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
   - Alternative Language (Spanish)
3. Second notice (NAPD-Notice of Preliminary Decision)
   - English
   - Alternative Language (Spanish)
4. Application materials *
5. Draft permit *
6. Technical summary or fact sheet *

* **NOTE:** This application was declared Administratively Complete before June 1, 2024. The application materials, draft permit, and technical summary or fact sheet are available for review at the Public Viewing Location provided in the NAPD.

Portada de Paquete Técnico

Este archivo contiene los siguientes documentos:

1. Resumen de la solicitud (en lenguaje sencillo)
   - Inglés
   - Idioma alternativo (español)
2. Primer aviso (NORI, Aviso de Recepción de Solicitud e Intención de Obtener un Permiso)
   - Inglés
   - Idioma alternativo (español)
3. Segundo aviso (NAPD, Aviso de Decisión Preliminar)
   - Inglés
   - Idioma alternativo (español)
4. Materiales de la solicitud **
5. Proyecto de permiso **
6. Resumen técnico u hoja de datos **

** **NOTA:** Esta solicitud se declaró administrativamente completa antes del 1 de junio de 2024. Los materiales de la solicitud, el proyecto de permiso, y los resumen técnico u hoja de datos están disponibles para revisión en la ubicación de consulta pública que se indica en el NAPD.

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.

Harvest Hills Treatment, LTD. (CN 602744997) operates Harvest Hills Wastewater Treatment Facility (RN 103013991). a Wastewater Treatment Facility. The facility is located at 3910 Harvest Canyon , in Santa Clara, Guadalupe County, Texas 78124.

This renewal is to use 90,000 gallons per day of treated domestic wastewater for irrigation.

Discharges from the facility are expected to contain Daily Average: BOD5 10 mg/l, TSS 25 mg/l, pH >5. .Sanitary Sewer is treated by *a wastewater treatment plant. Sanitary sewer enters the treatment plant and is processed through the existing bar screen and aerobic digester. The wastewater is then sent to the aeration chamber, then to the*

clarifier, then go the chlorine contact chamber, then to the storage pond, then to the I irrigation field.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

PERMIT NO. WQ0014037001

APPLICATION. Harvest Hills Treatment, Ltd., 103 South Winston Lane, San Antonio, Texas 78213 has applied to the Texas Commission on Environmental Quality (TCEQ) to renew Texas Land Application Permit (TLAP) No. WQ0014037001 to authorize the disposal of treated wastewater at a volume not to exceed a daily average flow of 90,000 gallons per day via: surface irrigation of 35 acres of non-public access land. The domestic wastewater treatment facility and disposal area are located at 3910 Harvest Canyon, in the city of Santa Clara, in Guadalupe County, Texas 78124. TCEQ received this application on October 22, 2024. The permit application will be available for viewing and copying at Guadalupe County Justice Center, Front Desk, 211 West Court Street, Seguin, in Guadalupe 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=-98.164166,29.604444&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 Harvest Hills Treatment, Ltd. at the address stated above or by calling Mr. Jack Uptmore, General Manager, at 210-696-2522.

Issuance Date: November 8, 2024

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

RENEWAL

PERMIT NO. WQ0014037001

APPLICATION AND PRELIMINARY DECISION. Harvest Hills Treatment, Ltd., 103 South Winston Lane, San Antonio, Texas 78213, has applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of TCEQ Permit No. WQ0014037001 which authorizes the disposal of treated domestic wastewater at a daily average flow not to exceed 90,000 gallons per day via surface irrigation of 35 acres of non-public access land. This permit will not authorize a discharge of pollutants into water in the state. TCEQ received this application on October 22, 2024.

The wastewater treatment facility and disposal site are located at 3910 Harvest Canyon, in the City of Santa Clara, Guadalupe County, Texas 78124. The wastewater treatment facility and disposal site are located in the drainage basin of in the drainage basin of Santa Clara Creek in Segment No. 1902 of the San Antonio 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=-98.164166,29.604444&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 Guadalupe County Justice Center, Front Desk, 211 West Court Street, Seguin, in Guadalupe 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 Harvest Hills Treatment, Ltd. at the address stated above or by calling Mr. Jack Uptmore, General Manager, at 210-696-2522.

Issuance Date: May 8, 2025

Comisión De Calidad Ambiental Del Estado De Texas

AVISO DE SOLICITUD Y DECISIÓN PRELIMINAR PARA PERMISO PARA APLICACIÓN DE LA CALIDAD DEL AGUA EN TERRENOS PARA AGUAS RESIDUALES MUNICIPALES

RENOVACIÓN

PERMISO NO. WQ0014037001

SOLICITUD Y DECISIÓN PRELIMINAR. Harvest Hills Treatment, Ltd., 103 South Winston Lane, San Antonio, Texas 78213 ha solicitado a la Comisión de Calidad Ambiental del Estado de Texas (TCEQ) por una renovación para autorizar la eliminación de aguas residuales domésticas tratadas con un caudal medio diario que no supere los 90.000 galones por día mediante riego superficial de 35 acres de terreno de acceso no público. Este permiso no autorizará una descarga de contaminantes a las aguas del estado. La TCEQ recibió esta solicitud el Octubre 22, 2024.

La planta y el sitio de disposición están ubicadas en 3910 Harvest Canyon en la ciudad de Santa Clara, en el Condado de Guadalupe, Texas. La planta y el sitio de disposición están ubicados en la cuenca de drenaje de Santa Clara Creek en el Segmento No. 1902 de la Cuenca del Río San Antonio. Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de la solicitud o del aviso. Para la ubicación exacta, consulte la solicitud.
https://gisweb.tceq.texas.gov/LocationMapper/?marker=-98.164166,29.604444&level=18

El Director Ejecutivo de la TCEQ ha completado la revisión técnica de la solicitud y ha preparado un borrador del permiso. El borrador del permiso, si es aprobado, establecería las condiciones bajo las cuales la instalación debe operar. El Director Ejecutivo ha tomado una decisión preliminar que si este permiso es emitido, cumple con todos los requisitos normativos y legales. La solicitud del permiso, la decisión preliminar del Director Ejecutivo y el borrador del permiso están disponibles para leer y copiar en Centro de Justicia del Condado de Guadalupe, Recepción, 211 West Court Street, Seguin, Condado de Guadalupe, Texas. La solicitud (cualquier actualización y aviso inclusive) está disponible electrónicamente en la siguiente página web: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tlap-applications.

AVISO DE IDIOMA ALTERNATIVO. El aviso de idioma alternativo en español está disponible
https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tlap-applications.

COMENTARIO PUBLICO / REUNION PUBLICA. Usted puede presentar comentarios públicos o pedir una reunión pública sobre esta solicitud. El propósito de una reunión pública es dar la oportunidad de presentar comentarios o hacer preguntas acerca de la solicitud. La TCEQ realiza una reunión pública si el Director Ejecutivo determina que hay un grado de interés público suficiente en la solicitud o si un legislador local lo pide. Una reunión pública no es una audiencia administrativa de lo contencioso.

OPORTUNIDAD DE UNA AUDIENCIA ADMINISTRATIVA DE LO CONTENCIOSO. Después del plazo para presentar comentarios públicos, el Director Ejecutivo considerará todos los comentarios apropiados y preparará una respuesta a todo los comentarios públicos esenciales, pertinentes, o significativos. **A menos que la solicitud haya sido referida directamente a una audiencia administrativa de lo contencioso, la respuesta a los comentarios y la decisión del Director Ejecutivo sobre la solicitud serán enviados por correo a todos los que presentaron un comentario público y a las personas que están en la lista para recibir avisos sobre esta solicitud. Si se reciben comentarios, el aviso también proveerá instrucciones para pedir una reconsideración de la decisión del Director Ejecutivo y para pedir una audiencia administrativa de lo contencioso.** Una audiencia administrativa de lo contencioso es un procedimiento legal similar a un procedimiento legal civil en un tribunal de distrito del estado.

PARA SOLICITAR UNA AUDIENCIA DE CASO IMPUGNADO, USTED DEBE INCLUIR EN SU SOLICITUD LOS SIGUIENTES DATOS: su nombre, dirección, y número de teléfono; el nombre del solicitante y número del permiso; la ubicación y distancia de su propiedad/actividad con respecto a la instalación; una descripción específica de la forma cómo usted sería afectado adversamente por el sitio de una manera no común al público en general; una lista de todas las cuestiones de hecho en disputa que usted presente durante el período de comentarios; y la declaración "[Yo/nosotros] solicito/solicitamos una audiencia de caso impugnado". Si presenta la petición para una audiencia de caso impugnado de parte de un grupo o asociación, debe identificar una persona que representa al grupo para recibir correspondencia en el futuro; identificar el nombre y la dirección de un miembro del grupo que sería afectado adversamente por la planta o la actividad propuesta; proveer la información indicada anteriormente con respecto a la ubicación del miembro afectado y su distancia de la planta o actividad propuesta; explicar cómo y porqué el miembro sería afectado; y explicar cómo los intereses que el grupo desea proteger son pertinentes al propósito del grupo.

Después del cierre de todos los períodos de comentarios y de petición que aplican, el Director Ejecutivo enviará la solicitud y cualquier petición para reconsideración o para una audiencia de caso impugnado a los Comisionados de la TCEQ para su consideración durante una reunión programada de la Comisión. La Comisión sólo puede conceder una solicitud de una audiencia de caso impugnado sobre los temas que el solicitante haya presentado en sus comentarios oportunos que no fueron retirados posteriormente. Si se concede una audiencia, el tema de la audiencia estará limitado a cuestiones de hecho en disputa o cuestiones mixtas de hecho y de derecho relacionadas a intereses pertinentes y materiales de calidad del agua que se hayan presentado durante el período de comentarios. Si ciertos criterios se cumplen, la TCEQ puede actuar sobre una solicitud para renovar un permiso sin proveer una oportunidad de una audiencia administrativa de lo contencioso.

ACCIÓN DEL DIRECTOR EJECUTIVO. El Director Ejecutivo puede emitir una aprobación final de la solicitud a menos que exista un pedido antes del plazo de vencimiento de una audiencia administrativa de lo contencioso o se ha presentado un pedido de reconsideración. Si un pedido ha llegado antes del plazo de vencimiento de la audiencia o el pedido de reconsideración ha sido presentado, el Director Ejecutivo no emitirá una aprobación final sobre el permiso y enviará la solicitud y el pedido a los Comisionados de la TECQ para consideración en una reunión programada de la Comisión.

LISTA DE CORREO. Si somete comentarios públicos, un pedido para una audiencia administrativa de lo contencioso o una reconsideración de la decisión del Director Ejecutivo, la Oficina del Secretario Principal enviará por correo los avisos públicos en relación con la solicitud. Ademas, puede pedir que la TCEQ ponga su nombre en una or mas de las listas correos siguientes (1) la lista de correo permanente para recibir los avisos de el solicitante indicado por nombre y número del permiso específico y/o (2) la lista de correo de todas las solicitudes en un condado especifico. Si desea que se agrega su nombre en una de las listas designe cual lista(s) y envia por correo su pedido a la Oficina del Secretario Principal de la TCEQ.

Todos los comentarios escritos del público y los pedidos una reunión deben ser presentados durante los 30 días después de la publicación del aviso a la Oficina del Secretario Principal, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or por el internet a www.tceq.texas.gov/about/comments.html. Tenga en cuenta que cualquier información personal que usted proporcione, incluyendo su nombre, número de teléfono, dirección de correo electrónico y dirección física pasarán a formar parte del registro público de la Agencia.

CONTACTOS E INFORMACIÓN DE LA AGENCIA. Los comentarios y solicitudes públicas deben enviarse electrónicamente a https://www14.tceq.texas.gov/epic/eComment/, o por escrito a Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Cualquier información personal que envíe a al TCEQ pasará a formar parte del registro de la agencia; esto incluye las direcciones de correo electrónico. Para obtener más información sobre esta solicitud de permiso o el proceso de permisos, llame al Programa de Educación Pública de la TCEQ, sin cargo, al 1-800-687-4040 o visite su sitio web en www.tceq.texas.gov/goto/pep. Si desea información en español, puede llamar al 1-800-687-4040.

También se puede obtener información adicional del Harvest Hills Treatment, Ltd. a la dirección indicada arriba o llamando a Sr. Jack Uptmore, Gerente General al 210-696-2522.

Fecha de emission: 8 de mayo de 2025

PERMIT NO. WQ0014037001

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

This is a renewal of amendment supersedes and replaces Permit No. WQ0014037001 issued on October 8, 2015.

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

Harvest Hills Treatment, Ltd.

whose mailing address is

103 South Winston Lane
San Antonio, Texas 78213

Nature of Business Producing Waste: Domestic wastewater treatment operation, SIC Code 6515.

General Description and Location of Waste Disposal System:

Description: The Harvest Hills Subdivision Wastewater Treatment Facility consists of an activated sludge process plant using the extended aeration mode. Treatment units include a bar screen, flow equalization basin, aeration basin, final clarifier, sludge holding tank, and a chlorine contact chamber. The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.09 million gallons per day (MGD) via surface irrigation of 35 acres of non-public access land. The facility includes a storage pond with a total surface area of 3.5 acres and total capacity of 26 acre-feet for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 2.88 acre-feet per year per acre irrigated. The permittee will maintain coastal Bermuda grass on the disposal site.

Location: The wastewater treatment facility and disposal site are located at 3910 Harvest Canyon, in the City of Santa Clara, Guadalupe County, Texas 78124. (See Attachment A.)

Drainage Area: The wastewater treatment facility and disposal site are located in the drainage basin of in the drainage basin of Santa Clara Creek in Segment No. 1902 of the San Antonio 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

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 – 0.09 MGD from the treatment system

Quality: The following effluent limitations are required:

	Effluent Concentrations (Not to Exceed)	
Parameter	Daily Average mg/l	Single Grab mg/l
Biochemical Oxygen Demand (5-day)	N/A	65

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.

B. Monitoring Requirements:

Parameter	Monitoring Frequency	Sample Type
Flow	Five/week	Instantaneous / Totalizing Meter
Biochemical Oxygen Demand (5-day)	One/week	Grab
pH	One/month	Grab
Total Chlorine Residual	One/week	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 13) 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 permitee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 13) and the Enforcement Division (MC 224).

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

TABLE 1

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

* Dry weight basis

3. Pathogen Control

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

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

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

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

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

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

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

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

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

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

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

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

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

Alternative 1

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain 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):

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

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

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

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

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

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

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

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

A. Pollutant Limits

Table 2

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

Table 3

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

*Dry weight basis

B. Pathogen Control

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

C. Management Practices

1. Bulk biosolids shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge 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 permitee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 13) 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 13) 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 13) and the Enforcement Division (MC 224), by September 30$_{th}$ of each year.

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

F. Record Keeping Requirements

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

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

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

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

G. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permitee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 13) 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 permitee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 13) and the Enforcement Division (MC 224).

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

2. the annual sludge or biosolids production;

3. the amount of sludge or biosolids transported;

4. the owner of each receiving facility;

5. the location of each receiving facility; and

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

SPECIAL PROVISIONS:

1. This permit is granted subject to the policy of the Commission to encourage the development of area-wide 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 area-wide system, if an area-wide system is developed; to require the delivery of the wastes authorized to be collected in, treated by, or discharged from the system, to an 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.

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 D * facility must be operated by a chief operator or an operator holding a Class D * 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.

   *A Class D Wastewater Treatment Operator license is not renewable for operators of a facility listed in 30 TAC Section 30.342(c) and must be upgraded to a Class C Wastewater Treatment Operator license or higher prior to the expiration date of the Class D license.

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. 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 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.

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

6. The permittee will maintain coastal Bermuda grass on the disposal site. Application rates to the irrigated land shall not exceed 2.88 acre-feet per year per acre irrigated. 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.

7. Holding or storage ponds shall conform to the Texas Commission on Environmental Quality "Design Criteria for Sewerage Systems" requirements for stabilization ponds with regard to construction and levee design, and a minimum freeboard of two feet shall be maintained.

8. 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 35 acres, with no less than 10 to 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 soils in December to February of each year. Soil samples shall be analyzed within 30 days of sample collection.

   The permittee shall provide annual soil 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 N KCl soil extract	1	mg/kg (dry weight basis)
Total Kjeldahl Nitrogen (TKN)	For determination of Organic plus Ammonium Nitrogen. Procedures that use Mercury (Hg) are not acceptable.	20	mg/kg (dry weight basis)
Total Nitrogen	= TKN + 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 (P)	mg/kg (dry weight basis)
Plant-available:	May be determined in the same Mehlich III extract	5	mg/kg (dry weight basis)

Potassium	with inductively coupled plasma		
Amendment addition, e.g., gypsum			Report in *short tons/acre* 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 13) and the Enforcement Division (MC 224) 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.

9. For any area where treated effluent is stored or where there exist hose bibs or faucets, the permit-tee 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.

10. Spray fixtures for the irrigation system shall be of such design that they cannot be operated by unauthorized personnel.

11. Irrigation with effluent shall be accomplished only when the area specified is not in use.

12. Permanent transmission lines shall be installed from the holding pond to each tract of land to be irrigated utilizing effluent from that pond.

13. For the existing storage lagoon: 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 1x10-7 cm/sec
        6. Soil compaction will be 95% standard proctor at optimum moisture content
    b. Membrane lining with a minimum thickness of 30 mils, and an underdrain leak detection system.

    The permittee shall maintain certification by a Texas Licensed Professional Engineer that the completed pond lining meets the appropriate criteria above. Upon request, the certification shall be sent to the TCEQ Regional Office (MC Region 13), the Water Quality Assessment Team (MC-150), and Water Quality Compliance Monitoring Team (MC-224) of the Enforcement Division.

14. The existing storage pond shall be maintained and operated in a manner that prevents

unauthorized discharge to water in the state and contamination of groundwater.

15. 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.

16. Any new or modified wastewater pond shall be adequately lined to control seepage in accordance with 30 TAC §217.203. 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. 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 required by 30 TAC 217.203. 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.

    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 13), 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.

17. 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.

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

19. The permittee shall construct berms around the entire perimeter of each of the irrigation areas and the storage pond as depicted on the attached map. (See Attachment A).

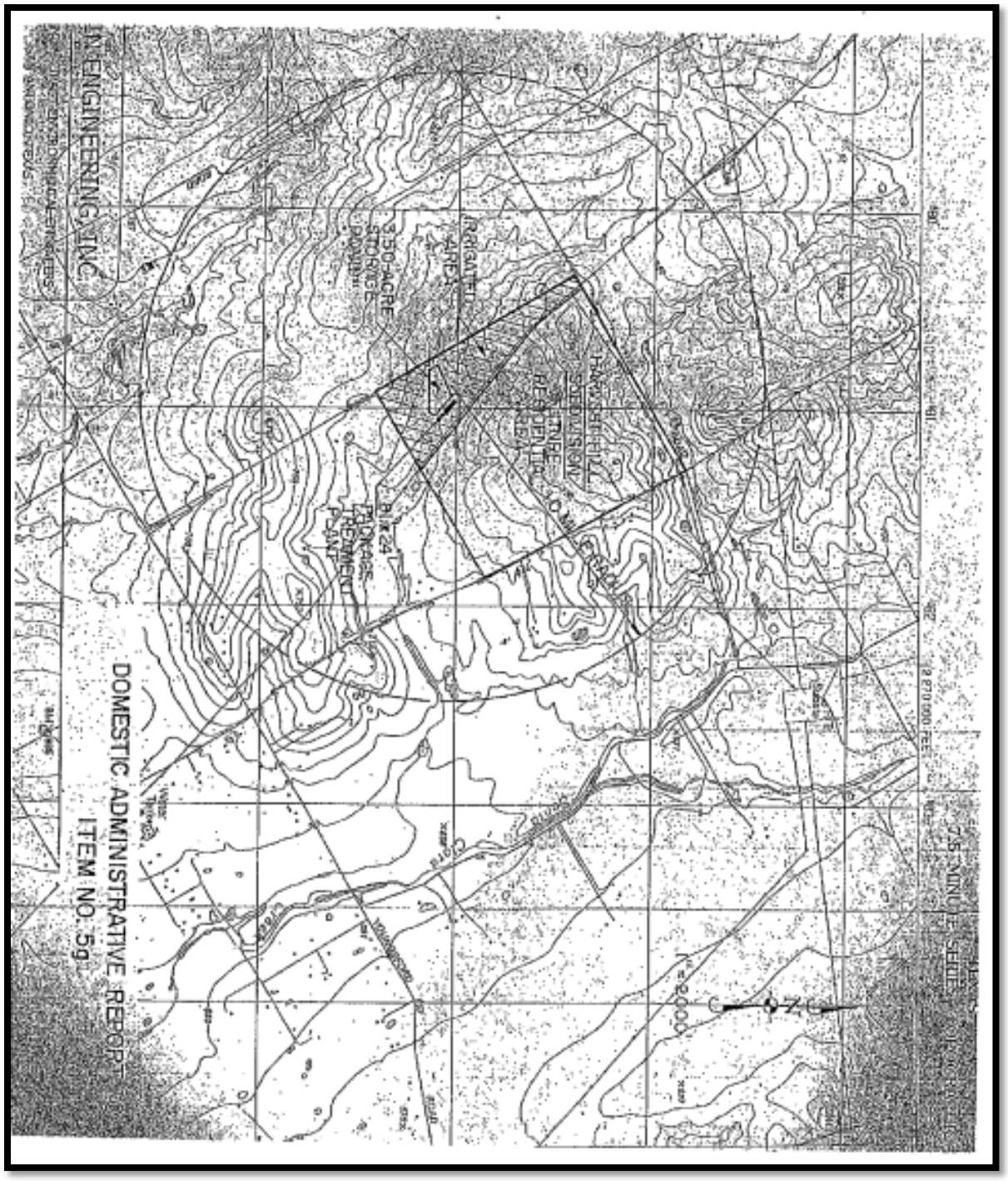
20. With the summary submittal letter received by the TCEQ on August 14, 2003, and approved on August 25, 2003 (TCEQ Log No. 0803/121), the permittee has met the requirements in 30 TAC Chapter 217.6(c), Design Criteria for Domestic Wastewater Systems.

21. The permittee shall use cultural practices to promote and maintain the health and propagation of the Bermuda grass 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.

22. 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.

23. 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.

Attachment A
Harvest Hills Treatment, Ltd.
Permit No. WQ0014037001



TECHNICAL SUMMARY AND
EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

DESCRIPTION OF APPLICATION

Applicant:	Harvest Hills Treatment, Ltd. TCEQ Permit No. WQ0014037001
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

Harvest Hills Treatment, Ltd. has applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of Permit No. WQ0014037001 to authorize the disposal of treated domestic wastewater at a daily average flow not to exceed 0.09 million gallons per day (MGD) via surface irrigation of 35 acres of non-public access land. The facility includes a storage pond with a total surface area of 3.5 acres and total capacity of 26 acre-feet for storage of treated effluent prior to irrigation. The existing wastewater treatment facility serves the Harvest Hills Subdivision.

PROJECT DESCRIPTION AND LOCATION

The Harvest Hills Subdivision Wastewater Treatment Facility consists of an activated sludge process plant using the extended aeration mode. Treatment units include a bar screen, flow equalization basin, aeration basin, final clarifier, sludge holding tank, and a chlorine contact chamber. The facility is in operation.

Sludge generated from the treatment facility is hauled by a registered transporter to Lokhart Wastewater Treatment Facility 2, Permit No. WQ0010210002 to be digested, dewatered, and then disposed of with the bulk of the sludge from the plant accepting the sludge. 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 at 3910 Harvest Canyon, in the City of Santa Clara, Guadalupe County, Texas 78124.

The wastewater treatment facility and disposal site are located in the drainage basin of in the drainage basin of Santa Clara Creek in Segment No. 1902 of the San Antonio 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 March 2023 through March 2025. The average of Daily Average value is computed by averaging of all 30-day average values for the reporting period for each parameter: flow and five-day biochemical oxygen demand (BOD_5).

Parameter	Average of Daily Average
Flow, MGD	0.06
BOD_5, mg/l	6.9

DRAFT PERMIT CONDITIONS

The draft permit authorizes the disposal of treated domestic wastewater effluent at a daily average flow not to exceed 0.09 MGD via surface irrigation of 35 acres of non-public access land. The facility includes a storage pond with a total surface area of 3.5 acres and total capacity of 26 acre-feet for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 2.88 acre-feet per year per acre irrigated. The permittee will maintain coastal Bermuda grass on the disposal site.

The effluent limitation in the draft permit, based on a single grab, is 65 mg/l biochemical oxygen demand (BOD_5). The effluent shall contain a total chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes based on peak flow.

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

The draft permit includes Sludge Provisions according to the requirements of 30 TAC Chapter 312, Sludge Use, Disposal, and Transportation. Sludge generated from the treatment facility is hauled by a registered transporter to Lokhart Wastewater Treatment Facility 2, Permit No. WQ0010210002 to be digested, dewatered, and then disposed of with the bulk of the sludge from the plant accepting the sludge. 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.

SECTION IV. REQUIREMENTS APPLYING TO SLUDGE TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING has been added to the Sludge Provisions of the draft permit to allow the transporting of sludge to another facility.

Special Provision No. 2 in the existing permit has been updated to reflect the requirements of 30 TAC § 30.342, which does not allow renewal of a Class D operator's license for mechanical treatment plants.

Special Provision (S.P.) Nos. 4, 9, and 13 in the existing permit have been revised in the draft permit based on Agronomy and Geology compliance review.

S.P. Nos. 14, 15, 16, 17, 21, 22, and 23 have been added to the draft permit based on Agronomy and Geology compliance review.

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

BASIS FOR DRAFT PERMIT

The following items were considered in developing the draft permit:

1. Application received on October 22, 2024, and additional information received on April 21, 2025.

2. Existing TCEQ permit: Permit No. WQ0014037001 issued on October 8, 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.

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 Sujata Sinha at (512) 239-1963.

Sujata Sinha

Sujata Sinha
Municipal Permits Team
Wastewater Permitting Section (MC 148)

4/28/2025
Date

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the application.

APPLICANT NAME: Harvest Hills Treatment, Ltd.

PERMIT NUMBER (If new, leave blank): WQ00 14037001

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

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

For TCEQ Use Only

Segment Number _____County _____
Expiration Date _____Region_____
Permit Number _____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

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

Section 1. Application Fees (Instructions Page 26)

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

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

Minor Amendment (for any flow) $150.00 ☐

Payment Information:

Mailed Check/Money Order Number: 91

Check/Money Order Amount: $515.00

Name Printed on Check: Harvest Hills Treatment, Ltd.

EPAY Voucher Number: Click to enter text.

Copy of Payment Voucher enclosed? Yes ☐

Section 2. Type of Application (Instructions Page 26)

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

☐ Publicly-Owned Domestic Wastewater

☒ Privately-Owned Domestic Wastewater

☐ Conventional Wastewater Treatment

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

☒ Active ☐ Inactive

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

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

d. Check the box next to the appropriate application type

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

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

f. For existing permits:

Permit Number: WQ00 14037001

EPA I.D. (TPDES only): TX R1526QZ

Expiration Date: March 1, 2025

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

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

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

Harvest Hills Treatment, Ltd.

(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: 602744997

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: Uptmore, Jack

Title: General Manager Credential: Click to enter text.

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?

Click to enter text.

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

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

CN: Click to enter text.

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

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

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

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

C. Core Data Form

Complete the Core Data Form for each customer and include as an attachment. If the customer type selected on the Core Data Form is **Individual**, complete **Attachment 1** of Administrative Report 1.0. See Attached

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: Uptmore, Jack

Title: General Manager Credential: Click to enter text.

Organization Name: Harvest Hills Treatment, Ltd.

Mailing Address: 103 S Winston Ln City, State, Zip Code: San Antonio, TX 78213

Phone No.: 210-696-2522 E-mail Address: jack@uptmorehomes.com

Check one or both: ☒ Administrative Contact ☒ Technical Contact

B. Prefix: Mr. Last Name, First Name: Barfell, Gregory

Title: Engineer Credential: E.I.T.

Organization Name: Cope Engineering, Inc.

Mailing Address: 8611 Botts Lane City, State, Zip Code: San Antonio, TX 78217

Phone No.: 210-828-7070 E-mail Address: greg@copeengineeringtx.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: Uptmore, Jack

Title: General Manager Credential: Click to enter text.

Organization Name: Harvest Hills Treatment, Ltd.

Mailing Address: 103 S Winston Ln City, State, Zip Code: San Antonio, TX 78213

Phone No.: 210-696-2522 E-mail Address: jack@uptmorehomes.com

B. Prefix: Mrs. Last Name, First Name: Uptmore, Susan

Title: Partner Credential: Click to enter text.

Organization Name: Harvest Hills Treatment, Ltd.

Mailing Address: 103 S Winston Ln City, State, Zip Code: San Antonio, TX 78213

Phone No.: 210-696-2522 E-mail Address: susan@uptmorehomes.com

Section 6. Billing Contact Information (Instructions Page 27)

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

Prefix: Mr. Last Name, First Name: Uptmore, Jack

Title: General Manager Credential: Click to enter text.

Organization Name: Harvest Hills Treatment, Ltd.

Mailing Address: 103 S Winston Ln City, State, Zip Code: San Antonio

Phone No.: 210-696-2522 E-mail Address: jack@uptmorehomes.com

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

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

Prefix: Mr. Last Name, First Name: Uptmore, Jack

Title: General Manager Credential: Click to enter text.

Organization Name: Harvest Hills Treatment, Ltd.

Mailing Address: 103 S Winston Ln City, State, Zip Code: San Antonio, TX 78213

Phone No.: 210-696-2522 E-mail Address: jack@uptmorehomes.com

Section 8. Public Notice Information (Instructions Page 27)

A. Individual Publishing the Notices

Prefix: Mr. Last Name, First Name: Uptmore, Jack

Title: General Manager Credential: Click to enter text.

Organization Name: Harvest Hills Treatment, Ltd.

Mailing Address: 103 S Winston Ln City, State, Zip Code: San Antonio, TX 78213

Phone No.: 210-696-2522 E-mail Address: jack@uptmorehomes.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: Uptmore, Jack

Title: General Manager Credential: Click to enter text.

Organization Name: Harvest Hills Treatment, Ltd.

Mailing Address: 103 S Winston Ln City, State, Zip Code: San Antonio, TX 78213

Phone No.: 210-696-2522 E-mail Address: jack@uptmorehomes.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: Guadalupe County Justice Center

Location within the building: Front Desk

Physical Address of Building: 211 W. Court St.

City: Seguin, TX County: Guadalupe

Contact (Last Name, First Name): Uptmore, Jack

Phone No.: 210-696-2522 Ext.: Click to enter text.

E. Bilingual Notice Requirements

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

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

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

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

   ☐ Yes ☒ No

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

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

   ☐ Yes ☒ No

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

   ☐ Yes ☒ No

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

   ☐ Yes ☒ No

5. If the answer is **yes** to **question 1, 2, 3, or 4**, public notices in an alternative language are required. Which language is required by the bilingual program? 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** 103013991

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):

Harvest Hills Subdivision Wastewater Treatment Plant

C. Owner of treatment facility: Harvest Hills Treatment, Ltd.

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

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

Prefix: Mr. Last Name, First Name: Uptmore, Jack

Title: General Manager Credential: Click to enter text.

Organization Name: Harvest Hills Treatment, Ltd.

Mailing Address: 103 S Winston City, State, Zip Code: San Antonio, TX 78213

Phone No.: 210-696-2522 E-mail Address: jack@uptmorehomes.com

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

Attachment: Click to enter text.

E. Owner of effluent disposal site:

Prefix: Mr. Last Name, First Name: Uptmore, Jack

Title: General Manager Credential: Click to enter text.

Organization Name: Harvest Hills Treatment, Ltd.

Mailing Address: 103 S Winston Ln City, State, Zip Code: San Antonio, TX 78213

Phone No.: 210-696-2522 E-mail Address: jack@uptmorehomes.com

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

Attachment: Click to enter text.

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

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

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

Organization Name: Click to enter text.

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

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

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

Attachment: Click to enter text.

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:

Click to enter text.

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

☐ Yes ☐ No

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

Click to enter text.

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

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

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

☐ Yes ☐ No

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

☐ Authorization granted ☐ Authorization pending

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

Attachment: Click to enter text.

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

Section 11. TLAP Disposal Information (Instructions Page 32)

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

☒ Yes ☐ No

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

Click to enter text.

B. City nearest the disposal site: Santa Clara, TX

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

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

From the packaged treatment plant, the treated effluent is routed through a 12" pipe to a 26.22 ac-ft holding pond, then pumped and dispersed to the 35 acre irrigated area

E. For **TLAPs**, please identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: A tributary of the Santa Clara Creek

Section 12. Miscellaneous Information (Instructions Page 32)

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

☐ Yes ☒ No

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

☐ Yes ☐ No ☒ Not Applicable

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

Click to enter text.

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

☐ Yes ☒ No

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

D. Do you owe any fees to the TCEQ?

☐ Yes ☒ No

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

Account number: Click to enter text.

Amount past due: Click to enter text.

E. Do you owe any penalties to the TCEQ?

☐ Yes ☒ No

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

Enforcement order number: Click to enter text.

Amount past due: Click to enter text.

Section 13. Attachments (Instructions Page 33)

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

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

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

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

☐ Attachment 1 for Individuals as co-applicants

☐ Other Attachments. Please specify: 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: WQ0014037001

Applicant: Harvest Hills Treatment, Ltd.

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): Jack Uptmore

Signatory title: General Manager

Signature: _____ Date: AUGUST 30, 2024

(Use blue ink)

Subscribed and Sworn to before me by the said Jack Uptmore

on this 30th day of August, 20 24.

My commission expires on the 15th day of December, 20 26.

Kenna Simons Glendening

Notary Public

[SEAL]

KENNA SIMONS GLENDENING
Notary Public, State of Texas
Comm. Expires 12-15-2026
Notary ID 134106698

Bexar County

County, Texas

DOMESTIC WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

The following information is required for new and amendment applications.

Section 1. Affected Landowner Information (Instructions Page 36)

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

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

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

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

☐ USB Drive ☐ Four sets of labels

D. Provide the source of the landowners' names and mailing addresses: Click to enter text.

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

☐ Yes ☐ No

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

Click to enter text.

Section 2. Original Photographs (Instructions Page 38)

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

- ☐ At least one original photograph of the new or expanded treatment unit location
- ☐ At least two photographs of the existing/proposed point of discharge and as much area downstream (photo 1) and upstream (photo 2) as can be captured. If the discharge is to an open water body (e.g., lake, bay), the point of discharge should be in the right or left edge of each photograph showing the open water and with as much area on each respective side of the discharge as can be captured.
- ☐ At least one photograph of the existing/proposed effluent disposal site
- ☐ A plot plan or map showing the location and direction of each photograph

Section 3. Buffer Zone Map (Instructions Page 38)

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

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

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

- ☐ Ownership
- ☐ Restrictive easement
- ☐ Nuisance odor control
- ☐ Variance

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

☐ Yes ☐ No

DOMESTIC WASTEWATER PERMIT APPLICATION

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

This form applies to TPDES permit applications only. Complete and attach the Supplemental Permit information Form (SPIF) (TCEQ Form 20971).

Attachment: Click to enter text.

ATTACHMENT 1

INDIVIDUAL INFORMATION

N/A

Section 1. Individual Information (Instructions Page 41)

Complete this attachment if the facility applicant or co-applicant is an individual. Make additional copies of this attachment if both are individuals.

Prefix (Mr., Ms., Miss): Click to enter text.

Full legal name (Last Name, First Name, Middle Initial): Click to enter text.

Driver's License or State Identification Number: Click to enter text.

Date of Birth: Click to enter text.

Mailing Address: Click to enter text.

City, State, and Zip Code: Click to enter text.

Phone Number: Click to enter text. Fax Number: Click to enter text.

E-mail Address: Click to enter text.

CN: Click to enter text.

For Commission Use Only:
Customer Number:
Regulated Entity Number:
Permit Number:

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST OF COMMON DEFICIENCIES

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

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

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

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

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

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

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

Things to Know:

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

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

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

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

Plain Language Summary ☒ Yes

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 604661520		**RN 1064544**

SECTION II: Customer Information

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

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

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

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* — *If new Customer, enter previous Customer below:*

Harvest Hills Treatment, Ltd.

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
8003051	3203564	43-2047042	

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

12. Number of Employees

☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?

☒ **Yes** ☐ **No**

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

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

15. Mailing Address:							
	103 S Winston Ln						
	City	San Antonio	**State**	TX	**ZIP**	78213	**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)*
(210) 969-2522		(210) 696-2034

SECTION III: Regulated Entity Information

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

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

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

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

Harvest hills Subdivision Wastewater Treatment Plant

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	3910 Harvest Canyon							
	City	Santa Clara	**State**	TX	**ZIP**	78124	**ZIP + 4**	
24. County	Guadalupe							

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

25. Description to Physical Location:	

26. Nearest City	State	Nearest ZIP Code

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

27. Latitude (N) In Decimal:	29.60444444		28. Longitude (W) In Decimal:	98.16416667	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	36	16	98	09	51

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.)*

A wastewater treatment plant that serves

34. Mailing Address:	**103 S Winston Ln**

	City	San Antonio	State	TX	ZIP	78213	ZIP + 4	
35. E-Mail Address:	**jack@uptmorehomes.com**							
36. Telephone Number		**37. Extension or Code**		**38. Fax Number** *(if applicable)*				
(210) 696-2522				**(210) 696-2034**				

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

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

SECTION IV: Preparer Information

40. Name:	Gregory	**41. Title:**	Engineer
42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(210 **)** 828-7070		**(** 210 **)** 828-7076	greg@copeengineeringtx.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:	Cope Engnineering, Inc.	**Job Title:**	Engineer	
Name *(In Print):*	Gregory Barfell		**Phone:**	**(** 210 **)** 828- **7070**
Signature:	greg barfell		**Date:**	8/29/2024

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): 0.090

2-Hr Peak Flow (MGD): 0.336

Estimated construction start date: Existing

Estimated waste disposal start date: Existing

B. Interim II Phase

Design Flow (MGD): N/A

2-Hr Peak Flow (MGD): N/A

Estimated construction start date: N/A

Estimated waste disposal start date: N/A

C. Final Phase

Design Flow (MGD): 0.090

2-Hr Peak Flow (MGD): 0.336

Estimated construction start date: Click to enter text.

Estimated waste disposal start date: Click to enter text.

D. Current Operating Phase

Provide the startup date of the facility: April 2005

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**.

The treatment plant is an extended aeration package treatment plant includes 25,000 gal. flow equalization plant, 15,000 gal. sludge holding tank, 90,000 gal. aeration tank, 16,700 gal. clarifier, and a 2,125 gal. chlorine contact tank.

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)
Aerobic Digester (Sludge Holding Tank)	1	8' x 24' x 10'-5"
Aeration Chamber	2	35' x 12' x 10'-5"
Clarifier	1	20'-0" dia.
Disinfection Chamber (Chlorine Contact)	1	6' x 12' x 10'-5"
Storage Pond	1	Irregular Shape - 26.22 ac-ft,
Irrigation Area	1	35 Acres

C. Process Flow Diagram

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

Attachment: See Attached

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: N/A
- Longitude: N/A

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: N/A

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

Harvest Hills Subdivision - a single-family residential development

Collection System Information **for wastewater TPDES permits only**: Provide information for each **uniquely owned** collection system, existing and new, served by this facility, including satellite collection systems. **Please see the instructions for a detailed explanation and examples.**

Collection System Information

Collection System Name	Owner Name	Owner Type	Population Served
		Choose an item.	
		Choose an item.	
		Choose an item.	
		Choose an item.	

Section 4. Unbuilt Phases (Instructions Page 45)

Is the application for a renewal of a permit that contains an unbuilt phase or phases?

☐ Yes ☒ No

If yes, does the existing permit contain a phase that has not been constructed **within five years** of being authorized by the TCEQ?

☐ Yes ☒ No

If yes, provide a detailed discussion regarding the continued need for the unbuilt phase. **Failure to provide sufficient justification may result in the Executive Director recommending denial of the unbuilt phase or phases**.

Click to enter text.

Section 5. Closure Plans (Instructions Page 45)

Have any treatment units been taken out of service permanently, or will any units be taken out of service in the next five years?

☐ Yes ☒ No

If yes, was a closure plan submitted to the TCEQ?

☐ Yes ☐ No

If yes, provide a brief description of the closure and the date of plan approval.

Click to enter text.

Section 6. Permit Specific Requirements (Instructions Page 45)

For applicants with an existing permit, check the Other Requirements or Special Provisions of the permit.

A. Summary transmittal

Have plans and specifications been approved for the existing facilities and each proposed phase?

☐ Yes ☒ No

If yes, provide the date(s) of approval for each phase: Click to enter text.

Provide information, including dates, on any actions taken to meet a *requirement or provision* pertaining to the submission of a summary transmittal letter. **Provide a copy of an approval letter from the TCEQ, if applicable**.

Click to enter text.

B. Buffer zones

Have the buffer zone requirements been met?

☒ Yes ☐ No

Provide information below, including dates, on any actions taken to meet the conditions of the buffer zone. If available, provide any new documentation relevant to maintaining the buffer zones.

The required 150' buffer zones are maintained around the wastewater treatment packaged plant and storage pond. There are no public wells within the area. The Nearest private well is ±1000 ft. from disposal site.

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*.

- The facility is maintained and operated by two Class C licensed operators.
- Effluent monitoring flows are taken 5 times / week, once a week for BOD and chlorine, once a month for pH.
- Irrigation area is monitored and maintained to prevent ponding and contamination.
- A meter is used to monitor volume of effluent applied for irrigation.
- Analysis of representative soil sample from irrigation site is taken annually.

D. Grit and grease treatment

1. Acceptance of grit and grease waste

Does the facility have a grit and/or grease processing facility onsite that treats and decants or accepts transported loads of grit and grease waste that are discharged directly to the wastewater treatment plant prior to any treatment?

☐ Yes ☒ No

If No, stop here and continue with Subsection E. Stormwater Management.

2. Grit and grease processing

Describe below how the grit and grease waste is treated at the facility. In your description, include how and where the grit and grease is introduced to the treatment works and how it is separated or processed. Provide a flow diagram showing how grit and grease is processed at the facility.

Click to enter text.

3. Grit disposal

Does the facility have a Municipal Solid Waste (MSW) registration or permit for grit disposal?

☐ Yes ☒ No

If No, contact the TCEQ Municipal Solid Waste team at 512-239-2335. Note: A registration or permit is required for grit disposal. Grit shall not be combined with treatment plant sludge. See the instruction booklet for additional information on grit disposal requirements and restrictions.

Describe the method of grit disposal.

Click to enter text.

4. Grease and decanted liquid disposal

Note: A registration or permit is required for grease disposal. Grease shall not be combined with treatment plant sludge. For more information, contact the TCEQ Municipal Solid Waste team at 512-239-2335.

Describe how the decant and grease are treated and disposed of after grit separation.

Click to enter text.

E. Stormwater management

1. Applicability

Does the facility have a design flow of 1.0 MGD or greater in any phase?

☐ Yes ☒ No

Does the facility have an approved pretreatment program, under 40 CFR Part 403?

☐ Yes ☒ No

If no to both of the above, then skip to Subsection F, Other Wastes Received.

2. MSGP coverage

Is the stormwater runoff from the WWTP and dedicated lands for sewage disposal currently permitted under the TPDES Multi-Sector General Permit (MSGP), TXR050000?

☐ Yes ☐ No

If yes, please provide MSGP Authorization Number and skip to Subsection F, Other Wastes Received:

TXR05 Click to enter text. or TXRNE Click to enter text.

If no, do you intend to seek coverage under TXR050000?

☐ Yes ☐ No

3. *Conditional exclusion*

Alternatively, do you intend to apply for a conditional exclusion from permitting based TXR050000 (Multi Sector General Permit) Part II B.2 or TXR050000 (Multi Sector General Permit) Part V, Sector T 3(b)?

☐ Yes ☐ No

If yes, please explain below then proceed to Subsection F, Other Wastes Received:

Click to enter text.

4. *Existing coverage in individual permit*

Is your stormwater discharge currently permitted through this individual TPDES or TLAP permit?

☐ Yes ☐ No

If yes, provide a description of stormwater runoff management practices at the site that are authorized in the wastewater permit then skip to Subsection F, Other Wastes Received.

Click to enter text.

5. *Zero stormwater discharge*

Do you intend to have no discharge of stormwater via use of evaporation or other means?

☐ Yes ☐ No

If yes, explain below then skip to Subsection F. Other Wastes Received.

Click to enter text.

Note: If there is a potential to discharge any stormwater to surface water in the state as the result of any storm event, then permit coverage is required under the MSGP or an individual discharge permit. This requirement applies to all areas of facilities with treatment plants or systems that treat, store, recycle, or reclaim domestic sewage, wastewater or sewage sludge (including dedicated lands for sewage sludge disposal located within the onsite property boundaries) that meet the applicability criteria of above. You have the option of obtaining coverage under the MSGP for direct discharges, (recommended), or obtaining coverage under this individual permit.

6. *Request for coverage in individual permit*

Are you requesting coverage of stormwater discharges associated with your treatment plant under this individual permit?

☐ Yes ☐ No

If yes, provide a description of stormwater runoff management practices at the site for which you are requesting authorization in this individual wastewater permit and describe whether you intend to comingle this discharge with your treated effluent or discharge it via a separate dedicated stormwater outfall. Please also indicate if you intend to divert stormwater to the treatment plant headworks and indirectly discharge it to water in the state.

Click to enter text.

Note: Direct stormwater discharges to waters in the state authorized through this individual permit will require the development and implementation of a stormwater pollution prevention plan (SWPPP) and will be subject to additional monitoring and reporting requirements. Indirect discharges of stormwater via headworks recycling will require compliance with all individual permit requirements including 2-hour peak flow limitations. All stormwater discharge authorization requests will require additional information during the technical review of your application.

F. Discharges to the Lake Houston Watershed

Does the facility discharge in the Lake Houston watershed?

☐ Yes ☒ No

If yes, attach a Sewage Sludge Solids Management Plan. See Example 5 in the instructions.
Click to enter text.

G. Other wastes received including sludge from other WWTPs and septic waste

1. Acceptance of sludge from other WWTPs

Does or will the facility accept sludge from other treatment plants at the facility site?

☐ Yes ☒ No

If yes, attach sewage sludge solids management plan. See Example 5 of instructions.

In addition, provide the date the plant started or is anticipated to start accepting sludge, an estimate of monthly sludge acceptance (gallons or millions of gallons), an estimate of the BOD_5 concentration of the sludge, and the design BOD_5 concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

Click to enter text.

Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.

2. Acceptance of septic waste

Is the facility accepting or will it accept septic waste?

☐ Yes ☒ No

If yes, does the facility have a Type V processing unit?

☐ Yes ☒ No

If yes, does the unit have a Municipal Solid Waste permit?

☐ Yes ☐ No

If yes to any of the above, provide the date the plant started or is anticipated to start accepting septic waste, an estimate of monthly septic waste acceptance (gallons or millions of gallons), an estimate of the BOD_5 concentration of the septic waste, and the design BOD_5 concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

Click to enter text.

Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.

3. ***Acceptance of other wastes (not including septic, grease, grit, or RCRA, CERCLA or as discharged by IUs listed in Worksheet 6)***

Is or will the facility accept wastes that are not domestic in nature excluding the categories listed above?

☐ Yes ☒ No

If yes, provide the date that the plant started accepting the waste, an estimate how much waste is accepted on a monthly basis (gallons or millions of gallons), a description of the entities generating the waste, and any distinguishing chemical or other physical characteristic of the waste. Also note if this information has or has not changed since the last permit action.

Click to enter text.

Section 7. Pollutant Analysis of Treated Effluent (Instructions Page 50)

Is the facility in operation?

☒ Yes ☐ No

If no, this section is not applicable. Proceed to Section 8.

If yes, provide effluent analysis data for the listed pollutants. ***Wastewater treatment facilities*** complete Table 1.0(2). W***ater treatment facilities*** discharging filter backwash water, complete Table 1.0(3). Provide copies of the laboratory results sheets. **These tables are not applicable for a minor amendment without renewal.** See the instructions for guidance.

Note: The sample date must be within 1 year of application submission.

Table1.0(2) – Pollutant Analysis for Wastewater Treatment Facilities

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
$CBOD_5$, mg/l		5	1	grab	9/06/2024
Total Suspended Solids, mg/l		25	1	grab	9/10/2024
Ammonia Nitrogen, mg/l		12.2	1	grab	9/10/2024
Nitrate Nitrogen, mg/l		<0.5	1	grab	9/06/2024
Total Kjeldahl Nitrogen, mg/l		17	1	grab	9/12/2024
Sulfate, mg/l		82	1	grab	9/06/2024
Chloride, mg/l		543	1	grab	9/06/2024
Total Phosphorus, mg/l		0.26	1	grab	9/11/2024
pH, standard units		7.8	1	grab	9/06/2024
Dissolved Oxygen*, mg/l		N/A			
Chlorine Residual, mg/l		1.85	1	grab	9/06/2024
E.coli (CFU/100ml) freshwater		0	1	grab	9/06/2024
Entercocci (CFU/100ml) saltwater		N/A			
Total Dissolved Solids, mg/l		1280	1	grab	9/06/2024
Electrical Conductivity, µmohs/cm, †		2286	1	grab	9/09/2024
Oil & Grease, mg/l		N/A			
Alkalinity ($CaCO_3$)*, mg/l		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					
Total Dissolved Solids, mg/l					
pH, standard units					
Fluoride, mg/l					
Aluminum, mg/l					
Alkalinity ($CaCO_3$), mg/l					

Section 8. Facility Operator (Instructions Page 50)

Facility Operator Name: Jack Uptmore

Facility Operator's License Classification and Level: Class C, License # WW0040070

Facility Operator's License Number: **# WW0043935**

Section 9. Sludge and Biosolids Management and Disposal (Instructions Page 51)

A. WWTP's Biosolids Management Facility Type

Check all that apply. See instructions for guidance

- ☐ Design flow>= 1 MGD
- ☐ Serves >= 10,000 people
- ☐ Class I Sludge Management Facility (per 40 CFR § 503.9)
- ☐ Biosolids generator
- ☐ Biosolids end user – land application (onsite)
- ☐ Biosolids end user – surface disposal (onsite)
- ☐ Biosolids end user – incinerator (onsite)

B. WWTP's Biosolids Treatment Process

Check all that apply. See instructions for guidance.

- ☐ Aerobic Digestion
- ☐ Air Drying (or sludge drying beds)
- ☐ Lower Temperature Composting
- ☐ Lime Stabilization
- ☐ Higher Temperature Composting
- ☐ Heat Drying
- ☐ Thermophilic Aerobic Digestion
- ☐ Beta Ray Irradiation
- ☐ Gamma Ray Irradiation
- ☐ Pasteurization
- ☐ Preliminary Operation (e.g. grinding, de-gritting, blending)
- ☐ Thickening (e.g. gravity thickening, centrifugation, filter press, vacuum filter)
- ☐ Sludge Lagoon
- ☐ Temporary Storage (< 2 years)
- ☐ Long Term Storage (>= 2 years)
- ☐ Methane or Biogas Recovery

☐ Other Treatment Process: Click to enter text.

C. Biosolids Management

Provide information on the *intended* biosolids management practice. Do not enter every management practice that you want authorized in the permit, as the permit will authorize all biosolids management practices listed in the instructions. Rather indicate the management practice the facility plans to use.

Biosolids Management

Management Practice	Handler or Preparer Type	Bulk or Bag Container	Amount (dry metric tons)	Pathogen Reduction Options	Vector Attraction Reduction Option
Choose an item.	Choose an item.	Choose an item.		Choose an item.	Choose an item.
Choose an item.	Choose an item.	Choose an item.		Choose an item.	Choose an item.
Choose an item.	Choose an item.	Choose an item.		Choose an item.	Choose an item.

If "Other" is selected for Management Practice, please explain (e.g. monofill or transport to another WWTP): Hauled off site to a permitted site

D. Disposal site

Disposal site name: Guadalupe-Blanco River Authority - FM 20 Plant

TCEQ permit or registration number: WQ0010210002

County where disposal site is located: Caldwell

E. Transportation method

Method of transportation (truck, train, pipe, other): truck

Name of the hauler: Sellman Enterprises - Buda, Tx

Hauler registration number: 21565

Sludge is transported as a:

Liquid ☐ semi-liquid ☐ semi-solid ☒ solid ☐

Section 10. Permit Authorization for Sewage Sludge Disposal (Instructions Page 53)

A. Beneficial use authorization

Does the existing permit include authorization for land application of sewage sludge for beneficial use?

☐ Yes ☒ No

If yes, are you requesting to continue this authorization to land apply sewage sludge for beneficial use?

☐ Yes ☐ No

If yes, is the completed **Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451)** attached to this permit application (see the instructions for details)?

☐ Yes ☐ No

B. Sludge processing authorization

Does the existing permit include authorization for any of the following sludge processing, storage or disposal options?

Sludge Composting	☐ Yes	☒ No
Marketing and Distribution of sludge	☐ Yes	☒ No
Sludge Surface Disposal or Sludge Monofill	☐ Yes	☒ No
Temporary storage in sludge lagoons	☐ Yes	☒ No

If yes to any of the above sludge options and the applicant is requesting to continue this authorization, is the completed **Domestic Wastewater Permit Application: Sewage Sludge Technical Report (TCEQ Form No. 10056)** attached to this permit application?

☐ Yes ☐ No

Section 11. Sewage Sludge Lagoons (Instructions Page 53)

Does this facility include sewage sludge lagoons?

☐ Yes ☒ No

If yes, complete the remainder of this section. If no, proceed to Section 12.

A. Location information

The following maps are required to be submitted as part of the application. For each map, provide the Attachment Number.

- Original General Highway (County) Map:

  Attachment: See attachment
- USDA Natural Resources Conservation Service Soil Map:

  Attachment: See attachment
- Federal Emergency Management Map:

  Attachment: See attachment
- Site map:

  Attachment: See attachment

Discuss in a description if any of the following exist within the lagoon area. Check all that apply.

☐ Overlap a designated 100-year frequency flood plain

☐ Soils with flooding classification

☐ Overlap an unstable area

☐ Wetlands

☐ Located less than 60 meters from a fault

☒ None of the above

Attachment: Click to enter text.

If a portion of the lagoon(s) is located within the 100-year frequency flood plain, provide the protective measures to be utilized including type and size of protective structures:

Click to enter text.

B. Temporary storage information N/A

Provide the results for the pollutant screening of sludge lagoons. These results are in addition to pollutant results in *Section 7 of Technical Report 1.0.*

Nitrate Nitrogen, mg/kg: Click to enter text.

Total Kjeldahl Nitrogen, mg/kg: Click to enter text.

Total Nitrogen (=nitrate nitrogen + TKN), mg/kg: Click to enter text.

Phosphorus, mg/kg: Click to enter text.

Potassium, mg/kg: Click to enter text.

pH, standard units: Click to enter text.

Ammonia Nitrogen mg/kg: Click to enter text.

Arsenic: Click to enter text.

Cadmium: Click to enter text.

Chromium: Click to enter text.

Copper: Click to enter text.

Lead: Click to enter text.

Mercury: Click to enter text.

Molybdenum: Click to enter text.

Nickel: Click to enter text.

Selenium: Click to enter text.

Zinc: Click to enter text.

Total PCBs: Click to enter text.

Provide the following information:

Volume and frequency of sludge to the lagoon(s): Click to enter text.

Total dry tons stored in the lagoons(s) per 365-day period: Click to enter text.

Total dry tons stored in the lagoons(s) over the life of the unit: Click to enter text.

C. Liner information N/A

Does the active/proposed sludge lagoon(s) have a liner with a maximum hydraulic conductivity of $1x10^{-7}$ cm/sec?

☐ Yes ☐ No

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

Click to enter text.

D. Site development plan N/A

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

Click to enter text.

Attach the following documents to the application.

- Plan view and cross-section of the sludge lagoon(s)

  Attachment: Click to enter text.
- Copy of the closure plan

  Attachment: Click to enter text.
- Copy of deed recordation for the site

  Attachment: Click to enter text.
- Size of the sludge lagoon(s) in surface acres and capacity in cubic feet and gallons

  Attachment: Click to enter text.
- Description of the method of controlling infiltration of groundwater and surface water from entering the site

  Attachment: Click to enter text.
- Procedures to prevent the occurrence of nuisance conditions

  Attachment: Click to enter text.

E. Groundwater monitoring

Is groundwater monitoring currently conducted at this site, or are any wells available for groundwater monitoring, or are groundwater monitoring data otherwise available for the sludge lagoon(s)?

☐ Yes ☒ No

If groundwater monitoring data are available, provide a copy. Provide a profile of soil types encountered down to the groundwater table and the depth to the shallowest groundwater as a separate attachment.

Attachment: Click to enter text.

Section 12. Authorizations/Compliance/Enforcement (Instructions Page 55)

A. Additional authorizations

Does the permittee have additional authorizations for this facility, such as reuse authorization, sludge permit, etc?

☐ Yes ☒ No

If yes, provide the TCEQ authorization number and description of the authorization:

Click to enter text.

B. Permittee enforcement status

Is the permittee currently under enforcement for this facility?

☐ Yes ☒ No

Is the permittee required to meet an implementation schedule for compliance or enforcement?

☐ Yes ☒ No

If yes to either question, provide a brief summary of the enforcement, the implementation schedule, and the current status:

Click to enter text.

Section 13. RCRA/CERCLA Wastes (Instructions Page 55)

A. RCRA hazardous wastes

Has the facility received in the past three years, does it currently receive, or will it receive RCRA hazardous waste?

☐ Yes ☒ No

B. Remediation activity wastewater

Has the facility received in the past three years, does it currently receive, or will it receive CERCLA wastewater, RCRA remediation/corrective action wastewater or other remediation activity wastewater?

☐ Yes ☒ No

C. Details about wastes received

If yes to either Subsection A or B above, provide detailed information concerning these wastes with the application.

Attachment: Click to enter text.

Section 14. Laboratory Accreditation (Instructions Page 56)

All laboratory tests performed must meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*, which includes the following general exemptions from National Environmental Laboratory Accreditation Program (NELAP) certification requirements:

- The laboratory is an in-house laboratory and is:
  - periodically inspected by the TCEQ; or
  - located in another state and is accredited or inspected by that state; or
  - performing work for another company with a unit located in the same site; or
  - performing pro bono work for a governmental agency or charitable organization.
- The laboratory is accredited under federal law.
- The data are needed for emergency-response activities, and a laboratory accredited under the Texas Laboratory Accreditation Program is not available.
- The laboratory supplies data for which the TCEQ does not offer accreditation.

The applicant should review 30 TAC Chapter 25 for specific requirements.

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

CERTIFICATION:

I certify that all laboratory tests submitted with this application meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification.*

Printed Name: Jack Uptmore

Title: General Manager

Signature: _____

Date: 9/12/2024

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.0: LAND DISPOSAL OF EFFLUENT

The following is required for renewal, new, and amendment permit applications.

Section 1. Type of Disposal System (Instructions Page 68)

Identify the method of land disposal:

- ☐ Surface application
- ☒ Irrigation
- ☐ Drip irrigation system
- ☐ Evaporation
- ☐ Other (describe in detail): Click to enter text.
- ☐ Subsurface application
- ☐ Subsurface soils absorption
- ☐ Subsurface area drip dispersal system
- ☐ Evapotranspiration beds

NOTE: All applicants without authorization or proposing new/amended subsurface disposal MUST complete and submit Worksheet 7.0.

For existing authorizations, provide Registration Number: Click to enter text.

Section 2. Land Application Site(s) (Instructions Page 68)

In table 3.0(1), provide the requested information for the land application sites. Include the agricultural or cover crop type (wheat, cotton, alfalfa, bermuda grass, native grasses, etc.), land use (golf course, hayland, pastureland, park, row crop, etc.), irrigation area, amount of effluent applied, and whether or not the public has access to the area. Specify the amount of land area and the amount of effluent that will be allotted to each agricultural or cover crop, if more than one crop will be used.

Table 3.0(1) – Land Application Site Crops

Crop Type & Land Use	Irrigation Area (acres)	Effluent Application (GPD)	Public Access? Y/N
Agriculture, Pasture	35	90,000	N

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	3.50	26.22	531'Lx55'Wx634'Lx 175'Arcx321'W	Clay

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

Section 4. Flood and Runoff Protection (Instructions Page 68)

Is the land application site within the 100-year frequency flood level?

☐ Yes ☒ No

If yes, describe how the site will be protected from inundation.

Click to enter text.

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

Click to enter text.

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

A swale and berm are provided at the property line to control runon and runoff

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

- 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

- 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 N/A
- All surface waters in the state onsite and within 500 feet of the property boundaries N/A
- All faults and sinkholes onsite and within 500 feet of the property N/A

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
68-31-201	Domestic / Stock	Y	Open	Outside buffer

Well ID	Well Use	Producing? Y/N	Open, cased, capped, or plugged?	Proposed Best Management Practice
68-31-307	Irrigation	N	Plugged	Outside buffer
68-31-209	Stock	Y	Open	Outside buffer
68-31-202	Domestic / Stock	Y	Open	Outside buffer
68-31-210	Domestic / Stock	Y	Open	Outside buffer

If water quality data or well log information is available please include the information in an attachment listed by Well ID.

Attachment: See Attachment

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

Are groundwater monitoring wells available onsite? ☐ Yes ☒ No

Do you plan to install ground water monitoring wells or lysimeters around the land application site? ☐ Yes ☒ No

If yes, provide the proposed location of the monitoring wells or lysimeters on a site map.

Attachment: Click to enter text.

Section 8. Soil Map and Soil Analyses (Instructions Page 70)

A. Soil map

Attach a USDA Soil Survey map that shows the area to be used for effluent disposal.

Attachment: See Attachment

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

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
Houston Black	0 – 60 in.	Slow	High	80
Trinity	0 – 72 in.	Very slow	High	80

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
8/2022	0.0421	2.1		7.8		35
9/2022	0.0401	1.8		7.8		35
10/2022	0.0407	2.6		7.8		35
11/2022	0.0435	2.6		7.8		35
12/2022	0.0533	3.5		7.9		35
1/2023	0.0499	5.0		7.8		35
2/2023	0.0692	5.8		7.9		35
3/2023	0.0563	3.0		7.7		35
4/2023	0.0692	3.8		7.8		35
5/2023	0.0966	3.1		7.8		35
6/2023	0.0814	2.8		7.8		35
7/2023	0.0538	3.0		7.9		35
8/2023	0.0456	3.4		7.9		35

Date	30 Day Avg Flow MGD	BOD5 mg/l	TSS mg/l	pH	Chlorine Residual mg/l	Acres irrigated
9/2023	0.0416	3.5		7.9		35
10/2023	0.0423	3.4		7.9		35
11/2023	0.0532	6.0		7.9		35
12/2023	0.0595	6.3		7.8		35
1/2024	0.0886	8.6		7.4		35
2/2024	0.0966	5.5		7.9		35
3/2024	0.0645	5.8		7.9		35
4/2024	0.0641	6.4		7.9		35
5/2024	0.0827	5.8		7.9		35
6/2024	0.0572	5.3		7.6		35
7/2024	0.0708	5.3		7.4		35

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

Click to enter text.

High flows in May and June of 2023 are due to high rainfall in those months.

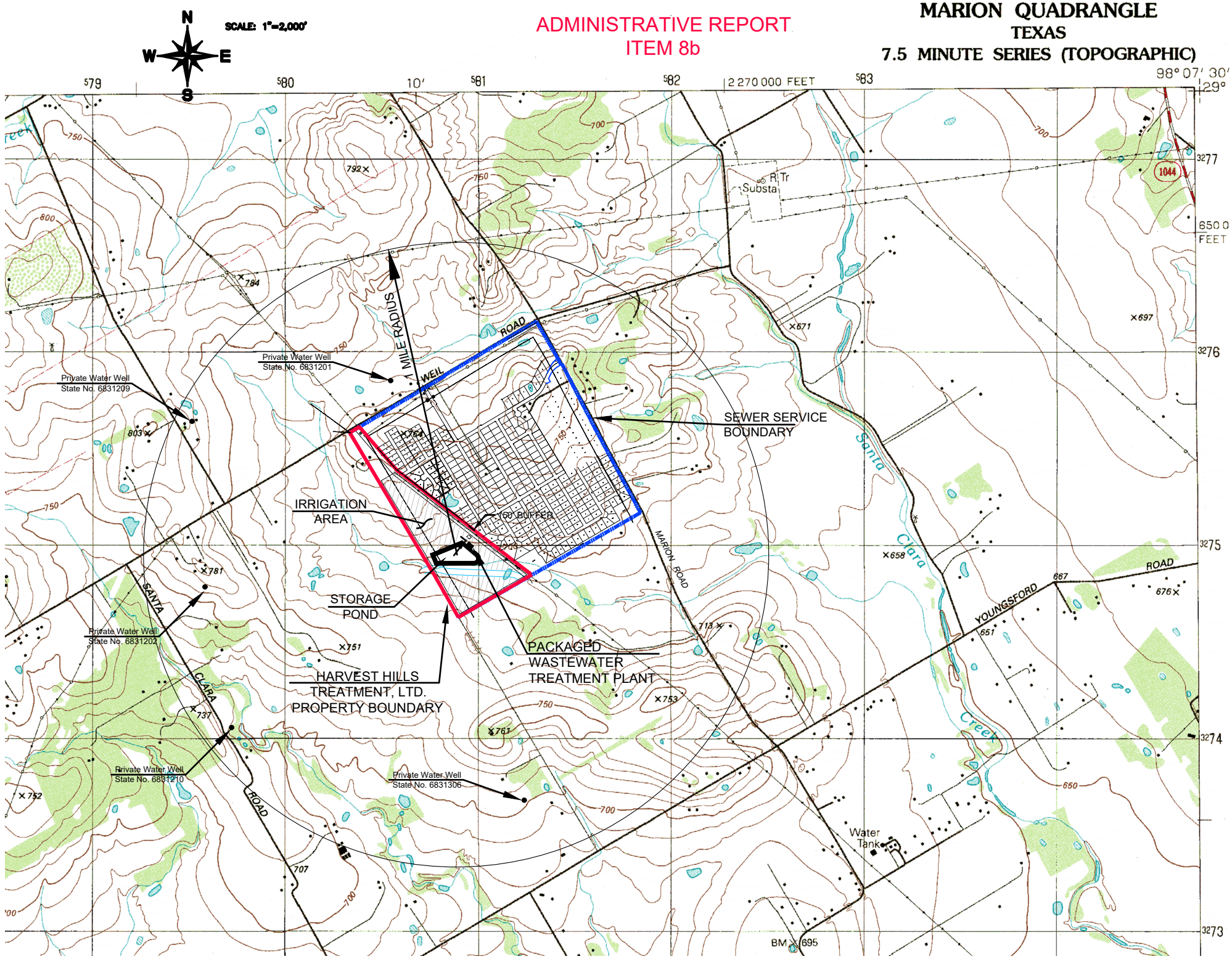
High flows in January and February of 2024 are due to high rainfall in those months.

ATTACHMENTS

ADMINISTRATIVE REPORT 1.0
ITEM 8b

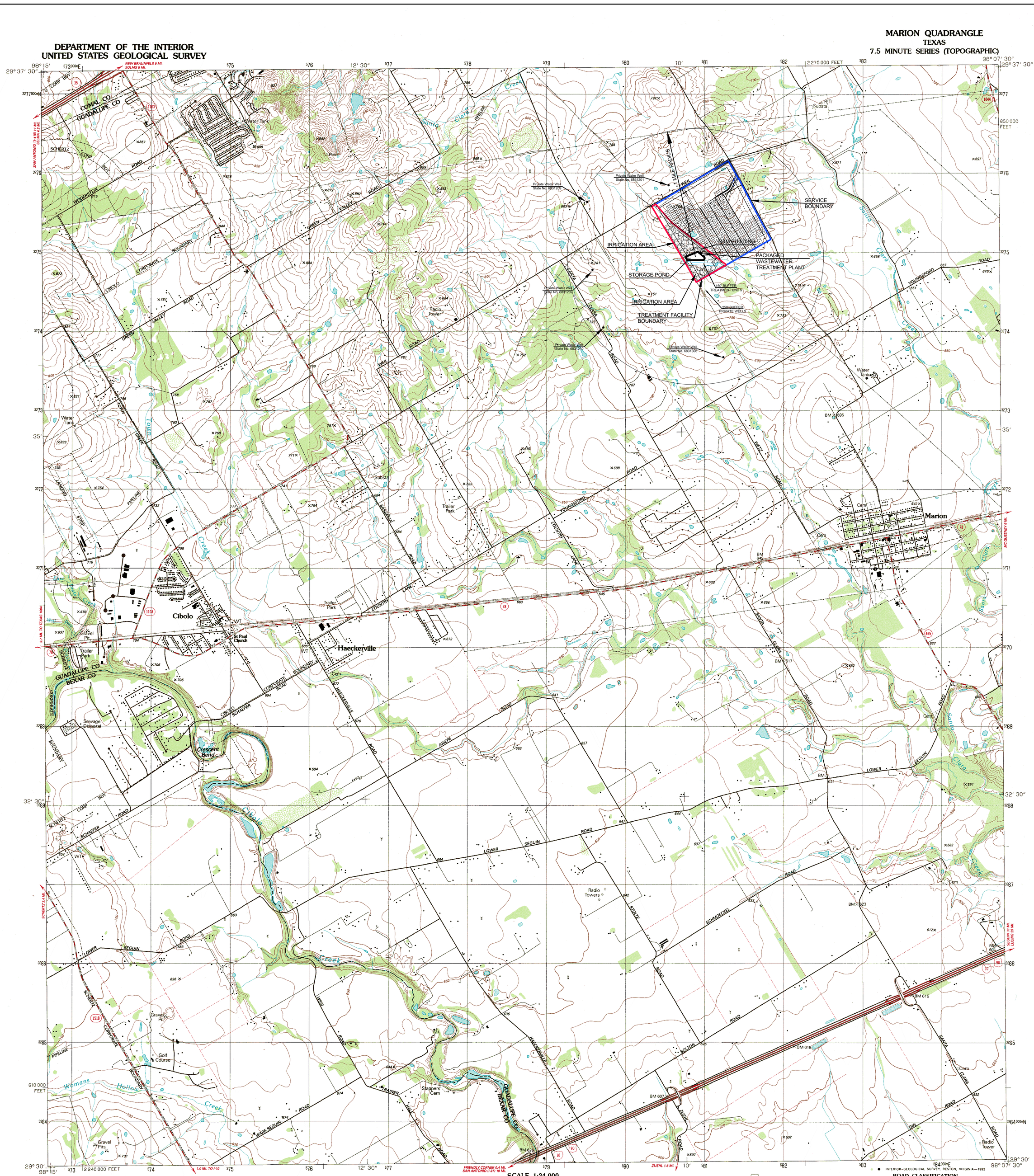
USGS TOPOGRAPHIC MAP

ADMINISTRATIVE REPORT
ITEM 8b



DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

MARION QUADRANGLE
TEXAS
7.5 MINUTE SERIES (TOPOGRAPHIC)



Produced by the United States Geological Survey

Control by USGS, NOS/NOAA and USCE

Compiled by Defense Mapping Agency from aerial photographs taken 1956. Revised from aerial photographs taken 1986
Field checked 1987. Map edited 1992

North American Datum of 1927 (NAD 27). Projection and 10 000-foot grid ticks: Texas Coordinate System, south central zone (Lambert Conformal Conic). 1000-meter Universal Transverse Mercator grid, zone 14
The difference between NAD 27 and North American Datum of 1983 (NAD 83) for 7.5 minute intersections is given in USGS Bulletin 1875. The NAD 83 is shown by dashed corner ticks

Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked

UTM GRID AND 1992 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET
MN
GN
0°24′ 7 MILS
6½° 116 MILS

SCALE 1:24 000
1 5 0 KILOMETERS 1 2
1000 0 METERS 1000 2000
1 .5 0 MILES 1
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10 000 FEET

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
TO CONVERT FEET TO METERS MULTIPLY BY 0.3048
TO CONVERT METERS TO FEET MULTIPLY BY 3.2808

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY
DENVER, COLORADO 80225 OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

TEXAS
QUADRANGLE LOCATION

2998-412

1	2	3
4		5
6	7	8

1 Bat Cave
2 New Braunfels West
3 New Braunfels East
4 Schertz
5 McQueeney
6 Martinez
7 Saint Hedwig
8 New Berlin

ADJOINING 7.5′ QUADRANGLE NAMES

ROAD CLASSIFICATION
Primary highway, hard surface — Light-duty road, hard or improved surface
Secondary highway, hard surface — Unimproved road
Interstate Route · U. S. Route · State Route

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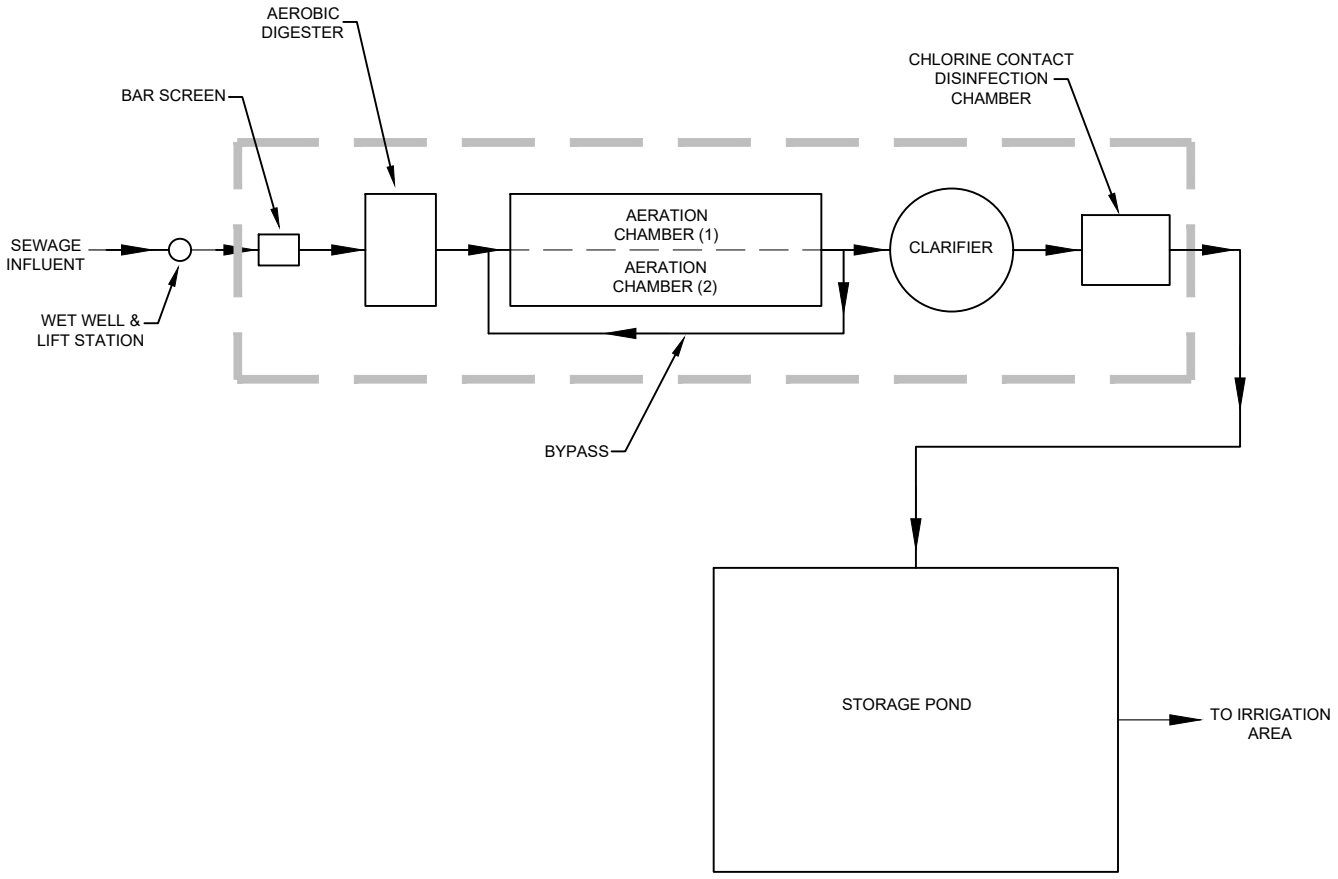
MARION, TEX.
29098-E2-TF-024

1992

DMA 6343 II SW-SERIES V882

ADMINISTRATIVE REPORT
ITEM 8b



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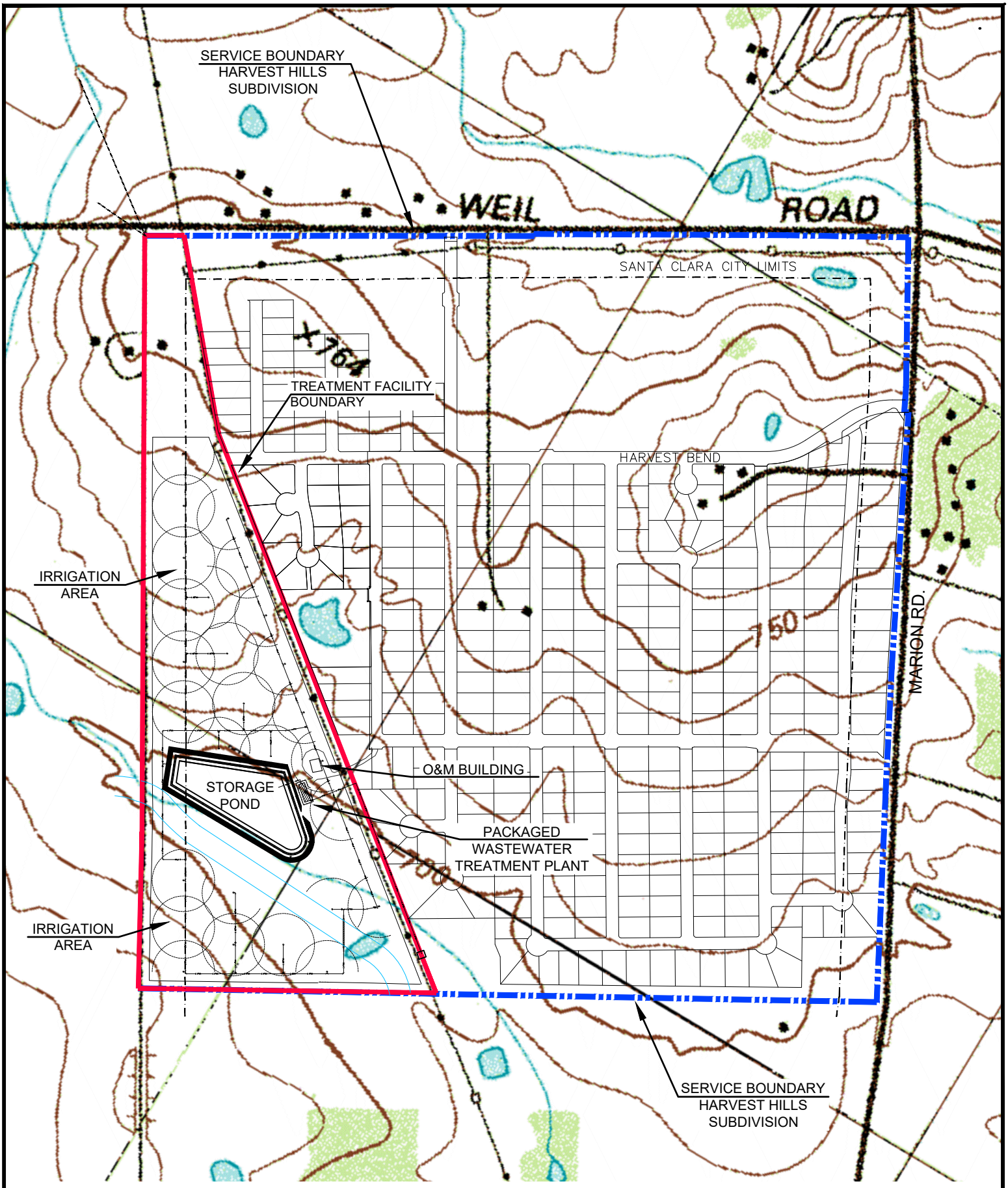
FLOW DIAGRAM
DOMESTIC TECHNICAL REPORT 1.0
ITEM 3c

HARVEST HILLS TREATMENT, LTD.

GUADALUPE COUNTY, TEXAS



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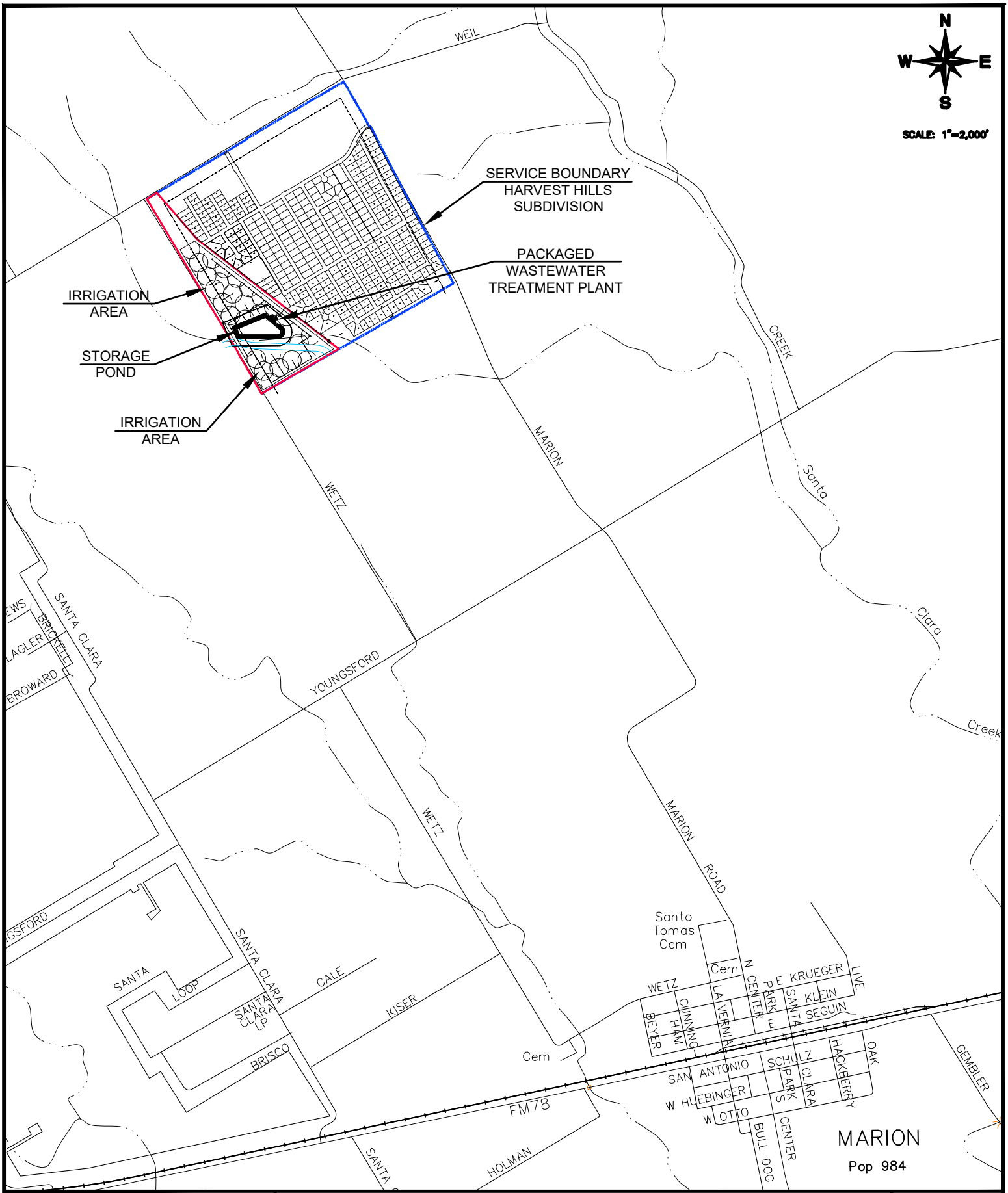
SITE DRAWING
DOMESTIC TECHNICAL REPORT 1.0
ITEM 4

HARVEST HILLS TREATMENT, LTD.

GUADALUPE COUNTY, TEXAS

SHT 1 OF 1



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GENERAL HIGHWAY (COUNTY) MAP
DOMESTIC TECHNICAL REPORT 1.0
ITEM 13a

HARVEST HILLS TREATMENT, LTD.

GUADALUPE COUNTY, TEXAS

SHT 1 OF 1

DOMESTIC TECHNICAL REPORT 1.0
ITEM 13a

USDA NRCS SOIL MAP

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Guadalupe County, Texas

August 14, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

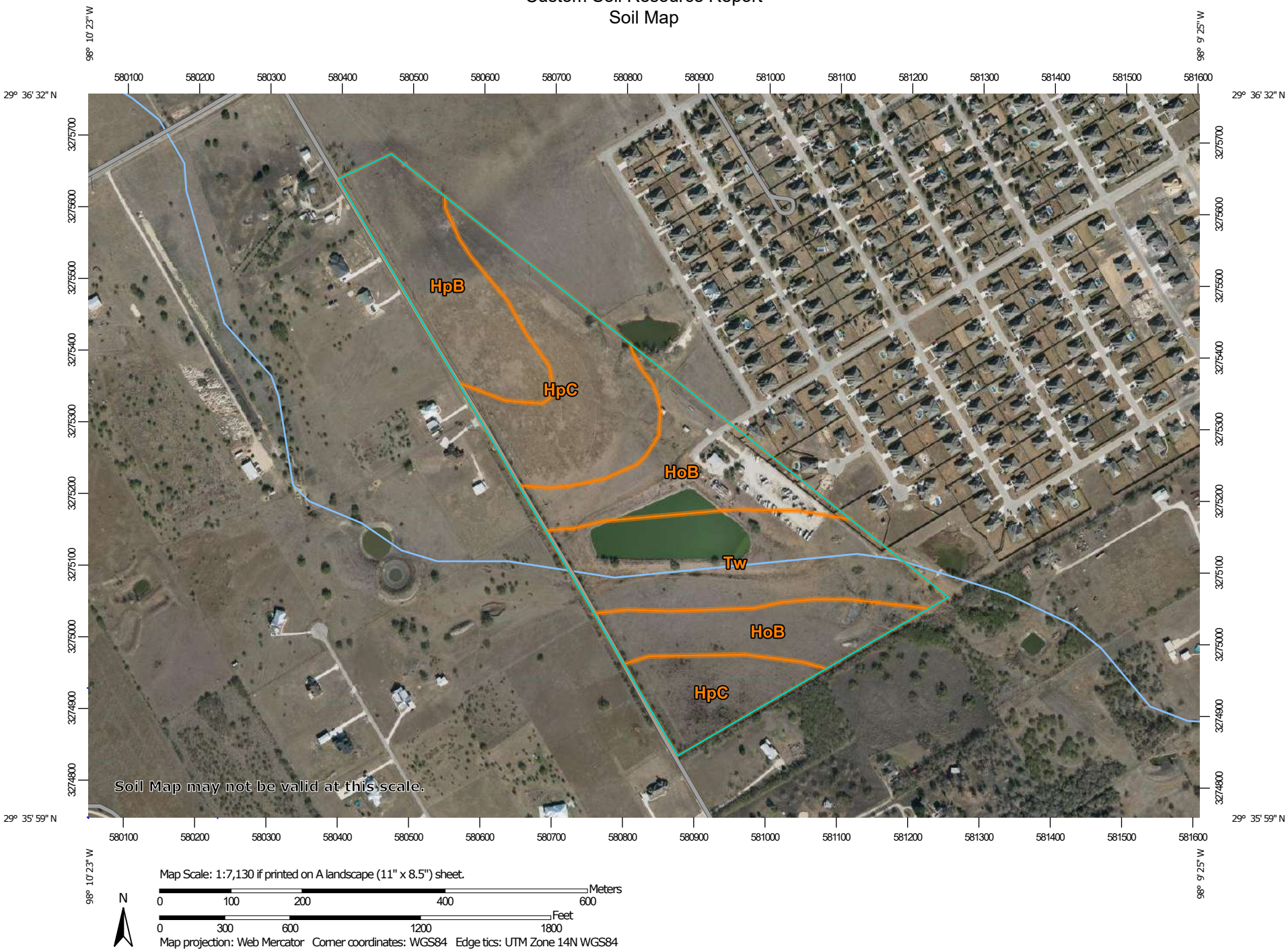
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:7,130 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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: Guadalupe County, Texas
Survey Area Data: Version 19, 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: Dec 15, 2020—Dec 25, 2020

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
HoB	Houston Black clay, 1 to 3 percent slopes	16.8	28.0%
HpB	Houston Black gravelly clay, 1 to 3 percent slopes	10.4	17.3%
HpC	Houston Black gravelly clay, 3 to 5 percent slopes	18.1	30.2%
Tw	Tinn clay, 0 to 1 percent slopes, frequently flooded	14.8	24.6%
Totals for Area of Interest		**60.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Guadalupe County, Texas

HoB—Houston Black clay, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2ssh0
Elevation: 270 to 1,040 feet
Mean annual precipitation: 33 to 43 inches
Mean annual air temperature: 62 to 63 degrees F
Frost-free period: 217 to 244 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Houston black and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Houston Black

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Microfeatures of landform position: Linear gilgai
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Clayey residuum weathered from calcareous mudstone of upper cretaceous age

Typical profile

Ap - 0 to 6 inches: clay
Bkss - 6 to 70 inches: clay
BCkss - 70 to 80 inches: clay

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: R086AY011TX - Southern Blackland

Hydric soil rating: No

Minor Components

Heiden

Percent of map unit: 15 percent
Landform: Plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Microfeatures of landform position: Linear gilgai
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Fairlie

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

HpB—Houston Black gravelly clay, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2sshn
Elevation: 420 to 1,030 feet
Mean annual precipitation: 33 to 37 inches
Mean annual air temperature: 68 to 69 degrees F
Frost-free period: 263 to 270 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Houston black and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Houston Black

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Microfeatures of landform position: Linear gilgai
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear

Parent material: Clayey residuum weathered from calcareous mudstone of upper cretaceous age

Typical profile

A - 0 to 6 inches: gravelly clay
Bkss - 6 to 70 inches: clay
BCkss - 70 to 80 inches: clay

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Minor Components

Heiden

Percent of map unit: 15 percent
Landform: Plains
Microfeatures of landform position: Linear gilgai
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Houston black, taxadjunct

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Microfeatures of landform position: Linear gilgai
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

HpC—Houston Black gravelly clay, 3 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2shgt
Elevation: 420 to 1,050 feet
Mean annual precipitation: 31 to 34 inches
Mean annual air temperature: 69 to 70 degrees F
Frost-free period: 262 to 277 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Houston black and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Houston Black

Setting

Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Microfeatures of landform position: Linear gilgai
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey residuum weathered from calcareous mudstone of upper cretaceous age

Typical profile

Ap - 0 to 13 inches: gravelly clay
Bkss - 13 to 63 inches: clay
BCkssz - 63 to 86 inches: clay

Properties and qualities

Slope: 3 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Minor Components

Houston black, taxadjunct
Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Microfeatures of landform position: Linear gilgai
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Heiden
Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Microfeatures of landform position: Linear gilgai
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Tw—Tinn clay, 0 to 1 percent slopes, frequently flooded

Map Unit Setting
National map unit symbol: 2vtgr
Elevation: 330 to 750 feet
Mean annual precipitation: 35 to 47 inches
Mean annual air temperature: 63 to 68 degrees F
Frost-free period: 226 to 263 days
Farmland classification: Not prime farmland

Map Unit Composition
Tinn and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tinn

Setting
Landform: Flood plains
Landform position (three-dimensional): Tread
Microfeatures of landform position: Circular gilgai

Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Calcareous clayey alluvium

Typical profile

A - 0 to 17 inches: clay
Bss - 17 to 57 inches: clay
Bkssy - 57 to 80 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: D
Ecological site: R086AY013TX - Clayey Bottomland
Hydric soil rating: No

Minor Components

Whitesboro

Percent of map unit: 10 percent
Landform: Flood plains
Microfeatures of landform position: Circular gilgai
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R086AY012TX - Loamy Bottomland
Hydric soil rating: No

Gladewater

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R086AY013TX - Clayey Bottomland
Hydric soil rating: Yes

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Physical Properties

Soil Physical Properties are measured or inferred from direct observations in the field or laboratory. Examples of soil physical properties include percent clay, organic matter, saturated hydraulic conductivity, available water capacity, and bulk density.

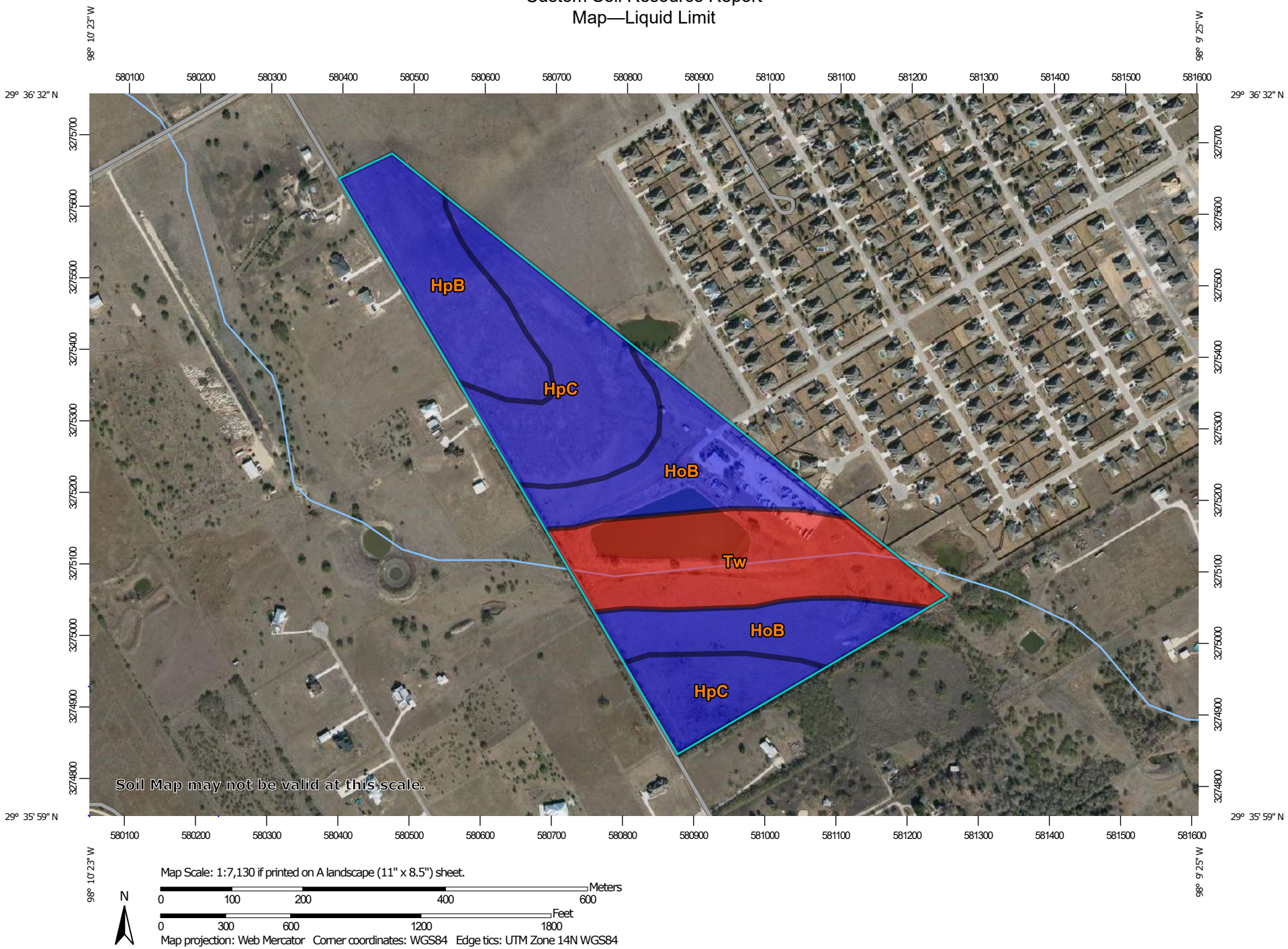
Liquid Limit

Liquid limit (LL) is one of the standard Atterberg limits used to indicate the plasticity characteristics of a soil. It is the water content, on a percent by weight basis, of the soil (passing #40 sieve) at which the soil changes from a plastic to a liquid state. Generally, the amount of clay- and silt-size particles, the organic matter content, and the type of minerals determine the liquid limit. Soils that have a high liquid limit have the capacity to hold a lot of water while maintaining a plastic or semisolid state.

Liquid limit is used in classifying soils in the Unified and AASHTO classification systems.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Map—Liquid Limit



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- <= 66.0
- > 66.0 and <= 70.0
- Not rated or not available

Soil Rating Lines

- <= 66.0
- > 66.0 and <= 70.0
- Not rated or not available

Soil Rating Points

- <= 66.0
- > 66.0 and <= 70.0
- Not rated or not available

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 1:20,000.

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: Guadalupe County, Texas
Survey Area Data: Version 19, 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: Dec 15, 2020—Dec 25, 2020

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.

Table—Liquid Limit

Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
HoB	Houston Black clay, 1 to 3 percent slopes	70.0	16.8	28.0%
HpB	Houston Black gravelly clay, 1 to 3 percent slopes	70.0	10.4	17.3%
HpC	Houston Black gravelly clay, 3 to 5 percent slopes	70.0	18.1	30.2%
Tw	Tinn clay, 0 to 1 percent slopes, frequently flooded	66.0	14.8	24.6%
Totals for Area of Interest			**60.1**	**100.0%**

Rating Options—Liquid Limit

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 0

Bottom Depth: 60

Units of Measure: Inches

Plasticity Index

Plasticity index (PI) is one of the standard Atterberg limits used to indicate the plasticity characteristics of a soil. It is defined as the numerical difference between the liquid limit and plastic limit of the soil. It is the range of water content in which a soil exhibits the characteristics of a plastic solid.

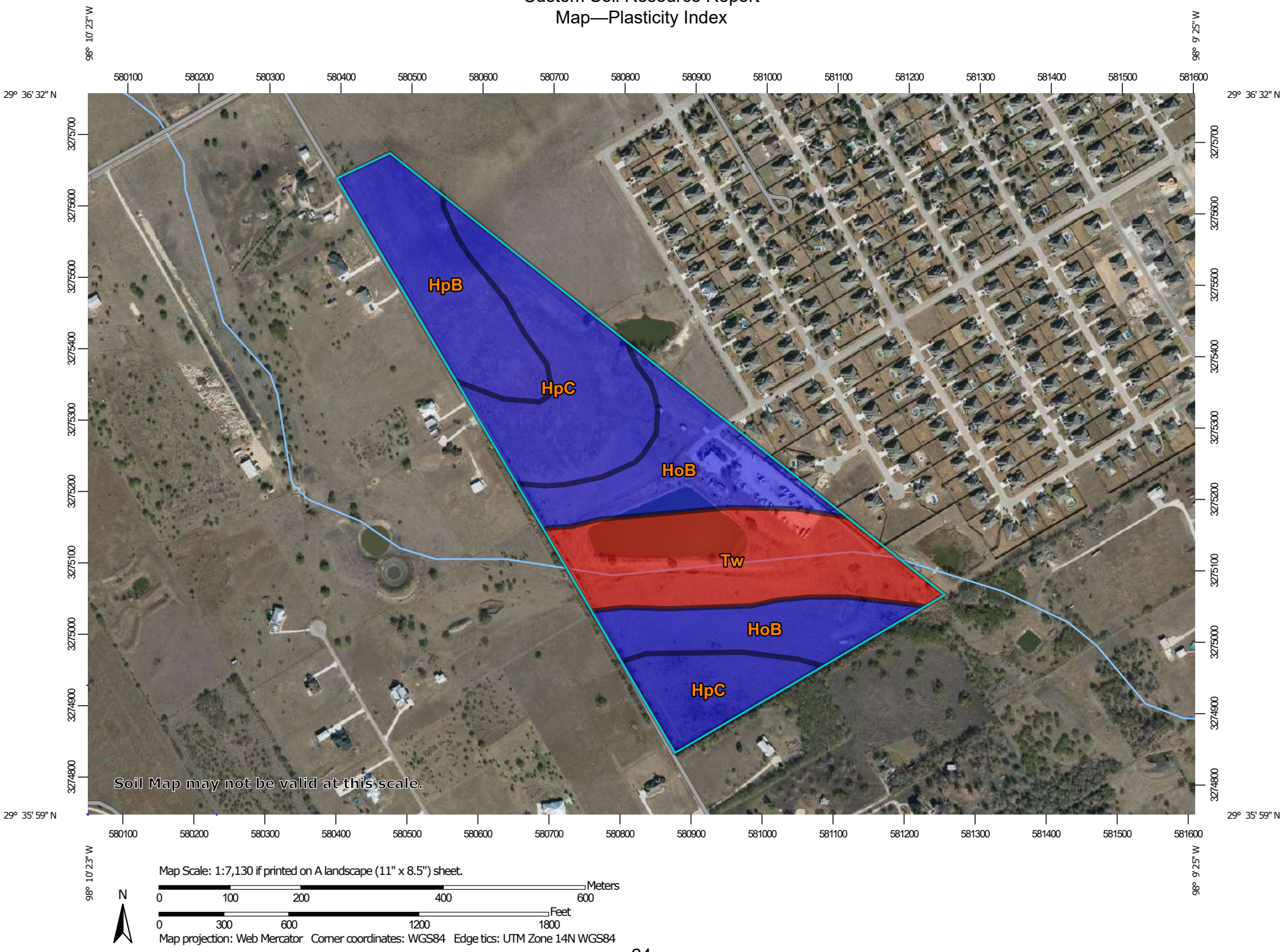
The plastic limit is the water content that corresponds to an arbitrary limit between the plastic and semisolid states of a soil. The liquid limit is the water content, on a percent by weight basis, of the soil (passing #40 sieve) at which the soil changes from a plastic to a liquid state.

Soils that have a high plasticity index have a wide range of moisture content in which the soil performs as a plastic material. Highly and moderately plastic clays

have large PI values. Plasticity index is used in classifying soils in the Unified and AASHTO classification systems.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—Plasticity Index



Map Scale: 1:7,130 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

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

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

<= 41.0

> 41.0 and <= 44.0

Not rated or not available

Soil Rating Lines

<= 41.0

> 41.0 and <= 44.0

Not rated or not available

Soil Rating Points

<= 41.0

> 41.0 and <= 44.0

Not rated or not available

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 1:20,000.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Date(s) aerial images were photographed: Dec 15, 2020—Dec 25, 2020

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Table—Plasticity Index

Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
HoB	Houston Black clay, 1 to 3 percent slopes	44.0	16.8	28.0%
HpB	Houston Black gravelly clay, 1 to 3 percent slopes	44.0	10.4	17.3%
HpC	Houston Black gravelly clay, 3 to 5 percent slopes	44.0	18.1	30.2%
Tw	Tinn clay, 0 to 1 percent slopes, frequently flooded	41.0	14.8	24.6%
Totals for Area of Interest			**60.1**	**100.0%**

Rating Options—Plasticity Index

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 0

Bottom Depth: 60

Units of Measure: Inches

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

AASHTO Group Index

The AASHTO Group Index is a refinement to the seven major groups of the AASHTO soil classification system. According to

this system, soil is classified into seven major groups: A -l through A-7. Soils classified into groups A-1, A-2. and A-3 are granular materials of which 35% or less of the particles pass through the No. 200 sieve. Soils of which more than 35% pass through the No. 200 sieve are classified into groups A-4, A-5, A-6, and A-7. These soils are mostly silt and clay-type materials.

The classifications system is based on the following criteria:

1. Grain size

a. Gravel ; fraction passing the 75-mm(3-in.) sieve and retained on the No. 10 (2-mm) U.S. sieve

b. sand: fraction passing the No. 10 (2-mm) U.S. sieve and retained on the No.200 (0.075-mm) U.S. sieve

c. Silt and clay: fraction passing the No. 200 U.S. sieve

2. Plasticity The term silty is applied when the fine fractions of the soil have a plasticity index of 10 or less. The term clayey is applied when the fine fractions have a plasticity index of 11 or more.

3. If cobbles and boulders (size larger than 75 mm) are encountered, they are excluded from the portion of the soil sample from which classification is made.

To evaluate the quality of a soil as a highway subgrade material, one must also incorporate a number called the group index (GI) with the groups and subgroups of the soil. This index is written in parentheses after the group or subgroup designation.

The group index is given by the equation:

GI = (F200-35)[0.2+ 0.005(LL- 40)] + 0.01(.F200-15)(PI- 10)

where:

F200 = percentage passing through the No. 200 sieve

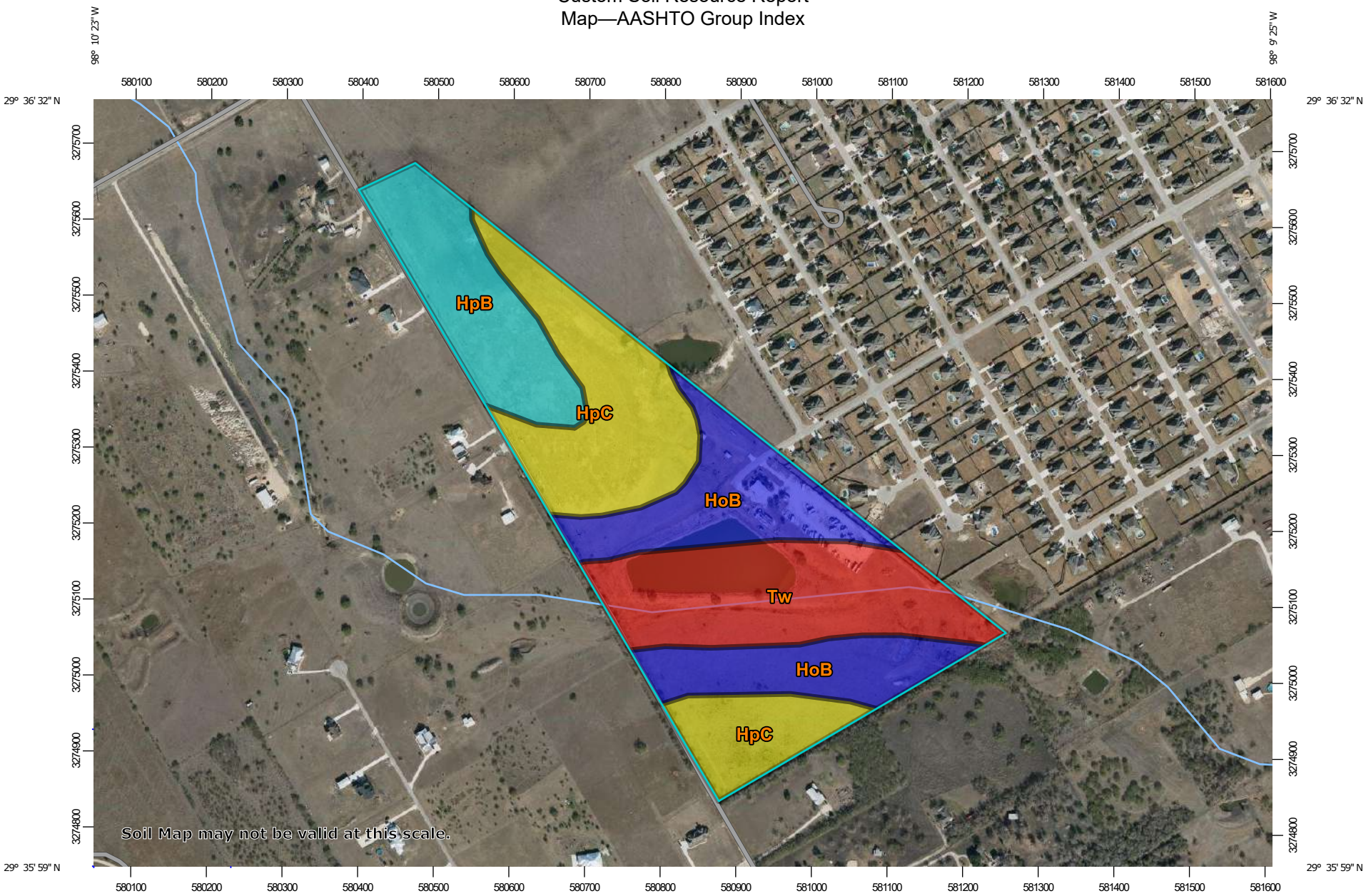
LL — liquid limit

PI : plasticity index

The group index is used typically to refine an AASHTO class but in the soil survey database is often used as a standalone soil attribute.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—AASHTO Group Index



Map Scale: 1:7,130 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- <= 34
- > 34 and <= 35
- > 35 and <= 36
- > 36 and <= 38
- Not rated or not available

Soil Rating Lines
- <= 34
- > 34 and <= 35
- > 35 and <= 36
- > 36 and <= 38
- Not rated or not available

Soil Rating Points
- <= 34
- > 34 and <= 35
- > 35 and <= 36
- > 36 and <= 38
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 19, Sep 5, 2023

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Date(s) aerial images were photographed: Dec 15, 2020—Dec 25, 2020

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Table—AASHTO Group Index

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HoB	Houston Black clay, 1 to 3 percent slopes	38	16.8	28.0%
HpB	Houston Black gravelly clay, 1 to 3 percent slopes	36	10.4	17.3%
HpC	Houston Black gravelly clay, 3 to 5 percent slopes	35	18.1	30.2%
Tw	Tinn clay, 0 to 1 percent slopes, frequently flooded	34	14.8	24.6%
Totals for Area of Interest			**60.1**	**100.0%**

Rating Options—AASHTO Group Index

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Interpret Nulls as Zero: No

This option indicates if a null value for a component should be converted to zero before aggregation occurs. This will be done only if a map unit has at least one component where this value is not null.

Layer Options (Horizon Aggregation Method): All Layers (Weighted Average)

For an attribute of a soil horizon, a depth qualification must be specified. In most cases it is probably most appropriate to specify a fixed depth range, either in centimeters or inches. The Bottom Depth must be greater than the Top Depth, and the Top Depth can be greater than zero. The choice of "inches" or "centimeters" only applies to the depth of soil to be evaluated. It has no influence on the units of measure the data are presented in.

When "Surface Layer" is specified as the depth qualifier, only the surface layer or horizon is considered when deriving a value for a component, but keep in mind that the thickness of the surface layer varies from component to component.

When "All Layers" is specified as the depth qualifier, all layers recorded for a component are considered when deriving the value for that component.

Whenever more than one layer or horizon is considered when deriving a value for a component, and the attribute being aggregated is a numeric attribute, a weighted average value is returned, where the weighting factor is the layer or horizon thickness.

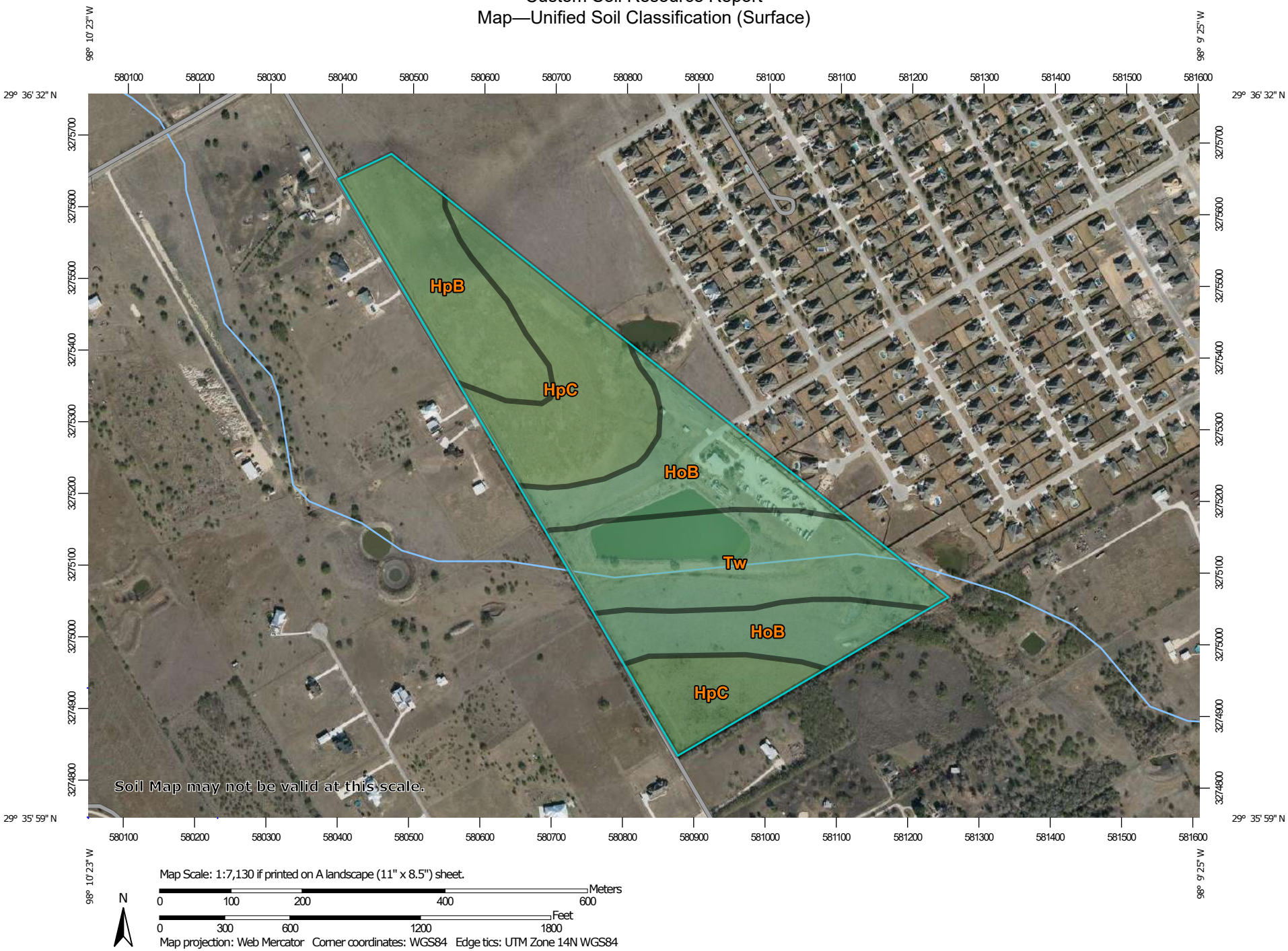
Unified Soil Classification (Surface)

The Unified soil classification system classifies mineral and organic mineral soils for engineering purposes on the basis of particle-size characteristics, liquid limit, and plasticity index. It identifies three major soil divisions: (i) coarse-grained soils having less than 50 percent, by weight, particles smaller than 0.074 mm in diameter; (ii) fine-grained soils having 50 percent or more, by weight, particles smaller than 0.074 mm in diameter; and (iii) highly organic soils that demonstrate certain organic characteristics. These divisions are further subdivided into a total of 15 basic soil groups. The major soil divisions and basic soil groups are determined on the basis of estimated or measured values for grain-size distribution and Atterberg limits. ASTM D 2487 shows the criteria chart used for classifying soil in the Unified system and the 15 basic soil groups of the system and the plasticity chart for the Unified system.

The various groupings of this classification correlate in a general way with the engineering behavior of soils. This correlation provides a useful first step in any field or laboratory investigation for engineering purposes. It can serve to make some general interpretations relating to probable performance of the soil for engineering uses.

For each soil horizon in the database one or more Unified soil classifications may be listed. One is marked as the representative or most commonly occurring. The representative classification is shown here for the surface layer of the soil.

Custom Soil Resource Report
Map—Unified Soil Classification (Surface)



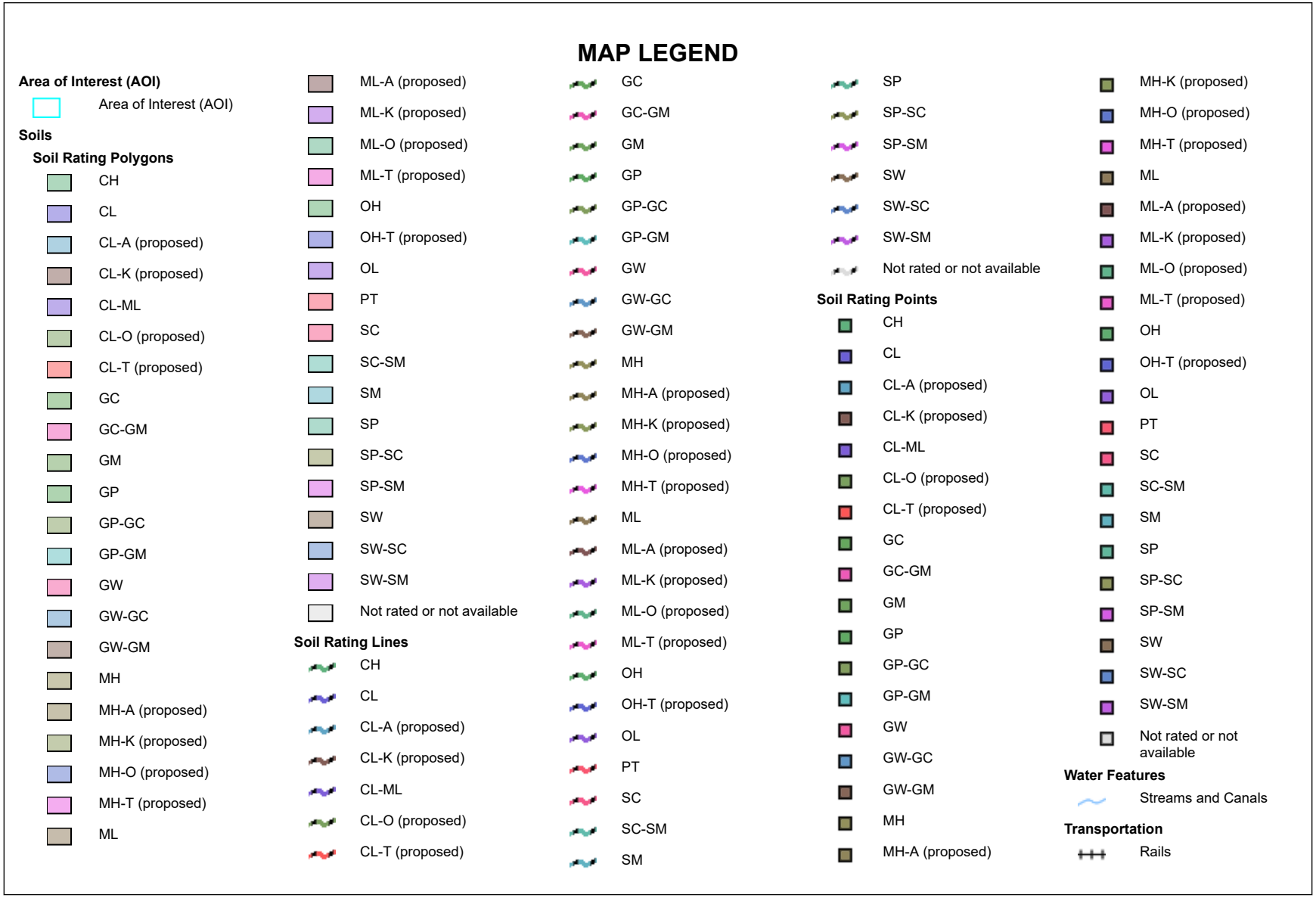
Map Scale: 1:7,130 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

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


MAP LEGEND
Area of Interest (AOI)
Area of Interest (AOI)
Soils
Soil Rating Polygons
CH
CL
CL-A (proposed)
CL-K (proposed)
CL-ML
CL-O (proposed)
CL-T (proposed)
GC
GC-GM
GM
GP
GP-GC
GP-GM
GW
GW-GC
GW-GM
MH
MH-A (proposed)
MH-K (proposed)
MH-O (proposed)
MH-T (proposed)
ML
ML-A (proposed)
ML-K (proposed)
ML-O (proposed)
ML-T (proposed)
OH
OH-T (proposed)
OL
PT
SC
SC-SM
SM
SP
SP-SC
SP-SM
SW
SW-SC
SW-SM
Not rated or not available
Soil Rating Lines
CH
CL
CL-A (proposed)
CL-K (proposed)
CL-ML
CL-O (proposed)
CL-T (proposed)
GC
GC-GM
GM
GP
GP-GC
GP-GM
GW
GW-GC
GW-GM
MH
MH-A (proposed)
MH-K (proposed)
MH-O (proposed)
MH-T (proposed)
ML
ML-A (proposed)
ML-K (proposed)
ML-O (proposed)
ML-T (proposed)
OH
OH-T (proposed)
OL
PT
SC
SC-SM
SM
SP
SP-SC
SP-SM
SW
SW-SC
SW-SM
Not rated or not available
Soil Rating Points
CH
CL
CL-A (proposed)
CL-K (proposed)
CL-ML
CL-O (proposed)
CL-T (proposed)
GC
GC-GM
GM
GP
GP-GC
GP-GM
GW
GW-GC
GW-GM
MH
MH-A (proposed)
MH-K (proposed)
MH-O (proposed)
MH-T (proposed)
ML
ML-A (proposed)
ML-K (proposed)
ML-O (proposed)
ML-T (proposed)
OH
OH-T (proposed)
OL
PT
SC
SC-SM
SM
SP
SP-SC
SP-SM
SW
SW-SC
SW-SM
Not rated or not available
Water Features
Streams and Canals
Transportation
Rails

MAP INFORMATION


Interstate Highways


US Routes

Major Roads

Local Roads

Background


Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:20,000.

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Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Table—Unified Soil Classification (Surface)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HoB	Houston Black clay, 1 to 3 percent slopes	CH	16.8	28.0%
HpB	Houston Black gravelly clay, 1 to 3 percent slopes	GC	10.4	17.3%
HpC	Houston Black gravelly clay, 3 to 5 percent slopes	GC	18.1	30.2%
Tw	Tinn clay, 0 to 1 percent slopes, frequently flooded	CH	14.8	24.6%
Totals for Area of Interest			**60.1**	**100.0%**

Rating Options—Unified Soil Classification (Surface)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

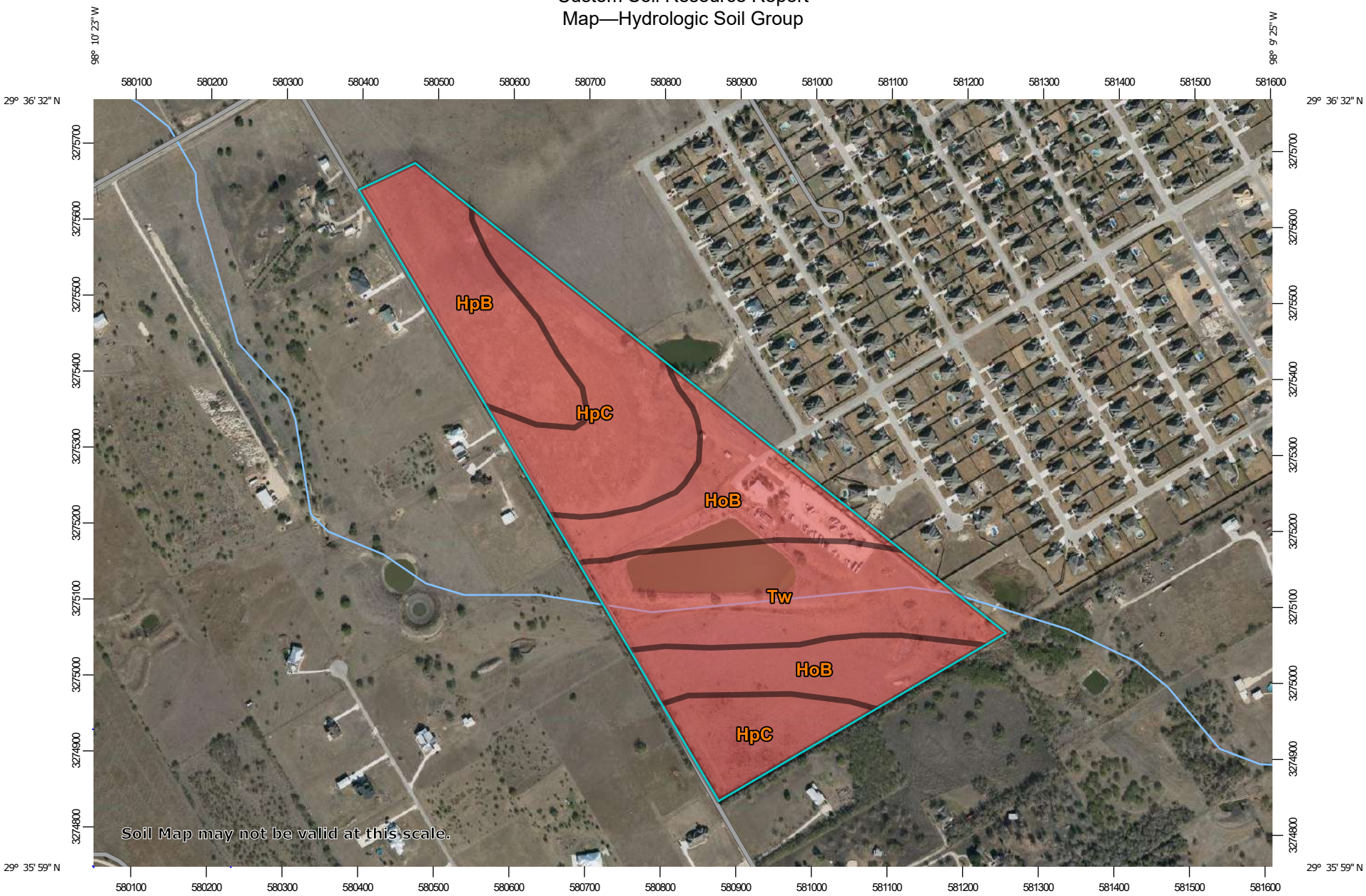
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or

soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.



Map Scale: 1:7,130 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 100 200 400 600

Feet
0 300 600 1200 1800

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HoB	Houston Black clay, 1 to 3 percent slopes	D	16.8	28.0%
HpB	Houston Black gravelly clay, 1 to 3 percent slopes	D	10.4	17.3%
HpC	Houston Black gravelly clay, 3 to 5 percent slopes	D	18.1	30.2%
Tw	Tinn clay, 0 to 1 percent slopes, frequently flooded	D	14.8	24.6%
Totals for Area of Interest			**60.1**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Drainage Class

"Drainage class (natural)" refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized-excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Custom Soil Resource Report
Map—Drainage Class

Map Scale: 1:7,130 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

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

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Soil Rating Lines

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Soil Rating Points

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

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 1:20,000.

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: Guadalupe County, Texas
Survey Area Data: Version 19, 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: Dec 15, 2020—Dec 25, 2020

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.

Table—Drainage Class

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HoB	Houston Black clay, 1 to 3 percent slopes	Moderately well drained	16.8	28.0%
HpB	Houston Black gravelly clay, 1 to 3 percent slopes	Moderately well drained	10.4	17.3%
HpC	Houston Black gravelly clay, 3 to 5 percent slopes	Moderately well drained	18.1	30.2%
Tw	Tinn clay, 0 to 1 percent slopes, frequently flooded	Moderately well drained	14.8	24.6%
Totals for Area of Interest			**60.1**	**100.0%**

Rating Options—Drainage Class

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Water Features

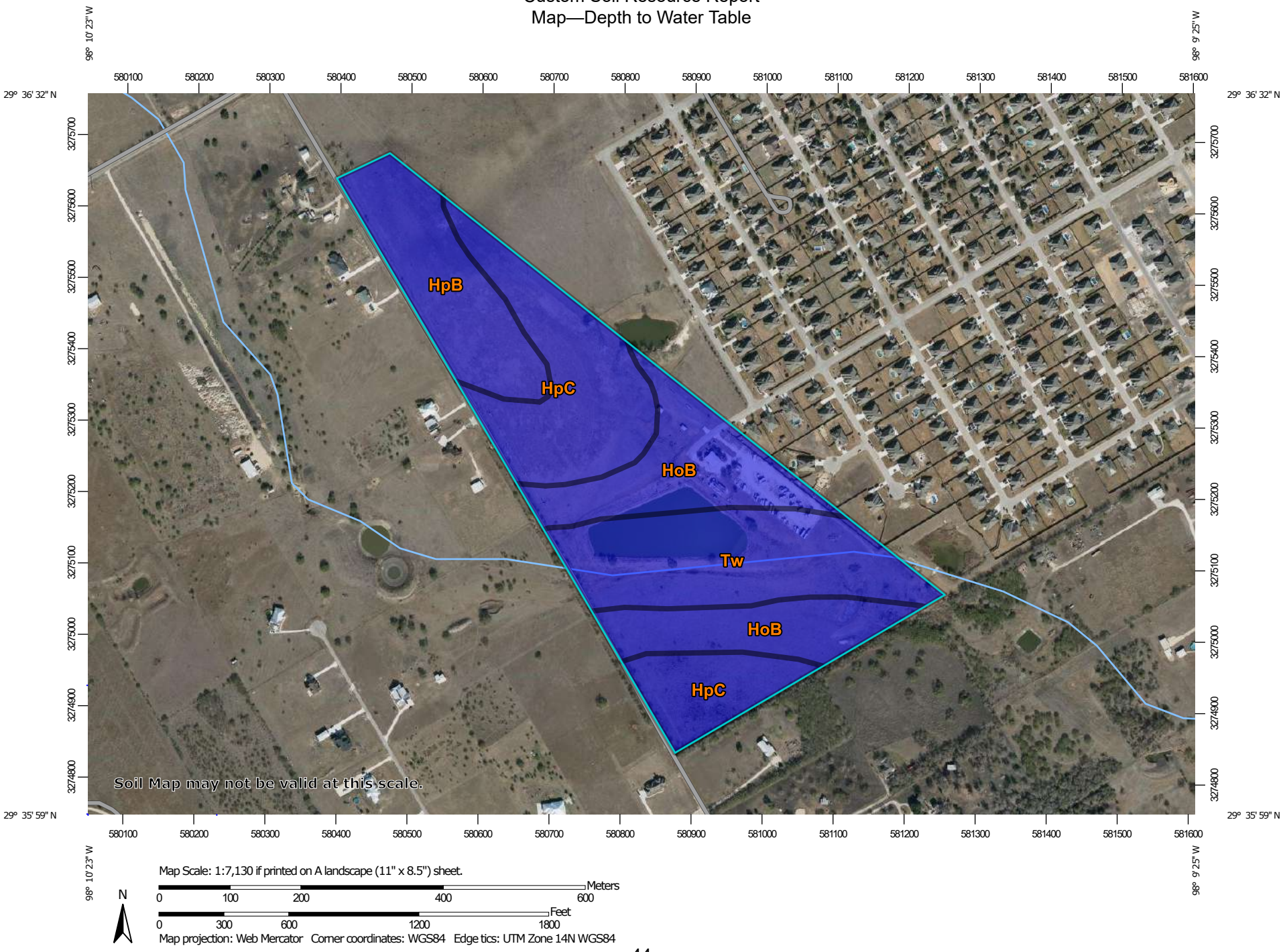
Water Features include ponding frequency, flooding frequency, and depth to water table.

Depth to Water Table

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—Depth to Water Table



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

0 - 25

25 - 50

50 - 100

100 - 150

150 - 200

> 200

Not rated or not available

Soil Rating Lines

0 - 25

25 - 50

50 - 100

100 - 150

150 - 200

> 200

Not rated or not available

Soil Rating Points

0 - 25

25 - 50

50 - 100

100 - 150

150 - 200

> 200

Not rated or not available

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 1:20,000.

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: Guadalupe County, Texas
Survey Area Data: Version 19, 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: Dec 15, 2020—Dec 25, 2020

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.

Table—Depth to Water Table

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
HoB	Houston Black clay, 1 to 3 percent slopes	>200	16.8	28.0%
HpB	Houston Black gravelly clay, 1 to 3 percent slopes	>200	10.4	17.3%
HpC	Houston Black gravelly clay, 3 to 5 percent slopes	>200	18.1	30.2%
Tw	Tinn clay, 0 to 1 percent slopes, frequently flooded	>200	14.8	24.6%
Totals for Area of Interest			**60.1**	**100.0%**

Rating Options—Depth to Water Table

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December

References

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DOMESTIC TECHNICAL REPORT 1.0
ITEM 13a

FEDERAL EMERGENCY MANAGEMENT MAP

480266

ZONE X

GUADALUPE COUNTY
CITY OF SANTA CLARA

WEIL ROAD

CITY OF SANTA CLARA
GUADALUPE COUNTY

MARION ROAD

AY0177

GUADALUPE COUNTY
UNINCORPORATED AREAS
480266

CITY OF SANTA CLARA
GUADALUPE COUNTY

Santa Clara Tributary 9

GUADALUPE COUNTY
UNINCORPORATED AREAS
480266

ZONE AE

678
676
674
672
670
668
666
664
662
660
658
656
654

CREEK ROAD

Santa Clara Creek

ZONE AE

Bridge

WILD CO

UPE COUNTY
ORATED AREAS
80266

PIETZ ROAD

TRAIL DUST LANE

H M RANCH AIRPORT

AY0178

YOUNGSFORD ROAD

CITY OF SANTA CLARA
480013

GUADALUPE COUNTY
CITY OF SANTA CLARA

Santa Clara Tributary 2

N SAN

LANE

MAP SCALE 1" = 1000'
500 0 1000 2000 FEET

FIRM
FLOOD INSURANCE RATE MAP
GUADALUPE COUNTY, TEXAS
AND INCORPORATED AREAS

PANEL 235 OF 480
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
GUADALUPE COUNTY	480266	0235	F
MARION, CITY OF	480268	0235	F
SANTA CLARA, CITY OF	480013	0235	F

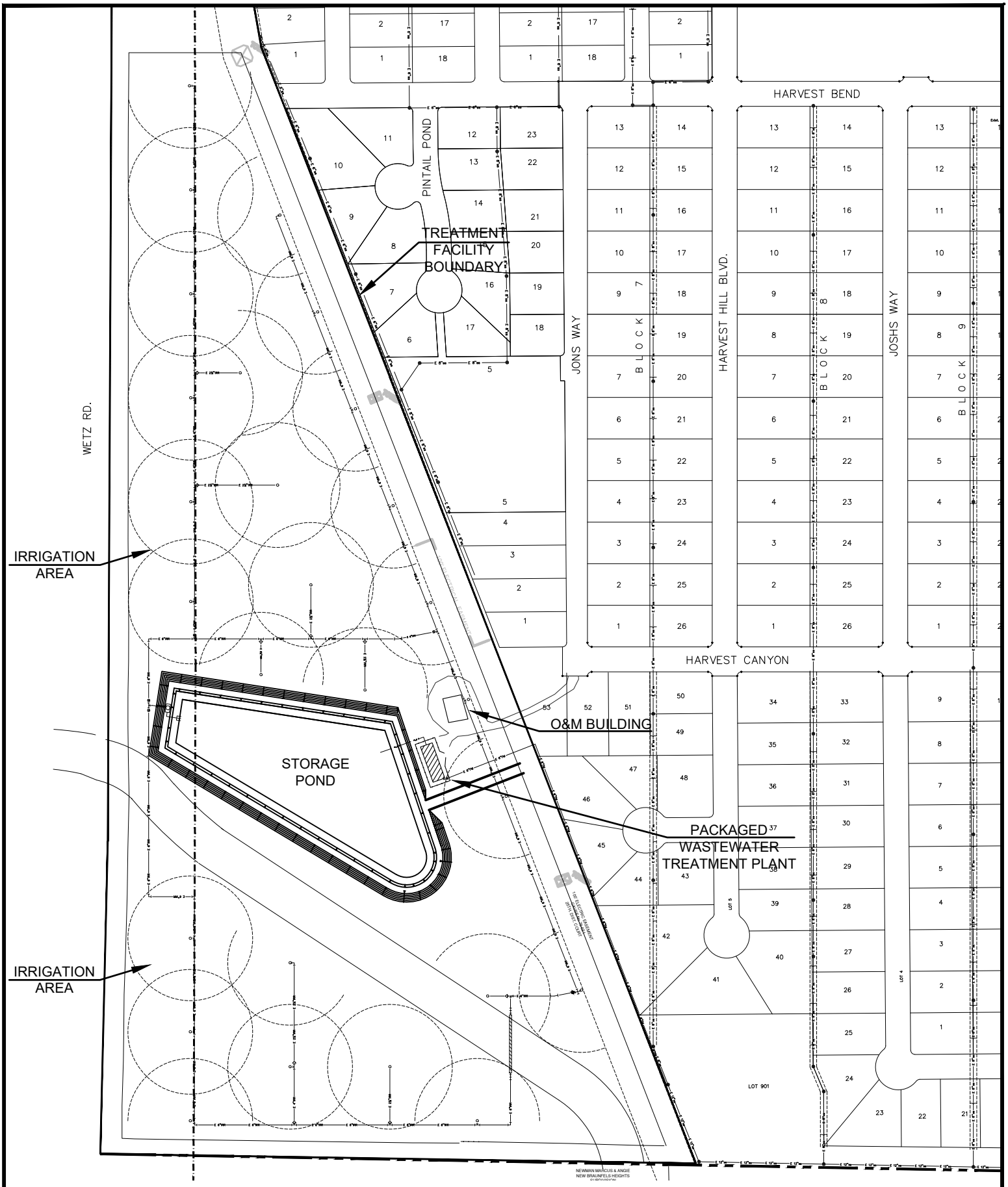
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48187C0235F

EFFECTIVE DATE
NOVEMBER 2, 2007

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



COPE ENGINEERNG, INC.
8611 BOTTS LANE
SAN ANTONIO, TX 78217
(210) 828-7070 OFFICE

TEXAS REG. #F-16078

WWW.COPEENGINEERINGTX.COM

SITE MAP
DOMESTIC TECHNICAL REPORT 1.0
ITEM 13a

HARVEST HILLS TREATMENT, LTD.

GUADALUPE COUNTY, TEXAS

DOMESTIC WORKSHEET 3.0
ITEM 3

POND LINER CERTIFICATION

I, Brian M. Cope, P.E., certify that the existing pond liner clay within the existing storage pond meets the liner requirements of 30 TAC Chapters 217 and 309. The pond liner is 24" thick. A sample from the side wall was taken and analyzed in September 2024. Soil test results indicate that the liner meets the coefficient of permeability with 8.9×10^{-8} cm/s, plasticity index of 46, liquid limit of 66, and percent passing 200 mesh sieve of 68.3%.

(Signature)

10/22/24
(Date)

Integrated Testing and Engineering Company of San Antonio, L.P.
Geotechnical & Environmental Engineering • Construction Services • Geologic Assessment

October 18, 2014

Harvest Hills, LTD
8400 Blanco Road, Suite 204
San Antonio, Texas 78216
Phone: (210) 669-1950
jack@uptmorehomes.com

Attention: **Mr. Jack Uptmore**

Re: Existing Pond Liner
Harvest Hill Subdivision, Phase IV-A
Guadalupe County, Texas

InTEC Project #: S142311-A3

Ladies & Gentlemen:

Integrated Testing and Engineering Company of San Antonio, L.P. (InTEC) completed requested tests on existing pond liner (InTEC Project No. S142311 in December 2014) at the above referenced site.

As requested, InTEC sampled the existing pond liner at the above referenced project iste and performed laboratory tests: Atterberg Limit Tests, percent Minus 200 Sieve test, and permeability test. The test results are presented in Table No. 1.

We appreciate and wish to thank you for the opportunity to be of service to you on this project. If we can be of additional assistance, or if you have any questions, please call us.

Sincerely,
InTEC of San Antonio

STATE OF TEXAS
MURALI SUBRAMANIAM
102417
LICENSED
PROFESSIONAL ENGINEER
InTEC of SAN ANTONIO
F-7623

10/18/2024

Murali Subramaniam, Ph. D., P.E.
Vice President

Table No. 1 Test Results

Laboratory Test	Test Results
Liquid Limit	66
Plasticity Index	46
Percent Minus 200 Sieve	68.3
Hydraulic Conductivity (k)	8.9×10^{-8} cm / sec

The existing pond was fairly full at the time of sampling.
Samples were obtained from the edge of the pond.

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Geotechnical-Engineering Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled*. No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

This Report May Not Be Reliable

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be*, and, in general, *if you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying it. A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed*. The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely*. Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures*. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old.*

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration.*** Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

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DOMESTIC WORKSHEET 3.0
ITEM 5

ANNUAL CROPPING PLAN

The irrigation site is composed of 35 acres used for agricultural pasture land.

The predominant soil on the surface at the irrigation site is Houston Black (HoB). See attached USDA NRCS Soil Map in the attachments of this application.

The predominant cover is Coastal Bermuda grass. It is harvested twice a year with no supplemental watering required. The growing season 8 out of 10 years is about 350 days per year for temperature above 24°F. The nutrient loading (for 30ppm) is 2,100 lbs sprayed over 35 acres.

DOMESTIC WORKSHEET 3.0
ITEM 6

NEARBY WATER WELL DATA

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 68-31-201

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	6831201
County	Guadalupe
River Basin	San Antonio
Groundwater Management Area	10
Regional Water Planning Area	L - South Central Texas
Groundwater Conservation District	Edwards Aquifer Authority
Latitude (decimal degrees)	29.611667
Latitude (degrees minutes seconds)	29° 36' 42" N
Longitude (decimal degrees)	-98.168333
Longitude (degrees minutes seconds)	098° 10' 06" W
Coordinate Source	+/- 1 Second
Aquifer Code	218EDRDA - Edwards and Associated Limestones
Aquifer	Edwards (Balcones Fault Zone)
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	740
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	560
Well Depth Source	Person Other than Owner
Drilling Start Date	
Drilling End Date	0/0/1936
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	Yes
Pump	Piston
Pump Depth (feet below land surface)	
Power Type	Windmill
Annular Seal Method	
Surface Completion	
Owner	Henry Weil
Driller	H. Kneupper
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	U.S. Geological Survey
Created Date	1/16/1997
Last Update Date	1/16/1997

Remarks	

Casing

Diameter (in.)	Casing Type	Casing Material	Schedule	Gauge	Top Depth (ft.)	Bottom Depth (ft.)
6	Blank				0	490
	Open Hole				490	560

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

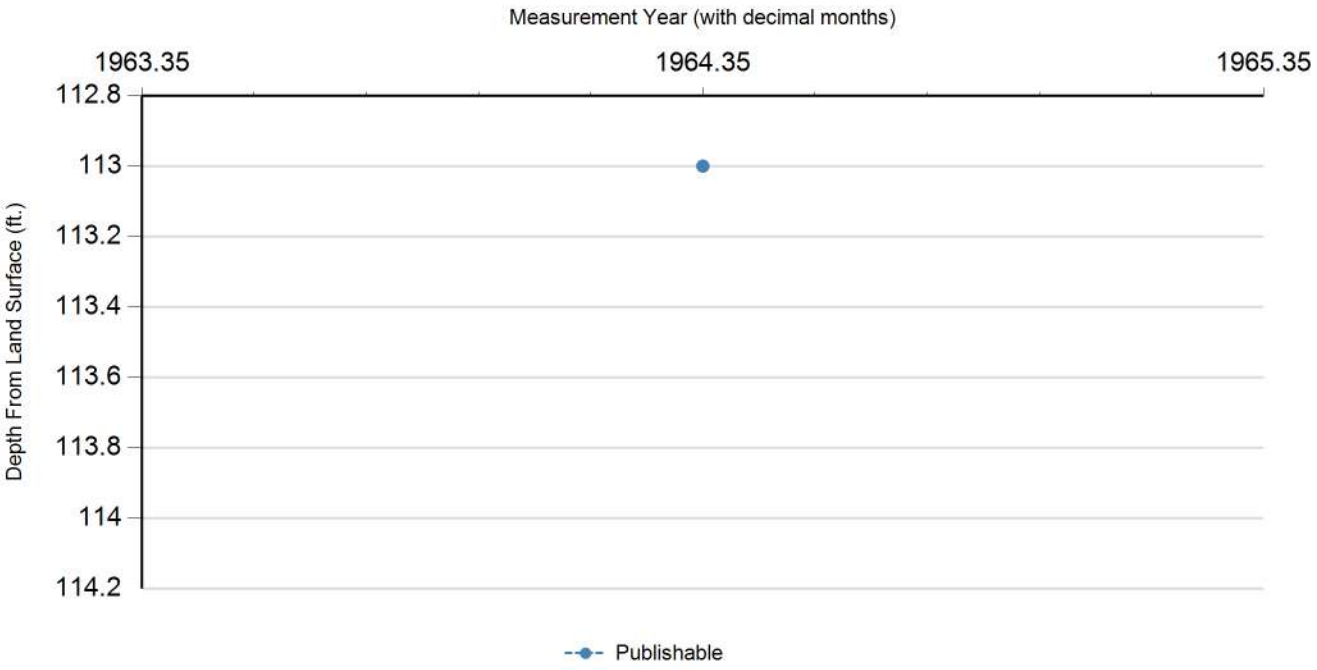
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	5/7/1964		113		627	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis

Sample Date: 9/10/1959 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** U.S. Geological Survey

Sampled Aquifer: Edwards and Associated Limestones

Analyzed Lab: U.S. Geological Survey Lab **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		276.23	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		337.1	mg/L	
00910	CALCIUM (MG/L)		155	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		565	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		2.7	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		740	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		86	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		0	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.1	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		14	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		6.41		
00932	SODIUM, CALCULATED, PERCENT		54	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)	calculated	401	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		2940	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		512	mg/L as SO4	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		1901	mg/L	

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

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

Form GW-1

TEXAS BOARD OF WATER ENGINEERS

GROUND-WATER DIVISION

WELL SCHEDULE

Date 10/12, 1956 Field No. 18

Record by J.A. Office No.

Source of data Owner

1. Location: County Guadalupe

Map 4 NW Marion

Survey Santos de los Coy

2. Owner: Henry Weil Address Rt. 1, Marion

Tenant Address

Driller H. Knauper Address New Braunfels

3. Topography: undulating

4. Elevation: ft. above / below

5. Type: Dug, drilled, driven, bored, jetted 1956

6. Depth: Rept. 560 ft. Meas. ft.

7. Casing: Diam. 6 in., to in., Type Steel

Depth 490 ft., Finish Open hole

8. Chief Aquifer: Edwards From ft. to ft.

Others

9. Water level: 90-100 ft. (rept. / meas.) July 1956 above / below

comm. base which app. 1 ft. above / below surface

10. Pump: Type Cylinder Capacity gpm

Power: Kind Windmill Horsepower

11. Yield: Flow gpm, Pump — gpm, Meas., Rept. Est.

Drawdown — ft. after — hours pumping gpm

12. Use: (Dom.) (Stock) PS., RR., Ind., Obs. Irr.

Adequacy, permanence

13. Quality: Sulphur

Temp. °F Sample Yes / (No)

14. Log: Yes / (No)

15. Remarks: Can't check W.L.

68-31-201

9-185—July 1935
Revised

UNITED STATES KX-6831201
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH COPY

WELL SCHEDULE

Date 10/12, 19 56 Field No. 18
Record by Office No. D-59
Source of data ~~Ver~~ D-38

1. *Location:* State Texas County GUADALUPE
Map 4 NW MARION SANTOS DE LOS COY
¼ ¼ sec. T N/S R E/W
2. *Owner:* HENRY WEIL Address RT. 1, MARION
Tenant Address
Driller H. KNEUPER Address NEW BRAUNFELS
3. *Topography* UNDULATING
4. *Elevation* ft. above/below
5. *Type:* Dug, drilled, driven, bored, jetted 19 36
6. *Depth:* Rept. 560 ft. Meas. ft.
7. *Casing:* Diam. 6 in., to in., Type STEEL
Depth 490 ft., Finish OPEN HOLE
8. *Chief Aquifer* From ft. to ft.
Others W.L. = 114.04 5-7-64 U.S.G.S.
9. *Water level* 90-100 ft. rept./meas. JULY 19 56 above/below
CONCRETE BASE which Ape. 1 ft. above/~~below~~ surface
10. *Pump:* Type C Capacity G. M.
Power: Kind W Horsepower
11. *Yield:* Flow G. M., Pump G. M., Meas., Rept. Est.
Drawdown ft. after hours pumping G. M.
12. *Use:* Dom, Stock, PS., RR., Ind., Irr., Obs
Adequacy, permanence
13. *Quality* SULFUR Temp °F.
Taste, odor, color Sample Yes/No ?
Unfit for
14. *Remarks:* (Log, Analyses, etc.)
CANT CHECK W.L.
* Former Santa Fe Test observation well — [illegible] 5-4-64

USGS-WRD Form GW KY-6831-201

Well No. D-38

ANALYTICAL STATEMENT

COUNTY GUADALUPE

LAB NO. 66557

Location NW of Cibolo

Date of collection September 10, 1959

Source (type of well) drld artesian

Owner Henry Weil

Date drld ____ Depth ____ ft

WBY Edwards Limestone

Producing Intervals ____

Water level ____ ft

Sampled after pumping several hrs

Yield 2 GPM pmp est

Ft of well tap on disch pipe

Appearance rusty settlements

Temp (°F) ____ Use dom, stock

Collector Henry Weil

Chemist D.K. Leifeste

Date completed September 21, 1959

Checked by JR

Date transmitted OCT 1959

Ignition Loss ____

Dissolved Solids:

Calculated (sum) 1900

Residue at 180°C 1990

Tons per acre foot 2.58

Hardness as $CaCO_3$ 740

N.C. hardness 464

% Na 54 SAR 6.4 RSC ____

Specific conductance (micromhos at 25°C) 2940

pH 7.1 Color ____

Data on well in Austin office

KEY PUNCHED

	epm	ppm
SiO_2		14
Fe		
Fe (total)		
Ca	7.73	155
Mg	7.07	86
Na		
K		
	14.80	
Na + K	17.45	401
HCO_3	5.52	337
CO_3	0.00	0
SO_4	10.66	512
Cl	15.93	565
F	.14	2.7
NO_3	.00	0.0
	32.25	

KEY PUNCHED

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 68-31-307

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	6831307
County	Guadalupe
River Basin	San Antonio
Groundwater Management Area	10
Regional Water Planning Area	L - South Central Texas
Groundwater Conservation District	Edwards Aquifer Authority
Latitude (decimal degrees)	29.610278
Latitude (degrees minutes seconds)	29° 36' 37" N
Longitude (decimal degrees)	-98.161667
Longitude (degrees minutes seconds)	098° 09' 42" W
Coordinate Source	+/- 1 Second
Aquifer Code	218EDRDA - Edwards and Associated Limestones
Aquifer	Edwards (Balcones Fault Zone)
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	772
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	655
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	0/0/1962
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Irrigation
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	Harold Tschirhart
Driller	Haskins Drlg
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	U.S. Geological Survey
Created Date	1/16/1997
Last Update Date	1/16/1997

Remarks	Cased to 605 ft. Owner plans to use for irrigation in future.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

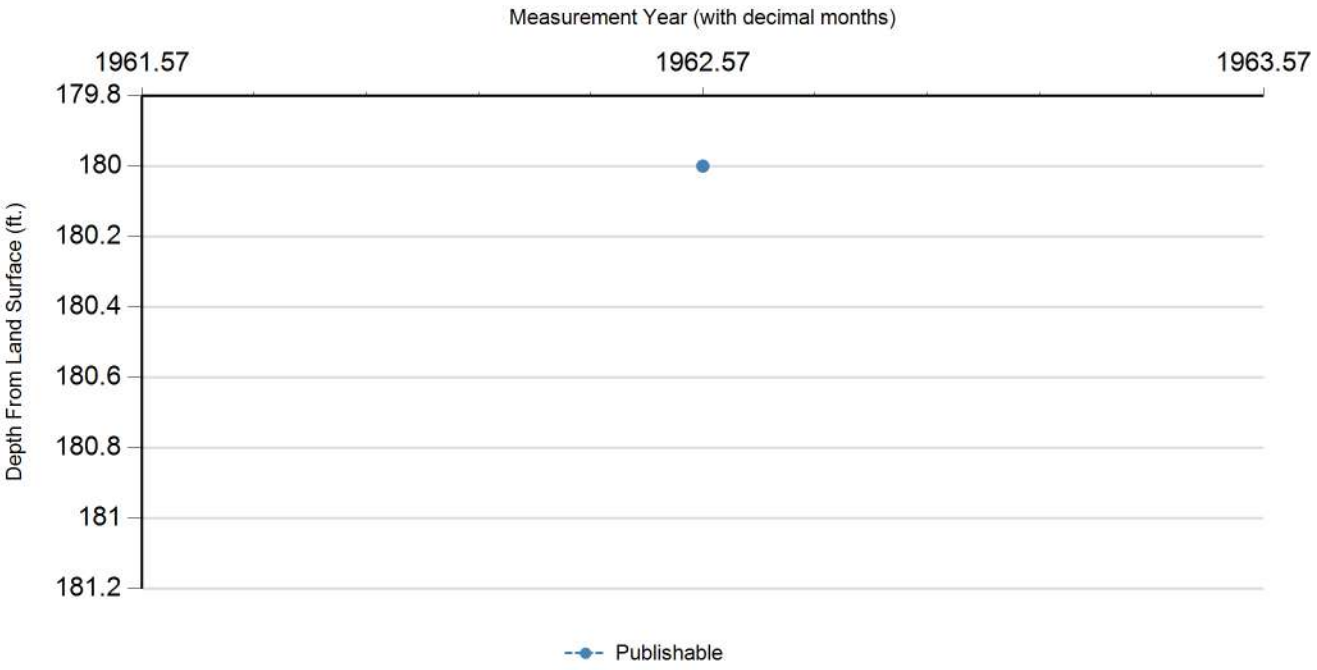
Borehole - No Data

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	6/0/1962		180		592	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/gwdbrpt.asp) is believed to be accurate and reliable; however, the TWDB assumes no responsibility for any errors appearing in rules or otherwise. Further, TWDB assumes no responsibility for the use of the information provided. PLEASE NOTE that users of these data are responsible for checking the accuracy, completeness, currency and/or suitability of all information themselves. TWDB makes no guarantees or warranties as to the accuracy, completeness, currency, or suitability of the information provided via the Groundwater Database (GWDB). TWDB specifically disclaims any and all liability for any claims or damages that may result from providing GWDB data or the information it contains. For additional information or answers to questions concerning the TWDB GWDB, contact the Groundwater Data Team at GroundwaterData@twdb.texas.gov.

9-135—July 193
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

KX-68-307

WELL SCHEDULE

Date 7-10-, 1964 Field No. _____

Record by GHS Office No. _____

Source of data Owner

1. *Location:* State Texas County Guadalupe

Map _____

_____ ¼ _____ ¼ sec. _____ T _____ N S R _____ E W

2. *Owner* Harold Tschirhart Address _____

Tenant _____ Address _____

Driller Hoskins Drlg. Co. Address San Antonio, Tex

3. *Topography* _____

4. *Elevation* 772 ft. above below SC

5. *Type:* Dug drilled driven, bored, jetted 1962

6. *Depth:* Rept. 655 ft. Meas. _____ ft.

7. *Casing:* Diam. 7 in., to _____ in., Type _____

Depth 605 ft., Finish _____

8. *Chief Aquifer* Edwards Ls. From _____ ft. to _____ ft.

Others Cow 1 mess 7-10-64

9. *Water level* 180 ft. rept. meas. June 1962 above below SL

_____ which is _____ ft. above below surface

10. *Pump:* Type Subm Capacity _____ G. M. _____

Power: Kind E Horsepower _____

11. *Yield:* Flow _____ G.M., Pump 15 G.M., Meas., Rept. Est. _____

Drawdown _____ ft. after _____ hours pumping _____ G. M.

12. *Use:* Dom., Stock, PS., RR., Ind., Irr., Obs. Not used at pres.

Adequacy, permanence _____

13. *Quality* Sulphur taste Temp _____ °F.

Taste, odor, color _____ Sample Yes No

Unfit for _____

14. *Remarks:* (Log, Analyses, etc.) Attached

Owner plans to use for small scale irr. in future.

Guadelupe

WELL LOG

Date August 28, 19

HASKIN DRILLING CO.

1114 S. Alamo • CA 2-2721
SAN ANTONIO, TEXAS

Name Harold Tschirhart 68-31-307

Location Marion, Texas

Total Depth 655' Well Capacity 15 G.P.M.

Total Pipe 605' Date Started 8-3-62

Drilling Time Water Level 180'

Date Completed 8-23-62 Kind of Formation

Log

0 - 3	Soil
3 - 12	Gravel
12 - 75	Yellow Shale
75 - 180	Blue Shale
180 - 250	Gray Shale
250 - 325	Blue Shale
325 - 495	Austin Chalk
495 - 553	Eagle Ford Shale
553 - 606	Del Rio
606 - 619	Georgetown
619 - 655	Edwards Lime
655	Subm Pump H.P.
619	
36	

Driller Clark and Crawford

Tool Dresser

Rig No. 45

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 68-31-209

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	6831209
County	Guadalupe
River Basin	San Antonio
Groundwater Management Area	10
Regional Water Planning Area	L - South Central Texas
Groundwater Conservation District	Edwards Aquifer Authority
Latitude (decimal degrees)	29.609723
Latitude (degrees minutes seconds)	29° 36' 35" N
Longitude (decimal degrees)	-98.178889
Longitude (degrees minutes seconds)	098° 10' 44" W
Coordinate Source	+/- 1 Second
Aquifer Code	218EDRDA - Edwards and Associated Limestones
Aquifer	Edwards (Balcones Fault Zone)
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	780
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	430
Well Depth Source	Owner
Drilling Start Date	
Drilling End Date	0/0/1956
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Stock
Water Level Observation	Miscellaneous Measurements
Water Quality Available	No
Pump	Piston
Pump Depth (feet below land surface)	
Power Type	Windmill
Annular Seal Method	
Surface Completion	
Owner	E.H. Menking
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	U.S. Geological Survey
Created Date	1/16/1997
Last Update Date	1/16/1997

Remarks	

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

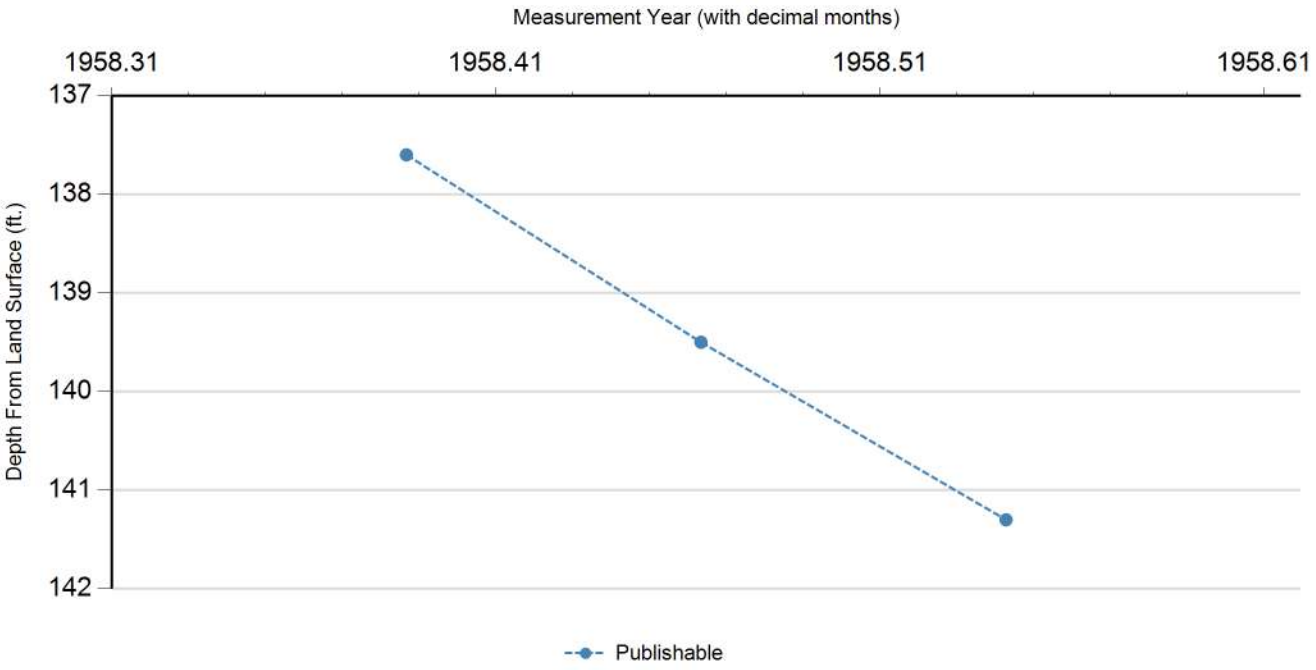
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	5/21/1958		137.6		642.4	1	Other or Source of Measurement Unknown	Unknown		
P	6/19/1958		139.5	1.90	640.5	1	Other or Source of Measurement Unknown	Unknown		
P	7/18/1958		141.3	1.80	638.7	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis - No Data Available

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Form GW-1

TEXAS BOARD OF WATER ENGINEERS

GROUND-WATER DIVISION

WELL SCHEDULE

Date 10/12, 1956 Field No. 24*

Record by J.A. Office No.

Source of data Mrs. Mankins

1. Location: County Guadalupe

Map 4 N Marion

Survey

2. Owner: E.H. Menking Address

Tenant Address

Driller Address

3. Topography:

4. Elevation: ft. above / below

5. Type: Dug, drilled, driven, bored, jetted 1956

6. Depth: Rept. 430 ft. Meas. ft.

7. Casing: Diam. 5 in., to in., Type

Depth 380 ft., Finish

8. Chief Aquifer: Edwards From ft. to ft.

Others

9. Water level: 180 ft. (top) meas. May 1956 above / below

Top Iron W.P.C. which is 0.8 ft. above / below surface

10. Pump: Type Cylinder Capacity gpm

Power: Kind Windmill Horsepower

11. Yield: Flow gpm, Pump — gpm, Meas., Rept., Est.

Drawdown ft. after hours pumping gpm

12. Use: Dom., (Stock), PS., RR., Ind., Obs. Irr.

Adequacy, permanence

13. Quality: Some sulphur

Temp. °F Sample Yes / (No)

14. Log: Yes / (No)

15. Remarks: Pumping all morning

68-31-209

Form GW-1

TEXAS BOARD OF WATER ENGINEERS

GROUND-WATER DIVISION

KY-683120 7 *

WELL SCHEDULE

10/13, 1956 Field No. 24

Record by J.A. Office No. D-58

Source of data Mrs. Meaking D-37

1. Location: County Guadalupe

Map 4 N Marion

Survey

Owner [illegible]ing Address

Tenant Address

Driller Address

Topography:

Elevation ft. above / below

Dug, drilled, driven, bored, jetted 1956

Depth: Rept. 430 ft. Meas. ft.

Casing: Diam. 5 in., to in., Type

Depth 500 ft., Finish

Chief Aquifer: Edwards From ft. to ft.

Others — See W.L. Sheet obs well file

Water level: 180 ft. Day 1956 above / below

from W.P.C. which is 0.8 ft. above / below surface

Pump: Type Cylinder Capacity gpm

Power: Kind Windmill Horsepower

Yield: Flow gpm, Pump — gpm, Meas., Rept. Est.

Drawdown ft. after hours pumping gpm

Use: Dom. (Stock) PS., RR., Ind., Obs. Irr.

Adequacy, permanence

Quality: Some sulphur

Temp. °F Sample Yes (No)

Log: Yes (No)

Remarks: Pumping all morning

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 68-31-202

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	6831202
County	Guadalupe
River Basin	San Antonio
Groundwater Management Area	10
Regional Water Planning Area	L - South Central Texas
Groundwater Conservation District	Edwards Aquifer Authority
Latitude (decimal degrees)	29.602223
Latitude (degrees minutes seconds)	29° 36' 08" N
Longitude (decimal degrees)	-98.178611
Longitude (degrees minutes seconds)	098° 10' 43" W
Coordinate Source	+/- 5 Seconds
Aquifer Code	211ASTN - Austin Chalk
Aquifer	Other
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	740
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	165
Well Depth Source	Owner
Drilling Start Date	
Drilling End Date	0/0/1912
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	Yes
Pump	Piston
Pump Depth (feet below land surface)	
Power Type	Windmill
Annular Seal Method	
Surface Completion	
Owner	Car Kosseth
Driller	Otto Eberling
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	U.S. Geological Survey
Created Date	1/16/1997
Last Update Date	1/16/1997

Remarks	Cased to 47 ft.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

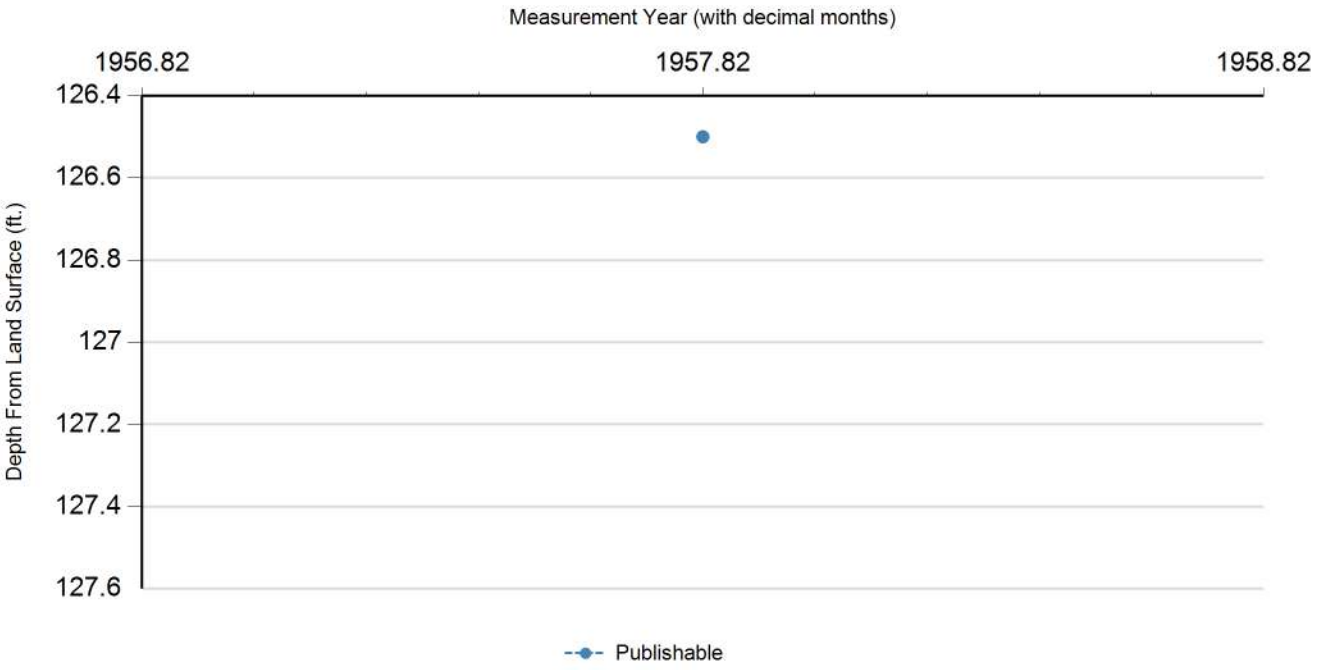
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	10/29/1957		126.5		613.5	1	U.S. Geological Survey	Steel Tape		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis

Sample Date: 12/18/1957 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Private Firm or Industry

Sampled Aquifer: Austin Chalk

Analyzed Lab: U.S. Geological Survey Lab **Reliability:** From well not sufficiently pumped; not filtered or preserved

Collection Remarks: owner collected

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		264.68	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		323	mg/L	
00910	CALCIUM (MG/L)		152	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		88	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		448	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		17	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		9	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.6	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		23	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		1.4		
00932	SODIUM, CALCULATED, PERCENT		24	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)	calculated	68	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1120	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		192	mg/L as SO4	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		707	mg/L	

Water Quality Analysis

Sample Date: 12/2/1959 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** U.S. Geological Survey

Sampled Aquifer: Austin Chalk

Analyzed Lab: U.S. Geological Survey Lab **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		324.59	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		396.11	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		106	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		490	mg/L as CACO3	
00400	PH (STANDARD UNITS), FIELD		7	SU	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1120	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		170	mg/L as SO4	

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

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9-185—July 1935
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH KX-683!202

WELL SCHEDULE

Date 10-29, 1957 Field No. 283
Record by IVK Office No. B-33
Source of data OWNER D-70 D-60

1. *Location:* State TEX. County GUADALUPE
Map 4 MI. N. of MARION
¼ ¼ sec. T N/S R E/W
2. *Owner:* CARL KOSSAGTH Address MARION R. R.
Tenant " " Address " "
Driller OTTO EBERLING Address " "
3. *Topography*
4. *Elevation* ft. above/below
5. *Type:* Dug, drilled, driven, bored, jetted 1912
6. *Depth:* Rept. 165 ft. Meas. ft.
7. *Casing:* Diam. 6 in., to in., Type
Depth 47* ft., Finish
8. *Chief Aquifer* AUSTIN From ft. to ft.
Others
9. *Water level* 127.02 ft. rept./meas. 10-29 1957 above/below
W. P. C. which is 0.5 ft. above/below surface
10. *Pump:* Type Cyl Capacity G. M.
Power: Kind Wind Horsepower
11. *Yield:* Flow G. M., Pump G. M., Meas., Rept. Est.
Drawdown ft. after hours pumping G. M.
12. *Use:* Dom, Stock, PS., RR., Ind., Irr., Obs.
Adequacy, permanence reported best water in area
13. *Quality* Temp °F.
Taste, odor, color good, Sample Yes/No
Unfit for
14. *Remarks:* (Log, Analyses, etc.) Never failed
*2 joints in middle of well (PROB. NAVARRO CASED OFF)
& 7' of surface casing (over)

USGS-WRD Form GW KX-68-31-207

Well No. D-40

ANALYTICAL STATEMENT

COUNTY GUADALUPE

LAB NO. 67356

Location 4 mi NE of Cibolo, Texas

Source (type of well) drilled

Owner Henry Weil

Date drld 1912 Depth 165 ft

WBF Austin

Producing intervals

Water level ft

Sampled after pumping several hours

Yield GPM

Pt of coll. at windmill

Appearance clear

Temp (°F) 73 Use dom, stock

Collector W M Jarrell

Chemist Wanda Jones

Date completed December 16, 1959

Checked by JFB

Date transmitted FEB 2 1960

Date of collection December 2, 1959

Ignition Loss

Dissolved Solids:

Calculated (sum)

Residue at 180°C

Tons per acre foot

Hardness as $CaCO_3$ 490

N.C. hardness 166

% Na BAR RSC

Specific conductance (micromhos at 25°C) 1,190

pH 7.0 Color

resample program

KEY PUNCHED

	ppm	ppm
SiO_2		
Fe		
Fe (total)		
Ca		
Mg		
Na		
K		
Na+K		
HCO_3		396
CO_3		0
SO_4		170
Cl		106
F		
NO_3		

KEY PUNCHED

USGS-WRB Form 9-331 No. 283 KX-68-31-202

ANALYTICAL STATEMENT

COUNTY GUADALUPE

LAB NO. 61430

Location 4 mi N Marion

Henry Well

Source (type of well) [illegible]

Owner Carl Kossaeth

Date drld 1912 Cased to 47 ft

Depth 165 Diam 6

USF Austin

Water level ft

Sampled after pumping 12 hrs

Yield 1-4 GPM (meas or est)

Ft of coll

Appearance

Temp (°F) Use dom, stock

Collector owner

Chemist H. B. Mendieta

Date completed Mar. 25, 1958

Checked by BN

Date transmitted APR 2 1958

Date of collection Dec. 18, 1957

Ignition Loss Color

Dissolved Solids:

Residue at 180°C 729

Calculated (Dom) 708

Tons per Acre Foot 0.99

Hardness as $CaCO_3$ 449

Non-carbonate Hardness 184

% Na 25 SAR 1.4 pH 7.6

Specific Conductance

(Micromhos at 25°C) 1,120

KEY PUNCHED

	epm	ppm
SiO_2		23
Fe		
Ca	7.58	152
Mg	1.40	17
Na		
K		
	8.98	
Na+K	2.94	68
HCO_3	5.29	323
CO_3	.00	0
SO_4	4.00	192
Cl	2.48	88
F		
NO_3	.15	9.0
	11.92	

KEY PUNCHED

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 68-31-210

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	6831210
County	Guadalupe
River Basin	San Antonio
Groundwater Management Area	10
Regional Water Planning Area	L - South Central Texas
Groundwater Conservation District	Edwards Aquifer Authority
Latitude (decimal degrees)	29.595556
Latitude (degrees minutes seconds)	29° 35' 44" N
Longitude (decimal degrees)	-98.176944
Longitude (degrees minutes seconds)	098° 10' 37" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	218EDRDA - Edwards and Associated Limestones
Aquifer	Edwards (Balcones Fault Zone)
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	715
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	293
Well Depth Source	Owner
Drilling Start Date	
Drilling End Date	0/0/1956
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	No
Pump	Piston
Pump Depth (feet below land surface)	
Power Type	Gasoline Engine
Annular Seal Method	
Surface Completion	
Owner	George Eberling
Driller	T E Owen
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	U.S. Geological Survey
Created Date	1/16/1997
Last Update Date	1/16/1997

Remarks	

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

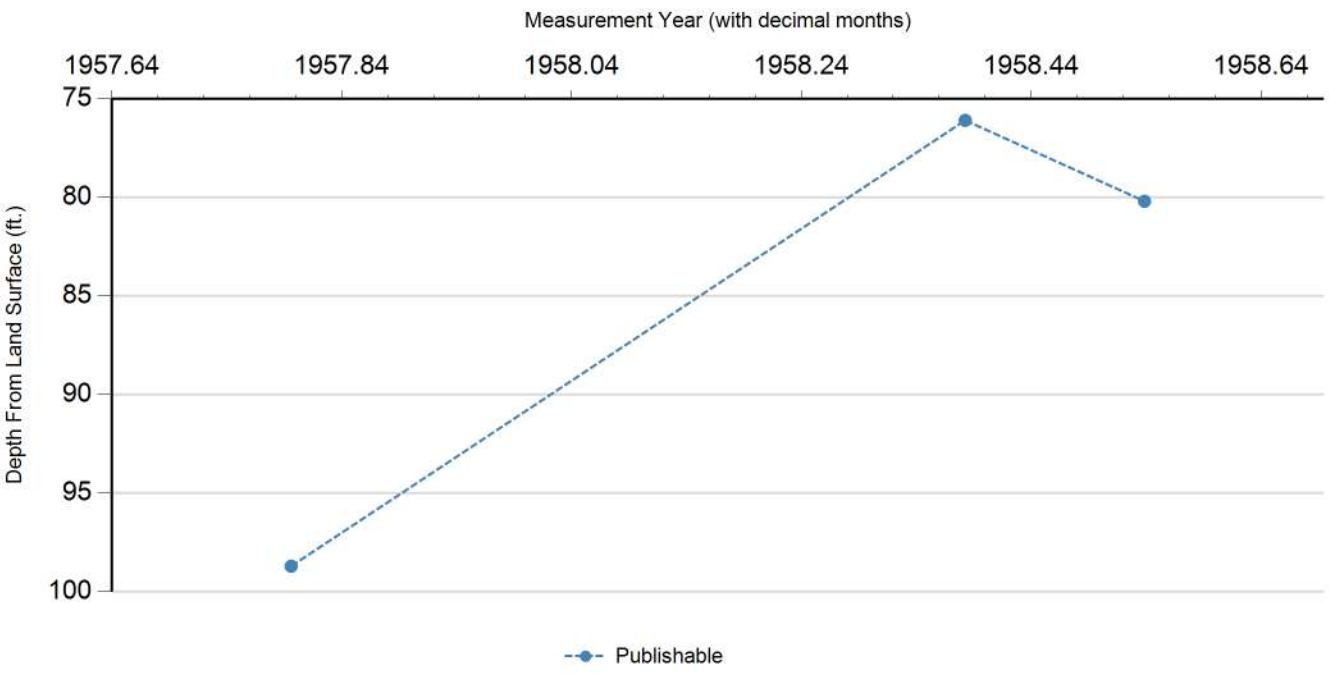
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	10/22/1957		98.7		616.3	1	U.S. Geological Survey	Steel Tape		
P	5/21/1958		76.1	(22.60)	638.9	1	U.S. Geological Survey	Steel Tape		
P	7/18/1958		80.2	4.10	634.8	1	U.S. Geological Survey	Steel Tape		

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

9-185—July 1935
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH KX-6831210

WELL SCHEDULE

Date 10-22, 1957 Field No. 287

Record by ? U K Office No. D-61?

Source of data OWNER D-41

1. *Location:* State TEXAS County GUADALUPE
   Map
   ¼ ¼ sec. T N/S R E/W
2. *Owner:* GEORGE EBERLING Address CIBOLO R. R.
   Tenant " " Address " "
   Driller I. E. OWEN Address DECEASED
3. *Topography*
4. *Elevation* ft. above/below
5. *Type:* Dug, (drilled), driven, bored, jetted 1956
6. *Depth:* Rept. 293 ft. Meas. ft.
7. *Casing:* Diam. 6 in., to in., Type (OWNER SAYS)
   Depth 62 ft., Finish
8. ⁺ *Chief Aquifer* EDWARDS ⁺ From 280± ft. to 293 ft.
   Others 109 ft rep't when drilled → See W.L.
9. *Water level* *99.19 ft. rept. (meas.) 10-22 1957 above/below shot
   W. P. C. which is 0.5 ft. (above)/below surface
10. *Pump:* Type JACK Capacity ** G. M. W/L
    Power: Kind GASOLINE, TRACTOR Horsepower
11. *Yield:* Flow G. M., Pump G. M., Meas., Rept. Est.
    Drawdown ft. after hours pumping G. M.
12. *Use:* (Dom), (Stock), PS., RR., Ind., Irr., Obs.
    Adequacy, permanence
13. *Quality*
    Temp °F.
    (Taste), odor, color good Sample Yes/No
    Unfit for
14. *Remarks:* (Log, Analyses, etc.) * HEAVY OIL MARK
    Broke suction after 3 hours pumping
    10 gal/min

+ AUSTIN ? ** WHEN ACTUALLY USED

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB)
Well Water Quality Report
Sampled Year: All
County: Guadalupe
Aquifer: Carrizo-Wilcox, Edwards (Balcones Fault Zone), Trinity, Other
Water Quality Parameter: All Available Selected

groundwater division

State Well Number	Coordinates	Aquifer	Aquifer Code	Well Depth (ft. below land surface)	Date	Time	Sample #	Entity Id	Lab Id	Reliability Id	Collection Remarks	Parameter Code	Parameter Description	Flag	Value	Unit	Plus/ Minus
6831104	29° 35' 47" N 098° 13' 37" W	Edwards (Balcones Fault Zone)	218EDRDA	470	12/18/1958	0000	1	3	2	3	Analysis Balanced.	00945	SULFATE, TOTAL (MG/L AS SO4)		467	mg/L as SO4	
												00010	TEMPERATURE, WATER (CELSIUS)		23	C	
												70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		1752	mg/L	
6831201	29° 36' 42" N 098° 10' 06" W	Edwards (Balcones Fault Zone)	218EDRDA	560	9/10/1959	0000	1	3	2	3	Analysis Balanced.	00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
												00410	ALKALINITY, TOTAL (MG/L AS CACO3)		276.23	mg/L as CACO3	
												00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		337.1	mg/L	
												00910	CALCIUM (MG/L)		155	mg/L	
												00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
												00940	CHLORIDE, TOTAL (MG/L AS CL)		565	mg/L	
												00950	FLUORIDE, DISSOLVED (MG/L AS F)		2.7	mg/L	
												00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		740	mg/L as CACO3	
												00920	MAGNESIUM (MG/L)		86	mg/L	
												71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		0	mg/L as NO3	
												00400	PH (STANDARD UNITS), FIELD		7.1	SU	
												71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
												00955	SILICA, DISSOLVED (MG/L AS SI02)		14	mg/L as SIO2	
												00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		6.41		

State Well Number	Coordinates	Aquifer	Aquifer Code	Well Depth (ft. below land surface)	Date	Time	Sample #	Entity Id	Lab Id	Reliability Id	Collection Remarks	Parameter Code	Parameter Description	Flag	Value	Unit	Plus/ Minus
6831201	29° 36' 42" N 098° 10' 06" W	Edwards (Balcones Fault Zone)	218EDRDA	560	9/10/1959	0000	1	3	2	3	Analysis Balanced.	00932	SODIUM, CALCULATED, PERCENT		54	PCT	
												00929	SODIUM, TOTAL (MG/L AS NA)	calculated	401	mg/L	
												00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		2940	MICR	
												00945	SULFATE, TOTAL (MG/L AS SO4)		512	mg/L as SO4	
												70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		1901	mg/L	
6831202	29° 36' 08" N 098° 10' 43" W	Other	211ASTN	165	12/18/1957	0000	1	11	2	2	Analysis Balanced. owner collected	00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
												00410	ALKALINITY, TOTAL (MG/L AS CACO3)		264.68	mg/L as CACO3	
												00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		323	mg/L	
												00910	CALCIUM (MG/L)		152	mg/L	
												00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
												00940	CHLORIDE, TOTAL (MG/L AS CL)		88	mg/L	
												00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		448	mg/L as CACO3	
												00920	MAGNESIUM (MG/L)		17	mg/L	
												71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		9	mg/L as NO3	
												00400	PH (STANDARD UNITS), FIELD		7.6	SU	
												71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		

State Well Number	Coordinates	Aquifer	Aquifer Code	Well Depth (ft. below land surface)	Date	Time	Sample #	Entity Id	Lab Id	Reliability Id	Collection Remarks	Parameter Code	Parameter Description	Flag	Value	Unit	Plus/ Minus
6831202	29° 36' 08" N 098° 10' 43" W	Other	211ASTN	165	12/18/1957	0000	1	11	2	2	Analysis Balanced. owner collected	00955	SILICA, DISSOLVED (MG/L AS SI02)		23	mg/L as SIO2	
												00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		1.4		
												00932	SODIUM, CALCULATED, PERCENT		24	PCT	
												00929	SODIUM, TOTAL (MG/L AS NA)	calculated	68	mg/L	
												00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1120	MICR	
												00945	SULFATE, TOTAL (MG/L AS SO4)		192	mg/L as SO4	
												70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		707	mg/L	
6831202	29° 36' 08" N 098° 10' 43" W	Other	211ASTN	165	12/2/1959	0000	1	3	2	3	Analysis Unbalanced .	00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
												00410	ALKALINITY, TOTAL (MG/L AS CACO3)		324.59	mg/L as CACO3	
												00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		396.11	mg/L	
												00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
												00940	CHLORIDE, TOTAL (MG/L AS CL)		106	mg/L	
												00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		490	mg/L as CACO3	
												00400	PH (STANDARD UNITS), FIELD		7	SU	
												00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1120	MICR	
												00945	SULFATE, TOTAL (MG/L AS SO4)		170	mg/L as SO4	

Texas Water Development Board (TWDB) Groundwater Database (GWDB)
Record of Wells Report
County: Guadalupe
Aquifer: Carrizo-Wilcox, Edwards (Balcones Fault Zone), Trinity, Carrizo-Wilcox/Other, Trinity/Other, Other, Unassigned
Number of Wells: 664

State Well Number	Coordinates	Aquifer	Aquifer Code	Owner	Well Type Code	Drilling End Date	Well Depth (ft. below land surface)	Casing Intervals Cas ID	Dia (in.)	Top (ft.)	Bot (ft.)	Land Surface Elevation (ft. above sea level)	Water Levels - Number of Meas - Period of Record - Min & Max Meas (ft.)	Water Quality Analyses	Pump	Well Use	Remarks
6831107	29° 36' 47" N 098° 13' 51" W	Other	211ASTN	Oscar Orth	W		122					860	1 Measurement 1957 107.3	No	Piston	Stock	Old well. Reported water of poor quality.
6831108	29° 35' 06" N 098° 13' 01" W	Edwards (Balcones Fault Zone)	218EDRDA	Arthur Zieschang	W	0/0/1923	600					770	1 Measurement 1956 157.6	No	Piston	Domestic	Reported slight sulphur odor.
6831109	29° 36' 54" N 098° 13' 40" W	Other	211ASTN	Oscar Orth	W	0/0/1956	240					830	1 Measurement 1957 73.7	No	Piston	Stock	Reported to irrigate garden.
6831110	29° 36' 27" N 098° 12' 59" W	Other	100ALVM	H.W. Pfeil	W	0/0/1934	40					865	1 Measurement 1957 5.7	No	Piston	Domestic	Reported dry during 1950-56 drought but recovered after rains of 1957.
6831111	29° 35' 29" N 098° 12' 38" W	Edwards (Balcones Fault Zone)	218EDRDA	H.A. Land	W	0/0/1956	448					825	1 Measurement 1956 190	No	Centrifugal Pump	Domestic	Reported water treated before used for drinking. Slight sulphur odor.
6831112	29° 35' 25" N 098° 13' 59" W	Other	100ALVM	Olen H. Krueger	W		45					765		No	Piston	Domestic	Dug well. Reported water in gravel .
6831113	29° 36' 24" N 098° 13' 42" W	Edwards (Balcones Fault Zone)	218EDRDA	Dean	W		689					800		No	None	Unused	Reported slight sulphur odor. Cased to 387 ft.
6831114	29° 35' 44" N 098° 14' 07" W	Edwards (Balcones Fault Zone)	218EDRDA	Ernest Schlather	W	0/0/1914	400					760	1 Measurement 1956 50	No	None	Unused	Formerly supplied water for domestic use.
6831201	29° 36' 42" N 098° 10' 06" W	Edwards (Balcones Fault Zone)	218EDRDA	Henry Weil	W	0/0/1936	560	10 101	6	0 490	490 560	740	1 Measurement 1964 113	Yes	Piston	Domestic	
6831202	29° 36' 08" N 098° 10' 43" W	Other	211ASTN	Car Kosseth	W	0/0/1912	165					740	1 Measurement 1957 126.5	Yes	Piston	Domestic	Cased to 47 ft.
6831204	29° 35' 22" N 098° 12' 28" W	Edwards (Balcones Fault Zone)	218EDRDA	W.C. Strub	W	1/0/1956	434					785	1 Measurement 1957 122.9	Yes	Piston	Stock	

State Well Number	Coordinates	Aquifer	Aquifer Code	Owner	Well Type Code	Drilling End Date	Well Depth (ft. below land surface)	Casing Intervals Cas ID	Dia (in.)	Top (ft.)	Bot (ft.)	Land Surface Elevation (ft. above sea level)	Water Levels - Number of Meas - Period of Record - Min & Max Meas (ft.)	Water Quality Analyses	Pump	Well Use	Remarks
6831205	29° 37' 10" N 098° 10' 55" W	Unassigned	NOT-APPL	Ray Brinks	P	0/0/1946	2580					798		No			Oil test.
6831206	29° 36' 46" N 098° 11' 26" W	Unassigned	NOT-APPL	Mrs. Minnie Keudel	P	0/0/1935	1935					807		No			Oil test. Well 460 in Guadalupe County report, 1937.
6831207	29° 36' 21" N 098° 10' 06" W	Unassigned	NOT-APPL	Otto Voges	P	0/0/1930	687					727		No			Oil test.
6831209	29° 36' 35" N 098° 10' 44" W	Edwards (Balcones Fault Zone)	218EDRDA	E.H. Menking	W	0/0/1956	430					780	3 Measurements 1958 to 1958 MIN 137.6 MAX 141.3	No	Piston	Stock	
6831210	29° 35' 44" N 098° 10' 37" W	Edwards (Balcones Fault Zone)	218EDRDA	George Eberling	W	0/0/1956	293					715	3 Measurements 1957 to 1958 MIN 98.7 MAX 80.2	No	Piston	Domestic	
6831211	29° 35' 28" N 098° 11' 52" W	Edwards (Balcones Fault Zone)	218EDRD	Robert Weyel	W	0/0/1900	442					750		No	Piston	Domestic	Reported sulphur water.
6831212	29° 36' 51" N 098° 10' 51" W	Unassigned	NOT-APPL	R.H. Sanders	P	0/0/1961	2499					770		No			Owner Well Number: R H SANDERS 1. Oil test.
6831301	29° 35' 34" N 098° 08' 15" W	Other	112LEON	Walter Stolte	W	0/0/1924	18					650	1 Measurement 1957 13.4	Yes	Piston	Domestic	Reported weakened during 1950-56 drought. Dug well.
6831302	29° 37' 16" N 098° 08' 06" W	Other	211NVRR	Louis Kurre	W	0/0/1938	540					678		No			Oil test.
6831303	29° 36' 48" N 098° 08' 39" W	Other	100ALVM	A.F. Tasto	W	7/0/1956	14					660	1 Measurement 1957 10	No	Bucket	Domestic	Reported water in gravel, weak supply. Dug well.
6831304	29° 36' 18" N 098° 08' 25" W	Other	100ALVM	Randolph Wohlfahrt	W	0/0/1925	16					665		No	Piston	Stock	Dug well. Reported water in gravel
6831306	29° 35' 31" N 098° 09' 41" W	Other	211NVRR	A.V. Cale	W	0/0/1954	650					700		No			Oil test.

Texas Water Development Board (TWDB) Groundwater Database (GWDB)
Record of Wells Report
County: Guadalupe
Aquifer: Carrizo-Wilcox, Edwards (Balcones Fault Zone), Trinity, Carrizo-Wilcox/Other, Trinity/Other, Other, Unassigned
Number of Wells: 664

State Well Number	Coordinates	Aquifer	Aquifer Code	Owner	Well Type Code	Drilling End Date	Well Depth (ft. below land surface)	Casing Intervals				Land Surface Elevation (ft. above sea level)	Water Levels - Number of Meas - Period of Record - Min & Max Meas (ft.)	Water Quality Analyses	Pump	Well Use	Remarks
								Cas ID	Dia (in.)	Top (ft.)	Bot (ft.)						
6831307 Plugged	29° 36' 37" N 098° 09' 42" W	Edwards (Balcones Fault Zone)	218EDRDA	Harold Tschirhart	W	0/0/1962	655					772	1 Measurement 1962 180	No	Submersible	Irrigation	Cased to 605 ft. Owner plans to use for irrigation in future.
6831401	29° 33' 45" N 098° 13' 33" W	Edwards (Balcones Fault Zone)	218EDRDA	City of Cibolo	W	10/0/1950	602	10 101	8	0 436	436 602	705	1 Measurement 1950 51	Yes	Turbine	Unused	Owner Well Number: D-56. Reported discharge 160 gpm in 1951. Formerly supplied water to Cibolo.
6831402	29° 33' 15" N 098° 13' 02" W	Other	110AVML	Herb Schraub	W	0/0/1920	35					692		Yes	Piston	Stock	Dug well. Cased to bottom.
6831403	29° 34' 24" N 098° 13' 47" W	Edwards (Balcones Fault Zone)	218EBFZA	SAWS Tri-County Well #2	O	10/13/1999	1050	10 10 101	10 6 6	0 0 486	30 486 1050	706	236 Measurements 1999 to 2014 MIN 57 MAX 72.33	Yes	None	Unused	Owner Well Number: Tri-County Well #2. USGS Site Number: 293424098134701. Owner's Tri-County Well #2. Recorder observation well.
6831501	29° 34' 51" N 098° 12' 22" W	Edwards (Balcones Fault Zone)	218EDRDA	Henry Tolle	W	2/0/1955	430	10 101	5	0 385	385 430	710	2 Measurements 1957 to 1957 MIN 83.6 MAX 76.5	Yes	Submersible	Domestic	Owner Well Number: D-72 281. Reported yield 15 gpm.
6831502	29° 34' 39" N 098° 11' 52" W	Edwards (Balcones Fault Zone)	218EDRDA	Edmond Sassman	W		623					710		Yes	Piston	Domestic	Cased to 618 ft.

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB)
Well Water Levels Report
County: Guadalupe
Aquifer: Carrizo-Wilcox, Edwards (Balcones Fault Zone), Trinity, Carrizo-Wilcox/Other, Trinity/Other, Other, Unassigned
Observation Type: GCD Current Site Visit, Historical, Miscellaneous Measurements, TWDB Current Site Visit, TWDB Water Data for Texas, USGS Current Site Visit

groundwater division

State Well Number	Coordinates	Aquifer	Aquifer Code	Obs Code	Well Depth (ft. below land surface)	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
6830610	29° 34' 04.84" N 098° 17' 12.19" W	Edwards (Balcones Fault Zone)	218EDRDA	M	680	P	0/0/1963		90		635	1	Other or Source of Measurement Unknown	Unknown		
6830611	29° 34' 23" N 098° 16' 11" W	Edwards (Balcones Fault Zone)	218EDRDA	M	362	P	6/0/1951		126		637	1	Other or Source of Measurement Unknown	Unknown		
6831102	29° 36' 11" N 098° 13' 31" W	Edwards (Balcones Fault Zone)	218EDRDA	M	405	P	11/12/1956		172.7		637.3	1	Other or Source of Measurement Unknown	Unknown		
6831103	29° 36' 11" N 098° 13' 00" W	Edwards (Balcones Fault Zone)	218EDRDA	M	545	P	5/17/1957		106.53		726.47	1	U.S. Geological Survey	Steel Tape		
6831107	29° 36' 47" N 098° 13' 51" W	Other	211ASTN	M	122	P	5/17/1957		107.3		752.7	1	U.S. Geological Survey	Steel Tape		
6831108	29° 35' 06" N 098° 13' 01" W	Edwards (Balcones Fault Zone)	218EDRDA	M	600	P	10/6/1956		157.6		612.4	1	Other or Source of Measurement Unknown	Unknown		
6831109	29° 36' 54" N 098° 13' 40" W	Other	211ASTN	M	240	P	5/17/1957		73.7		756.3	1	U.S. Geological Survey	Steel Tape		
6831110	29° 36' 27" N 098° 12' 59" W	Other	100ALVM	M	40	P	5/17/1957		5.7		859.3	1	U.S. Geological Survey	Steel Tape		
6831111	29° 35' 29" N 098° 12' 38" W	Edwards (Balcones Fault Zone)	218EDRDA	M	448	P	9/0/1956		190		635	1	Other or Source of Measurement Unknown	Unknown		
6831114	29° 35' 44" N 098° 14' 07" W	Edwards (Balcones Fault Zone)	218EDRDA	M	400	P	10/0/1956		50		710	1	Other or Source of Measurement Unknown	Unknown		
6831201	29° 36' 42" N 098° 10' 06" W	Edwards (Balcones Fault Zone)	218EDRDA	M	560	P	5/7/1964		113		627	1	Other or Source of Measurement Unknown	Unknown		
6831202	29° 36' 08" N 098° 10' 43" W	Other	211ASTN	M	165	P	10/29/1957		126.5		613.5	1	U.S. Geological Survey	Steel Tape		
6831204	29° 35' 22" N 098° 12' 28" W	Edwards (Balcones Fault Zone)	218EDRDA	M	434	P	12/3/1957		122.9		662.1	1	U.S. Geological Survey	Steel Tape		
6831209	29° 36' 35" N 098° 10' 44" W	Edwards (Balcones Fault Zone)	218EDRDA	M	430	P	5/21/1958		137.6		642.4	1	Other or Source of Measurement Unknown	Unknown		

State Well Number	Coordinates	Aquifer	Aquifer Code	Obs Code	Well Depth (ft. below land surface)	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
6831209	29° 36' 35" N 098° 10' 44" W	Edwards (Balcones Fault Zone)	218EDRDA	M	430	P	6/19/1958		139.5	1.90	640.5	1	Other or Source of Measurement Unknown	Unknown		
						P	7/18/1958		141.3	1.80	638.7	1	Other or Source of Measurement Unknown	Unknown		
6831210	29° 35' 44" N 098° 10' 37" W	Edwards (Balcones Fault Zone)	218EDRDA	M	293	P	10/22/1957		98.7		616.3	1	U.S. Geological Survey	Steel Tape		
						P	5/21/1958		76.1	(22.60)	638.9	1	U.S. Geological Survey	Steel Tape		
						P	7/18/1958		80.2	4.10	634.8	1	U.S. Geological Survey	Steel Tape		
6831301	29° 35' 34" N 098° 08' 15" W	Other	112LEON	M	18	P	12/3/1957		13.4		636.6	1	U.S. Geological Survey	Steel Tape		
6831303	29° 36' 48" N 098° 08' 39" W	Other	100ALVM	M	14	P	8/0/1957		10		650	1	U.S. Geological Survey	Steel Tape		
6831307 Plugged	29° 36' 37" N 098° 09' 42" W	Edwards (Balcones Fault Zone)	218EDRDA	M	655	P	6/0/1962		180		592	1	Other or Source of Measurement Unknown	Unknown		Plugged
6831401	29° 33' 45" N 098° 13' 33" W	Edwards (Balcones Fault Zone)	218EDRDA	M	602	P	10/0/1950		51		654	1	Other or Source of Measurement Unknown	Unknown		
6831403	29° 34' 24" N 098° 13' 47" W	Edwards (Balcones Fault Zone)	218EBFZA	H	1050	P	10/13/1999		57		649	1	Texas Water Development Board	Air Line		
						P	5/5/2002		40.72	(16.28)	665.28	1	Groundwater Conservation District	Recorder (Float or Transducer)		
						P	5/10/2002		43.04	2.32	662.96	1	Groundwater Conservation District	Recorder (Float or Transducer)		
						P	5/15/2002		45.29	2.25	660.71	1	Groundwater Conservation District	Recorder (Float or Transducer)		
						P	5/20/2002		45.9	0.61	660.1	1	Groundwater Conservation District	Recorder (Float or Transducer)		
						P	5/25/2002		46.63	0.73	659.37	1	Groundwater Conservation District	Recorder (Float or Transducer)		

DOMESTIC WORKSHEET 3.0
ITEM 6

WATER QUALITY ASSESSMENT

The nearby private water wells are outside the 250' buffer zone required by 30 TAC Section 309.13(c). The nearest well is 1000' upstream of the land disposal site. There are no private wells downstream of the land disposal site. The storage pond liner consists of two feet of clay meeting liner permeability requirements in 30 TAC 217.203(d). Therefore, the impact of the waste disposal site on the groundwater is negligible.

DOMESTIC WORKSHEET 3.0
ITEM 7b

SOIL ANALYSIS

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name: Permit Renewal Soil** **§Sample ID: 0"-6" Houston** **Matrix: Soil** **Date/Time Taken: 8/22/2024 0820**	**PCS Sample #: 772573 Page 1 of 2** **Date/Time Received: 8/22/2024 11:35** **Report Date: 9/5/2024** **Approved by:** Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
pH		7.7	S.U.	N/A	08/27/2024 08:12	SW846 9045	LCC
Conductivity, Specific		207	µmhos/cm at 25° C	N/A	08/27/2024 16:29	SM 2510B	LCC
Nitrate-N		4.2	mg/kg	0.1	08/26/2024 13:20	EPA 352.1	LCC
Kjeldahl-N, Total	!	2,125	mg/kg	3	08/27/2024 10:30	SM 4500-N B/C	BMR
Nitrogen, Total		2,129.2	mg/kg	1	08/27/2024 10:30	Calculation	CFW
Calcium (H2O Soluble)		250	mg/L	5.00	09/04/2024 08:51	SAR / EPA 200.7	DJL
Magnesium (H2O Soluble)		8.70	mg/L	0.50	09/04/2024 08:51	SAR / EPA 200.7	DJL
Sodium (H2O Soluble)		72.0	mg/L	0.50	09/04/2024 08:51	SAR / EPA 200.7	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
pH	N/A	N/A	N/A			N/A			
Conductivity, Specific	N/A	N/A	N/A			N/A			
Nitrate-N	5	10	70	98	103	130	94	85 - 115	
Kjeldahl-N, Total	5	13	83	108	103	114	106	85 - 115	<3
Nitrogen, Total	N/A	N/A	N/A			N/A			
Calcium (H2O Soluble)	<1	20	70	*N/C	*N/C	130	90	85 - 115	
Magnesium (H2O Soluble)	<1	20	70	99	99	130	95	85 - 115	
Sodium (H2O Soluble)	<1	20	70	98	98	130	95	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

*Approved for release per QA Plan, Exception to Limits - QAM Section 13-4

! Parameter not NELAP certifiable

§ Reported on a Dry Weight Basis

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POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name: Permit Renewal Soil** **§Sample ID: 0"-6" Houston** **Matrix: Soil** **Date/Time Taken: 8/22/2024 0820**	**PCS Sample #: 772573 Page 2 of 2** **Date/Time Received: 8/22/2024 11:35** **Report Date: 9/5/2024**

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
Sodium Absorption Ratio	!	1.2	N/A	N/A	09/05/2024 07:50	USDA	DJL
Sodium/ICP (Mehlich III)		107	mg/kg	55.7	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Calcium/ICP (Mehlich III)		27,000	mg/kg	11.1	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Magnesium/ICP (Mehlich III)		257	mg/kg	5.57	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Phosphorous/ICP (Mehlich III)		<5.57	mg/kg	5.57	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Potassium/ICP (Mehlich III)		417	mg/kg	11.1	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Sulfur/ICP (Mehlich III)		20.4	mg/kg	11.1	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Total Solids		89.4	%	0.10	08/22/2024 16:30	SM 2540 G	EMV

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
Sodium Absorption Ratio	N/A	N/A	N/A			N/A			
Sodium/ICP (Mehlich III)	6	20	70	75	78	130	100	85 - 115	
Calcium/ICP (Mehlich III)	3	20	70	*N/C	*N/C	130	102	85 - 115	
Magnesium/ICP (Mehlich III)	4	20	70	104	107	130	101	85 - 115	
Phosphorous/ICP (Mehlich III)	7	20	75	83	87	125	103	85 - 115	
Potassium/ICP (Mehlich III)	3	20	70	102	105	130	100	85 - 115	
Sulfur/ICP (Mehlich III)	7	20	70	99	104	130	103	85 - 115	
Total Solids	1	12	N/A			N/A			

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

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! Parameter not NELAP certifiable
§ Reported on a Dry Weight Basis

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POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name: Permit Renewal Soil** **§Sample ID: 6"-18" Houston** **Matrix: Soil** **Date/Time Taken: 8/22/2024 09:05**	**PCS Sample #: 772574 Page 1 of 2** **Date/Time Received: 8/22/2024 11:35** **Report Date: 9/5/2024** **Approved by:** Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
pH		7.9	S.U.	N/A	08/27/2024 08:15	SW846 9045	LCC
Conductivity, Specific		193	µmhos/cm at 25° C	N/A	08/27/2024 16:31	SM 2510B	LCC
Nitrate-N		1.9	mg/kg	0.1	08/26/2024 13:20	EPA 352.1	LCC
Kjeldahl-N, Total	!	1,602	mg/kg	3	08/27/2024 10:30	SM 4500-N B/C	BMR
Nitrogen, Total		1,603.9	mg/kg	1	08/27/2024 10:30	Calculation	CFW
Calcium (H2O Soluble)		200	mg/L	5.00	09/04/2024 08:51	SAR / EPA 200.7	DJL
Magnesium (H2O Soluble)		6.00	mg/L	0.50	09/04/2024 08:51	SAR / EPA 200.7	DJL
Sodium (H2O Soluble)		61.0	mg/L	0.50	09/04/2024 08:51	SAR / EPA 200.7	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
pH	N/A	N/A	N/A			N/A			
Conductivity, Specific	N/A	N/A	N/A			N/A			
Nitrate-N	5	10	70	98	103	130	94	85 - 115	
Kjeldahl-N, Total	5	13	83	108	103	114	106	85 - 115	<3
Nitrogen, Total	N/A	N/A	N/A			N/A			
Calcium (H2O Soluble)	<1	20	70	*N/C	*N/C	130	90	85 - 115	
Magnesium (H2O Soluble)	<1	20	70	99	99	130	95	85 - 115	
Sodium (H2O Soluble)	<1	20	70	98	98	130	95	85 - 115	

***Quality Statement:** All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.*

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Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name: Permit Renewal Soil** **§Sample ID: 6"-18" Houston** **Matrix: Soil** **Date/Time Taken: 8/22/2024 09:05**	**PCS Sample #: 772574 Page 2 of 2** **Date/Time Received: 8/22/2024 11:35** **Report Date: 9/5/2024**

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
Sodium Absorption Ratio	!	1.2	N/A	N/A	09/05/2024 07:50	USDA	DJL
Sodium/ICP (Mehlich III)		<54.2	mg/kg	54.2	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Calcium/ICP (Mehlich III)		28,200	mg/kg	10.8	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Magnesium/ICP (Mehlich III)		133	mg/kg	5.42	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Phosphorous/ICP (Mehlich III)		<5.42	mg/kg	5.42	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Potassium/ICP (Mehlich III)		88.2	mg/kg	10.8	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Sulfur/ICP (Mehlich III)		<10.8	mg/kg	10.8	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Total Solids		89.7	%	0.10	08/22/2024 16:30	SM 2540 G	EMV

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
Sodium Absorption Ratio	N/A	N/A	N/A			N/A			
Sodium/ICP (Mehlich III)	6	20	70	75	78	130	100	85 - 115	
Calcium/ICP (Mehlich III)	3	20	70	*N/C	*N/C	130	102	85 - 115	
Magnesium/ICP (Mehlich III)	4	20	70	104	107	130	101	85 - 115	
Phosphorous/ICP (Mehlich III)	7	20	75	83	87	125	103	85 - 115	
Potassium/ICP (Mehlich III)	3	20	70	102	105	130	100	85 - 115	
Sulfur/ICP (Mehlich III)	7	20	70	99	104	130	103	85 - 115	
Total Solids	1	12	N/A			N/A			

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! Parameter not NELAP certifiable

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POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name: Permit Renewal Soil** **§Sample ID: 18"-30" Houston** **Matrix: Soil** **Date/Time Taken: 8/22/2024 09:35**	**PCS Sample #: 772575 Page 1 of 2** **Date/Time Received: 8/22/2024 11:35** **Report Date: 9/5/2024** **Approved by:** Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
pH		7.8	S.U.	N/A	08/27/2024 08:16	SW846 9045	LCC
Conductivity, Specific		371	µmhos/cm at 25° C	N/A	08/27/2024 16:33	SM 2510B	LCC
Nitrate-N		7.2	mg/kg	0.1	08/26/2024 13:20	EPA 352.1	LCC
Kjeldahl-N, Total	!	1,409	mg/kg	3	08/27/2024 10:30	SM 4500-N B/C	BMR
Nitrogen, Total		1,416.2	mg/kg	1	08/27/2024 10:30	Calculation	CFW
Calcium (H2O Soluble)		240	mg/L	5.00	09/04/2024 08:51	SAR / EPA 200.7	DJL
Magnesium (H2O Soluble)		8.30	mg/L	0.50	09/04/2024 08:51	SAR / EPA 200.7	DJL
Sodium (H2O Soluble)		67.0	mg/L	0.50	09/04/2024 08:51	SAR / EPA 200.7	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
pH	N/A	N/A	N/A			N/A			
Conductivity, Specific	N/A	N/A	N/A			N/A			
Nitrate-N	5	10	70	98	103	130	94	85 - 115	
Kjeldahl-N, Total	5	13	83	108	103	114	106	85 - 115	<3
Nitrogen, Total	N/A	N/A	N/A			N/A			
Calcium (H2O Soluble)	<1	20	70	*N/C	*N/C	130	90	85 - 115	
Magnesium (H2O Soluble)	<1	20	70	99	99	130	95	85 - 115	
Sodium (H2O Soluble)	<1	20	70	98	98	130	95	85 - 115	

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Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name: Permit Renewal Soil** **§Sample ID: 18"-30" Houston** **Matrix: Soil** **Date/Time Taken: 8/22/2024 09:35**	**PCS Sample #: 772575 Page 2 of 2** **Date/Time Received: 8/22/2024 11:35** **Report Date: 9/5/2024**

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
Sodium Absorption Ratio	!	1.2	N/A	N/A	09/05/2024 07:50	USDA	DJL
Sodium/ICP (Mehlich III)		<54.8	mg/kg	54.8	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Calcium/ICP (Mehlich III)		35,400	mg/kg	11.0	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Magnesium/ICP (Mehlich III)		146	mg/kg	5.48	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Phosphorous/ICP (Mehlich III)		<5.48	mg/kg	5.48	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Potassium/ICP (Mehlich III)		269	mg/kg	11.0	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Sulfur/ICP (Mehlich III)		11.4	mg/kg	11.0	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Total Solids		90.2	%	0.10	08/22/2024 16:30	SM 2540 G	EMV

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
Sodium Absorption Ratio	N/A	N/A	N/A			N/A			
Sodium/ICP (Mehlich III)	6	20	70	75	78	130	100	85 - 115	
Calcium/ICP (Mehlich III)	3	20	70	*N/C	*N/C	130	102	85 - 115	
Magnesium/ICP (Mehlich III)	4	20	70	104	107	130	101	85 - 115	
Phosphorous/ICP (Mehlich III)	7	20	75	83	87	125	103	85 - 115	
Potassium/ICP (Mehlich III)	3	20	70	102	105	130	100	85 - 115	
Sulfur/ICP (Mehlich III)	7	20	70	99	104	130	103	85 - 115	
Total Solids	1	12	N/A			N/A			

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

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Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name: Permit Renewal Soil** **§Sample ID: 0"-6" Trinity** **Matrix: Soil** **Date/Time Taken: 8/22/2024 10:00**	**PCS Sample #: 772576 Page 1 of 2** **Date/Time Received: 8/22/2024 11:35** **Report Date: 9/5/2024** **Approved by:** Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
pH		7.9	S.U.	N/A	08/27/2024 08:18	SW846 9045	LCC
Conductivity, Specific		173	µmhos/cm at 25° C	N/A	08/27/2024 16:35	SM 2510B	LCC
Nitrate-N		0.9	mg/kg	0.1	08/26/2024 13:20	EPA 352.1	LCC
Kjeldahl-N, Total	!	1,399	mg/kg	3	08/27/2024 10:30	SM 4500-N B/C	BMR
Nitrogen, Total		1,400	mg/kg	1	08/27/2024 10:30	Calculation	CFW
Calcium (H2O Soluble)		280	mg/L	5.00	09/04/2024 08:51	SAR / EPA 200.7	DJL
Magnesium (H2O Soluble)		14.0	mg/L	0.50	09/04/2024 08:51	SAR / EPA 200.7	DJL
Sodium (H2O Soluble)		57.0	mg/L	0.50	09/04/2024 08:51	SAR / EPA 200.7	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
pH	N/A	N/A	N/A			N/A			
Conductivity, Specific	N/A	N/A	N/A			N/A			
Nitrate-N	5	10	70	98	103	130	94	85 - 115	
Kjeldahl-N, Total	5	13	83	108	103	114	106	85 - 115	<3
Nitrogen, Total	N/A	N/A	N/A			N/A			
Calcium (H2O Soluble)	<1	20	70	*N/C	*N/C	130	90	85 - 115	
Magnesium (H2O Soluble)	<1	20	70	99	99	130	95	85 - 115	
Sodium (H2O Soluble)	<1	20	70	98	98	130	95	85 - 115	

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! Parameter not NELAP certifiable
§ Reported on a Dry Weight Basis

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POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name: Permit Renewal Soil** **§Sample ID: 0"-6" Trinity** **Matrix: Soil** **Date/Time Taken: 8/22/2024 10:00**	**PCS Sample #: 772576 Page 2 of 2** **Date/Time Received: 8/22/2024 11:35** **Report Date: 9/5/2024**

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
Sodium Absorption Ratio	!	0.9	N/A	N/A	09/05/2024 07:50	USDA	DJL
Sodium/ICP (Mehlich III)		138	mg/kg	54.6	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Calcium/ICP (Mehlich III)		24,000	mg/kg	10.9	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Magnesium/ICP (Mehlich III)		475	mg/kg	5.46	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Phosphorous/ICP (Mehlich III)		<5.46	mg/kg	5.46	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Potassium/ICP (Mehlich III)		368	mg/kg	10.9	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Sulfur/ICP (Mehlich III)		36.4	mg/kg	10.9	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Total Solids		90.9	%	0.10	08/22/2024 16:30	SM 2540 G	EMV

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
Sodium Absorption Ratio	N/A	N/A	N/A			N/A			
Sodium/ICP (Mehlich III)	6	20	70	75	78	130	100	85 - 115	
Calcium/ICP (Mehlich III)	3	20	70	*N/C	*N/C	130	102	85 - 115	
Magnesium/ICP (Mehlich III)	4	20	70	104	107	130	101	85 - 115	
Phosphorous/ICP (Mehlich III)	7	20	75	83	87	125	103	85 - 115	
Potassium/ICP (Mehlich III)	3	20	70	102	105	130	100	85 - 115	
Sulfur/ICP (Mehlich III)	7	20	70	99	104	130	103	85 - 115	
Total Solids	1	12	N/A			N/A			

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POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name: Permit Renewal Soil** **§Sample ID: 6"-18" Trinity** **Matrix: Soil** **Date/Time Taken: 8/22/2024 10:15**	**PCS Sample #: 772577 Page 1 of 2** **Date/Time Received: 8/22/2024 11:35** **Report Date: 9/5/2024** **Approved by:** Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
pH		7.6	S.U.	N/A	08/27/2024 08:21	SW846 9045	LCC
Conductivity, Specific		705	µmhos/cm at 25° C	N/A	08/27/2024 16:38	SM 2510B	LCC
Nitrate-N		0.8	mg/kg	0.1	08/26/2024 13:20	EPA 352.1	LCC
Kjeldahl-N, Total	!	1,237	mg/kg	3	08/27/2024 10:30	SM 4500-N B/C	BMR
Nitrogen, Total		1,237.8	mg/kg	1	08/27/2024 10:30	Calculation	CFW
Calcium (H2O Soluble)		200	mg/L	5.00	09/04/2024 08:51	SAR / EPA 200.7	DJL
Magnesium (H2O Soluble)		14.0	mg/L	0.50	09/04/2024 08:51	SAR / EPA 200.7	DJL
Sodium (H2O Soluble)		65.0	mg/L	0.50	09/04/2024 08:51	SAR / EPA 200.7	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
pH	N/A	N/A	N/A			N/A			
Conductivity, Specific	N/A	N/A	N/A			N/A			
Nitrate-N	5	10	70	98	103	130	94	85 - 115	
Kjeldahl-N, Total	5	13	83	108	103	114	106	85 - 115	<3
Nitrogen, Total	N/A	N/A	N/A			N/A			
Calcium (H2O Soluble)	<1	20	70	*N/C	*N/C	130	90	85 - 115	
Magnesium (H2O Soluble)	<1	20	70	99	99	130	95	85 - 115	
Sodium (H2O Soluble)	<1	20	70	98	98	130	95	85 - 115	

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POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name: Permit Renewal Soil** **§Sample ID: 6"-18" Trinity** **Matrix: Soil** **Date/Time Taken: 8/22/2024 10:15**	**PCS Sample #: 772577 Page 2 of 2** **Date/Time Received: 8/22/2024 11:35** **Report Date: 9/5/2024**

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
Sodium Absorption Ratio	!	1.2	N/A	N/A	09/05/2024 07:50	USDA	DJL
Sodium/ICP (Mehlich III)		<54.8	mg/kg	54.8	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Calcium/ICP (Mehlich III)		18,200	mg/kg	11.0	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Magnesium/ICP (Mehlich III)		555	mg/kg	5.48	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Phosphorous/ICP (Mehlich III)		<5.48	mg/kg	5.48	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Potassium/ICP (Mehlich III)		67.9	mg/kg	11.0	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Sulfur/ICP (Mehlich III)		35.4	mg/kg	11.0	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Total Solids		90.8	%	0.10	08/22/2024 16:30	SM 2540 G	EMV

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
Sodium Absorption Ratio	N/A	N/A	N/A			N/A			
Sodium/ICP (Mehlich III)	6	20	70	75	78	130	100	85 - 115	
Calcium/ICP (Mehlich III)	3	20	70	*N/C	*N/C	130	102	85 - 115	
Magnesium/ICP (Mehlich III)	4	20	70	104	107	130	101	85 - 115	
Phosphorous/ICP (Mehlich III)	7	20	75	83	87	125	103	85 - 115	
Potassium/ICP (Mehlich III)	3	20	70	102	105	130	100	85 - 115	
Sulfur/ICP (Mehlich III)	7	20	70	99	104	130	103	85 - 115	
Total Solids	1	12	N/A			N/A			

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POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name: Permit Renewal Soil** **§Sample ID: 18"-30" Trinity** **Matrix: Soil** **Date/Time Taken: 8/22/2024 1035**	**PCS Sample #: 772578 Page 1 of 2** **Date/Time Received: 8/22/2024 11:35** **Report Date: 9/5/2024** **Approved by:** Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
pH		7.7	S.U.	N/A	08/27/2024 08:24	SW846 9045	LCC
Conductivity, Specific		716	µmhos/cm at 25° C	N/A	08/27/2024 16:39	SM 2510B	LCC
Nitrate-N		0.7	mg/kg	0.1	08/26/2024 13:20	EPA 352.1	LCC
Kjeldahl-N, Total	!	956	mg/kg	3	08/27/2024 10:30	SM 4500-N B/C	BMR
Nitrogen, Total		956.7	mg/kg	1	08/27/2024 10:30	Calculation	CFW
Calcium (H2O Soluble)		300	mg/L	5.00	09/04/2024 08:51	SAR / EPA 200.7	DJL
Magnesium (H2O Soluble)		24.0	mg/L	0.50	09/04/2024 08:51	SAR / EPA 200.7	DJL
Sodium (H2O Soluble)		150	mg/L	0.50	09/04/2024 08:51	SAR / EPA 200.7	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
pH	N/A	N/A	N/A			N/A			
Conductivity, Specific	N/A	N/A	N/A			N/A			
Nitrate-N	5	10	70	98	103	130	94	85 - 115	
Kjeldahl-N, Total	5	13	83	108	103	114	106	85 - 115	<3
Nitrogen, Total	N/A	N/A	N/A			N/A			
Calcium (H2O Soluble)	<1	20	70	*N/C	*N/C	130	90	85 - 115	
Magnesium (H2O Soluble)	<1	20	70	99	99	130	95	85 - 115	
Sodium (H2O Soluble)	<1	20	70	98	98	130	95	85 - 115	

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POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name: Permit Renewal Soil** **§Sample ID: 18"-30" Trinity** **Matrix: Soil** **Date/Time Taken: 8/22/2024 1035**	**PCS Sample #: 772578 Page 2 of 2** **Date/Time Received: 8/22/2024 11:35** **Report Date: 9/5/2024**

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
Sodium Absorption Ratio	!	2.2	N/A	N/A	09/05/2024 07:50	USDA	DJL
Sodium/ICP (Mehlich III)		621	mg/kg	54.6	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Calcium/ICP (Mehlich III)		29,800	mg/kg	10.9	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Magnesium/ICP (Mehlich III)		556	mg/kg	5.46	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Phosphorous/ICP (Mehlich III)		<5.46	mg/kg	5.46	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Potassium/ICP (Mehlich III)		256	mg/kg	10.9	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Sulfur/ICP (Mehlich III)		550	mg/kg	10.9	09/04/2024 11:10	Mehlich 3/EPA 200.7	DJL
Total Solids		90.7	%	0.10	08/22/2024 16:30	SM 2540 G	EMV

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
Sodium Absorption Ratio	N/A	N/A	N/A			N/A			
Sodium/ICP (Mehlich III)	6	20	70	75	78	130	100	85 - 115	
Calcium/ICP (Mehlich III)	3	20	70	*N/C	*N/C	130	102	85 - 115	
Magnesium/ICP (Mehlich III)	4	20	70	104	107	130	101	85 - 115	
Phosphorous/ICP (Mehlich III)	7	20	75	83	87	125	103	85 - 115	
Potassium/ICP (Mehlich III)	3	20	70	102	105	130	100	85 - 115	
Sulfur/ICP (Mehlich III)	7	20	70	99	104	130	103	85 - 115	
Total Solids	1	12	N/A			N/A			

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Chain of Custody Number: 772573

MULTIPLE SAMPLE ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

Stamp 1st sample and COC as same number

CUSTOMER INFORMATION | **REPORT INFORMATION**

Name: Enriched Organics | Attention: Jason Breithaupt | Phone: 210-6690007 | Fax:

SAMPLE INFORMATION

Project Information: Harvest Hills Permit Renewal

Report "Soils" ☐ As Is ☐ Dry Wt.

Collected By: Jason Breithaupt

Client / Field Sample ID	Collected Date	Collected Time	Field Chlorine Residual mg/L	Composite or Grab	Matrix: DW-Drinking Water; NPW-Non-potable water; WW-Wastewater; LW-Liquid Waste	Container Type	Container Number	Preservative	Requested Analysis: Permit renewal see attached	%MS, PH, Specific Conductance, TKN, NO3N, N	Sodium Potassium Manganese	Calcium Phosphorous Sulfur Mercury	SAR - Ca, Mg, Na	Instructions/Comments: PCS Sample Number
0-6 Horston	Start: 8.22.24 End: 8.22.24	Start: 800 End: 820		C	DW NPW WW Soil Sludge LW Other	P		H_2SO_4 HNO_3 H_3PO_4 NaOH ICE		X	X	X	X	772573 ☐S ☐B ☐N ☐HEM Other:
6-18 Horston	Start: 8.22.24 End: 8.22.24	Start: 840 End: 905		C	DW NPW WW Soil Sludge LW Other	P		H_2SO_4 HNO_3 H_3PO_4 NaOH ICE		X	X	X	X	772574 ☐S ☐B ☐N ☐HEM Other:
18-30 Horston	Start: 8.22.24 End: 8.22.24	Start: 910 End: 935		C	DW NPW WW Soil Sludge LW Other	P		H_2SO_4 HNO_3 H_3PO_4 NaOH ICE		X	X	X	X	772575 ☐S ☐B ☐N ☐HEM Other:
0-6 Trinity	Start: 8.22.24 End: 8.22.24	Start: 940 End: 1000		C	DW NPW WW Soil Sludge LW Other	P		H_2SO_4 HNO_3 H_3PO_4 NaOH ICE		X	X	X	X	772576 ☐S ☐B ☐N ☐HEM Other:
6-18 Trinity	Start: 8.22.24 End: 8.22.24	Start: 1002 End: 1015		C	DW NPW WW Soil Sludge LW Other	P		H_2SO_4 HNO_3 H_3PO_4 NaOH ICE		X	X	X	X	772577 ☐S ☐B ☐N ☐HEM Other:
18-30 Trinity	Start: 8.22.24 End: 8.22.24	Start: 1016 End: 1035		C	DW NPW WW Soil Sludge LW Other	P		H_2SO_4 HNO_3 H_3PO_4 NaOH ICE		X	X	X	X	772578 ☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		C	DW NPW WW Soil Sludge LW Other	P		H_2SO_4 HNO_3 H_3PO_4 NaOH ICE						☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		C	DW NPW WW Soil Sludge LW Other	P		H_2SO_4 HNO_3 H_3PO_4 NaOH ICE						☐S ☐B ☐N ☐HEM Other:

Required Turnaround: ☒ Routine (6-10 days) | ***EXPEDITE:*** (See Surcharge Schedule) ☐ < 8 Hrs. ☐ < 16 Hrs. ☐ < 24 Hrs. ☐ 5 days ☐ Other: _____ ***Rush Charges Authorized by:***

Sample Archive/Disposal: ☒ Laboratory Standard ☐ Hold for client pick up | **Container Type:** P = Plastic, G = Glass, O = Other _____ | Carrier ID: _____

Relinquished By:	Jason Breithaupt	Date: 8.22.24	Time: 1135	Received By:		Date: 8.22.24	Time: 1135		
Relinquished By:		Date:	Time:	Received By:		Date:	Time:		

Rev. Multiple Sample COC_20180628

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wastewater irrigation methods and application rates as well as the wastewater ponds are protective of groundwater.

Indicate whether groundwater monitoring wells or lysimeters are planned around the land application site. If yes, then a map identifying the proposed location of the monitoring wells or lysimeters should be submitted, along with the proposed depth of the wells or lysimeters, proposed sampling schedule, and proposed monitoring parameters.

Section 8. Soil Map and Soil Analyses

a. Soil map

A soil map is only needed for renewals on a case by case basis. For new and amendment requests, accurately locate the area to be used for land application on a U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey Map. Updated soil information may be obtained from NRCS[23] or from the NRCS Web Soil Survey[24]. Include engineering properties (No. 200 sieve, liquid limit, plasticity), soil permeability for each texture class, and seasonal high-water table. Soil evaluations will be provided with all the information required in *30 TAC § 222.73*. See Instructions for Domestic Worksheet 3.3, Subsection 2, Required Plans.

b. Soil analyses

Provide analyses of the soil in the land application site(s) for pH [2:1 (v/v) water/soil mixture]; electrical conductivity [2:1 (v/v) water/soil mixture]; sodium adsorption ratio (SAR) from a water saturated paste and its constituent parameters (water-soluble Na, Ca and Mg reported in' mg/L); total Kjeldahl nitrogen (TKN); total nitrogen (organic-nitrogen + nitrate-nitrogen + ammonium-nitrogen); nitrate-nitrogen (from a 1 N KCl soil extract); potassium, phosphorous; calcium; magnesium; sulfur; and sodium. The nutrient parameters should be analyzed on a plant-available basis. Phosphorus shall be analyzed according to the Mehlich III procedure with inductively coupled plasma and potassium, calcium, magnesium, sodium, and sulfur may also be analyzed in the Mehlich III soil extract. Plant-available phosphorus, potassium, calcium, magnesium, sodium and sulfur shall be reported on a dry weight basis in mg/kg; electrical conductivity, in mmho/cm [same as deciSiemens/meter (dS/m)]; and pH, in standard units. When reporting the results, include all information concerning fertilizer recommendations. Provide a copy of this plan to the analytical laboratory prior to sample analysis.

Composite or benchmark sampling techniques should be used when sampling the soils of the wastewater application area. Individual soil types, as defined by the USDA Soil Conservation Service Soil Survey, should be sampled individually at zones 0-6, 6-18, and 18-30 inches. Each composite sample must represent no more than 80 acres with no less than 15 subsamples representing each composite sample. Each benchmark sample must represent no more than 80 acres with at least 7 subsamples for each benchmark composite sample. Subsamples must be composited by individual site, zone, and soil type for analysis and reporting.

In addition, provide the information requested on Table 3.0(4), including the soil series name; total depth of the soil series; permeability of the soil series by depth; and available water capacity of the soil series by depth.

Note for renewal applications, the current annual soil analyses required by the permit is acceptable as long as the test date is less than one year prior to the submission of the

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[23] http://websoilsurvey.sc.egov.usda.gov/
[24] http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

Pollution Control Services

Sample Log-In Checklist

PCS Sample No(s) 772573 772578 772573 **COC No.** _____

Client/Company Name: E.O. Harvest Hills **Checklist Completed by:** LMW

Sample Delivery to Lab Via:
Client Drop Off ✓ Commercial Carrier: Bus ____ UPS ____ Lone Star ____ FedEx ____ USPS ____
PCS Field Services: Collection/Pick Up____ Other: _____

Sample Kit/Coolers ✓
Sample Kit/Cooler? Yes____ No____ Sample Kit/Cooler: Intact? Yes✓ No___
Custody Seals on Sample Kit/Cooler: Not Present ✓ If Present, Intact ___ Broken ___
Sample Containers Intact; Unbroken and Not Leaking? Yes ✓ No ___
Custody Seals on Sample Bottles: Not Present ✓ If Present, Intact ___ Broken ___
COC Present with Shipment or Delivery or Completed at Drop Off? Yes ✓ No ___
Has COC sample date/time and other pertinent information been provided by client/sampler? Yes: ✓ No: ___
Has COC been properly Signed when Received/Relinquished? Yes ✓ No ___
Does COC agree with Sample Bottle Information, Bottle Types, Preservation, etc.? Yes ✓ No ___
All Samples Received before Hold Time Expiration? Yes ✓ No ___
Sufficient Sample Volumes for Analysis Requested? Yes ✓ No ___
Zero Headspace in VOA Vial? Yes ___ No ___

Sample Preservation: ✓
* ***Cooling:*** **Not Required** _____ **or Required** _____
If cooling required, record temperature of submitted samples Observed/Corrected 29 / 26 °C
Is Ice Present in Sample Kit/Cooler? _____ Yes ✓ No Samples received same day as collected? ✓ Yes _____ No
Lab Thermometer Make and Serial Number: Vaughan 1807009583 Other: _____

Acid Preserved Sample - If present, is pH <2? **Yes** ____ **No** ____** _____H_2SO_4 _____HNO_3 _____H_3PO_4
Base Preserved Sample - If present, is pH >12? Yes ____ No ____ _____NaOH
Other Preservation:_____ If Present, Meets Requirements? Yes_____ No_____
Sample Preservations Checked by:_____ Date _____ Time _____
pH paper used to check sample preservation (PCS log #): _____ (HEM pH checked at analysis).

Samples Preserved/Adjusted by Lab:	Lab #	Parameters Preserved	Preservative Used	Log #

Adjusted by Tech/Analyst:_____ Date :_____Time:_____

Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ RevisionComments
Person Notified: _____ Contacted by:_____
Notified Date: _____Time: _____
Method of Contact: At Drop Off:_____ Phone ___ Left Voice Mail ____ E-Mail _____ Fax _____
Unable to Contact_____ Authorized Laboratory to Proceed :_____(Lab Director)
Regarding / Comments:_____
_____
_____
Actions taken to correct problems/discrepancies:_____
_____
_____
Receiving qualifier needed (*requires client notification above*) Temp. ___ Holding Time ___ Initails: _____
Receiving qualifier entered into LIMS at login Initial/Date: _____
Revision Comments: _____
_____

Brandon Maldonado

From: Brandon Maldonado
Sent: Monday, November 4, 2024 11:01 AM
To: Greg Barfell
Subject: RE: Application to Renew Permit No. WQ0014037001 - Notice of Deficiency Letter

Good morning,

Sorry for the delayed response. Your response to all items of the NOD are sufficient.

Let me know if you have any questions

Regards,

Brandon Maldonado
Texas Commission on Environmental Quality
Water Quality Division
512-239-4331
Brandon.Maldonado@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

---

From: Greg Barfell <greg@copeengineeringtx.com>
Sent: Friday, November 1, 2024 12:12 PM
To: Brandon Maldonado <Brandon.Maldonado@tceq.texas.gov>
Subject: RE: Application to Renew Permit No. WQ0014659002 - Notice of Deficiency Letter

Good morning Brandon,

Attached is the comment response letter, updated core data form, and plain language summary.
Please let me know if there is anything you need from me.

Thank you,
Greg

From: Brandon Maldonado <Brandon.Maldonado@tceq.texas.gov>
Sent: Wednesday, October 30, 2024 4:48 PM
To: Greg Barfell <greg@copeengineeringtx.com>
Subject: RE: Application to Renew Permit No. WQ0014659002 - Notice of Deficiency Letter

Hello,

Your response to the Notice of Deficiency (NOD) can be sent as an email attachment or in the body of the email itself.

For the individual items of the NOD, the updated core data form should be submitted as an attached PDF file to your response email, and the Plain Language Summery should be sent as a Microsoft Word document attached to your response email. The response to item 3 of the nod can be sent as an email attachment or in the body of the email itself. Once received I will update the application to add the new documents.

Please let me know if you have any further questions

Regards,

Brandon Maldonado
Texas Commission on Environmental Quality
Water Quality Division
512-239-4331
Brandon.Maldonado@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

---

From: Greg Barfell <greg@copeengineeringtx.com>
Sent: Wednesday, October 30, 2024 4:35 PM
To: Brandon Maldonado <Brandon.Maldonado@tceq.texas.gov>
Subject: RE: Application to Renew Permit No. WQ0014659002 - Notice of Deficiency Letter

Good afternoon Brandon,

How do you want me to submit the response letter and revised permit renewal package?

Thank you,
Greg

From: Brandon Maldonado <Brandon.Maldonado@tceq.texas.gov>
Sent: Tuesday, October 29, 2024 2:28 PM
To: jack@uptmorehomes.com
Cc: Greg Barfell <greg@copeengineeringtx.com>
Subject: Application to Renew Permit No. WQ0014659002 - Notice of Deficiency Letter

Dear Mr. Uptmore,

The attached Notice of Deficiency (NOD) letter sent on **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,

Brandon Maldonado
Texas Commission on Environmental Quality
Water Quality Division
512-239-4331
Brandon.Maldonado@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

Cope
Engineering, Inc.
Texas Registration #F-16078

November 1, 2024

Texas Commission on Environmental Quality
Applications Review and Processing Team (MC148)
Water Quality Division
P.O. Box 13087
Austin, Texas 78711-3087

Re: Application to Renew Permit No. WQ0014037001
Issued to Harvest Hills Treatment, Ltd.
CN 602744997; RN 103013991

Mr. Brandon Maldonado:

The following responses have been completed in reference to the TCEQ comment letter dated October 29, 2024:

1. Core Data Form (CDF): Section III, Item 39: The TCEQ program was inadvertently left blank. Please submit an updated core data form with the missing section completed.
The Core Data Form, Section III, Item 39, has been updated and included.

2. Plain Language Summery (PLS): Please use the attached Plain Language Summary (PLS) Template to provide a plain language summary in English. Please provide the PLS in a Microsoft Word Document.
The attached Plain Language Summary has been filled out to the best of my abilities. It is attached in the Microsoft word document.

3. 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.
The NORI has been reviewed and it does not contain any errors.

If you have any further questions and/or comments, let us know.

Thank You,

Greg Barfell, E.I.T.
Cope Engineering, Inc.

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 602744997		RN 103013991

SECTION II: Customer Information

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

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

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

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* — *If new Customer, enter previous Customer below:*

Harvest Hills Treatment, Ltd.

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
8003051	3203564	43-2047042	

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

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

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

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

15. Mailing Address:							
	103 S Winston Ln						
	City	San Antonio	**State**	TX	**ZIP**	78213	**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)*
(210) 969-2522		(210) 696-2034

SECTION III: Regulated Entity Information

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

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

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

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

Harvest hills Subdivision Wastewater Treatment Plant

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	3910 Harvest Canyon							
	City	Santa Clara	**State**	TX	**ZIP**	78124	**ZIP + 4**	
24. County	Guadalupe							

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

25. Description to Physical Location:	

26. Nearest City	State	Nearest ZIP Code

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

27. Latitude (N) In Decimal:	29.60444444		28. Longitude (W) In Decimal:	98.16416667	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	36	16	98	09	51

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.)*

A wastewater treatment plant that serves

34. Mailing Address:	**103 S Winston Ln**

	City	San Antonio	State	TX	ZIP	78213	ZIP + 4	

35. E-Mail Address:	jack@uptmorehomes.com

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(210) 696-2522		(210) 696-2034

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

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☒ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:
	WQ0014037001			

SECTION IV: Preparer Information

40. Name:	Gregory Barfell	41. Title:	Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(210) 828-7070		(210) 828-7076	greg@copeengineeringtx.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:	Cope Engnineering, Inc.	Job Title:	Engineer	
Name *(In Print)*:	Gregory Barfell		Phone:	(210) 828- 7070
Signature:	greg barfell		Date:	10/31/2024

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.

Harvest Hills Treatment, LTD. (CN 602744997) operates Harvest Hills Wastewater Treatment Facility (RN 103013991). a Wastewater Treatment Facility. The facility is located at 3910 Harvest Canyon , in Santa Clara, Guadalupe County, Texas 78124.

This renewal is to use 90,000 gallons per day of treated domestic wastewater for irrigation.

Discharges from the facility are expected to contain Daily Average: BOD5 10 mg/l, TSS 25 mg/l, pH >5. .Sanitary Sewer is treated by *a wastewater treatment plant. Sanitary sewer enters the treatment plant and is processed through the existing bar screen and aerobic digester. The wastewater is then sent to the aeration chamber, then to the*

clarifier, then go the chlorine contact chamber, then to the storage pond, then to the I irrigation field.

Cope
Engineering, Inc.
Texas Registration #F-16078

November 1, 2024

Texas Commission on Environmental Quality
Applications Review and Processing Team (MC148)
Water Quality Division
P.O. Box 13087
Austin, Texas 78711-3087

Re: Application to Renew Permit No. WQ0014037001
Issued to Harvest Hills Treatment, Ltd.
CN 602744997; RN 103013991

Mr. Brandon Maldonado:

The following responses have been completed in reference to the TCEQ comment letter dated October 29, 2024:

1. Core Data Form (CDF): Section III, Item 39: The TCEQ program was inadvertently left blank. Please submit an updated core data form with the missing section completed.
The Core Data Form, Section III, Item 39, has been updated and included.

2. Plain Language Summery (PLS): Please use the attached Plain Language Summary (PLS) Template to provide a plain language summary in English. Please provide the PLS in a Microsoft Word Document.
The attached Plain Language Summary has been filled out to the best of my abilities. It is attached in the Microsoft word document.

3. 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.
The NORI has been reviewed and it does not contain any errors.

If you have any further questions and/or comments, let us know.

Thank You,

Greg Barfell, E.I.T.
Cope Engineering, Inc.

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. Jack Uptmore
General Manager
Harvest Hills Treatment, Ltd
103 South Winston Lane
San Antonio, Texas 78213

RE: Application to Renew Permit No.: WQ0014037001
Applicant Name: Harvest Hills Treatment, Ltd (CN602744997)
Site Name: Harvest Hills Subdivision WWTP (RN103013991)
Type of Application: Renewal without changes

VIA EMAIL

Dear Mr. Uptmore:

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. Core Data Form (CDF)

   Section III, Item 39: The TCEQ program was inadvertently left blank. Please submit an updated core data form with the missing section completed.

2. Plain Language Summery (PLS)

   Please use the attached Plain Language Summary (PLS) Template to provide a plain language summary in English. Please provide the PLS in a Microsoft Word Document.

3. 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. Harvest Hills Treatment, Ltd 103 South Winston Lane, San Antonio, has applied to the Texas Commission on Environmental Quality (TCEQ) to renew Texas Land Application Permit (TLAP) No. WQ0014037001 to authorize the disposal of treated wastewater at a volume not to exceed a daily average flow of 90,000 gallons per day via: enter disposal method and acreage. The domestic wastewater facility and disposal area are located at 3910 Harvest Canyon, in the city of Santa Clara, in Guadalupe County,

Texas 78124. TCEQ received this application on October 22, 2024. The permit application will be available for viewing and copying at Guadalupe County Justice Center, Front Desk, 211 West Court Street, Seguin, in Guadalupe 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=-98.164166,29.604444&level=18

Further information may also be obtained from Harvest Hills Treatment, Ltd at the address stated above or by calling Mr. Jack Uptmore, General Manager, at 210-696-2522.

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) 239-4331 or by email at Brandon.Maldonado@tceq.texas.gov

Sincerely,

Brandon Maldonado

Applications Review and Processing Team (MC148)
Water Quality Division
Texas Commission of Environmental Quality

BM

Enclosure(s)

cc: Mr. Gregory Barfell, E.I.T., Engineer, Cope engineering, Inc., 8611 Botts Lane, San Antonio, Texas 78217

Brandon Maldonado

From: Brandon Maldonado
Sent: Monday, November 4, 2024 11:01 AM
To: Greg Barfell
Subject: RE: Application to Renew Permit No. WQ0014037001 - Notice of Deficiency Letter

Good morning,

Sorry for the delayed response. Your response to all items of the NOD are sufficient.

Let me know if you have any questions

Regards,

Brandon Maldonado
Texas Commission on Environmental Quality
Water Quality Division
512-239-4331
Brandon.Maldonado@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

---

From: Greg Barfell <greg@copeengineeringtx.com>
Sent: Friday, November 1, 2024 12:12 PM
To: Brandon Maldonado <Brandon.Maldonado@tceq.texas.gov>
Subject: RE: Application to Renew Permit No. WQ0014659002 - Notice of Deficiency Letter

Good morning Brandon,

Attached is the comment response letter, updated core data form, and plain language summary.
Please let me know if there is anything you need from me.

Thank you,
Greg

From: Brandon Maldonado <Brandon.Maldonado@tceq.texas.gov>
Sent: Wednesday, October 30, 2024 4:48 PM
To: Greg Barfell <greg@copeengineeringtx.com>
Subject: RE: Application to Renew Permit No. WQ0014659002 - Notice of Deficiency Letter

Hello,

Your response to the Notice of Deficiency (NOD) can be sent as an email attachment or in the body of the email itself.

For the individual items of the NOD, the updated core data form should be submitted as an attached PDF file to your response email, and the Plain Language Summery should be sent as a Microsoft Word document attached to your response email. The response to item 3 of the nod can be sent as an email attachment or in the body of the email itself. Once received I will update the application to add the new documents.

Please let me know if you have any further questions

Regards,

Brandon Maldonado
Texas Commission on Environmental Quality
Water Quality Division
512-239-4331
Brandon.Maldonado@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

---

From: Greg Barfell <greg@copeengineeringtx.com>
Sent: Wednesday, October 30, 2024 4:35 PM
To: Brandon Maldonado <Brandon.Maldonado@tceq.texas.gov>
Subject: RE: Application to Renew Permit No. WQ0014659002 - Notice of Deficiency Letter

Good afternoon Brandon,

How do you want me to submit the response letter and revised permit renewal package?

Thank you,
Greg

From: Brandon Maldonado <Brandon.Maldonado@tceq.texas.gov>
Sent: Tuesday, October 29, 2024 2:28 PM
To: jack@uptmorehomes.com
Cc: Greg Barfell <greg@copeengineeringtx.com>
Subject: Application to Renew Permit No. WQ0014659002 - Notice of Deficiency Letter

Dear Mr. Uptmore,

The attached Notice of Deficiency (NOD) letter sent on **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,

Brandon Maldonado
Texas Commission on Environmental Quality
Water Quality Division
512-239-4331
Brandon.Maldonado@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

Brandon Maldonado

From: Brandon Maldonado
Sent: Friday, November 8, 2024 2:58 PM
To: OCC-WQ
Subject: FW: NORI for Permit No. WQ0014037001; Harvest Hills Treatment, Ltd.; Harvest Hills Subdivision WWTP
Attachments: NORI Instructions Combined.pdf; WQ0014037001-nori-eng.pdf; WQ0014037001-nori-letter.pdf; WQ0014037001-contact-routing-sheets.docx

---

From: Brandon Maldonado
Sent: Friday, November 8, 2024 2:57 PM
To: jack@uptmorehomes.com
Subject: NORI for Permit No. WQ0014037001; Harvest Hills Treatment, Ltd.; Harvest Hills Subdivision WWTP

Good afternoon,

Permit No. WQ0014037001

Applicants are required to publish the Notice of Receipt of Application and Intent to Obtain a Water Quality Permit within 30 days of the application being declared administratively complete.

Attached are:

- Letter of Declaration of Administrative Completeness
- Notice of Receipt of Application and Intent to Obtain a Water Quality Permit
- Instructions of Public Notice
- Public Notice Verification Form
- Affidavit of Publication

IMPORTANT: You must enter the Applicant Name and Permit Number into the sections provided in the upper right portion of the Affidavit of Publication. The CID or CCO Number section does not need to be entered and is intended for internal use only.

Please let me know if you have any questions.

Thank you,

Brandon Maldonado
Texas Commission on Environmental Quality
Water Quality Division
512-239-4331
Brandon.Maldonado@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

November 8, 2024

Mr. Jack Uptmore
General Manager
Harvest Hills Treatment, Ltd
103 South Winston Lane
San Antonio, Texas 78213

RE: Declaration of Administrative Completeness
Applicant Name: Harvest Hills Treatment, Ltd (CN602744997)
Permit No.: WQ0014037001
Site Name: Harvest Hills Subdivision WWTP (RN103013991)
Type of Application: Renewal without changes

Dear Mr. Uptmore:

The executive director has declared the above referenced application, received on October 22, 2024 administratively complete on November 8, 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 Brandon Maldonado at (512) 239-4331 or Brandon.Maldonado@tceq.texas.gov.

Sincerely,

J Bowers

Jennifer E. Bowers
Section Manager, Water Quality Division Support
Office of Water
Texas Commission of Environmental Quality

JEB/BM

Enclosures

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 602744997		RN 103013991

SECTION II: Customer Information

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

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

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

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* — *If new Customer, enter previous Customer below:*

Harvest Hills Treatment, Ltd.

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
8003051	3203564	43-2047042	

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

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

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

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

15. Mailing Address:							
	103 S Winston Ln						
	City	San Antonio	**State**	TX	**ZIP**	78213	**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)*
(210) 969-2522		(210) 696-2034

SECTION III: Regulated Entity Information

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

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

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

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

Harvest hills Subdivision Wastewater Treatment Plant

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	3910 Harvest Canyon							
	City	Santa Clara	**State**	TX	**ZIP**	78124	**ZIP + 4**	
24. County	Guadalupe							

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

25. Description to Physical Location:	

26. Nearest City	State	Nearest ZIP Code

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

27. Latitude (N) In Decimal:	29.60444444		28. Longitude (W) In Decimal:	98.16416667	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	36	16	98	09	51

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.)*

A wastewater treatment plant that serves

34. Mailing Address:	**103 S Winston Ln**

	City	San Antonio	State	TX	ZIP	78213	ZIP + 4	

35. E-Mail Address:	jack@uptmorehomes.com

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(210) 696-2522		(210) 696-2034

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

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☒ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:
	WQ0014037001			

SECTION IV: Preparer Information

40. Name:	Gregory Barfell	41. Title:	Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(210) 828-7070		(210) 828-7076	greg@copeengineeringtx.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:	Cope Engnineering, Inc.	Job Title:	Engineer	
Name *(In Print)*:	Gregory Barfell		Phone:	(210) 828- 7070
Signature:	greg barfell		Date:	10/31/2024

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.

Harvest Hills Treatment, LTD. (CN 602744997) operates Harvest Hills Wastewater Treatment Facility (RN 103013991). a Wastewater Treatment Facility. The facility is located at 3910 Harvest Canyon , in Santa Clara, Guadalupe County, Texas 78124.

This renewal is to use 90,000 gallons per day of treated domestic wastewater for irrigation.

Discharges from the facility are expected to contain Daily Average: BOD5 10 mg/l, TSS 25 mg/l, pH >5. .Sanitary Sewer is treated by *a wastewater treatment plant. Sanitary sewer enters the treatment plant and is processed through the existing bar screen and aerobic digester. The wastewater is then sent to the aeration chamber, then to the*

clarifier, then go the chlorine contact chamber, then to the storage pond, then to the I irrigation field.

The TCEQ is committed to accessibility.
To request a more accessible version of this report, please contact the TCEQ Help Desk at (512) 239-4357.

Compliance History Report

Compliance History Report for CN602744997, RN103013991, Rating Year 2024 which includes Compliance History (CH) components from September 1, 2019, through August 31, 2024.

Customer, Respondent, or Owner/Operator: CN602744997, Harvest Hills Treatment, Ltd. **Classification:** HIGH **Rating:** 0.00

Regulated Entity: RN103013991, HARVEST HILLS TREATMENT **Classification:** HIGH **Rating:** 0.00

Complexity Points: 8 **Repeat Violator:** NO

CH Group: 14 - Other

Location: 3910 HARVEST CANYON MARION, TX 78124, GUADALUPE COUNTY

TCEQ Region: REGION 13 - SAN ANTONIO

ID Number(s):
WASTEWATER PERMIT WQ0014037001

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 22, 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.

Harvest Hills Treatment, Ltd., 103 South Winston Lane, San Antonio, Texas 78213 has applied to the TCEQ to renew Texas Land Application Permit No. WQ0014037001 to authorize the disposal of treated wastewater at a volume not to exceed a daily average flow of 90,000 gallons per day via surface irrigation of 35 acres of non-public access land. The domestic wastewater treatment facility and disposal area are located at 3910 Harvest Canyon, in the city of Santa Clara, in Guadalupe County, Texas 78124. TCEQ received this application on October 22, 2024. The permit application will be available for viewing and copying at Guadalupe County Justice Center, Front Desk, 211 West Court Street, Seguin, in Guadalupe 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=-98.164166,29.604444&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: _____

TCEQ Interoffice Memorandum

To: Deba Dutta, P.E., Leader, Municipal Permits Team

From: April Hoh, P.G., Geologist, Water Quality Assessment Team

Date: November 15, 2024

Subject: **Geology Compliance Review of Groundwater-Related Special Provisions for Permit No. WQ0014037-001, Harvest Hills Treatment, Renewal, Guadalupe County**

Based upon the review of the existing permit language the WQA Team reviewing geologist recommends the following modifications to special provisions:

Recommendations:

Update Special Provision 13 as follows:

1. For the existing storage lagoon: 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 1x10-7 cm/sec
        6. Soil compaction will be 95% standard proctor at optimum moisture content
    b. Membrane lining with a minimum thickness of 30 mils, and an underdrain leak detection system.

    The permittee shall maintain certification by a Texas Licensed Professional Engineer that the completed pond lining meets the appropriate criteria above. Upon request, the certification shall be sent to the TCEQ Regional Office (MC Region 13), the Water Quality Assessment Team (MC-150), and Water Quality Compliance Monitoring Team (MC-224) of the Enforcement Division.

Add the following two new provisions after Special Provision 13 to address the existing ponds:

2. The existing storage pond shall be maintained and operated in a manner that prevents unauthorized discharge to water in the state and contamination of groundwater.
3. 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.
4. Add the following provisions for any new or modified ponds:

Any new or modified wastewater pond shall be adequately lined to control seepage in accordance with 30 TAC §217.203. 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. 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 required by 30 TAC 217.203. 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.

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 13), 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.

5. 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.

6. Add the following provision to address water wells:

   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.

From: April Hoh
To: greg@copeengineeringtx.com
Cc: jack@uptmorehomes.com; Sara Holmes
Subject: Pretech comments--WQ0014037001 Harvest Hills Treatment
Date: Thursday, October 31, 2024 10:24:39 AM
Attachments: 14037-001.Pretech.Oct2024.docx

Good morning.

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 by **November 14**, **2024**.

Any revisions can be sent electronically to the recipients of this email. If you have any questions, please feel free to contact either Sara Holmes or me.

Thank you,
April

April Hoh, P.G.

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

512-239-3567

HARVEST HILLS TREATMENT, LTD.
PERMIT APPLICATION NO. WQ0014037001
APPLICATION FOR A RENEWAL
Technical Completeness Review

Please address the following items:

GEOLOGY ITEMS

1. The USGS topographic map identifies an unnamed tributary to Santa Clara Creek and two freshwater ponds either onsite or adjacent to the property boundary. Please describe what protective measures (for example buffers) are in place to prevent wastewater irrigation into these waters in the state.

AGRONOMY ITEMS

1. Domestic Technical Report 1.0, Section 7. Pollutant Analyses of Treated Effluent – Please submit the effluent lab analyses.

2. Domestic Worksheet 3.0, Section 2. Land Application Site(s) – Please include the crop type in Table 3.0(1).

For geology/groundwater-related questions, please contact April Hoh, P.G. via email at April.Hoh@tceq.texas.gov (preferred) or at 512-239-3567 and for agronomy related questions, please contact Sara Holmes via email at Sara.Holmes@tceq.texas.gov (preferred) or at 512-239-4534.

From: Greg Barfell
To: April Hoh
Cc: Sara Holmes
Subject: RE: Pretech comments--WQ0014037001 Harvest Hills Treatment
Date: Friday, November 1, 2024 12:40:33 PM
Attachments: 10054 - Technical Report 1.0 Pg 31.pdf
Effluent Analysis 773857-773859.pdf
TCEQ Cmt-Response_Water Quality Assessment.pdf

Good afternoon April,

Attached is the comment response letter, revised technical report page 31, and the lab effluent analysis.
Please let me know if there is anything else you need.

Thank you,
Greg

From: April Hoh <april.hoh@tceq.texas.gov>
Sent: Thursday, October 31, 2024 11:20 AM
To: Greg Barfell <greg@copeengineeringtx.com>
Cc: Sara Holmes <Sara.Holmes@tceq.texas.gov>
Subject: RE: Pretech comments--WQ0014037001 Harvest Hills Treatment

Greg,

Thanks for checking! You can just respond to that question in your email or letter response.

April

From: Greg Barfell <greg@copeengineeringtx.com>
Sent: Thursday, October 31, 2024 10:57 AM
To: April Hoh <april.hoh@tceq.texas.gov>
Cc: Sara Holmes <Sara.Holmes@tceq.texas.gov>
Subject: RE: Pretech comments--WQ0014037001 Harvest Hills Treatment

Good morning,

Where in the report do you want me to describe the protective measures in place to prevent wastewater irrigation into the tributaries?

Thank you,
Greg

From: April Hoh <april.hoh@tceq.texas.gov>
Sent: Thursday, October 31, 2024 10:25 AM

To: Greg Barfell <greg@copeengineeringtx.com>
Cc: jack@uptmorehomes.com; Sara Holmes <Sara.Holmes@tceq.texas.gov>
Subject: Pretech comments--WQ0014037001 Harvest Hills Treatment

Good morning.

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 by **November 14**, **2024**.

Any revisions can be sent electronically to the recipients of this email. If you have any questions, please feel free to contact either Sara Holmes or me.

Thank you,
April

April Hoh, P.G.

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

512-239-3567

Cope
Engineering, Inc.
Texas Registration #F-16078

November 1, 2024

Texas Commission on Environmental Quality
Applications Review and Processing Team (MC148)
Water Quality Division
P.O. Box 13087
Austin, Texas 78711-3087

Re: Application to Renew Permit No. WQ0014037001
Issued to Harvest Hills Treatment, Ltd.
CN 602744997; RN 103013991

Ms. April Hoh:

The following responses have been completed in reference to the TCEQ comment letter dated October 31, 2024:

Geology Items

1. The USGS topographic map identifies an unnamed tributary to Santa Clara Creek and two freshwater ponds either onsite or adjacent to the property boundary. Please describe what protective measures (for example buffers) are in place to prevent wastewater irrigation into these waters in the state.
The wastewater irrigation field has a berm surrounding the entire field to prevent the irrigation water from entering any surrounding tributaries or ponds.

Agronomy Items

2. Domestic Technical Report 1.0, Section 7. Pollutant Analyses of Treated Effluent – Please submit the effluent lab analyses.
The effluent lab analyses have been included.

3. Domestic Worksheet 3.0, Section 2. Land Application Site(s) – Please include the crop type in Table 3.01(1).
The crop type has been included in Table 3.01(1) and is attached.

If you have any further questions and/or comments, let us know.

Thank You,

Greg Barfell, E.I.T.
Cope Engineering, Inc.

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.0: LAND DISPOSAL OF EFFLUENT

The following is required for renewal, new, and amendment permit applications.

Section 1. Type of Disposal System (Instructions Page 68)

Identify the method of land disposal:

- ☐ Surface application
- ☒ Irrigation
- ☐ Drip irrigation system
- ☐ Evaporation
- ☐ Other (describe in detail): Click to enter text.
- ☐ Subsurface application
- ☐ Subsurface soils absorption
- ☐ Subsurface area drip dispersal system
- ☐ Evapotranspiration beds

NOTE: All applicants without authorization or proposing new/amended subsurface disposal MUST complete and submit Worksheet 7.0.

For existing authorizations, provide Registration Number: Click to enter text.

Section 2. Land Application Site(s) (Instructions Page 68)

In table 3.0(1), provide the requested information for the land application sites. Include the agricultural or cover crop type (wheat, cotton, alfalfa, bermuda grass, native grasses, etc.), land use (golf course, hayland, pastureland, park, row crop, etc.), irrigation area, amount of effluent applied, and whether or not the public has access to the area. Specify the amount of land area and the amount of effluent that will be allotted to each agricultural or cover crop, if more than one crop will be used.

Table 3.0(1) – Land Application Site Crops

Crop Type & Land Use	Irrigation Area (acres)	Effluent Application (GPD)	Public Access? Y/N
Bermuda Grass, Agriculture/Pasture	35	90,000	N

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name: TCEQ Permit Renewal** **Sample ID: Effluent** **Matrix: Non-Potable Water** **Date/Time Taken: 9/6/2024 1141**	**PCS Sample #: 773857 Page 1 of 2** **Date/Time Received: 9/6/2024 13:15** **Report Date: 9/16/2024** **Approved by:** Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
E. coli. (Enumeration-MPN) 18		0	CFU/100ml	1	09/06/2024 14:30	9223 IDEXX Quanti-Tray	CLH/LMW
pH	I	7.8	S.U.	N/A	09/06/2024 14:41	SM 4500-H+ B	GQM
BOD5		10	mg/L	3	09/06/2024 14:41	SM 5210 B	GQM
CBOD5		5	mg/L	3	09/06/2024 14:41	SM 5210 B	GQM
Chloride_IC		543	mg/L	5	09/06/2024 15:12	EPA 300.0	JAS
Conductivity, Specific		2,286	µmhos/cm at 25° C	1	09/09/2024 08:22	SM 2510B	LCC
Nitrate-N_IC		<0.5	mg/L	0.5	09/06/2024 15:12	EPA 300.0	JAS
Phosphorus, Total		0.26	mg/L	0.10	09/11/2024 05:10	SM 4500-P/B/E	JAS

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
E. coli. (Enumeration-MPN) 18	N/A	N/A	N/A			N/A			
pH	N/A	N/A	N/A			N/A			
BOD5	5	23	N/A	N/A	N/A	N/A	223	167 - 228	
CBOD5	5	23	N/A	N/A	N/A	N/A	223	167 - 228	
Chloride_IC	<1	10	95	100	99	102	94	85 - 115	
Conductivity, Specific	N/A	N/A	N/A			N/A			
Nitrate-N_IC	2	20	70	104	103	130	103	85 - 115	
Phosphorus, Total	<1	10	91	92	93	103	101	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

[1] *Informational purposes only - pH outside hold time - pH Temperature: 26°C*

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits
QC Data Reported in %, Except BOD in mg/L

www.pcslab.net
chuck@pcslab.net
1532 Universal City Blvd
Universal City, TX 78148-3318
Main: 210-340-0343
Fax: 210-658-7903
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POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name: TCEQ Permit Renewal** **Sample ID: Effluent** **Matrix: Non-Potable Water** **Date/Time Taken: 9/6/2024 1141**	**PCS Sample #: 773857 Page 2 of 2** **Date/Time Received: 9/6/2024 13:15** **Report Date: 9/16/2024**

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
Sulfate_IC	82	mg/L	5	09/06/2024 15:12	EPA 300.0	JAS
Total Dissolved Solids	1,280	mg/L	10	09/10/2024 13:35	SM 2540C	PML
Total Suspended Solids	25	mg/L	1	09/10/2024 10:05	SM 2540 D	PML
Ammonia-N (ISE)	12.2	mg/L	0.1	09/10/2024 14:35	SM 4500-NH3 D	BMR
Kjeldahl-N, Total	17	mg/L	1	09/12/2024 11:00	SM 4500-N B/C	BMR
Alkalinity, Total (@pH 4.5)	270	mg/L	10	09/11/2024 07:00	SM 2320 B	LCC

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
Sulfate_IC	1	10	94	100	100	101	102	85 - 115	
Total Dissolved Solids	3	10	N/A	N/A	N/A	N/A			
Total Suspended Solids	2	10	N/A			N/A			
Ammonia-N (ISE)	4	10	80	103	107	120	87	85 - 115	
Kjeldahl-N, Total	2	10	90	101	103	109	106	85 - 115	<1
Alkalinity, Total (@pH 4.5)	<1	10	95	97	97	107	100	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name:** **Sample ID: Aeration basin - 1** **Matrix: Non-Potable Water** **Date/Time Taken: 9/6/2024 1142**	**PCS Sample #: 773858 Page 1 of 1** **Date/Time Received: 9/6/2024 13:15** **Report Date: 9/10/2024** **Approved by:** Chuck Wallgren, President

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
MLSS	4,900	mg/L	1	09/06/2024 15:40	SM 2540 D	PML

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
MLSS	3	10	N/A			N/A			

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Jason Breithaupt **Harvest Hills Treatment, LTD.** **103 S. Winston Ln** **San Antonio, TX 78213**	**Project Name:** **Sample ID: R.A.S.** **Matrix: Non-Potable Water** **Date/Time Taken: 9/6/2024 1145**	**PCS Sample #: 773859 Page 1 of 1** **Date/Time Received: 9/6/2024 13:15** **Report Date: 9/10/2024** **Approved by:** Chuck Wallgren, President

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
MLSS	6,780	mg/L	1	09/06/2024 15:40	SM 2540 D	PML

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
MLSS	3	10	N/A			N/A			

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

www.pcslab.net
chuck@pcslab.net

1532 Universal City Blvd
Universal City, TX 78148-3318

Main: 210-340-0343
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POLLUTION CONTROL SERVICES

Chain of Custody Number
773857

Stamp 1st sample and COC as same number

MULTIPLE SAMPLE ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

CUSTOMER INFORMATION

Name: Harvest Hills Treatment, LTD.

REPORT INFORMATION

Attention: Jason Breithaupt
Phone: (210) 669-0007
Fax: (000) 000-0000

SAMPLE INFORMATION

Project Information:

Report "Soils" ☐ As Is ☐ Dry Wt.

Collected By: Jason Breithaupt

Requested Analysis

Instructions/Comments:

Client / Field Sample ID	Collected Date	Collected Time	Field Chlorine Residual mg/L	Composite or Grab	Matrix (DW-Drinking Water; NPW-Non-potable water; WW-Wastewater; LW-Liquid Waste)	Container Type	Container Number	Container Preservative	pH, BOD	MLSS,	E coli)	see attached permit Renewal					PCS Sample Number
Effluent	Start: 9-6-24 End: 9-6-24	Start: 1140 End: 1145		☐C ☒G	☐ DW ☐ NPW ☒ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☑P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☑ICE ☐	★								773857 ☒S ☒B ☒N ww ☐HEM Other:
Aeration basin - 1	Start: 9-6-24 End: 9-6-24	Start: 1142 End: 1142		☐C ☒G	☐ DW ☐ NPW ☐ WW ☐ Soil ☒ Sludge ☐ LW ☐ Other	☑P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☑ICE ☐		★							773858 ☐S ☐B ☐N ☐HEM Other:
~~Aeration basin - 2~~	~~Start:~~ ~~End:~~	~~Start:~~ ~~End:~~		~~☐C ☒G~~	~~☐ DW ☐ NPW ☐ WW ☐ Soil ☒ Sludge ☐ LW ☐ Other~~	~~☑P ☐G ☐O~~		~~☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☑ICE ☐~~		~~★~~							~~☐S ☐B ☐N ☐HEM Other:~~
R.A.S.	Start: 9-6-24 End: 9-6-24	Start: 1145 End: 1145		☐C ☒G	☐ DW ☐ NPW ☐ WW ☐ Soil ☒ Sludge ☐ LW ☐ Other	☑P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☑ICE ☐		★							773859 ☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:

Required Turnaround: ☒ Routine (6-10 days) | ***EXPEDITE***: (See Surcharge Schedule) ☐ < 8 Hrs. ☐ < 16 Hrs. ☐ < 24 Hrs. ☐ 5 days ☐ Other: ______ ***Rush Charges Authorized by:***

Sample Archive/Disposal: ☒ Laboratory Standard ☐ Hold for client pick up

Container Type: P = Plastic, G = Glass, O = Other

Carrier ID:

Relinquished By: Jason Breith	Date: 9-6-24	Time: 115	Received By:	Date: 9-6-24 Time: 1315
Relinquished By:	Date:	Time:	Received By:	Date: Time:

Rev. Multiple Sample COC_20180628

1532 Universal City Blvd., Ste. 100, Universal City, Texas 78148
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Login at

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					
Total Suspended Solids, mg/l					
Ammonia Nitrogen, mg/l					
Nitrate Nitrogen, mg/l					
Total Kjeldahl Nitrogen, mg/l					
Sulfate, mg/l					
Chloride, mg/l					
Total Phosphorus, mg/l					
pH, standard units					
Dissolved Oxygen*, mg/l		N/A			
Chlorine Residual, mg/l					
E.coli (CFU/100ml) freshwater					
Entercocci (CFU/100ml) saltwater		N/A			
Total Dissolved Solids, mg/l					
Electrical Conductivity, µmohs/cm, †					
Oil & Grease, mg/l		N/A			
Alkalinity ($CaCO_3$)*, mg/l		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					
Total Dissolved Solids, mg/l					
pH, standard units					
Fluoride, mg/l					
Aluminum, mg/l					
Alkalinity ($CaCO_3$), mg/l					

Pollution Control Services

Sample Log-In Checklist

PCS Sample No(s) 773857 773859 **COC No.** 773857

Client/Company Name: Harvest Hills **Checklist Completed by:** LMW

Sample Delivery to Lab Via:
Client Drop Off ✓ Commercial Carrier: Bus ___ UPS ___ Lone Star ___ FedEx ___ USPS ___
PCS Field Services: Collection/Pick Up ___ Other: ___

Sample Kit/Coolers
Sample Kit/Cooler? Yes ✓ No ___ Sample Kit/Cooler: Intact? Yes ✓ No ___
Custody Seals on Sample Kit/Cooler: Not Present ✓ If Present, Intact ___ Broken ___
Sample Containers Intact; Unbroken and Not Leaking? Yes ✓ No ___
Custody Seals on Sample Bottles: Not Present ✓ If Present, Intact ___ Broken ___
COC Present with Shipment or Delivery or Completed at Drop Off? Yes ✓ No ___
Has COC sample date/time and other pertinent information been provided by client/sampler? Yes: ✓ No: ___
Has COC been properly Signed when Received/Relinquished? Yes ✓ No ___
Does COC agree with Sample Bottle Information, Bottle Types, Preservation, etc.? Yes ✓ No ___
All Samples Received before Hold Time Expiration? Yes ✓ No ___
Sufficient Sample Volumes for Analysis Requested? Yes ✓ No ___
Zero Headspace in VOA Vial? Yes ___ No ___

Sample Preservation:
* ***Cooling:*** **Not Required** ___ or **Required** ✓
If cooling required, record temperature of submitted samples Observed/Corrected 9 / 6 °C
Is Ice Present in Sample Kit/Cooler? ✓ Yes ___ No Samples received same day as collected? ✓ Yes ___ No
Lab Thermometer Make and Serial Number: Vaughan 1807009583 Other: ___

Acid Preserved Sample - If present, is pH <2? **Yes** ___ **No** ___ ** ___H_2SO_4 ___HNO_3 ___H_3PO_4
Base Preserved Sample - If present, is pH >12? Yes ___ No ___ ___NaOH
Other Preservation: ___ If Present, Meets Requirements? Yes ___ No ___
Sample Preservations Checked by: ___ Date ___ Time ___
pH paper used to check sample preservation (PCS log #): ___ (HEM pH checked at analysis).

Samples Preserved/Adjusted by Lab:	Lab #	Parameters Preserved	Preservative Used	Log #
		NH3N, TKN, TP04P	H2SO4	01808206

Adjusted by Tech/Analyst: LMW Date: 9.6.24 Time: 1335

Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ RevisionComments
Person Notified: ___ Contacted by: ___
Notified Date: ___ Time: ___
Method of Contact: At Drop Off: ___ Phone ___ Left Voice Mail ___ E-Mail ___ Fax ___
Unable to Contact ___ Authorized Laboratory to Proceed : ___ (Lab Director)
Regarding / Comments: ___

Actions taken to correct problems/discrepancies: ___

Receiving qualifier needed (*requires client notification above*) Temp. ___ Holding Time ___ Initails: ___
Receiving qualifier entered into LIMS at login Initial/Date: ___
Revision Comments: ___

TCEQ Interoffice Memorandum

To: Deba Dutta, P.E., Team Leader
Municipal Permits Team

From: Sara Holmes
Water Quality Assessment Team

Date: November 12, 2024

Subject: Agronomy Recommendation, Harvest Hills Treatment, Ltd., Renewal, Permit WQ0014037001, Guadalupe County

Based upon review of the permit application and an evaluation of soils and agronomy information, the WQA Team reviewing agronomist recommends the following:

1. Replace Special Provision 4 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 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.

2. Replace Special Provision 9 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.

3. Add Special Provision:

The permittee shall use cultural practices to promote and maintain the health and propagation of the Bermuda grass 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.

4. 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.