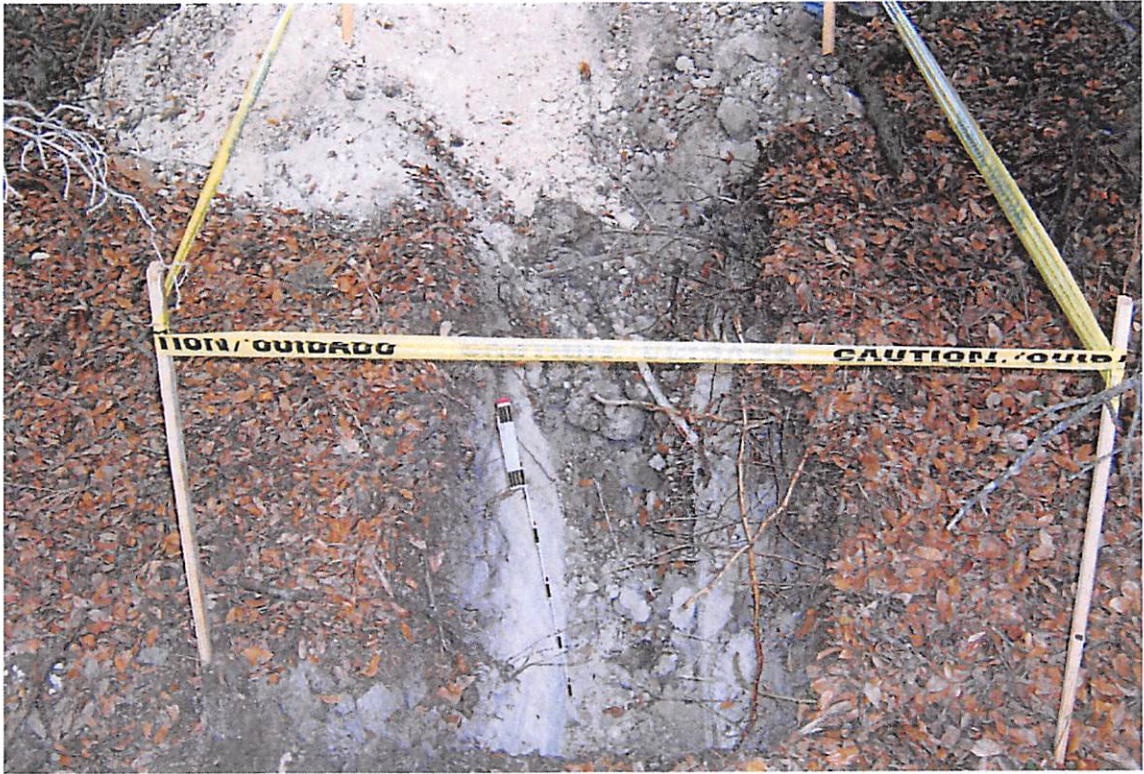
Total soil depth was 30 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 4 inches. The secondary rooting depth was 15 inches.

Depth of the 1st horizon was 6 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 0% limestone fragments.

Depth of the 2nd horizon was 24 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 5% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. No restrictive horizon was reached at 30 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #C

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 20% large Oak and 80% juniper with 50% canopy cover. There was 50% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 20%. The litter layer coverage was estimated at 50%. Slope of this area was 5-10%.

Soil Characteristics

Total soil depth was 32 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 6 inches. The secondary rooting depth was 12 inches.

Depth of the 1st horizon was 6 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 5% limestone fragments.

Depth of the 2nd horizon was 26 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 5% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. The boundary between the 2nd horizon and the restrictive horizon was smooth. A restrictive horizon was reached at 32 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #D

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 10% large Oak and 90% juniper with 80% canopy cover. There was 60% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 10%. The litter layer coverage was estimated at 80%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 31 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 5 inches. The secondary rooting depth was 19 inches.

Depth of the 1st horizon was 5 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 5% limestone fragments.

Depth of the 2nd horizon was 26 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 0% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. No restrictive horizon was reached at 31 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #E

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 20% large Oak and 80% juniper with 40% canopy cover. There was 90% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 15%. The litter layer coverage was estimated at 40%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 31 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 5 inches. The secondary rooting depth was 26 inches.

Depth of the 1st horizon was 5 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

Depth of the 2nd horizon was 26 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 10% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. The boundary between the 2nd horizon and the restrictive horizon was smooth. A restrictive horizon was reached at 31 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #F

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 5% canopy cover. There was 100% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 5%. The litter layer coverage was estimated at 0%. Slope of this area was 0-5%.

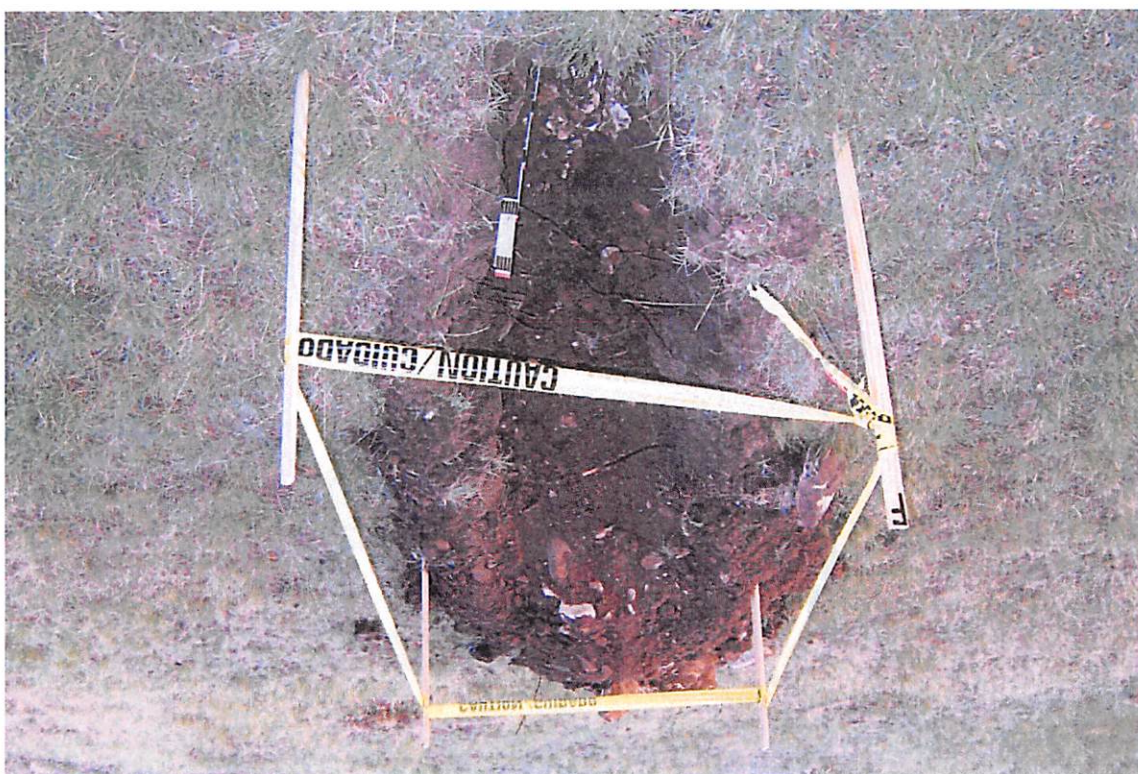
Soil Characteristics

Total soil depth was 21 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 9 inches. The secondary rooting depth was 13 inches.

Depth of the 1st horizon was 21 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 20% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was wavy. The restrictive horizon was reached at 21 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #G

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 5% canopy cover. There was 100% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 5%. The litter layer coverage was estimated at 0%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 25 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 8 inches. The secondary rooting depth was 18 inches.

Depth of the 1st horizon was 25 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was smooth. The restrictive horizon was reached at 25 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #H

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 50% canopy cover. There was 80% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 10%. The litter layer coverage was estimated at 20%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 24 inches where digging was stopped. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 14 inches. The secondary rooting depth was 21 inches.

Depth of the 1st horizon was 24 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 20% limestone fragments.

No restrictive horizon was reached at 24 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #1

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 20% large Oak and 80% juniper with 50% canopy cover. There was 50% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 50%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 29 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 8 inches. The secondary rooting depth was 14 inches.

Depth of the 1st horizon was 11 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 0% limestone fragments.

Depth of the 2nd horizon was 18 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 10% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. No restrictive horizon was reached at 29 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #J

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 10% large Oak and 90% juniper with 70% canopy cover. There was 60% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 15%. The litter layer coverage was estimated at 20%. Slope of this area was 0-5%.

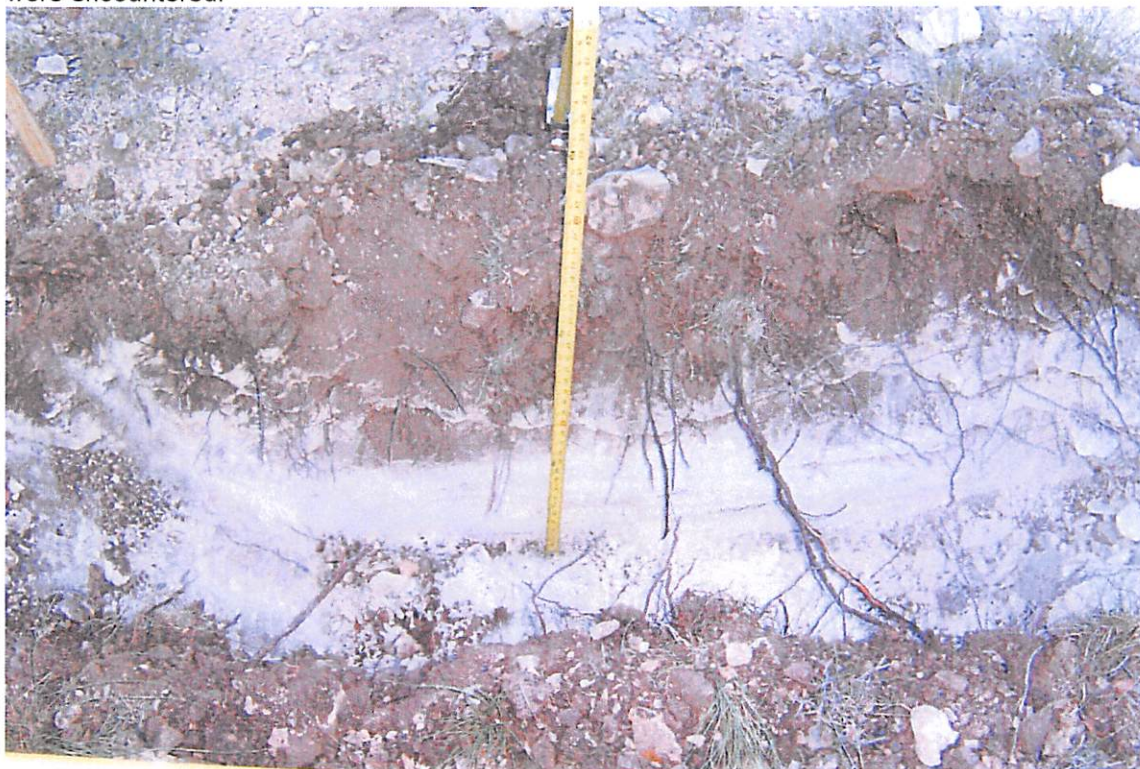
Soil Characteristics

Total soil depth was 26 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 9 inches. The secondary rooting depth was 19 inches.

Depth of the 1st horizon was 3 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

Depth of the 2nd horizon was 23 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 5% limestone fragments.

The boundary between the 1st and 2nd horizon was wavy. The boundary between the 2nd horizon and the restrictive horizon was wavy. A restrictive horizon was reached at 26 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #K

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 10% canopy cover. There was 95% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 10%. The litter layer coverage was estimated at 10%. Slope of this area was 0-5%.

Soil Characteristics

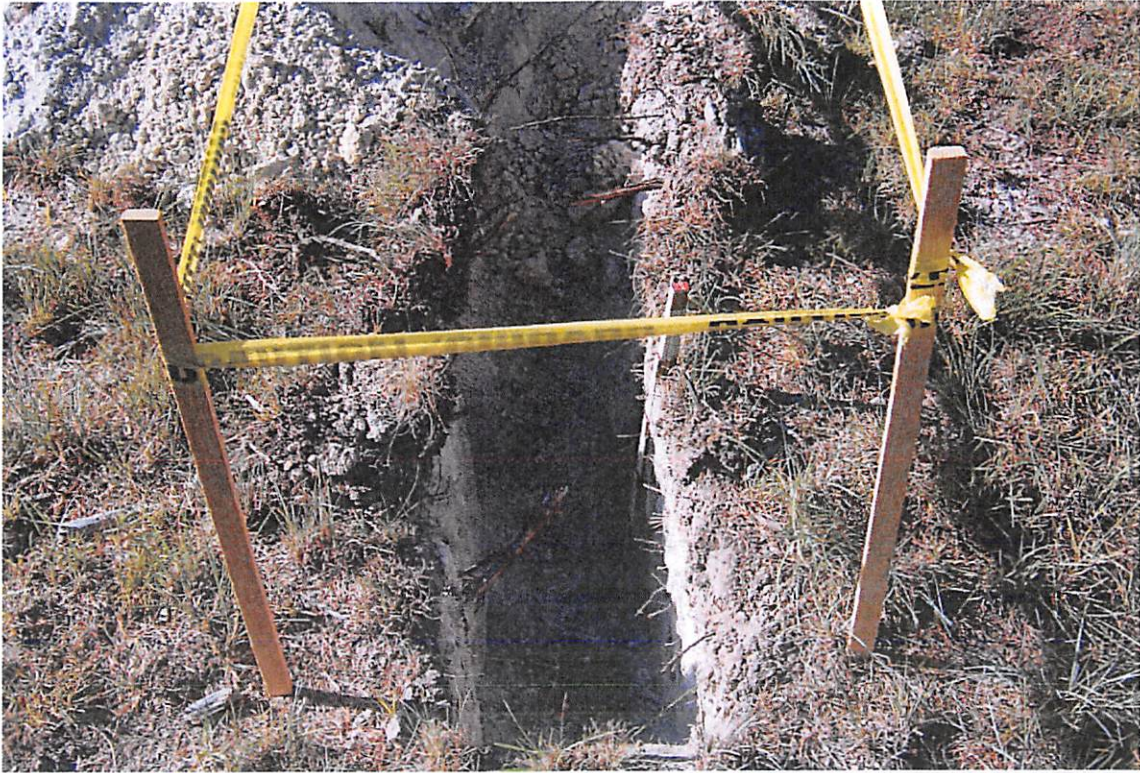
Total soil depth was 28 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 8 inches. The secondary rooting depth was 16 inches.

Depth of the 1st horizon was 3 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 0% limestone fragments.

Depth of the 2nd horizon was 25 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 5% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. The boundary between the 2nd horizon and the restrictive horizon was smooth. A restrictive horizon was reached at 28 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #L

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 80% canopy cover. There was 25% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 20%. The litter layer coverage was estimated at 80%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 14 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 14 inches. The secondary rooting depth was 14 inches.

Depth of the 1st horizon was 14 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 30% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was wavy. The restrictive horizon was reached at 14 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #M

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 10% large Oak and 90% juniper with 50% canopy cover. There was 40% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 50%. The litter layer coverage was estimated at 40%. Slope of this area was 5-10%.

Soil Characteristics

Total soil depth was 35 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 12 inches. The secondary rooting depth was 16 inches.

Depth of the 1st horizon was 4 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 15% limestone fragments.

Depth of the 2nd horizon was 31 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 10% limestone fragments.

The boundary between the 1st and 2nd horizon was wavy. No restrictive horizon was reached at 35 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #N

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 10% large Oak and 90% juniper with 50% canopy cover. There was 50% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 20%. The litter layer coverage was estimated at 50%. Slope of this area was 5-10%.

Soil Characteristics

Total soil depth was 32 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 12 inches. The secondary rooting depth was 16 inches.

Depth of the 1st horizon was 5 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 0% limestone fragments.

Depth of the 2nd horizon was 27 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 0% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. No restrictive horizon was reached at 32 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #O

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 20% large Oak and 80% juniper with 60% canopy cover. There was 20% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 20%. The litter layer coverage was estimated at 40%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 32 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 12 inches. The secondary rooting depth was 16 inches.

Depth of the 1st horizon was 4 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

Depth of the 2nd horizon was 28 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 10% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. No restrictive horizon was reached at 32 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #P

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 10% large Oak and 90% juniper with 90% canopy cover. There was 50% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 80%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 22 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 8 inches. The secondary rooting depth was 18 inches.

Depth of the 1st horizon was 22 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 20% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was smooth. The restrictive horizon was reached at 22 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #Q

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 90% canopy cover. There was 70% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 15%. The litter layer coverage was estimated at 30%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 18 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 4 inches. The secondary rooting depth was 18 inches.

Depth of the 1st horizon was 10 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

Depth of the 2nd horizon was 8 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 15% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. The boundary between the 2nd horizon and the restrictive horizon was smooth. A restrictive horizon was reached at 18 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #R

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 50% large Oak and 50% juniper with 40% canopy cover. There was 90% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 10%. The litter layer coverage was estimated at 20%. Slope of this area was 0-5%.

Soil Characteristics

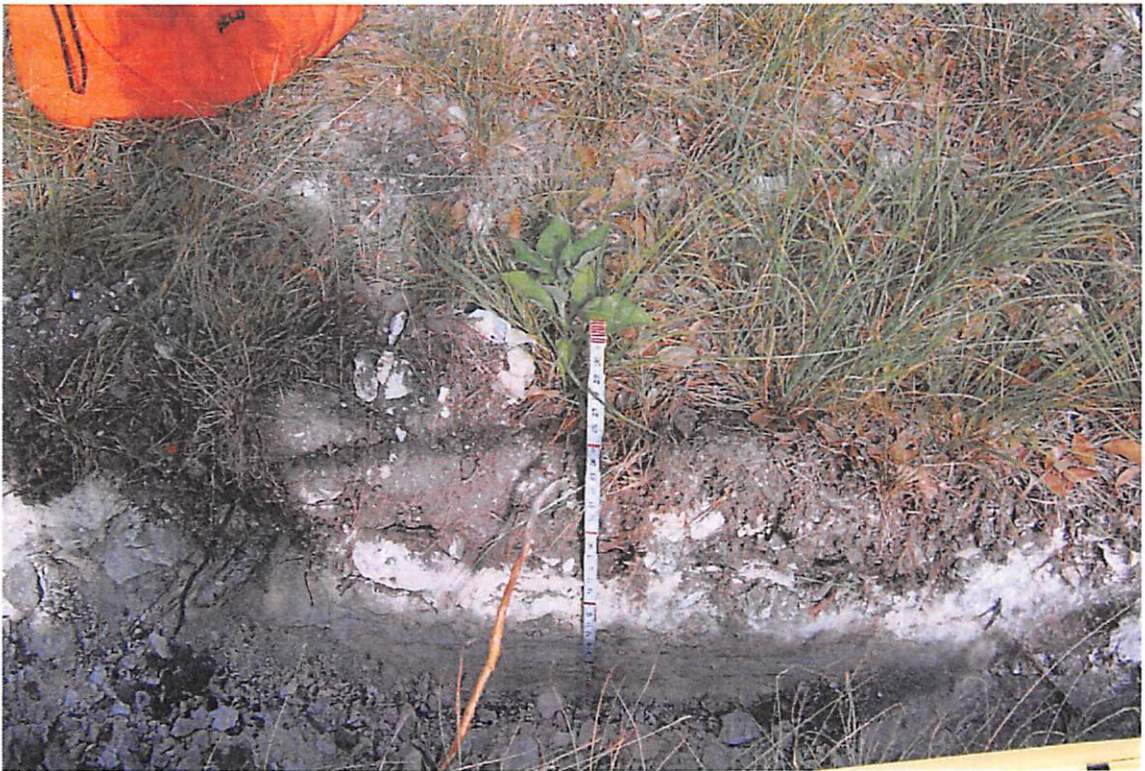
Total soil depth was 22 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 10 inches. The secondary rooting depth was 14 inches.

Depth of the 1st horizon was 6 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

Depth of the 2nd horizon was 16 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 15% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. The boundary between the 2nd horizon and the restrictive horizon was smooth. A restrictive horizon was reached at 22 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #S

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 10% large Oak and 90% juniper with 40% canopy cover. There was 75% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 20%. The litter layer coverage was estimated at 10%. Slope of this area was 0-5%.

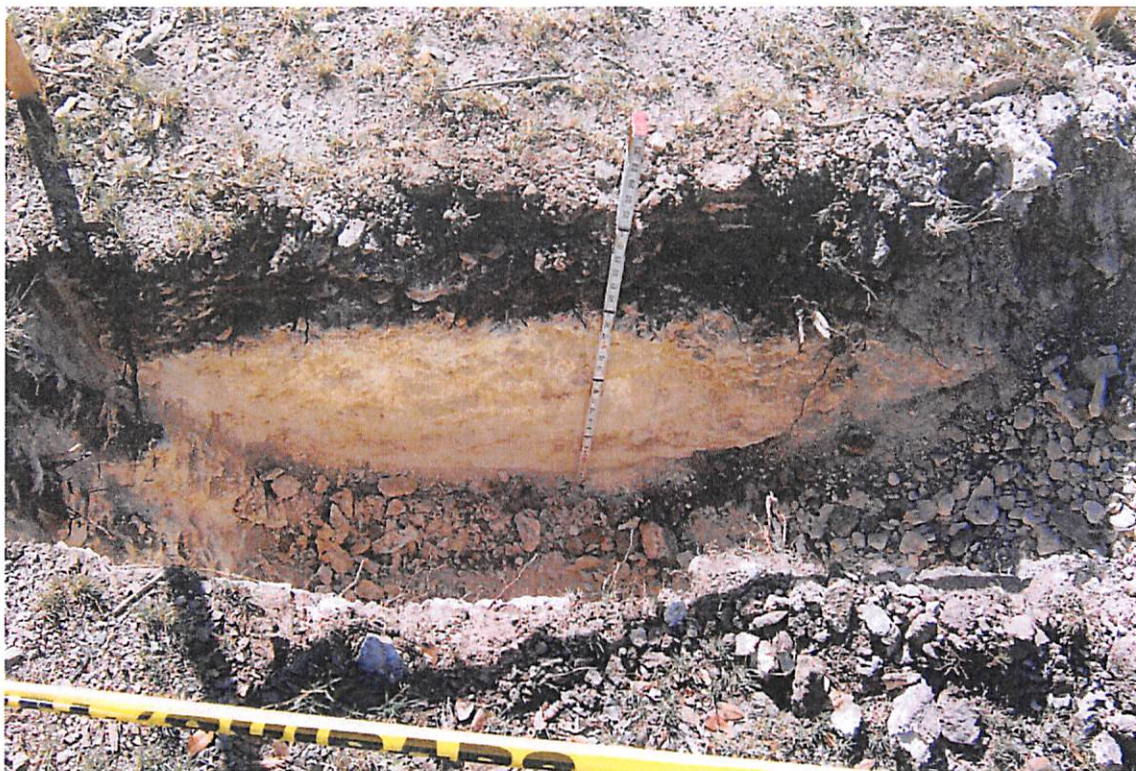
Soil Characteristics

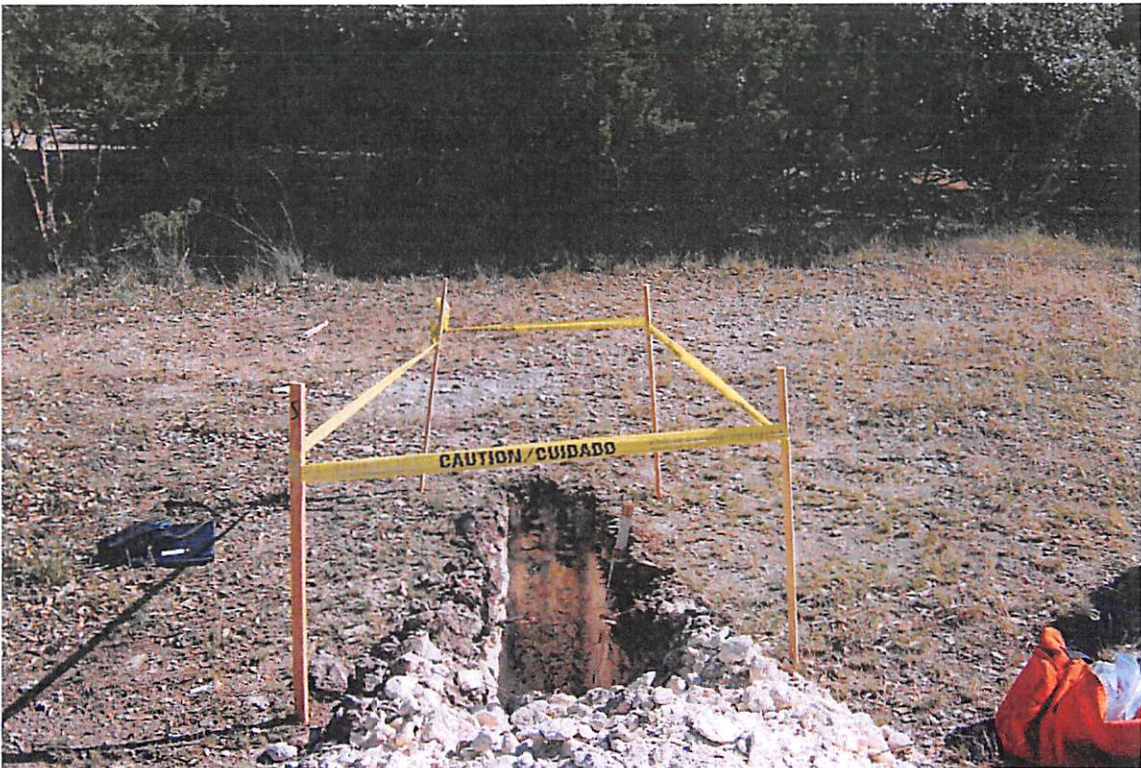
Total soil depth was 23 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 5 inches. The secondary rooting depth was 5 inches.

Depth of the 1st horizon was 5 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 0% limestone fragments.

Depth of the 2nd horizon was 18 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 0% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. The boundary between the 2nd horizon and the restrictive horizon was smooth. A restrictive horizon was reached at 23 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #T

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 100% large Oak and 0% juniper with 50% canopy cover. There was 90% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 15%. The litter layer coverage was estimated at 20%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 20 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 12 inches. The secondary rooting depth was 20 inches.

Depth of the 1st horizon was 20 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 50% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was wavy. The restrictive horizon was reached at 20 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #U

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 50% large Oak and 50% juniper with 20% canopy cover. There was 100% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 20%. Slope of this area was 0-5%.

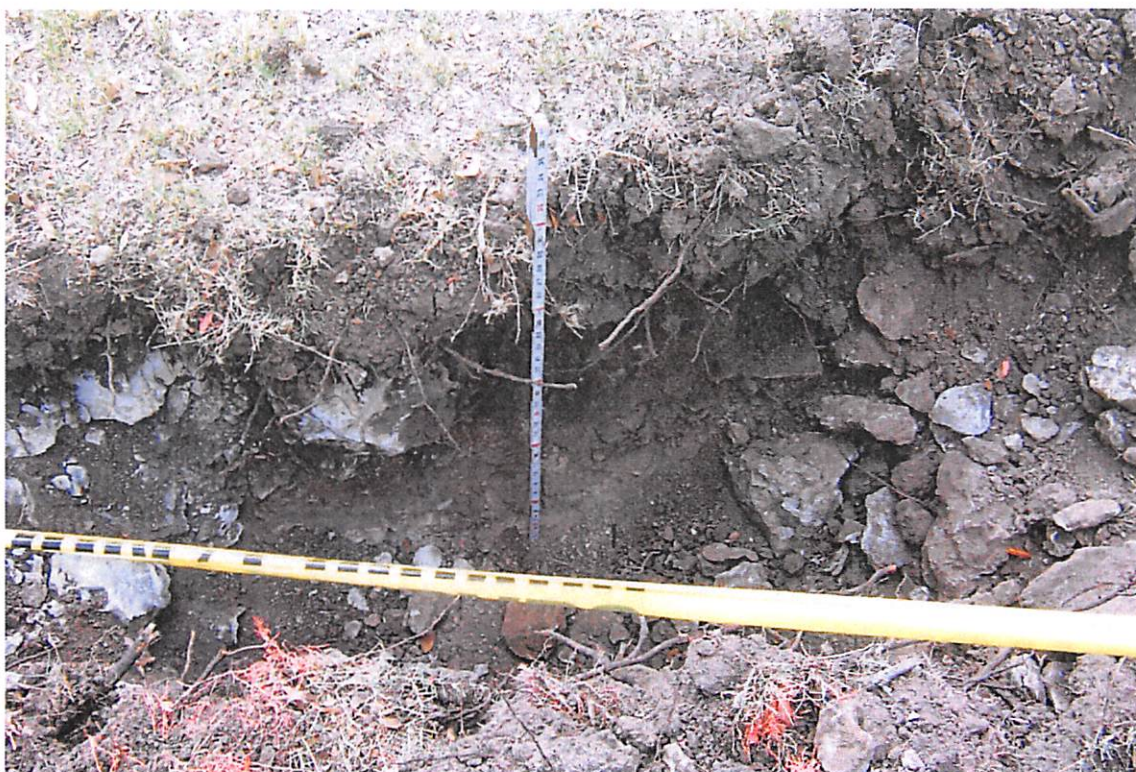
Soil Characteristics

Total soil depth was 29 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 17 inches. The secondary rooting depth was 21 inches.

Depth of the 1st horizon was 14 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 30% limestone fragments.

Depth of the 2nd horizon was 15 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 10% limestone fragments.

The boundary between the 1st and 2nd horizon was wavy. The boundary between the 2nd horizon and the restrictive horizon was wavy. A restrictive horizon was reached at 29 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #V

Vegetation Characteristics

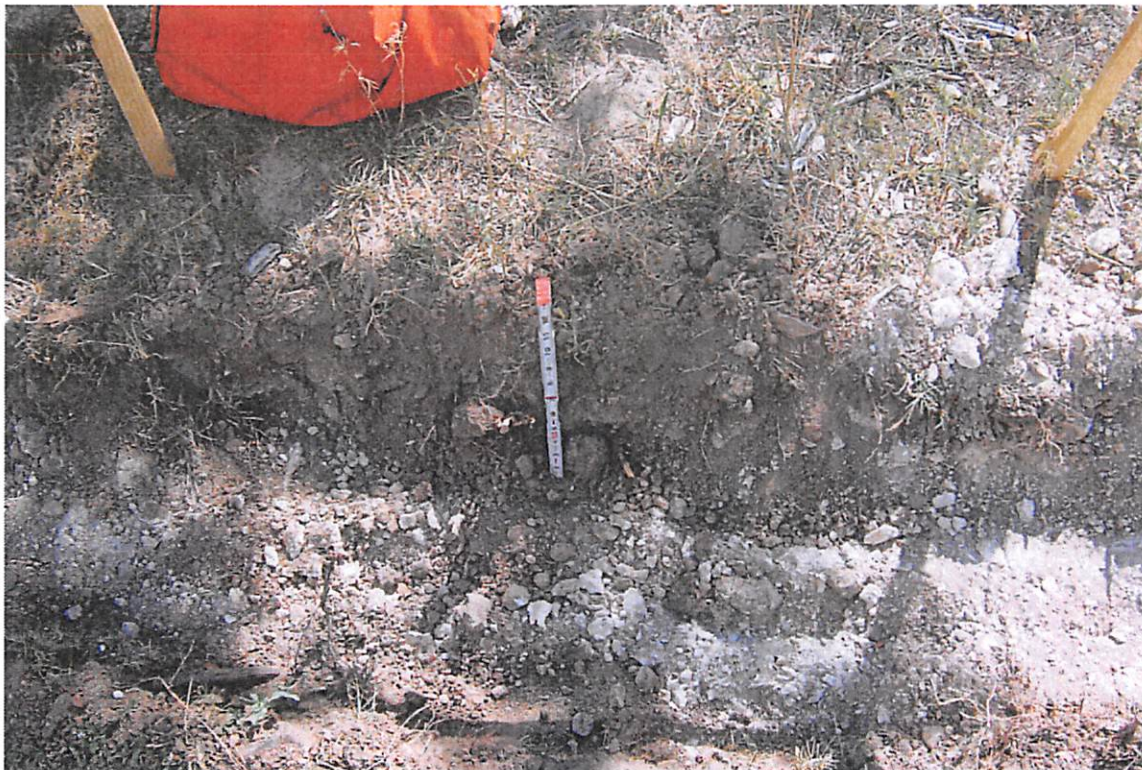
The woody vegetation of this site consisted of approximately 50% large Oak and 50% juniper with 50% canopy cover. There was 90% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 30%. The litter layer coverage was estimated at 20%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 7 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 7 inches. The secondary rooting depth was 7 inches.

Depth of the 1st horizon was 7 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 20% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was smooth. The restrictive horizon was reached at 7 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #W

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 60% large Oak and 40% juniper with 40% canopy cover. There was 80% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 0%. Slope of this area was 0-5%.

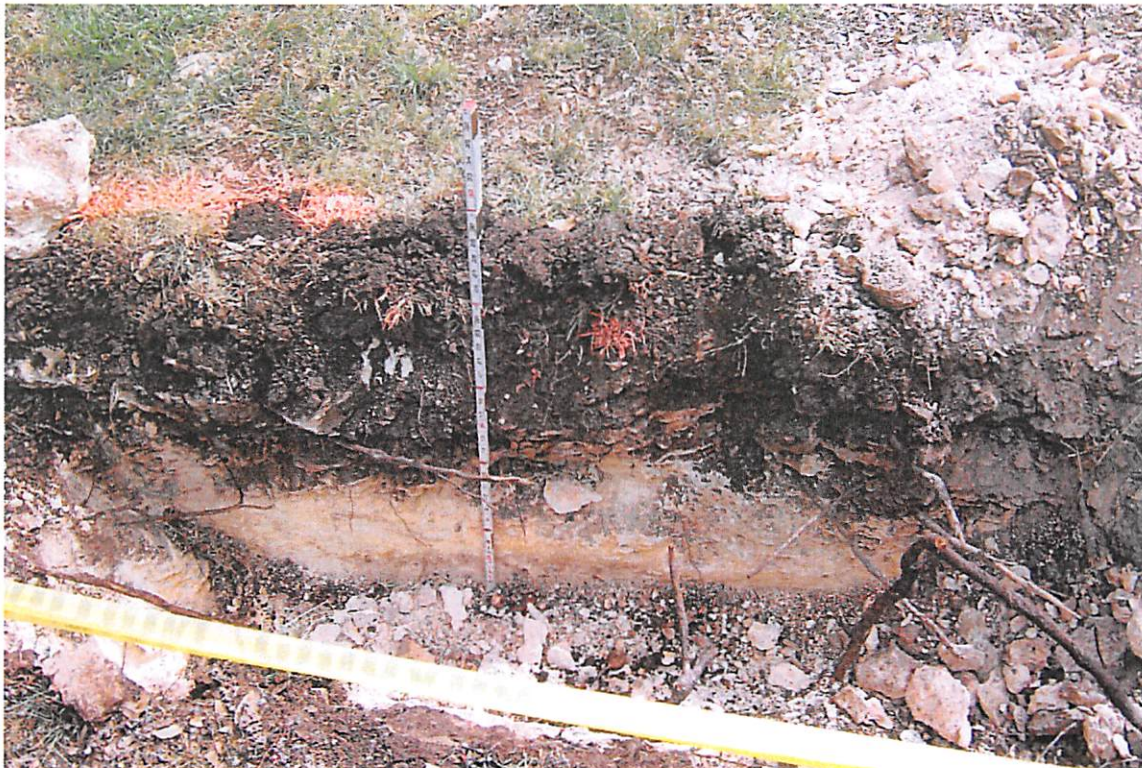
Soil Characteristics

Total soil depth was 22 inches where a restrictive horizon was reached. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 7 inches. The secondary rooting depth was 12 inches.

Depth of the 1st horizon was 6 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 30% limestone fragments.

Depth of the 2nd horizon was 16 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 0% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. The boundary between the 2nd horizon and the restrictive horizon was wavy. A restrictive horizon was reached at 22 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #X

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 40% large Oak and 60% juniper with 40% canopy cover. There was 60% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 0%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 29 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 14 inches. The secondary rooting depth was 25 inches.

Depth of the 1st horizon was 7 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

Depth of the 2nd horizon was 22 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 0% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. No restrictive horizon was reached at 29 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #Y

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 60% large Oak and 40% juniper with 50% canopy cover. There was 60% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 50%. Slope of this area was 0-5%.

Soil Characteristics

Total soil depth was 18 inches where refusal was achieved. The profile consisted of one horizon. The primary rooting depth in the hole was approximately 10 inches. The secondary rooting depth was 18 inches.

Depth of the 1st horizon was 18 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 5% limestone fragments.

The boundary between the 1st horizon and the restrictive horizon was smooth. The restrictive horizon was reached at 18 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.





Test Hole #Z

Vegetation Characteristics

The woody vegetation of this site consisted of approximately 10% large Oak and 90% juniper with 40% canopy cover. There was 70% herbaceous plant growth in the immediate area of this hole. Surficial stoniness was estimated at 0%. The litter layer coverage was estimated at 20%. Slope of this area was 5-10%.

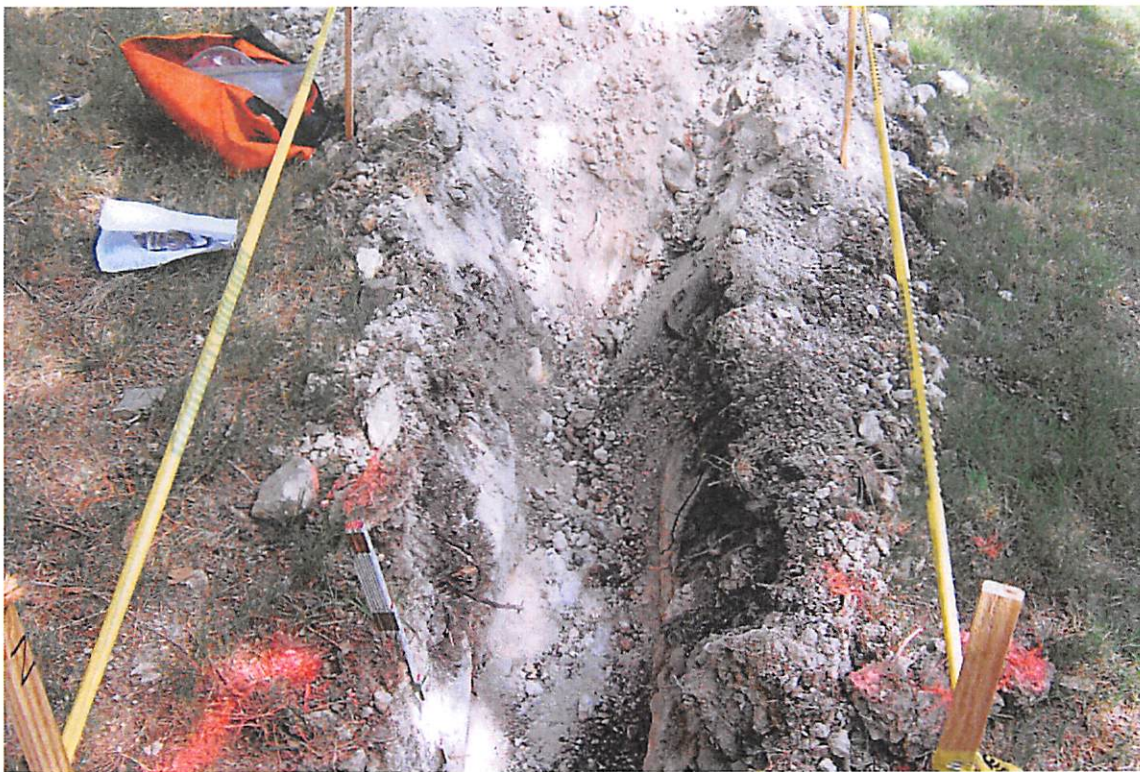
Soil Characteristics

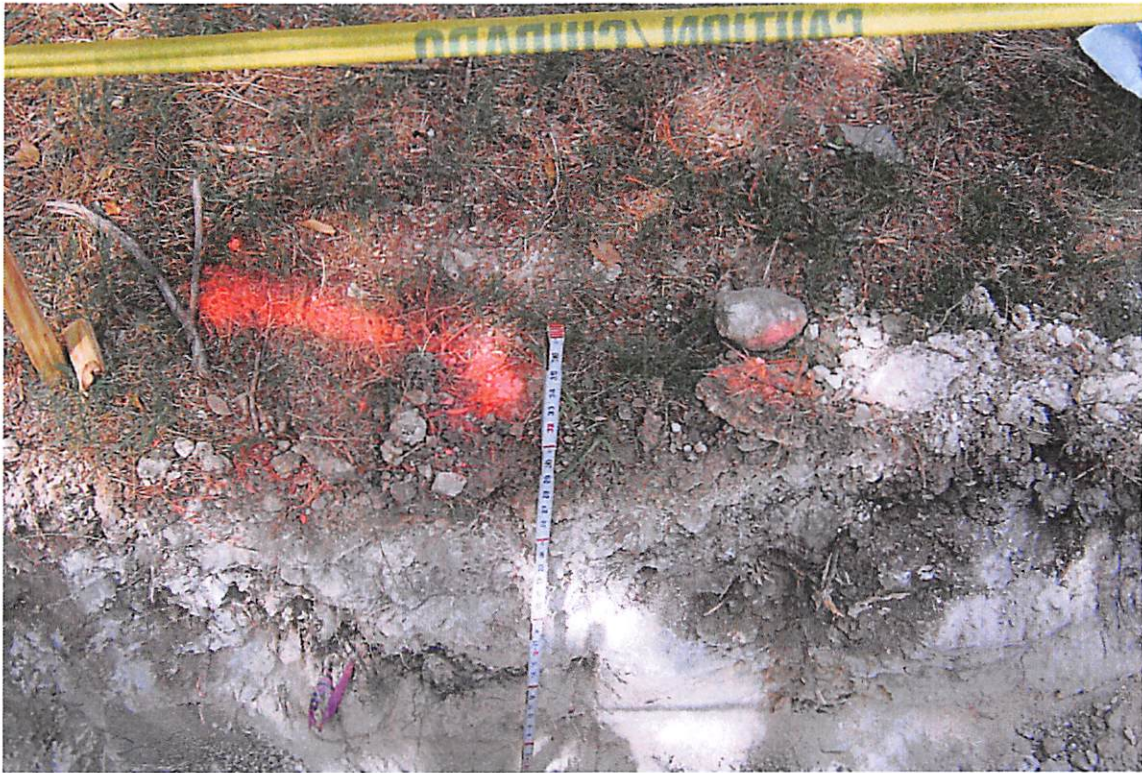
Total soil depth was 27 inches where excavation was stopped. The profile consisted of two horizons. The primary rooting depth in the hole was approximately 7 inches. The secondary rooting depth was 12 inches.

Depth of the 1st horizon was 3 inches. The 1st horizon consisted of a clay loam material. The 1st horizon consisted of a material that was granular in texture and structure. The material in the 1st horizon was dark brown in color. There was no mottling evident in the 1st horizon. The 1st horizon consisted of 10% limestone fragments.

Depth of the 2nd horizon was 24 inches. The 2nd horizon consisted of a class III caliche material. The 2nd horizon consisted of a material that was granular in texture and structure. The material in the 2nd horizon was light tan in color. There was no mottling evident in the 2nd horizon. The 2nd horizon consisted of 5% limestone fragments.

The boundary between the 1st and 2nd horizon was smooth. No restrictive horizon was reached at 27 inches. In this hole no potential water bearing zones were encountered. In this hole no active water bearing zones were encountered.

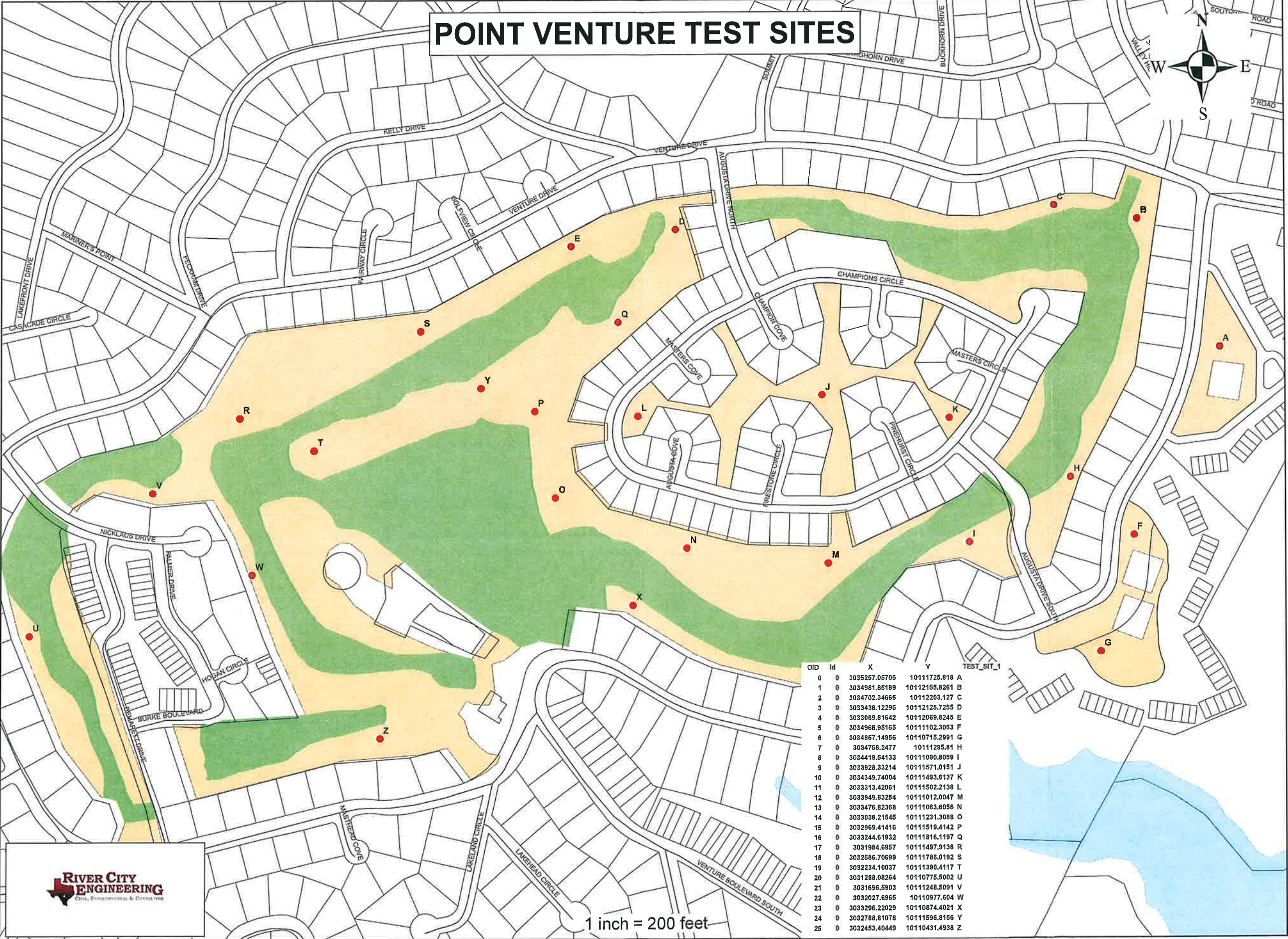




Appendix I

Site Maps

POINT VENTURE TEST SITES



1 inch = 200 feet

OID	Id	X	Y	TEST_SIT_1
0	0	3035257.05705	10111725.818	A
1	0	3034981.85189	10112155.8261	B
2	0	3034702.34665	10112203.127	C
3	0	3033438.12295	10112125.7255	D
4	0	3033089.81642	10112069.8245	E
5	0	3034968.95165	10111102.3063	F
6	0	3034857.14956	10110715.2991	G
7	0	3034758.2477	10111295.81	H
8	0	3034418.54133	10111080.8059	I
9	0	3033928.33214	10111571.0151	J
10	0	3034349.74004	10111493.6137	K
11	0	3033313.42061	10111502.2138	L
12	0	3033949.83254	10111012.0047	M
13	0	3033476.82368	10111063.6056	N
14	0	3033038.21545	10111231.3088	O
15	0	3032969.41416	10111519.4142	P
16	0	3033244.61932	10111816.1197	Q
17	0	3031984.6957	10111497.9138	R
18	0	3032586.70699	10111786.0192	S
19	0	3032234.10037	10111390.4117	T
20	0	3031288.08264	10110775.5002	U
21	0	3031696.5903	10111248.5091	V
22	0	3032027.6965	10110977.604	W
23	0	3033296.22029	10110874.4021	X
24	0	3032788.81078	10111596.8156	Y
25	0	3032453.40449	10110431.4938	Z

Appendix II

Soils Analysis



Report generated for:
 Waste Water Solutions
 9217 Hwy 290 West - Ste 100
 Austin, TX 78736

Travis County
 Laboratory Number: 276820
 Customer Sample ID: PV Smaple 1

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
 Department of Soil and Crop Sciences
 345 Heep Center, 2474 TAMU
 College Station, TX 77843-2474
 979-845-4816 (phone)
 979-845-5958 (FAX)
 Visit our website: <http://soiltesting.tamu.edu>

Sample received on: 6/22/2009
 Printed on: 6/25/2009
 Area Represented: not provided

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
pH	8.3	(5.8)	-	Mod. Alkaline							
Conductivity	235	(-)	umho/cm	None							Fertilizer Recommended
Nitrate-N	4	(-)	ppm								90 lbs N/acre
Phosphorus	4	(50)	ppm								115 lbs P2O5/acre
Potassium	211	(150)	ppm								0 lbs K2O/acre
Calcium	20,810	(180)	ppm								0 lbs Ca/acre
Magnesium	118	(50)	ppm								0 lbs Mg/acre
Sulfur	15	(13)	ppm								0 lbs S/acre
Sodium	78	(-)	ppm								
Iron											
Zinc											
Manganese											
Copper											
Boron											
Limestone Requirement											0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.



Soil Analysis Report

Soil, Water and Forage Testing Laboratory
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 College Station, TX 77843-2474
 979-845-4816 (phone)
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 Visit our website: <http://soiltesting.tamu.edu>

Report generated for:
 Waste Water Solutions
 9217 Hwy 290 West - Ste 100
 Austin, TX 78736

Sample received on: 6/22/2009
 Printed on: 6/25/2009
 Area Represented: not provided

Travis County
 Laboratory Number: 276821
 Customer Sample ID: PV Sample 2

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
pH	7.5	(5.8)	-	Slightly Alkaline							
Conductivity	208	(-)	umho/cm	None				CL*			Fertilizer Recommended
Nitrate-N	5	(-)	ppm								90 lbs N/acre
Phosphorus	0	(50)	ppm								120 lbs P2O5/acre
Potassium	165	(150)	ppm								0 lbs K2O/acre
Calcium	36,380	(180)	ppm								0 lbs Ca/acre
Magnesium	224	(50)	ppm								0 lbs Mg/acre
Sulfur	34	(13)	ppm								0 lbs S/acre
Sodium	174	(-)	ppm								
Iron											
Zinc											
Manganese											
Copper											
Boron											
Limestone Requirement											0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.



Report generated for:
 Waste Water Solutions
 9217 Hwy 290 West - Ste 100
 Austin, TX 78736

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
 Department of Soil and Crop Sciences
 345 Heep Center, 2474 TAMU
 College Station, TX 77843-2474
 979-845-4816 (phone)
 979-845-5958 (FAX)
 Visit our website: <http://soiltesting.tamu.edu>

Travis County
 Laboratory Number: 276822
 Customer Sample ID: PV Comp 1

Sample received on: 6/22/2009
 Printed on: 6/25/2009
 Area Represented: not provided

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.
pH	7.5	(5.8)	-	Slightly Alkaline						
Conductivity	246	(-)	umho/cm	None						CL*
Nitrate-N	6	(-)	ppm							Fertilizer Recommended
Phosphorus	9	(50)	ppm							85 lbs N/acre
Potassium	267	(150)	ppm							100 lbs P2O5/acre
Calcium	19,544	(180)	ppm							0 lbs K2O/acre
Magnesium	230	(50)	ppm							0 lbs Ca/acre
Sulfur	23	(13)	ppm							0 lbs Mg/acre
Sodium	111	(-)	ppm							0 lbs S/acre
Iron										
Zinc										
Manganese										
Copper										
Boron										
Limestone Requirement										0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Report generated for:
Waste Water Solutions
9217 Hwy 290 West - Ste 100
Austin, TX 78736

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
345 Heep Center, 2474 TAMU
College Station, TX 77843-2474
979-845-4816 (phone)
979-845-5958 (FAX)
Visit our website: <http://soiltesting.tamu.edu>

Travis County
Laboratory Number: 276823
Customer Sample ID: PV Comp 2

Sample received on: 6/22/2009
Printed on: 6/25/2009
Area Represented: not provided

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
pH	7.6	(5.8)	-	Mod. Alkaline							
Conductivity	319	(-)	umho/cm	None							Fertilizer Recommended
Nitrate-N	6	(-)	ppm								85 lbs N/acre
Phosphorus	0	(50)	ppm								120 lbs P2O5/acre
Potassium	138	(150)	ppm								20 lbs K2O/acre
Calcium	37,224	(180)	ppm								0 lbs Ca/acre
Magnesium	174	(50)	ppm								0 lbs Mg/acre
Sulfur	29	(13)	ppm								0 lbs S/acre
Sodium	132	(-)	ppm								
Iron											
Zinc											
Manganese											
Copper											
Boron											
Limestone Requirement											0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.



Report generated for:
Waste Water Solutions
9217 Hwy 290 West - Ste 100
Austin, TX 78736

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
345 Heep Center, 2474 TAMU
College Station, TX 77843-2474
979-845-4816 (phone)
979-845-5958 (FAX)
Visit our website: <http://soiltesting.tamu.edu>

Sample received on: 6/22/2009
Printed on: 6/25/2009
Area Represented: not provided

Travis County

Laboratory Number: 276824

Customer Sample ID: PV Comp 3

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.
pH	7.7	(5.8)	-	Mod. Alkaline						
Conductivity	189	(-)	umho/cm	None						CL*
Nitrate-N	6	(-)	ppm							
Phosphorus	1	(50)	ppm							
Potassium	115	(150)	ppm							
Calcium	37,522	(180)	ppm							
Magnesium	167	(50)	ppm							
Sulfur	22	(13)	ppm							
Sodium	124	(-)	ppm							
Iron										
Zinc										
Manganese										
Copper										
Boron										
Limestone Requirement										0.00 tons 100ECCE/acre

Fertilizer Recommended

85 lbs N/acre
120 lbs P2O5/acre
55 lbs K2O/acre
0 lbs Ca/acre
0 lbs Mg/acre
0 lbs S/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Appendix III

USDA Soil Survey Map



Appendix IV

Profile Hole Information Sheets

Project Point Venture Profile Hole # A County Travis
Date 6-18-09

- (1) Total depth of the profile hole 28"
- (2) Primary rooting depth 18"
- (3) Secondary rooting depth 18"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 28"
 - (B) Soil texture Clay Loam
 - (C) Soil structure Granular
 - (D) Soil color Dark Brown
 - (E) Mottling No
 - (F) Percent coarse fragments 15%
 - (A) Depth of the horizon _____
 - (B) Soil texture _____
 - (C) Soil structure _____
 - (D) Soil color _____
 - (E) Mottling _____
 - (F) Percent coarse fragments _____
 - (A) Depth of the horizon _____
 - (B) Soil texture _____
 - (C) Soil structure _____
 - (D) Soil color _____
 - (E) Mottling _____
 - (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Wavy
- (6) Restrictive horizons 28"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # A County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 100%	5 % Canopy Cover	100 %	5 % Visible	70 %	0 %- 5 %
Juniper					
Small Oak					

Comments: Pictures 7,8,9

Refusal at 28"	1=DK BRN	Color Key
Stopped Digging At “	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # B County Travis
Date 6-18-09

- (1) Total depth of the profile hole 30"
- (2) Primary rooting depth 4"
- (3) Secondary rooting depth 15"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 6"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon 24"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 5%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons No
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # B County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 20%	100% Canopy Cover	20 %	0 % Visible	100 %	0 %- 5 %
Juniper 80%					
Small Oak					

Comments: Pictures 10,11,12

Color Key

Refusal at	1=DK BRN	2=LT Tan
Stopped Digging At 30 “	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # C County Travis
Date 6-18-09

- (1) Total depth of the profile hole 32"
- (2) Primary rooting depth 6"
- (3) Secondary rooting depth 12"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 6"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 5%
- (A) Depth of the horizon 26"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 5%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 32"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # c County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 20%	50 % Canopy Cover	50% %	20% % Visible	50 %	5 %- 10 %
Juniper 80%					
Small Oak					

Comments: Pictures 13,14,15

Refusal at 32"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # D County Travis
Date 6-18-09

- (1) Total depth of the profile hole 31"
- (2) Primary rooting depth 5"
- (3) Secondary rooting depth 19"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 5"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 5%
- (A) Depth of the horizon 26"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons No
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # D County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 10%	80 % Canopy Cover	60 %	10 % Visible	80 %	0 %- 5 %
Juniper 90%					
Small Oak					

Comments: Pictures 16,17,18

Refusal at	Color Key
	1=DK BRN 2=LT Tan
Stopped Digging At 31 “	3=LT Tan w/ orange Stn 4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn 6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # E County Travis
Date 6-18-09

- (1) Total depth of the profile hole 31"
- (2) Primary rooting depth 5"
- (3) Secondary rooting depth 26"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 5"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon 26"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) smooth
- (6) Restrictive horizons 31"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # E County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 20%	40%	90%	15%	40%	0
Juniper 80%	% Canopy Cover	%	% Visible	%	5 %
Small Oak					

Comments: Pictures 19,20,21

Refusal at 31"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # F County Travis
Date 6-18-09

- (1) Total depth of the profile hole 21"
- (2) Primary rooting depth 9"
- (3) Secondary rooting depth 13"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 21"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 20%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Wavy
- (6) Restrictive horizons 21"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # F County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 100%	5 % Canopy Cover	100 %	5 % Visible	0 %	0 %- 5 %
Juniper					
Small Oak					

Comments: Pictures 1,2,3

Refusal at 21"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # G County Travis
Date 6-18-09

- (1) Total depth of the profile hole 25"
- (2) Primary rooting depth 8"
- (3) Secondary rooting depth 18"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 25"
 - (B) Soil texture Clay Loam
 - (C) Soil structure Granular
 - (D) Soil color Dark Brown
 - (E) Mottling No
 - (F) Percent coarse fragments 10%
 - (A) Depth of the horizon _____
 - (B) Soil texture _____
 - (C) Soil structure _____
 - (D) Soil color _____
 - (E) Mottling _____
 - (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 25"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # G County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 100%	5 % Canopy Cover	100 %	5 % Visible	0 %	0 %- 5 %
Juniper					
Small Oak					

Comments: Pictures 1,2,3

Refusal at 25"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # H County Travis
Date 6-18-09

- (1) Total depth of the profile hole 24"
- (2) Primary rooting depth 14"
- (3) Secondary rooting depth 21"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 24"
 - (B) Soil texture Clay Loam
 - (C) Soil structure granular
 - (D) Soil color Dark Brown
 - (E) Mottling No
 - (F) Percent coarse fragments 20%
 - (A) Depth of the horizon _____
 - (B) Soil texture _____
 - (C) Soil structure _____
 - (D) Soil color _____
 - (E) Mottling _____
 - (F) Percent coarse fragments _____
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) NA
- (6) Restrictive horizons NA
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # H County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak	50 % Canopy Cover	80 %	10 % Visible	20 %	0 %- 5 %
Juniper 100%					
Small Oak					

Comments: Pictures 37,38,39

Color Key

Refusal at	1=DK BRN	2=LT Tan
Stopped Digging At 24 “	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # 1 County Travis
Date 6-18-09

- (1) Total depth of the profile hole 29"
- (2) Primary rooting depth 8"
- (3) Secondary rooting depth 14"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 11"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon 18"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons NA
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # 1 County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 20%	50 % Canopy Cover	50 %	0 % Visible	50 %	0 %- 5 %
Juniper 80%					
Small Oak					

Comments: Pictures 34,35,36

Color Key

Refusal at	1=DK BRN	2=LT Tan
Stopped Digging At 29 “	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # J County Travis
Date 6-18-09

- (1) Total depth of the profile hole 26"
- (2) Primary rooting depth 9"
- (3) Secondary rooting depth 19"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 3"
 - (B) Soil texture Clay Loam
 - (C) Soil structure Granular
 - (D) Soil color Dark Brown
 - (E) Mottling No
 - (F) Percent coarse fragments 10%
 - (A) Depth of the horizon 23"
 - (B) Soil texture Class III Caliche
 - (C) Soil structure Granular
 - (D) Soil color Light Tan
 - (E) Mottling No
 - (F) Percent coarse fragments 5%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Wavy
- (6) Restrictive horizons 26"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # J County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 10%	70 % Canopy Cover	60 %	15% % Visible	20 %	0 %- 5 %
Juniper 90%					
Small Oak					

Comments: Pictures 28,29,30

Refusal at 26"	1=DK BRN	Color Key
Stopped Digging At “	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # K County Travis
Date 6-18-09

- (1) Total depth of the profile hole 28"
- (2) Primary rooting depth 8"
- (3) Secondary rooting depth 16"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 3"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon 25"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 5%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 28"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # K County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 100%	10 % Canopy Cover	95 %	10 % Visible	10 %	0 %- 5 %
Juniper					
Small Oak					

Comments: Pictures 31,32,33

Refusal at 28"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # L County Travis
Date 6-18-09

- (1) Total depth of the profile hole 14"
- (2) Primary rooting depth 14"
- (3) Secondary rooting depth 14"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 14"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 30%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Wavy
- (6) Restrictive horizons 14"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # L County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 0%	80 % Canopy Cover	25 %	20 % Visible	80 %	0 %- 5 %
Juniper 100%					
Small Oak					

Comments: Pictures 25,26,27

Refusal at 14"	Color Key
	1=DK BRN 2=LT Tan
Stopped Digging At “	3=LT Tan w/ orange Stn 4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn 6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # M County Travis
Date 6-18-09

- (1) Total depth of the profile hole 35"
- (2) Primary rooting depth 12"
- (3) Secondary rooting depth 16"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 4"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 15%
- (A) Depth of the horizon 31"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Wavy
- (6) Restrictive horizons NA
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # M County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 10%	50 % Canopy Cover	40 %	50 % Visible	40 %	5 %- 10 %
Juniper 90%					
Small Oak					

Comments: Pictures 40,41,42

Refusal at	Color Key
	1=DK BRN
	2=LT Tan
Stopped Digging At 35 “	3=LT Tan w/ orange Stn
	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn
	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # N County Travis
Date 6-18-09

- (1) Total depth of the profile hole 32"
- (2) Primary rooting depth 12"
- (3) Secondary rooting depth 16"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 5"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Light Brown
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon 27"
- (B) Soil texture Class III Caliche
- (C) Soil structure granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons NA
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # N County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 10%	50 % Canopy Cover	50 %	20 % Visible	50 %	5 %- 10 %
Juniper 90%					
Small Oak					

Comments: Pictures 43,44,45

Refusal at 32"	1=DK BRN	Color Key
Stopped Digging At “	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # 0 County Travis
Date 6-18-09

- (1) Total depth of the profile hole 32"
- (2) Primary rooting depth 12"
- (3) Secondary rooting depth 16"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 4"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon 28"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons No
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # 0 County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 20%	60 % Canopy Cover	20 %	20 % Visible	40 %	0 %- 5 %
Juniper 80%					
Small Oak					

Comments: Pictures 49,50,51

	Color Key
Refusal at 32"	1=DK BRN 2=LT Tan
Stopped Digging At “	3=LT Tan w/ orange Stn 4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn 6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # P County Travis
Date 6-18-09

- (1) Total depth of the profile hole 22"
- (2) Primary rooting depth 8"
- (3) Secondary rooting depth 18"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 22"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 20%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 22"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # P County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 10%	90 % Canopy Cover	50 %	0 % Visible	80 %	0 %- 5 %
Juniper 90%					
Small Oak					

Comments: Pictures 55,56,57

Color Key

Refusal at 22"	1=DK BRN	2=LT Tan
Stopped Digging At “	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # Q County Travis
Date 6-18-09

- (1) Total depth of the profile hole 18"
- (2) Primary rooting depth 4"
- (3) Secondary rooting depth 48"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 10"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon 8"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 15%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 18"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # Q County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 100%	90 % Canopy Cover	70 %	15 % Visible	30 %	0 %- 5 %
Juniper					
Small Oak					

Comments: Pictures 22,23,24

Refusal at 18"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # R County Travis
Date 6-18-09

- (1) Total depth of the profile hole 22"
- (2) Primary rooting depth 10"
- (3) Secondary rooting depth 14"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 6"
 - (B) Soil texture Clay Loam
 - (C) Soil structure Granular
 - (D) Soil color Dark Brown
 - (E) Mottling No
 - (F) Percent coarse fragments 10%
 - (A) Depth of the horizon 16"
 - (B) Soil texture Class III Caliche
 - (C) Soil structure Granular
 - (D) Soil color Light Tan
 - (E) Mottling No
 - (F) Percent coarse fragments 15%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 22"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # R County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 50%	40 % Canopy Cover	90 %	10 % Visible	20 %	0 %- 5 %
Juniper 50%					
Small Oak					

Comments: Pictures 64,65,66

Refusal at 22"	1=DK BRN	Color Key
Stopped Digging At “	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # S County Travis
Date 6-18-09

- (1) Total depth of the profile hole 23"
- (2) Primary rooting depth 5"
- (3) Secondary rooting depth 5"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 5"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 15%
- (A) Depth of the horizon 18"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 23"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # S County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 10%	40 % Canopy Cover	75% %	20% % Visible	10 %	0 %- 5 %
Juniper 90%					
Small Oak					

Comments: Pictures 58,59,60

			Color Key	
Refusal at 23"			1=DK BRN	2=LT Tan
Stopped Digging At "			3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
			5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # T County Travis
Date 6-18-09

- (1) Total depth of the profile hole 20"
- (2) Primary rooting depth 12"
- (3) Secondary rooting depth 20"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 20"
 - (B) Soil texture Clay Loam
 - (C) Soil structure Granular
 - (D) Soil color Dark Brown
 - (E) Mottling No
 - (F) Percent coarse fragments 50%
 - (A) Depth of the horizon _____
 - (B) Soil texture _____
 - (C) Soil structure _____
 - (D) Soil color _____
 - (E) Mottling _____
 - (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Wavy
- (6) Restrictive horizons 20"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # 1 County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 100%	50 % Canopy Cover	90 %	15 % Visible	20 %	0 %- 5 %
Juniper					
Small Oak					

Comments: Pictures 61,62,63

Color Key

Refusal at 20"	1=DK BRN	2=LT Tan
Stopped Digging At "	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # U County Travis
Date 6-18-09

- (1) Total depth of the profile hole 29"
- (2) Primary rooting depth 17"
- (3) Secondary rooting depth 21"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 14"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 30%
- (A) Depth of the horizon 15"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Wavy
- (6) Restrictive horizons 29"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # U County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 50%	20% % Canopy Cover	100% %	0% % Visible	20% %	0 %- 5 %
Juniper 50%					
Small Oak					

Comments: Pictures 70,71,72

Refusal at 29"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # V County Travis
Date 6-18-09

- (1) Total depth of the profile hole 7"
- (2) Primary rooting depth 7"
- (3) Secondary rooting depth 7"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 7"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 20%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 7"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # v County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 50%	50 % Canopy Cover	90 %	30 % Visible	20 %	0 %- 5 %
Juniper 50%					
Small Oak					

Comments: Pictures 67,68,69

	Color Key
Refusal at 7"	1=DK BRN 2=LT Tan
Stopped Digging At "	3=LT Tan w/ orange Stn 4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn 6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # W County Travis
Date 6-18-09

- (1) Total depth of the profile hole 22"
- (2) Primary rooting depth 7"
- (3) Secondary rooting depth 12"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 6"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 30%
- (A) Depth of the horizon 16"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 22"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # w County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 60%	40 % Canopy Cover	80 %	0 % Visible	0 %	0 %- 5 %
Juniper 40%					
Small Oak					

Comments: Pictures 73,74,75

Refusal at 22"	1=DK BRN	Color Key
Stopped Digging At "	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # X County Travis
Date 6-18-09

- (1) Total depth of the profile hole 29"
- (2) Primary rooting depth 14"
- (3) Secondary rooting depth 25"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 7"
- (B) Soil texture Clay Loam
- (C) Soil structure granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon 22"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 0%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons NA
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # x County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 40%	40 % Canopy Cover	60 %	0 % Visible	0 %	0 %- 5 %
Juniper 60%					
Small Oak					

Comments: Pictures 46,47,48

Refusal at	Color Key
Stopped Digging At 29 “	1=DK BRN 2=LT Tan 3=LT Tan w/ orange Stn 4=LT Tan w/ pink Stn 5= LT Tan with Orange and Pink Stn 6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # Y County Travis
Date 6-18-09

- (1) Total depth of the profile hole 18"
- (2) Primary rooting depth 10"
- (3) Secondary rooting depth 18"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 18"
 - (B) Soil texture Clay Loam
 - (C) Soil structure Granular
 - (D) Soil color Dark Brown
 - (E) Mottling No
 - (F) Percent coarse fragments 5%
 - (A) Depth of the horizon _____
 - (B) Soil texture _____
 - (C) Soil structure _____
 - (D) Soil color _____
 - (E) Mottling _____
 - (F) Percent coarse fragments _____
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons 18"
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # Y County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 60%	50 % Canopy Cover	60 %	0 % Visible	50 %	0 %- 5 %
Juniper 40%					
Small Oak					

Comments: Pictures 52,53,54

Refusal at 18	1=DK BRN	Color Key
Stopped Digging At “	2=LT Tan	
	3=LT Tan w/ orange Stn	4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn	6=LT Tan w/ yellow Stn

Project Point Venture Profile Hole # Z County Travis
Date 6-18-09

- (1) Total depth of the profile hole 27"
- (2) Primary rooting depth 7"
- (3) Secondary rooting depth 12"
- (4) Horizon descriptions shall include
- (A) Depth of the horizon 3"
- (B) Soil texture Clay Loam
- (C) Soil structure Granular
- (D) Soil color Dark Brown
- (E) Mottling No
- (F) Percent coarse fragments 10%
- (A) Depth of the horizon 24"
- (B) Soil texture Class III Caliche
- (C) Soil structure Granular
- (D) Soil color Light Tan
- (E) Mottling No
- (F) Percent coarse fragments 5%
- (A) Depth of the horizon _____
- (B) Soil texture _____
- (C) Soil structure _____
- (D) Soil color _____
- (E) Mottling _____
- (F) Percent coarse fragments _____
- (5) Boundary descriptions (soil horizons) Smooth
- (6) Restrictive horizons NA
- (7) Potential water bearing zones No
- (8) Active water bearing zones No

Project Point Venture Profile Hole # z County Travis Date 6-18-09

Site Characteristics

Vegetation	% Woody	% Herbaceous	Surface Fragments	Litter	Slope Type
Large Oak 10%	40 % Canopy Cover	70 %	0% % Visible	20 %	5 %- 10 %
Juniper 90%					
Small Oak					

Comments: Pictures 76,77,78

Refusal at	Color Key
Stopped Digging At 27 “	1=DK BRN 2=LT Tan
	3=LT Tan w/ orange Stn 4=LT Tan w/ pink Stn
	5= LT Tan with Orange and Pink Stn 6=LT Tan w/ yellow Stn

ATTACHMENT M
ANNUAL SOIL ANALYSES

Email information for report date:
3/19/24 13:30
H005445

INFRAMARK

Attn: Alan Gould
alan.gould@Inframark.com

14050 Summit Drive Suite 103
Austin, TX 78728

Please contact us for your sampling needs or if you have any questions. Some convenient contacts are listed below. You can also access your results and reports through our ClientConnect™ portal on our website (www.aqua-techlabs.com).

For sampling questions:

samplingbryan@aqua-techlabs.com (Bryan area)
samplingaustin@aqua-techlabs.com (Austin area)

reporting@aqua-techlabs.com (report questions)

Aqua-Tech values you as a customer and encourages you to speak with our staff at 979-778-3707 or the above emails if you have questions.

Thank you for your business,
June M. Brien
Executive Technical Director

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AUSTIN FACILITY
3512 Montopolis Dr. Suite A
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Phone: (512) 301-9559
Fax: (512) 301-9552

The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with TNI and/or through the TCEQ Drinking Water Commercial Laboratory Approval Program.

The following abbreviations indicate certification status:

NEL	TNI accredited parameter.
ANR	Accreditation not offered by the State of Texas.
DWP	Approval through the TCEQ Drinking Water Commercial Laboratory Approval Program.
INF	Aqua-Tech Laboratories, Inc. is not accredited for this parameter. It is reported on an informational basis only.

Certificate: T104704371-23-27



TCEQ Lab ID T104704371

Subcontracted data summarized in this report is indicated by "Sub" in the Lab column.

General Definitions:

NR	Not Reported.
RPD	Relative Percent Difference.
% R	Percent Recovery.
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The Sample Quantitation Limit is the value below which the parameter cannot reliably be detected. The SQL includes all sample preparations, dilutions and / or concentrations.
Adj MDL	The Adjusted Method Detection Limit is the MDL value adjusted for any sample dilutions or concentrations.
MDL	The Method Detection Limit is the lowest theoretical value that is statistically different from zero for a specific method, taking into account all preparation steps and instrument settings.

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Sample Collected" field of this report as "Client" or "CLT".

Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

Record Retention:

All reports, raw data, and associated quality control data are kept on file for 10 years before being destroyed. Any client that would like copies of records must contact Aqua-Tech Laboratories, Inc. no later than six months prior to the scheduled disposal. An administrative fee for retrieval and distribution will apply.

This report was approved by:

June M. Brien, Technical Director

The results in this report apply only to the samples analyzed. This analytical report must be reproduced in its entirety unless written permission is granted by Aqua-Tech Laboratories, Inc.

corp@aqua-techlabs.com

www.aqua-techlabs.com

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Analytical Report

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Report Printed: 3/19/24 13:30
H005445

See attached subcontract report for additional analysis and fertilizer recommendations.

Point Venture WWTP Soil 0-6 Inches			Collected: 02/13/24 09:42 by Received: 02/13/24 14:29 by Bradley Land			Type Comp	Matrix Solid			C-O-C # N/A
Lab ID#	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch
H005445-01										
General Chemistry										
% Solids	79.4	g/100g (%)		0.10	0.10	0.10	Austin	02/19/24 08:45 SR	SM2540 G 2015	M173540 NEL
Total Kjeldahl Nitrogen as N	2000	mg/kg dry		0.13	40.9	62.9	Bryan	02/20/24 14:06 KMA	SM4500-NH3 G 2011	M173599 ANR
Plant Available Parameters										
Total Nitrogen	2010	mg/kg dry wt.			N/A	N/A	Calc	03/14/24 13:09 PMY	Calculation	M174697 ANR
Please see the attached subcontract report for subcontracted data.										

Point Venture WWTP Soil 6-18 Inches			Collected: 02/13/24 09:42 by Received: 02/13/24 14:29 by Bradley Land			Type Comp	Matrix Solid			C-O-C # N/A
Lab ID#	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch
H005445-02										
General Chemistry										
% Solids	81.3	g/100g (%)		0.10	0.10	0.10	Austin	02/19/24 08:45 SR	SM2540 G 2015	M173540 NEL
Total Kjeldahl Nitrogen as N	1770	mg/kg dry		0.13	40.0	61.5	Bryan	02/20/24 14:06 KMA	SM4500-NH3 G 2011	M173599 ANR
Plant Available Parameters										
Total Nitrogen	1780	mg/kg dry wt.			N/A	N/A	Calc	03/14/24 13:09 PMY	Calculation	M174697 ANR
Please see the attached subcontract report for subcontracted data.										

Point Venture WWTP Soil 18-30 Inches			Collected: 02/13/24 09:42 by Received: 02/13/24 14:29 by Bradley Land			Type Comp	Matrix Solid			C-O-C # N/A
Lab ID#	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch
H005445-03										
General Chemistry										
% Solids	78.4	g/100g (%)		0.10	0.10	0.10	Austin	02/19/24 08:45 SR	SM2540 G 2015	M173540 NEL
Total Kjeldahl Nitrogen as N	1790	mg/kg dry		0.13	41.4	63.6	Bryan	02/20/24 14:06 KMA	SM4500-NH3 G 2011	M173599 ANR
Plant Available Parameters										
Total Nitrogen	1800	mg/kg dry wt.			N/A	N/A	Calc	03/14/24 13:09 PMY	Calculation	M174697 ANR
Please see the attached subcontract report for subcontracted data.										

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Analytical Report

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Report Printed:

3/19/24 13:30

H005445

General Chemistry - Quality Control

Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch
% Solids - SM2540 G 2015												<i>Austin</i>
Blank	<0.10	g/100g (%)	0.10	0.10	02/19/24 08:45 SR							M173540
Duplicate	85.8	g/100g (%)	0.10	0.10	02/19/24 08:45 SR		85.6			0.338	10	M173540
Duplicate	85.8	%	0.100	0.100	02/19/24 08:45 SR		85.6			0.338	10	M173540
Total Kjeldahl Nitrogen as N - SM4500-NH3 G 2011												<i>Bryan</i>
Initial Cal Check	4.71	mg/L			02/20/24 14:06 KMA	4.56		103	90 - 110			2402227
Low Cal Check	0.22	mg/L			02/20/24 14:06 KMA	0.200		112	70 - 130			2402227
Blank	<0.20	mg/kg wet	0.13	0.20	02/20/24 14:06 KMA							M173599
LCS	4.19	mg/kg wet	0.13	0.20	02/20/24 14:06 KMA	4.00		105	91 - 116			M173599
LCS Dup	4.22	mg/kg wet	0.13	0.20	02/20/24 14:06 KMA	4.00		105	91 - 116	0.738	10	M173599
Matrix Spike	3500	mg/kg dry	80.2	123	02/20/24 14:06 KMA	2470	942	104	88.2 - 119			M173599
Matrix Spike Dup	3470	mg/kg dry	80.2	123	02/20/24 14:06 KMA	2470	942	102	88.2 - 119	1.21	20	M173599

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
H005445-01										
% Solids	SM2540 G 2015	2/19/24 8:45 SR	Austin	C	5.00	g	5.00	mL	1	M173540
Subcontract	Sub Contract Data Entry	3/4/24 17:14 PMY	Bryan	-	-	-	-	-	-	M174206
Total Kjeldahl Nitrogen as N	SM4500-NH3 G 2011	2/20/24 9:13 CTG	Bryan	B	0.100	g	25.0	mL	1	M173599
Total Nitrogen	Calculation	3/14/24 13:09 PMY			1.00	g	1.00	mL	1	M174697
H005445-02										
% Solids	SM2540 G 2015	2/19/24 8:45 SR	Austin	C	5.00	g	5.00	mL	1	M173540
Subcontract	Sub Contract Data Entry	3/4/24 17:14 PMY	Bryan	-	-	-	-	-	-	M174206
Total Kjeldahl Nitrogen as N	SM4500-NH3 G 2011	2/20/24 9:13 CTG	Bryan	B	0.100	g	25.0	mL	1	M173599
Total Nitrogen	Calculation	3/14/24 13:09 PMY			1.00	g	1.00	mL	1	M174697
H005445-03										
% Solids	SM2540 G 2015	2/19/24 8:45 SR	Austin	C	5.00	g	5.00	mL	1	M173540
Subcontract	Sub Contract Data Entry	3/4/24 17:14 PMY	Bryan	-	-	-	-	-	-	M174206
Total Kjeldahl Nitrogen as N	SM4500-NH3 G 2011	2/20/24 9:13 CTG	Bryan	B	0.100	g	25.0	mL	1	M173599
Total Nitrogen	Calculation	3/14/24 13:09 PMY			1.00	g	1.00	mL	1	M174697

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Analytical Report

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Report Printed: 3/19/24 13:30
H005445

Chain-of-Custody Summary

The following record summarizes custody for work orders sampled by Aqua-Tech Laboratories, Inc. personnel on route.
Original signatures are kept on file by Aqua-Tech Laboratories, Inc. and are available upon request.

WORK ORDER H005445

Cooler ID	Temperature °C	Condition Good?	On Ice?	Preservation Correct?	Custody Maintained by ATL?	See comments below or comments and qualifiers with analytical results explaining any "No" answers.	
Y021	3.4	Yes	Yes	Yes	Yes		
H005445-01		Comp	Sampling Begun: 2/13/24 8:40		Sampling Ended: 2/13/24 9:42		
Container & Description		pH Checks / Comments		Container & Description		pH Checks / Comments	
A	[SUB] TAMU SL 1LP			B	SOIL TKN 0.25LP		C SOIL TS 0.1L

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Analytical Report

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Report Printed:

3/19/24 13:30

H005445

WORK ORDER H005445

Cooler ID	Temperature °C	Condition Good?	On Ice?	Preservation Correct?	Custody Maintained by ATL?	See comments below or comments and qualifiers with analytical results explaining any "No" answers.	
Y021	3.4	Yes	Yes	Yes	Yes		
H005445-03	Comp	Sampling Begun:	2/13/24 8:40		Sampling Ended:	2/13/24 9:42	
Container & Description		pH Checks / Comments		Container & Description		pH Checks / Comments	
A	[SUB] TAMU SL 1LP			B	SOIL TKN 0.25LP	C	SOIL TS 0.1L



Report generated for:
Aqua-Tech Laboratories, Inc.
635 Phil Gramm Blvd
BRYAN, TX 77807

Brazos County
Laboratory Number: 651446
Customer Sample ID: H005445-01A
Crop Grown: TURF FAIRWAYS , ATHLETIC FIELDS , ETC.

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
2478 TAMU
College Station, TX 77843-2478
(979)321-5960

Visit our website: <http://soiltesting.tamu.edu>

Sample received on: 2/20/2024

Printed on: 2/28/2024

Area Represented: 48 acres

SWFTL recommends <40 acres/sample

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.		
pH	8.2	(6.2)	-	Mod. Alkaline								
Conductivity	68	(-)	umho/cm	None							CL*	Fertilizer Recommended
Nitrate-N	8	(-)	ppm**								40 lbs N/acre	
Phosphorus	19	(50)	ppm								30 lbs P2O5/acre	
Potassium	332	(160)	ppm								0 lbs K2O/acre	
Calcium	17,884	(180)	ppm								0 lbs Ca/acre	
Magnesium	351	(50)	ppm								0 lbs Mg/acre	
Sulfur	127	(13)	ppm								0 lbs S/acre	
Sodium	62	(-)	ppm									
Iron												
Zinc												
Manganese												
Copper												
Boron												
Limestone Requirement											0.00 tons 100ECCE/acre	

Detailed Salinity Test (Saturated Paste Extract)			
	pH	7.2	
	Conductivity	0.73	mmhos/cm
	Sodium	46	ppm
	Potassium	18	ppm
	Calcium	67	ppm
	Magnesium	8	ppm
	SAR	1.43	
	SSP	31.25	

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Nitrogen: Apply suggested nitrogen rate and then apply 40 lbs/A of nitrogen every 4 to 6 weeks as needed.

Online fertilizer calculators to determine appropriate fertilizers and application rates.
<http://soiltesting.tamu.edu>



Report generated for:
Aqua-Tech Laboratories, Inc.
635 Phil Gramm Blvd
BRYAN, TX 77807

Brazos County

Laboratory Number: 651447

Customer Sample ID: H005445-02A

Crop Grown: TURF FAIRWAYS , ATHLETIC FIELDS , ETC.

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
2478 TAMU
College Station, TX 77843-2478
(979)321-5960

Visit our website: <http://soiltesting.tamu.edu>

Sample received on: 2/20/2024

Printed on: 2/28/2024

Area Represented: 48 acres

SWFTL recommends <40 acres/sample

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.		
pH	8.2	(6.2)	-	Mod. Alkaline								
Conductivity	75	(-)	umho/cm	None							CL*	Fertilizer Recommended
Nitrate-N	11	(-)	ppm**	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div>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*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Nitrogen: Apply suggested nitrogen rate and then apply 40 lbs/A of nitrogen every 4 to 6 weeks as needed.

Online fertilizer calculators to determine appropriate fertilizers and application rates.

<http://soiltesting.tamu.edu>



Report generated for:
Aqua-Tech Laboratories, Inc.
635 Phil Gramm Blvd
BRYAN, TX 77807

Brazos County
Laboratory Number: 651448
Customer Sample ID: H005445-03A
Crop Grown: TURF FAIRWAYS , ATHLETIC FIELDS , ETC.

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
2478 TAMU
College Station, TX 77843-2478
(979)321-5960

Visit our website: <http://soiltesting.tamu.edu>

Sample received on: 2/20/2024

Printed on: 2/28/2024

Area Represented: 48 acres

SWFTL recommends <40 acres/sample

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
pH	8.1	(6.2)	-	Mod. Alkaline							
Conductivity	51	(-)	umho/cm	None							Fertilizer Recommended
Nitrate-N	5	(-)	ppm**								50 lbs N/acre
Phosphorus	34	(50)	ppm								15 lbs P2O5/acre
Potassium	233	(160)	ppm								0 lbs K2O/acre
Calcium	13,487	(180)	ppm								0 lbs Ca/acre
Magnesium	237	(50)	ppm								0 lbs Mg/acre
Sulfur	101	(13)	ppm								0 lbs S/acre
Sodium	20	(-)	ppm								
Iron											
Zinc											
Manganese											
Copper											
Boron											
Limestone Requirement											0.00 tons 100ECCE/acre
Detailed Salinity Test (Saturated Paste Extract)											
	pH										7.1
	Conductivity										0.60 mmhos/cm
	Sodium										27 ppm 1.168 meq/L
	Potassium										13 ppm 0.334 meq/L
	Calcium										77 ppm 3.847 meq/L
	Magnesium										6 ppm 0.477 meq/L
	SAR										0.79
	SSP										20.05

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Nitrogen: Apply suggested nitrogen rate and then apply 40 lbs/A of nitrogen every 4 to 6 weeks as needed.

Online fertilizer calculators to determine appropriate fertilizers and application rates.
<http://soiltesting.tamu.edu>



Chain-of-Custody and Analysis Request

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

TAMU - Soil Lab

2610 F&B Road
College Station, TX 77845
Phone: (979) 845-4816

SHIPPED TO

DEFINITIONS
P Plastic
G Glass
L Liter
CM Custody Maintained
CTU Custody Transfer Unbroken
ATL Aqua-Tech Laboratories, Inc

Please use Sample ID as PO# and email reports to reporting@aquatechlabs.com.

Lines below document condition at receipt in lab (shipped to) listed above.

Please hold coolers for pick-up.

Cooler ID Temp Read (C) Corrected Temp (C) Thermometer ID

8/17/77 NA LABB7

Sample ID
Sampled / Matrix

Analysis Request

H005445-01

2/13/24 09:42

Soil

Mehlich 3 - TAMU

S SL Plant Available Na Plant Available
Mg Plant Available K Plant Available
Ca Plant Available

TAMU - 1:2 Soil Extract

pH Conductivity (1:2)

H005445-02

2/13/24 09:42

Soil

Calculation - TAMU

SAR Plant Available

Mehlich 3 - TAMU

Na Plant Available P Plant Available
NO3N Extractable K Plant Available
Ca Plant Available Mg Plant Available

Saturated Paste - TAMU

Ca Water Soluble Ca Water Soluble MEQ Mg Water Soluble MEQ
Na Water Soluble Na Water Soluble MEQ Mg Water Soluble

TAMU - 1:2 Soil Extract

pH Conductivity (1:2)



T104704371
TX239

Aqua-Tech Laboratories, Inc.
Austin
3512 Montopolis Dr. Suite A
Austin, TX 78744
512.301.9559

Test results meet all accreditation/certification requirements unless stated otherwise.

Sample Custody

Relinquished (print & sign)	Sampler	Date	Time	Refrigerated / Sealed
Received (print & sign)	Client	Date	Time	Refrigerated / Sealed
Relinquished (print & sign)	Client	Date	Time	Refrigerated / Sealed
Received (print & sign)	Client	Date	Time	Refrigerated / Sealed
Relinquished (print & sign)	Client	Date	Time	Refrigerated / Sealed
Received (print & sign)	Client	Date	Time	Refrigerated / Sealed
Relinquished (print & sign)	Client	Date	Time	Refrigerated / Sealed
Received (print & sign)	Client	Date	Time	Refrigerated / Sealed

(ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed above.)

Lab ID

() H005445-01 [A] - [SUB] TAMU SL 1LP

() H005445-02 [A] - [SUB] TAMU SL 1LP

SHIPPED TO: **TAMU - Soil Lab**

Page 2 of 2

Sample ID Sampled / Matrix	Analysis Request	(ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed above.)	Lab ID
H005445-03 02/13/24 09:42 Soil	<div> <div>SAR Plant Available</div> <div> <div>Na Plant Available</div> <div>Mg Plant Available</div> <div>S SL Plant Available</div> </div> <div> <div>Calculation - TAMU</div> <div>Mehlich 3 - TAMU</div> <div> <div>K Plant Available</div> <div>NO3N Extractable</div> </div> <div> <div>Ca Plant Available</div> <div>P Plant Available</div> </div> </div> <div> <div>Na Water Soluble MEQ</div> <div>Ca Water Soluble MEQ</div> </div> <div> <div>Saturated Paste - TAMU</div> <div>Na Water Soluble</div> <div>Ca Water Soluble</div> </div> <div> <div>TAMU - 1:2 Soil Extract</div> <div>Conductivity (1:2)</div> </div> <div>pH</div> <div>Mg Water Soluble</div> <div>Mg Water Soluble MEQ</div> </div>	() H005445-03 [A] - [SUB] TAMU SL 1LP	

ATTACHMENT N
EXISTING TLAP WQ0011385001



PERMIT NO. WQ0011385001

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

This is a renewal of Permit No.
WQ0011385001 issued
December 9, 2010.

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

Travis County Water Control and Improvement District - Point Venture

whose mailing address is

18606 Venture Drive
Point Venture, Texas 78645

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

General Description and Location of Waste Disposal System:

Description: The Point Venture Wastewater Treatment Facility consists of an activated sludge process plant using the complete mix mode. Treatment units include bar screens, aeration basin, final clarifier, aerobic sludge digester and chlorine contact chamber.

Interim I Phase – Surface Irrigation. The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.082 million gallons per day MGD (April - October) and 0.061875 MGD (November - March) via surface irrigation of 48 acres of a golf course. The facility includes two storage ponds with a total surface area of 0.6 acre and total capacity of 3.85 acre-feet and one steel tank with a total capacity of 13.04 acre-feet for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 1.95 acre-feet per year per acre irrigated (April - October) and 1.47 acre-feet per year per acre irrigated (November - March). The irrigated crop is Bermuda grass.

Interim II Phase – Surface Irrigation. The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.10 MGD via surface irrigation of 48 acres of a golf course. The facility includes two storage ponds with a total surface area of 0.6 acre and total capacity of 3.85 acre-feet and two steel tanks with a total capacity of 18.41 acre-feet for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 2.33 acre-feet per year per acre irrigated. The irrigated crop is Bermuda grass.

Final Phase – Surface Irrigation. The permittee is authorized to dispose of treated

domestic wastewater effluent at a daily average flow not to exceed 0.0822 MGD via surface irrigation of 33.576 acres of a golf course. The facility will include two storage ponds with a total surface area of 0.6 acre and total capacity of 3.85 acre-feet and two steel tanks with a total capacity of 18.41 acre-feet for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 2.74 acre-feet per year per acre irrigated. The irrigated crop is Bermuda grass.

Final Phase – Subsurface area drip dispersal system (SADDS). The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.0678 MGD via subsurface area drip irrigation system (SADDS) with a minimum area of 19.464 acres of a golf course. The facility will include one dosing tank with a total capacity of 339,000 gallons for storage of treated effluent prior to subsurface drip irrigation. Application rates shall not exceed 0.1 gallons per square foot per day. The permittee will maintain native grasses, native oaks and juniper trees and, on the open areas, bermuda grass and winter rye, on the SADDS disposal site.

Location: The wastewater treatment facility and disposal site are located approximately 6.5 miles south of the intersection (within the Village of Point Venture) of Farm-to-Market Road 1431 and Lohmans Crossing in Travis County, Texas 78645. The wastewater treatment facility is located adjacent to Venture Drive in the Village of Point Venture between the 1st and 2nd holes of the Point Venture Golf Course in Travis County, Texas 78645. (See Attachment A.)

Drainage Area: The wastewater treatment facility and disposal site are located in the drainage basin of Lake Travis in Segment No. 1404 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 on **December 1, 2024.**

ISSUED DATE: February 4, 2015


For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR SURFACE IRRIGATION

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 – 0.082 MGD (April – October) and 0.061875 MGD (November – March) in the Interim I Phase;
Daily Average Flow – 0.10 MGD in the Interim II Phase;
Daily Average Flow – 0.0822 MGD in the Final Phase from the treatment system

Quality: The following effluent limitations shall be required:

<u>Parameter</u>	<u>Effluent Concentrations</u> (Not to Exceed)			
	<u>Daily Average</u> mg/l	<u>7-Day Average</u> mg/l	<u>Daily Maximum</u> mg/	<u>Single Grab</u> mg/l
Biochemical Oxygen Demand (5-day)	10	15	25	35
Total Suspended Solids	15	25	40	60

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

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. A trace chlorine residual shall be maintained in the effluent at the point of irrigation application.

B. Monitoring Requirements:

<u>Parameter</u>	<u>Monitoring Frequency</u>	<u>Sample Type</u>
Flow	Five/week	Instantaneous
Biochemical Oxygen Demand (5-day)	One/month	Grab
Total Suspended Solids	One/month	Grab
pH	One/month	Grab
Chlorine Residual	One/month	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.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR SADDs

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 -- 0.0678 MGD in the Final Phase from the treatment system

Quality: The following effluent limitations shall be required:

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

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. A trace chlorine residual shall be maintained in the effluent at the point of irrigation application.

B. Monitoring Requirements:

<u>Parameter</u>	<u>Monitoring Frequency</u>	<u>Sample Type</u>
Flow	Five/week	Instantaneous
Biochemical Oxygen Demand (5-day)	One/month	Grab
Total Suspended Solids	One/month	Grab
pH	One/month	Grab
Chlorine Residual	One/month	Grab
<i>E. coli</i>	One/month	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 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. 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 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. 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 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 judgment 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 169) 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 Environmental Cleanup 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.

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SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site or co-disposal landfill. **The disposal of sludge 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 by the TCEQ. This provision does not authorize Distribution and Marketing of sludge. This provision does not authorize land application of Class A Sludge. This provision does not authorize the permittee to land apply sludge on property owned, leased or under the direct control of the permittee.**

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner which protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge 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 to assure compliance with these regulations.
3. 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 disposal practice.

B. Testing Requirements

1. Sewage sludge 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, which receives the prior approval of the TCEQ for the contaminants listed in Table 1 of 40 CFR Section 261.24. Sewage sludge 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 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 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 Remediation Support Division and the Regional Director (MC Region 11) 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 Remediation 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 Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

2. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceed the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration</u> (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 shall be treated by one of the following methods to ensure that the sludge meets either the Class A or Class B pathogen requirements.

- a. Six alternatives are available to demonstrate compliance with Class A sewage sludge. The first 4 options require either the density of fecal coliform in the sewage sludge be less than 1000 Most Probable Number (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. Below are the additional requirements necessary to meet the definition of a Class A sludge.

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 Section 312.82(a)(2)(A) for specific information.

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 degrees 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 percent.

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 Section 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 Section 312.82(a)(2)(C)(iv-vi) for specific information.

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.

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of shall 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.

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of shall 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. Three alternatives are available to demonstrate compliance with Class B criteria for sewage sludge.

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 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, the following site restrictions must be met if Class B sludge is land applied:

- i. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains 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 sewage sludge when the sewage sludge remains 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 sewage sludge.
- v. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.
- vi. Turf grown on land where sewage sludge is 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 sewage sludge.
- viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
- ix. Land application of sludge shall be in accordance with the buffer zone requirements found in 30 TAC Section 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 percent.

- 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 degrees Celsius. Volatile solids must be reduced by less than 17 percent 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 degrees Celsius. Volatile solids must be reduced by less than 15 percent 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 degrees 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 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees 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 percent 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 percent 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. Sewage sludge shall be injected below the surface of the land.
 - ii. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

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

Alternative 10-

- i. Sewage sludge 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 sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge 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):

<u>Amount of sewage sludge (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
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 sewage sludge applied to the land (dry weight basis).*

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

SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A or B 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 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

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

Table 3

<u>Pollutant</u>	<u>Monthly Average Concentration (milligrams per kilogram)*</u>
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 or Class B pathogen reduction requirements as defined above in Section I.B.3.

C. Management Practices

1. Bulk sewage sludge 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 requirements shall be land applied in a manner which complies with the Management Requirements in accordance with 30 TAC Section 312.44.
3. Bulk sewage sludge 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 sewage sludge sold or given away. The information sheet shall contain the following information:
 - a. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.
 - b. A statement that application of the sewage sludge 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 sewage sludge application rate for the sewage sludge 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 sewage sludge is 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 sewage sludge is 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 sewage sludge 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 sewage sludge.
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 sewage sludge disposal practice.

E. Record keeping Requirements

The sludge 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 sewage sludge 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 Section 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 B sludges, 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 Section 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC Section 312.83(b) have been met for each site on which bulk sewage sludge is 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 sewage sludge or a sewage sludge 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 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 Section 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 Section 312.47(a)(4)(A)(ii) or 30 TAC Section 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 report annually to the TCEQ Regional Office (MC Region 11) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30 of each year the following information:

1. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
2. The frequency of monitoring listed in Section I.C. which applies to the permittee.
3. Toxicity Characteristic Leaching Procedure (TCLP) results.
4. Identity of hauler(s) and TCEQ transporter number.
5. PCB concentration in sludge in mg/kg.
6. Date(s) of disposal.
7. Owner of disposal site(s).
8. Texas Commission on Environmental Quality registration number, if applicable.
9. Amount of sludge disposal dry weight (lbs/acre) at each disposal site.
10. The concentration (mg/kg) in the sludge 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.
11. Level of pathogen reduction achieved (Class A or Class B).
12. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B sludge, include information on how site restrictions were met.
13. Vector attraction reduction alternative used as listed in Section I.B.4.
14. Annual sludge production in dry tons/year.
15. Amount of sludge land applied in dry tons/year.

16. The certification statement listed in either 30 TAC Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge treatment activities, shall be attached to the annual reporting form.
17. 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 sewage sludge is applied.
 - c. The date and time bulk sewage sludge is applied to each site.
 - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk sewage sludge applied to each site.
 - e. The amount of sewage sludge (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
DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL**

- A. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 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 meets the requirements in 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge 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 disposal practice.
- D. Sewage sludge 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) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR Section 261.24. Sewage sludge 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 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 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 Remediation 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 Remediation 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 Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

- E. Sewage sludge 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 report annually to the TCEQ Regional Office (MC Region 11) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year the following information:

1. Toxicity Characteristic Leaching Procedure (TCLP) results.
2. Annual sludge production in dry tons/year.
3. Amount of sludge disposed in a municipal solid waste landfill in dry tons/year.
4. Amount of sludge transported interstate in dry tons/year.
5. A certification that the sewage sludge meets the requirements of 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
6. Identity of hauler(s) and transporter registration number.
7. Owner of disposal site(s).
8. Location of disposal site(s).
9. 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.

SPECIAL PROVISIONS FOR SURFACE IRRIGATION:

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 Category 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 Interim II Phase and Final Phase 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 Section 217.6(c). 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 Pages 2 and 4 of the permit.
5. The permittee had submitted evidence of legal restrictions (on file) prohibiting residential structures within the part of the buffer zone not owned by the permittee according to 30 TAC § 309.13(e)(3). The evidence of legal restrictions shall be submitted to the Executive Director in care of the TCEQ Wastewater Permitting Section (MC 148). The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). (See Attachment B.)

6. 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 33.576 acres with no less than 15 subsamples representing each composite sample. Subsamples shall be composited by like sampling depth 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 6 inches, 6 inches to 18 inches and 18 inches to 30 inches below ground level. The permittee shall sample and analyze soils in December to February of each year. Soil samples shall be analyzed within 30 days of sample procurement.

The permittee shall provide annual soil 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	2:1 (v/v) water to soil mixture	0.01	dS/m (same as mmho/cm)
Nitrate-nitrogen	From a 1 <u>N</u> 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 + nitrate-nitrogen (same as, organic-nitrogen + ammonium-nitrogen + nitrate-nitrogen)		mg/kg (dry weight basis)
Plant-available: Phosphorus	Mehlich III with inductively coupled plasma	1	mg/kg (dry weight basis)
Plant-available: Potassium	May be determined in the same Mehlich III extract with inductively coupled plasma	5 (K)	mg/kg (dry weight basis)
Amendment addition, e.g., gypsum	Recommendation from analytical laboratory		Report in <i>short tons/acre</i> in the year effected

The permittee shall provide a copy of this plan 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) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division no later than end of September following the sampling date of each year. If wastewater is not applied in a particular year, the permittee shall notify the same TCEQ offices and indicate that wastewater and/or sludge has not been applied on the approved land disposal sites during that year.

7. The irrigated crops include Bermuda grass for surface irrigation. The permittee will maintain native grasses, native oaks and juniper trees and, on the open areas, bermuda grass and winter rye, on the SADDs disposal site.
8. Application rates to the irrigated land shall not exceed 1.95 acre-feet per year per acre irrigated (April – October) and 1.47 acre-feet per year per acre irrigated (November – March) in the Interim I Phase. Application rates to the irrigated land shall not exceed 2.33 acre-feet per year per acre irrigated in the Interim II Phase. Application rates to the irrigated land shall not exceed 2.74 acre-feet per year per acre irrigated in the Final Phase. The permittee is responsible for providing equipment to determine application rates and maintaining accurate records of the volume of effluent applied. These records shall be made available for review by the Texas Commission on Environmental Quality and shall be maintained for at least three years.
9. Irrigation practices shall be designed and managed so as to prevent ponding of effluent or contamination of ground and surface waters and to prevent the occurrence of nuisance conditions in the area. Bermuda grass, native grasses, native oaks and juniper trees and winter rye shall be established and well maintained in the irrigation area throughout the year for effluent and nutrient uptake by the crop and to prevent pathways for effluent surfacing. Tailwater control facilities shall be provided as necessary to prevent the discharge of any effluent from the irrigated land.
10. Effluent shall not be applied for irrigation during rainfall events or when the ground is frozen or saturated.
11. The permittee shall erect adequate signs stating that the irrigation water is from a non-potable water supply for any area where treated effluent is stored or where there exist hose bibs or faucets. 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.
12. Spray fixtures for the irrigation system shall be of such design that they cannot be operated by unauthorized personnel.
13. Irrigation with effluent shall be accomplished only when the area specified is not in use.
14. The permittee shall maintain a long term contract with the owner(s) of the land application site which is authorized for use in this permit, or own the land authorized for land application of treated effluent.

15. Holding or storage ponds shall conform to the design criteria for stabilization ponds with regard to construction and levee design and shall maintain a minimum freeboard of two feet according to 30 TAC Chapter 217, Design Criteria for Wastewater Treatment Systems.
16. Permanent transmission lines shall be installed from the holding pond to each tract of land to be irrigated utilizing effluent from that pond.
17. Facilities for the retention or storage of treated or untreated wastewater, such as constructed wetlands, ponds and lagoons, shall be adequately lined to control seepage. The liner shall meet the requirements in 30 TAC § 217.203, Design Criteria for Natural Treatment Facilities.

The permittee shall furnish certification by a Texas Licensed Professional Engineer that the completed pond lining meets the appropriate criteria above prior to use of the facilities. The certification shall be submitted to the TCEQ Regional Office (MC Region 11), Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, Water Quality Assessment Team (MC 150) and Wastewater Permitting Section (MC 148) of the Water Quality Division.

18. For existing ponds that were lined and certified under 30 TAC Chapter 317: Facilities for the retention of treated or untreated wastewater shall be adequately lined to control seepage. The following methods of pond lining are acceptable.

a. In-situ clay soils or placed and compacted clay soils meeting the following requirements:

- 1) More than 30% passing a No. 200 mesh sieve
- 2) Liquid limit greater than 30%
- 3) Plasticity index greater than 15
- 4) A minimum thickness of 2 feet
- 5) Permeability equal to or less than 1×10^{-7} cm/sec (*)
- 6) Soil compaction will be 95% standard proctor at optimum moisture content (*)

(*) For new and/or modified ponds only.

- b. Membrane lining with a minimum thickness of 20 mils, and an underdrain leak detection system.
- c. An alternate method of pond lining may be utilized with prior approval from the Executive Director.

The permittee has furnished certification by a Texas Licensed Professional Engineer that the completed pond lining meets the appropriate criteria above (on file). The certification shall be sent to the TCEQ Regional Office (MC Region 11) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division

19. The permittee shall provide automatic shutdown alarm controls for the irrigation system of the future irrigation areas (hatched areas in Attachment C) that will be continuously responsive to the measured wind speed and direction to prevent nuisance spray drift off the stated irrigation areas.

20. The permittee shall provide facilities for the protection of its wastewater treatment facilities from a 100-year flood.

SPECIAL PROVISIONS FOR SADDs:

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 Category 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 Interim II Phase and Final Phase 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 Section 217.6(c). 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.
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. The permittee had submitted evidence of legal restrictions (on file) prohibiting residential structures within the part of the buffer zone not owned by the permittee according to 30 TAC Section 309.13(e)(3). The evidence of legal restrictions shall be submitted to the Executive

Director in care of the TCEQ Wastewater Permitting Section (MC 148). The permittee shall comply with the requirements of 30 TAC Section 309.13(a) through (d). (See Attachment B.)

7. According to the requirements of 30 TAC Section 222.81(a), the permittee shall locate the subsurface area drip dispersal system a minimum horizontal distance of 100 feet from surface waters in the state. The permittee shall locate the subsurface area drip dispersal system 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 water wells as described in 30 TAC Section 309.13(c)(1). The permittee shall not locate a subsurface area drip dispersal system within a floodway according to the requirements of 30 TAC Section 222.81(d).
8. The permittee will maintain native grasses, native oaks and juniper trees and, on the open areas, bermuda grass and winter rye. 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 Section 222.161(d), the permittee shall maintain records documenting all activities associated with maintaining the vegetative cover, 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.
9. Based on the requirements of 30 TAC Section 222.151, the subsurface drip irrigation 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.
10. The subsurface drip irrigation system shall consist of a sufficient number of different dispersal zones. 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.
11. 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.
12. 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 Section 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.
13. According to the requirements of 30 TAC Section 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.
- 14. 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.
 - 15. According to 30 TAC Section 222.163, Closure Requirements, the permittee shall close the system under the standards set forth in this section.
 - 16. Effluent shall not be applied for irrigation when the ground is saturated.
 - 17. Irrigation with effluent shall be accomplished only when the area specified is not in use.
 - 18. The permittee shall erect adequate signs stating that the irrigation water is from a non-potable water supply for any area where treated effluent is stored or where there exist hose bibs or faucets. 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.
 - 19. The permittee shall maintain a long term contract with the owner(s) of the land application site which is authorized for use in this permit, or own the land authorized for land application of treated effluent.
 - 20. According to the requirements of 30 TAC Section 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.
 - 21. The permittee shall comply with the buffer zone requirements of 30 TAC §217; §222.81; §290; §309; and any Best Management Practice (BMP) proposed in the permit application regarding water in the state. Effluent shall not be applied within 150 feet of a private water supply well; 500 feet of a public water supply well, spring, or similar source of public drinking water; 200 feet of a solution channel, sinkhole, or other conduit to groundwater; or 100 feet from surface waters in the state.
 - 22. Any recharge features uncovered by construction activities shall be addressed in an updated and certified Recharge Feature Plan (RFP). The RFP will include the BMPs implemented that will prevent impact to recharge features from wastewater application and prevent groundwater contamination. The updated certified RFP shall be submitted to the TCEQ Water Quality Assessment Team (MC-150) and the TCEQ Region 11 Office within 30 days of discovery of the new recharge feature(s).
 - 23. The permittee shall notify the TCEQ Region 11 Office 30 days before any of the following activities begin in accordance with 30 TAC §222.43: construction start up, drip system field layout, completion of any soil amendments, operation of the subsurface drip system, or completion of the subsurface project.

24. The applicant shall construct berms or swales that will prevent, or divert, stormwater from entering all subsurface wastewater application areas.
25. The shallow groundwater monitoring program shall be implemented per the Drip Irrigation System Engineering Report and Annual Cropping Plan of the application. Additionally:

The applicant shall submit the data from the quarterly shallow groundwater monitoring plan to the Water Quality Assessment Team (MC-150) of the Water Quality Division and the Compliance Monitoring Section (MC-224) during the month of September of each year for review.

The shallow groundwater sampling points are, at a minimum, the same locations as the sampling points used for the annual soil sampling (Locations A through Z) and are shown in Attachment D.

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.

26. The seep/springs sampling program shall be implemented per the Drip Irrigation System Engineering Report and Annual Cropping Plan of the application. Additionally:

The applicant shall submit the data from the quarterly seeps/springs monitoring plan to the Water Quality Assessment Team (MC-150) of the Water Quality Division and the Compliance Monitoring Section (MC-224) during the months of March and September of each year for review.

Any spring and/or seep development found downgradient from the drip irrigation fields will be reported to the TCEQ Region 11 Office within five (5) business days. If laboratory analysis indicates that wastewater is emerging as a spring or seep, corrective measures will be implemented immediately to correct the discharge.

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.

27. 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 19.464 acres with no less than two soil cores per each dispersal zone. Subsamples shall be composited by like sampling depth 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. Soils shall be sampled in December to February and shall be analyzed within 30 days of sample procurement.

The permittee shall provide annual soil 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)
Plant-available: Phosphorus	Mehlich III with inductively coupled plasma	1	mg/kg (dry weight basis)
Plant-available: Potassium Calcium Magnesium Sulfur	May be determined in the same Mehlich III extract with inductively coupled plasma	5 (K) 10 (Ca) 5 (Mg) 1 (S)	mg/kg (dry weight basis)
Water-soluble: Sodium Calcium Magnesium	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.

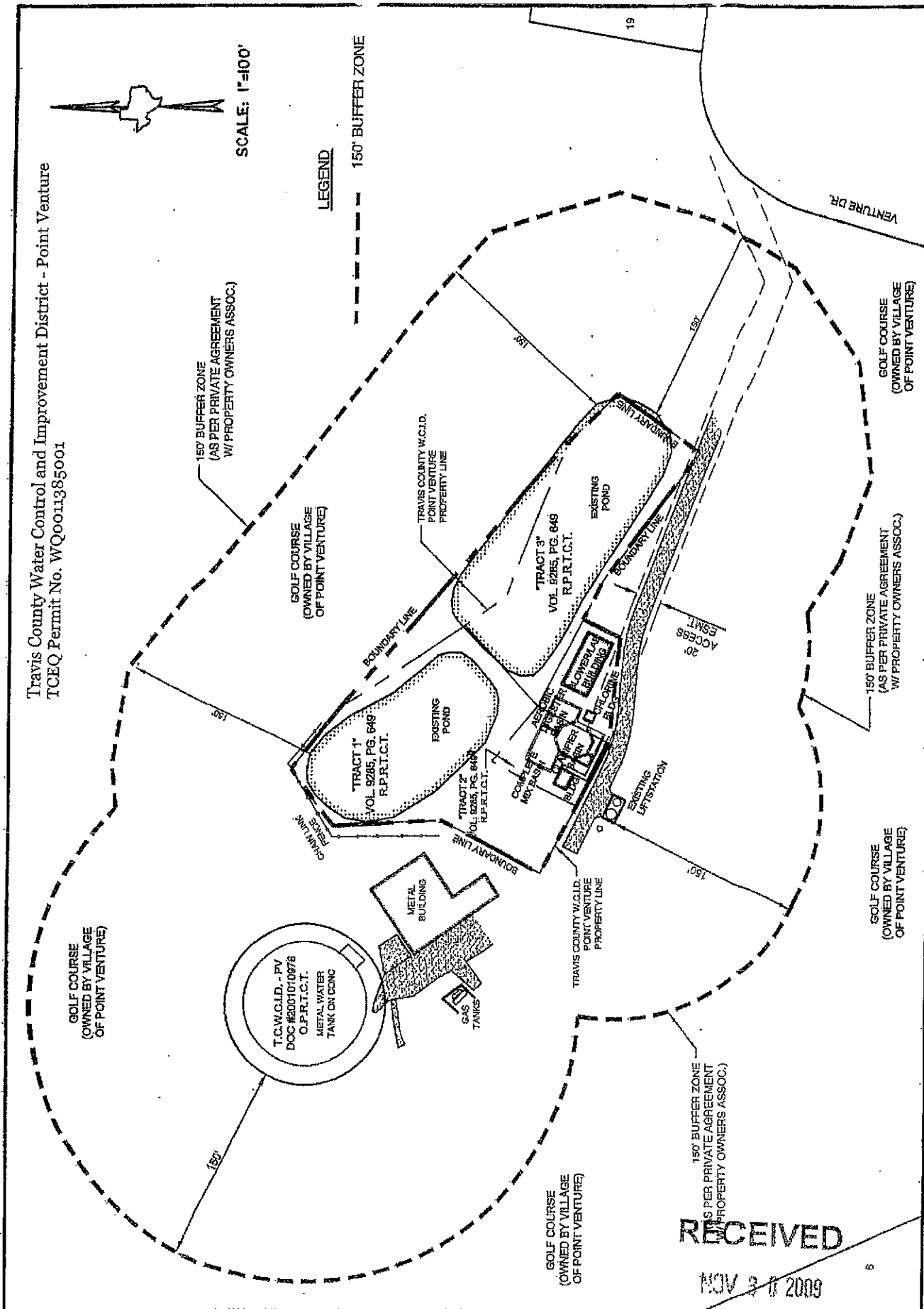
			If the SAR is 10 or greater than 10, amendments (e.g., gypsum) shall be added to the soil to adjust the SAR to less than 10.
Amendment addition, e.g., gypsum	Recommendation from analytical laboratory		Report in <i>short tons/acre</i> in the year effected

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 Compliance Monitoring Team (MC 224) of the Water Quality Assessment (MC 150) and Enforcement Division, no later than September 30 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 permittee shall maintain a minimum rootable soil depth below the drip irrigation lines of 12 inches. At least a 6 inch layer of soil shall be maintained over the drip lines. If imported soils are utilized, 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.
29. Each drip field (zone) shall have at least one moisture sensing device placed at 12 inches below the drip lines at the topographic low of each zone that will automatically shut off irrigation to the drip field when the soil becomes saturated. In each zone, the moisture sensing devices will be at least 20 feet apart if more than one moisture sensing device is installed.
30. If complete shutdown of the facility becomes necessary or if the storage capacity is exceeded, the permittee shall employ pump and haul method to prevent the discharge of treated or untreated wastewater. The permittee shall obtain the necessary authorization from the TCEQ Region 11 before undertaking the pump and haul activity.
31. 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 30 TAC Chapter 222 indicating how uneven application of effluent due to back draining will be avoided. The permittee shall notify the TCEQ Region 11 office 30 days prior to installation of the drip lines.
32. All open areas in the 19.464 acres shall be planted to Bermuda grass and rye grass and maintained to ensure a year round non-dormant vegetative cover. The permittee shall mow and/or harvest (cut and remove it from the field at least one time during the year) and manage the grass areas to ensure the health of the plant stand and elevated

evapotranspiration of the vegetative cover. Harvesting and mowing dates shall be recorded in a log book kept on site to be made available to TCEQ personnel upon request.

33. Each dispersal zone shall meet the flush velocity requirements of 30 TAC §222.117.
34. The physical condition of the land application fields will be monitored on a weekly basis. Any areas with problems such as surface runoff, surficial erosion, stressed or damaged vegetation, etc., will be recorded in the field log kept onsite and corrective measures will be implemented immediately.
35. In open SADDs areas, rocks 12 or more inches in size shall be removed from 12 inches below the drip line placement depth.



3801 SOUTH 1ST STREET
AUSTIN, TEXAS 78704-7847
PHONE-(512) 442-3668
FAX-(512) 442-3623

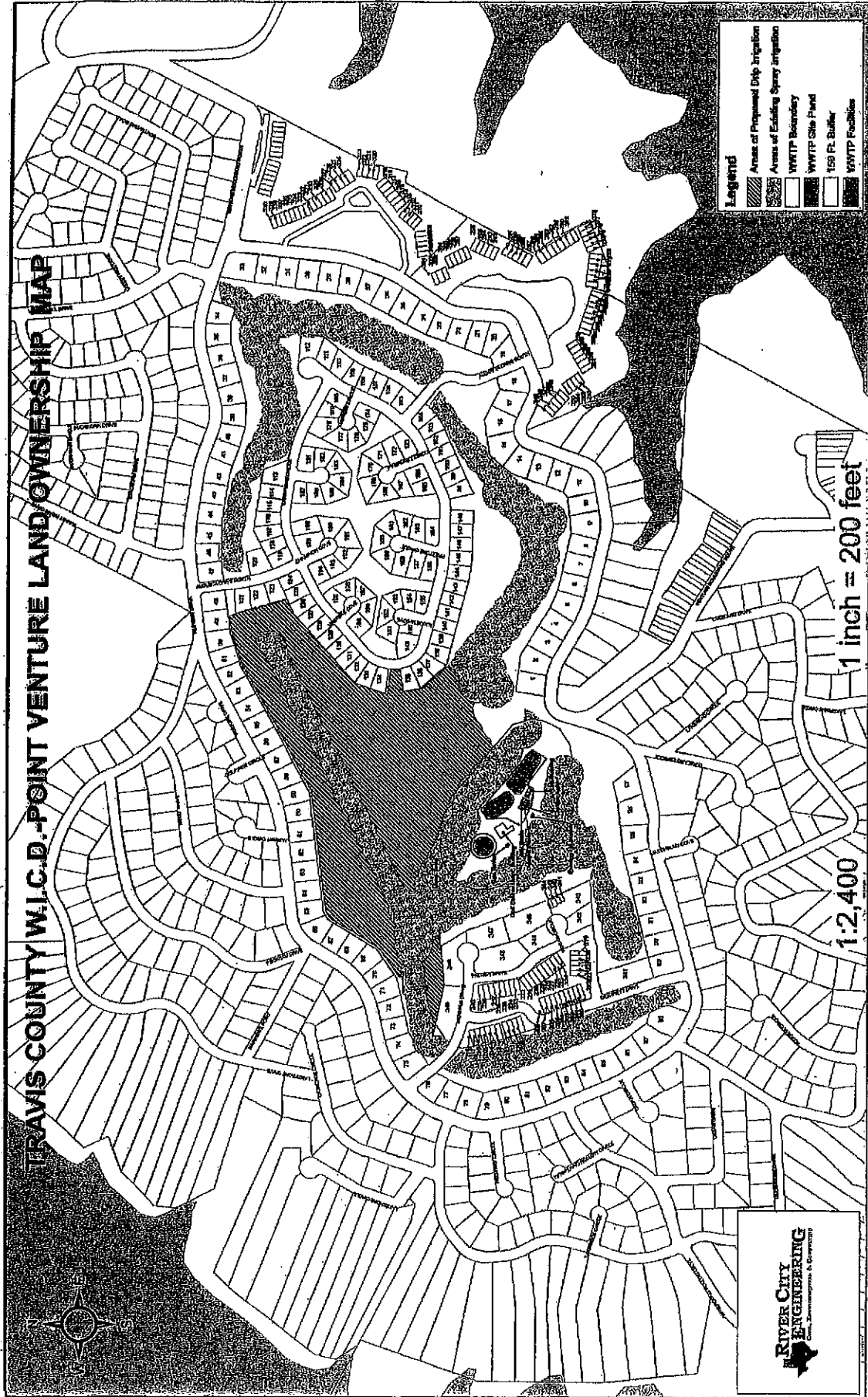
1011 E. COUNTY LINE ROAD, SUITE C
MCKINNEY, TEXAS 75069
PHONE-(972) 442-3668
FAX-(972) 442-3607



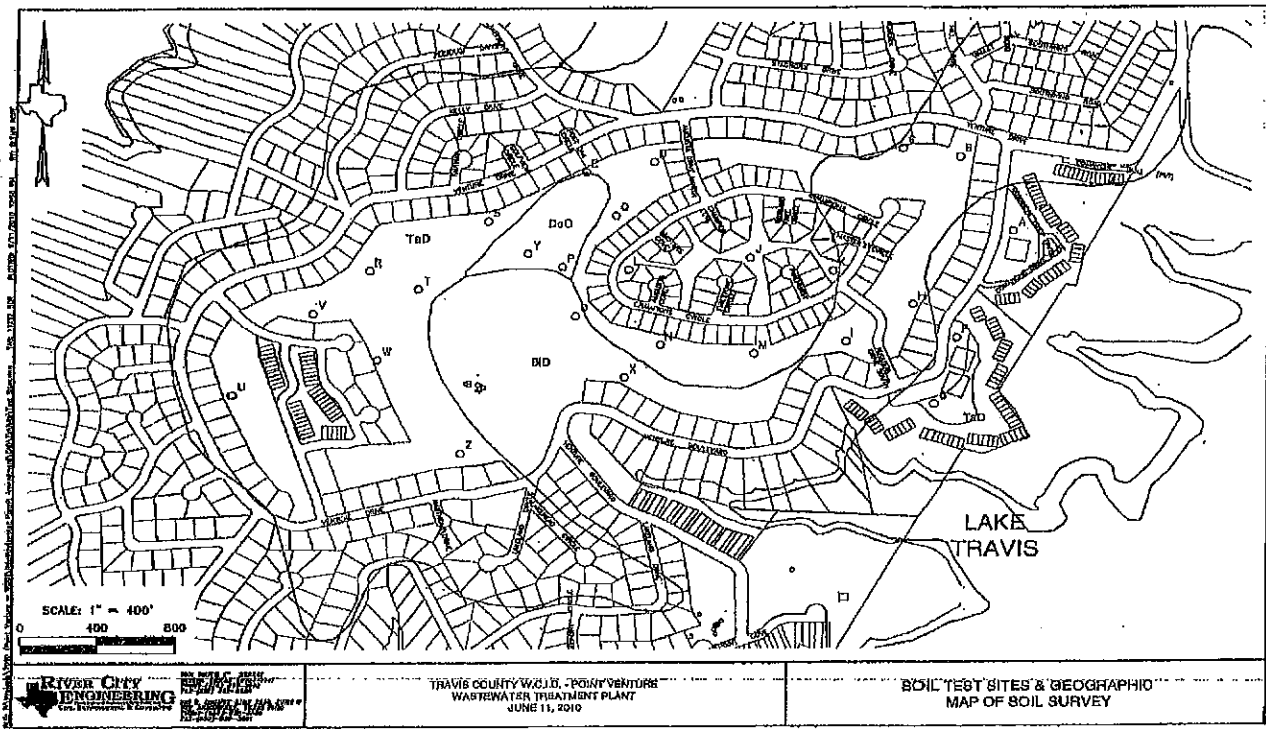
TRAVIS COUNTY W.C.&I.D. NO. 17
POINT VENTURE
WASTEWATER TREATMENT FACILITIES
TCEQ PERMIT APPLICATION

ATTACHMENT B
BUFFER ZONE MAP

ATTACHMENT C



ATTACHMENT D **Shallow Groundwater Monitoring Locations
(Locations A through Z)**



ATTACHMENT O
EXISTING 210 AUTHORIZAITON R11385-001

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 30, 2016

Mr. Fred Marshall, Board President
Travis County Water Control and Improvement District-Point Venture
18606 Venture Drive
Point Venture, Texas 78645

Re: Travis County Water Control and Improvement District-Point Venture
Reuse Authorization No. R11385-001
Travis County
CN600644843, RN101916161

Dear Mr. Marshall:

The Texas Commission on Environmental Quality has completed its review of the application for the above referenced authorization. The authorization allows the reuse of Type I and Type II wastewater effluent from Point Venture wastewater treatment facility. Plant improvements adding tertiary filtration must be completed to allow for wastewater effluent to meet the Type I effluent limitations.

Notify this office and the appropriate regional office at least 30 days before reclaimed water is distributed. If the plans and specifications for the project have been approved, the authorization will be activated and the facility will be issued monthly effluent report (MER) forms for reporting quality and quantity of reclaimed water used. See Requirement V (d) on page 8 of the attached authorization.

Thank you for your cooperation during this review process. If you have any questions, please contact Paul A. Brochi of my staff at paul.brochi@tceq.texas.gov or (512) 239-1372.

Sincerely;

A handwritten signature in black ink, appearing to read "Chris Linendoll", written over a circular stamp.

Chris Linendoll, E.I.T., Manager
Wastewater Permitting Section
Water Quality Division

CL/PAB/evm

cc: Mr. David Kneuper, P.E., River City Engineering, Austin, Texas

AUTHORIZATION FOR RECLAIMED WATER



Authorization No. R11385-001

Producer: Travis County Water Control and Improvement District - Point Venture
18606 Venture Drive
Point Venture, Texas 78645

Provider: Travis County Water Control and Improvement District - Point Venture
18606 Venture Drive
Point Venture, Texas 78645

User: Travis County Water Control and Improvement District - Point Venture
18606 Venture Drive
Point Venture, Texas 78645

Location: The wastewater treatment facility is located approximately 6.5 miles south of the intersection of Farm-to-Market road 1431 and Lohman's Crossing within the Village of Point Venture, Travis County, Texas.

Authorization: Type I and Type II reclaimed water from the Travis County Water Control and Improvement District's Point Venture Wastewater Treatment Facility (TLAP Permit No. WQ0011385001) to be used for the irrigation of landscape, public parks, athletic fields, and golf courses; soil compaction; and dust control. The service area is defined as shown in Section XI, Service Area Map.

This authorization contains the conditions that apply for the use of reclaimed water. The approval of reclaimed water use under Chapter 210 does not affect any existing water rights. If applicable, a reclaimed water use authorization in no way affects the need of a producer, provider, or user to obtain a separate water right authorization from the commission. This authorization does not allow irrigation of any area authorized for irrigation under a Texas Land Application Permit.

Issue Date: June 30, 2016

A handwritten signature in black ink, appearing to read "R. A. Hyde", is written over a horizontal line.

Richard A. Hyde, P.E., Executive Director

I. General Requirements

- A. No producer or provider may transfer reclaimed water to a user without first notifying the commission.
- B. Reuse of untreated wastewater is prohibited.
- C. Food crops that may be consumed raw by humans must not be spray irrigated. Food crops including orchard crops that will be substantially processed prior to human consumption may be spray irrigated. Other types of irrigation that avoid contact of reclaimed water with edible portions of food crops are acceptable.
- D. There must be no nuisance conditions resulting from the distribution, the use, or storage of reclaimed water.
- E. Reclaimed water must not be used in a way that degrades groundwater quality to a degree adversely affecting its actual or potential uses.
- F. Reclaimed water stored in ponds must be prevented from discharging into waters in the state, except for discharges directly resulting from rainfall events or in accordance with a permit issued by the commission. All other discharges are unauthorized.
- G. If an overflow of a holding pond occurs causing discharge into or adjacent to water in the state, the user or provider, as appropriate, shall report the noncompliance. A written submission of pertinent information must be provided to both the TCEQ Region 11 office in Austin, and to the TCEQ Enforcement Division (MC-149) in Austin, within five (5) working days after becoming aware of the overflow. The submission must contain:
 - 1. a description of the noncompliance and its cause;
 - 2. the potential danger to human health or safety, or the environment;
 - 3. the period of noncompliance, including exact dates and times;
 - 4. if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
 - 5. steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
- H. Unless otherwise provided in this authorization, there must be no off-site discharge, either airborne or surface runoff of reclaimed water from the user's property except to a wastewater treatment collection system or wastewater treatment facility unless the reclaimed water user applies for and obtains a permit from the commission that authorizes discharge of the water.
- I. All reclaimed water piping must be separated from potable water piping when trenched by a distance of at least nine feet for Type II effluent and four feet For Type I. All buried pipe must be manufactured in purple, painted purple, taped with purple metallic tape or bagged in purple. All exposed piping, hose bibs and faucets must be painted purple, designed to prevent connection to a standard water hose, and stenciled with a warning reading "NON-POTABLE WATER."
- J. The design of any new distribution system that will convey reclaimed water to a user requires the approval of the executive director. Materials must be submitted to the executive director in accordance with the Texas Engineering Practice Act (Article 3271a, Vernon's Annotated Texas Statutes). The plans and specifications for any new

distribution system constructed pursuant to this authorization must be approved by the executive director. Failure to secure approval before commencing construction or making a transfer of reclaimed water is a violation of this authorization. Each day of a transfer is a separate violation until approval has been secured.

- K. Nothing in this authorization modifies any requirements in 30 TAC Chapter 290, Public Drinking Water.
- L. A major change from a prior notification for use of reclaimed water must be approved by the executive director before it can be implemented. A major change includes:
 - 1. a change in the boundary of the approved service area, not including the conversion of individual lots within a subdivision to reclaimed water use;
 - 2. the addition of a new provider;
 - 3. a major change in the intended use, such as conversion from irrigation of a golf course to residential irrigation; or
 - 4. a change from either Type I or Type II use to the other.
- M. The reclaimed water producer, provider, and user shall maintain current operation and maintenance plans on the sites over which they have operational control. The operation and maintenance plan must contain the following, as a minimum:
 - 1. a copy of the signed contract between the user and provider and a copy of the signed contract between the provider and the producer, as applicable;
 - 2. a labeling and separation plan for the prevention of cross connections between reclaimed water distribution lines and potable water lines;
 - 3. the measures that will be implemented to prevent unauthorized access to reclaimed water facilities (e.g., secured valves);
 - 4. procedures for monitoring reclaimed water;
 - 5. a plan for how reclaimed water use will be scheduled to minimize the risk of inadvertent human exposure;
 - 6. schedules for routine maintenance;
 - 7. a plan for worker training and safety; and
 - 8. contingency plan for system failure or upsets.
- N. One of the following requirements must be met by the user or provider, for any area where reclaimed water is stored or where there are hose bibs or faucets:
 - 1. Signs having a minimum size of eight inches by eight inches must be posted at all storage areas and on all hose bibs and faucets reading, in both English and Spanish, "Reclaimed Water, Do Not Drink" or similar warning.
 - 2. The area must be secured to prevent access by the public.
- O. Where a reclaimed water line parallels a sewer line, the reclaimed water line must be constructed in accordance with subsection (p) or (q) of this section. The horizontal separation distance must be three feet (outside to outside) with the reclaimed water line at the level of or above the sewer line. Reclaimed water lines that parallel sewer lines may be placed in the same benched trench. Where a reclaimed water line crosses a sewer line,

the requirement of 30 TAC §290.44(e)(4)(B), Water Line Installation—crossing lines, must be followed with the reclaimed water line substituted for the water line.

- P. Reclaimed water pipes must meet the following requirements:
1. Lines that transport reclaimed water under pressure must be sized according to acceptable engineering practices for the needs of the reclaimed water users.
 2. Reclaimed water force mains must have an expected life of at least as long as that of the associated lift station and must be suitable for the reclaimed water being pumped and operating pressure to which it will be subjected.
 3. Pipes must be identified in the technical specifications with appropriate American Society for Testing and Materials, American National Standard Institute, or American Water Works Association standard numbers for both quality control (dimensions, tolerance, and installation such as bedding or backfill).
 4. Pipes and fittings must have a minimum working pressure rating of 150 pounds per square inch.
 5. Final plans and specifications must describe required pressure testing for all installed reclaimed water force mains.
 6. Minimum test pressure must be 1.5 times the maximum design pressure. Allowable leakage rates must be determined as described in 30 TAC §217.97, Pressure Sewer Systems.
 7. Gravity flow reclaimed water lines must meet the requirements of 30 TAC Chapter 217, Subchapter C, Conventional Collection Systems. The provider shall prevent high velocity scouring and maintain adequate fluid velocity to prevent the deposition of solids in the lines.
- Q. All exposed piping and piping within a building must be either purple pipe or painted purple. All exposed piping should be stenciled in white with a warning reading "NON-POTABLE WATER. All exposed or buried reclaimed water piping constructed at a wastewater treatment facility is exempt from the color-coding requirement of this section.
- R. When applicable, in accordance with 30 TAC Chapter 217, Design Criteria for Domestic Wastewater Systems, the design of the distribution systems that will convey reclaimed water to a user must be submitted to the executive director and must receive an approval before the distribution system may be constructed. The design of the distribution systems must meet the criteria of 30 TAC Chapter 217, Design Criteria for Domestic Wastewater Systems. When a municipality is the plan review authority for certain sewer systems that transport primarily domestic waste, in lieu of the commission, design submittal will not be subject to submittal to the commission and instead must be approved by the municipality.
- S. All ground level and elevated storage tanks must be designed, installed, and constructed in accordance with current AWWA standards with reference to materials to be used and construction practices to be followed, except for health-based standards strictly related to potable water storage and contact practices, where appropriately less restrictive standards may be applied.

II. Storage Requirements for Reclaimed Water

- A. Storage facilities for retaining reclaimed water prior to use must not be located within a floodway.
- B. Storage ponds must be hydraulically separated from waters in the state.
- C. Any holding pond designed to contain Type I effluent or Type II effluent that is located within a DRASTIC Pollution Potential Index Zone of less than 110, shall conform to the following requirements:
 - 1. Ponds with an earthen liner must meet the following requirements
 - a. A permeability of less than 1×10^{-4} cm/sec;
 - b. The ponds must be designed and constructed to prevent groundwater contamination;
 - c. Soils used for pond lining must be free from foreign material such as paper, brush, trees, and large rocks; and
 - d. All soil liners must be of compacted material, at least 24 inches thick, compacted in lifts no greater than 6 inches thick and compacted to 95% of Standard Proctor Density;
 - e. Soil liners must meet the following particle size gradation and Atterberg limits:
 - i. 30% or more passing a number 200 mesh sieve; and
 - ii. a liquid limit of 30% or greater; and
 - iii. a plasticity index of 15 or greater;
 - f. In situ liners at least 24 inches thick meeting a permeability less than or equal to 1×10^{-4} cm/sec are acceptable alternatives; In-situ clay soils meeting the soils liner requirements must be excavated and re-compacted a minimum of 6 inches below planned grade to assure a uniformly compacted finished surface.
- D. Synthetic membrane linings must have a minimum thickness of 40 mils and have a leak detection system;
- E. Certification by a Texas licensed professional engineer must be furnished stating that the pond liner meets the appropriate criteria prior to use of the facilities;
- F. Soil embankment walls must have a top width of at least five feet. The interior and exterior slopes of soil embankment walls must be no steeper than one foot vertical to three feet horizontal unless alternate methods of slope stabilization are used. All soil embankment walls must be protected by a vegetative cover or other stabilizing material to prevent erosion. Erosion stops and water seals must be installed on all pipe penetrating the embankments; and
- G. An alternative method of pond lining that provides equivalent or better water quality protection than provided under this section may be utilized with the prior approval of the executive director; and
- H. Reclaimed water may be stored in leak-proof, fabricated tanks;

- I. Subsequent holding ponds utilized for the receipt and storage of reclaimed water of a quality that could cause or causes a violation of a surface water quality standard or impairment of groundwater for its actual or intended use will be also subject to the storage requirements of this section.

III. Specific Uses and Quality Standards for Reclaimed Water

- A. Numerical parameter limits pertaining to specific reclaimed water use categories are contained in this section. These limits apply to reclaimed water before discharge to initial holding ponds or a reclaimed water distribution system.
- B. The reclaimed water producer shall establish that the reclaimed water meets the quality limits at the sample point for the intended use in accordance with the monitoring requirements identified in Section IV, Sampling and Analysis.
- C. Types and quality standards for reclaimed water.
 1. Type I Reclaimed Water Use. The use of Type I reclaimed water is for situations where the public may come in contact with the reclaimed water. The uses allowed by this authorization are:
 - a. Irrigation: landscape, public parks, and athletic fields.
 - b. Type I reclaimed water may also be used for any of the authorized Type II uses.
 2. The following conditions apply to Type I use of reclaimed water. At a minimum, the reclaimed water producer shall transfer only reclaimed water of the following quality as described for Type I reclaimed water use. Type I reclaimed water on a 30-day average must have a quality of no more than:

Table 1. Type I Quality Requirements

Parameter	Limit	Limit Type
Turbidity	3 NTUs	30-day average
BOD ₅	5 mg/l	30-day average
<i>E. coli</i>	20/100 ml	30-day geometric mean (MPN or CFU)
<i>E. coli</i>	75/100 ml	maximum single grab sample (MPN or CFU)

Type II Reclaimed Water Use. The use of Type II reclaimed water is for situations where the public will not be exposed to the reclaimed water. The uses allowed by this authorization are:

- a. Irrigation of golf course and landscaped areas surrounding commercial or industrial complexes.
- b. Soil compaction or dust control in construction areas.
3. The following conditions apply to Type II use of reclaimed water. At a minimum, the reclaimed water producer shall transfer only reclaimed water of the following quality. Type II reclaimed water on a 30-day average must have a quality of no more than:

Table 2. Type II Quality Requirements

Parameter	Limit	Limit Type
BOD ₅	20 mg/l	30-day average
<i>E. coli</i>	200/100 ml	30-day geometric mean (MPN or CFU)

<u>E. coli</u>	800/100 ml	maximum single grab sample (MPN or CFU)
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D. Test Procedures

1. Test procedures for the analysis of pollutants must comply with procedures specified in 30 TAC §§319.11 - 319.12. Measurements, tests, and calculations must accurately represent the reclaimed water.
2. All laboratory tests submitted to demonstrate compliance with this authorization must meet the requirements of 30 TAC Chapter 25, *Environmental Testing Laboratory Accreditation and Certification*.

IV. Sampling and Analysis

- A. The reclaimed water producer shall sample the reclaimed water prior to distribution to the entity that first received the reclaimed water after it leaves the wastewater treatment facility (provider or user) to assure that the water quality meets the standard for the contracted use.
- B. Analytical methods must be in compliance with 30 TAC Chapter 319, *Monitoring and Reporting*.
- C. The minimum sampling and analysis frequency for Type I reclaimed water is twice per week when reclaimed water is being produced and shall be reported as outfall 800.
- D. The minimum sampling and analysis frequency for Type II reclaimed water is once per week when reclaimed water is being produced and shall be reported as outfall 900.
- E. The monitoring must be done after the final treatment unit.
- F. The records of the monitoring must be kept on a monthly basis and be available at the facility site for inspection by representatives of the Commission for at least five years.

V. Record Keeping and Reporting

- A. The reclaimed water provider and user shall maintain records on site for a period of at least five years.
- B. The producer shall maintain the following records:
 1. copies of notifications made to the commission concerning reclaimed water projects;
 2. as applicable, copies of contracts with each reclaimed water user (this requirement does not include reclaimed water users at residences that have separate distribution lines for potable water);
 3. records of the volume of water delivered to each reclaimed water user per delivery (this requirement does not apply to reclaimed water users at residences that have separate distribution lines for potable water); and
 4. reclaimed water quality analyses.
- C. The reclaimed water provider or producer shall report to the commission on a monthly basis the following information on forms furnished by the executive director. The reports

are due by the 20th day of the month following the reporting period.

1. volume of reclaimed water delivered to each user; and
 2. quality of reclaimed water delivered to a user or provider reported as a monthly average for each quality criteria, except those listed as "not to exceed" that must be reported as individual analyses.
- D. Monitoring requirements contained in the authorization are suspended from the effective date of the authorization until the reclaimed water is transferred. The provider shall provide written notice to the Water Quality Application Team (MC 148) and the appropriate TCEQ regional office at least thirty (30) days prior to transfer of reclaimed water.

VI. Transfer of Reclaimed Water

- A. Reclaimed water must be transferred from a provider to a user on a demand only basis. A reclaimed water user may refuse delivery of reclaimed water at any time.
- B. All reclaimed water transferred to a user must be of at least the quality specified in Section IV, *Sampling and Analysis*.
- C. Transfer must be by pipes or tank trucks.
- D. The transfer of reclaimed water must be terminated immediately if a provider becomes aware of the misuse of the reclaimed water by the user, regardless of contract provisions.

VII. Restrictions

- A. This authorization does not convey any property right and does not grant any exclusive privilege.
- B. This authorization does not allow the use of reclaimed water on land that is authorized as a disposal site under either a Texas Pollutant Discharge Elimination System (TPDES) permit or a Texas Land Application Permit (TLAP).

VIII. Responsibilities and Contracts

- A. The producer of reclaimed water is not liable for misapplication of reclaimed water by users, except as provided in this section. Both the reclaimed water provider and user have at least but are not limited to the following responsibilities:
 1. The reclaimed water producer shall: transfer reclaimed water of at least the minimum quality required by this chapter at the point of delivery to the user;
 - a. sample and analyze the reclaimed water and report the analyses in accordance with Section IV, *Sampling and Analysis*, and Section V, *Recordkeeping and Reporting*; and
 - b. notify the executive director in writing within five (5) days after obtaining knowledge of reclaimed water use not authorized by the executive director.
 2. The reclaimed water provider shall:

Travis County Water Control and Improvement District – Point Venture
Reclaimed Authorization No. R11385-001

- a. ensure construction of reclaimed water distribution systems in accordance with 30 TAC Chapter 217, Design of Domestic Wastewater Systems, and in accordance with approved plans and specifications;
 - b. transfer reclaimed water of at least the minimum quality required by this authorization at the point of delivery to the user;
 - c. notify the executive director in writing within five (5) days after obtaining knowledge of reclaimed water use not authorized by the executive director; and
 - d. not be found in violation of this chapter for the misuse of the reclaimed water by the user if transfer of such water is shut off promptly upon knowledge of misuse regardless of contract provisions.
3. The reclaimed water user shall:
 - a. use the reclaimed water in accordance with this authorization; and
 - b. maintain and provide records as required by Section V, Record Keeping and Reporting.

IX. Enforcement

If the producer, provider, or user fail to comply with the terms of this authorization, the executive director may take enforcement action provided by the Texas Water Code §26.019 and §26.136.

X. Standard Provisions

- A. This authorization is granted in accordance with the rules and orders of the commission and the laws of the state of Texas.
- B. Acceptance of this authorization constitutes an acknowledgment and agreement that the producer, provider and user will comply with all the terms, provisions, conditions, limitations and restrictions embodied in this authorization and with the rules and other orders of the commission and the laws of the state of Texas. Agreement is a condition precedent to the granting of this authorization.



Re: Travis Co. WCID - Point Venture WWTP, TLAP Permit No: WQ0011385001

From Andrew Gorton <Andrew.Gorton@Tceq.Texas.Gov>

Date Wed 11/6/2024 3:47 PM

To David Vargas <dvargas@trihydro.com>

Cc Derek Klenke <DKlenke@trihydro.com>

Thank you David, I will review what you submitted in the next few days and let you know if I have any other questions or need more information. Going forward, it is acceptable to only submit revised pages/maps/etc., rather than the entire application.

Thank you,

-Andy

Andrew Gorton, P.G.
Texas Commission on Environmental Quality
MC-150
PO Box 13087
Austin, TX 78711-3087
512.239.4585
Andrew.Gorton@tceq.texas.gov

From: David Vargas <dvargas@trihydro.com>

Sent: Wednesday, November 6, 2024 3:21 PM

To: Andrew Gorton <Andrew.Gorton@Tceq.Texas.Gov>

Cc: Derek Klenke <DKlenke@trihydro.com>

Subject: RE: Travis Co. WCID - Point Venture WWTP, TLAP Permit No: WQ0011385001

Andy, good afternoon:

Attached below is the link to download the revised permit application submittal package per your review comments:

https://trihydrocorp.sharepoint.com/:b:/s/traviscountywcidpointventure/EX9eA47AtbdDo-co8lqJRdkBAe0MjmxWjQje_6URCI2G8Q

Domestic Worksheet 3.0, Sections 6 & 7, and Attachments 'A – Original USGS Topographic Maps', 'H – Well and Map Information', & 'L – Groundwater Quality Technical Report' have been updated.

Let me know if you have any questions and if you have any issues with the link.

Best,

David Alexander Vargas, P.E.
Assistant Project Engineer

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5508 Highway 290 West, Suite 201
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From: David Vargas
Sent: Wednesday, November 6, 2024 7:16 AM
To: Andrew Gorton <Andrew.Gorton@Tceq.Texas.Gov>
Cc: Derek Klenke <DKlenke@trihydro.com>
Subject: RE: Travis Co. WCID - Point Venture WWTP, TLAP Permit No: WQ0011385001

Morning Andy,
Thank for sending over the example copies, we appreciate it.
We should be good to go on our to address your comments.

You take care and have a good day.

Best,
David Alexander Vargas, P.E.
Assistant Project Engineer

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From: Andrew Gorton <Andrew.Gorton@Tceq.Texas.Gov>
Sent: Tuesday, November 5, 2024 4:28 PM
To: David Vargas <dvargas@trihydro.com>
Cc: Derek Klenke <DKlenke@trihydro.com>
Subject: Re: Travis Co. WCID - Point Venture WWTP, TLAP Permit No: WQ0011385001

You don't often get email from andrew.gorton@tceq.texas.gov. [Learn why this is important](#)

Caution: This email is from an external sender. Please report suspicious emails using the **Report Message** button in Outlook.

Hello David, thank you for reaching out. I have attached 3 examples of a Groundwater Quality Tech Report. The Report can be one page or less, as long as each "box" is checked. These examples are pretty complete, so are more than one page. The "boxes" include pond liner information, applying effluent at agronomic rates, the aquifer and local geology at the site, general depth to groundwater in the area, uses of groundwater (domestic, public supply, irrigation, etc.), and how the activities at the facility will not impact groundwater.

Please let me know if you have any questions or need additional information.

Thank you,

-Andy

Andrew Gorton, P.G.
Texas Commission on Environmental Quality
MC-150
PO Box 13087
Austin, TX 78711-3087
512.239.4585
Andrew.Gorton@tceq.texas.gov

From: David Vargas <dvargas@trihydro.com>
Sent: Tuesday, November 5, 2024 4:02 PM
To: Andrew Gorton <Andrew.Gorton@Tceq.Texas.Gov>
Cc: Derek Klenke <DKlenke@trihydro.com>
Subject: RE: Travis Co. WCID - Point Venture WWTP, TLAP Permit No: WQ0011385001

Andrew, good afternoon:

We received your review comments to the TLAP renewal.

We acknowledge items #1 & #2 and will furnish a revised well/map attachment and revised Section 6 in the technical report.

For Item #3, it mentions that upon request, an example copy of the Groundwater Quality Technical Report can be provided.

We would like to request an example copy and if you could provide this sometime tomorrow, that be appreciated.

Best,

David Alexander Vargas, P.E.

Assistant Project Engineer



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From: Andrew Gorton <Andrew.Gorton@Tceq.Texas.Gov>

Sent: Tuesday, November 5, 2024 12:14 PM

To: David Vargas <dvargas@trihydro.com>

Subject: Travis Co. WCID - Point Venture WWTP, TLAP Permit No: WQ0011385001

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Caution: This email is from an external sender. Please report suspicious emails using the **Report Message** button in Outlook.

Good afternoon Mr. Vargas,

The Water Quality Assessment (WQA) Team of the Texas Commission on Environmental Quality has completed a preliminary review of the permit application information and identified deficiencies

(attached) that must be addressed before the WQA Team can continue with the technical review. The deficient item(s) will require your response in a timely, complete, and accurate manner.

An accurate and complete revised permit application is essential for making recommendations to the commission regarding whether this permit should be issued. Based on the information provided in the application, the executive director does not have sufficient information to make a recommendation. Therefore, you must send updated technically complete and accurate information within **14 days** (November 19) of the date of this email.

Any revisions can be sent electronically to me (WQA Team Geologist) or Sara Holmes (WQA Team Agronomist). If you have any questions, please feel free to contact either me or Sara. Email is preferred.

Thank you,

-Andy

Andrew Gorton, P.G.
Texas Commission on Environmental Quality
MC-150
PO Box 13087
Austin, TX 78711-3087
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Andrew.Gorton@tceq.texas.gov

TCEQ Interoffice Memorandum

To: Deba Dutta, P.E., Team Leader
Municipal Permits Team

From: Sara Holmes
Water Quality Assessment Team

Date: November 13, 2024

Subject: Agronomy Recommendation, Travis County Water Control and Improvement District – Point Venture, Renewal, Permit WQ0011385001, Travis County

Based upon review of the permit application and an evaluation of soils and agronomy information, the WQA Team reviewing agronomist recommends the following:

SPECIAL PROVISIONS FOR SURFACE IRRIGATION:

1. Replace the first paragraph of Special Provision 6 with the following:

The permittee shall obtain representative soil samples from the root zones of the land application area. Composite sampling techniques shall be used. Each composite sample shall represent no more than 33.576 acres with no fewer than 15 subsamples representing each composite sample. For analysis and reporting, subsamples shall be composited by like sampling depth, type of crop, and soil type. Soil types are soils that have like topsoil or plow layer textures. These soils shall be sampled individually from 0 to 6 inches, 6 to 18 inches and 18 to 30 below ground level. The permittee shall sample soils in December to February of each. Soil samples shall be analyzed within 30 days of sample collection.

2. Replace Special Provision 9 with the following:

Irrigation practices shall be designed and managed as to prevent ponding of effluent or contamination of ground and surface waters and to prevent the occurrence of nuisance conditions in the area. To promote effluent and nutrient uptake by the crop, and to prevent pathways for effluent surfacing, the Bermuda grass, native grasses, native oaks, and juniper trees and winter rye shall be established and well maintained in the irrigation area throughout the year. Tailwater control facilities shall be provided as necessary to prevent the discharge of any effluent from the irrigated land.

3. Replace Special Provision 11 with the following:

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.

4. Add Special Provision:

The permittee shall use cultural practices to promote and maintain the health and propagation of the Bermuda grass, native grasses, native oaks, juniper trees, and winter rye crops and avoid plant lodging. The permittee shall harvest the crops (cut and remove it from the field) at least one time during the year. Harvesting and mowing dates shall be recorded in a log book kept on site to be made available to TCEQ personnel upon request.

5. Add Special Provision:

The physical condition of the spray irrigation fields will be monitored on a weekly basis when the fields are being utilized for the purpose of wastewater irrigation. Any areas with problems such as surface runoff, surficial erosion, stressed or damaged vegetation will be recorded in the field log kept onsite and corrective measures will be initiated within 24 hours of discovery.

SPECIAL PROVISIONS FOR SADDs:

6. Replace the first paragraph of Special Provision 27 with the following:

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 19.464 acres with no less than two soil cores per each dispersal zone. For analysis and reporting, subsamples shall be composited by like sampling depth, type of crop, and soil type. 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 below ground level. The permittee shall sample soils in December to February of each. Soil samples shall be analyzed within 30 days of sample collection.

7. Replace Special Provision 16 with the following:

Irrigation practices shall be designed and managed as to prevent ponding of effluent or contamination of ground and surface waters and to prevent the occurrence of nuisance conditions in the area. To promote effluent and nutrient uptake by the crop, and to prevent pathways for effluent surfacing, the Bermuda grass, native grasses, native oaks, and juniper trees and winter rye shall be established and well maintained in the irrigation area throughout the year. Tailwater control facilities shall be provided as necessary to prevent the discharge of any effluent from the irrigated land.

8. Replace Special Provision 18 with the following:

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.

9. Replace Special Provision 35 with the following:

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.

10. Replace Special Provision 34 with the following:

The physical condition of the land application fields will be monitored on a weekly basis when the fields are being utilized for the purpose of wastewater irrigation. Any areas with problems such as surface runoff, surficial erosion, stressed or damaged vegetation will be recorded in the field log kept onsite and corrective measures will be initiated within 24 hours of discovery.