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 *

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 **

SECTION 15. PLAIN LANGUAGE SUMMARY

Hays County Development District No. 1 proposes to operate the Ranch at Caliterra Treatment Facility, an activated sludge treatment plant. The facility will be located approximately 1 mile SE of the intersection of CR 190 and CR 220 in Hays County, Texas.

Applicant requests a TLAP permit for wastewater disposal. This permit will not authorize a discharge of pollutants into water in the state. Discharges from the facility, projected to be 41,000 gpd, are expected to contain organic and nutrient materials from domestic wastewater sources. The raw wastewater will be treated in an activated sludge-based treatment plant to provide an effluent quality suitable for irrigation.

SECTION 15. PLAIN LANGUAGE SUMMARY

El Distrito N.º 1 de Desarrollo del Condado de Hays propone operar la Instalación de Tratamiento de Ranch at Caliterra, una planta de tratamiento de lodos activados. La planta estará ubicada aproximadamente a 1 milla al sureste de la intersección de CR 190 y CR 220 en el Condado de Hays, Texas.

El solicitante solicita un permiso TLAP para la eliminación de aguas residuales. Este permiso no autorizará la descarga de contaminantes en el agua del estado. Se espera que las descargas de la instalación, que se estima que serán de 41,000 gpd, contengan materiales orgánicos y nutrientes provenientes de fuentes de aguas residuales domésticas. Las aguas residuales sin tratar se tratarán en una planta de tratamiento a base de lodos activados para proporcionar una calidad de efluente adecuada para el riego.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

PROPOSED PERMIT NO. WQ0016604001

APPLICATION. Hays County Development District 1, 2929 Allen Parkway, Suite 3150, Houston, Texas 77019, has applied to the Texas Commission on Environmental Quality (TCEQ) for proposed Texas Land Application Permit (TLAP) No. WQ0016604001 to authorize the disposal of treated wastewater at a volume not to exceed a daily average flow of 41,000 gallons per day via irrigation on a minimum of 35 acres. The domestic wastewater treatment facility and disposal area will be located approximately one mile southeast of the intersection of County Road 190/Creek Road and County Road 220/Mount Gainor Road, near the city of Dripping Springs, in Hays County, Texas 78620. TCEQ received this application on August 22, 2024. The permit application will be available for viewing and copying at Dripping Springs Public Library, 501 Sportsplex Drive, Dripping Springs, in Hays 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=-98.12,30.18&level=18

ALTERNATIVE LANGUAGE NOTICE. Alternative language notice in Spanish is available at: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tlap-applications. El aviso de idioma alternativo en español está disponible en https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tlap-applications.

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.**

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 Hays County Development District 1 at the address stated above or by calling Mr. Zachary Petrov, Johnson Petrov LLP, at 713-489-8977.

Issuance Date: September 20, 2024

Comisión de Calidad Ambiental del Estado de Texas

AVISO DE RECIBO DE LA SOLICITUD E
INTENCION DE OBTENER PERMISO PARA LA CALIDAD DEL AGUA

PERMISO PROPUESTO NO. WQ0016604001

SOLICITUD. El Distrito 1 de Desarrollo del Condado de Hays, 2929 Allen Parkway, Suite 3150, Houston, Texas 77019, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) por el propuesto Permiso de Aplicación en Terrenos de Texas (TLAP) No. WQ0016604001 para autorizar la disposición de aguas residuales tratadas en un volumen que no sobrepasa un flujo promedio diario de 41,000 galones por día por medio de riego en un mínimo de 35 acres. La planta de tratamiento de aguas domésticas residuales y el área de disposición estarán ubicados aproximadamente a una milla al sureste de la intersección de County Road 190/Creek Road y County Road 220/Mount Gainor Road, cerca de la ciudad de Dripping Springs, en el Condado de Hays, Texas 78620. La TCEQ recibió esta solicitud el día 22 de agosto de 2024. La solicitud para el permiso estará disponible para leerla y copiarla en la Biblioteca Pública de Dripping Springs, 501 Sportsplex Drive, Dripping Springs, en el condado de Hays, Texas, antes de la fecha de publicación de este aviso en el periódico. La solicitud, incluidas las actualizaciones y los avisos asociados, están disponibles electrónicamente en la siguiente página web: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tlap-applications
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=-98.12,30.18&level=18

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

AVISO ADICIONAL. El Director Ejecutivo de la TCEQ ha determinado que la solicitud es administrativamente completa y conducirá una revisión técnica de la solicitud. Después de completar la revisión técnica, el Director Ejecutivo puede preparar un borrador del permiso y emitirá una Decisión Preliminar sobre la solicitud. **El aviso de la solicitud y la decisión preliminar serán publicados y enviado a los que están en la lista de correo de las personas a lo largo del condado que desean recibir los avisos y los que están en la lista de correo que desean recibir avisos de esta solicitud. El aviso dará la fecha límite para someter comentarios públicos.**

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.

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.

INFORMACIÓN DISPONIBLE EN LÍNEA. Para detalles sobre el estado de la solicitud, favor de visitar la Base de Datos Integrada de los Comisionados en www.tceq.texas.gov/goto/cid. Para buscar en la base de datos, utilizar el número de permiso para esta solicitud que aparece en la parte superior de este aviso.

CONTACTOS E INFORMACIÓN A LA AGENCIA. Todos los comentarios públicos y solicitudes deben ser presentadas electrónicamente vía http://www14.tceq.texas.gov/epic/eComment/ o por escrito dirigidos a la Comisión de Texas de Calidad Ambiental, Oficial de la Secretaría (Office of Chief Clerk), MC-105, P.O. Box 13087, Austin, Texas 78711-3087. 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. Para obtener más información acerca de esta solicitud de permiso o el proceso de permisos, llame al programa de educación pública de la TCEQ, gratis, al 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040.

También se puede obtener información adicional del Distrito 1 de Desarrollo del Condado de Hays en la dirección indicada arriba o llamando al Sr. Zachary Petrov, Johnson Petrov LLP, al 713-489-8977.

Fecha de emisión el 20 de septiembre de 2024

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

NEW

PERMIT NO. WQ0016604001

APPLICATION AND PRELIMINARY DECISION. Hays County Development District 1, 2929 Allen Parkway, Suite 3150, Houston, Texas 77019, has applied to the Texas Commission on Environmental Quality (TCEQ) for a new permit, TCEQ Permit No. WQ0016604001 to authorize the disposal of treated domestic wastewater at a daily average flow not to exceed 41,000 gallons per day via surface irrigation of 35 acres of public access land. This permit will not authorize a discharge of pollutants into water in the state. TCEQ received this application on August 22, 2024.

The wastewater treatment facility and disposal site will be located approximately one mile southeast of the intersection of County Road 190/Creek Road and County Road 220/Mount Gainor Road, near the City of Dripping Springs, Hays County, Texas 78620. The wastewater treatment facility and disposal site will be in the drainage basin of Onion Creek in Segment No. 1427 of the Colorado River Basin. This link to an electronic map of the site or facility's general location is provided as a public courtesy and is not part of the application or notice. For the exact location, refer to the application.
https://gisweb.tceq.texas.gov/LocationMapper/?marker=-98.12,30.18&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 Dripping Springs Public Library, 501 Sportsplex Drive, Dripping Springs, in Hays 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.

ALTERNATIVE LANGUAGE NOTICE. Alternative language notice in Spanish is available at https://www.tceq.texas.gov/permitting/wastewater/plain-language-summaries-and-public-notices. El aviso de idioma alternativo en español está disponible en https://www.tceq.texas.gov/permitting/wastewater/plain-language-summaries-and-public-notices.

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.**

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 Hays County Development District 1 at the address stated above or by calling Mr. Zachary Petrov, Johnson Petrov LLP, at 713-489-8977.

Issuance Date: April 4, 2025

COMISIÓN DE CALIDAD AMBIENTAL DE TEXAS

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

NUEVO

PERMISO N.º WQ0016604001

SOLICITUD Y DECISIÓN PRELIMINAR. Hays County Development District 1 (Distrito de Desarrollo 1 del Condado de Hays), 2929 Allen Parkway, Suite 3150, Houston, Texas 77019, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) un nuevo permiso, el Permiso TCEQ n.º WQ0016604001, para autorizar la eliminación de aguas residuales domésticas tratadas con un caudal promedio diario que no exceda los 41,000 galones por día mediante riego superficial en 35 acres de terrenos de acceso público. Este permiso no autoriza la descarga de contaminantes al agua del estado. La TCEQ recibió esta solicitud el 22 de agosto de 2024.

La instalación de tratamiento de aguas residuales y el sitio de eliminación estarán ubicados aproximadamente a una milla al sureste de la intersección de County Road 190/Creek Road y County Road 220/Mount Gainor Road, cerca de la ciudad de Dripping Springs, Condado de Hays, Texas 78620. La instalación de tratamiento de aguas residuales y el sitio de eliminación estarán ubicados en la cuenca hidrográfica de Onion Creek, en el segmento n.º 1427 de la cuenca del río Colorado. Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación se proporciona como cortesía pública y no forma parte de la solicitud ni del aviso. Para conocer la ubicación exacta, consulte la solicitud.
https://gisweb.tceq.texas.gov/LocationMapper/?marker=-98.12,30.18&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 este permiso, si 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 la Biblioteca Pública de Dripping Springs, 501 Sportsplex Drive, Dripping Springs, en el Condado de Hays, Texas. La solicitud, incluidas las actualizaciones y los avisos asociados, están disponibles electrónicamente en la siguiente página web: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tlap-applications.

AVISO DE IDIOMA ALTERNATIVO. Alternative language notice in Spanish is available at https://www.tceq.texas.gov/permitting/wastewater/plain-language-summaries-and-public-notices. El aviso de idioma alternativo en español está disponible en https://www.tceq.texas.gov/permitting/wastewater/plain-language-summaries-and-public-notices.

COMENTARIO PÚBLICO / REUNIÓN PÚBLICA. **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 realizará 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 todos 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 será enviada por correo a todos los que presentaron un comentario público y a las personas que están en la lista de difusión para esta solicitud. Si se reciben comentarios, el aviso enviado por correo también proveerá instrucciones para pedir una audiencia administrativa de lo contencioso o solicitar una reconsideración de la decisión del Director Ejecutivo**. Una audiencia administrativa de lo contencioso es un procedimiento legal similar a un procedimiento legal civil en un tribunal de distrito del estado.

PARA PEDIR UNA AUDIENCIA ADMINISTRATIVA DE LO CONTENCIOSO, USTED DEBE INCLUIR EN SU PEDIDO LOS SIGUIENTES DATOS: su nombre; dirección; número de teléfono; nombre del solicitante y número del permiso propuesto; la ubicación y la distancia de su propiedad/actividad con respecto a la instalación propuesta; una descripción específica de la forma en que usted sería afectado adversamente por la instalación de una manera no común al público en general; una lista de todas las cuestiones de hecho controvertidas que usted somete durante el período de comentarios, y la declaración "[Yo/nosotros] solicito/solicitamos una audiencia administrativa de lo contencioso". Si la solicitud de audiencia administrativa de lo contencioso se presenta por parte de un grupo o una asociación, la solicitud debe identificar el representante del grupo para recibir correspondencia en el futuro; debe identificar por su nombre y dirección física a un miembro individual del grupo que sería afectado adversamente por la instalación o actividad propuesta; debe proveer la información ya indicada anteriormente con respecto a la ubicación del miembro afectado y la distancia de la instalación o actividad; debe explicar cómo y por qué el miembro sería afectado; y debe explicar la forma en que los intereses que el grupo desea proteger son pertinentes al propósito del grupo.

Después del cierre de todos los períodos para los pedidos y comentarios pertinentes, el Director Ejecutivo enviará la solicitud y los pedidos para reconsideración o por una audiencia administrativa de lo contencioso a los Comisionados de la TCEQ para su consideración en una reunión programada de la Comisión.

La Comisión sólo podrá conceder una solicitud de audiencia administrativa de lo contencioso sobre cuestiones que el solicitante haya presentado en sus comentarios oportunos y que no fueron retirados posteriormente. **Si se concede una audiencia, el tema de una audiencia se limitará a asuntos de hecho cuestionados o cuestiones mixtas de hecho y ley relacionadas con las preocupaciones pertinentes y materiales sobre la calidad del agua presentadas durante el período de comentarios.**

ACCIÓN DEL DIRECTOR EJECUTIVO. El Director Ejecutivo puede emitir una aprobación final de la solicitud a menos que se haya presentado una solicitud oportuna de audiencia administrativa de lo contencioso o un pedido de reconsideración. Si se ha presentado una solicitud oportuna de audiencia administrativa de lo contencioso o un pedido de reconsideración, el Director Ejecutivo no emitirá una aprobación final sobre el permiso y remitirá la solicitud y el pedido a los Comisionados de la TECQ para su consideración en una reunión programada de la Comisión.

LISTA DE CORREO. Si usted somete comentarios públicos, un pedido para una audiencia administrativa de lo contencioso o una reconsideración de la decisión del Director Ejecutivo, será añadido a la lista de difusión para esta solicitud específica para recibir avisos públicos futuros enviados por la Oficina del Secretario Principal. Además, puede pedir que lo incluyan en: (1) la lista de correo permanente para el nombre de solicitante y número de permiso específicos; y/o (2) la lista de correo para un condado especifico. Si desea ser añadido a la lista de correo permanente y/o del condado, identifique claramente la(s) lista(s) y envíe su pedido a la Oficina del Secretario Principal de la TCEQ, a la dirección proporcionada más abajo.

Todos los comentarios públicos escritos y pedidos de reunión pública deben ser presentados a la Oficina del Secretario Principal, MC 105, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, TX 78711-3087 o por vía electrónica a www.tceq.texas.gov/goto/comment **dentro de los 30 días siguientes a la fecha de publicación del presente aviso en el periódico.**

INFORMACIÓN DISPONIBLE EN LÍNEA. Para obtener detalles sobre el estado de la solicitud, visite la Base de Datos Integrada de los Comisionados en www.tceq.texas.gov/goto/cid. Busque en la base de datos utilizando el número de permiso para esta solicitud, que se proporciona en la parte superior de este aviso.

CONTACTOS E INFORMACIÓN DE LA AGENCIA. Los comentarios y solicitudes del público deben enviarse electrónicamente a www.tceq.texas.gov/goto/comment, o por escrito a la Comisión de Calidad Ambiental de Texas, Oficina del Secretario Principal, 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 de Hays County Development District 1 en la dirección indicada más arriba o llamando al Sr. Zachary Petrov, Johnson Petrov LLP, at 713-489-8977.

Fecha de emisión: 4 de abril de 2025

PERMIT NO. WQ0016604001

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

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

Hays County Development District 1

whose mailing address is

2929 Allen Parkway, Suite 3150,
Houston, Texas 77019

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

General Description and Location of Waste Disposal System:

Description: The Ranch at Caliterra Wastewater Treatment Facility will consist of an activated sludge process plant using the complete mix aeration mode with single stage nitrification. Treatment units in the Interim phase will include one aeration basin, one sludge holding tank, one final clarifier, one filtration unit, and one chlorine contact basin. Treatment units in the Final phase will include two aeration basins, two sludge holding tank, two final clarifier, two filtration units, and two chlorine contact basins. The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.0205 million gallons per day (MGD) in the Interim phase and 0.041 MGD in the Final phase via surface irrigation of 35 acres of public access land. The facility will include two bolted storage tanks in which each will contain a capacity of 0.95 MGD for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 2.85 acre-feet per year per acre irrigated. The irrigated crops include native grass (warm season), ryegrass (cool season), juniper trees, and mixed hardwood trees.

Location: The wastewater treatment facility and disposal site are located approximately one mile southeast of the intersection of County Road 190/Creek Road and County Road 220/Mount Gainor Road, near the city of Dripping Springs, Hays County, Texas 78620. (See Attachment A.)

Drainage Area: The wastewater treatment facility and disposal site are located in the drainage basin of Onion Creek in Segment No. 1427 of the Colorado River Basin. No discharge of pollutants into water in the state is authorized by this permit.

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

ISSUED DATE:

_____
For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

A. Effluent Limitations

Character: Treated Domestic Sewage Effluent

Volume: Daily Average Flow – 0.0205 MGD in the Interim phase and 0.041 MGD in the Final phase from the treatment system

Quality: The following effluent limitations are required:

	Effluent Concentrations (Not to Exceed)			
Parameter	Daily Average mg/l	7-Day Average mg/l	Daily Maximum mg/	Single Grab mg/l
Carbonaceous Biochemical Oxygen Demand (5-day)	10	15	25	35
Total Suspended Solids	15	25	40	60
Ammonia Nitrogen	3	6	10	15

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

The effluent shall be chlorinated in a chlorine contact chamber to a residual of 1.0 mg/l with a minimum detention time of 20 minutes. If the effluent is to be transferred to a holding pond or tank, re-chlorination prior to the effluent being delivered into the irrigation system will be required. A trace total chlorine residual shall be maintained in the effluent at the point of irrigation application.

B. Monitoring Requirements:

Parameter	Monitoring Frequency	Sample Type
Flow	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	One/week	Grab
Total Suspended Solids	One/week	Grab
Ammonia Nitrogen	One/week	Grab
pH	One/week	Grab

Total Chlorine Residual	Five/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 11) within seven (7) days after failing the TCLP Test.

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

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

TABLE 1

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

* Dry weight basis

3. Pathogen Control

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

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

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

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

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

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

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

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

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

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

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

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

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

Alternative 1

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain 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 permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 11) and the Enforcement Division (MC 224).

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

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

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

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

5. Toxicity Characteristic Leaching Procedure (TCLP) results.

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

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

8. Date(s) of transport.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

F. Record Keeping Requirements

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

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

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

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

G. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 11) and the Enforcement Division (MC224).

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

2. Toxicity Characteristic Leaching Procedure (TCLP) results.

3. Annual sludge or biosolids production in dry tons/year.

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

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

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

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

8. Owner of disposal site(s).

9. Location of disposal site(s).

10. Date(s) of disposal.

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

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

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

A. General Requirements

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

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

B. Record Keeping Requirements

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

   a. the amount of sludge or biosolids transported;

   b. the date of transport;

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

   d. the location of the receiving facility or facilities;

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

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

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

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

C. Reporting Requirements

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

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

2. the annual sludge or biosolids production;

3. the amount of sludge or biosolids transported;

4. the owner of each receiving facility;

5. the location of each receiving facility; and

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

TCEQ Revision 06/2020

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

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

4. Prior to construction of the Interim 0.0205 MGD phase and the Final 0.041 MGD phase wastewater treatment facilities, the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) of the Water Quality Division, a summary transmittal letter according to the requirements in 30 TAC § 217.6(d). If requested by the Wastewater Permitting Section, the permittee shall submit plans, specifications and a final engineering design report which comply with the requirements of 30 TAC Chapter 217, Design Criteria for Domestic Wastewater Systems. The permittee shall clearly show how the treatment system will meet the permitted effluent limitations required on Page 2 of the permit. A copy of the summary transmittal letter shall be available at the plant site for inspection by authorized representatives of the TCEQ.

5. Reporting requirements according to 30 TAC § 319.1-319.11 and any additional effluent reporting requirements contained in this permit are suspended from the effective date of the permit until plant startup or discharge, whichever occurs first, from the facility described by this permit. The permittee shall provide written notice to the TCEQ Regional Office (MC Region 11) and the Applications Review and Processing Team (MC

148) of the Water Quality Division at least forty-five (45) days prior to plant startup or anticipated discharge, whichever occurs first, and prior to completion of each additional phase on Notification of Completion Form 20007.

6. The permittee has submitted sufficient evidence of legal restrictions prohibiting residential structures within the part of the buffer zone not owned by the permittee according to 30 TAC § 309.13(e)(3) on August 22, 2024. The buffer zone is being met by electrical easement to the northeast of the property. The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). (See Attachment B.)

7. The irrigated crops include native grass (warm season), ryegrass (cool season), juniper trees, and mixed hardwood trees. Application rates to the irrigated land shall not exceed 2.85 acre-feet/acre/year. The permittee is responsible for providing equipment to determine application rates and maintaining accurate records of the volume of effluent applied. The records shall be made available for review by the Texas Commission on Environmental Quality and shall be maintained for at least three years.

8. The permittee shall use cultural practices to promote and maintain the health and propagation of the native grass, ryegrass, juniper trees, and mixed hardwood tree crops and avoid plant lodging. The permittee shall harvest the crops (cut and remove it from the field) at least once during the year. Harvesting and mowing dates shall be recorded in a log book kept on site to be made available to TCEQ personnel upon request.

9. 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.

10. 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, native grass, ryegrass, juniper trees, and mixed hardwood trees 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.

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

12. The permittee shall construct and maintain earthen berms to prevent runoff from leaving the irrigation site.

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

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

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

16. The permittee shall obtain representative soil samples from the root zones of the land application area. Composite sampling techniques shall be used. Each composite sample shall represent no more than 17.5 acres with no less than 12 subsamples representing each composite sample. Subsamples shall be composited by like sampling depth, type of crop and soil type for analysis and reporting. Soil types are soils that have like topsoil or plow layer textures. These soils shall be sampled individually from 0 to 6 inches, 6 to 18 inches and 18 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.

    Samples shall be analyzed annually 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 plus Nitrate-nitrogen		mg/kg (dry weight basis)
Plant-available: Phosphorus	Mehlich III with inductively coupled plasma	1	mg/kg (dry weight basis)
Plant-available: Potassium (K)	May be determined in the same Mehlich	5	mg/kg (dry weight basis)

	III extract with inductively coupled plasma		
Amendment addition, e.g., gypsum			Report in short tons/acre in the year effected

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

17. This site is on the Edwards Aquifer Contributing Zone so is subject to 30 TAC 213, Subchapter B.

18. A wastewater treatment plant unit may not be located in wetlands per 30 TAC §309.13(b).

19. 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 feet from a private well and a minimum horizontal distance of 500 feet from a public water well site, spring, or other similar sources of public drinking water, as provided by §290.41(c)(1)(C) of this title.

20. The permittee shall comply with the buffer zone requirements of 30 TAC §309.13(c), specifically regarding water wells and waters in the state. The permittee must locate the wastewater irrigation fields a minimum horizontal distance of 500 feet from public water wells, springs, or other similar sources of public drinking water; 150 feet from private water wells; and 100 feet from surface waters in the state.

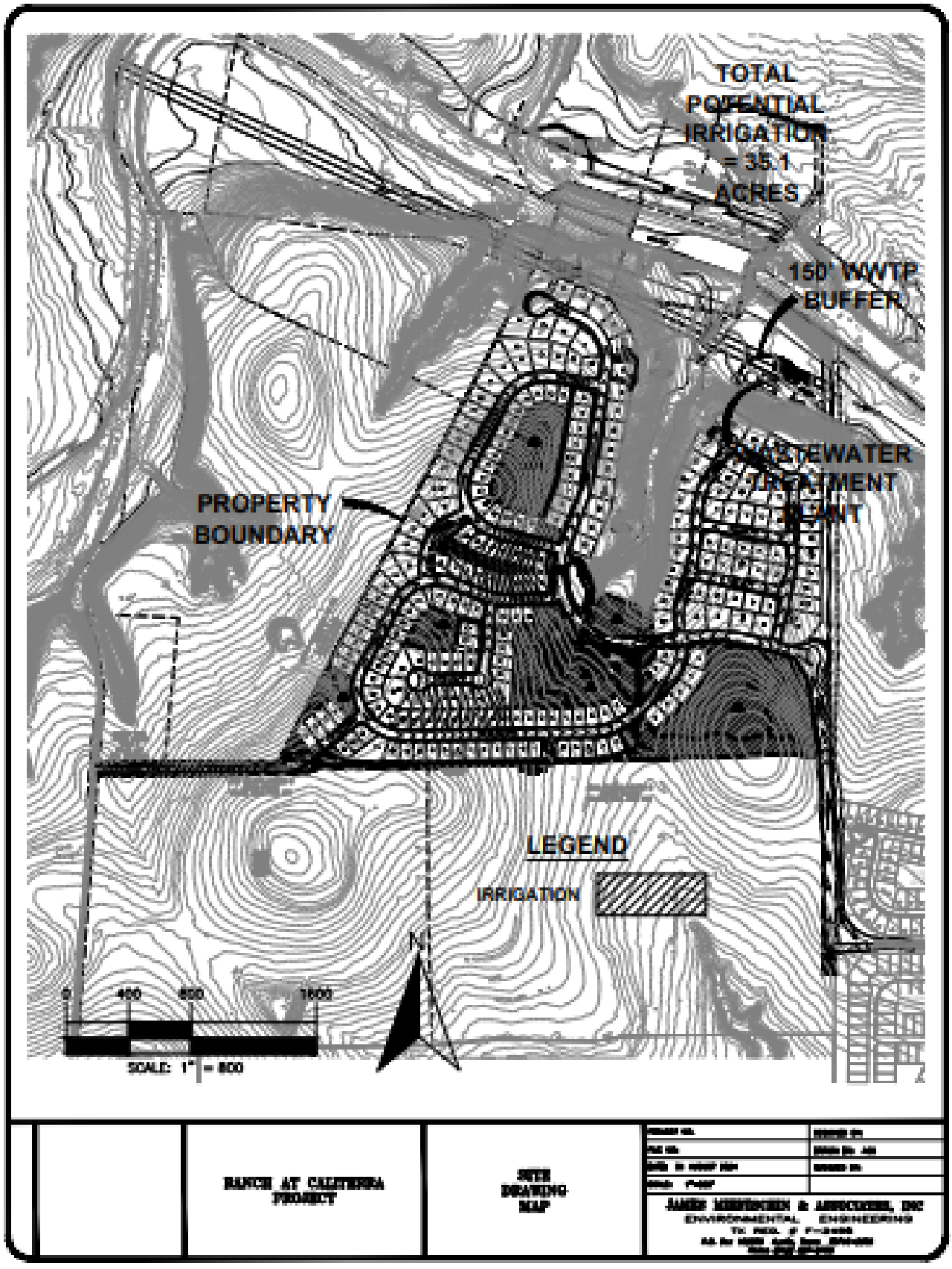
21. The permittee shall maintain a minimum 100-foot horizontal buffer between surface water in the state, including the unnamed tributary to Onion Creek and Onion Creek, and the wastewater irrigation areas, wastewater treatment plant, and effluent storage tanks.

22. The permittee shall maintain a minimum 100-foot horizontal buffer between the spring identified by the Texas Water Development Board as State Well Number 5756477 and the wastewater irrigation areas, wastewater treatment plant, and effluent storage tanks.

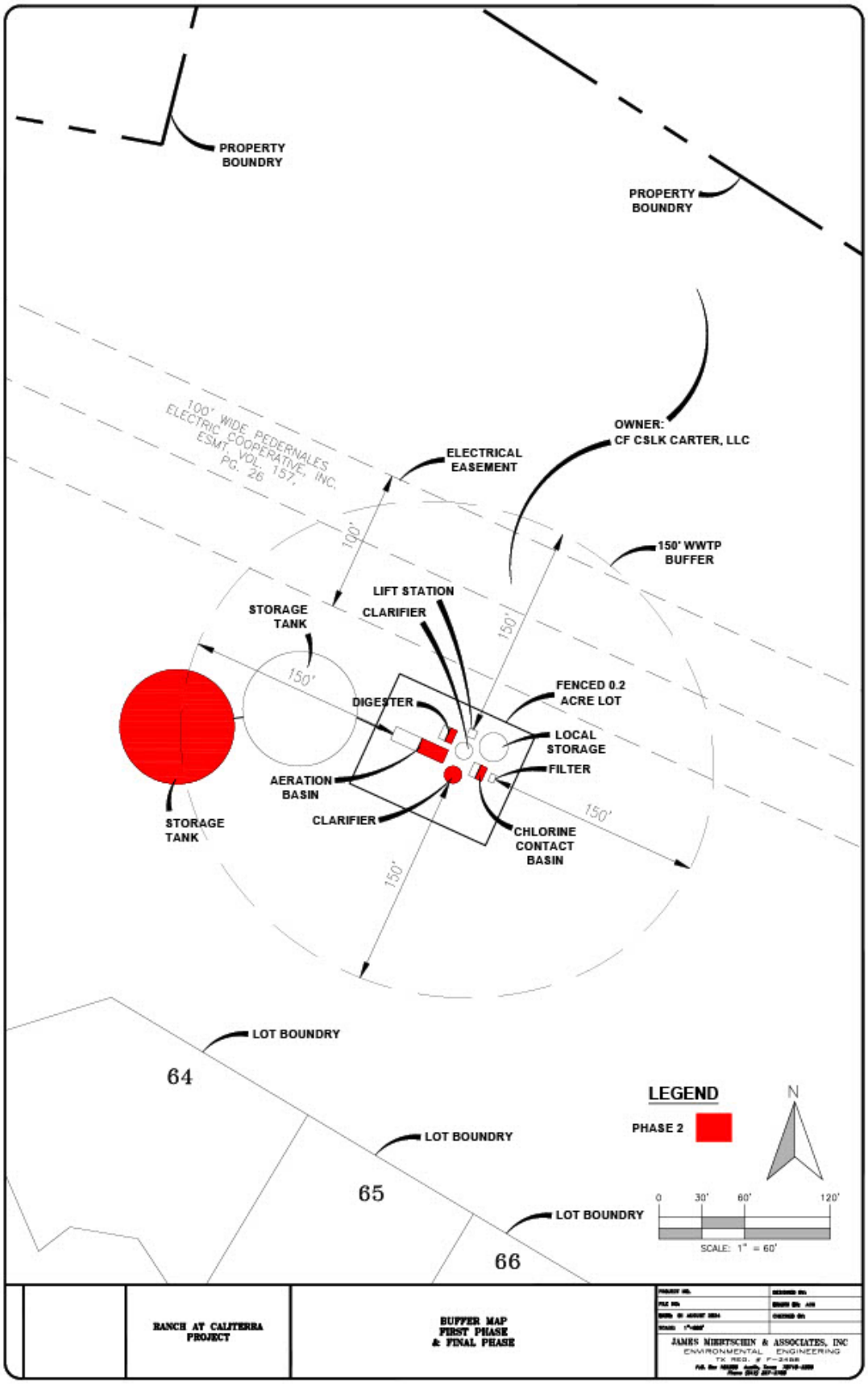
23. Irrigation with effluent shall be accomplished only when the area specified is not in use.

24. Permanent transmission lines shall be installed from the holding tanks to each tract of land to be irrigated utilizing effluent from each tank.

Attachment A – Site Layout Map
TCEQ Permit No. WQ0016604001
Hays County Development District 1



Attachment B – Buffer Zone Map
TCEQ Permit No. WQ0016604001
Hays County Development District 1



TECHNICAL SUMMARY AND
EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

DESCRIPTION OF APPLICATION

Applicant:	Hays County Development District 1 TCEQ Permit No. WQ0016604001
Regulated Activity:	Domestic Wastewater Permit
Type of Application:	New Permit
Request:	New Permit
Authority:	Texas Water Code (TWC) § 26.027; 30 Texas Administrative Code (TAC) Chapters 305, 309, 312, 319, and 30; and Commission policies.

EXECUTIVE DIRECTOR RECOMMENDATION

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

REASON FOR PROJECT PROPOSED

Hays County Development District 1 has applied to the Texas Commission on Environmental Quality (TCEQ) for new Permit No. WQ0016604001 to authorize the disposal of treated domestic wastewater at a daily average flow not to exceed 0.0205 million gallons per day (MGD) in the Interim phase and 0.041 MGD in the Final phase via surface irrigation of 35 acres of public access land. The facility will include two bolted storage tanks in which each will contain a capacity of 0.95 MGD for storage of treated effluent prior to irrigation. The proposed wastewater treatment facility will serve Ranch at Caliterra development.

PROJECT DESCRIPTION AND LOCATION

The Ranch at Caliterra Wastewater Treatment Facility will consist of an activated sludge process plant using the complete mix aeration mode with single stage nitrification. Treatment units in the Interim phase will include one aeration basin, one sludge holding tank, one final clarifier, one filtration unit, and one chlorine contact basin. Treatment units in the Final phase will include two aeration basins, two sludge holding tank, two final clarifier, two filtration units, and two chlorine contact basins. The facility has not been constructed.

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 approximately one mile southeast of the intersection of County Road 190/Creek Road and County Road 220/Mount Gainor Road, near the City of Dripping Springs, Hays County, Texas 78620.

The wastewater treatment facility and disposal site are located in the drainage basin of Onion Creek in Segment No. 1427 of the Colorado River Basin. No discharge of pollutants into water in the state is authorized by this permit.

SUMMARY OF EFFLUENT DATA

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

DRAFT PERMIT CONDITIONS

The draft permit authorizes the disposal of treated domestic wastewater effluent at a daily average flow not to exceed 0.0205 MGD in the Interim phase and 0.041 MGD in the Final phase via surface irrigation of 35 acres of public access land. The facility will include two bolted storage tanks in which each will contain a capacity of 0.95 MGD for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 2.85 acre-feet per year per acre irrigated. The irrigated crops include native grass (warm season), ryegrass (cool season), juniper trees, and mixed hardwood trees.

The effluent limitations in the draft permit, based on a daily average, are 10 mg/l Carbonaceous biochemical oxygen demand ($CBOD_5$), 3.0 mg/l Ammonia Nitrogen, and 15 mg/l total suspended solids (TSS). 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 draft permit includes a requirement for the permittee to obtain legal restrictions prohibiting residential structures within the part of the buffer zone not owned by the permittee according to 30 TAC § 309.13(e)(3).

The draft permit includes Sludge Provisions according to the requirements of 30 TAC Chapter 312, Sludge Use, Disposal, and Transportation. 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

The applicant is proposing a 5.0 mg/l total phosphorus effluent limit. Since phosphorus is a necessary plant nutrient, it is not advisable to limit total phosphorus in the effluent. In addition, a proposed dissolved oxygen effluent limit is not necessary because dissolved oxygen is a water quality consideration for effluent discharged into a receiving body of water. Furthermore, the proposed aerobic process will produce a well-oxygenated effluent.

The applicant requested an application rate of 2.75 acre-feet per year per acre; however, the draft permit includes an application rate not to exceed 2.85 acre-feet per year per acre.

BASIS FOR DRAFT PERMIT

The following items were considered in developing the draft permit:

1. Application received on August 22, 2024, and additional information received on January

13, 2025 and March 4, 2025.

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

PROCEDURES FOR FINAL DECISION

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

Once a draft permit is completed, it is sent, along with the Executive Director's preliminary decision, as contained in the technical summary or fact sheet, to the Chief Clerk. At that time, 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 Garrison Layne at (512) 239-0849.

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

Leah Whallon

From: James Miertschin <jm@jmaenv.com>
Sent: Wednesday, September 18, 2024 10:19 AM
To: Leah Whallon; Andy Barrett
Subject: RE: Application for Proposed Permit No. WQ0016604001; Hays County Development District 1; Ranch at Caliterra WWTP
Attachments: Complete Response to Admin Review.pdf; Municipal Disposal New Spanish NORI.docx; Plain language summary revised spanish.docx; Plain language summary revised.docx; RAC Adjacent Land Owners.doc

Follow Up Flag: Follow up
Flag Status: Flagged

Leah
Attached please find a complete PDF of the response to the deficiency letter. I am also attaching Word documents of the landowner list, plain language summary, and Spanish NORI. I will mail a copy of all of this today as well which will include the labels. Let me know if anything else is needed.

James Miertschin, PE, PhD
James Miertschin & Associates, Inc.

From: Leah Whallon <Leah.Whallon@Tceq.Texas.Gov>
Sent: Wednesday, September 4, 2024 3:04 PM
To: Andy Barrett <andy@thebarrettfirm.com>
Cc: James Miertschin <jm@jmaenv.com>
Subject: Application for Proposed Permit No. WQ0016604001; Hays County Development District 1; Ranch at Caliterra WWTP

Good Afternoon,

Please see the attached Notice of Deficiency letter dated September 4, 2024 requesting additional information needed to declare the application administratively complete. Please send the complete response by September 18, 2024.

Please let me know if you have any questions.

Thank you,

Leah Whallon
Texas Commission on Environmental Quality
Water Quality Division
512-239-0084
leah.whallon@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at
www.tceq.texas.gov/customersurvey

JAMES MIERTSCHIN & ASSOCIATES, INC.
ENVIRONMENTAL ENGINEERING (TX REG #F-2458)
P.O. BOX 162305 ° AUSTIN, TEXAS 78716-2305 ° (512) 327-2708

18 September 2024

Ms. Leah Whallon
Applications Review and Processing Team (MC 148)
Water Quality Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Re: Application for Proposed Permit No. WQ0016604001
Hays County Development District No. 1 (CN600685457)
Site Name: Ranch at Caliterra (RN111761284)
Response to Comments from Administrative Review

Dear Ms. Whallon:

We received your letter dated 4 September 2024 regarding the permit application referenced above. Responses to your comments are provided below.

1. Core Data Form, Section III, Items 23-26, regarding mailing address/physical address.

   Response: A revised Core Data Form is attached, providing the location description.

2. Administrative Report 1.0, Section 1; regarding proof of payment

   Response: The ePay payment mistakenly was labelled as payment for an Edwards Aquifer application, when in fact it was a payment for the subject application. A new ePay voucher is attached.

3. Administrative Report 1.0, Section 8, Item F; regarding Plain Language Summary.

   Response: The Plain Language Summary has been revised to include the proposed flow. It is attached to this response, along with a Spanish translation.

4. Administrative Report 1.1, Section 1, regarding landowner list.

   Response: Attached with this response is the reformatted landowner list. Also, we are mailing this letter with attached landowner labels.

5. Notice of Receipt of Application and Intent to Obtain a Water Quality Permit

   Response: The Notice appears to be correct.

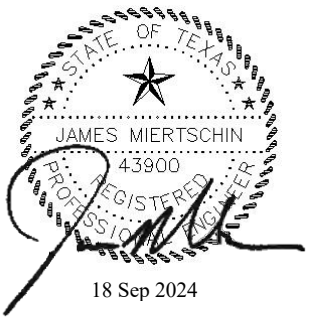
6. Public notice in Spanish.

   Response: The translation of the notice in Spanish is attached.

I am providing this complete response as an original to be mailed to the agency on this date. I am also providing a pdf copy of the complete response package to you via email. Please do not hesitate to call me at (512) 327-2708 if you have any questions.

Yours truly,

JAMES MIERTSCHIN & ASSOCIATES, INC.



18 Sep 2024

James Miertschin, PE, PhD

cc: Andy Barrett

TCEQ Core Data Form

TCEQ Use Only

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

SECTION I: General Information

1. Reason 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 600685457		RN 111761284

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:*

Hays County Development District No. 1

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

11. Type of Customer: ☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited

Government: ☐ City ☐ County ☐ Federal ☐ State ☒ Other ☐ Sole Proprietorship ☐ Other: LLC

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 ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address: 2929 Allen Parkway, Suite 3150

City	Houston	State	TX	ZIP	77019	ZIP + 4	7126

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

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(713) 489-8977		( )

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity' is selected below this form should be accompanied by a permit application)*

☒ 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 Agency 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.)*

Hays County Development District No.1

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

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	One mile southeast of the intersection of County Road 190/Creek Road and County Road 220/Mount Gainor Road, near the City of Dripping Springs.

26. Nearest City	State	Nearest ZIP Code

27. Latitude (N) In Decimal:			28. Longitude (W) In Decimal:		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

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)

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

Project Development

34. Mailing Address:	2929 Allen Parkway, Suite 3150							
	City	Houston	State	TX	ZIP	77019	ZIP + 4	7126

35. E-Mail Address:	mroberts@johnsonpetrov.com

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(713) 489-8977		( ) -

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	☒ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	James Miertschin	41. Title:	Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 327-2708		(512) 327-2733	jm@jmaenv.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:	Hays County Development District No. 1	Job Title:	President of the Board	
Name *(In Print)*:	Billy Foulds		Phone:	(713) 489- 8977
Signature:	Bill Foulds		Date:	8-8-24

Your transaction is complete. Thank you for using TCEQ ePay.

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt and the vouchers for your records. An email receipt has also been sent.

Transaction Information

Trace Number:	582EA000625693
Date:	09/17/2024 01:41 PM
Payment Method:	ACH - Authorization 0082672422
ePay Actor:	GREG RICH
Actor Email:	grich@siepiela.com
IP:	50.84.2.138
TCEQ Amount:	$350.00
Texas.gov Price:	$350.00*

* This service is provided by Texas.gov, the official website of Texas. The price of this service includes funds that support the ongoing operations and enhancements of Texas.gov, which is provided by a third party in partnership with the State.

Payment Contact Information

Name:	JENNIFER WARHEIT
Company:	CF CSLK CARTER
Address:	12222 MERIT DRIVE, DALLAS, TX 75251
Phone:	972-960-2777

Cart Items

Click on the voucher number to see the voucher details.

Voucher	Fee Description	AR Number	Amount
721595	WW PERMIT - FACILITY WITH FLOW < .05 MGD - NEW AND MAJOR AMENDMENTS		$300.00
721596	30 TAC 305.53B WQ NOTIFICATION FEE		$50.00
		TCEQ Amount:	$350.00

ePay Again | Exit ePay

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt for your records.

SECTION 15. PLAIN LANGUAGE SUMMARY

Hays County Development District No. 1 proposes to operate the Ranch at Caliterra Treatment Facility, an activated sludge treatment plant. The facility will be located approximately 1 mile SE of the intersection of CR 190 and CR 220 in Hays County, Texas.

Applicant requests a TLAP permit for wastewater disposal. This permit will not authorize a discharge of pollutants into water in the state. Discharges from the facility, projected to be 41,000 gpd, are expected to contain organic and nutrient materials from domestic wastewater sources. The raw wastewater will be treated in an activated sludge-based treatment plant to provide an effluent quality suitable for irrigation.

SECTION 15. PLAIN LANGUAGE SUMMARY

El Distrito N.º 1 de Desarrollo del Condado de Hays propone operar la Instalación de Tratamiento de Ranch at Caliterra, una planta de tratamiento de lodos activados. La planta estará ubicada aproximadamente a 1 milla al sureste de la intersección de CR 190 y CR 220 en el Condado de Hays, Texas.

El solicitante solicita un permiso TLAP para la eliminación de aguas residuales. Este permiso no autorizará la descarga de contaminantes en el agua del estado. Se espera que las descargas de la instalación, que se estima que serán de 41,000 gpd, contengan materiales orgánicos y nutrientes provenientes de fuentes de aguas residuales domésticas. Las aguas residuales sin tratar se tratarán en una planta de tratamiento a base de lodos activados para proporcionar una calidad de efluente adecuada para el riego.

JOHN C HORTON III
903 NUECES ST
AUSTIN TX 78701

LIMESTONE DRIPPING SPRINGS LLC
1114 LOST CREEK BLVD, STE 120
AUSTIN TX 78746

SIEPIETA DEVELOPMENT CORP
12222 MERIT DR, STE 1020
DALLAS TX 75251

CYPRESS FORK RANCH LP
1300 CREEK RD
DRIPPING SPRINGS TX 78620

MARIANNE SIMMONS
1611 CREEK RD
DRIPPING SPRINGS TX 78620

MESA DEL ARROYO LP
3736 BEE CAVES RD, STE 1 #241
WESTLAKE HILLS TX 78746

JEFFREY W & LINDSEY J BOYD
9350 NE 12TH AVE
MIAMI SHORES FL 33138

ORANGETREE TRUST
2935 WILLOWOOD FARM RD
HAMEL MN 55340

JOHN M PETERS TRUST
PO BOX 1095
DRIPPING SPRINGS TX 78620

JEFFREY & CALLIE MURRAY
674 CLIMBING ROCK LOOP
DRIPPING SPRINGS TX 78620

ROBERT A & KELSEY A BORGESON
124 CLIMBING ROCK LOOP
DRIPPING SPRINGS TX 78620

BRADLEY B & ELIZABETH AULT
138 CLIMBING ROCK LOOP
DRIPPING SPRINGS TX 78620

SQUIRES REVOCABLE TRUST
150 CLIMBING ROCK LOOP
DRIPPING SPRINGS TX 78620

KENNETH J & MADISON CLARK
160 CLIMBING ROCK LOOP
DRIPPING SPRINGS TX 78620

RICHARD & BOZENKA O SAUER
170 CLIMBING ROCK LOOP
DRIPPING SPRINGS TX 78620

DREW & STEPHANIE PFAMILLER
180 CLIMBING ROCK LOOP
DRIPPING SPRINGS TX 78620

GREGORY M LAIRD
190 CLIMBING ROCK LOOP
DRIPPING SPRINGS TX 78620

HEATHER A & JUSTIN M TELIGA
431 BARNHILL LOOP
DRIPPING SPRINGS TX 78620

LORI A HAMMOND
425 BARNHILL LOOP
DRIPPING SPRINGS TX 78620

MICHAEL VAN PFULLMAN
1305 CREEK ROAD
DRIPPING SPRINGS TX 78620

ANNA MARIE WIDEN ETAL SPEIR
15 LAS BRISAS DRIVE
AUSTIN TX 78746

Comisión de Calidad Ambiental del Estado de Texas

AVISO DE RECIBO DE LA SOLICITUD E
INTENCION DE OBTENER PERMISO PARA LA CALIDAD DEL AGUA

PERMISO PROPUESTO NO. WQ00_____

SOLICITUD. El Distrito 1 de Desarrollo del Condado de Hays, 2929 Allen Parkway, Suite 3150, Houston, Texas 77019, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) por el propuesto Permiso de Aplicación en Terrenos de Texas (TLAP) No. WQ0016604001 para autorizar la disposición de aguas residuales tratadas en un volumen que no sobrepasa un flujo promedio diario de 41,000 galones por día por medio de riego en un mínimo de 35 acres. La planta de tratamiento de aguas domésticas residuales y el área de disposición están ubicados aproximadamente a una milla al sureste de la intersección de County Road 190/Creek Road y County Road 220/Mount Gainor Road, cerca de la ciudad de Dripping Springs, en el Condado de Hays, Texas 78620. La TCEQ recibió esta solicitud el día 22 de agosto de 2024. La solicitud para el permiso estará disponible para leerla y copiarla en la Biblioteca Pública de Dripping Springs, 501 Sportsplex Drive, Dripping Springs, en el condado de Hays, Texas, antes de la fecha de publicación de este aviso en el periódico. La solicitud, incluidas las actualizaciones y los avisos asociados, están disponibles electrónicamente en la siguiente página web: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tlap-applications.
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=-98.12,30.18&level=18

Include the following non-italicized sentence if the facility is located in the Coastal Management Program boundary. The Coastal Management Program boundary is the area along the Texas Coast of the Gulf of México as depicted on the map in 31 TAC §503.1 and includes part or all of the following counties: Cameron, Willacy, Kenedy, Kleberg, Nueces, San Patricio, Aransas, Refugio, Calhoun, Victoria, Jackson, Matagorda, Brazoria, Galveston, Harris, Chambers, Jefferson y Orange. El Director Ejecutivo de la TCEQ ha revisado esta medida para ver si está de acuerdo con los objetivos y las regulaciones del Programa de Administración Costero de Texas (CMP) de acuerdo con las regulaciones del Consejo Coordinador de la Costa (CCC) y ha determinado que la acción es conforme con las metas y regulaciones pertinentes del CMP.

AVISO ADICIONAL. El Director Ejecutivo de la TCEQ ha determinado que la solicitud es administrativamente completa y conducirá una revisión técnica de la solicitud. Después de completar la revisión técnica, el Director Ejecutivo puede preparar un borrador del permiso y emitirá una Decisión Preliminar sobre la solicitud. **El aviso de la solicitud y la decisión preliminar serán publicados y enviado a los que están en la lista de correo de las personas a lo largo del condado que desean recibir los avisos y los que están en la**

lista de correo que desean recibir avisos de esta solicitud. El aviso dará la fecha límite para someter comentarios públicos.

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.

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.

CONTACTOS E INFORMACIÓN A LA AGENCIA. Todos los comentarios públicos y solicitudes deben ser presentadas electrónicamente vía http://www14.tceq.texas.gov/epic/eComment/ o por escrito dirigidos a la Comisión de Texas de Calidad Ambiental, Oficial de la Secretaría (Office of Chief Clerk), MC-105, P.O. Box 13087, Austin, Texas 78711-3087. 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. Para obtener más información acerca de esta solicitud de permiso o el proceso de permisos, llame al programa de educación pública de la TCEQ, gratis, al 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040.

También se puede obtener información adicional del Distrito 1 de Desarrollo del Condado de Hays en la dirección indicada arriba o llamando al Sr. Zachary Petrov, n/a, Johnson Petrov LLP, al 713-489-8977.

Fecha de emisión _____ *[Date notice issued]*

JAMES MIERTSCHIN & ASSOCIATES, INC.
ENVIRONMENTAL ENGINEERING (TBPE F-2458)
P.O. BOX 162305 ° AUSTIN, TEXAS 78716-2305 ° (512) 327-2708

22 August 2024

Water Quality Applications Team
Texas Commission on Environmental Quality
Applications Review and Processing Team (MC148)
Building F, Room 2101
12100 Park 35 Circle
Austin, Texas 78753

RE: Hays County Development District No.1 Wastewater Treatment Facility
TLAP Permit Application

Dear Sirs:

A permit application for a proposed Hays County Development District No.1 Wastewater Treatment Facility located in Hays County, Texas is attached. One original and two copies of the complete application package are included and are being delivered via FedEx to the agency. The application fee has been paid electronically to the Revenues Section, and a photocopy of the voucher is included in the application.

Please do not hesitate to contact us if you have any questions or need additional information. You may contact me at (512) 327-2708 or via email at jm@jmaenv.com.

Yours truly,

JAMES MIERTSCHIN & ASSOCIATES, INC.

08/22/2024

James Miertschin, PE, PhD

cc: Zachary Petrov
Andy Barrett

JAMES MIERTSCHIN & ASSOCIATES, INC.
ENVIRONMENTAL ENGINEERING
P.O. BOX 162305 ° AUSTIN, TEXAS 78716-2305 ° (512) 327-2708

TLAP Permit Application

Hays County Development District No.1

Wastewater Treatment Facility

22 August 2024

TABLE OF CONTENTS

RANCH AT CALITERRA PERMIT APPLICATION

LIST OF EXHIBITS TO APPLICATION

			mile
P	GW Quality	Wkst. 3.0, p.33, Section 7	Well records
Q	Soils Report	Wkst. 3.0, p.33, Section 8	Soils on land application area, lab results
R	Irrigation Report	Wkst. 3.1, p.36, Section 1.A	Water balance, storage balance

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the application.

APPLICANT NAME: Hays County Development District No.1

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

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

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

For TCEQ Use Only

Segment Number _____County _____
Expiration Date _____Region_____
Permit Number _____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

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

Section 1. Application Fees (Instructions Page 26)

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

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

Minor Amendment (for any flow) $150.00 ☐

Payment Information:

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

Check/Money Order Amount: Click to enter text.

Name Printed on Check: NA

EPAY — Voucher Number: 718222

Copy of Payment Voucher enclosed? Yes ☒

Section 2. Type of Application (Instructions Page 26)

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

☒ Publicly-Owned Domestic Wastewater

Privately-Owned Domestic Wastewater

☐ Conventional Wastewater Treatment

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

☐ Active ☒ Inactive

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

☐ TPDES Permit

☒ TLAP

☐ TPDES Permit with TLAP component

☐ Subsurface Area Drip Dispersal System (SADDS)

d. Check the box next to the appropriate application type

☒ New

☐ Major Amendment *with* Renewal

☐ Major Amendment *without* Renewal

☐ Renewal without changes

☐ Minor Amendment *with* Renewal

☐ Minor Amendment *without* Renewal

☐ Minor Modification of permit

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

f. **For existing permits**:

Permit Number: WQ00 Click to enter text.

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

Expiration Date: Click to enter text.

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

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

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

Hays County Development District No.1

(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: CN600685457

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: Foulds, Billy

Title: President Credential: Click to enter text.

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

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

NA

(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. Attachment A

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: Barrett, Andy

Title: Attorney Credential: Click to enter text.

Organization Name: Andy Barrett & Associates, PLLC

Mailing Address: PO Box 12603 City, State, Zip Code: Dallas, TX, 75225

Phone No.: (512) 217-4956 E-mail Address: andy@thebarrettfirm.com

Check one or both: ☒ Administrative Contact ☐ Technical Contact

B. Prefix: Dr. Last Name, First Name: Miertschin, James

Title: Engineer Credential: PE, PhD

Organization Name: James Miertschin & Associates, Inc.

Mailing Address: PO Box 162305 City, State, Zip Code: Austin, TX 78716

Phone No.: (512) 327-2708 E-mail Address: jm@jmaenv.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: Abshire, William

Title: Operator Credential: Click to enter text.

Organization Name: Si Environmental

Mailing Address: 2306 RR 620 North City, State, Zip Code: Austin, Texas 78734

Phone No.: 512-791-6710 E-mail Address: wabshire@sienviro.com

B. Prefix: Mr. Last Name, First Name: Petrov, Zachary

Title: Attorney Credential: Click to enter text.

Organization Name: Johnson Petrov LLP

Mailing Address: 2929 Allen Parkway, Suite 3150 City, State, Zip Code: Houston, Texas 77019

Phone No.: 713.489.8977 E-mail Address: Zpetrov@johnsonpetrov.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: Abshire, William

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

Organization Name: Si Environmental

Mailing Address: 2306 RR 620 North City, State, Zip Code: Austin, Texas 78734

Phone No.: 512-791-6710 E-mail Address: wabshire@sienviro.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: Abshire, William

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

Organization Name: Si Environmental

Mailing Address: 2306 RR 620 North City, State, Zip Code: Austin, Texas 78734

Phone No.: 512-791-6710 E-mail Address: wabshire@sienviro.com

Section 8. Public Notice Information (Instructions Page 27)

A. Individual Publishing the Notices

Prefix: Mr. Last Name, First Name: Petrov, Zachary

Title: Attorney Credential: Click to enter text.

Organization Name: Johnson Petrov LLP

Mailing Address: 2929 Allen Parkway, Suite 3150 City, State, Zip Code: Houston, Texas 77019

Phone No.: 713.489.8977 E-mail Address: zpetrov@johnsonpetrov.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: Petrov, Zachary

Title: Attorney Credential: Click to enter text.

Organization Name: Johnson Petrov LLP

Mailing Address: 2929 Allen Parkway Suite 3150 City, State, Zip Code: Houston, TX 77019

Phone No.: 713.489.8977 E-mail Address: zpetrov@johnsonpetrov.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: Dripping Springs Public Library

Location within the building: front desk

Physical Address of Building: 501 Sportsplex Drive

City: Dripping Springs County: Hays

Contact (Last Name, First Name): Library Director

Phone No.: 512-858-7825 Ext.: NA

E. Bilingual Notice Requirements

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

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

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

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

   ☒ Yes ☐ No

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

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

   ☒ Yes ☐ No

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

   ☒ Yes ☐ No

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

   ☒ Yes ☐ No

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

F. Plain Language Summary Template

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

Attachment: Attachment B

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: Attachment C

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** RN103896601

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):

Ranch at Caliterra

C. Owner of treatment facility: Hays County Development District No.1

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

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

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

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

Organization Name: Hays County Development District No. 1

Mailing Address: 2929 Allen Parkway S. 3150 City, State, Zip Code: Houston, Texas 77019

Phone No.: 713.489.8977 E-mail Address: zpetrov@johnsonpetrov.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: NA

E. Owner of effluent disposal site:

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: Hays County Development District No. 1

Mailing Address: 2929 Allen Parkway S. 3150 City, State, Zip Code: Houston, Texas 77019

Phone No.: 713-489-8977 E-mail Address:

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: NA

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: NA

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:

New Permit Application. 1 mi SE of intersection of CR 190 and CR 220.

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:

New Permit Application. No discharge.

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: NA

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: NA

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:

Disposal site will be distributed throughout the tract

B. City nearest the disposal site: Dripping Springs

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

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

Treated effluent will be pumped from the treatment facility to the irrigation fields.

E. For **TLAPs**, please identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: unnamed tributaries of Onion 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 **SEE ATTACHMENT D**
- 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: TBD

Applicant: Hays County Development District No.1

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): Billy Foulds, Jr

Signatory title: Click to enter text. President, Board of Directors of Hays County Development District No. 1

Signature: _____ Date: 8-8-24

(Use blue ink)

Subscribed and Sworn to before me by the said Board President, Billy Foulds Jr.

on this 8th day of August, 20 24.

My commission expires on the 15 day of May, 20 25.

_____

Notary Public

ZACHARY ALAN PETROV
Notary Public, State of Texas
Comm. Expires 05-15-2025
Notary ID 131129633

[SEAL]

Hays

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:**See Attachment E**

- ☒ 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: Hays Co. Appraisal Dist.

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.**See Attachment F**

☒ 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; **See Attachment G**
- 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: NA

WATER QUALITY PERMIT

PAYMENT SUBMITTAL FORM

Use this form to submit the Application Fee, if the mailing the payment.

- Complete items 1 through 5 below.
- Staple the check or money order in the space provided at the bottom of this document.
- **Do Not mail this form with the application form.**
- Do not mail this form to the same address as the application.
- Do not submit a copy of the application with this form as it could cause duplicate permit entries.

Mail this form and the check or money order to:

BY REGULAR U.S. MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, Texas 78711-3088

BY OVERNIGHT/EXPRESS MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, Texas 78753

Fee Code: WQP **Waste Permit No:** Click to enter text.

1. Check or Money Order Number: electronic
2. Check or Money Order Amount: Click to enter text.
3. Date of Check or Money Order: Click to enter text.
4. Name on Check or Money Order: Click to enter text.
5. APPLICATION INFORMATION

   Name of Project or Site: Click to enter text.

   Physical Address of Project or Site:

   If the check is for more than one application, attach a list which includes the name of each Project or Site (RE) and Physical Address, exactly as provided on the application.

Staple Check or Money Order in This Space

See Attachment H

ATTACHMENT 1

INDIVIDUAL INFORMATION

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): NA

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

ATTACHMENT A

TCEQ Core Data Form

TCEQ Use Only

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

SECTION I: General Information

1. Reason 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 600685457		RN 103896601 and RN 101405751

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:*

Hays County Development District No. 1

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

11. Type of Customer: ☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited

Government: ☐ City ☐ County ☐ Federal ☐ State ☒ Other ☐ Sole Proprietorship ☐ Other: LLC

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 ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:

2929 Allen Parkway, Suite 3150

City	Houston	State	TX	ZIP	77019	ZIP + 4	7126

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

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(713) 489-8977		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (*If 'New Regulated Entity" is selected below this form should be accompanied by a permit application*)

☒ 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 Agency 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.*)

Hays County Development District No.1

23. Street Address of the Regulated Entity: *(No PO Boxes)*	2929 Allen Parkway, Suite 3150							
	City	Houston	State	TX	ZIP	77019	ZIP + 4	7126
24. County	Harris							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:								

26. Nearest City	State	Nearest ZIP Code

27. Latitude (N) In Decimal:			28. Longitude (W) In Decimal:		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

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)

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

Project Development

34. Mailing Address:	2929 Allen Parkway, Suite 3150							
	City	Houston	State	TX	ZIP	77019	ZIP + 4	7126
35. E-Mail Address:	mroberts@johnsonpetrov.com							

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(713) 489-8977		( ) -

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	☒ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	James Miertschin	41. Title:	Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 327-2708		(512) 327-2733	jm@jmaenv.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:	Hays County Development District No. 1	Job Title:	President of the Board
Name *(In Print)*:	Billy Foulds	Phone:	(713) 489- 8977
Signature:	Bill Foulds	Date:	8-8-24

ATTACHMENT B

SECTION 15. PLAIN LANGUAGE SUMMARY

Hays County Development District No. 1 proposes to operate the Ranch at Caliterra Treatment Facility, an activated sludge treatment plant. The facility will be located approximately 1 mile SE of the intersection of CR 190 and CR 220 in Hays County, Texas.

Applicant requests a TLAP permit for wastewater disposal. This permit will not authorize a discharge of pollutants into water in the state. Discharges from the facility are expected to contain organic and nutrient materials from domestic wastewater sources. The raw wastewater will be treated in an activated sludge-based treatment plant to provide an effluent quality suitable for irrigation.

ATTACHMENT C

Texas Commission on Environmental Quality

Public Involvement Plan Form for Permit and Registration Applications

The Public Involvement Plan is intended to provide applicants and the agency with information about how public outreach will be accomplished for certain types of applications in certain geographical areas of the state. It is intended to apply to new activities; major changes at existing plants, facilities, and processes; and to activities which are likely to have significant interest from the public. This preliminary screening is designed to identify applications that will benefit from an initial assessment of the need for enhanced public outreach.

All applicable sections of this form should be completed and submitted with the permit or registration application. For instructions on how to complete this form, see TCEQ-20960-inst.

Section 1. Preliminary Screening

☒ New Permit or Registration Application

☐ New Activity – modification, registration, amendment, facility, etc. (see instructions)

If neither of the above boxes are checked, completion of the form is not required and does not need to be submitted.

Section 2. Secondary Screening

☒ Requires public notice,

☐ Considered to have significant public interest, **and**

☒ Located within any of the following geographical locations:

- Austin
- Dallas
- Fort Worth
- Houston
- San Antonio
- West Texas
- Texas Panhandle
- Along the Texas/Mexico Border
- Other geographical locations should be decided on a case-by-case basis

If all the above boxes are not checked, a Public Involvement Plan is not necessary. Stop after Section 2 and submit the form.

☒ Public Involvement Plan not applicable to this application. Provide **brief** explanation.

TLAP with irrigation, 37 acres; lack of discharge should minimize public interest

Section 3. Application Information

Type of Application (check all that apply):

Air ☐ Initial ☐ Federal ☐ Amendment ☐ Standard Permit ☐ Title V

Waste ☐ Municipal Solid Waste ☐ Industrial and Hazardous Waste ☐ Scrap Tire
☐ Radioactive Material Licensing ☐ Underground Injection Control

Water Quality

☐ Texas Pollutant Discharge Elimination System (TPDES)

- ☐ Texas Land Application Permit (TLAP)
- ☐ State Only Concentrated Animal Feeding Operation (CAFO)
- ☐ Water Treatment Plant Residuals Disposal Permit

☐ Class B Biosolids Land Application Permit

☐ Domestic Septage Land Application Registration

Water Rights New Permit

☐ New Appropriation of Water

☐ New or existing reservoir

Amendment to an Existing Water Right

☐ Add a New Appropriation of Water

☐ Add a New or Existing Reservoir

☐ Major Amendment that could affect other water rights or the environment

Section 4. Plain Language Summary

Provide a brief description of planned activities.

Section 5. Community and Demographic Information

Community information can be found using EPA's EJ Screen, U.S. Census Bureau information, or generally available demographic tools.

Information gathered in this section can assist with the determination of whether alternative language notice is necessary. Please provide the following information.

(City)

(County)

(Census Tract)
Please indicate which of these three is the level used for gathering the following information.

☐ City ☐ County ☐ Census Tract

(a) Percent of people over 25 years of age who at least graduated from high school

(b) Per capita income for population near the specified location

(c) Percent of minority population and percent of population by race within the specified location

(d) Percent of Linguistically Isolated Households by language within the specified location

(e) Languages commonly spoken in area by percentage

(f) Community and/or Stakeholder Groups

(g) Historic public interest or involvement

Section 6. Planned Public Outreach Activities

(a) Is this application subject to the public participation requirements of Title 30 Texas Administrative Code (30 TAC) Chapter 39?

☐ Yes ☐ No

(b) If yes, do you intend at this time to provide public outreach other than what is required by rule?

☐ Yes ☐ No

If Yes, please describe.

If you answered "yes" that this application is subject to 30 TAC Chapter 39, answering the remaining questions in Section 6 is not required.

(c) Will you provide notice of this application in alternative languages?

☐ Yes ☐ No

Please refer to Section 5. If more than 5% of the population potentially affected by your application is Limited English Proficient, then you are required to provide notice in the alternative language.

If yes, how will you provide notice in alternative languages?

☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

(d) Is there an opportunity for some type of public meeting, including after notice?

☐ Yes ☐ No

(e) If a public meeting is held, will a translator be provided if requested?

☐ Yes ☐ No

(f) Hard copies of the application will be available at the following (check all that apply):

☐ TCEQ Regional Office ☐ TCEQ Central Office

☐ Public Place (specify)

Section 7. Voluntary Submittal

For applicants voluntarily providing this Public Involvement Plan, who are not subject to formal public participation requirements.

Will you provide notice of this application, including notice in alternative languages?

☐ Yes ☐ No

What types of notice will be provided?

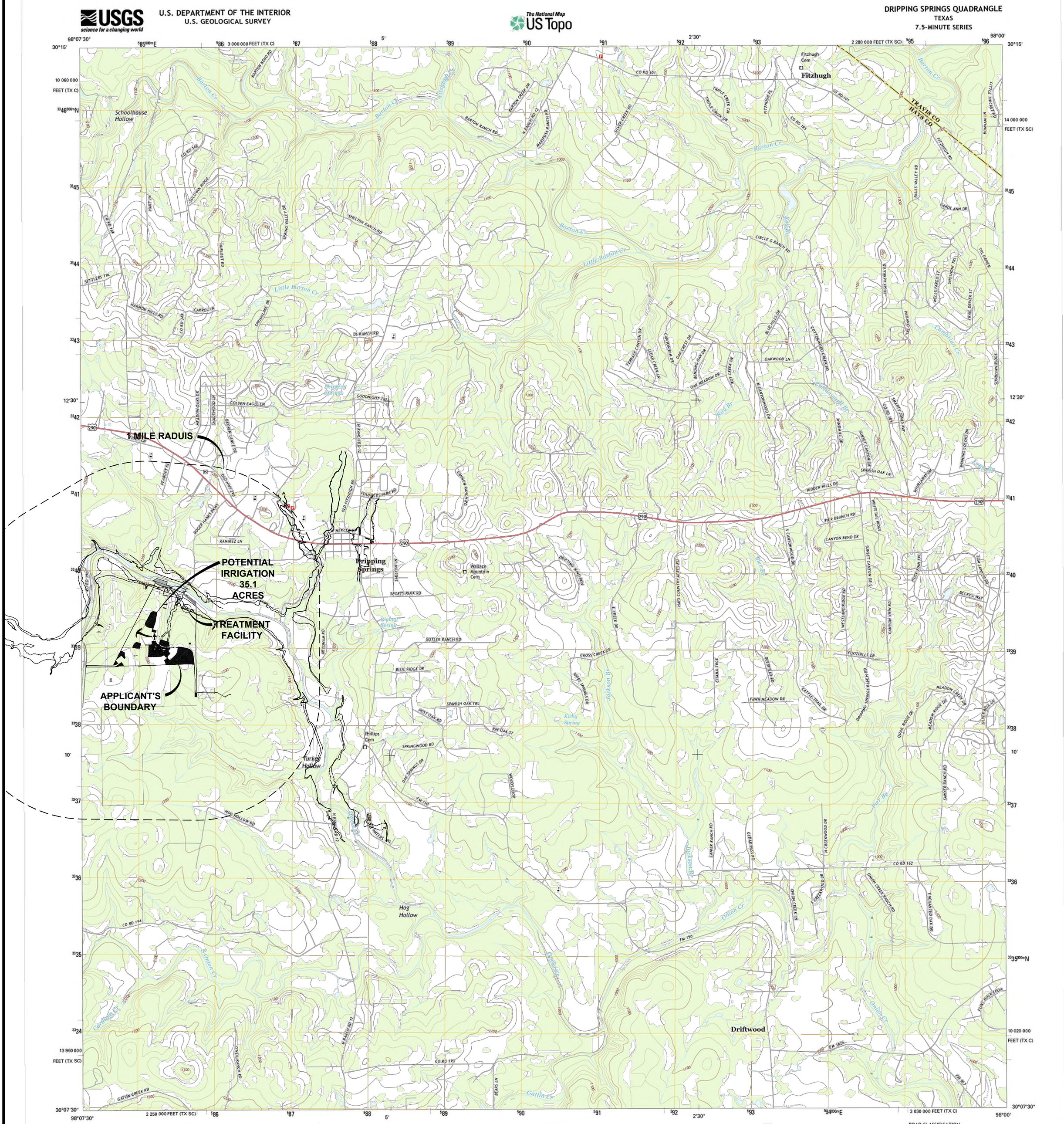
☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

ATTACHMENT D



RANCH AT CALITERRA PROJECT

DRIPPING SPRINGS QUADRANGLE USGS MAP

PROJECT NO.	DESIGNED BY:
FILE NO:	DRAWN BY: ACS
DATE: 01 AUGUST 2024	CHECKED BY:
SCALE: 1"=2000'	

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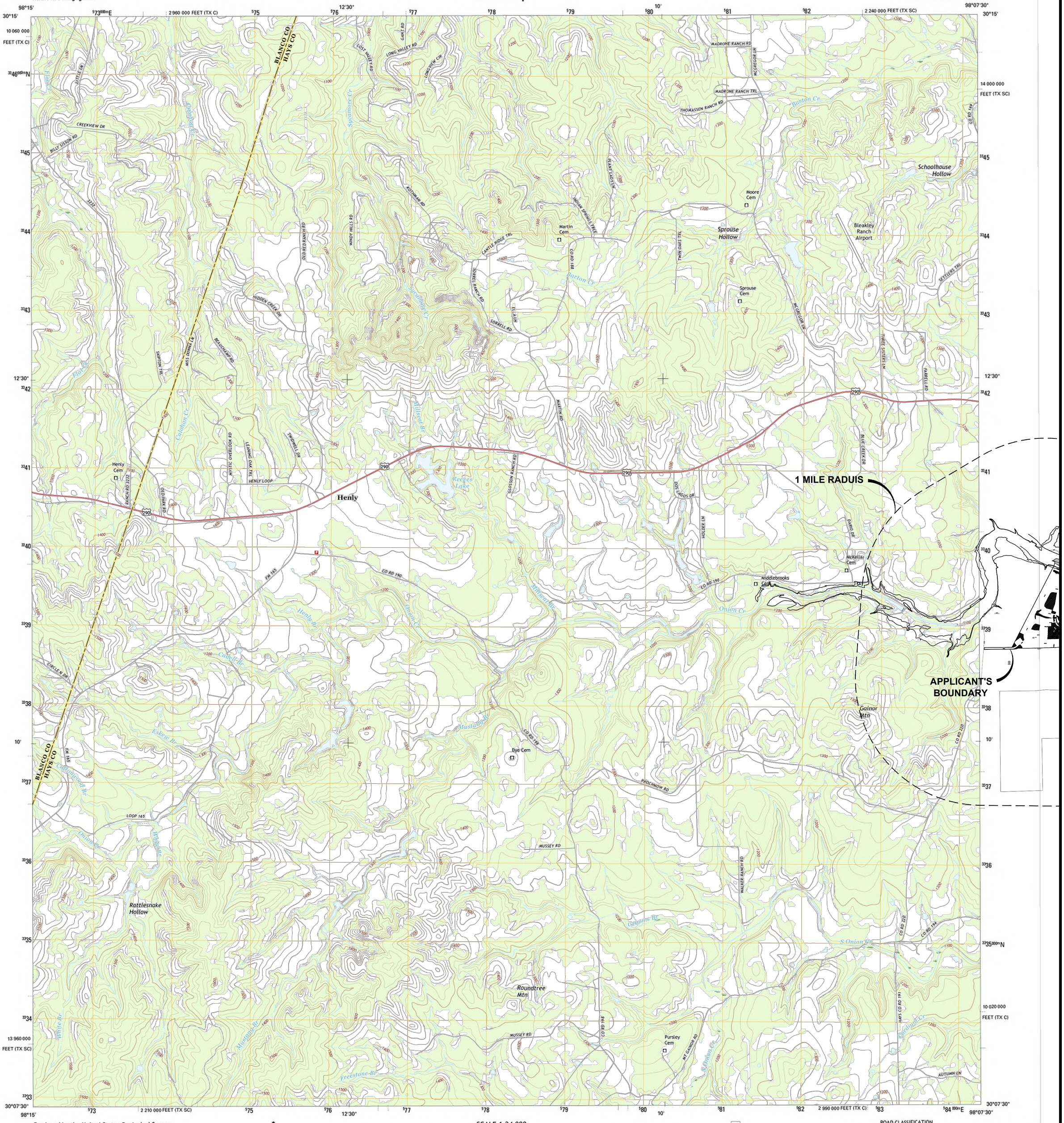
ENVIRONMENTAL ENGINEERING
TX REG. # F-2458
P.O. Box 162305 Austin, Texas 78716-2305
Phone (512) 327-2708

USGS science for a changing world

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

The National Map US Topo

HENLY QUADRANGLE
TEXAS
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid: Universal Transverse Mercator, Zone 14R
10 000-foot ticks: Texas Coordinate System of 1983 (south central and central zones)

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

Imagery.....NAIP, September 2014
Roads..... U.S. Census Bureau, 2014 - 2015
Names.....GNIS, 2015
Hydrography.....National Hydrography Dataset, 2014
Contours.....National Elevation Dataset, 2003
Boundaries.....Multiple sources; see metadata file 1972 - 2015

Wetlands.....FWS National Wetlands Inventory 1977 - 2014

MN 4° 19' 77 MILS
GN 0° 24' 7 MILS
UTM GRID AND 2016 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

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

SCALE 1:24 000

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

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.19

QUADRANGLE LOCATION

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

1	2	3
4		5
6	7	8

1 Pedernales Falls
2 Hammetts Crossing
3 Shingle Hills
4 Yeager Creek
5 Dripping Springs
6 Payton
7 Rough Hollow
8 Driftwood

ADJOINING QUADRANGLES

HENLY, TX
2016

NSN 7643016396516*
NGA REF NO. USGSX24K20106

0 1000' 2000' 4000'
SCALE: 1" = 2000'

N

RANCH AT CALITERRA PROJECT

HENLY QUADRANGLE USGS MAP

PROJECT NO.	DESIGNED BY:
FILE NO:	DRAWN BY: ACS
DATE: 01 AUGUST 2024	CHECKED BY:
SCALE: 1"=2000'	

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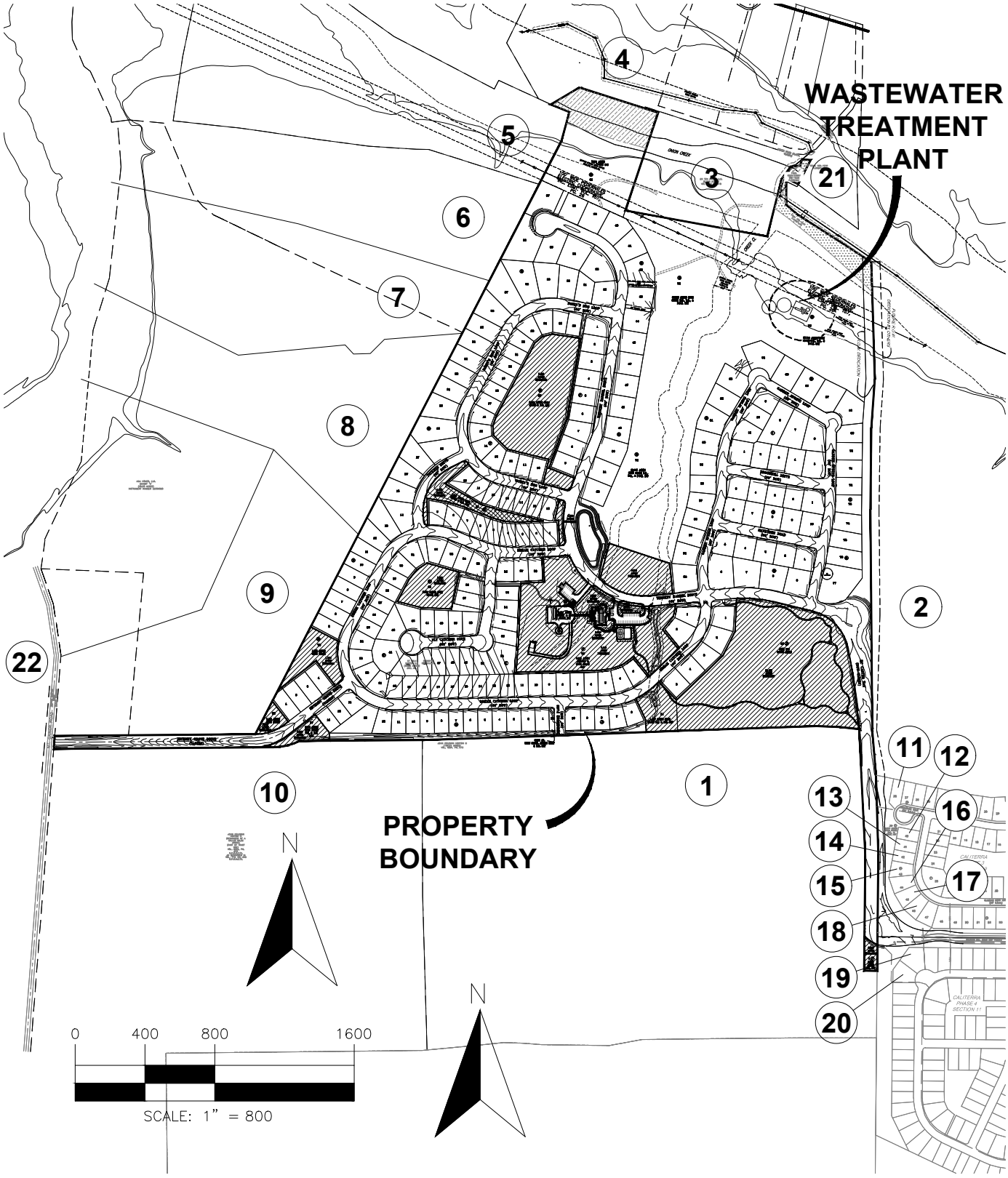
ATTACHMENT E



RANCH AT CALITERRA PROJECT

ADJACENT LANDOWNERS MAP

PROJECT NO.	DESIGNED BY:
FILE NO:	DRAWN BY: ACS
DATE: 01 AUGUST 2024	CHECKED BY:
SCALE: 1"=800'	

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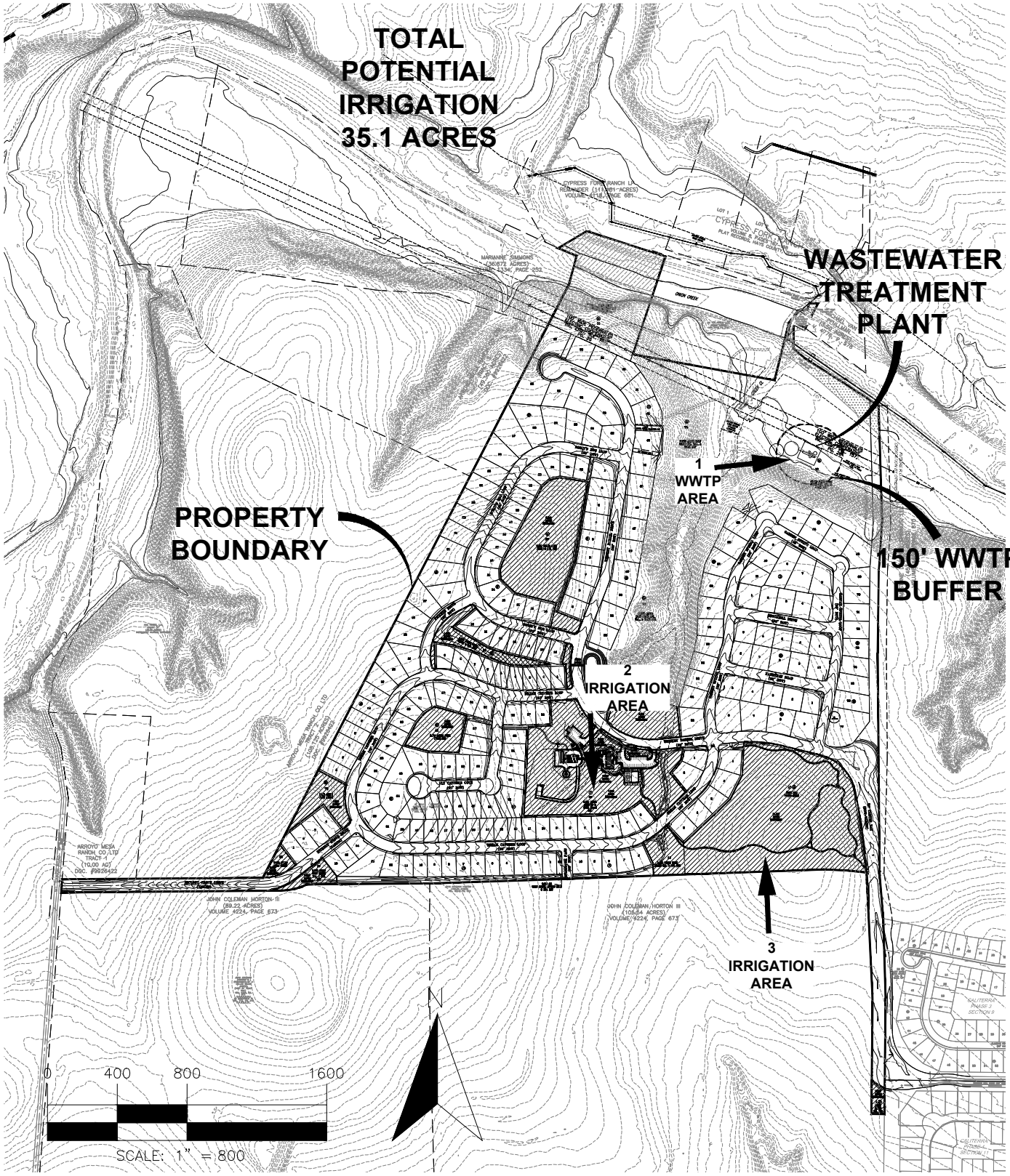
Phone (512) 327-2708

Adjacent Landowners List

Number	Name	Address	City	State	Zipcode	Prop ID
1	John C Horton III	903 Nueces St	Austin	TX	78701	R14995
2	Limestone Dripping Springs LLC	1114 Lost Creek Blvd, Ste 120	Austin	TX	78746	R112037
3	Siepiela Development Corp.	12222 Merit Dr, Ste 1020	Dallas	TX	75251	R15109
4	Cypress Fork Ranch LP	1300 Creek Rd	Dripping Springs	TX	78620	R136311
5	Marianne Simmons	1611 Creek Rd	Dripping Springs	TX	78620	R15104
6	Mesa Del Arroyo LP	3736 Bee Caves Rd Ste 1 #241	Westlake Hills	TX	78746	R15105
7	Jeffrey W & Lindsey J Boyd	9350 NE 12th Ave	Miami Shores	FL	33138	R201716
8	Orangetree Trust	2935 Willowood Farm Rd	Hamel	MN	55340	R199703
9	John M Peters Trust	PO Box 1095	Dripping Springs	TX	78620	R15106
10	John C Horton III	903 Nueces St	Austin	TX	78701	R14994
11	Jeffrey & Callie Murray	674 Climbing Rock Loop	Dripping Springs	TX	78620	R170176
12	Robert A & Kelsey A Borgeson	124 Climbing Rock Loop	Dripping Springs	TX	78620	R170178
13	Bradley B & Elizabeth Ault	138 Climbing Rock Loop	Dripping Springs	TX	78620	R170179
14	Squires Revocable Trust	150 Climbing Rock Loop	Dripping Springs	TX	78620	R170180
15	Kenneth J & Madison Clark	160 Climbing Rock Loop	Dripping Springs	TX	78620	R170181
16	Richard & Bozenka O Sauer	170 Climbing Rock Loop	Dripping Springs	TX	78620	R170182
17	Drew & Stephanie Pfamiller	180 Climbing Rock Loop	Dripping Springs	TX	78620	R170183
18	Gregory M Laird	190 Climbing Rock Loop	Dripping Springs	TX	78620	R170184
19	Heather A & Justin M Teliga	431 Barnhill Loop	Dripping Springs	TX	78620	R181337
20	Lori A Hammond	425 Barnhill Loop	Dripping Springs	TX	78620	R181336
21	Michael Van Pfullman	1305 Creek Road	Dripping Springs	TX	78620	R14989
22	Anna Marie Widen Etal Speir	15 Las Brisas Drive	Austin	TX	78746	R15067

ATTACHMENT F



RANCH AT CALITERRA
PROJECT

PHOTO
MAP

PROJECT NO.	DESIGNED BY:
FILE NO:	DRAWN BY: ACS
DATE: 01 AUGUST 2024	CHECKED BY:
SCALE: 1"=800'	

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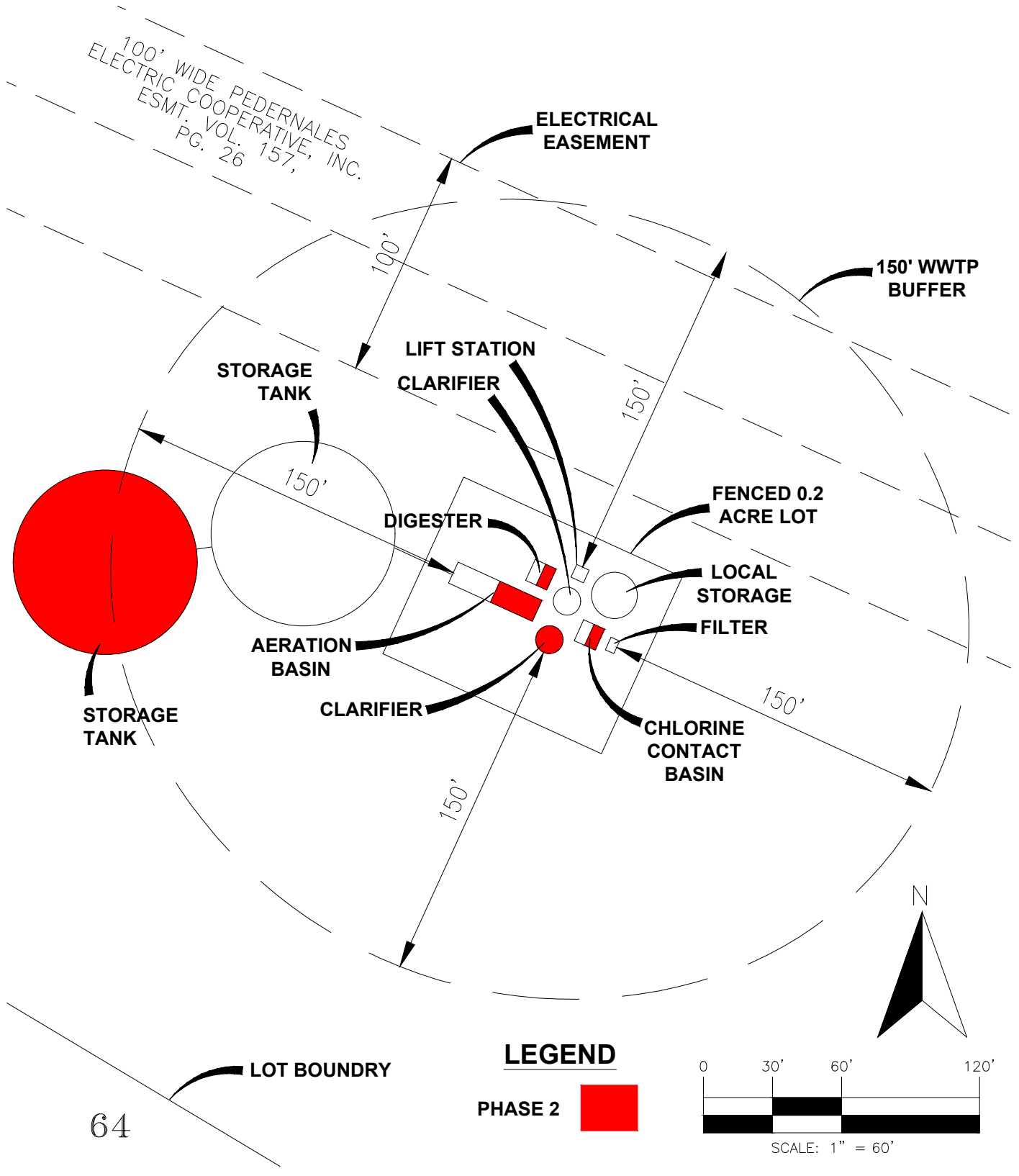
Phone (512) 327-2708

LOOKING NE TOWARD PROPOSED WWTP

TYPICAL IRRIGATION AREA PHOTO #2, LOOKING SOUTH

TYPICAL IRRIGATION AREA PHOTO #3, LOOKING NORTH

ATTACHMENT G



	RANCH AT CALITERRA PROJECT	BUFFER MAP FIRST PHASE & FINAL PHASE	PROJECT NO. / DESIGNED BY:
			FILE NO: / DRAWN BY: ACS
			DATE: 01 AUGUST 2024 / CHECKED BY:
			SCALE: 1"=800'

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ATTACHMENT H

Your transaction is complete. Thank you for using TCEQ ePay.

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt and the vouchers for your records. An email receipt has also been sent.

Transaction Information

Trace Number:	582EA000622490
Date:	08/21/2024 11:11 AM
Payment Method:	ACH - Authorization 0080979638
ePay Actor:	GREG RICH
Actor Email:	grich@siepiela.com
IP:	50.84.2.138
TCEQ Amount:	$350.00
Texas.gov Price:	$350.00*

* This service is provided by Texas.gov, the official website of Texas. The price of this service includes funds that support the ongoing operations and enhancements of Texas.gov, which is provided by a third party in partnership with the State.

Payment Contact Information

Name:	JENNIFER WARHEIT
Company:	CF CSLK CARTER
Address:	12222 MERIT DRIVE, DALLAS, TX 75251
Phone:	972-960-2777

Cart Items

Click on the voucher number to see the voucher details.

Voucher	Fee Description	AR Number	Amount
718222	EDWARDS AQUIFER APPLICATION FEE-AUSTIN REGION		$350.00
		TCEQ Amount:	$350.00

ePay Again | Exit ePay

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt for your records.

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): 0.0205

2-Hr Peak Flow (MGD): 0.082

Estimated construction start date: April 2025

Estimated waste disposal start date: October 2025

B. Interim II Phase

Design Flow (MGD): NA

2-Hr Peak Flow (MGD): Click to enter text.

Estimated construction start date: Click to enter text.

Estimated waste disposal start date: Click to enter text.

C. Final Phase

Design Flow (MGD): 0.041

2-Hr Peak Flow (MGD): 0.164

Estimated construction start date: April 2028

Estimated waste disposal start date: October 2028

D. Current Operating Phase

Provide the startup date of the facility: NA

Section 2. Treatment Process (Instructions Page 43)

A. Current Operating Phase

Provide a detailed description of the treatment process. **Include the type of treatment plant, mode of operation, and all treatment units.** Start with the plant's head works and

finish with the point of discharge. Include all sludge processing and drying units. **If more than one phase exists or is proposed, a description of *each phase* must be provided**.

Activated sludge process (c0mplete mix, single stage nitrification), with bar screen, aeration basin, final clarifier, sludge holding tank, chlorine contact chamber, and filtration.

B. Treatment Units

In Table 1.0(1), provide the treatment unit type, the number of units, and dimensions (length, width, depth) **of each treatment unit, accounting for *all* phases of operation.**

Table 1.0(1) - Treatment Units

Treatment Unit Type	Number of Units	Dimensions (L x W x D)
See Attachment I		

C. Process Flow Diagram

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

Attachment: See Attachment I

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

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

- Latitude: NA
- Longitude: NA

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

- Latitude: 30 deg 10’ 55” N
- Longitude: 98 deg 06’ 40” W

Provide a site drawing for the facility that shows the following:

- The boundaries of the treatment facility;
- The boundaries of the area served by the treatment facility;
- If land disposal of effluent, the boundaries of the disposal site and all storage/holding ponds; and
- If sludge disposal is authorized in the permit, the boundaries of the land application or disposal site.

Attachment: See Attachment J

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

Ranch at Caliterra development, including residential units

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
NA		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**.

NA

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.

NA

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**.

NA

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.

See buffer zone map in Attachment G. Wastewater treatment units will have a 150-ft buffer to any residential units.

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*.

NA

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 the 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). ***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					
Chlorine Residual, mg/l					
E.coli (CFU/100ml) freshwater					
Entercocci (CFU/100ml) saltwater					
Total Dissolved Solids, mg/l					
Electrical Conductivity, µmohs/cm, †					
Oil & Grease, mg/l					
Alkalinity ($CaCO_3$)*, mg/l					

*TPDES permits only
†TLAP permits only

Table1.0(3) – Pollutant Analysis for Water Treatment Facilities

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
Total Suspended Solids, mg/l					
Total Dissolved Solids, mg/l					
pH, standard units					
Fluoride, mg/l					
Aluminum, mg/l					
Alkalinity ($CaCO_3$), mg/l					

Section 8. Facility Operator (Instructions Page 50)

Facility Operator Name: Contract operator to be secured by permittee after permit issuance

Facility Operator's License Classification and Level: TBD

Facility Operator's License Number: TBD

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
Other	Off-site Third-Party Handler or Preparer	Not Applicable		Choose an item.	Choose an item.

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.

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

D. Disposal site

Disposal site name: TBD

TCEQ permit or registration number: TBD

County where disposal site is located: TBD

E. Transportation method

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

Name of the hauler: TBD

Hauler registration number: TBD

Sludge is transported as a:

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

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

A. Beneficial use authorization

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

☐ Yes ☒ No

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

☐ Yes ☐ No

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

☐ Yes ☐ No

B. Sludge processing authorization

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

Sludge Composting ☐ Yes ☒ No

Marketing and Distribution of sludge ☐ Yes ☒ No

Sludge Surface Disposal or Sludge Monofill ☐ Yes ☒ No

Temporary storage in sludge lagoons ☐ Yes ☒ No

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

☐ Yes ☐ No

Section 11. Sewage Sludge Lagoons (Instructions Page 53)

Does this facility include sewage sludge lagoons?

☐ Yes ☒ No

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

A. Location information

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

- Original General Highway (County) Map:

  Attachment: Click to enter text.
- USDA Natural Resources Conservation Service Soil Map:

  Attachment: Click to enter text.
- Federal Emergency Management Map:

  Attachment: Click to enter text.
- Site map:

  Attachment: Click to enter text.

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

☐ Overlap a designated 100-year frequency flood plain

☐ Soils with flooding classification

☐ Overlap an unstable area

☐ Wetlands

☐ Located less than 60 meters from a fault

☐ None of the above

Attachment: Click to enter text.

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

Click to enter text.

B. Temporary storage information

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

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

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

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

Phosphorus, mg/kg: Click to enter text.

Potassium, mg/kg: Click to enter text.

pH, standard units: Click to enter text.

Ammonia Nitrogen mg/kg: Click to enter text.

Arsenic: Click to enter text.

Cadmium: Click to enter text.

Chromium: Click to enter text.

Copper: Click to enter text.

Lead: Click to enter text.

Mercury: Click to enter text.

Molybdenum: Click to enter text.

Nickel: Click to enter text.

Selenium: Click to enter text.

Zinc: Click to enter text.

Total PCBs: Click to enter text.

Provide the following information:

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

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

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

C. Liner information

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

☐ Yes ☐ No

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

Click to enter text.

D. Site development plan

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

Click to enter text.

Attach the following documents to the application.

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

  Attachment: Click to enter text.

- Copy of the closure plan

  Attachment: Click to enter text.

- Copy of deed recordation for the site

  Attachment: Click to enter text.

- Size of the sludge lagoon(s) in surface acres and capacity in cubic feet and gallons

  Attachment: Click to enter text.

- Description of the method of controlling infiltration of groundwater and surface water from entering the site

  Attachment: Click to enter text.

- Procedures to prevent the occurrence of nuisance conditions

  Attachment: Click to enter text.

E. Groundwater monitoring

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

☐ Yes ☐ No

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

Attachment: Click to enter text.

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

A. Additional authorizations

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

☐ Yes ☒ No

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

Click to enter text.

B. Permittee enforcement status

Is the permittee currently under enforcement for this facility?

☐ Yes ☒ No

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

☐ Yes ☒ No

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

Click to enter text.

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

A. RCRA hazardous wastes

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

☐ Yes ☒ No

B. Remediation activity wastewater

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

☐ Yes ☒ No

C. Details about wastes received

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

Attachment: Click to enter text.

Section 14. Laboratory Accreditation (Instructions Page 56)

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

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

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

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

CERTIFICATION:

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

Printed Name: NA, no lab tests are included

Title: NA

Signature: _____

Date: _____

DOMESTIC WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.1

The following information is required for new and amendment major applications.

Section 1. Justification for Permit (Instructions Page 57)

A. Justification of permit need

Provide a detailed discussion regarding the need for any phase(s) not currently permitted. Failure to provide sufficient justification may result in the Executive Director recommending denial of the proposed phase(s) or permit.

See Attachment I – Supplemental Technical Report

B. Regionalization of facilities

For additional guidance, please review TCEQ's Regionalization Policy for Wastewater Treatment[1].

Provide the following information concerning the potential for regionalization of domestic wastewater treatment facilities:

1. *Municipally incorporated areas*

If the applicant is a city, then Item 1 is not applicable. Proceed to Item 2 Utility CCN areas.

Is any portion of the proposed service area located in an incorporated city?

☐ Yes ☒ No ☐ Not Applicable

If yes, within the city limits of: Click to enter text.

If yes, attach correspondence from the city.

Attachment: Click to enter text.

If consent to provide service is available from the city, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the city versus the cost of the proposed facility or expansion attached.

Attachment: Click to enter text.

2. *Utility CCN areas*

Is any portion of the proposed service area located inside another utility's CCN area?

☒ Yes ☐ No

[1] https://www.tceq.texas.gov/permitting/wastewater/tceq-regionalization-for-wastewater

If yes, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the CCN facilities versus the cost of the proposed facility or expansion.

Attachment: See Attachment K

3. Nearby WWTPs or collection systems

Are there any domestic permitted wastewater treatment facilities or collection systems located within a three-mile radius of the proposed facility?

☒ Yes ☐ No

If yes, attach a list of these facilities and collection systems that includes each permittee's name and permit number, and an area map showing the location of these facilities and collection systems.

Attachment: See Attachment K

If yes, attach proof of mailing a request for service to each facility and collection system, the letters requesting service, and correspondence from each facility and collection system.

Attachment: See Attachment K

If the facility or collection system agrees to provide service, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the facility or collection system versus the cost of the proposed facility or expansion.

Attachment: Click to enter text.

Section 2. Proposed Organic Loading (Instructions Page 59)

Is this facility in operation?

☐ Yes ☒ No

If no, proceed to Item B, Proposed Organic Loading.

If yes, provide organic loading information in Item A, Current Organic Loading

A. Current organic loading

Facility Design Flow (flow being requested in application): Click to enter text.

Average Influent Organic Strength or BOD_5 Concentration in mg/l: Click to enter text.

Average Influent Loading (lbs/day = total average flow X average BOD_5 conc. X 8.34): Click to enter text.

Provide the source of the average organic strength or BOD_5 concentration.

Click to enter text.

B. Proposed organic loading

This table must be completed if this application is for a facility that is not in operation or if this application is to request an increased flow that will impact organic loading.

Table 1.1(1) – Design Organic Loading

Source	Total Average Flow (MGD)	Influent BOD5 Concentration (mg/l)
Municipality		
Subdivision	0.041	325
Trailer park – transient		
Mobile home park		
School with cafeteria and showers		
School with cafeteria, no showers		
Recreational park, overnight use		
Recreational park, day use		
Office building or factory		
Motel		
Restaurant		
Hospital		
Nursing home		
Other		
TOTAL FLOW from all sources	0.041	
AVERAGE BOD_5 from all sources		325

Section 3. Proposed Effluent Quality and Disinfection (Instructions Page 59)

A. Existing/Interim I Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: 10

Total Suspended Solids, mg/l: 15

Ammonia Nitrogen, mg/l: 3

Total Phosphorus, mg/l: 5

Dissolved Oxygen, mg/l: 4

Other: Click to enter text.

B. Interim II Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: NA

Total Suspended Solids, mg/l: Click to enter text.

Ammonia Nitrogen, mg/l: Click to enter text.

Total Phosphorus, mg/l: Click to enter text.

Dissolved Oxygen, mg/l: Click to enter text.

Other: Click to enter text.

C. Final Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: 10

Total Suspended Solids, mg/l: 15

Ammonia Nitrogen, mg/l: 3

Total Phosphorus, mg/l: 5

Dissolved Oxygen, mg/l: 4

Other: Click to enter text.

D. Disinfection Method

Identify the proposed method of disinfection.

☒ Chlorine: 1.0 mg/l after 20 minutes detention time at peak flow

Dechlorination process: Click to enter text.

☐ Ultraviolet Light: Click to enter text. seconds contact time at peak flow

☐ Other: Click to enter text.

Section 4. Design Calculations (Instructions Page 59)

Attach design calculations and plant features for each proposed phase. Example 4 of the instructions includes sample design calculations and plant features.

Attachment: See Attachment I – Supplemental Technical Report

Section 5. Facility Site (Instructions Page 60)

A. 100-year floodplain

Will the proposed facilities be located above the 100-year frequency flood level?

☒ Yes ☐ No

If no, describe measures used to protect the facility during a flood event. Include a site map showing the location of the treatment plant within the 100-year frequency flood level. If applicable, provide the size and types of protective structures.

Click to enter text.

Provide the source(s) used to determine 100-year frequency flood plain.

FEMA flood insurance map, topographic map, Hays Co. unincorporated areas

For a new or expansion of a facility, will a wetland or part of a wetland be filled?

☐ Yes ☒ No

If yes, has the applicant applied for a US Corps of Engineers 404 Dredge and Fill Permit?

☐ Yes ☐ No

If yes, provide the permit number: Click to enter text.

If no, provide the approximate date you anticipate submitting your application to the Corps: Click to enter text.

B. Wind rose

Attach a wind rose: See Attachment L

Section 6. Permit Authorization for Sewage Sludge Disposal (Instructions Page 60)

A. Beneficial use authorization

Are you requesting to include authorization to land apply sewage sludge for beneficial use on property located adjacent to the wastewater treatment facility under the wastewater permit?

☐ Yes ☒ No

If yes, attach the completed **Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451)**: Click to enter text.

B. Sludge processing authorization

Identify the sludge processing, storage or disposal options that will be conducted at the wastewater treatment facility:

☐ Sludge Composting

☐ Marketing and Distribution of sludge

☐ Sludge Surface Disposal or Sludge Monofill

If any of the above, sludge options are selected, attach the completed **Domestic Wastewater Permit Application: Sewage Sludge Technical Report (TCEQ Form No. 10056)**: NA

Section 7. Sewage Sludge Solids Management Plan (Instructions Page 61)

Attach a solids management plan to the application.

Attachment: See Attachment M

The sewage sludge solids management plan must contain the following information:

- Treatment units and processes dimensions and capacities
- Solids generated at 100, 75, 50, and 25 percent of design flow
- Mixed liquor suspended solids operating range at design and projected actual flow
- Quantity of solids to be removed and a schedule for solids removal
- Identification and ownership of the ultimate sludge disposal site
- For facultative lagoons, design life calculations, monitoring well locations and depths, and the ultimate disposal method for the sludge from the facultative lagoon

An example of a sewage sludge solids management plan has been included as Example 5 of the instructions.

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.0: LAND DISPOSAL OF EFFLUENT

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

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

Identify the method of land disposal:

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

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

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

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

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

Table 3.0(1) – Land Application Site Crops

Crop Type & Land Use	Irrigation Area (acres)	Effluent Application (GPD)	Public Access? Y/N
Native vegetation, landscaping	35 acres available	41,000	Y

Section 3. Storage and Evaporation Lagoons/Ponds (Instructions Page 68)

Table 3.0(2) – Storage and Evaporation Ponds

Pond Number	Surface Area (acres)	Storage Volume (acre-feet)	Dimensions	Liner Type
N/A	N/A	1.9 MG	TBD	Steel tanks

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

Attachment: N/A

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

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

☐ Yes ☒ No

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

Click to enter text.

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

FEMA mapping

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

Rainwater from the impervious areas will be collected and diverted to rainwater structures to prevent run-on to irrigation areas. Application rate will be controlled to prevent effluent 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**: N

- 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**: O

- The boundaries of the land application site(s)
- Waste disposal or treatment facility site(s)
- On-site buildings
- Buffer zones
- Effluent storage and tailwater control facilities
- All water wells within 1-mile radius of the disposal site or property boundaries
- All springs and seeps onsite and within 500 feet of the property boundaries
- All surface waters in the state onsite and within 500 feet of the property boundaries
- All faults and sinkholes onsite and within 500 feet of the property

List and cross reference all water wells located within a half-mile radius of the disposal site or property boundaries shown on the USGS map in the following table. Attach additional pages as necessary to include all of the wells.

Table 3.0(3) – Water Well Data

Well ID	Well Use	Producing? Y/N	Open, cased, capped, or plugged?	Proposed Best Management Practice
34928	domestic	Y	cased	NA
402838	irrigation	Y	cased	NA
405177	domestic	Y	open	NA
5756477	spring	NA	NA	NA
5756481	Surface water	NA	NA	NA

Well ID	Well Use	Producing? Y/N	Open, cased, capped, or plugged?	Proposed Best Management Practice

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

Attachment: O

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: P

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: Q

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: Q

List all USDA designated soil series on the proposed land application site. Attach additional pages as necessary.

Table 3.0(4) – Soil Data

Soil Series	Depth from Surface	Permeability	Available Water Capacity	Curve Number
See Attachment Q				

Soil Series	Depth from Surface	Permeability	Available Water Capacity	Curve Number

Section 9. Effluent Monitoring Data (Instructions Page 71)

Is the facility in operation?

☐ Yes ☒ No

If no, this section is not applicable and the worksheet is complete.

If yes, provide the effluent monitoring data for the parameters regulated in the existing permit. If a parameter is not regulated in the existing permit, enter N/A.

Table 3.0(5) – Effluent Monitoring Data

Date	30 Day Avg Flow MGD	BOD5 mg/l	TSS mg/l	pH	Chlorine Residual mg/l	Acres irrigated

Date	30 Day Avg Flow MGD	BOD5 mg/l	TSS mg/l	pH	Chlorine Residual mg/l	Acres irrigated

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

Click to enter text.

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.1: SURFACE LAND DISPOSAL OF EFFLUENT

The following is required for new and major amendment permit applications. Renewal and minor amendment permit applications may be asked for this worksheet on a case by case basis.

Section 1. Surface Disposal (Instructions Page 72)

Complete the item that applies for the method of disposal being used.

A. Irrigation

Area under irrigation, in acres: 35

Design application frequency:

hours/day 12 **And** days/week 7

Land grade (slope):

average percent (%): Click to enter text.

maximum percent (%): Click to enter text.

Design application rate in acre-feet/acre/year: 2.75

Design total nitrogen loading rate, in lbs N/acre/year: Click to enter text.

Soil conductivity (mmhos/cm): 10

Method of application: sprinkler, travelling gun

Attach a separate engineering report with the water balance and storage volume calculations, method of application, irrigation efficiency, and nitrogen balance.

Attachment: R

B. Evaporation ponds

Daily average effluent flow into ponds, in gallons per day: Click to enter text.

Attach a separate engineering report with the water balance and storage volume calculations.

Attachment: Click to enter text.

C. Evapotranspiration beds

Number of beds: Click to enter text.

Area of bed(s), in acres: Click to enter text.

Depth of bed(s), in feet: Click to enter text.

Void ratio of soil in the beds: Click to enter text.

Storage volume within the beds, in acre-feet: Click to enter text.

Attach a separate engineering report with the water balance and storage volume calculations, and a description of the lining.

Attachment: Click to enter text.

D. Overland flow

Area used for application, in acres: Click to enter text.

Slopes for application area, percent (%): Click to enter text.

Design application rate, in gpm/foot of slope width: Click to enter text.

Slope length, in feet: Click to enter text.

Design BOD_5 loading rate, in lbs BOD_5/acre/day: Click to enter text.

Design application frequency:

hours/day: Click to enter text. **And** days/week: Click to enter text.

Attach a separate engineering report with the method of application and design requirements according to *30 TAC Chapter 217*.

Attachment: Click to enter text.

Section 2. Edwards Aquifer (Instructions Page 73)

Is the facility subject to *30 TAC Chapter 213*, Edwards Aquifer Rules?

☐ Yes ☒ No

If **yes**, is the facility located on the Edwards Aquifer Recharge Zone?

☐ Yes ☒ No

If yes, attach a geological report addressing potential recharge features.

Attachment: Click to enter text.

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 6.0: INDUSTRIAL WASTE CONTRIBUTION

The following **is required** for **all publicly owned treatment works**.

Section 1. All POTWs (Instructions Page 89)

A. Industrial users (IUs)

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

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

Categorical IUs:

Number of IUs: 0

Average Daily Flows, in MGD: Click to enter text.

Significant IUs – non-categorical:

Number of IUs: Click to enter text.

Average Daily Flows, in MGD: Click to enter text.

Other IUs:

Number of IUs: Click to enter text.

Average Daily Flows, in MGD: Click to enter text.

B. Treatment plant interference

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

☐ Yes ☒ No

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

Click to enter text.

C. Treatment plant pass through

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

☐ Yes ☒ No

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

Click to enter text.

D. Pretreatment program

Does your POTW have an approved pretreatment program?

☐ Yes ☒ No

If yes, complete Section 2 only of this Worksheet.

Is your POTW required to develop an approved pretreatment program?

☐ Yes ☒ No

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

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

E. Service Area Map

Attach a map indicating the service area of the POTW. The map should include the applicant's service area boundaries and the location of any known industrial users discharging to the POTW. Please see the instructions for guidance.

Attachment: Click to enter text.

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

A. Substantial modifications

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

☐ Yes ☐ No

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

Click to enter text.

B. Non-substantial modifications

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

☐ Yes ☐ No

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

Click to enter text.

C. Effluent parameters above the MAL

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

Table 6.0(1) – Parameters Above the MAL

Pollutant	Concentration	MAL	Units	Date

D. Industrial user interruptions

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

☐ Yes ☐ No

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

Click to enter text.

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

A. General information

Company Name: Click to enter text.

SIC Code: Click to enter text.

Contact name: Click to enter text.

Address: Click to enter text.

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

Telephone number: Click to enter text.

Email address: Click to enter text.

B. Process information

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

Click to enter text.

C. Product and service information

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

Click to enter text.

D. Flow rate information

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

Process Wastewater:

Discharge, in gallons/day: Click to enter text.

Discharge Type: ☐ Continuous ☐ Batch ☐ Intermittent

Non-Process Wastewater:

Discharge, in gallons/day: Click to enter text.

Discharge Type: ☐ Continuous ☐ Batch ☐ Intermittent

E. Pretreatment standards

Is the SIU or CIU subject to technically based local limits as defined in the *i*nstructions?

☐ Yes ☐ No

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

☐ Yes ☐ No

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

Category: Subcategories: Click to enter text.

Click or tap here to enter text. Click to enter text.

Category: Click to enter text.

Subcategories: Click to enter text.

Category: Click to enter text.

Subcategories: Click to enter text.

Category: Click to enter text.

Subcategories: Click to enter text.

Category: Click to enter text.

Subcategories: Click to enter text.

F. Industrial user interruptions

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

☐ Yes ☐ No

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

Click to enter text.

ATTACHMENT I

SUPPLEMENTAL TECHNICAL REPORT

FOR WASTEWATER TREATMENT PLANT

RANCH AT CALITERRA PROJECT

Prepared by:

James Miertschin & Associates, Inc.

Post Office Box 162305

Austin, Texas 78716

August 2024

TABLE OF CONTENTS

1.0 INTRODUCTION

Th Ranch at Caliterra project will begin construction on a wastewater treatment plant (WWTP) to serve the development upon TPDES permit approval. The construction will have two phases to meet the needs of the complete development. The proposed project will consist of residential units. No residential units have been constructed to date.

The first phase will be designed to handle an average daily flow of 20,500 gallons per day (GPD) and a peak flow of 82,000 GPD. The final phase will be designed to handle the ultimate project flow of 41,000 GPD, with a peak flow of 164,000 GPD.

The applicant is proposing effluent treatment levels of 10 mg/L Carbonaceous Biochemical Oxygen Demand ($CBOD_5$), 15 mg/L Total Suspended Solids (TSS), 3 mg/L Ammonia Nitrogen (NH_3N), and 4 mg/L Dissolved Oxygen (DO). After treatment, effluent will be released for disposal in irrigation fields positioned throughout the development.

2.0 SYSTEM FLOW PROJECTIONS

At full build-out, the primarily residential development to be served by the wastewater treatment plant is projected to have approximately 234 residential living unit equivalents (LUEs).

Wastewater flows were projected with assumed flows of 175 gpd/LUE, which is consistent with unit flow rates applied in the Dripping Springs area.

3.0 INFLUENT AND EFFLUENT QUALITY DESIGN CRITERIA

3.1 INFLUENT QUALITY

Projected influent quality for the wastewater treatment plant is consistent with typical design parameters for domestic wastewater:

BOD_5: 325 mg/L

TSS: 300 mg/L

3.2 EFFLUENT QUALITY

The effluent will be discharged to irrigation fields located on the project tract. The wastewater treatment plant will be designed to achieve effluent limitations of:

BOD_5: 10 mg/L

TSS: 15mg/L

NH_3N: 3 mg/L

DO: 4 mg/L

4.0 WASTEWATER TREATMENT PLANT DESIGN

4.1 TREATMENT PROCESS

The first and final phase of the WWTP will consist of an activated sludge system operating in complete mix mode, single stage nitrification. The influent will pass through the headworks, aeration basin, clarifier, filters, and chlorine contact before the effluent is released to storage prior to dispersal in irrigation fields. Sludge will be contained in a digester/sludge holding tank before being dewatered and hauled to a TCEQ-permitted disposal site. The minimum sizes for the key treatment plant components are shown in Table 1

A schematic flow diagram for the plant treatment process is displayed in Figure 1. Sizing criteria and design calculations for the plant are found in Table 1.

The actual plant configuration will be determined at the design stage. The plant unit processes may be located in stand-alone basins, or a concentric-circle arrangement may be used. Whatever final configuration is selected, sizing will adhere to the Ch. 217 criteria summarized in Table 1.

Figure 1: Schematic Flow Diagram

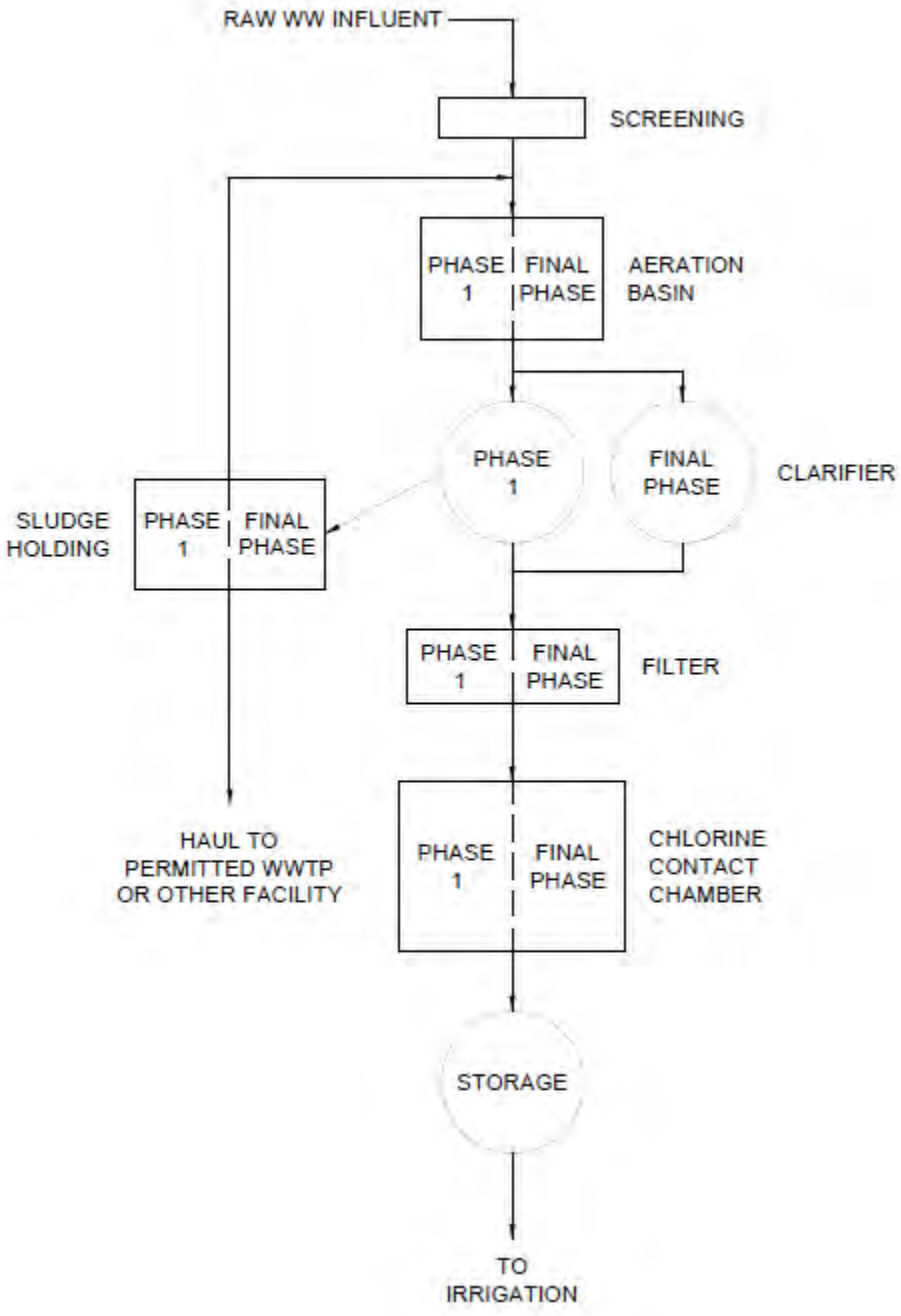


Table 1: WWTP Sizing Criteria and Design Calculations

INFLUENT STRENGTH CONDITIONS				**EFFLUENT STRENGTH CONDITIONS**		
BOD	**325**	**mg/l**		**BOD**	**10**	**mg/l**
TSS	**300**	**mg/l**		**TSS**	**15**	**mg/l**
				NH3	**3**	**mg/l**
				P		**mg/l**
PROCESS LOADINGS						
MLSS	2500	mg/l				
RASS	10000	mg/l				
	Reference	**First Phase**			**Final Phase**	
INFLUENT FLOW CONDITIONS						
Average Daily Flow (Qd)		20,500	gpd		41,000	gpd
		14.24	gpm		28.47	gpm
2 Hour Peak Flow (Qp)		82,000	gpd		164,000	gpd
		56.94	gpm		113.89	gpm
BOD5 Load		55.57	lb/day		111.13	lb/day
TSS Load		51.29	lb/day		102.58	lb/day
TOTAL AERATION VOLUME REQUIRED						
Loading	30 TAC §217.154(b)(2)	**35**	**lb/1000 cf**		**35**	**lb/1000 cf**
Req. Aeration Volume (cf)	§217.156(a)(6)	1,588	cf		3,175	cf
Req. Aeration Volume (gal)		11,875	gal		23,750	gal
Volume Provided, normal depth		12,000	cf		24,000	cf
SLUDGE HOLDING VOLUME REQUIRED						
Suggested Retention Time	BPJ	20	days		20	days
VSS Reduction		0.45			0.45	
Sludge Yield, Y (from incoming BOD)		0.70			0.70	
Mass Sludge Incoming		21	lb/day		43	lb/day
Mass Stored = Ret Time x Mass Incoming						
Holding Volume Required		2,565	gal		5,130	gal
Holding Volume Provided		3,500	gal		7,480	gal
CLARIFIER SIZING REQUIRED						
Surface Loading at Qp	§217.154(c)(1)	**1,200**	**gal/sf**		**1,200**	**gal/sf**
Conventional Area Required		69.00	sf		137.00	sf
Surface Area Provided		69	sf		137.00	sf
Vertical Flow Velocity	§217.152(a)(4)	**0.15**	**ft/sec**		**0.15**	**ft/sec**
Stilling Well Area Required		0.85	sf		1.69	sf
Weir Loading	§217.152(c)(4)	**20,000**	**gal/ft**		**20,000**	**gal/ft**
Weir Length Required		4.10	**ft**		8.20	**ft**
Detention Time	§217.154(c)(1)	**1.80**	**hours**		**1.80**	**hours**
Volume Required (gal)		6,150.00	gal		12,300.00	gal
Volume Required (cf)		822.19	cf		1,644.39	cf
Side Water Depth (est.)		10.00	ft		10	ft
Surface Area Required		82.22	sf		164.44	sf
FILTRATION						
Filter Loading at Qp	§217.191(a)(2)	**4.00**	**gal/min-sf**		**4.00**	**gal/min-sf**
Surface Area Required		14.2	sf		28.5	sf
Surface Area Provided		15.0	sf		30.0	sf
CHLORINE CONTACT CHAMBER						
HRT	§217.281(b)((1)	**20**	**minutes**		**20**	**minutes**
Volume Required		1,138.9	gallons		2,277.8	gallons
		152.26	cf		304.52	cf
Volume Provided		200.00	cf		400.00	cf
AIR REQUIREMENTS						
Process Flow	§217.155(a)(3)	**2.20**	**lb O2/lb BOD**		**2.20**	**lb O2/lb BOD5**
Oxygen Demand based on Load		122	lb O2/day		244	lb O2/day
Airflow Default Rate	§217.155(b)(1)	**3,200**	**scf/d/lb BOD**		**3,200**	**scf/d/lb BOD5**
Default Airflow		123	scfm		247	scfm
Site-Specific Airflow	§217.155(b)(2)					
Site-Specific Calculated Airflow	(see air calcs sheet)	120	icfm		239	icfm
Digester Air						
Air for Storage Rate	§217.251(d)(1)(C)	**30**	**scfm/1000 ft3**		**30**	**scfm/1000 ft3**
Calculated Airflow		15.00	scfm		34.60	scfm
Total Calculated Airflow		**135.00**	**scfm**		**273.60**	**scfm**

4.2 EFFLUENT DISPOSAL

Effluent from the WWTP will be sent for disposal via irrigation on the project site.

4.3 WASTEWATER TREATMENT PLANT SITE

The WWTP site is located approximately 1.0 mile SE of the intersection CR 190 and CR 220 in Hays County. The WWTP is located above the 100-year flood hazard.

4.4 DESIGN FEATURES

4.4.1 Overflow Prevention

The wastewater treatment plant is designed to hydraulically accommodate peak wet weather flows. The sanitary collection system on the project site is relatively limited in extent, and there will be only minimal opportunity for any wet weather flows to intrude. Under the proposed wastewater management system, the treatment plant will be flexible for accommodation of peak flows, as specific process units are sized with a peaking factor of 4. This excess capacity should enhance the operator's ability to prevent washout of solids under high flow conditions. The influent lift station will be configured to pump the peak flow with the largest single pump out of service.

4.4.2 Emergency Power

An emergency generator will be provided at the plant site to provide auxiliary electrical power in the event of power outages from the local utility supplier. The generator will start automatically in the event of a failure.

4.4.3 Alarms

An automatic alarm dialer system will be provided at the treatment plant. An alarm will be signaled in the event of a power outage, chlorine leak, or lift station high water level. The auto-dialer will automatically dial a series of telephone numbers in order to notify an operator.

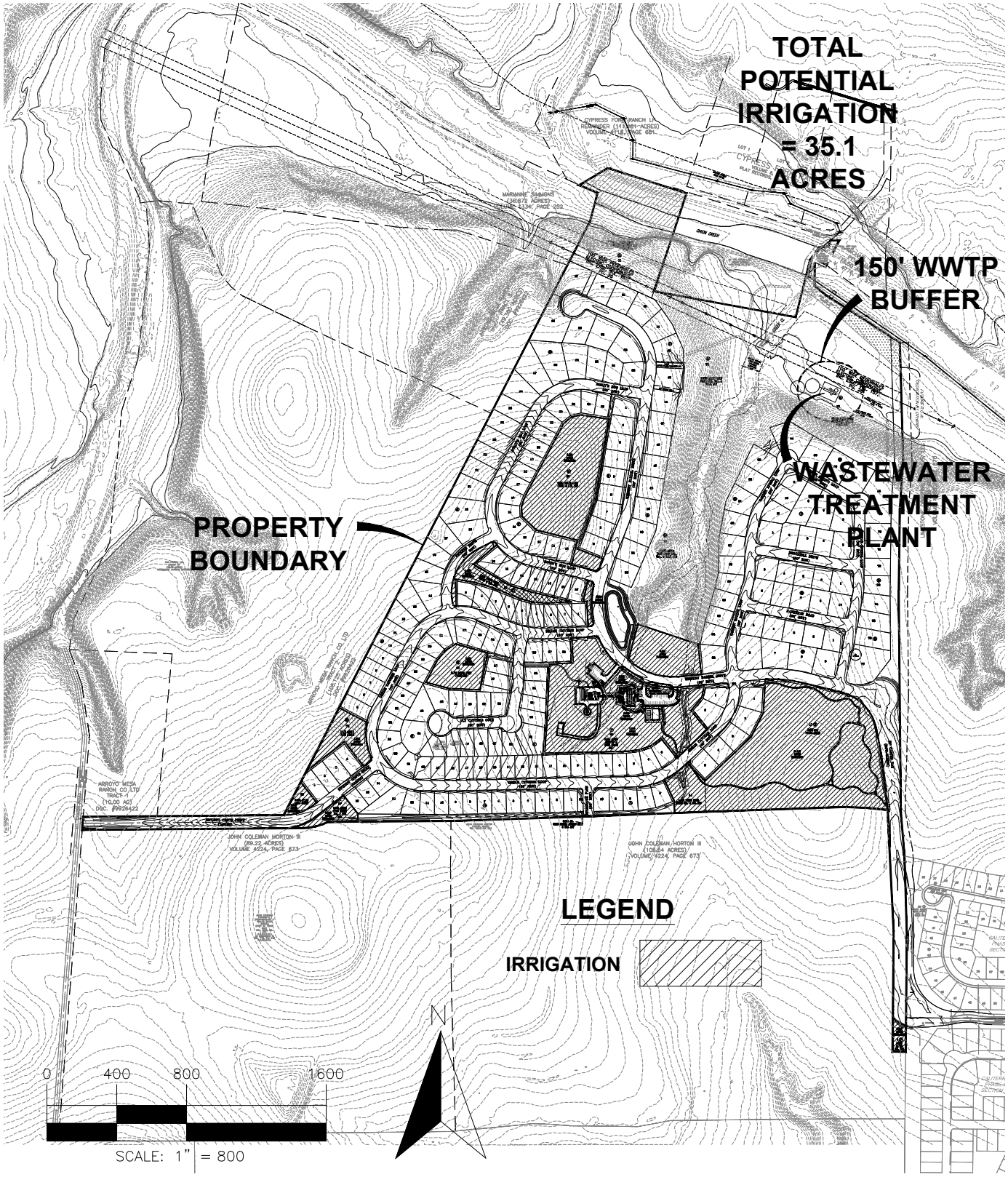
4.4.4 Reliability and Flexibility

The influent lift station will include multiple pumps that are sized to meet peak flow rates with the largest pump out of service. High wet well level will result in an alarm condition.

4.5 EFFLUENT QUALITY ENHANCEMENT

The proposed WWTP facility will be designed to achieve effluent limitations of 10 mg/L $CBOD_5$, 15 mg/L TSS, 3 mg/L NH_3N, and 4 mg/L DO.

ATTACHMENT J



	RANCH AT CALITERRA PROJECT	SITE DRAWING MAP	PROJECT NO.	DESIGNED BY:
			FILE NO:	DRAWN BY: ACS
			DATE: 01 AUGUST 2024	CHECKED BY:
			SCALE: 1"=800'	

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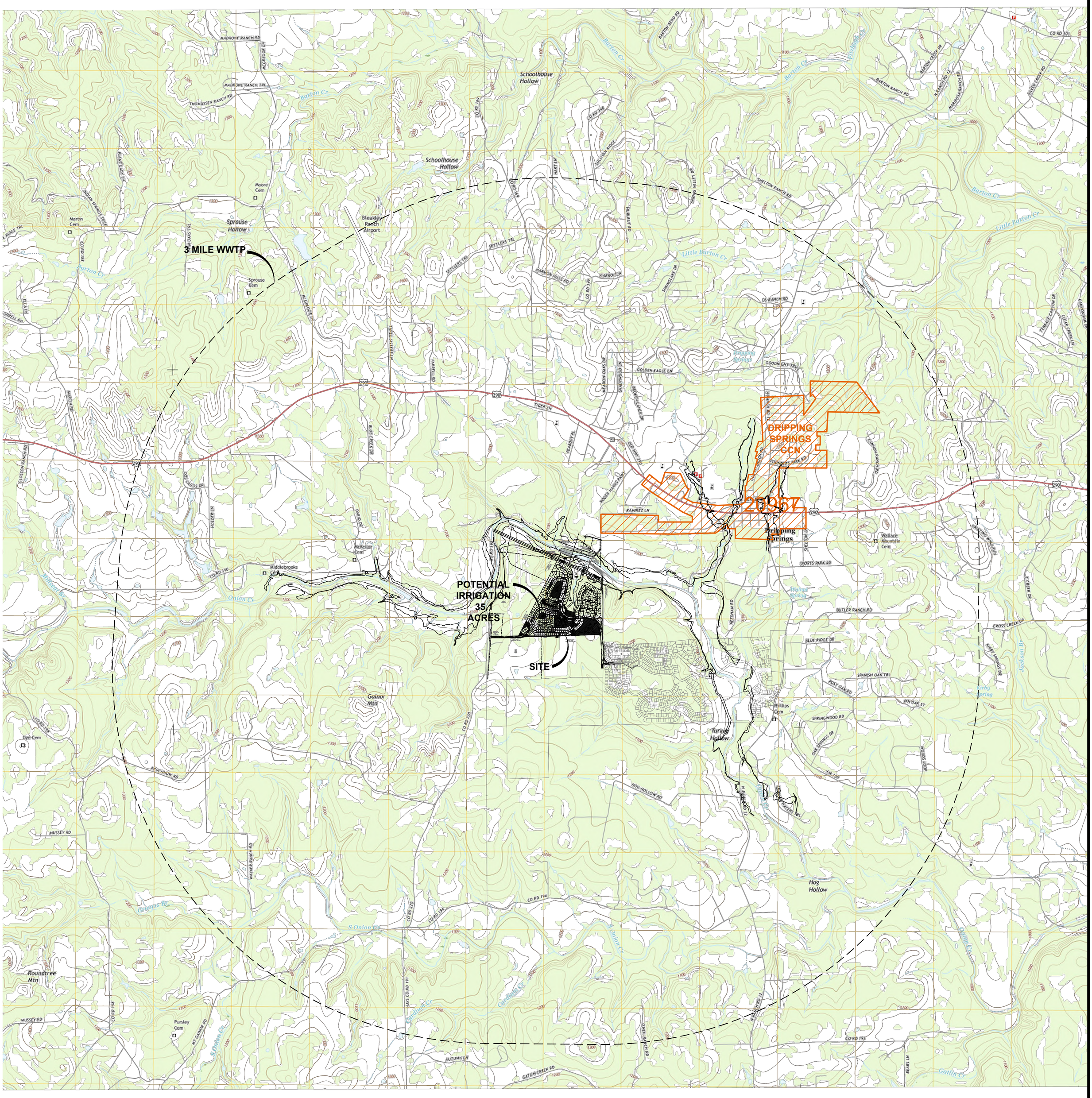
ATTACHMENT K



0 1000' 2000' 4000'

SCALE: 1" = 2000'

N

RANCH AT CALITERRA PROJECT

WASTEWATER TREATMENT PLANTS WITHIN 3 MILE RADIUS

PROJECT NO.	DESIGNED BY:
FILE NO:	DRAWN BY: ACS
DATE: 01 AUGUST 2024	CHECKED BY:
SCALE: 1"=2000'	

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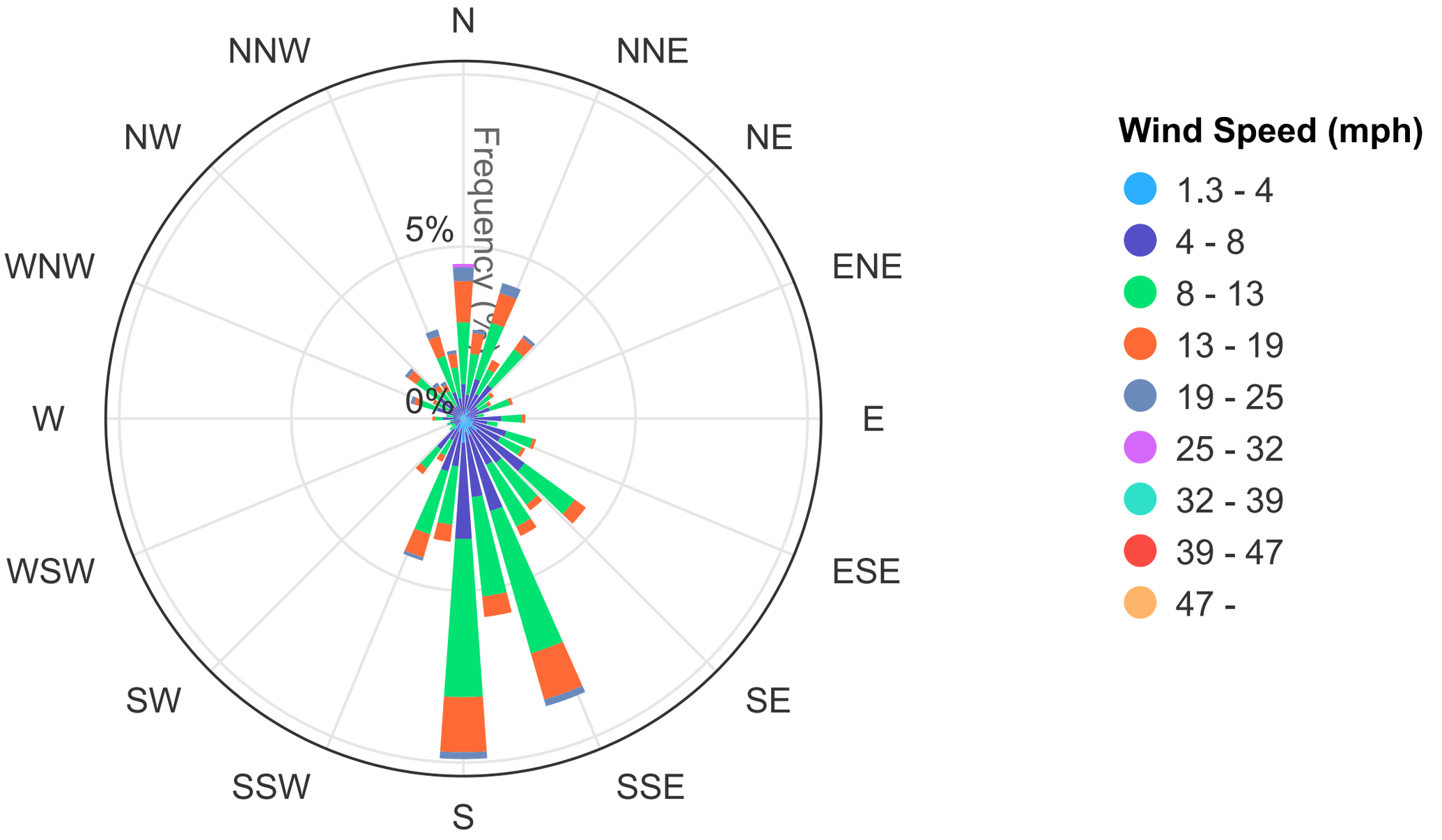
ATTACHMENT L

AUSTIN Wind Rose

July 1, 1948 - July 16, 2024
Sub-Interval: Jan. 1 - Dec. 31, 0 - 23



Click and drag to zoom

ATTACHMENT M

SOLIDS MANAGEMENT PLAN
FIRST PHASE

FINAL PHASE

System Parameters:	**Symbols:**		
Design Q	Qd :=	0.0205	MGD
Design BOD_5 Concentration	BOD: =	325	mg/l
Design BOD_5 Load	LBOD :=	55.56525	lbs/d
Design MLSS Concentration in aeration basin	MLSS :=	2500	mg/l
F/M Food to Microorganism ratio	FM :=	0.07	day^{-1}
Sludge Yield	Y :=	0.7	lbs sludge / lb BOD5 / day
VS reduction in Digester	R :=	0.45	
Digester SS	DSS :=	20000	mg/l
Aeration basin volume	Avol :=	0.012	MG
Digester volume	Dvol :=	0.004	MG

Sludge Wasting from Aeration Basin to Digester:

Mass solids wasted = (BOD load)(sludge yield) $MSw := LBOD \cdot Y$

Mass solids under aeration = (BOD load)/(F/M) (equivalent to basin vol x MLSS) $MSa := \frac{LBOD}{FM}$

Aeration solids retention time $ASRT := \frac{MSa}{MSw}$

F/M will vary up to design condition if maintain MLSS

Flow	F/M		Solids under Aeration (lbs)		Solids Wasted (lbs/d)		Aeration SRT (days)	
25% Design Q	$FM_{.25}$ =	0.056	$MSa_{.25}$ =	248	$MSw_{.25}$ =	9.723919	$ASRT_{.25}$=	25.516
50% Design Q	$FM_{.50}$ =	0.112	$MSa_{.50}$ =	248	$MSw_{.50}$ =	19.44784	$ASRT_{.50}$=	12.758
75% Design Q	$FM_{.75}$ =	0.168	$Msa_{.75}$ =	248	$MSw_{.75}$ =	29.17176	$ASRT_{.75}$=	8.505
100% Design Q	$FM_{1.00}$ =	0.224	$Msa_{1.00}$ =	248	$MSw_{1.00}$ =	38.89568	$ASRT_{1.00}$=	6.379

SOLIDS MANAGEMENT PLAN
FIRST PHASE

Sludge Wasting from Digester:

Mass solids wasted = (BOD load)(sludge yield)(VS remaining)

$$DMSw := lbod \cdot Y \cdot (1 - R)$$

Mass solids in digester = (digester volume)(digester SS)(8.34)(VS remaining)

$$DMSa := Dvol \cdot DSS \cdot 8.34 \cdot (1 - R)$$

Digester solids retention time = (mass solids in digestion)/(mass solids wasted)

$$DSRT := \frac{DMSa}{DMSw}$$

Total solids retention time = (aeration SRT) + (digester SRT)

$$TSRT := ASRT + DSRT$$

Digester SS will be maintained

Flow	Digester SS (mg/l)		Solids in Digester (lbs)		Solids Wasted (lbs/d)		Digester Solids Retention Time Days	
25% Design Q	$DSS_{.25}$ =	20000	$DMSa_{.25}$ =	321.09	$DMSw_{.25}$ =	5.34816	$DMS_{.25}$ =	60.038
50% Design Q	$DSS_{.50}$ =	20000	$DMSa_{.50}$ =	321.09	$DMSw_{.50}$ =	10.6963	$DMS_{.50}$ =	30.019
75% Design Q	$DSS_{.75}$ =	20000	$DMSa_{.75}$ =	321.09	$DMSw_{.75}$ =	16.0445	$DMS_{.75}$ =	20.013
100% Design Q	$DSS_{1.00}$ =	20000	$DMSa_{1.00}$ =	321.09	$DMSw_{1.00}$ =	21.3926	$DMS_{1.00}$ =	15.009

Total Aeration Plus Digester SRT (days)

$SRT_{.25}$ = 85.553

$SRT_{.50}$ = 42.777

$SRT_{.70}$ = 28.518

$SRT_{1.00}$ = 21.388

FINAL PHASE

System Parameters:	Symbols:		
Design Q	Qd :=	0.041	MGD
Design BOD_5 Concentration	BOD: =	325	mg/l
Design BOD_5 Load	LBOD :=	111.1305	lbs/d
Design MLSS Concentration in aeration basin	MLSS :=	2500	mg/l
F/M Food to Microorganism ratio	FM :=	0.07	day^{-1}
Sludge Yield	Y :=	0.7	lbs sludge / lb BOD5 / day
VS reduction in Digester	R :=	0.45	
Digester SS	DSS :=	20000	mg/l
Aeration basin volume	Avol :=	0.024	MG
Digester volume	Dvol :=	0.008	MG

Sludge Wasting from Aeration Basin to Digester:

Mass solids wasted = (BOD load)(sludge yield)

$$MSw := LBOD \cdot Y$$

Mass solids under aeration = (BOD load)/(F/M)
(equivalent to basin vol x MLSS)

$$MSa := \frac{LBOD}{FM}$$

Aeration solids retention time

$$ASRT := \frac{MSa}{MSw}$$

F/M will vary up to design condition if maintain MLSS

Flow	F/M		Solids under Aeration (lbs)		Solids Wasted (lbs/d)		Aeration SRT (days)	
25% Design Q	$FM_{.25}$ =	0.056	$MSa_{.25}$ =	494	$MSw_{.25}$ =	19.44784	$ASRT_{.25}$=	25.409
50% Design Q	$FM_{.50}$ =	0.112	$MSa_{.50}$ =	494	$MSw_{.50}$ =	38.89568	$ASRT_{.50}$=	12.704
75% Design Q	$FM_{.75}$ =	0.169	$Msa_{.75}$ =	494	$MSw_{.75}$ =	58.34351	$ASRT_{.75}$=	8.470
100% Design Q	$FM_{1.00}$ =	0.225	$Msa_{1.00}$ =	494	$MSw_{1.00}$ =	77.79135	$ASRT_{1.00}$=	6.352

Solids Management Plan
Final Phase

Sludge Wasting from Digester:

Mass solids wasted = (BOD load)(sludge yield)(VS remaining) $DMSw := lbod \cdot Y \cdot (1 - R)$

Mass solids in digester = (digester volume)(digester SS)(8.34)(VS remaining) $DMSa := Dvol \cdot DSS \cdot 8.34 \cdot (1 - R)$

Digester solids retention time = (mass solids in digestion)/(mass solids wasted) $DSRT := \frac{DMSa}{DMSw}$

Total solids retention time = (aeration SRT) + (digester SRT) $TSRT := ASRT + DSRT$

Digester SS will be maintained

Flow	Digester SS (mg/l)		Solids in Digester (lbs)		Solids Wasted (lbs/d)		Digester Solids Retention Time Days	
25% Design Q	$DSS_{.25}$ =	20000	$DMSa_{.25}$ =	688.05	$DMSw_{.25}$ =	10.6963	$DMS_{.25}$ =	64.326
50% Design Q	$DSS_{.50}$ =	20000	$DMSa_{.50}$ =	688.05	$DMSw_{.50}$ =	21.3926	$DMS_{.50}$ =	32.163
75% Design Q	$DSS_{.75}$ =	20000	$DMSa_{.75}$ =	688.05	$DMSw_{.75}$ =	32.0889	$DMS_{.75}$ =	21.442
100% Design Q	$DSS_{1.00}$ =	20000	$DMSa_{1.00}$ =	688.05	$DMSw_{1.00}$ =	42.7852	$DMS_{1.00}$ =	16.081

Total Aeration Plus Digester SRT (days)

$SRT_{.25}$ = 89.735

$SRT_{.50}$ = 44.867

$SRT_{.70}$ = 29.912

$SRT_{1.00}$ = 22.434

ATTACHMENT N

CROPPING PLAN

COVER CROP

An irrigation system is proposed for effluent disposal. A total irrigation tract area of 35 acres has been designated, but not all of the tract will be used for irrigation in the early stages of development. The proposed cover crop on the site will be native grasses, juniper trees, and mixed hardwood trees on rangeland. The primary growing season of the native grass is roughly March through October. Bermuda or rye may be planted on the irrigation site if future needs dictate.

NUTRIENTS

The nitrogen uptake of the rangeland area consisting of native grass, juniper trees, and mixed hardwood trees is not well documented. For the present analysis, it is assumed that it will be approximately 200 lbs N/acre. It is expected that the nitrogen requirements of the rangeland cover crop will be provided by the nitrogen content in the effluent only, and no additional fertilizer will be required.

WATERING

Treated municipal wastewater effluent will be applied to the irrigation site. The effluent application rate for the rangeland cover is projected to be 2.75 acre-feet/acre-year or less. No additional irrigation water is expected to be necessary.

HARVESTING

The precise method and schedule for harvest on the rangeland irrigation tract has not been determined at the present time. On some of the flatter expanses of the tract, periodic mowing may be accomplished.

SOILS

The principal soils group on the native rangeland irrigation tract is the Comfort-Rock Outcrop Association. The soils generally range from moderately slow to slowly permeable, are shallow, and well-drained. Soils are described in more detail in a separate soils report.

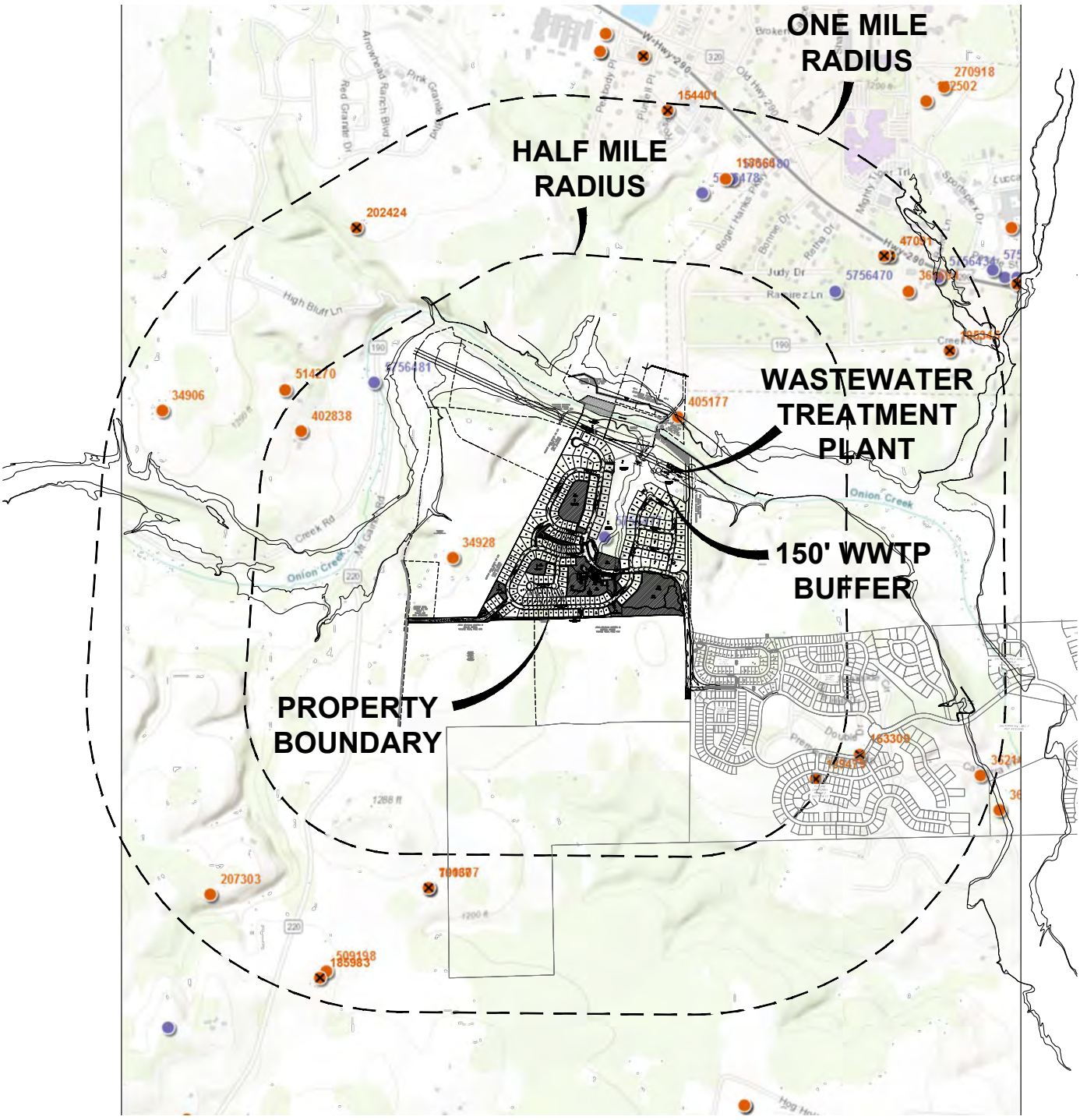
SALT TOLERANCES

It is documented that bermudagrass is relatively tolerant of high salt loadings in irrigation waters. The salt tolerance of native grass and mixed rangeland vegetation is not well documented, but it would be expected to be at least as tolerant as bermuda. The salt concentration in the root zone will be controlled by leaching.

APPLICATION METHOD

At the present time, the irrigation application system has not been designed. The rangeland tract will be irrigated with either fixed head or traveling gun application equipment. The irrigation efficiency is estimated at 85%.

ATTACHMENT O



0 1250 2500 5000

SCALE: 1" = 2500

N

- DRILLER'S PLUGGED WELL REPORT
- DRILLLER'S WELL REPORT
- TWDB GROUNDWATER WELL REPORT

RANCH AT CALITERRA PROJECT

WELL MAP

PROJECT NO.	DESIGNED BY:
FILE NO:	DRAWN BY: ACS
DATE: 01 AUGUST 2024	CHECKED BY:
SCALE: 1"=2500'	

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ATTACHMENT P

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 57-56-477

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5756477
County	Hays
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Hays Trinity GCD
Latitude (decimal degrees)	30.1819444
Latitude (degrees minutes seconds)	30° 10' 55" N
Longitude (decimal degrees)	-98.1133333
Longitude (degrees minutes seconds)	098° 06' 48" W
Coordinate Source	+/- 1 Second
Aquifer Code	
Aquifer	Unassigned
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1141
Land Surface Elevation Method	Digital Elevation Model -DEM
Well Depth (feet below land surface)	
Well Depth Source	
Drilling Start Date	
Drilling End Date	
Drilling Method	
Borehole Completion	

Well Type	Spring
Well Use	
Water Level Observation	None
Water Quality Available	No
Pump	
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	HARPER SW
Driller	
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	301055098064801
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	11/6/2003
Last Update Date	1/4/2022

Remarks	

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis - No Data Available

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 57-56-481

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5756481
County	Hays
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Hays Trinity GCD
Latitude (decimal degrees)	30.1880556
Latitude (degrees minutes seconds)	30° 11' 17" N
Longitude (decimal degrees)	-98.1238889
Longitude (degrees minutes seconds)	098° 07' 26" W
Coordinate Source	Global Positioning System - GPS
Aquifer Code	NOT-APPL - Aquifer Code Is Not Applicable to this Well
Aquifer	Unassigned
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1082
Land Surface Elevation Method	Digital Elevation Model -DEM
Well Depth (feet below land surface)	
Well Depth Source	
Drilling Start Date	
Drilling End Date	
Drilling Method	
Borehole Completion	

Well Type	Surface Water (not a spring)
Well Use	Other
Water Level Observation	None
Water Quality Available	Yes
Pump	None
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	Onion Creek at Creek Road
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	Groundwater Conservation District
Created Date	10/27/2015
Last Update Date	6/15/2020

Remarks	Sample collected from Onion Creek at Creek Rd crossing by Barton Spring GCD. Estimated 5 cfs flow 8/28/2015.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis

Sample Date: 8/28/2015 **Sample Time:** 1355 **Sample Number:** 1 **Collection Entity:** Barton Springs/Edwards Aquifer CD

Sampled Aquifer: Aquifer Code Is Not Applicable to this Well

Analyzed Lab: LCRA - Lower Colorado River Authority **Reliability:** Sampled using TWDB protocols

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

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)	<	20	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		160	mg/L as CACO3	
01106	ALUMINUM, DISSOLVED (UG/L AS AL)		6.63	ug/L	
50938	ANION/CATION CHG BAL, PERCENT		-1.96	PCT	
01095	ANTIMONY, DISSOLVED (UG/L AS SB)	<	1	ug/L	
01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	2	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		25.9	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		195.25	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)		81.2	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.147	mg/L	
01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	1	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		46.3	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		24	mg/L	
01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	1	ug/L	
01035	COBALT, DISSOLVED (UG/L AS CO)	<	1	ug/L	
01040	COPPER, DISSOLVED (UG/L AS CU)	<	1	ug/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.17	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		193	mg/L as CACO3	
01046	IRON, DISSOLVED (UG/L AS FE)	<	50	ug/L	
01049	LEAD, DISSOLVED (UG/L AS PB)	<	1	ug/L	
01130	LITHIUM, DISSOLVED (UG/L AS LI)		3.77	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		18.7	mg/L	
01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	1	ug/L	
71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	ug/L	
01060	MOLYBDENUM, DISSOLVED (UG/L AS MO)		1.89	ug/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		1.11	mg/L as NO3	
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		0.25	mg/L as N	
00400	PH (STANDARD UNITS), FIELD		8.31	SU	

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00666	PHOSPHORUS, DISSOLVED (MG/L AS P)	<	0.02	mg/L as P	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		1.67	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	4	ug/L	
00955	SILICA, DISSOLVED (MG/L AS SI02)		14.6	mg/L as SIO2	
01075	SILVER, DISSOLVED (UG/L AS AG)	<	1	ug/L	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.34		
00932	SODIUM, CALCULATED, PERCENT		11	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		11	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1359	MICR	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		160	ug/L	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		31	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		32.1	C	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		245	mg/L	
22703	URANIUM, NATURAL, DISSOLVED (UG/L AS U)	<	1	ug/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)		1.31	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)	<	4	ug/L	

Water Quality Analysis

Sample Date: 6/15/2016 **Sample Time:** 1345 **Sample Number:** 1 **Collection Entity:** Barton Springs/Edwards Aquifer CD

Sampled Aquifer: Aquifer Code Is Not Applicable to this Well

Analyzed Lab: LCRA - Lower Colorado River Authority **Reliability:** Sampled using TWDB protocols

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

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00425	ALKALINITY, BICARBONATE DISSOLVED (MG/L), LAB		212	mg/L	
00430	ALKALINITY, CARBONATE DISSOLVED (MG/L), LAB	<	20	mg/L	
00420	ALKALINITY, HYDROXIDE DISSOLVED (MG/L), LAB	<	20	mg/L	
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)	<	20	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		223	mg/L as CACO3	
01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	4	ug/L	
50938	ANION/CATION CHG BAL, PERCENT		-1.8146	PCT	
01095	ANTIMONY, DISSOLVED (UG/L AS SB)	<	1	ug/L	
01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	2	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		31.2	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		272.137	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)	<	50	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.101	mg/L	
01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	1	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		65.3	mg/L	
28004	CARBON-14 DISS APPARENT AGE (YEARS BP)	>	1950	Y-BP	
82172	CARBON-14 FRACTION MODERN		1.0524		0.0025
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		13.6	mg/L	
01030	CHROMIUM, DISSOLVED (UG/L AS CR)		2.56	ug/L	
01035	COBALT, DISSOLVED (UG/L AS CO)	<	1	ug/L	
01040	COPPER, DISSOLVED (UG/L AS CU)	<	1	ug/L	
82081	DELTA CARBON 13 C13/C12 PER MIL		-9.5	0/00	
50791	DEUTERIUM, EXPRESSED AS PERMIL VSMOW		-26.6	0/00	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.135	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		241.149	mg/L as CACO3	
01046	IRON, DISSOLVED (UG/L AS FE)	<	50	ug/L	
01049	LEAD, DISSOLVED (UG/L AS PB)	<	1	ug/L	
01130	LITHIUM, DISSOLVED (UG/L AS LI)		3.34	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		18.9	mg/L	
01056	MANGANESE, DISSOLVED (UG/L AS MN)		6.21	ug/L	

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	ug/L	
01060	MOLYBDENUM, DISSOLVED (UG/L AS MO)		1.07	ug/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		0.584	mg/L as NO3	
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		0.132	mg/L as N	
50790	OXYGEN-18, EXPRESSED AS PERMIL VSMOW		-4.6	0/00	
00400	PH (STANDARD UNITS), FIELD		8.61	SU	
00666	PHOSPHORUS, DISSOLVED (MG/L AS P)	<	0.02	mg/L as P	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		1.03	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	4	ug/L	
00955	SILICA, DISSOLVED (MG/L AS SI02)		10.6	mg/L as SIO2	
01075	SILVER, DISSOLVED (UG/L AS AG)	<	1	ug/L	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.234		
00932	SODIUM, CALCULATED, PERCENT		7.008	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		8.34	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		448	MICR	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		193	ug/L	
48297	STRONTIUM, ISOTOPE OF MASS 86 AND 87 RATIO		0.7079	N/A	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		25.9	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		30.26	C	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		278.392	mg/L	
07012	TRITIUM IN WATER (TRITIUM UNITS)		2.18	TU	0.09
22703	URANIUM, NATURAL, DISSOLVED (UG/L AS U)	<	1	ug/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)		1.49	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)	<	4	ug/L	

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

STATE OF TEXAS WELL REPORT for Tracking #34928

Owner:	**Western Town**	Owner Well #:	**No Data**
Address:	**10 East Lee St., Suite 2705 Baltimore, MD 21202**	Grid #:	**57-56-4**
		Latitude:	**30° 10' 52" N**
Well Location:	**CR 220 Dripping Springs, TX 78620**	Longitude:	**098° 07' 13" W**
Well County:	**Hays**	Elevation:	**No Data**

Type of Work: **New Well** Proposed Use: **Domestic**

Drilling Start Date: **1/3/2002** Drilling End Date: **1/4/2002**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8	**0**	**10**
6.75	**10**	**440**

Drilling Method: **Air Rotary**

Borehole Completion: **cased to bottom**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**140**	

Seal Method: **Unknown**

Sealed By: **James Tucker**

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

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

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

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed**

Water Level: **180 ft.** below land surface on **2002-01-04** Measurement Method: **Unknown**

Packers: **Cement 140'**
Formation 270'

Type of Pump: **Submersible**

Well Tests: **Jetted** **No Test Data Specified**

Water Quality:

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

Chemical Analysis Made: **Unknown**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **Unknown**

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

Company Information: **James Tucker Drilling, Inc.**

P. O. Box 308
Dripping Springs, TX 78620

Driller Name: **J.B. Tucker** License Number: **1488**

Comments: **$dfs**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0 15 Caliche and Rock
15 17 Med. Brown Limestone
17 40 Light Brown Limestone
40 60 Light Brown Water 3 gpm
60 260 Light Gray Limestone
260 270 Soft Med. Gray Limestone
with Shale
270 300 Lt. Brown Sandstone water 15
gpm
300 375 Hard Gray Limestone
375 380 Broken
380 440 Hard Light Gray Limestone
440 480 White and Brown Broken Water

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.) New/Used Type Setting From/To (ft.)
5 ID new Plastic +2 480
Perf. 280 300
Perf. 440 480

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

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

STATE OF TEXAS WELL REPORT for Tracking #402838

Owner:	**SOMMERFELD, MARVIN-ROBERT & AMY GARLAND**	Owner Well #:	**No Data**
Address:	**151 SILVER CHARM AUSTIN, TX 78737**	Grid #:	**57-55-6**
		Latitude:	**30° 11' 10" N**
Well Location:	**2100 CREEK RD. DRIPPING SPRINGS, TX 78620**	Longitude:	**098° 07' 38" W**
Well County:	**Hays**	Elevation:	**No Data**

Type of Work: **New Well** Proposed Use: **Irrigation**

Drilling Start Date: **6/26/2015** Drilling End Date: **6/26/2015**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
9	**0**	**70**
6.5	**70**	**390**

Drilling Method: **Air Rotary**

Borehole Completion: **CASED**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**70**	**8 CEMENT**
0	**70**	**4 VOLCLAY**

Seal Method: **Slurry**

Sealed By: **Driller**

Distance to Property Line (ft.): **100**

Distance to Septic Field or other concentrated contamination (ft.): **300**

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

Method of Verification: **OWNER**

Surface Completion: **Surface Sleeve Installed**

Water Level: **191 ft.** below land surface on **2015-06-26** Measurement Method: **Unknown**

Packers: **4 BURLAP, PVC 70', 250', 270', 350'**

Type of Pump: **Submersible**

Well Tests: **Jetted** **Yield: 100+ GPM**

Water Quality:

Strata Depth (ft.)	Water Type
80	**MIDDLE TRINITY**

Chemical Analysis Made: **No**

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

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

Company Information: **CENTEX PUMP & SUPPLY, INC.**

2520 HWY. 290 WEST
DRIPPING SRPINGS, TX 78620

Driller Name: **AARON GLASS** License Number: **4227**

Comments: **No Data**

Report Amended on 12/2/2015 by Request #15287

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**TOP SOIL**
1	**20**	**CALICHE**
20	**24**	**BLUE/GRAY LIMESTONE**
24	**140**	**GRAY LIMESTONE**
140	**190**	**GRAY/TAN LIMESTONE**
190	**250**	**TAN LIMESTONE**
250	**270**	**GRAY/TAN LIMESTONE W/BLUE CLAY STRIPS**
270	**320**	**TAN LIMESTONE**
320	**330**	**TAN W/BROWN LIMESTONE**
330	**345**	**GRAY LIMESTONE W/CLAY**
345	**360**	**WHITE LIMESTONE**
360	**365**	**WHITE/TAN/BROWN LIMESTONE**
365	**388**	**BROWN LIMESTONE**
388	**390**	**GRAY CLAY**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
5" OD N SDR17 PVC +3 TO 390			
5" OD N SDR17 PVC SLOT 270 TO 390 .032			

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

STATE OF TEXAS WELL REPORT for Tracking #405177

Owner:	**Michael Pfullman**	Owner Well #:	**No Data**
Address:	**3008 Flight Acres Rd. Wimberley, TX 78676**	Grid #:	**57-56-4**
		Latitude:	**30° 11' 12" N**
Well Location:	**1291 Creek Rd. Dripping Springs, TX 78620**	Longitude:	**098° 06' 36" W**
Well County:	**Hays**	Elevation:	**1120 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **8/14/2015** Drilling End Date: **8/14/2015**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
10	**0**	**10**
8	**10**	**20**
6.75	**20**	**360**

Drilling Method: **Air Rotary**

Borehole Completion: **Open Hole**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**5 Portland**

Seal Method: **Slurried and Poured**

Sealed By: **Mike Scott**

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

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

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

Method of Verification: **No Data**

Surface Completion: **Pitless Adapter Used**

Water Level: **No Data**

Packers: **Neoprene 50, 90, 250, 255**

Type of Pump: **No Data**

Well Tests: **Jetted** **Yield: 50+ GPM**

Water Quality:

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

Chemical Analysis Made: **Unknown**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **Unknown**

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

Company Information: **Bee Cave Drilling, Inc.**

185 Angel Fire Dr.
Dripping Springs, TX 78620

Driller Name: **Jim Blair** License Number: **54416**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**1**	**Topsoil**
1	**9**	**Caliche**
9	**90**	**Gray Lime**
90	**110**	**Limestone W/B 30GPM 1900 TDS**
110	**250**	**Gray Sandstone**
250	**360**	**Lt.Gray/Tan Sandstone W/B 50+GPM 1000 TDS**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
4.5"	**ID New**	**PVC SDR-17**	**0-360**
		Perf	**300-360**

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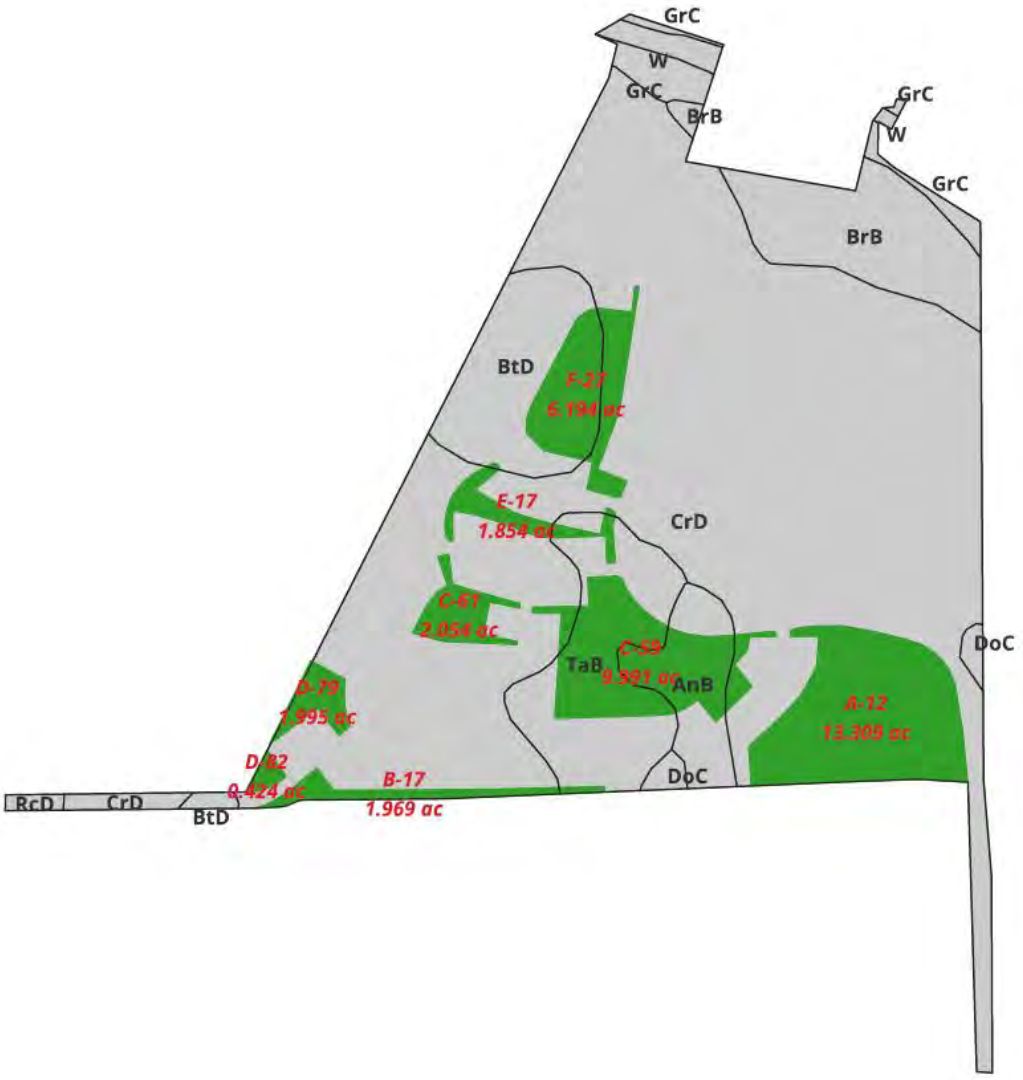
ATTACHMENT Q

SOILS REPORT
EFFLUENT IRRIGATION SYSTEM

A soils map for the irrigation area is shown in Figure 1. Current irrigation areas include eight tracts of land. Soils mapping was based upon file information provided by the NRCS online soil survey database. (https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx).

Figure 1: Soils Map



The irrigation fields are characterized by four general soil groups Anhalt clay (AnB), Brackett-Rock outcrop-Comfort complex (BtD), Comfort-Rock outcrop complex (CrD), and Tarpley Clay

(TaB), as shown in the following table:

Table 1: Soils Proportions

Location	AnB	BtD	CrD	TaB	AnB (acres)	BtD (acres)	CrD (acres)	TaB (acres)	Total (acres)
F-27	0.0%	0.0%	0.0%	0.0%	0.00	3.94	2.25	0.00	6.19
E-17	0.0%	0.0%	0.0%	0.0%	0.00	0.03	1.37	0.45	1.85
C-61	0.0%	0.0%	0.0%	0.0%	0.00	0.00	2.05	0.00	2.05
D-79	0.0%	0.0%	0.0%	0.0%	0.00	0.00	2.00	0.00	2.00
D-82	0.0%	0.0%	0.0%	0.0%	0.00	0.00	0.42	0.00	0.42
B-17	0.0%	0.0%	0.0%	0.0%	0.00	0.00	1.55	0.15	1.70
C-59	0.0%	0.0%	0.0%	0.0%	3.49	0.00	0.98	5.53	9.99
A-12	0.0%	0.0%	0.0%	0.0%	0.00	0.00	13.31	0.00	13.31
Total	9.3%	10.6%	63.8%	16.3%	3.49	3.97	23.94	6.13	37.52

A general description of the major soil types is provided below.

AnB – Anhalt clay, 1 to 3 percent slopes

This is a moderately deep, gently sloping soil on slightly concave foot slopes on uplands. It is generally near streams. Typically, the surface layer is dark reddish gray, neutral clay about 23 inches thick. The subsoil extends to a depth of 32 inches and is dark reddish brown, neutral clay. Below the subsoil there is fractured, indurated limestone. This soil is well drained. Surface runoff is medium. Permeability is very slow. Water enters rapidly when the soil is dry and cracked and very slowly when the soil is wet. The available water capacity is low. The rooting zone is moderately deep. However, the clay tends to impede root penetration. Water erosion is a moderate hazard. Included with this soil in mapping are small areas of Tarpley and Denton soils. Also included are a few small areas of soils that are similar to this Anhalt soil except that one is deeper than 40 inches to bedrock and the other is dark gray throughout. This soil is used mainly as cropland. Small grains and forage sorghums are the main crops. In some areas this soil is used as rangeland or for improved pasture. This soil is moderately well suited to use as cropland. The very slow permeability and the low available water capacity are the main limitations. These conditions can be improved, however, and good tilth and fertility can be maintained if proper residue management is practiced. Contour farming and terraces generally are needed to help control erosion. This Anhalt soil is well suited to improved pasture. Improved bermudagrass, kleingrass, and medio bluestem grow well. Good management includes proper stocking, controlled grazing, and brush management. If this soil is used as rangeland, it produces high yields of forage if good management is practiced.

BtD – Brackett-Rock outcrop-Comfort complex, 1 to 8 percent slopes

This complex consists of shallow, loamy and clayey soils and Rock outcrop on uplands in the Edwards Plateau Land Resource Area. Slopes are convex and range from 1 to 8 percent. Many areas have a benched appearance along the hill slopes because of the horizontal bands of Rock

outcrop. The Brackett and Comfort soils are between the bands of Rock outcrop. Typically, the surface layer of the Brackett soil is grayish brown gravelly clay loam about 6 inches thick. The subsoil extends to a depth of 17 inches. It is very pale brown and pale yellow gravelly clay loam. The underlying material is weakly cemented limestone interbedded with thin layers of indurated limestone. The soil is moderately alkaline and calcareous throughout. Typically, the areas of Rock outcrop consist of exposures of limestone bedrock. There is some soil material in the narrow fractures in the rock. In some areas, however, the rock is flat and is covered by soil material as much as 3 inches thick. Typically, the surface layer of the Comfort soil is dark brown extremely stony clay about 4 inches thick. The subsoil extends to a depth of 11 inches. It is dark reddish brown extremely stony clay. The underlying material is indurated fractured limestone. The soil is moderately alkaline and noncalcareous throughout. The soils in this complex are well drained. Surface runoff is medium to rapid. Permeability is moderately slow in the Brackett soil and slow in the Comfort soil. The available water capacity is very low. The rooting Soil survey zone is shallow.

CrD – Comfort-Rock outcrop complex, 1 to 8 percent slopes

This complex consists of shallow, clayey soils and Rock outcrop on side slopes and on hilltops and ridgetops on uplands in the Edwards Plateau Land Resource Area. Slopes are convex. Comfort extremely stony clay makes up 49 to more than 95 percent of the complex, but on the average it makes up 70 percent. Rock outcrop and areas of soil less than 4 inches deep make up 5 to 36 percent, but the average is 15 percent. The areas of Rock outcrop are long, narrow horizontal bands on hill slopes and along small drains. The Comfort soil is between the bands of Rock outcrop. Typically, the surface layer of the Comfort soil is dark brown extremely stony clay about 6 inches thick. Cobbles and stones as much as 4 feet across cover about 45 percent of the surface. The subsoil extends to a depth of 13 inches. It is dark reddish brown extremely stony clay. The underlying material is indurated fractured limestone. The soil is mildly alkaline and noncalcareous throughout. The Comfort soil is well drained. Surface runoff is slow to medium. Permeability is slow, and the available water capacity is very low. The rooting zone is shallow.

TaB – Tarpley clay, 1 to 3 percent slopes

This is a shallow, gently sloping soil on plane to slightly concave slopes on uplands in the Edwards Plateau Land Resource Area. Typically, the surface layer is dark brown clay about 6 inches thick. The subsoil to a depth of 17 inches is dark reddish brown clay. The underlying layer is fractured, indurated limestone bedrock. The soil is neutral and noncalcareous throughout. This soil is well drained. Surface runoff is medium. Permeability is slow. Water enters rapidly when the soil is dry and cracked and slowly when it is wet. The available water capacity is very low. The rooting zone is shallow.

Soil properties of the four general soil groups are summarized in Table 2.

Table 2: Soil Properties

Map Unit	Map Symbol	Depth to Any Soil Restrictive Layer cm	Water Table Depth cm	Map Unit Component	Component Composition	Hydrologic Group	Depth In	USDA texture	Percentage passing sieve No. 200 L-R-H	Liquid limit L-R-H	Plasticity index L-R-H	Saturated hydraulic conductivity micro m/sec	Available water capacity In/In
Anhalt clay, 1 to 3 percent slopes	AnB	74	>200	Anhalt	92%	D	0-6	Clay	57-88- 98	50-71 -77	27-42-48	0.01-0.21-0.42	0.10-0.13-0.20
							6-15	Clay	60-88-100	65-85 -96	40-56-67	0.01-0.21-0.42	0.10-0.12-0.20
							15-29	Clay	60-88-100	65-85 -96	40-56-67	0.01-0.21-0.42	0.10-0.13-0.20
							29-60	Bedrock	—	—	—	0.42-2.70-14.00	—
Brackett-Rock outcrop-Comfort complex, 1 to 8 percent slopes	BtD	36	>200	Brackett	50%	D	0-6	Paragravelly clay loam	32-53- 77	34-42 -49	13-18-24	4.00-9.00-14.00	0.09-0.11-0.19
							6-14	Clay loam, loam, gravelly loam, gravelly clay loam	29-47- 75	26-39 -47	7-17-23	4.00-9.00-14.00	0.09-0.11-0.19
							14-60	Bedrock	—	—	—	0.42-2.70-14.00	—
				Rock outcrop	20%	D	0-48	Bedrock	—	—	—	0.42-2.70-14.00	—
				Comfort	15%	D	0-6	Very stony clay	31-66- 72	46-60 -72	26-40-45	0.42-1.00-1.40	0.02-0.08-0.12
							6-13	Very stony clay, extremely stony clay, very cobbly clay, very gravelly clay	27-68- 86	62-74 -83	39-46-54	0.42-1.00-1.40	0.01-0.02-0.10
							13-40	Bedrock	—	—	—	0.42-2.70-14.00	—
Comfort-Rock outcrop complex, 1 to 8 percent slopes	CrD	33	>200	Comfort	70%	D	0-6	Very stony clay	31-66- 73	46-60 -72	26-40-45	0.42-1.00-1.40	0.02-0.08-0.12
							6-13	Very cobbly clay, very gravelly clay, extremely stony clay, very stony clay	27-68- 86	62-74 -83	39-46-54	0.42-1.00-1.40	0.01-0.04-0.10
							13-40	Bedrock	—	—	—	0.42-2.70-14.00	—
				Rock outcrop	15%	D	0-80	Bedrock	—	—	—	0.42-2.70-14.00	—
Tarpley clay, 1 to 3 percent slopes	TaB	43	>200	Tarpley	90%	D	0-6	Clay	53-76- 86	41-51 -65	22-26-36	0.42-0.91-1.40	0.08-0.15-0.18
							6-17	Gravelly clay, clay	50-87-100	50-55 -89	26-30-60	0.01-0.22-0.42	0.07-0.11-0.18
							17-60	Bedrock	—	—	—	0.42-2.70-14.00	—

Site-specific soils data will be available from sampling conducted in accordance with permit application protocols. The soils laboratory is Texas A&M AgriLife. The soils data for the proposed irrigation sites are shown in Table 2.

Table 2: Soil Sampling

Location	Layer (in.)	pH	Conductivity (mmho/cm)	Nitrate - N (mg/kg)	TKN (mg/kg)	Phosphorus (mg/kg)	Potassium (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sulfur (mg/kg)	Sodium (mg/kg)	SAR
1	0 - 6											
1	6 - 18		TBD									
1	18 - 30											
2	0 - 6											
2	6 - 18											
2	18 - 30											

Location 1 was sampled from proposed irrigation area A-12, while location 2 was sampled from proposed irrigation area F-22. As shown, two soil composite sampling sets were collected. The two locations were selected in an effort to characterize the clayey soils and well as the loamy and clayey soils.

ATTACHMENT R

SUPPLEMENTAL TECHNICAL REPORT
FOR IRRIGATION DISPOSAL

HAYS COUNTY DEVELOPMENT DISTRICT NO.1

Prepared by:

James Miertschin & Associates, Inc.
Austin, Texas

August 2024

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1.0 INTRODUCTION

1.1 LOCATION

The Hays County Development District No. 1 (HCDD) will provide wastewater service to the Ranch at Caliterra subdivision. The proposed development will be located approximately 1.0 mile southwest of the City of Dripping Springs.

1.2 PROPOSED IRRIGATION DISPOSAL

The HCCD proposes to utilize irrigation for disposal of treated municipal effluent at a final phase flow of 41,000 gpd. An irrigation tract has been designated that has available a total of 35.1 acres. The cover crop for the irrigation tract is native grasses, juniper trees, and mixed hardwood trees on rangeland. A relatively small fraction of the tract may be developed as turf fields in the future. In conjunction with the HCCD's permit application, a water balance and storage analysis was conducted for sizing of the irrigation disposal system.

2.0 IRRIGATION SYSTEM SIZING

TCEQ rules for irrigation systems generally require that effluent disposal be accomplished by evaporation and evapotranspiration. A water balance analysis for the study area is conducted to determine key irrigation system design parameters. In the water balance, rainfall, runoff, infiltration, and evapotranspiration are analyzed in order to determine the amount of water that can be applied to a site for consumption by a particular cover crop. The results are then used to calculate an effluent application rate and land area requirements for irrigation of wastewater.

A storage balance, similar in structure to the preceding water balance, is also required to determine the storage volume required for a system that will provide complete disposal of effluent via irrigation. The storage balance typically includes analysis of the effluent application rate and meteorological inputs under wet weather conditions.

The TCEQ's rules under 30 TAC Chapter 309.20 require that a water balance "generally follow" an example provided. The example considers precipitation, runoff, leaching, crop consumptive use, evaporation, and irrigation efficiency, aggregated in a monthly distribution, in order to determine an application rate.

The water balance and storage balance for the HCCD facility has been prepared to perform calculations on a daily time step. Because it performs calculations at a smaller time step, the daily water balance and daily storage balance methodology should be a more accurate representation of the physical system than an approximation obtained with a monthly water balance. The daily balances incorporate all of the variables and factors described in Chapter 309.20. Significant safeguards have been incorporated into the storage balance calculation in order to provide a conservative estimate:

1. The calculations were based upon the wettest year in the past 25 years (1999-2023);

2. The gross evaporation for the wettest year was used for calculation of net evaporation;
3. Irrigation was restricted by evaluation of the daily water needs and an antecedent two-day infiltrated rainfall;

The daily water balance procedure has been successfully applied and accepted by TCEQ on numerous past permitting deliberations.

2.1 WATER BALANCE

A detailed water balance for the facility was conducted that was based upon daily calculation of key variables. The daily water balance is a more accurate representation of the physical system than a water balance based upon longer averaging periods, such as weekly or monthly. The water balance is shown in Appendix A. Information required and used in the water balance is described below.

Precipitation

A water balance is developed using average rainfall data for a 25 year period of record. The use of average data tends to smooth out highly variable extremes in annual rainfall totals.

The water balance was based upon rainfall data for the National Weather Service gauge Dripping Springs 6 E, TX US. Data were compiled from 1999 through 2023. The 25-year average annual rainfall total was determined to be 33.71 inches. The wettest year was determined to be 2004, with a total rainfall of 51.6 inches. The year in the historical record closest to the annual rainfall value was 2019. The daily rainfall data for 2019 were input into the daily water balance on the actual dates of occurrence of the various storm events.

Runoff

Runoff at the irrigation site during storm events was calculated with the Soil Conservation Service (SCS) curve number method. Hydrologic soil types were inventoried for the irrigation areas, and a CN of 72.5 was established for an antecedent moisture condition II (AMC II). The curve number method was applied to the actual storm events recorded during the average year (2019), and runoff was calculated for each storm. The runoff for each storm was input into the water balance on the actual dates of the storms.

Evapotranspiration

One of the key variables in a water balance is evapotranspiration. For the present analysis, the cover crop in the irrigation area will be native perennial grasses, juniper trees, and mixed hardwoods. The evapotranspiration characteristics of native grasses and mixed tree cover is not as well documented as that for bermuda, so the water demands of bermuda were first assessed.

The evapotranspiration for bermuda grass was estimated using adjusted data for perennial pasture (assuming 90% of the values tabulated for alfalfa) from Bulletin 6019 of the Texas Board of Water Engineers (1971), entitled "Consumptive Use of Water by Major Crops in Texas". This reference is recommended by the TCEQ for estimation of evapotranspiration characteristics and it has been employed in numerous permit evaluations. A total evapotranspiration use for bermuda of 54.05 inches per year was determined from Bulletin 6019 for the climatic region of the irrigation site.

It was assumed for the present analysis that the evapotranspiration characteristics of the native grasses and trees on the site could be represented by 90% of the evapotranspiration calculated for bermuda above. Therefore, the evapotranspiration for native grasses and trees was estimated to be 43.78 inches per year.

As another check on the evapotranspiration characteristics, the average historic potential evapotranspiration (PET) on a monthly basis for the Austin area was obtained from the Texas A&M ET web site (http://texaset.tamu.edu/pet.php). For the Austin area the annual total PET is 62.69 inches. The PET is reduced to the ET rate by application of a crop coefficient and an allowable stress factor. For grazing pasture, an average crop coefficient of 0.95 was used. For the other factor, allowable stress, a value of 0.8 was used. This represents a low stress condition as would occur with frequent watering. Using this methodology, the ET for the native grass would be estimated to be 47.64 inches per year. This is greater than the ET estimated using the assumptions applied to Bulletin 6019, therefore, the preceding ET estimate of 43.78 inches per year is expected to be conservative.

Leaching

A leaching requirement was incorporated into the water balance. Leaching is necessary in order to prevent the build-up of salts in the soil. The leaching requirement was estimated empirically as a function of the effluent conductivity and the soil conductivity, in accordance with the method in 30 TAC Chapter 309.

Evaporation

Reservoir evaporation for the site was estimated from Texas Water Oriented Data Bank data for Quad 709, 1999-2023. The average net 25-year evaporation was used. The 25-year average net was determined to be 28.44 inches (determined as gross evaporation minus the precipitation from the Dripping Springs site). The 25-year average net evaporation was inserted into the water balance on a monthly basis.

Effluent Application Rate

From the water balance calculation for the site, it was determined that a total of 48.96 inches/year (4.08 feet/year)of wastewater would be consumed from the storage pond. This value for consumption from the pond is comprised of water used for irrigation and water that evaporates. This consumptive use of 48.96 inches/year (4.08 feet/year) also represents the calculated average allowable wastewater application rate for the site.

The calculated allowable application rate will be reduced to 33.0 inches/year (2.75 feet/year) for the proposed irrigation disposal site in order to provide conservative safeguards against over-watering.

Minimum Irrigation Area

The effluent application rate from the water balance analysis is used to determine the minimum irrigation area needed for a specific design flow. The proposed effluent flow from the subdivision is projected to be 41,000 gpd at the final phase, which is equivalent to an annual volume of wastewater of 45.9 acre-feet. Using the annual wastewater flow, an irrigation area of only 11.3 acres would be required using the calculated effluent application rate of 4.08 feet/year.

However, as discussed above, the permittee proposes to employ a more conservative irrigation application rate of 2.75 feet/year. With the application rate of 2.75 feet/year, the minimum irrigation area required would be 16.7 acres in the final phase. However, additional area available on the tract will also be used for irrigation, in excess of the minimum required. It is projected that 35 acres of area will ultimately be irrigated at the final phase, which will provide the permittee with more operational flexibility for effluent disposal.

For the first phase of the project, the projected wastewater flow will be 20,500 gpd. This effectively reduces the sizing outlined in the preceding paragraph by half. So for the first phase, the minimum required area would be 5.7 acres, but the permittee proposes to employ an irrigation application rate of 2.75 feet/year. At that rate, a minimum area of 8.4 acres would be provided. The permittee anticipates providing irrigation area in excess of this minimum, even in the first phase operation. The calculations for the first phase water balance are summarized on the final page of the multi-page daily water balance, and they are attached at the conclusion of Appendix A.

Phasing

Two phases are proposed for the wastewater treatment and irrigation system. In the final phase, the projected effluent flow is 41,500 gpd. The minimum required irrigation area is 16.7 acres, but the permittee intends to provide 35 acres for irrigation.

For the first phase of operation, the projected effluent flow is 20,500 gpd. The minimum irrigation area at this flow is 8.4 acres, but the permittee intends to provide 17.5 acres for irrigation.

2.2 STORAGE BALANCE

A storage balance was conducted for sizing of the storage capacity necessary for successful irrigation scheduling in response to variable dry and wet conditions. The storage balance is essentially a water balance that analyzes the effluent application rate, evapotranspiration, rainfall, runoff, infiltration, and evaporation in order to determine the storage volume required. Instead

of the average rainfall applied in the water balance, the storage calculations were based on the wettest year on record during the past 25 years (1999 - 2023).

The method of Chapter 309 includes a calculation of storage that is based upon infiltrated rainfall, effluent available, and total water needs. When calculations are performed on a monthly time step, and significant rainfall occurs at any time during the month, the mathematical calculation can indicate that all of the effluent goes to storage, with no irrigation whatsoever during the time step. This calculation then ignores the likelihood that there were significant periods of no rainfall during the month, such that some irrigation could have been accomplished. The use of a daily time step overcomes the gross monthly penalty of rainfall in the mathematical calculation.

A significant refinement was incorporated into the storage balance calculations to provide a more realistic analysis. As described above, the use of a daily time step allows the mathematical calculation of storage to be performed based upon the attendant variables for each day. In this approach, the presence of rainfall and infiltrated rainfall is balanced against water needs for the day to calculate whether storage or irrigation occurs. For the present analysis, the storage calculation was modified to compare the water needs for the day to the cumulative infiltrated rainfall for an antecedent multi-day period (in this case, a 2-day period was considered), rather than to the infiltration for only a single day. Thus, the modification allows irrigation to occur only after the effects of substantial rainfall have subsided. This refinement provides a more conservative irrigation schedule. The storage balance is displayed in Appendix B.

The information incorporated into the storage balance for precipitation, runoff, evapotranspiration, leaching, and evaporation were similar to the data employed in the water balance, as described in the preceding section. The wet year precipitation was employed, referencing the wet year of 2004. Runoff for the rain events that took place in 2004 were calculated and employed. For evaporation, the reported lowest-net evaporation year of 2021 was applied, and the monthly net evaporation was distributed in accordance with the monthly rainfall schedule for the average year.

The storage analysis is dependent upon the irrigation area. An irrigation area of 35 acres was used for this analysis, which is consistent with the area proposed to be irrigated in the final phase, as described in the preceding section. This expanded area will enable the effluent application rate to be restricted to 2.75 feet per year or less.

The storage balance indicated a maximum storage requirement of 1.898 inches/acre. With this storage requirement, a storage volume of 5.54 acre-feet (1.8 MG) can be calculated for the wastewater flow of 41,000 gpd and the irrigation area of 35 acres. This volume of storage would provide 44 days of detention at 41,000 gpd. For the proposed facility, a safety factor will be applied to the minimum storage requirement, and a volume of 1.9 MG (essentially 47 days) will be provided for the final phase.

Phasing

Two phases are proposed for the wastewater treatment and irrigation system. In the final phase, the projected effluent flow is 41,500 gpd. The required minimum storage volume is 1.8 MG. The permittee will provide 1.9 MG of storage consisting of bolted steel above ground tankage.

For the first phase of operation, the projected effluent flow is 20,500 gpd. The required minimum storage is 0.9 MG, and the permittee will provide 0.95 MG of storage capacity.

2.3 NITROGEN BALANCE

A nitrogen balance was prepared for the irrigation site to examine system sizing with respect to conventional estimates of cover crop nutrient uptake, as shown in Appendix C. Key input parameters are described below.

Hydraulic Application Rate

The first column of data displays the effluent needed in the root zone obtained from the water balance analysis for the site. This root zone requirement for effluent represents the hydraulic application rate, or volume of wastewater, that can be applied for consumption by the crop. The effluent requirement varies monthly in accordance with the climatological and evapotranspiration characteristics at the site. The monthly distribution of crop effluent need is used throughout the nitrogen balance to represent the monthly variation of crop growth and nutritional need. This distribution is displayed in the second column of data in the table.

Nitrogen Loading

The nitrogen balance table calculates the applied nitrogen loading in pounds per acre to the irrigation area on a monthly basis. The third column of data in the table displays the effluent applied on a monthly basis, in terms of total volume in acre-feet, distributed in accordance with the crop effluent needs. The nitrogen loading associated with the applied effluent is calculated in the fourth column of data. The nitrogen loading is determined from the effluent volume and the concentration of total nitrogen and converted to a unit area basis. The sum of the monthly nitrogen loading represents the total amount of nitrogen applied via effluent irrigation for the year.

Crop Uptake

One of the key parameters in the nitrogen balance is the projected crop uptake of nitrogen. Data from the Texas Agricultural Extension Service (TAES) indicates that the nitrogen uptake of bermuda grass may be estimated at approximately 100 lbs N/acre per cutting, with the number of cuttings ranging from 1-6 per year. Therefore, an intensively managed site with bermuda could use up to 600 lbs N/acre per year.

The proposed irrigation disposal site is composed of mainly native perennial grasses, with juniper trees and mixed hardwood trees. The nitrogen uptake rate for native grasses is not well defined, but it would be expected to be somewhat less than that for bermuda. However, the site will also have areas with juniper trees and mixed hardwood trees which will increase the uptake rate. For

the present analysis, it is assumed that the nitrogen uptake rate for the mixed rangeland vegetation will be approximately 200 lbs N/acre per year. This rate would include only minimal cutting or harvesting of vegetation. For use in the nitrogen balance, the uptake rate can be increased by 20% to account for volatilization loss of nitrogen. The total annual nitrogen uptake values enter into the nitrogen balance table in the fifth column of data (after including an allowance for volatilization), with the values distributed on a monthly basis in accordance with crop water needs. The sixth column of data presents the calculated hydraulic application rate (inches/month) of effluent that would be needed to satisfy the crop nitrogen needs, with effluent as the only source of nitrogen.

Discussion

The nitrogen balance depicts the scenario with the proposed irrigation area of 37 acres, the projected flow of 45.9 acre-feet/year, and an estimated nitrogen concentration of 20 mg/l. Under these conditions, it is evident that nitrogen will be applied to the site at a rate lower than the calculated crop uptake rate for nitrogen. This is also apparent in the calculation of the effluent needed in the root zone, which can be compared directly to the hydraulic application rate for the irrigation system. The effluent volume application rate calculated on the basis of crop nitrogen uptake is greater than the effluent volume application rate calculated on the basis of consumptive use in the water balance.

3.0 SUMMARY OF PROPOSED IRRIGATION SYSTEM

Parameters for the proposed effluent irrigation system are summarized below.

Irrigation Area

The permittee proposes a total **irrigation area of 35 acres** for disposal of up to 45.9 acre-feet of effluent. This sizing is applicable to the final phase of 41,000 gpd.

For the first phase of 20,500 gpd, an irrigation area of 17.5 acres will be provided. It is also possible that additional acreage of the available 37 acres could be irrigated.

Storage Pond

The permittee proposes a storage volume **of 1.9 million gallons for the final phase effluent flow of 41,000 gpd**. This volume will be provided with two bolted steel storage tanks.

For the first phase of 20,500 gpd, a single storage tank of 0.95 million gallons will be provided. Also in the first phase, a smaller irrigation storage tank may be provided on the plant site to facilitate irrigation pumping.

The storage component is not a wastewater treatment unit *per se* -- it only serves to store highly treated effluent.

Application System

The effluent will be used for **irrigation of up to 35 acres of rangeland,** as described above. Effluent from storage will be pumped directly to the irrigation distribution system.

System Operation

The facility will operate the wastewater treatment plant and the pumping station at the effluent storage site. Effluent from the treatment plant will be pumped to the storage tankage. Effluent will accumulate in the storage tanks as a reservoir for irrigation of the tract of native grasses. Irrigation will be controlled by personnel of the contract operations company. The irrigation needs will vary monthly, as illustrated by the water balance analysis presented previously in this report. In general, the storage pond will accumulate effluent during the winter months, when the native grass consumptive use is minimal. Irrigation needs will increase dramatically during the summer months, and this demand will result in draw-down of the contents of the storage tanks.

The application of wastewater effluent will be carefully controlled by the operators. There are no physical tailwater controls proposed for the irrigation site. Runoff of effluent during irrigation will be prevented by careful control of the application rate. Irrigation will not occur during wet weather storm events as a further operational precaution to prevent runoff of effluent.

APPENDIX A – WATER BALANCE

DAILY WATER BALANCE ANALYSIS

	A	B	C	D	E	F	G	H	I	J	K	L
1							TOTAL	ROOT	25 YR	EVAP		CONSUMP
2				INFILT	EVAPO-	REQUIRED	WATER	ZONE	AVERAGE	PER IRR.	EFFLUENT	FROM
3	MONTH	PRECIP	RUNOFF	RAINFALL	TRANSP	LEACHING	NEEDS	REQMT	EVAP	AREA	APPLIED	RESERVOIR
4												
5												
6				(2)-(3)			(5)+(6)	(7)-(4)			(8)/K	(9B)+(10)
7	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9B)	(10)	(11)
8												
9	01-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
10	02-Jan-2019	0.51	0	0.51	0.03	0.00	0.03	0.00	0.02	0.00	0.00	0.00
11	03-Jan-2019	1.68	0.18	1.50	0.03	0.00	0.03	0.00	0.02	0.00	0.00	0.00
12	04-Jan-2019	0.01	0	0.01	0.03	0.00	0.03	0.02	0.02	0.00	0.03	0.03
13	05-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
14	06-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
15	07-Jan-2019	0.03	0	0.03	0.03	0.00	0.03	0.00	0.02	0.00	0.00	0.00
16	08-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
17	09-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
18	10-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
19	11-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
20	12-Jan-2019	0.37	0	0.37	0.03	0.00	0.03	0.00	0.02	0.00	0.00	0.00
21	13-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
22	14-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
23	15-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
24	16-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
25	17-Jan-2019	0.04	0	0.04	0.03	0.00	0.03	0.00	0.02	0.00	0.00	0.00
26	18-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
27	19-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
28	20-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
29	21-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
30	22-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
31	23-Jan-2019	0.30	0	0.30	0.03	0.00	0.03	0.00	0.02	0.00	0.00	0.00
32	24-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
33	25-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
34	26-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
35	27-Jan-2019	0.69	0	0.69	0.03	0.00	0.03	0.00	0.02	0.00	0.00	0.00
36	28-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
37	29-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
38	30-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
39	31-Jan-2019	0.02	0	0.02	0.03	0.00	0.03	0.01	0.02	0.00	0.01	0.01
40	Jan Tot	3.65	0.18	3.47	0.97	0.08	1.05	0.80	0.72	0.00	0.95	0.95
41												
42	01-Feb-2019	0.04	0	0.04	0.04	0.00	0.04	0.00	0.04	0.00	0.00	0.00
43	02-Feb-2019	0.03	0	0.03	0.04	0.00	0.04	0.01	0.04	0.00	0.01	0.01
44	03-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
45	04-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
46	05-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
47	06-Feb-2019	0.01	0	0.01	0.04	0.00	0.04	0.03	0.04	0.00	0.04	0.04
48	07-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
49	08-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
50	09-Feb-2019	0.13	0	0.13	0.04	0.00	0.04	0.00	0.04	0.00	0.00	0.00
51	10-Feb-2019	0.19	0	0.19	0.04	0.00	0.04	0.00	0.04	0.00	0.00	0.00
52	11-Feb-2019	0.03	0	0.03	0.04	0.00	0.04	0.01	0.04	0.00	0.01	0.01
53	12-Feb-2019	0.04	0	0.04	0.04	0.00	0.04	0.00	0.04	0.00	0.00	0.00
54	13-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
55	14-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
56	15-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
57	16-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
58	17-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
59	18-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
60	19-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
61	20-Feb-2019	0.18	0	0.18	0.04	0.00	0.04	0.00	0.04	0.00	0.00	0.00
62	21-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
63	22-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
64	23-Feb-2019	0.02	0	0.02	0.04	0.00	0.04	0.02	0.04	0.00	0.03	0.03
65	24-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
66	25-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
67	26-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
68	27-Feb-2019	0.01	0	0.01	0.04	0.00	0.04	0.03	0.04	0.00	0.04	0.04
69	28-Feb-2019	0.00	0	0.00	0.04	0.00	0.05	0.05	0.04	0.00	0.05	0.05
70	Feb Tot	0.68	0.00	0.68	1.13	0.09	1.23	0.93	0.99	0.00	1.09	1.09
71												
72	01-Mar-2019	0.09	0	0.09	0.09	0.00	0.09	0.00	0.04	0.00	0.00	0.00
73	02-Mar-2019	0.01	0	0.01	0.09	0.01	0.10	0.09	0.04	0.00	0.10	0.10
74	03-Mar-2019	0.06	0	0.06	0.09	0.00	0.09	0.03	0.04	0.00	0.04	0.04
75	04-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
76	05-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
77	06-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
78	07-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
79	08-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
80	09-Mar-2019	0.06	0	0.06	0.09	0.00	0.09	0.03	0.04	0.00	0.04	0.04
81	10-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
82	11-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
83	12-Mar-2019	0.03	0	0.03	0.09	0.01	0.10	0.07	0.04	0.00	0.08	0.08
84	13-Mar-2019	0.18	0	0.18	0.09	0.00	0.09	0.00	0.04	0.00	0.00	0.00
85	14-Mar-2019	0.13	0	0.13	0.09	0.00	0.09	0.00	0.04	0.00	0.00	0.00
86	15-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
87	16-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
88	17-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
89	18-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
90	19-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
91	20-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
92	21-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
93	22-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
94	23-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
95	24-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
96	25-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
97	26-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12

DAILY WATER BALANCE ANALYSIS

	A	B	C	D	E	F	G	H	I	J	K	L
17	09-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
98	27-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
99	28-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
100	29-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
101	30-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
102	31-Mar-2019	0.00	0	0.00	0.09	0.01	0.10	0.10	0.04	0.00	0.12	0.12
103	Mar Tot	0.56	0.00	0.56	2.79	0.26	3.06	2.63	1.39	0.00	3.09	3.09
104												
105	01-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
106	02-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
107	03-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
108	04-Apr-2019	0.09	0	0.09	0.11	0.00	0.11	0.02	0.08	0.00	0.03	0.03
109	05-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
110	06-Apr-2019	0.04	0	0.04	0.11	0.01	0.12	0.08	0.08	0.00	0.09	0.09
111	07-Apr-2019	2.04	0.32	1.72	0.11	0.00	0.11	0.00	0.08	0.00	0.00	0.00
112	08-Apr-2019	0.93	0.01	0.92	0.11	0.00	0.11	0.00	0.08	0.00	0.00	0.00
113	09-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
114	10-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
115	11-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
116	12-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
117	13-Apr-2019	0.02	0	0.02	0.11	0.01	0.12	0.10	0.08	0.00	0.12	0.12
118	14-Apr-2019	0.42	0	0.42	0.11	0.00	0.11	0.00	0.08	0.00	0.00	0.00
119	15-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
120	16-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
121	17-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
122	18-Apr-2019	0.89	0.00	0.89	0.11	0.00	0.11	0.00	0.08	0.00	0.00	0.00
123	19-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
124	20-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
125	21-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
126	22-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
127	23-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
128	24-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
129	25-Apr-2019	1.70	0.19	1.51	0.11	0.00	0.11	0.00	0.08	0.00	0.00	0.00
130	26-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
131	27-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
132	28-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
133	29-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
134	30-Apr-2019	0.00	0	0.00	0.11	0.01	0.12	0.12	0.08	0.00	0.15	0.15
135	Apr Tot	6.13	0.52	5.61	3.36	0.29	3.66	2.95	2.30	0.00	3.47	3.47
136												
137	01-May-2019	0.03	0	0.03	0.20	0.02	0.22	0.19	0.05	0.00	0.22	0.22
138	02-May-2019	0.03	0	0.03	0.20	0.02	0.22	0.19	0.05	0.00	0.22	0.22
139	03-May-2019	0.31	0	0.31	0.20	0.00	0.20	0.00	0.05	0.00	0.00	0.00
140	04-May-2019	4.80	2.09	2.71	0.20	0.00	0.20	0.00	0.05	0.00	0.00	0.00
141	05-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
142	06-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
143	07-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
144	08-May-2019	0.74	0	0.74	0.20	0.00	0.20	0.00	0.05	0.00	0.00	0.00
145	09-May-2019	2.44	0.52	1.92	0.20	0.00	0.20	0.00	0.05	0.00	0.00	0.00
146	10-May-2019	0.02	0	0.02	0.20	0.02	0.22	0.20	0.05	0.00	0.23	0.23
147	11-May-2019	0.12	0	0.12	0.20	0.01	0.21	0.09	0.05	0.00	0.10	0.10
148	12-May-2019	0.07	0	0.07	0.20	0.01	0.21	0.14	0.05	0.00	0.17	0.17
149	13-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
150	14-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
151	15-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
152	16-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
153	17-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
154	18-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
155	19-May-2019	0.09	0	0.09	0.20	0.01	0.21	0.12	0.05	0.00	0.14	0.14
156	20-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
157	21-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
158	22-May-2019	0.07	0	0.07	0.20	0.01	0.21	0.14	0.05	0.00	0.17	0.17
159	23-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
160	24-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
161	25-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
162	26-May-2019	0.14	0	0.14	0.20	0.01	0.20	0.06	0.05	0.00	0.07	0.07
163	27-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
164	28-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
165	29-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
166	30-May-2019	0.88	0.00	0.88	0.20	0.00	0.20	0.00	0.05	0.00	0.00	0.00
167	31-May-2019	0.00	0	0.00	0.20	0.02	0.22	0.22	0.05	0.00	0.26	0.26
168	May Tot	9.74	2.61	7.13	6.12	0.51	6.62	5.07	1.67	0.00	5.96	5.96
169												
170	01-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
171	02-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
172	03-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
173	04-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
174	05-Jun-2019	1.21	0.05	1.16	0.21	0.00	0.21	0.00	0.12	0.00	0.00	0.00
175	06-Jun-2019	0.40	0	0.40	0.21	0.00	0.21	0.00	0.12	0.00	0.00	0.00
176	07-Jun-2019	0.45	0	0.45	0.21	0.00	0.21	0.00	0.12	0.00	0.00	0.00
177	08-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
178	09-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
179	10-Jun-2019	0.68	0	0.68	0.21	0.00	0.21	0.00	0.12	0.00	0.00	0.00
180	11-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
181	12-Jun-2019	0.07	0	0.07	0.21	0.02	0.23	0.16	0.12	0.00	0.19	0.19
182	13-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
183	14-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
184	15-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
185	16-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
186	17-Jun-2019	0.04	0	0.04	0.21	0.02	0.23	0.19	0.12	0.00	0.23	0.23
187	18-Jun-2019	0.03	0	0.03	0.21	0.02	0.23	0.20	0.12	0.00	0.24	0.24
188	19-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
189	20-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
190	21-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
191	22-Jun-2019	0.06	0	0.06	0.21	0.02	0.23	0.17	0.12	0.00	0.20	0.20
192	23-Jun-2019	0.13	0	0.13	0.21	0.01	0.22	0.09	0.12	0.00	0.11	0.11
193	24-Jun-2019	0.01	0	0.01	0.21	0.02	0.24	0.23	0.12	0.00	0.27	0.27

DAILY WATER BALANCE ANALYSIS

	A	B	C	D	E	F	G	H	I	J	K	L
17	09-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
194	25-Jun-2019	1.23	0.05	1.18	0.21	0.00	0.21	0.00	0.12	0.00	0.00	0.00
195	26-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
196	27-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
197	28-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
198	29-Jun-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.12	0.00	0.28	0.28
199	30-Jun-2019	1.38	0.09	1.29	0.21	0.00	0.21	0.00	0.12	0.00	0.00	0.00
200	Jun Tot	5.69	0.19	5.50	6.40	0.53	6.93	5.31	3.50	0.00	6.25	6.25
201												
202	01-Jul-2019	0.38	0	0.38	0.21	0.00	0.21	0.00	0.17	0.00	0.00	0.00
203	02-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
204	03-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
205	04-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
206	05-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
207	06-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
208	07-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
209	08-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
210	09-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
211	10-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
212	11-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
213	12-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
214	13-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
215	14-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
216	15-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
217	16-Jul-2019	2.05	0.33	1.72	0.21	0.00	0.21	0.00	0.17	0.00	0.00	0.00
218	17-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
219	18-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
220	19-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
221	20-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
222	21-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
223	22-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
224	23-Jul-2019	0.09	0	0.09	0.21	0.01	0.23	0.14	0.17	0.00	0.16	0.16
225	24-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
226	25-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
227	26-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
228	27-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
229	28-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
230	29-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
231	30-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
232	31-Jul-2019	0.00	0	0.00	0.21	0.02	0.24	0.24	0.17	0.00	0.28	0.28
233	Jul Tot	2.52	0.33	2.19	6.60	0.68	7.28	6.76	5.25	0.00	7.96	7.96
234												
235	01-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
236	02-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
237	03-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
238	04-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
239	05-Aug-2019	0.05	0	0.05	0.14	0.01	0.15	0.10	0.18	0.00	0.12	0.12
240	06-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
241	07-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
242	08-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
243	09-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
244	10-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
245	11-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
246	12-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
247	13-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
248	14-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
249	15-Aug-2019	0.13	0	0.13	0.14	0.00	0.14	0.01	0.18	0.00	0.01	0.01
250	16-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
251	17-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
252	18-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
253	19-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
254	20-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
255	21-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
256	22-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
257	23-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
258	24-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
259	25-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
260	26-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
261	27-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
262	28-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
263	29-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
264	30-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
265	31-Aug-2019	0.00	0	0.00	0.14	0.02	0.16	0.16	0.18	0.00	0.18	0.18
266	Aug Tot	0.18	0.00	0.18	4.33	0.46	4.80	4.62	5.65	0.00	5.43	5.43
267												
268	01-Sep-2019	0.00	0	0.00	0.17	0.02	0.19	0.19	0.10	0.00	0.22	0.22
269	02-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
270	03-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
271	04-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
272	05-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
273	06-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
274	07-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
275	08-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
276	09-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
277	10-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
278	11-Sep-2019	0.08	0	0.08	0.21	0.01	0.22	0.14	0.10	0.00	0.17	0.17
279	12-Sep-2019	0.04	0	0.04	0.21	0.02	0.23	0.19	0.10	0.00	0.22	0.22
280	13-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
281	14-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
282	15-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
283	16-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
284	17-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
285	18-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
286	19-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
287	20-Sep-2019	0.89	0.00	0.89	0.21	0.00	0.21	0.00	0.10	0.00	0.00	0.00
288	21-Sep-2019	0.02	0	0.02	0.21	0.02	0.23	0.21	0.10	0.00	0.24	0.24
289	22-Sep-2019	0.03	0	0.03	0.21	0.02	0.23	0.20	0.10	0.00	0.23	0.23

DAILY WATER BALANCE ANALYSIS

	A	B	C	D	E	F	G	H	I	J	K	L
17	09-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
290	23-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
291	24-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
292	25-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
293	26-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
294	27-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
295	28-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
296	29-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
297	30-Sep-2019	0.00	0	0.00	0.21	0.02	0.23	0.23	0.10	0.00	0.27	0.27
298	Sep Tot	1.06	0.00	1.06	5.10	0.64	6.82	6.44	2.87	0.00	7.58	7.58
299												
300	01-Oct-2019	0.26	0	0.26	0.13	0.00	0.13	0.00	0.06	0.00	0.00	0.00
301	02-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
302	03-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
303	04-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
304	05-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
305	06-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
306	07-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
307	08-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
308	09-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
309	10-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
310	11-Oct-2019	0.15	0	0.15	0.13	0.00	0.13	0.00	0.06	0.00	0.00	0.00
311	12-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
312	13-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
313	14-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
314	15-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
315	16-Oct-2019	0.13	0	0.13	0.13	0.00	0.13	0.00	0.06	0.00	0.00	0.00
316	17-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
317	18-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
318	19-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
319	20-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
320	21-Oct-2019	0.35	0	0.35	0.13	0.00	0.13	0.00	0.06	0.00	0.00	0.00
321	22-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
322	23-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
323	24-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
324	25-Oct-2019	1.58	0.15	1.43	0.13	0.00	0.13	0.00	0.06	0.00	0.00	0.00
325	26-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
326	27-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
327	28-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
328	29-Oct-2019	0.07	0	0.07	0.13	0.01	0.14	0.07	0.06	0.00	0.08	0.08
329	30-Oct-2019	0.14	0	0.14	0.13	0.00	0.13	0.00	0.06	0.00	0.00	0.00
330	31-Oct-2019	0.00	0	0.00	0.13	0.01	0.14	0.14	0.06	0.00	0.17	0.17
331	Oct Tot	2.68	0.15	2.53	4.01	0.35	4.36	3.51	1.89	0.00	4.14	4.14
332												
333	01-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
334	02-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
335	03-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
336	04-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
337	05-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
338	06-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
339	07-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
340	08-Nov-2019	0.14	0	0.14	0.07	0.00	0.07	0.00	0.04	0.00	0.00	0.00
341	09-Nov-2019	0.10	0	0.10	0.07	0.00	0.07	0.00	0.04	0.00	0.00	0.00
342	10-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
343	11-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
344	12-Nov-2019	0.12	0	0.12	0.07	0.00	0.07	0.00	0.04	0.00	0.00	0.00
345	13-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
346	14-Nov-2019	0.05	0	0.05	0.07	0.00	0.07	0.02	0.04	0.00	0.02	0.02
347	15-Nov-2019	0.09	0	0.09	0.07	0.00	0.07	0.00	0.04	0.00	0.00	0.00
348	16-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
349	17-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
350	18-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
351	19-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
352	20-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
353	21-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
354	22-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
355	23-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
356	24-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
357	25-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
358	26-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
359	27-Nov-2019	0.00	0	0.00	0.07	0.01	0.08	0.08	0.04	0.00	0.09	0.09
360	28-Nov-2019	0.04	0	0.04	0.07	0.00	0.07	0.03	0.04	0.00	0.04	0.04
361	29-Nov-2019	0.05	0	0.05	0.07	0.00	0.07	0.02	0.04	0.00	0.02	0.02
362	30-Nov-2019	0.16	0	0.16	0.07	0.00	0.07	0.00	0.04	0.00	0.00	0.00
363	Nov Tot	0.75	0.00	0.75	2.03	0.17	2.20	1.72	1.33	0.00	2.02	2.02
364												
365	01-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
366	02-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
367	03-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
368	04-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
369	05-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
370	06-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
371	07-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
372	08-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
373	09-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
374	10-Dec-2019	0.08	0	0.08	0.03	0.00	0.03	0.00	0.03	0.00	0.00	0.00
375	11-Dec-2019	0.33	0	0.33	0.03	0.00	0.03	0.00	0.03	0.00	0.00	0.00
376	12-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
377	13-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
378	14-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
379	15-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
380	16-Dec-2019	0.01	0	0.01	0.03	0.00	0.03	0.02	0.03	0.00	0.03	0.03
381	17-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
382	18-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
383	19-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
384	20-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
385	21-Dec-2019	0.37	0	0.37	0.03	0.00	0.03	0.00	0.03	0.00	0.00	0.00

DAILY WATER BALANCE ANALYSIS

	A	B	C	D	E	F	G	H	I	J	K	L
17	09-Jan-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.02	0.00	0.04	0.04
386	22-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
387	23-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
388	24-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
389	25-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
390	26-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
391	27-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
392	28-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
393	29-Dec-2019	0.06	0	0.06	0.03	0.00	0.03	0.00	0.03	0.00	0.00	0.00
394	30-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
395	31-Dec-2019	0.00	0	0.00	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.04
396	Dec Tot	0.85	0.00	0.85	0.93	0.09	1.02	0.89	0.88	0.00	1.05	1.05
397	Ann Tot	34.49	3.97	30.52	43.78	4.16	49.01	41.62	28.44	0.00	48.96	48.96
398												
399												
400												
401	**JAN**	3.65	0.18	3.47	0.97	0.08	1.05	0.80	0.72	0.00	0.95	0.95
402	**FEB**	0.68	0.00	0.68	1.13	0.09	1.23	0.93	0.99	0.00	1.09	1.09
403	**MAR**	0.56	0.00	0.56	2.79	0.26	3.06	2.63	1.39	0.00	3.09	3.09
404	**APR**	6.13	0.52	5.61	3.36	0.29	3.66	2.95	2.30	0.00	3.47	3.47
405	**MAY**	9.74	2.61	7.13	6.12	0.51	6.62	5.07	1.67	0.00	5.96	5.96
406	**JUN**	5.69	0.19	5.50	6.40	0.53	6.93	5.31	3.50	0.00	6.25	6.25
407	**JUL**	2.52	0.33	2.19	6.60	0.68	7.28	6.76	5.25	0.00	7.96	7.96
408	**AUG**	0.18	0.00	0.18	4.33	0.46	4.80	4.62	5.65	0.00	5.43	5.43
409	**SEP**	1.06	0.00	1.06	5.10	0.64	6.82	6.44	2.87	0.00	7.58	7.58
410	**OCT**	2.68	0.15	2.53	4.01	0.35	4.36	3.51	1.89	0.00	4.14	4.14
411	**NOV**	0.75	0.00	0.75	2.03	0.17	2.20	1.72	1.33	0.00	2.02	2.02
412	**DEC**	0.85	0.00	0.85	0.93	0.09	1.02	0.89	0.88	0.00	1.05	1.05
413	**ANNUAL**	34.49	3.97	30.52	43.78	4.16	49.01	41.62	28.44	0.00	48.96	48.96

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415 **INPUT DATA**

416

417 **Runoff Equation = if (DailyRainfall>Ia, (DailyRainfall-Ia)²/((DailyRainfall-Ia)+S),0)** **If computed r**

418 **CN =** **72.5** <---- This value comes from sheet PROJ

419 **S =** **3.79**

420 **Ia =** **0.76**

421 **Irrigation Efficiency, K =** **0.85** <---- This value comes from sheet PROJ

422 **Conductivity of Effluent =** **1.00 mmhos/cm** <---- This value comes from sheet PROJ

423 **Maximum Soil Conductivity =** **10.00 mmhos/cm** <---- This value comes from sheet PROJ

424 **Reservoir Surface Area =** **0.00 acres** <---- This value comes from sheet PROJ

425 **Available Irrigation Area =** **35.00 acres** <---- This value comes from sheet PROJ

426 **Ratio of Reservoir surface to irrigation area =** **0.00**

427 **Effluent Flow =** **0.041 MGD** <---- This value comes from sheet EFFLUENT

428

429

430 **OUTPUT DATA**

431

432 **Annual volume at projected flow rate =** **45.9 ac-ft**

433 **Min. Irrigation area needed for design flow =** **(Tot WW flow)/(Consumption from res) =** **11.3 acres**

434 **Annual Precipitation** **34.49 in/yr** **2.87 ft/yr**

435 **Annual Evapotranspiration** **43.78 in/yr** **3.65 ft/yr**

436 **Annual Root Zone Requirement** **41.62 in/yr** **3.47 ft/yr**

437 **Annual Gross Evaporation** **28.44 in/yr** **2.37 ft/yr**

438 **Consumption from Reservoir** **48.96 in/yr** **4.08 ft/yr**

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APPENDIX B – STORAGE BALANCE

DAILY STORAGE BALANCE ANALYSIS FOR IRRIGATION
2-DAY ANTECEDENT RAINFALL

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1				25 YR	25 YR			25 YR	25 YR	25 YR	25 YR	25 YR		
2		TOTAL		MAX	MAX			LOW	LOW	LOW	LOW	LOW		
3		WATER	EFFLUENT	RAINFALL	RUNOFF	INFILT	AVAILABLE	NET EVAP	NET EVAP	NET EVAP	NET EVAP	NET EVAP		
4	MONTH	NEEDS	RECEIVED	(WET YR)	(WET YR)	RAINFALL	WATER	PRECIP	GROSS EVAP	EVAP	(REDIST)	PER IRR AC		ACCUMUL
5				**2004**	**2004**			**2021**	**2021**	**2021**	**2021**	**2021**	STORAGE	STORAGE
6		(5)+(6)				(14)-(15)	(13)+(16)							
7	(12)	(7)	(13)	(14)	(15)	(16)	(17)				(18A)	(18)	(19)	(20)
8														
9	01-Jan-2004	0.03	0.043	0.09	0	0.09	0.13	0.09	0.07	0.03	0.01	0.00	0.043	0.671
10	02-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.043	0.714
11	03-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.006	0.720
12	04-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.003	0.723
13	05-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.002	0.726
14	06-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.002	0.728
15	07-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.006	0.734
16	08-Jan-2004	0.03	0.043	0.01	0	0.01	0.05	0.01	0.07	0.03	0.01	0.00	0.014	0.748
17	09-Jan-2004	0.03	0.043	0.05	0	0.05	0.09	0.05	0.07	0.03	0.01	0.00	0.043	0.791
18	10-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.043	0.834
19	11-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.002	0.836
20	12-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.006	0.842
21	13-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.002	0.845
22	14-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.002	0.847
23	15-Jan-2004	0.03	0.043	0.46	0	0.46	0.50	0.46	0.07	0.03	0.01	0.00	0.043	0.890
24	16-Jan-2004	0.03	0.043	0.58	0	0.58	0.62	0.58	0.07	0.03	0.01	0.00	0.043	0.933
25	17-Jan-2004	0.03	0.043	2.56	0.58	1.98	2.02	2.56	0.07	0.03	0.01	0.00	0.043	0.976
26	18-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.043	1.019
27	19-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.002	1.021
28	20-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.002	1.024
29	21-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.002	1.026
30	22-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.002	1.028
31	23-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.006	1.034
32	24-Jan-2004	0.03	0.043	0.32	0	0.32	0.36	0.32	0.07	0.03	0.01	0.00	0.043	1.077
33	25-Jan-2004	0.03	0.043	0.30	0	0.30	0.34	0.30	0.07	0.03	0.01	0.00	0.043	1.120
34	26-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.043	1.164
35	27-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.006	1.170
36	28-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.002	1.172
37	29-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.002	1.174
38	30-Jan-2004	0.03	0.043	0.06	0	0.06	0.10	0.06	0.07	0.03	0.01	0.00	0.043	1.217
39	31-Jan-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.03	0.01	0.00	0.043	1.260
40	Jan Tot	1.05	1.337	4.43	0.58	3.85	5.19	4.43	2.04	0.99	0.25	0.00	0.633	
41														
42	01-Feb-2004	0.04	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.005	1.256
43	02-Feb-2004	0.04	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.006	1.250
44	03-Feb-2004	0.05	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.010	1.240
45	04-Feb-2004	0.05	0.043	0.04	0	0.04	0.08	0.04	0.06	0.02	0.01	0.00	0.037	1.277
46	05-Feb-2004	0.05	0.043	0.94	0.01	0.93	0.97	0.94	0.06	0.02	0.01	0.00	0.043	1.320
47	06-Feb-2004	0.04	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	0.043	1.364
48	07-Feb-2004	0.05	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.010	1.354
49	08-Feb-2004	0.05	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.010	1.344
50	09-Feb-2004	0.04	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.005	1.340
51	10-Feb-2004	0.04	0.043	0.15	0	0.15	0.19	0.15	0.06	0.02	0.01	0.00	0.043	1.383
52	11-Feb-2004	0.04	0.043	0.76	0.00	0.76	0.80	0.76	0.06	0.02	0.01	0.00	0.043	1.426
53	12-Feb-2004	0.04	0.043	0.57	0	0.57	0.61	0.57	0.06	0.02	0.01	0.00	0.043	1.469
54	13-Feb-2004	0.05	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	0.043	1.512
55	14-Feb-2004	0.05	0.043	0.34	0	0.34	0.38	0.34	0.06	0.02	0.01	0.00	0.043	1.555
56	15-Feb-2004	0.05	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	0.043	1.598
57	16-Feb-2004	0.05	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.010	1.589
58	17-Feb-2004	0.05	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.010	1.579
59	18-Feb-2004	0.05	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.010	1.569
60	19-Feb-2004	0.05	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.010	1.559
61	20-Feb-2004	0.04	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.005	1.555
62	21-Feb-2004	0.05	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.010	1.545
63	22-Feb-2004	0.05	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.010	1.535
64	23-Feb-2004	0.04	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.007	1.528
65	24-Feb-2004	0.05	0.043	0.93	0.01	0.92	0.97	0.93	0.06	0.02	0.01	0.00	0.043	1.571
66	25-Feb-2004	0.05	0.043	0.07	0	0.07	0.11	0.07	0.06	0.02	0.01	0.00	0.043	1.614
67	26-Feb-2004	0.05	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	0.043	1.657
68	27-Feb-2004	0.04	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.008	1.649
69	28-Feb-2004	0.05	0.043	0.00	0	0.00	0.04	0.00	0.06	0.02	0.01	0.00	-0.010	1.639
70	Feb Tot	1.23	1.208	3.80	0.02	3.78	4.99	3.80	1.75	0.52	0.35	0.00	0.379	
71														
72	01-Mar-2004	0.09	0.043	0.20	0	0.20	0.24	0.20	0.09	0.00	0.02	0.00	0.043	1.682
73	02-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	0.043	1.725
74	03-Mar-2004	0.09	0.043	0.27	0	0.27	0.31	0.27	0.09	0.00	0.02	0.00	0.043	1.768
75	04-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	0.043	1.812
76	05-Mar-2004	0.10	0.043	0.48	0	0.48	0.52	0.48	0.09	-0.01	0.02	0.00	0.043	1.855
77	06-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	0.043	1.898
78	07-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	-0.075	1.823
79	08-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	-0.075	1.748
80	09-Mar-2004	0.09	0.043	0.00	0	0.00	0.04	0.00	0.09	0.00	0.02	0.00	-0.067	1.682
81	10-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	-0.075	1.607
82	11-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	-0.075	1.532
83	12-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	-0.071	1.461
84	13-Mar-2004	0.09	0.043	0.46	0	0.46	0.50	0.46	0.09	0.00	0.02	0.00	0.043	1.505
85	14-Mar-2004	0.09	0.043	0.15	0	0.15	0.19	0.15	0.09	0.00	0.02	0.00	0.043	1.548
86	15-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	0.043	1.591
87	16-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	-0.075	1.516
88	17-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	-0.075	1.441
89	18-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	-0.075	1.367
90	19-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	-0.075	1.292
91	20-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	-0.075	1.217
92	21-Mar-2004	0.10	0.043	0.21	0	0.21	0.25	0.21	0.09	-0.01	0.02	0.00	0.043	1.260
93	22-Mar-2004	0.10	0.043	0.01	0	0.01	0.05	0.01	0.09	-0.01	0.02	0.00	0.043	1.304
94	23-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	-0.075	1.229

DAILY STORAGE BALANCE ANALYSIS FOR IRRIGATION
2-DAY ANTECEDENT RAINFALL

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1				25 YR	25 YR			25 YR	25 YR	25 YR	25 YR	25 YR		
2		TOTAL		MAX	MAX			LOW	LOW	LOW	LOW	LOW		
3		WATER	EFFLUENT	RAINFALL	RUNOFF	INFILT	AVAILABLE	NET EVAP	NET EVAP	NET EVAP	NET EVAP	NET EVAP		
4	MONTH	NEEDS	RECEIVED	(WET YR)	(WET YR)	RAINFALL	WATER	PRECIP	GROSS EVAP	EVAP	(REDIST)	PER IRR AC		ACCUMUL
5				**2004**	**2004**			**2021**	**2021**	**2021**	**2021**	**2021**	STORAGE	STORAGE
6		(5)+(6)				(14)-(15)	(13)+(16)							
7	(12)	(7)	(13)	(14)	(15)	(16)	(17)				(18A)	(18)	(19)	(20)
95	24-Mar-2004	0.10	0.043	0.05	0	0.05	0.09	0.05	0.09	-0.01	0.02	0.00	-0.016	1.213
96	25-Mar-2004	0.10	0.043	0.04	0	0.04	0.08	0.04	0.09	-0.01	0.02	0.00	-0.028	1.185
97	26-Mar-2004	0.10	0.043	0.01	0	0.01	0.05	0.01	0.09	-0.01	0.02	0.00	-0.063	1.122
98	27-Mar-2004	0.10	0.043	0.01	0	0.01	0.05	0.01	0.09	-0.01	0.02	0.00	-0.063	1.060
99	28-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	-0.075	0.985
100	29-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	-0.075	0.910
101	30-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	-0.075	0.835
102	31-Mar-2004	0.10	0.043	0.00	0	0.00	0.04	0.00	0.09	-0.01	0.02	0.00	-0.075	0.761
103	Mar Tot	3.06	1.337	1.89	0.00	1.89	3.23	1.89	2.82	-0.24	0.49	0.00	-0.878	
104														
105	01-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	-0.01	0.03	0.00	-0.103	0.657
106	02-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	-0.01	0.03	0.00	-0.103	0.554
107	03-Apr-2004	0.12	0.043	0.21	0	0.21	0.25	0.21	0.12	-0.01	0.03	0.00	0.043	0.597
108	04-Apr-2004	0.11	0.043	0.00	0	0.00	0.04	0.00	0.12	0.00	0.03	0.00	0.043	0.640
109	05-Apr-2004	0.12	0.043	0.35	0	0.35	0.39	0.35	0.12	-0.01	0.03	0.00	0.043	0.684
110	06-Apr-2004	0.12	0.043	0.12	0	0.12	0.16	0.12	0.12	0.00	0.03	0.00	0.043	0.727
111	07-Apr-2004	0.11	0.043	1.11	0.03	1.08	1.12	1.11	0.12	0.01	0.03	0.00	0.043	0.770
112	08-Apr-2004	0.11	0.043	0.00	0	0.00	0.04	0.00	0.12	0.01	0.03	0.00	0.043	0.813
113	09-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	-0.01	0.03	0.00	-0.103	0.710
114	10-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	-0.01	0.03	0.00	-0.103	0.606
115	11-Apr-2004	0.12	0.043	1.09	0.03	1.06	1.11	1.09	0.12	-0.01	0.03	0.00	0.043	0.649
116	12-Apr-2004	0.12	0.043	0.61	0	0.61	0.65	0.61	0.12	-0.01	0.03	0.00	0.043	0.693
117	13-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	0.00	0.03	0.00	0.043	0.736
118	14-Apr-2004	0.11	0.043	0.00	0	0.00	0.04	0.00	0.12	0.01	0.03	0.00	-0.089	0.647
119	15-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	-0.01	0.03	0.00	-0.103	0.544
120	16-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	-0.01	0.03	0.00	-0.103	0.440
121	17-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	-0.01	0.03	0.00	-0.103	0.337
122	18-Apr-2004	0.11	0.043	0.00	0	0.00	0.04	0.00	0.12	0.01	0.03	0.00	-0.089	0.248
123	19-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	-0.01	0.03	0.00	-0.103	0.145
124	20-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	-0.01	0.03	0.00	-0.103	0.042
125	21-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	-0.01	0.03	0.00	-0.103	0.000
126	22-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	-0.01	0.03	0.00	-0.103	0.000
127	23-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	-0.01	0.03	0.00	-0.103	0.000
128	24-Apr-2004	0.12	0.043	0.53	0	0.53	0.57	0.53	0.12	-0.01	0.03	0.00	0.043	0.043
129	25-Apr-2004	0.11	0.043	0.15	0	0.15	0.19	0.15	0.12	0.01	0.03	0.00	0.043	0.086
130	26-Apr-2004	0.12	0.043	0.14	0	0.14	0.18	0.14	0.12	-0.01	0.03	0.00	0.043	0.129
131	27-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	-0.01	0.03	0.00	0.043	0.173
132	28-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	-0.01	0.03	0.00	-0.103	0.069
133	29-Apr-2004	0.12	0.043	0.31	0	0.31	0.35	0.31	0.12	-0.01	0.03	0.00	0.043	0.112
134	30-Apr-2004	0.12	0.043	0.00	0	0.00	0.04	0.00	0.12	-0.01	0.03	0.00	0.043	0.156
135	Apr Tot	3.66	1.294	4.62	0.06	4.56	5.86	4.62	3.53	-0.13	0.81	0.00	-0.874	
136														
137	01-May-2004	0.22	0.043	0.08	0	0.08	0.12	0.08	0.15	-0.07	0.02	0.00	-0.117	0.039
138	02-May-2004	0.22	0.043	0.34	0	0.34	0.38	0.34	0.15	-0.07	0.02	0.00	0.043	0.082
139	03-May-2004	0.20	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.05	0.02	0.00	0.043	0.125
140	04-May-2004	0.20	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.05	0.02	0.00	-0.189	0.000
141	05-May-2004	0.22	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.07	0.02	0.00	-0.215	0.000
142	06-May-2004	0.22	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.07	0.02	0.00	-0.215	0.000
143	07-May-2004	0.22	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.07	0.02	0.00	-0.215	0.000
144	08-May-2004	0.20	0.043	0.15	0	0.15	0.19	0.15	0.15	-0.05	0.02	0.00	-0.012	0.000
145	09-May-2004	0.20	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.05	0.02	0.00	-0.189	0.000
146	10-May-2004	0.22	0.043	0.02	0	0.02	0.06	0.02	0.15	-0.07	0.02	0.00	-0.189	0.000
147	11-May-2004	0.21	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.06	0.02	0.00	-0.199	0.000
148	12-May-2004	0.21	0.043	0.32	0	0.32	0.36	0.32	0.15	-0.06	0.02	0.00	0.043	0.043
149	13-May-2004	0.22	0.043	0.02	0	0.02	0.06	0.02	0.15	-0.07	0.02	0.00	0.043	0.086
150	14-May-2004	0.22	0.043	1.52	0.13	1.39	1.44	1.52	0.15	-0.07	0.02	0.00	0.043	0.129
151	15-May-2004	0.22	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.07	0.02	0.00	0.043	0.173
152	16-May-2004	0.22	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.07	0.02	0.00	-0.215	0.000
153	17-May-2004	0.22	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.07	0.02	0.00	-0.215	0.000
154	18-May-2004	0.22	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.07	0.02	0.00	-0.215	0.000
155	19-May-2004	0.21	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.06	0.02	0.00	-0.203	0.000
156	20-May-2004	0.22	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.07	0.02	0.00	-0.215	0.000
157	21-May-2004	0.22	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.07	0.02	0.00	-0.215	0.000
158	22-May-2004	0.21	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.06	0.02	0.00	-0.206	0.000
159	23-May-2004	0.22	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.07	0.02	0.00	-0.215	0.000
160	24-May-2004	0.22	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.07	0.02	0.00	-0.215	0.000
161	25-May-2004	0.22	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.07	0.02	0.00	-0.215	0.000
162	26-May-2004	0.20	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.05	0.02	0.00	-0.196	0.000
163	27-May-2004	0.22	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.07	0.02	0.00	-0.215	0.000
164	28-May-2004	0.22	0.043	0.08	0	0.08	0.12	0.08	0.15	-0.07	0.02	0.00	-0.121	0.000
165	29-May-2004	0.22	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.07	0.02	0.00	-0.215	0.000
166	30-May-2004	0.20	0.043	0.00	0	0.00	0.04	0.00	0.15	-0.05	0.02	0.00	-0.189	0.000
167	31-May-2004	0.22	0.043	0.05	0	0.05	0.09	0.05	0.15	-0.07	0.02	0.00	-0.156	0.000
168	May Tot	6.62	1.337	2.58	0.13	2.45	3.79	2.58	4.63	-1.99	0.59	0.00	-4.498	
169														
170	01-Jun-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.05	0.04	0.00	-0.236	0.000
171	02-Jun-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.05	0.04	0.00	-0.236	0.000
172	03-Jun-2004	0.24	0.043	0.13	0	0.13	0.17	0.13	0.18	-0.05	0.04	0.00	-0.083	0.000
173	04-Jun-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.05	0.04	0.00	-0.236	0.000
174	05-Jun-2004	0.21	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.03	0.04	0.00	-0.208	0.000
175	06-Jun-2004	0.21	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.03	0.04	0.00	-0.208	0.000
176	07-Jun-2004	0.21	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.03	0.04	0.00	-0.208	0.000
177	08-Jun-2004	0.24	0.043	1.01	0.02	0.99	1.04	1.01	0.18	-0.05	0.04	0.00	0.043	0.043
178	09-Jun-2004	0.24	0.043	0.65	0	0.65	0.69	0.65	0.18	-0.05	0.04	0.00	0.043	0.086
179	10-Jun-2004	0.21	0.043	2.79	0.71	2.08	2.12	2.79	0.18	-0.03	0.04	0.00	0.043	0.129
180	11-Jun-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.05	0.04	0.00	0.043	0.173
181	12-Jun-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.05	0.04	0.00	-0.227	0.000

DAILY STORAGE BALANCE ANALYSIS FOR IRRIGATION
2-DAY ANTECEDENT RAINFALL

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1				25 YR	25 YR			25 YR	25 YR	25 YR	25 YR	25 YR		
2		TOTAL		MAX	MAX			LOW	LOW	LOW	LOW	LOW		
3		WATER	EFFLUENT	RAINFALL	RUNOFF	INFILT	AVAILABLE	NET EVAP	NET EVAP	NET EVAP	NET EVAP	NET EVAP		
4	MONTH	NEEDS	RECEIVED	(WET YR)	(WET YR)	RAINFALL	WATER	PRECIP	GROSS EVAP	EVAP	(REDIST)	PER IRR AC		ACCUMUL
5				**2004**	**2004**			**2021**	**2021**	**2021**	**2021**	**2021**	STORAGE	STORAGE
6		(5)+(6)				(14)-(15)	(13)+(16)							
7	(12)	(7)	(13)	(14)	(15)	(16)	(17)				(18A)	(18)	(19)	(20)
182	13-Jun-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.05	0.04	0.00	-0.236	0.000
183	14-Jun-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.05	0.04	0.00	-0.236	0.000
184	15-Jun-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.05	0.04	0.00	-0.236	0.000
185	16-Jun-2004	0.24	0.043	1.09	0.03	1.06	1.11	1.09	0.18	-0.05	0.04	0.00	0.043	0.043
186	17-Jun-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.05	0.04	0.00	0.043	0.086
187	18-Jun-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.05	0.04	0.00	-0.232	0.000
188	19-Jun-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.05	0.04	0.00	-0.236	0.000
189	20-Jun-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.05	0.04	0.00	-0.236	0.000
190	21-Jun-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.05	0.04	0.00	-0.236	0.000
191	22-Jun-2004	0.23	0.043	0.05	0	0.05	0.09	0.05	0.18	-0.05	0.04	0.00	-0.169	0.000
192	23-Jun-2004	0.22	0.043	0.23	0	0.23	0.27	0.23	0.18	-0.04	0.04	0.00	0.043	0.043
193	24-Jun-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.05	0.04	0.00	-0.234	0.000
194	25-Jun-2004	0.21	0.043	0.00	0	0.00	0.04	0.00	0.18	-0.03	0.04	0.00	-0.208	0.000
195	26-Jun-2004	0.24	0.043	0.15	0	0.15	0.19	0.15	0.18	-0.05	0.04	0.00	-0.059	0.000
196	27-Jun-2004	0.24	0.043	0.84	0.00	0.84	0.88	0.84	0.18	-0.05	0.04	0.00	0.043	0.043
197	28-Jun-2004	0.24	0.043	0.46	0	0.46	0.50	0.46	0.18	-0.05	0.04	0.00	0.043	0.086
198	29-Jun-2004	0.24	0.043	0.18	0	0.18	0.22	0.18	0.18	-0.05	0.04	0.00	0.043	0.129
199	30-Jun-2004	0.21	0.043	2.13	0.36	1.77	1.81	2.13	0.18	-0.03	0.04	0.00	0.043	0.173
200	Jun Tot	6.93	1.294	9.71	1.12	8.59	9.89	9.71	5.50	-1.43	1.23	0.00	-3.481	
201														
202	01-Jul-2004	0.21	0.043	0.41	0	0.41	0.45	0.41	0.20	-0.01	0.06	0.00	0.043	0.216
203	02-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	0.043	0.259
204	03-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.024
205	04-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
206	05-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
207	06-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
208	07-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
209	08-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
210	09-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
211	10-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
212	11-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
213	12-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
214	13-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
215	14-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
216	15-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
217	16-Jul-2004	0.21	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.01	0.06	0.00	-0.207	0.000
218	17-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
219	18-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
220	19-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
221	20-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
222	21-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
223	22-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
224	23-Jul-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.03	0.06	0.00	-0.223	0.000
225	24-Jul-2004	0.24	0.043	0.26	0	0.26	0.30	0.26	0.20	-0.04	0.06	0.00	0.043	0.043
226	25-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	0.043	0.086
227	26-Jul-2004	0.24	0.043	0.40	0	0.40	0.44	0.40	0.20	-0.04	0.06	0.00	0.043	0.129
228	27-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	0.043	0.173
229	28-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
230	29-Jul-2004	0.24	0.043	0.14	0	0.14	0.18	0.14	0.20	-0.04	0.06	0.00	-0.071	0.000
231	30-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
232	31-Jul-2004	0.24	0.043	0.00	0	0.00	0.04	0.00	0.20	-0.04	0.06	0.00	-0.235	0.000
233	Jul Tot	7.28	1.337	1.21	0.00	1.21	2.55	1.21	6.16	-1.12	1.85	0.00	-5.418	
234														
235	01-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
236	02-Aug-2004	0.16	0.043	0.34	0	0.34	0.38	0.34	0.22	0.06	0.06	0.00	0.043	0.043
237	03-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	0.043	0.086
238	04-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
239	05-Aug-2004	0.15	0.043	0.00	0	0.00	0.04	0.00	0.22	0.07	0.06	0.00	-0.133	0.000
240	06-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
241	07-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
242	08-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
243	09-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
244	10-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
245	11-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
246	12-Aug-2004	0.16	0.043	0.10	0	0.10	0.14	0.10	0.22	0.06	0.06	0.00	-0.022	0.000
247	13-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
248	14-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
249	15-Aug-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.22	0.08	0.06	0.00	-0.123	0.000
250	16-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
251	17-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
252	18-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
253	19-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
254	20-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
255	21-Aug-2004	0.16	0.043	0.36	0	0.36	0.40	0.36	0.22	0.06	0.06	0.00	0.043	0.043
256	22-Aug-2004	0.16	0.043	0.01	0	0.01	0.05	0.01	0.22	0.06	0.06	0.00	0.043	0.086
257	23-Aug-2004	0.16	0.043	0.34	0	0.34	0.38	0.34	0.22	0.06	0.06	0.00	0.043	0.129
258	24-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	0.043	0.173
259	25-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.033
260	26-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
261	27-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
262	28-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
263	29-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
264	30-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
265	31-Aug-2004	0.16	0.043	0.00	0	0.00	0.04	0.00	0.22	0.06	0.06	0.00	-0.140	0.000
266	Aug Tot	4.80	1.337	1.15	0.00	1.15	2.49	1.15	6.73	1.94	1.98	0.00	-3.090	
267														
268	01-Sep-2004	0.19	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.03	0.03	0.00	-0.179	0.000

DAILY STORAGE BALANCE ANALYSIS FOR IRRIGATION
2-DAY ANTECEDENT RAINFALL

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1				25 YR	25 YR			25 YR	25 YR	25 YR	25 YR	25 YR		
2		TOTAL		MAX	MAX			LOW	LOW	LOW	LOW	LOW		
3		WATER	EFFLUENT	RAINFALL	RUNOFF	INFILT	AVAILABLE	NET EVAP	NET EVAP	NET EVAP	NET EVAP	NET EVAP		
4	MONTH	NEEDS	RECEIVED	(WET YR)	(WET YR)	RAINFALL	WATER	PRECIP	GROSS EVAP	EVAP	(REDIST)	PER IRR AC		ACCUMUL
5				**2004**	**2004**			**2021**	**2021**	**2021**	**2021**	**2021**	STORAGE	STORAGE
6		(5)+(6)				(14)-(15)	(13)+(16)							
7	(12)	(7)	(13)	(14)	(15)	(16)	(17)				(18A)	(18)	(19)	(20)
269	02-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
270	03-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
271	04-Sep-2004	0.23	0.043	0.02	0	0.02	0.06	0.02	0.16	-0.07	0.03	0.00	-0.204	0.000
272	05-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
273	06-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
274	07-Sep-2004	0.23	0.043	0.03	0	0.03	0.07	0.03	0.16	-0.07	0.03	0.00	-0.192	0.000
275	08-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
276	09-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
277	10-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
278	11-Sep-2004	0.22	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.06	0.03	0.00	-0.217	0.000
279	12-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.222	0.000
280	13-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
281	14-Sep-2004	0.23	0.043	0.96	0.01	0.95	0.99	0.96	0.16	-0.07	0.03	0.00	0.043	0.043
282	15-Sep-2004	0.23	0.043	0.27	0	0.27	0.31	0.27	0.16	-0.07	0.03	0.00	0.043	0.086
283	16-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	0.043	0.129
284	17-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
285	18-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
286	19-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
287	20-Sep-2004	0.21	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.05	0.03	0.00	-0.200	0.000
288	21-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.225	0.000
289	22-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.224	0.000
290	23-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
291	24-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
292	25-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
293	26-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
294	27-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
295	28-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
296	29-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
297	30-Sep-2004	0.23	0.043	0.00	0	0.00	0.04	0.00	0.16	-0.07	0.03	0.00	-0.227	0.000
298	Sep Tot	6.82	1.294	1.28	0.01	1.27	2.56	1.28	4.69	-2.13	1.01	0.00	-5.855	
299														
300	01-Oct-2004	0.13	0.043	0.00	0	0.00	0.04	0.00	0.14	0.01	0.02	0.00	-0.109	0.000
301	02-Oct-2004	0.14	0.043	2.37	0.48	1.89	1.93	2.37	0.14	0.00	0.02	0.00	0.043	0.043
302	03-Oct-2004	0.14	0.043	0.06	0	0.06	0.10	0.06	0.14	0.00	0.02	0.00	0.043	0.086
303	04-Oct-2004	0.14	0.043	0.38	0	0.38	0.42	0.38	0.14	0.00	0.02	0.00	0.043	0.129
304	05-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	0.043	0.173
305	06-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	-0.126	0.047
306	07-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	-0.126	0.000
307	08-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	-0.126	0.000
308	09-Oct-2004	0.14	0.043	0.01	0	0.01	0.05	0.01	0.14	0.00	0.02	0.00	-0.114	0.000
309	10-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	-0.126	0.000
310	11-Oct-2004	0.13	0.043	0.00	0	0.00	0.04	0.00	0.14	0.01	0.02	0.00	-0.109	0.000
311	12-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	-0.126	0.000
312	13-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	-0.126	0.000
313	14-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	-0.126	0.000
314	15-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	-0.126	0.000
315	16-Oct-2004	0.13	0.043	0.00	0	0.00	0.04	0.00	0.14	0.01	0.02	0.00	-0.109	0.000
316	17-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	-0.126	0.000
317	18-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	-0.126	0.000
318	19-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	-0.126	0.000
319	20-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	-0.126	0.000
320	21-Oct-2004	0.13	0.043	0.00	0	0.00	0.04	0.00	0.14	0.01	0.02	0.00	-0.109	0.000
321	22-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	-0.126	0.000
322	23-Oct-2004	0.14	0.043	3.67	1.26	2.41	2.45	3.67	0.14	0.00	0.02	0.00	0.043	0.043
323	24-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	0.043	0.086
324	25-Oct-2004	0.13	0.043	0.34	0	0.34	0.38	0.34	0.14	0.01	0.02	0.00	0.043	0.129
325	26-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	0.043	0.173
326	27-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.00	0.02	0.00	-0.126	0.047
327	28-Oct-2004	0.14	0.043	1.06	0.02	1.04	1.08	1.06	0.14	0.00	0.02	0.00	0.043	0.090
328	29-Oct-2004	0.14	0.043	0.00	0	0.00	0.04	0.00	0.14	0.01	0.02	0.00	0.043	0.133
329	30-Oct-2004	0.13	0.043	0.01	0	0.01	0.05	0.01	0.14	0.01	0.02	0.00	-0.097	0.036
330	31-Oct-2004	0.14	0.043	0.02	0	0.02	0.06	0.02	0.14	0.00	0.02	0.00	-0.102	0.000
331	Oct Tot	4.36	1.337	7.92	1.77	6.15	7.49	7.92	4.37	0.01	0.66	0.00	-2.082	
332														
333	01-Nov-2004	0.08	0.043	1.55	0.14	1.41	1.46	1.55	0.09	0.02	0.02	0.00	0.043	0.043
334	02-Nov-2004	0.08	0.043	0.04	0	0.04	0.08	0.04	0.09	0.02	0.02	0.00	0.043	0.086
335	03-Nov-2004	0.08	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.045	0.041
336	04-Nov-2004	0.08	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.045	0.000
337	05-Nov-2004	0.08	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.045	0.000
338	06-Nov-2004	0.08	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.045	0.000
339	07-Nov-2004	0.08	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.045	0.000
340	08-Nov-2004	0.07	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.036	0.000
341	09-Nov-2004	0.07	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.036	0.000
342	10-Nov-2004	0.08	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.045	0.000
343	11-Nov-2004	0.08	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.045	0.000
344	12-Nov-2004	0.07	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.036	0.000
345	13-Nov-2004	0.08	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.045	0.000
346	14-Nov-2004	0.07	0.043	0.12	0	0.12	0.16	0.12	0.09	0.02	0.02	0.00	0.043	0.043
347	15-Nov-2004	0.07	0.043	0.87	0.00	0.87	0.91	0.87	0.09	0.02	0.02	0.00	0.043	0.086
348	16-Nov-2004	0.08	0.043	0.69	0	0.69	0.73	0.69	0.09	0.02	0.02	0.00	0.043	0.129
349	17-Nov-2004	0.08	0.043	4.26	1.68	2.58	2.62	4.26	0.09	0.02	0.02	0.00	0.043	0.173
350	18-Nov-2004	0.08	0.043	0.53	0	0.53	0.57	0.53	0.09	0.02	0.02	0.00	0.043	0.216
351	19-Nov-2004	0.08	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	0.043	0.259
352	20-Nov-2004	0.08	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.045	0.214
353	21-Nov-2004	0.08	0.043	0.73	0	0.73	0.77	0.73	0.09	0.02	0.02	0.00	0.043	0.257
354	22-Nov-2004	0.08	0.043	1.46	0.11	1.35	1.39	1.46	0.09	0.02	0.02	0.00	0.043	0.300
355	23-Nov-2004	0.08	0.043	1.87	0.25	1.62	1.66	1.87	0.09	0.02	0.02	0.00	0.043	0.343

DAILY STORAGE BALANCE ANALYSIS FOR IRRIGATION
2-DAY ANTECEDENT RAINFALL

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1				25 YR	25 YR			25 YR	25 YR	25 YR	25 YR	25 YR		
2		TOTAL		MAX	MAX			LOW	LOW	LOW	LOW	LOW		
3		WATER	EFFLUENT	RAINFALL	RUNOFF	INFILT	AVAILABLE	NET EVAP	NET EVAP	NET EVAP	NET EVAP	NET EVAP		
4	MONTH	NEEDS	RECEIVED	(WET YR)	(WET YR)	RAINFALL	WATER	PRECIP	GROSS EVAP	EVAP	(REDIST)	PER IRR AC		ACCUMUL
5				**2004**	**2004**			**2021**	**2021**	**2021**	**2021**	**2021**	STORAGE	STORAGE
6		(5)+(6)				(14)-(15)	(13)+(16)							
7	(12)	(7)	(13)	(14)	(15)	(16)	(17)				(18A)	(18)	(19)	(20)
356	24-Nov-2004	0.08	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	0.043	0.386
357	25-Nov-2004	0.08	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.045	0.341
358	26-Nov-2004	0.08	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.045	0.296
359	27-Nov-2004	0.08	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.045	0.251
360	28-Nov-2004	0.07	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.040	0.211
361	29-Nov-2004	0.07	0.043	0.00	0	0.00	0.04	0.00	0.09	0.02	0.02	0.00	-0.039	0.173
362	30-Nov-2004	0.07	0.043	0.39	0	0.39	0.43	0.39	0.09	0.02	0.02	0.00	0.043	0.216
363	Nov Tot	2.20	1.294	12.51	2.18	10.33	11.62	12.51	2.75	0.55	0.47	0.00	-0.168	
364														
365	01-Dec-2004	0.03	0.043	0.08	0	0.08	0.12	0.08	0.07	0.04	0.01	0.00	0.043	0.259
366	02-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.043	0.302
367	03-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.306
368	04-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.310
369	05-Dec-2004	0.03	0.043	0.08	0	0.08	0.12	0.08	0.07	0.04	0.01	0.00	0.043	0.353
370	06-Dec-2004	0.03	0.043	0.02	0	0.02	0.06	0.02	0.07	0.04	0.01	0.00	0.043	0.396
371	07-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.400
372	08-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.404
373	09-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.408
374	10-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.008	0.415
375	11-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.008	0.423
376	12-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.427
377	13-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.431
378	14-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.435
379	15-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.439
380	16-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.005	0.444
381	17-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.448
382	18-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.452
383	19-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.455
384	20-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.459
385	21-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.008	0.467
386	22-Dec-2004	0.03	0.043	0.17	0	0.17	0.21	0.17	0.07	0.04	0.01	0.00	0.043	0.510
387	23-Dec-2004	0.03	0.043	0.05	0	0.05	0.09	0.05	0.07	0.04	0.01	0.00	0.043	0.553
388	24-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.043	0.596
389	25-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.600
390	26-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.604
391	27-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.608
392	28-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.612
393	29-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.008	0.620
394	30-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.624
395	31-Dec-2004	0.03	0.043	0.00	0	0.00	0.04	0.00	0.07	0.04	0.01	0.00	0.004	0.627
396	Dec Tot	1.02	1.337	0.40	0.00	0.40	1.74	0.40	2.22	1.20	0.31	0.00	0.412	
397	Ann Tot	49.01	15.75	51.50	5.86	45.64	61.39	51.50	47.19	-1.82	9.99	0.00		
398														
399														
400														
401	**JAN**	1.05	1.34	4.43	0.58	3.85	5.19	4.43	2.04	0.99	0.25	0.00	0.63	
402	**FEB**	1.23	1.21	3.80	0.02	3.78	4.99	3.80	1.75	0.52	0.35	0.00	0.38	0.00
403	**MAR**	3.06	1.34	1.89	0.00	1.89	3.23	1.89	2.82	-0.24	0.49	0.00		
404	**APR**	3.66	1.29	4.62	0.06	4.56	5.86	4.62	3.53	-0.13	0.81	0.00		
405	**MAY**	6.62	1.34	2.58	0.13	2.45	3.79	2.58	4.63	-1.99	0.59	0.00		
406	**JUN**	6.93	1.29	9.71	1.12	8.59	9.89	9.71	5.50	-1.43	1.23	0.00		
407	**JUL**	7.28	1.34	1.21	0.00	1.21	2.55	1.21	6.16	-1.12	1.85	0.00		
408	**AUG**	4.80	1.34	1.15	0.00	1.15	2.49	1.15	6.73	1.94	1.98	0.00		
409	**SEP**	6.82	1.29	1.28	0.01	1.27	2.56	1.28	4.69	-2.13	1.01	0.00		
410	**OCT**	4.36	1.34	7.92	1.77	6.15	7.49	7.92	4.37	0.01	0.66	0.00		
411	**NOV**	2.20	1.29	12.51	2.18	10.33	11.62	12.51	2.75	0.55	0.47	0.00		
412	**DEC**	1.02	1.34	0.40	0.00	0.40	1.74	0.40	2.22	1.20	0.31	0.00	0.41	0.00
413	**ANNUAL**	49.01	15.75	51.50	5.86	45.64	61.39	51.50	47.19	-1.82	9.99	0.00		
414														
415	**INPUT DATA**													
416														
417	**Runoff Equation = if (DailyRainfall>Ia, (DailyRainfall-Ia)²/((DailyRainfall-Ia)+S),0)**													
418				**CN =**	**72.5**	<---- This value comes from sheet PROJ								
419				**S =**	**3.79**									
420				**Ia =**	**0.76**									
421	**Irrigation Efficiency, K =**				**0.85**	<---- This value comes from sheet PROJ								
422	**Effluent Flowrate =**				**41,000 GPD**	<---- This value comes from sheet EFFLUENT								
423	**Reservoir Surface Area =**				**0.00 acres**	<---- This value comes from sheet PROJ								
424	**Available Irrigation area =**				**35.00 acres**	<---- This value comes from sheet PROJ								
425	**Ratio of Reservoir surface to irrigation area =**				**0.00**									
426	**No. of Days after Significant Rainfall Event =**				**2**	<---- This value comes from sheet PROJ (value = 1 to 5; this value affects column J above)								
427														
428														
429	**OUTPUT DATA**													
430														
431	**Maximum storage required =**				**1.898 in**									
432	**Storage pond size required =**				**5.54 ac-ft**									
433					**1.80 MG**									
434	**Storage pond detention time =**				**44.0 days at design flow**									
435	**Annual Total Irrigation =**				**1.31 ft/ac**									

APPENDIX C – NITROGEN BALANCE

NITROGEN BALANCE ANALYSIS

Month	Effluent Needed in Root Zone for Crop Consumption (in)	Portion of Annual Nitrogen Needed	Effluent Applied (ac-ft)	Applied Nitrogen Load (lb/ac)	Nitrogen Application for Crop Uptake (lb/ac)	Effluent Needed in Root Zone for Crop Nitrogen Uptake (in)
JAN	0.80	0.019	1	1	4.64	1.0
FEB	0.93	0.022	1	1	5.33	1.2
MAR	2.63	0.063	2	4	15.15	3.4
APR	2.95	0.071	3	4	16.99	3.8
MAY	5.07	0.122	5	7	29.21	6.5
JUN	5.31	0.128	5	8	30.62	6.8
JUL	6.76	0.162	6	10	38.99	8.7
AUG	4.62	0.111	4	7	26.61	5.9
SEP	6.44	0.155	6	9	37.14	8.3
OCT	3.51	0.084	3	5	20.27	4.5
NOV	1.72	0.041	2	3	9.92	2.2
DEC	0.89	0.021	1	1	5.13	1.1
	41.62	1.000	39	61	240.00	53.33

Effluent Flow =	0.041	MGD
Wastewater volume (projected)=	**45.9**	ac-ft
Consumption from reservoir=	48.96	in/yr
Total effluent applied = (root zone need)(ww vol)/(consump from res)=	39	ac-ft
Irrigation area =	35	acres
Crop uptake =	200	lbs/ac
Waste water total nitrogen concentration=	20	mg/L
Annual nitrogen uptake (Crop uptake x 1.2) =	240	lb/ac/yr

Effluent applied = (total effluent applied)(effluent needed/total)
Applied nitrogen load = (effluent applied)(0.3259 MG/ac-ft)(nitrogen conc)(8.34)(1/irrigation area)
Effluent needed for crop nitrogen uptake = (nitrogen loading rate for crop uptake)(12in/ft)(1/2.7)(1/nitrogen conc)

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

1. Reason 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 600685457		~~RN 103896601~~ and RN 101405751

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:*

Hays County Development District No. 1

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

11. Type of Customer: ☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited

Government: ☐ City ☐ County ☐ Federal ☐ State ☒ Other ☐ Sole Proprietorship ☐ Other: LLC

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 ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address: 2929 Allen Parkway, Suite 3150

City	Houston	State	TX	ZIP	77019	ZIP + 4	7126

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

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(713) 489-8977		( )

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity' is selected below this form should be accompanied by a permit application)*

☒ 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 Agency 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.)*

Hays County Development District No.1

23. Street Address of the Regulated Entity: *(No PO Boxes)*	2929 Allen Parkway, Suite 3150							
	City	Houston	State	TX	ZIP	77019	ZIP + 4	7126
24. County	Harris							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:								
26. Nearest City					State		Nearest ZIP Code	

27. Latitude (N) In Decimal:	30.18		28. Longitude (W) In Decimal:	-98.12	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

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)

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

Project Development

34. Mailing Address:	2929 Allen Parkway, Suite 3150							
	City	Houston	State	TX	ZIP	77019	ZIP + 4	7126
35. E-Mail Address:	mroberts@johnsonpetrov.com							

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(713) 489-8977		( ) -

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	☒ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	James Miertschin	41. Title:	Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 327-2708		(512) 327-2733	jm@jmaenv.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:	Hays County Development District No. 1	Job Title:	President of the Board
Name *(In Print)*:	Billy Foulds	Phone:	(713) 489- 8977
Signature:	Bill Foulds	Date:	8-8-24