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

SUMMARY OF APPLICATION IN PLAIN LANGUAGE FOR TPDES OR TLAP PERMIT APPLICATIONS

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

Generation Park Management District (CN604386060) and MRA Northeast, L.P. (CN606362754) proposes to operate Generation Park Management District East Wastewater Treatment Plant (RN112166004),. a domestic wastewater treatment facility. The facility will be located approximately 1,400 ft north of the intersection of Lake Houston Parkway and Common Dock Drive, in Houston, Harris County, Texas 77044.

This application is for a new permit to discharge at an ultimate average flow of 2,800,000 gallons per day of treated domestic wastewater via an outfall into a series of detention basins and ultimately to the San Jacinto River Basin.

Discharges from the facility are expected to contain Carbonaceous Biochemical Oxygen Demand (5-day)($CBOD_5$), total suspended solids (TSS), and ammonia nitrogen (NH_3-N). Additional potential pollutants are unknown as this is a new wastewater treatment plant. Domestic wastewater will be treated by activated sludge process with single stage nitrification.

RESUMEN DE LA SOLICITUD EN LENGUAJE SENCILLO PARA LAS SOLICITUDES DE PERMISOS TPDES O TLAP

El siguiente resumen se proporciona para esta solicitud de permiso de calidad del agua pendiente que está siendo revisada por la Comisión de Calidad Ambiental de Texas según lo requerido por el Capítulo 39 del Código Administrativo de Texas 30. La información proporcionada en este resumen puede cambiar durante la revisión técnica de la solicitud y no es una representación ejecutiva fedérale de la solicitud de permiso.

El Distrito de Gestión de Generation Park (CN604386060) y MRA Northeast, L.P. (CN606362754) propone operar Planta de Tratamiento de Aguas Residuales del Este del Distrito de Gestión de Generation Park (RN112166004), una instalación de tratamiento de aguas residuales domésticas. La instalación está ubicada en aproximadamente 1,400 pies al norte de la intersección de Lake Houston Parkway y Common Dock Drive, en Houston, Condado de Harris, Texas 77044. Esta solicitud es para un nuevo permiso para descargar un caudal promedio final de 2.800.000 galones por día de aguas residuales domésticas tratadas a través de un desagüe en una serie de cuencas de detención y, en última instancia, en la cuenca del río San Jacinto.

Se espera que las descargas de la instalación contengan Demanda bioquímica de oxígeno carbonoso (5-días)($CBOD_5$), sólidos suspendidos totales (TSS) y nitrógeno amoniaco (NH_3-N). Se desconocen otros posibles contaminantes ya que se trata de una nueva planta de tratamiento de aguas residuales.. Aguas residuales domésticas. estará tratado por roceso de lodos activados con nitrificación en una sola etapa.

Texas Commission on Environmental Quality

COMBINED

NOTICE OF RECEIPT OF APPLICATION AND INTENT TO OBTAIN WATER QUALITY PERMIT (NORI)

AND

NOTICE OF APPLICATION AND PRELIMINARY DECISION FOR TPDES PERMIT FOR MUNICIPAL WASTEWATER

NEW

PERMIT NO. WQ0016745001

APPLICATION AND PRELIMINARY DECISION. Generation Park Management District and MRA Northeast, L.P, 1300 Post Oak Boulevard, Suite 2400, Houston, Texas 77056, has applied to the Texas Commission on Environmental Quality (TCEQ) for a new Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0016745001, to authorize the discharge of treated domestic wastewater at an annual average flow not to exceed 2,800,000 gallons per day. TCEQ received this application on March 5, 2025.

This combined notice is being issued to correct the discharge route included in the original NORI.

The facility will be located approximately 1,400 feet north of the intersection of Lake Houston Parkway and Common Dock Drive, in Harris County, Texas 77044. The treated effluent will be discharged to a detention basin, thence to a storm sewer, thence to a detention basin, thence to a series of ditches, thence to an unnamed tributary, thence to San Jacinto River Tidal in Segment No. 1001 of the San Jacinto River Basin. The unclassified receiving water uses are limited aquatic life use for the detention basins, and minimal aquatic life use for the ditches and for the unnamed tributary. The designated uses for Segment No. 1001 are primary contact recreation and high aquatic life use. In accordance with 30 Texas Administrative Code § 307.5 and the TCEQ's *Procedures to Implement the Texas Surface Water Quality Standards (June 2010),* an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. This review has preliminarily determined that no water bodies with exceptional, high, or intermediate aquatic life uses are present within the stream reach assessed; therefore, no Tier 2 degradation determination is required. No significant degradation of water quality is expected in water

bodies with exceptional, high, or intermediate aquatic life uses downstream, and existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received. 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=95.170277,29.900833&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 TCEQ Region 12 Office, Suite H, 5425 Polk Street, Houston, 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/tpdes-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 Generation Park Management District and MRA Northeast, L.P. at the address stated above or by calling Mr. Vernon Webb II, P.E., District Engineer, IDS Engineering Group, at (832) 590-7210.

Issuance Date: September 16, 2025

Comisión De Calidad Ambiental Del Estado De Texas

COMBINED

AVISO DE LA SOLICITUD Y DECISIÓN PRELIMINAR PARA EL PERMISO DEL SISTEMA DE ELIMINACION DE DESCARGAS DE

Y

CONTAMINANTES DE TEXAS (TPDES)
PARA AGUAS RESIDUALES MUNICIPALES

NUEVO

PERMISO NO. WQ0016745001

SOLICITUD Y DECISIÓN PRELIMINAR. El Distrito de Gestión de Generation Park y MRA Northeast, L.P., 1300 Post Oak Boulevard, Suite 2400, Houston, Texas 77056, ha solicitado a la Comisión de Calidad Ambiental del Estado de Texas (TCEQ) por un nuevo Permiso del Sistema de Eliminacion de Descargas de Contaminantes de Texas (TPDES) No. WQ0016745001, para autorizar la descarga de aguas residuales domésticas tratadas a un caudal promedio anual que no exceda de 2,800,000 galones por día. La TCEQ recibió esta solicitud el 5 de Marzo de 2025.

La planta está ubicada en aproximadamente 1,400 pies al norte de la intersección de Lake Houston Parkway y Common Dock Drive en el Condado de Harris, Texas 77044. 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=-95.170277,29.900833&level=18

El efluente tratado es descargado al una cuenca de retención, de allí a una alcantarilla de tormentas, de allí a una cuenca de retención, de allí a una serie de zanjas, de allí a un afluente sin nombre, de allí al río San Jacinto Tidal en el Segmento No. 1001 de la Cuenca del Río San Jacinto. Los usos no clasificados de las aguas receptoras son limitados usos de la vida acuática en los estanques de detención, y un uso mínimo para la vida acuática en las zanjas y en el afluente sin nombre. Los usos designados para el Segmento No. 1001 son recreación primaria de contacto y elevados uso de vida acuática.

De acuerdo con el 30 TAC §307.5 y los procedimientos de implementación de la TCEQ (Enero 2010) para las Normas de Calidad de Aguas Superficiales en Texas, fue realizada una revisión de la antidegradación de las aguas recibidas. Una revisión de antidegradación del Nivel 1 ha determinado preliminarmente que los usos de la calidad del agua existente no serán perjudicados por la acción de este permiso. Se mantendrá un criterio narrativo y numérico para proteger los usos existentes. Esta revisión ha determinado preliminarmente que ninguno de los cuerpos de agua con usos intermedio, alto o excepcional de vida acuática están presentes dentro del acceso para llegar a la corriente; por lo tanto, no se requiere ninguna determinación de degradación del Nivel 2. No se espera ninguna degradación significativa de la calidad del agua en los cuerpos de agua con usos intermedios, elevados o excepcionales de la vida acuática río abajo y que los usos existentes serán mantenidos y protegidos. La determinación preliminar puede ser reexaminada y puede ser modificada, si se recibe alguna información nueva.

El Director Ejecutivo de la TCEQ ha completado la revisión técnica de la solicitud y ha preparado un borrador del permiso. El borrador del permiso, si es aprobado, establecería las condiciones bajo las cuales la instalación debe operar. El Director Ejecutivo ha tomado una decisión preliminar que si este permiso es emitido, cumple con todos los requisitos normativos y legales. La solicitud del permiso, la decisión preliminar del Director Ejecutivo y el borrador del permiso están disponibles para leer y copiar en Oficina de la TCEQ Región 12, Suite H, 5425 Polk Street, Houston, Texas. La solicitud (cualquier actualización y aviso inclusive) está disponible electrónicamente en la siguiente página web: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications.

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

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 de la fecha límite para presentar comentarios públicos, el Director Ejecutivo considerará los comentarios y preparará una respuesta a todos los comentarios públicos relevantes y materiales, o significativos. **A menos que la solicitud sea remitida directamente para una audiencia de caso impugnado, la respuesta a los comentarios se enviará por correo a**

todos los que enviaron comentarios públicos y a aquellas personas que estén en la lista de correo para esta solicitud. Si se reciben comentarios, el correo también proporcionará instrucciones para solicitar una audiencia de caso impugnado o reconsiderar la decisión del Director Ejecutivo. Una audiencia de caso impugnado es un procedimiento legal similar a un juicio civil en un tribunal de distrito estatal.

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.

Tras el cierre de todos los periodos de comentarios y solicitudes aplicables, el Director Ejecutivo remitirá la solicitud y cualquier solicitud de reconsideración o de una audiencia de caso impugnado a los Comisionados de la TCEQ para su consideración en 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.

ACCIÓN DEL DIRECTOR EJECUTIVO. El Director Ejecutivo puede emitir la aprobación final de la solicitud a menos que se presente una solicitud de audiencia de caso impugnado oportunamente o una solicitud de reconsideración. Si se presenta una solicitud de audiencia oportuna o una solicitud de reconsideración, el Director Ejecutivo no emitirá la aprobación final del permiso y enviará la solicitud y la solicitud a los Comisionados de TCEQ para su consideración en una reunión programada de la Comisión.

LISTA DE CORREO. Si envía comentarios públicos, una solicitud de una audiencia de caso impugnado o una reconsideración de la decisión del Director Ejecutivo, se le agregará a la lista de correo de esta solicitud específica para recibir futuros avisos públicos enviados por correo por la Oficina del Secretario Oficial. Además, puede solicitar ser colocado en: (1) la lista de correo permanente para un nombre de solicitante específico y número de permiso; y/o (2) la lista de correo para un condado específico. Si desea ser colocado en la lista de correo permanente y / o del condado, especifique claramente qué lista (s) y envíe su solicitud a la Oficina del Secretario Oficial de la TCEQ a la dirección a continuación.

Todos los comentarios públicos escritos y las solicitudes de reunión pública deben enviarse a Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 o electrónicamente a www.tceq.texas.gov/goto/comment **dentro de los 30 días a partir de la fecha de publicación de este aviso en el periódico.**

CONTACTOS E INFORMACIÓN DE LA AGENCIA. Los comentarios y solicitudes públicas deben enviarse electrónicamente a www.tceq.texas.gov/goto/comment, o por escrito a Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Cualquier información personal que envíe a la 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 TCEQ, línea gratuita, al 1-800-687-4040 o visite su sitio web en www.tceq.texas.gov/goto/pep. Si desea información en español, puede llamar al 1-800-687-4040.

También se puede obtener información adicional del El Distrito de Gestión de Generation Park y MRA Northeast, L.P. a la dirección indicada arriba o llamando a Mr. Vernon Webb, II, P.E., Ingeniero de Distrito al (832) 590-7210.

Fecha de emission: el 16 de Septiembre de 2025.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

PROPOSED PERMIT NO. WQ0016745001

APPLICATION. Generation Park Management District and MRA Northeast, L.P., 1300 Post Oak Boulevard, Suite 2400, Houston, Texas 77056, have applied to the Texas Commission on Environmental Quality (TCEQ) for proposed Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0016745001 (EPA I.D. No. TX0147567) to authorize the discharge of treated wastewater at a volume not to exceed an annual average flow of 2,800,000 gallons per day. The domestic wastewater treatment facility will be located approximately 1,400 feet north of the intersection of Lake Houston Parkway and Common Dock Drive, near the city of Houston, in Harris County, Texas 77044. The discharge route will be from the plant site to a detention basin; thence to a storm sewer; thence to an unnamed tributary; thence to San Jacinto River Tidal. TCEQ received this application on March 5, 2025. The permit application will be available for viewing and copying at TCEQ Region 12 Office, Suite H, 5425 Polk Street, Houston, 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/tpdes-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=-95.170277,29.900833&level=18

ALTERNATIVE LANGUAGE NOTICE. Alternative language notice in Spanish is available at: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications.
El aviso de idioma alternativo en español está disponible en https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-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 Generation Park Management District and MRA Northeast, L.P. at the address stated above or by calling Mr. Vernon Webb II, P.E., District Engineer, IDS Engineering Group, at (832) 590-7210.

Issuance Date: April 16, 2025

Comisión de Calidad Ambiental del Estado de Texas

AVISO DE RECIBO DE LA SOLICITUD Y EL INTENTO DE OBTENER PERMISO PARA LA CALIDAD DEL AGUA

PERMISO PROPUESTO NO. WQ0016745001

SOLICITUD. El Distrito de Gestión de Generation Park y MRA Northeast, L.P., 1300 Post Oak Boulevard, Suite 2400, Houston, Texas 77056, ha solicitado a la Comisión de Calidad Ambiental del Estado de Texas (TCEQ) para el propuesto Permiso No. WQ0016745001 (EPA I.D. No. TX0147567) del Sistema de Eliminación de Descargas de Contaminantes de Texas (TPDES) para autorizar la descarga de aguas residuales tratadas en un volumen que no sobrepasa un flujo promedio diario de 2,800,000 galones por día. La planta está ubicada aproximadamente 1,400 pies al norte de la intersección de Lake Houston Parkway y Common Dock Drive, cerca de la ciudad de Houston, en el Condado de Harris, Texas 77044. La ruta de descarga es del sitio de la planta a una cuenca de detención sin nombre; de allí al alcantarillado pluvial; de allí a una serie de cuencas y canales de detención sin nombre; de allí a un afluente sin nombre; de allí a la marea del río San Jacinto. La TCEQ recibió esta solicitud el 5 de Marzo de 2025. La solicitud para el permiso está disponible para leerla y copiarla en Oficina de la Región 12 de la TCEQ, Suite H, 5425 Polk Street, Houston, en el candado de Harris, Texas. La solicitud (cualquier actualización y aviso inclusive) está disponible electrónicamente en la siguiente página web: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-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=-95.170277,29.900833&level=18

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 DE LA TCEQ. Todos los comentarios escritos del público y los para pedidos una reunión deben ser presentados a la Oficina del Secretario Principal, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 o por el internet at www.tceq.texas.gov/about/comments.html. Tenga en cuenta que cualquier información personal que usted proporcione, incluyendo su nombre, número de teléfono, dirección de correo electrónico y dirección física pasarán a formar parte del registro público de la Agencia. Si necesita más información en Español sobre esta solicitud para un permiso o el proceso del permiso, por favor llame a El Programa de Educación Pública de la TCEQ, sin cobro, al 1-800-687-4040. La información general sobre la TCEQ puede ser encontrada en nuestro sitio de la red: www.tceq.texas.gov.

También se puede obtener información adicional del El Distrito de Gestión de Generation Park y MRA Northeast, L.P. a la dirección indicada arriba o llamando a Mr. Vernon Webb, II, P.E., Ingeniero de Distrito, al (832) 590-7210.

Fecha de emisión 16 de abril de 2025

IDS Engineering Group

13430 Northwest Freeway, Suite 700, Houston, Texas 77040
TBPE F-2726 | TBPLS 10110700 & 10110704
t 713.462.3178
idseg.com

DOMESTIC WASTEWATER PERMIT RENEWAL APPLICATION – ELECTRONIC COPY

Texas Commission on Environmental Quality

Generation Park Management District

IDS Project No. 1339-012-04

February 2025



3/5/2025

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the application.

APPLICANT NAME: Generation Park Management District

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

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

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

For TCEQ Use Only

Segment Number _____County _____
Expiration Date _____Region_____
Permit Number _____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

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

Section 1. Application Fees (Instructions Page 26)

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

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

Minor Amendment (for any flow) $150.00 ☐

Payment Information:

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

Check/Money Order Amount: Click to enter text.

Name Printed on Check: Click to enter text.

EPAY — Voucher Number: 751697/751698

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?

Generation Park Management District

(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: 604386060

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: Neuhaus, Charles W.

Title: Board 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?

MRA Northeast, L.P.

(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: Mr. Last Name, First Name: McCord, Frederick R.

Title: President Credential: Click to enter text.

Provide a brief description of the need for a co-permittee: The co-applicant is the current owner of the land where the treatment facility will be located.

C. Core Data Form

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

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: Webb II, Vernon

Title: District Engineer Credential: P.E.

Organization Name: IDS Engineering Group

Mailing Address: 13430 Northwest Fwy, Suite 700 City, State, Zip Code: Houston, TX 77040

Phone No.: 832-590-7210 E-mail Address: vwebb@idseg.com

Check one or both: ☒ Administrative Contact ☒ Technical Contact

B. Prefix: Mr. Last Name, First Name: Ringold, Daniel

Title: District Attorney Credential: Click to enter text.

Organization Name: Schwartz, Page & Harding, L.L.P.

Mailing Address: 1300 Post Oak Blvd, Suite 2400 City, State, Zip Code: Houston, TX 77056

Phone No.: 713-623-4531 E-mail Address: dringold@sphllp.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: Neuhaus, Charles W.

Title: Board President Credential: Click to enter text.

Organization Name: c/o Schwartz, Page & Harding, L.L.P.

Mailing Address: 1300 Post Oak Blvd, Suite 2400 City, State, Zip Code: Houston, TX 77056

Phone No.: (713) 623-4531 E-mail Address: Click to enter text.

B. Prefix: Mr. Last Name, First Name: Deboben III, John R.

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

Organization Name: c/o Schwartz, Page & Harding, L.L.P.

Mailing Address: 1300 Post Oak Blvd, Suite 2400 City, State, Zip Code: Houston, TX 77056

Phone No.: (713) 623-4531 E-mail Address: Click to enter text.

Section 6. Billing Contact Information (Instructions Page 27)

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

Prefix: Ms. Last Name, First Name: Colondres, Cynthia

Title: District Bookkeeper Credential: Click to enter text.

Organization Name: Municipal Accounts & Consulting, L.P.

Mailing Address: 1281 Brittmoore Rd. City, State, Zip Code: Houston, TX 77043

Phone No.: (713) 623-4539 E-mail Address: ccolondres@municipalaccounts.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: Ms. Last Name, First Name: Chapa, Vanessa

Title: Compliance Manager Credential: Click to enter text.

Organization Name: Inframark

Mailing Address: 2002 W Grand Pkwy N., Suite 100 City, State, Zip Code: Katy, TX, 77449

Phone No.: (281) 877-2612 E-mail Address: vanessa.chapa@inframark.com

Section 8. Public Notice Information (Instructions Page 27)

A. Individual Publishing the Notices

Prefix: Ms. Last Name, First Name: Riley, Vonda

Title: Administrative Assistant Credential: Click to enter text.

Organization Name: IDS Engineering Group

Mailing Address: 13430 Northwest Fwy, Suite 700 City, State, Zip Code: Houston, TX 77040

Phone No.: (713) 462-3178 E-mail Address: vriley@idseg.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: Webb II, Vernon

Title: District Engineer Credential: P.E.

Organization Name: IDS Engineering Group

Mailing Address: 13430 Northwest Fwy, Suite 700 City, State, Zip Code: Houston, TX 77040

Phone No.: (832) 590-7210 E-mail Address: vwebb@idseg.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: TCEQ Region 12 Office

Location within the building: Reception Area

Physical Address of Building: 5425 Polk Street

City: Houston County: Harris

Contact (Last Name, First Name): N/A

Phone No.: (713) 767-3500 Ext.: Click to enter text.

E. Bilingual Notice Requirements

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

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

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

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

   ☒ Yes ☐ No

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

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

   ☒ Yes ☐ No

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

   ☐ Yes ☒ No

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

   ☐ Yes ☒ No

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

F. Plain Language Summary Template

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

Attachment: Attachment 2

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 3

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

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

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

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

Generation Park Management District East Wastewater Treatment Plant

C. Owner of treatment facility: Generation Park Management District

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: MRA Northeast, L.P.

Mailing Address: 250 Assay Street, Suite 200 City, State, Zip Code: Houston, TX 77044

Phone No.: (713) 860-3000 E-mail Address: scloonan@mccord.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: Landowner is co-applicant.

E. Owner of effluent disposal site:

Prefix: N/A Last Name, First Name: N/A

Title: N/A Credential: N/A

Organization Name: N/A

Mailing Address: N/A City, State, Zip Code: N/A

Phone No.: N/A E-mail Address: N/A

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

Attachment: N/A

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

Prefix: N/A Last Name, First Name: N/A

Title: N/A Credential: N/A

Organization Name: N/A

Mailing Address: N/A City, State, Zip Code: N/A

Phone No.: N/A E-mail Address: N/A

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

Attachment: N/A

Section 10. TPDES Discharge Information (Instructions Page 31)

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

☐ Yes ☐ No

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

Approximately 1,400 ft north of the intersection of Lake Houston Parkway and Common Dock Drive in Harris County, Texas 77044.

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:

To an unnamed detention basin, thence to storm sewer, thence to a series of unnamed detention basins and channels, thence to an unnamed tributary, thence to San Jacinto River Tidal in Segment No. 1001 of the San Jacinto River Basin.

City nearest the outfall(s): Houston

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

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

☐ Yes ☒ No

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

☐ Authorization granted ☐ Authorization pending

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

Attachment: N/A

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

Section 11. TLAP Disposal Information (Instructions Page 32)

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

☐ Yes ☐ No

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

N/A

B. City nearest the disposal site: N/A

C. County in which the disposal site is located: N/A

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

N/A

E. For **TLAPs**, please identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: N/A

Section 12. Miscellaneous Information (Instructions Page 32)

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

☐ Yes ☒ No

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

☐ Yes ☐ No ☒ Not Applicable

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

N/A

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

☐ Yes ☒ No

If yes, list each person formerly employed by the TCEQ who represented your company and was paid for service regarding the application: N/A

D. Do you owe any fees to the TCEQ?

☐ Yes ☒ No

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

Account number: N/A

Amount past due: N/A

E. Do you owe any penalties to the TCEQ?

☐ Yes ☒ No

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

Enforcement order number: N/A

Amount past due: N/A

Section 13. Attachments (Instructions Page 33)

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

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

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

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

☐ Attachment 1 for Individuals as co-applicants

☒ Other Attachments. Please specify: Attachment 1 – Core Data Forms; Attachment 2 – Plain Language Summary (English and Spanish); Attachment 3 – Public Involvement Plan Form; Attachment 4 – USGS Topographic Map, Attachment 5 – Copy of Payment Voucher

Section 14. Signature Page (Instructions Page 34)

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

Permit Number: Click to enter text.

Applicant: Generation Park Management District

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): Mr. Charles W. Neuhaus

Signatory title: Board President

Signature: _____ Date: 12/18/24

(Use blue ink)

Subscribed and Sworn to before me by the said Charles W. Neuhaus

on this 18th day of December, 2024.

My commission expires on the 28th day of January, 2025.

Linda L. Knox

Notary Public

Harris

County, Texas

LINDA L. KNOX
NOTARY ID #448502-4
My Commission Expires
January 28, 2025

Section 14. Signature Page (Instructions Page 34)

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

Permit Number: Click to enter text.

Applicant: MRA Northeast, L.P.

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): Mr. Frederick R. McCord

Signatory title: President

Signature: _____ Date: 2-14-25

(Use blue ink)

Subscribed and Sworn to before me by the said Frederick R. McCord, Jr.

on this 14th day of February, 2025.

My commission expires on the 12th day of October, 2025.

_____

Notary Public

SHAWN WESLEY CLOONAN
Notary Public, State of Texas
Comm. Expires 10-12-2028
Notary ID 126589235

[SEAL]

Harris

County, Texas

ATTACHMENT NO. 1

CORE DATA FORMS

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 604386060		**RN**

SECTION II: Customer Information

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

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

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

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

Generation Park Management District

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 ☐ Local ☐ State ☒ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

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

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

15. Mailing Address:

Schwartz, Page & Harding, L.L.P.
1300 Post Oak Blvd, Suite 2400

City	Houston	**State**	TX	**ZIP**	77056	**ZIP + 4**	

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

18. Telephone Number	**19. Extension or Code**	**20. Fax Number** *(if applicable)*

(713) 623-4531		(713) 623-6143

SECTION III: Regulated Entity Information

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

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

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

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

Generation Park Management District East Wastewater Treatment Plant

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

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

25. Description to Physical Location:	Approximately 1,400 ft north of the intersection of Lake Houston Parkway and Common Dock Drive.				
26. Nearest City			**State**	**Nearest ZIP Code**	
Houston			TX	77044	

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

27. Latitude (N) In Decimal:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	54	3.32	-95	10	13.44

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

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

Wastewater Treatment Facility

34. Mailing Address:	**Schwartz, Page & Harding, L.L.P.**							
	1300 Post Oak Blvd, Suite 2400							
	City	**Houston**	**State**	**TX**	**ZIP**	**77056**	**ZIP + 4**	**3078**
35. E-Mail Address:	**dringold@sphllp.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(713) 623-4531		**(713) 623-6143**

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

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

SECTION IV: Preparer Information

40. Name:	AnnMarie Burns	41. Title:	Design Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(832) 590-7153		( ) -	aburns@idseg.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:	Generation Park Management District	Job Title:	Board President
Name *(In Print)*:	Charles W. Neuhaus	Phone:	( ) 713 - 502 4515
Signature:		Date:	12/18/14

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

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

SECTION II: Customer Information

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

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

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

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

MRA Northeast, L.P.

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
0800309222	32035641169	76-0559742	N/A

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

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

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

☐ Owner ☐ Operator ☐ Owner & Operator ☒ Other: Current owner of land where treatment facility will be located.
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant

15. Mailing Address:	MRA Northeast, L.P.							
	250 Assay St., Suite 200							
	City	Houston	**State**	TX	**ZIP**	77044	**ZIP + 4**	3506

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

18. Telephone Number	**19. Extension or Code**	**20. Fax Number** *(if applicable)*

(713) 623-4531		(713) 623-6143

SECTION III: Regulated Entity Information

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

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

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

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

Generation Park Management District East Wastewater Treatment Plant

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

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

25. Description to Physical Location:	Approximately 1,400 ft north of the intersection of Lake Houston Parkway and Common Dock Drive.				
26. Nearest City			**State**		**Nearest ZIP Code**
Houston			TX		77044

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

27. Latitude (N) In Decimal:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
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4952			

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

Wastewater Treatment Facility

34. Mailing Address:	**Schwartz, Page & Harding, L.L.P.**							
	1300 Post Oak Blvd, Suite 2400							
	City	**Houston**	**State**	**TX**	**ZIP**	**77056**	**ZIP + 4**	**3078**
35. E-Mail Address:	**dringold@sphllp.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(713) 623-4531		**(713) 623-6143**

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

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

SECTION IV: Preparer Information

40. Name:	AnnMarie Burns	41. Title:	Design Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(832) 590-7153		( ) -	aburns@idseg.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:	MRA Northeast, L.P.	Job Title:	President
Name *(In Print)*:	Frederick R. McCord	Phone:	( ) -
Signature:		Date:	2/14/2025

ATTACHMENT NO. 2

PLAIN LANGUAGE SUMMARY
(ENGLISH AND SPANISH)

SUMMARY OF APPLICATION IN PLAIN LANGUAGE FOR TPDES OR TLAP PERMIT APPLICATIONS

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

Generation Park Management District (CN604386060) proposes to operate Generation Park Management District East Wastewater Treatment Plant (RN_____),. a domestic wastewater treatment facility. The facility will be located approximately 1,400 ft north of the intersection of Lake Houston Parkway and Common Dock Drive, in Houston, Harris County, Texas 77044.

This application is for a new permit to discharge at an ultimate average flow of 2,800,000 gallons per day of treated domestic wastewater via an outfall into a series of detention basins and ultimately to the San Jacinto River Basin.

Discharges from the facility are expected to contain Carbonaceous Biochemical Oxygen Demand (5-day)($CBOD_5$), total suspended solids (TSS), and ammonia nitrogen (NH_3-N). Additional potential pollutants are unknown as this is a new wastewater treatment plant. Domestic wastewater will be treated by activated sludge process with single stage nitrification.

RESUMEN DE LA SOLICITUD EN LENGUAJE SENCILLO PARA LAS SOLICITUDES DE PERMISOS TPDES O TLAP

El siguiente resumen se proporciona para esta solicitud de permiso de calidad del agua pendiente que está siendo revisada por la Comisión de Calidad Ambiental de Texas según lo requerido por el Capítulo 39 del Código Administrativo de Texas 30. La información proporcionada en este resumen puede cambiar durante la revisión técnica de la solicitud y no es una representación ejecutiva fedérale de la solicitud de permiso.

El Distrito de Gestión de Generation Park (CN604386060) propone operar Planta de Tratamiento de Aguas Residuales del Este del Distrito de Gestión de Generation Park (RN_____), una instalación de tratamiento de aguas residuales domésticas. La instalación está ubicada en aproximadamente 1,400 pies al norte de la intersección de Lake Houston Parkway y Common Dock Drive, en Houston, Condado de Harris, Texas 77044. Esta solicitud es para un nuevo permiso para descargar un caudal promedio final de 2.800.000 galones por día de aguas residuales domésticas tratadas a través de un desagüe en una serie de cuencas de detención y, en última instancia, en la cuenca del río San Jacinto.

Se espera que las descargas de la instalación contengan Demanda bioquímica de oxígeno carbonoso (5-días)($CBOD_5$), sólidos suspendidos totales (TSS) y nitrógeno amoniaco (NH_3-N). Se desconocen otros posibles contaminantes ya que se trata de una nueva planta de tratamiento de aguas residuales.. Aguas residuales domésticas. estará tratado por roceso de lodos activados con nitrificación en una sola etapa.

ATTACHMENT NO. 3

PUBLIC INVOLVEMENT PLAN FORM

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.

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 NO. 4

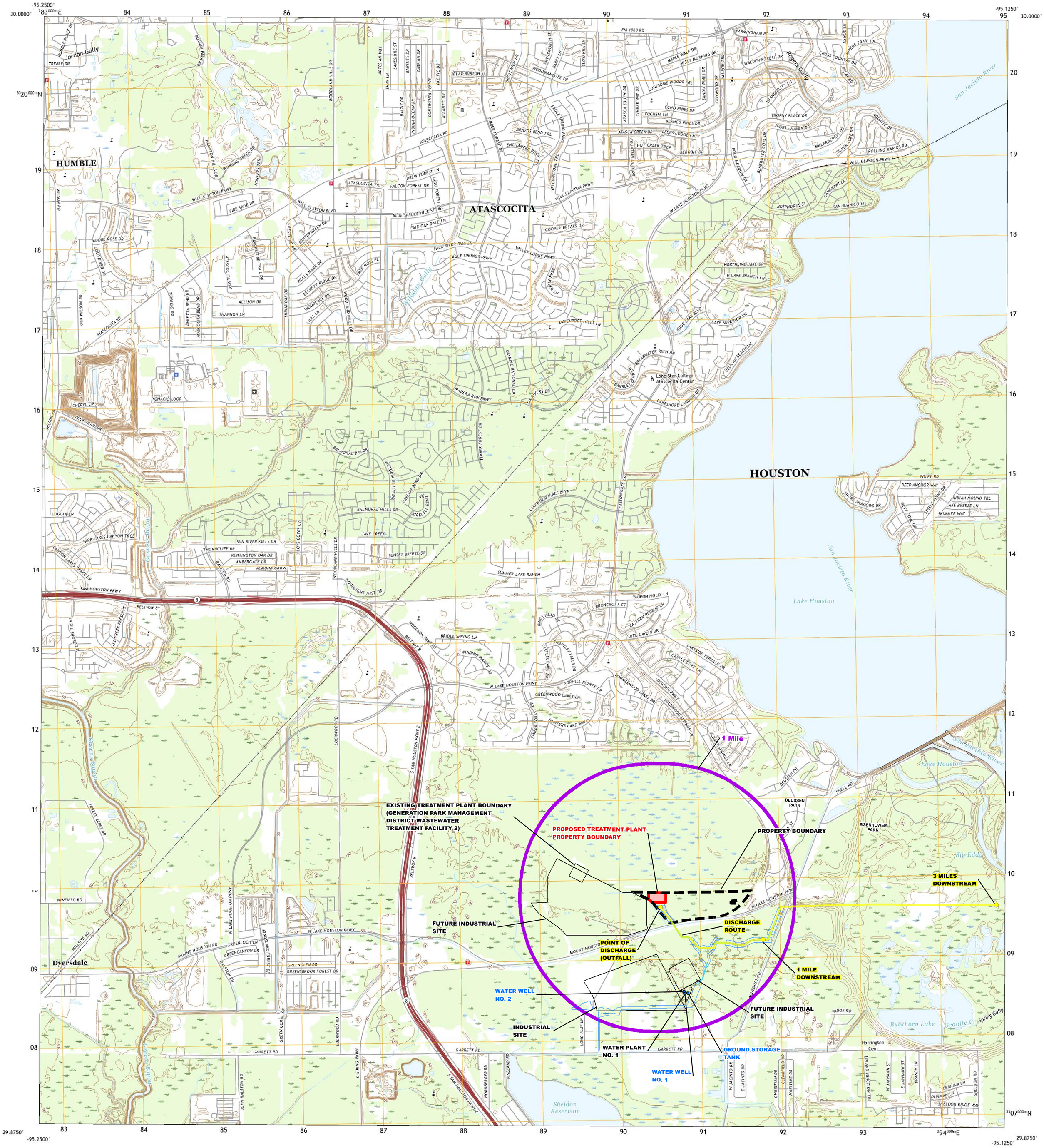
USGS TOPOGRAPHIC MAP

USGS science for a changing world

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

The National Map US Topo

HARMASTON QUADRANGLE
TEXAS - HARRIS COUNTY
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 15R

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 2016 - November 2016
Roads.....U.S. Census Bureau, 2015 - 2019
Names.....GNIS, 1979 - 2022
Hydrography.....National Hydrography Dataset, 2002 - 2018

MN
GN
1°6' 20 MILS
2°15' 40 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

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

TEXAS
QUADRANGLE LOCATION

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

IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Texas 77040
713.462.3178
TxEng Firm 2726
Tx Surv Firm 10110700

N
0 1,000 2,000 4,000 6,000 8,000 Feet
1 inch = 2,000 feet

GENERATION PARK MANAGEMENT DISTRICT
USGS 7.5' QUADRANGLE MAP

ATTACHMENT NO. 5

COPY OF PAYMENT VOUCHER

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:	582EA000653750
Date:	02/21/2025 10:21 AM
Payment Method:	CC - Authorization 0000021420
ePay Actor:	ANNMARIE BURNS
Actor Email:	dgillamac@idseg.com
IP:	216.201.136.178
TCEQ Amount:	$2,050.00
Texas.gov Price:	$2,096.38*

* 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:	ANNMARIE BURNS
Company:	IDS ENGINEERING GROUP
Address:	13430 NORTHWEST FREEWAY, HOUSTON, TX 77040
Phone:	713-462-3178

Cart Items

Click on the voucher number to see the voucher details.

Voucher	Fee Description	AR Number	Amount
751697	WW PERMIT - FACILITY WITH FLOW >= 1.0 MGD - NEW AND MAJOR AMENDMENTS		$2,000.00
751698	30 TAC 305.53B WQ NOTIFICATION FEE		$50.00
		TCEQ Amount:	$2,050.00

ePay Again | Exit ePay

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

© 2002-2025 Texas Commission on Environmental Quality

DOMESTIC WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

The following information is required for new and amendment applications.

Section 1. Affected Landowner Information (Instructions Page 36)

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

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

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

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

☐ USB Drive ☒ Four sets of labels

D. Provide the source of the landowners' names and mailing addresses: Harris County Appraisal District

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

☐ Yes ☒ No

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

Click to enter text.

Section 2. Original Photographs (Instructions Page 38)

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

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

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

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

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

Section 3. Buffer Zone Map (Instructions Page 38)

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

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

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

☒ Ownership

☒ Restrictive easement

☐ Nuisance odor control

☐ Variance

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

☒ Yes ☐ No

DOMESTIC WASTEWATER PERMIT APPLICATION

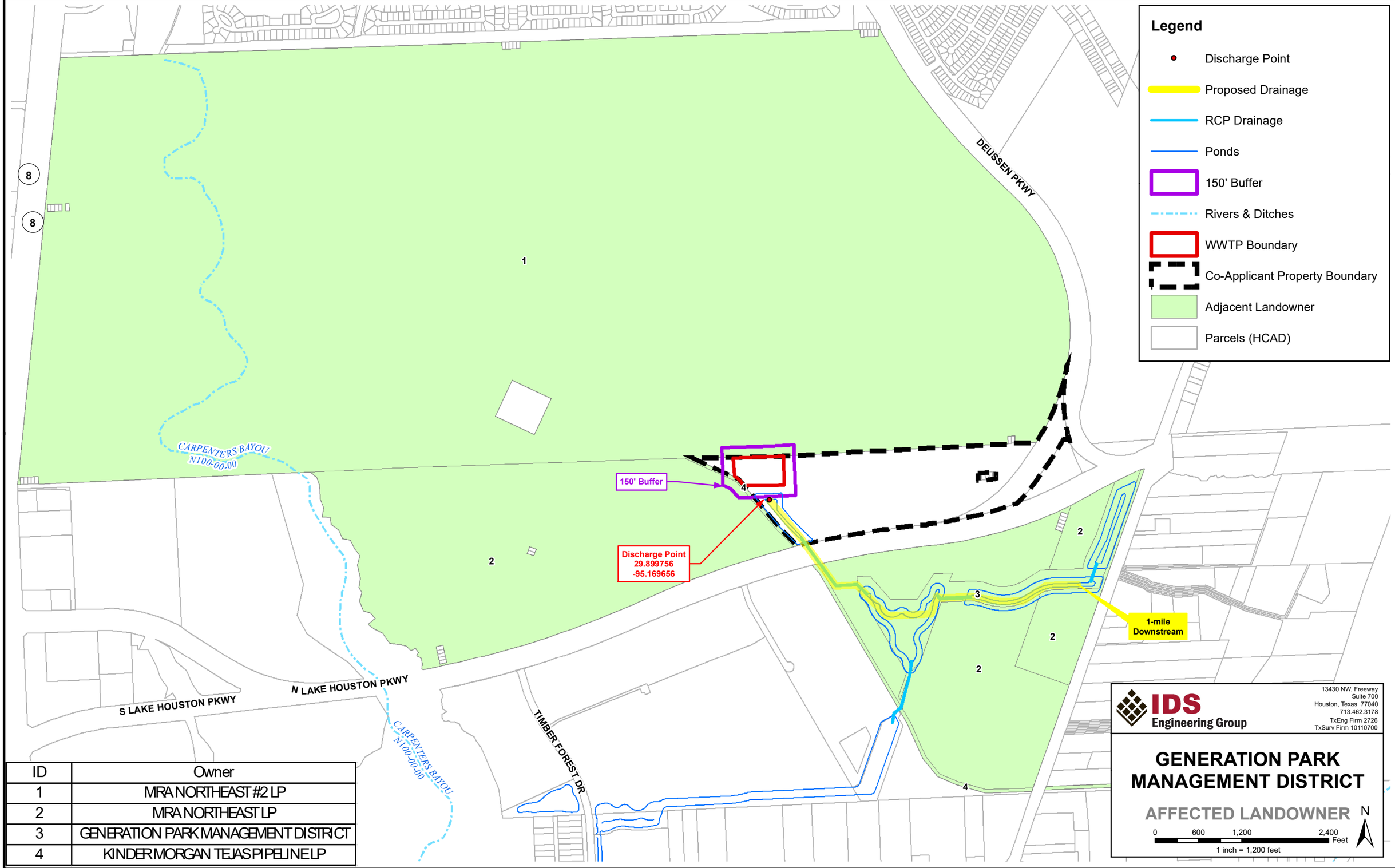
SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

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

Attachment: See Attachment No. 9

ATTACHMENT NO. 6

AFFECTED LANDOWNERS MAP & LIST OF ADDRESSES



ID	Owner
1	MRA NORTHEAST #2 LP
2	MRA NORTHEAST LP
3	GENERATION PARK MANAGEMENT DISTRICT
4	KINDER MORGAN TEJAS PIPELINE LP

IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Texas 77040
713.462.3178
TxEng Firm 2726
TxSurv Firm 10110700

GENERATION PARK MANAGEMENT DISTRICT

AFFECTED LANDOWNER

N

0 600 1,200 2,400 Feet

1 inch = 1,200 feet

IDS Engineering Group \\houvgisdb1\Projects\13001\339-012-04_GPMD2024_TPDES_GPEWWTP\AffectedLandowner_11X17.mxd Plotted: 2/25/2025 at 9:59:52 AM by vtrevino

Affected Landowner Cross-Reference List

ID	Owner	Mailing Address	City	State	Zip Code
1	MRA NORTHEAST #2 LP	250 ASSAY ST, STE 200	HOUSTON	TX	77044-3506
2	MRA NORTHEAST LP	250 ASSAY ST, STE 200	HOUSTON	TX	77044-3506
3	GENERATION PARK MANAGEMENT DISTRICT	1300 POST OAK BLVD, STE 2400	HOUSTON	TX	77056-3044
4	KINDER MORGAN TEJAS PIPELINE LP	500 DALLAS ST, STE 1000	HOUSTON	TX	77002-4718

ATTACHMENT NO. 7

ORIGINAL PHOTOGRAPHS WITH MAP

Generation Park Management District East Wastewater Treatment Plant

Domestic Administrative Report 1.1 – Section 2 Original Photographs

- Photograph of new treatment unit location:
  Area is currently wooded and is not yet cleared.



- <u>Photographs of proposed discharge point:</u>
  Area is currently wooded and is not yet cleared. Effluent will discharge into detention pond, which has not yet been excavated.





\\idseg.com\fs\Projects\1300\133901204 TO 143 Generation Park East\CAD\Exhibits\2025-02-10 OUTFALL AERIAL\GP EAST-WWTP OUTFALL DETN POND G.dwg [11x17] Plotted Feb 10, 2025 at 9:07am by tbradshaw (Last Saved by: tbradshaw)

1804.19 ACRES
MRA NORTHEAST #2, L.P.
FILE NO. 20110043079, O.P.R.R.P.

HL&P ESMT.
FILE No. D057381,
H.C.D.R.

PROPOSED
WWTP

WWTP DISCHARGE

OUTFALL
LAT=29°53'59.1182"N
LONG=-95°10'10.7635"W

POND G

TOP BANK EL 51.0

100 YR WSEL 46.9

NWSEL 34.8

BOTTOM EL 31.5

30' MAINTENANCE BERM (TYP.)

5:1

5:1

87.953 ACRES - TRACT III
MRA NORTHEAST, L.P.
FILE NO. X426083, O.P.R.R.P.

285.301 ACRES - TRACT 1
MRA NORTHEAST, L.P.
FILE NO. X426083, O.P.R.R.P.

50' HUMBLE OIL &
REFINING CO. (FEE STRIP)
VOL. 5353, PG. 149, H.C.D.R.

PIPELINE FEE STRIP

LAKE HOUSTON PARKWAY
(300' R.O.W.)

LOCATION OF
PHOTOGRAPH #1,
FACING EAST

LOCATION OF
PHOTOGRAPH #2,
FACING NORTHEAST

LOCATION OF
PHOTOGRAPH #3,
FACING EAST

N
W E
S

200' 0' 200'

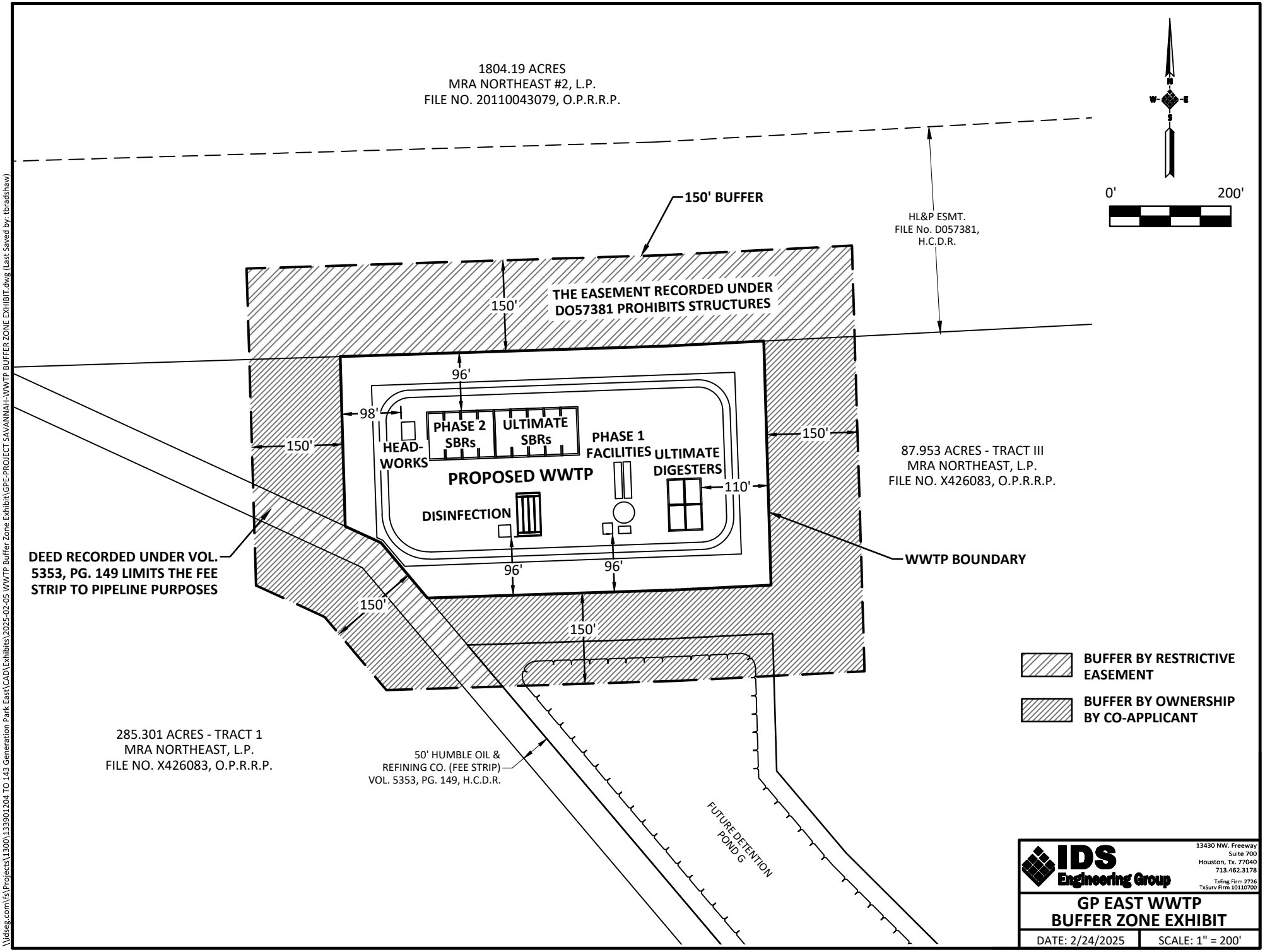
SCALE

1"=200'

GP EAST WWTP
OUTFALL AERIAL
DATE: 2/10/25
DATE: 1" = 200'

ATTACHMENT NO. 8

BUFFER ZONE MAP



IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Tx. 77040
713.462.3178
TxEng Firm 2726
TxSurv Firm 10110700

GP EAST WWTP BUFFER ZONE EXHIBIT

DATE: 2/24/2025 | SCALE: 1" = 200'

\\idseg.com\s\Projects\13001\133901204 TO 143 Generation Park East\CAD\Exhibits\2025-02-05 WWTP Buffer Zone Exhibit\GPE-PROJECT SAVANNAH-WWTP BUFFER ZONE EXHIBIT.dwg (Last Saved by: tbradshaw)

ATTACHMENT NO. 9

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

FOR AGENCIES REVIEWING DOMESTIC OR INDUSTRIAL TPDES WASTEWATER PERMIT APPLICATIONS

TCEQ USE ONLY:

Application type: ____Renewal ____Major Amendment ____Minor Amendment ____New

County: _____ Segment Number: _____

Admin Complete Date: _____

Agency Receiving SPIF:

_____ Texas Historical Commission _____ U.S. Fish and Wildlife

_____ Texas Parks and Wildlife Department _____ U.S. Army Corps of Engineers

This form applies to TPDES permit applications only. (Instructions, Page 53)

Complete this form as a separate document. TCEQ will mail a copy to each agency as required by our agreement with EPA. If any of the items are not completely addressed or further information is needed, we will contact you to provide the information before issuing the permit. Address each item completely.

Do not refer to your response to any item in the permit application form. Provide each attachment for this form separately from the Administrative Report of the application. The application will not be declared administratively complete without this SPIF form being completed in its entirety including all attachments. Questions or comments concerning this form may be directed to the Water Quality Division's Application Review and Processing Team by email at WQ-ARPTeam@tceq.texas.gov or by phone at (512) 239-4671.

The following applies to all applications:

1. Permittee: Generation Park Management District

   Permit No. WQ00 Click here to enter text EPA ID No. TX Click here to enter text

   Address of the project (or a location description that includes street/highway, city/vicinity, and county):

   Approximately 1,400 ft north of the intersection of Lake Houston Parkway and Common Dock Drive in Harris County, TX 77044.

Provide the name, address, phone and fax number of an individual that can be contacted to answer specific questions about the property.

Prefix (Mr., Ms., Miss): Mr.

First and Last Name: Vernon H. Webb, II

Credential (P.E, P.G., Ph.D., etc.): P.E.

Title: District Engineer

Mailing Address: 13430 Northwest Freeway, Suite 700

City, State, Zip Code: Houston, TX 77040

Phone No.: (713) 462-3178 Ext.: Click here to enter text Fax No.: Click here to enter text

E-mail Address: vwebb@idseg.com

2. List the county in which the facility is located: Harris
3. If the property is publicly owned and the owner is different than the permittee/applicant, please list the owner of the property.

N/A

4. Provide a description of the effluent discharge route. The discharge route must follow the flow of effluent from the point of discharge to the nearest major watercourse (from the point of discharge to a classified segment as defined in 30 TAC Chapter 307). If known, please identify the classified segment number.

Effluent will discharge to an unnamed detention basin, thence to storm sewer, thence to a series of unnamed detention basins and channels, thence to an unnamed tributary, thence to San Jacinto River Tidal in Segment No. 1001 of the San Jacinto River Basin.

5. Please provide a separate 7.5-minute USGS quadrangle map with the project boundaries plotted and a general location map showing the project area. Please highlight the discharge route from the point of discharge for a distance of one mile downstream. (This map is required in addition to the map in the administrative report).

Provide original photographs of any structures 50 years or older on the property.

Does your project involve any of the following? Check all that apply.

- ☒ Proposed access roads, utility lines, construction easements
- ☐ Visual effects that could damage or detract from a historic property's integrity
- ☐ Vibration effects during construction or as a result of project design
- ☒ Additional phases of development that are planned for the future
- ☐ Sealing caves, fractures, sinkholes, other karst features

☒ Disturbance of vegetation or wetlands

1. List proposed construction impact (surface acres to be impacted, depth of excavation, sealing of caves, or other karst features):

Construction of the wastewater treatment plant will include grading of the site, installation of utilities, site paving, equipment, and treatment basins. Excavation depth will not exceed approximately 20 feet. Construction, including clearing, will impact approximately 5.5 acres.

2. Describe existing disturbances, vegetation, and land use:

The site is currently wooded. There is one cleared area which was previously used for oil and gas exploration.

THE FOLLOWING ITEMS APPLY ONLY TO APPLICATIONS FOR NEW TPDES PERMITS AND MAJOR AMENDMENTS TO TPDES PERMITS

3. List construction dates of all buildings and structures on the property:

There are no existing buildings or structures.

4. Provide a brief history of the property, and name of the architect/builder, if known.

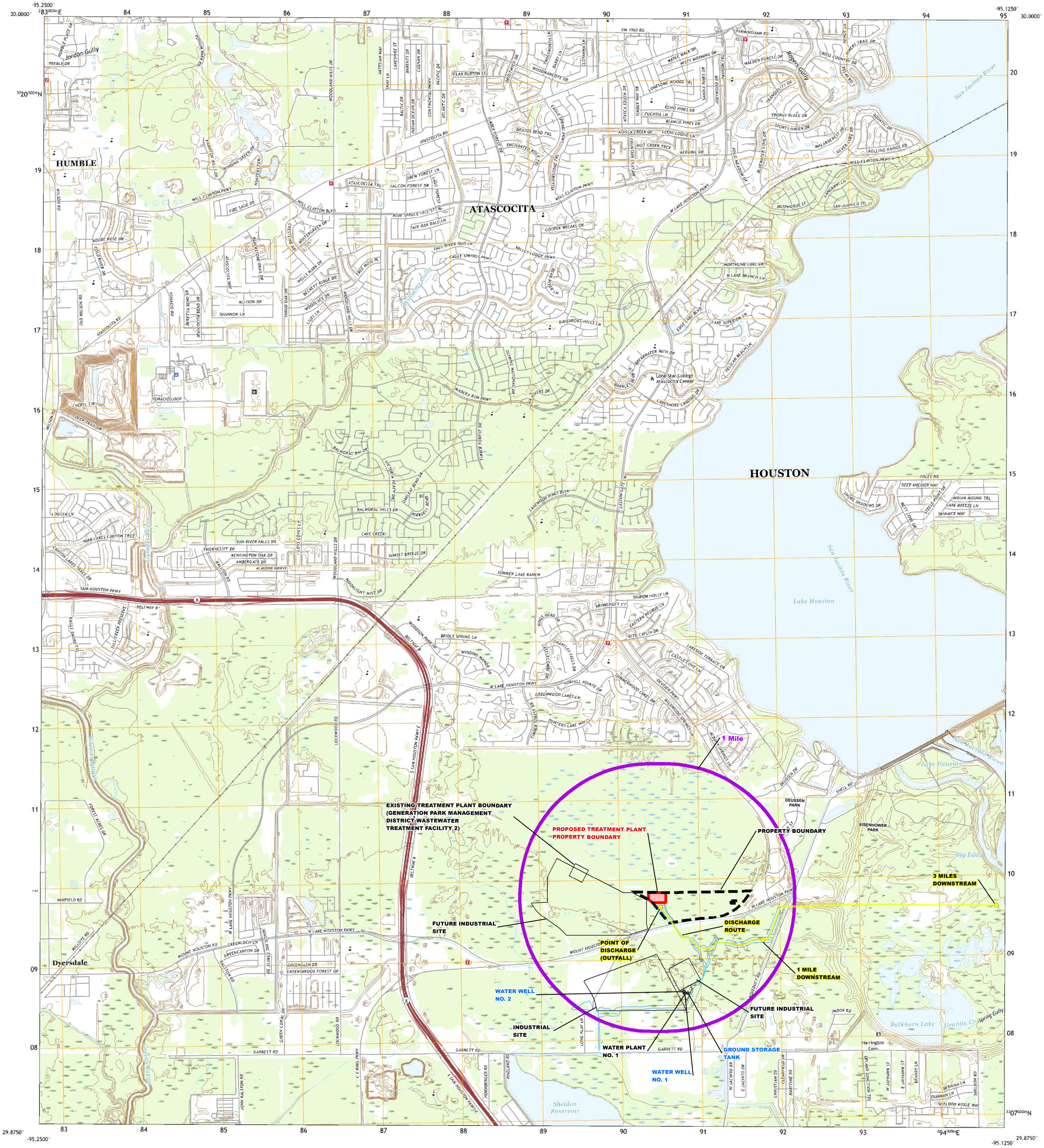
The site was previously owned by the King Cattle & Timber Company, and was also used for oil and gas activities.

USGS science for a changing world

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

The National Map US Topo

HARMASTON QUADRANGLE
TEXAS - HARRIS COUNTY
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 15R

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 2016 - November 2016
Roads.....U.S. Census Bureau, 2015 - 2019
Names.....GNIS, 1979 - 2022
Hydrography.....National Hydrography Dataset, 2002 - 2018

MN
GN
1°6' 20 MILS
2°15' 40 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

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

TEXAS
QUADRANGLE LOCATION

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

IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Texas 77040
713.462.3178
TxEng Firm 2726
Tx Surv Firm 10110700

N
0 1,000 2,000 4,000 6,000 8,000 Feet
1 inch = 2,000 feet

GENERATION PARK MANAGEMENT DISTRICT
USGS 7.5' QUADRANGLE MAP

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~~ Domestic 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.)
TCEQ ePay Voucher Receipt is included, see Attachment No. 5

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

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 42)

A. Existing/Interim I Phase

Design Flow (MGD): 0.12

2-Hr Peak Flow (MGD): 0.48

Estimated construction start date: February 2026

Estimated waste disposal start date: September 2026

B. Interim II Phase

Design Flow (MGD): 1.05

2-Hr Peak Flow (MGD): 4.2

Estimated construction start date: February 2027

Estimated waste disposal start date: August 2029

C. Final Phase

Design Flow (MGD): 2.8

2-Hr Peak Flow (MGD): 11.2

Estimated construction start date: January 2030

Estimated waste disposal start date: June 2032

D. Current Operating Phase

Provide the startup date of the facility: N/A

Section 2. Treatment Process (Instructions Page 42)

A. Current Operating Phase

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

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

See Attachment No. 10

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 No. 11		

C. Process Flow Diagram

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

Attachment: See Attachment No. 12

Section 3. Site Information and Drawing (Instructions Page 43)

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

- Latitude: 29° 53' 59.12" N
- Longitude: -95° 10' 10.76" W

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

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

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

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

Attachment: See Attachment No. 13

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

This wastewater treatment plant will serve the east side of Generation Park Management District. The area is generally bounded by Beltway 8 and Sheldon Reservoir to the West, Summerwood to the North, Deussen Parkway and Aqueduct Road to the east, and Garrett Road to the South.

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
Generation Park East Collection System	**Generation Park Management District**	**Publicly Owned**	1675
		Choose an item.	
		Choose an item.	
		Choose an item.	

Section 4. Unbuilt Phases (Instructions Page 44)

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

☐ Yes ☒ No

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

☐ Yes ☐ No

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

Click to enter text.

Section 5. Closure Plans (Instructions Page 44)

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

☐ Yes ☒ No

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

☐ Yes ☐ No

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

N/A

Section 6. Permit Specific Requirements (Instructions Page 44)

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: N/A

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**.

N/A

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.

N/A

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*.

N/A

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.

N/A

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.

N/A

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.

N/A

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:

N/A

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.

N/A

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.

N/A

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.

N/A

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

F. Discharges to the Lake Houston Watershed

Does the facility discharge in the Lake Houston watershed?

☐ Yes ☐ No

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

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

1. Acceptance of sludge from other WWTPs

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

☐ Yes ☐ No

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

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

N/A

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

2. Acceptance of septic waste

Is the facility accepting or will it accept septic waste?

☐ Yes ☐ No

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

☐ Yes ☐ No

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

☐ Yes ☐ No

If yes to any of the above, provide the date the plant started or is anticipated to start accepting septic waste, an estimate of monthly septic waste acceptance (gallons or millions of gallons), an estimate of the 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.

N/A

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

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

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

☐ Yes ☐ No

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

N/A

Section 7. Pollutant Analysis of Treated Effluent (Instructions Page 49)

Is the facility in operation?

☐ Yes ☒ No

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

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

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

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

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
$CBOD_5$, mg/l					
Total Suspended Solids, mg/l					
Ammonia Nitrogen, mg/l					
Nitrate Nitrogen, mg/l					
Total Kjeldahl Nitrogen, mg/l					
Sulfate, mg/l					
Chloride, mg/l					
Total Phosphorus, mg/l					
pH, standard units					
Dissolved Oxygen*, mg/l					
Chlorine Residual, mg/l					
E.coli (CFU/100ml) freshwater					
Entercocci (CFU/100ml) saltwater					
Total Dissolved Solids, mg/l					
Electrical Conductivity, µmohs/cm, †					
Oil & Grease, mg/l					
Alkalinity ($CaCO_3$)*, mg/l					

*TPDES permits only
†TLAP permits only

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

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

Section 8. Facility Operator (Instructions Page 49)

Facility Operator Name: Inframark, LLC

Facility Operator's License Classification and Level: (Wastewater Operations Company)

Facility Operator's License Number: OC0000232

Section 9. Sludge and Biosolids Management and Disposal (Instructions Page 50)

A. WWTP's Sewage Sludge or 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 Sewage Sludge or 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. Sewage Sludge or Biosolids Management

Provide information on the *intended* sewage sludge or biosolids management practice. Do not enter every management practice that you want authorized in the permit, as the

permit will authorize all sewage sludge or 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
Disposal in Landfill	Off-site Third-Party Handler or Preparer	Bulk	60 metric tons (estimated per year)	Class B: PSRP Aerobic Digestion	Option 4: SOUR <=1.5 mg 02/hr/g total solids at 20C (<2% solids)
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): Click to enter text.

D. Disposal site

Disposal site name: Mt Houston Road WWTP Sludge Processing Site

TCEQ permit or registration number: 0011154001

County where disposal site is located: Harris

E. Transportation method

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

Name of the hauler: Magna Flow Environmental

Hauler registration number: 21484

Sludge is transported as a:

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

Section 10. Permit Authorization for Sewage Sludge Disposal (Instructions Page 52)

A. Beneficial use authorization

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

☐ Yes ☐ No

If yes, are you requesting to continue this authorization to land apply biosolids 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 Biosolids	☐ 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 54)

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 55)

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: N/A

Title: N/A

Signature: _____

Date: _____

ATTACHMENT NO. 10

TREATMENT PROCESS DESCRIPTION

Generation Park Management District

East Wastewater Treatment Plant

Domestic Technical Report 1.0 – Section 2. Treatment Process Description

Current Operating Phase

All phases are proposed; plant is not currently operating.

Proposed Interim Phase I (0.12 MGD)

The proposed Interim Phase I plant is a steel plant, designed to treat 0.12 MGD average daily flow with a 0.48 MGD peak flow (4Q). The treatment process is activated sludge process with complete mix single stage nitrification.

Wastewater will be pumped through an influent force main to the headworks, which will have a manual bar screen. The effluent from the screens will proceed to two (2) aeration basins for biological treatment. From the aeration basins, the mixed liquor will flow to a single clarifier for settling.

The settled sludge from the clarifier will either be returned to the aeration basins as Recycled Activated Sludge (RAS) or wasted into two (2) digesters as Waste Activated Sludge (WAS). Each digester has aerators and airlift decanters to further thicken the sludge and return the supernatant back to the aeration basins, while the sludge is periodically removed and wet hauled to another facility for further dewatering and disposal.

The settled final clarifier effluent will flow to a chlorine contact basin for disinfection. Finally, the disinfected effluent will be discharged into a man-made detention pond and ultimately into the San Jacinto River.

Proposed Interim Phase II (1.05 MGD)

The proposed Interim Stage II plant will include four (4) of the nine (9) ultimate sequencing batch reactors (SBRs) and repurpose the basins from the steel plant as digesters. It will be designed to treat 1.05 MGD average daily flow and 4.2 MGD peak flow, with one SBR out of service. Each SBR treats 350,000 gallons per day.

The wastewater influent will flow into a headworks structure and then to the SBRs for biological treatment and settling using an activated sludge process with single stage nitrification. Fine bubble diffusers and/or jet aerators will be used for aeration and decanters will be used for removing the clarified supernatant effluent. Positive displacement blowers will supply air to the SBR basins.

The proposed Interim Phase II will also include two (2) chlorine contact basins, for final disinfection of the effluent. The disinfected effluent will then be de-chlorinated and discharged into a man-made detention pond and ultimately into the San Jacinto River.

Excess sludge from the SBRs will continue to digesters, which will contain a decant mechanism for thickening the sludge. The steel aeration basins and digesters from the Proposed Stage I package plant will be converted as necessary and repurposed as digesters in this phase. The decanted digester supernatant will be returned to the SBR treatment basins, and thickened sludge will be periodically removed and wet hauled to another facility for further dewatering and disposal.

Proposed Ultimate Phase (2.8 MGD)

In the proposed ultimate phase, five (5) additional concrete sequencing batch reactors (SBRs) will be added to the four (4) SBRs proposed in the 1.05 MGD Interim II phase, for a total of nine (9) SBRs. The ultimate plant will be designed to treat 2.8 MGD average daily flow and 11.2 MGD peak flow, with one SBR out of service. Each SBR treats 350,000 gallons per day.

The wastewater influent will flow into a headworks structure and then to the SBRs for biological treatment and settling using an activated sludge process with single stage nitrification. Fine bubble diffusers and/or jet aerators will be used for aeration and decanters will be used for removing the clarified supernatant effluent. Positive displacement blowers will supply air to the SBR basins.

The proposed ultimate phase will include four (4) chlorine contact basins, for final disinfection of the effluent. The disinfected effluent will then be de-chlorinated and discharged into a man-made detention pond and ultimately into the San Jacinto River.

Excess sludge from the SBRs will continue to digesters, which will contain a decant mechanism for thickening the sludge. The proposed ultimate phase will include four (4) digesters. The decanted digester supernatant will be returned to the SBR treatment basins, and thickened sludge will be periodically removed and wet hauled to another facility for further dewatering and disposal.

ATTACHMENT NO. 11

TREATMENT UNITS

Generation Park Management District

East Wastewater Treatment Plant

Domestic Technical Report 1.0 – Table 1.0(1) Treatment Units

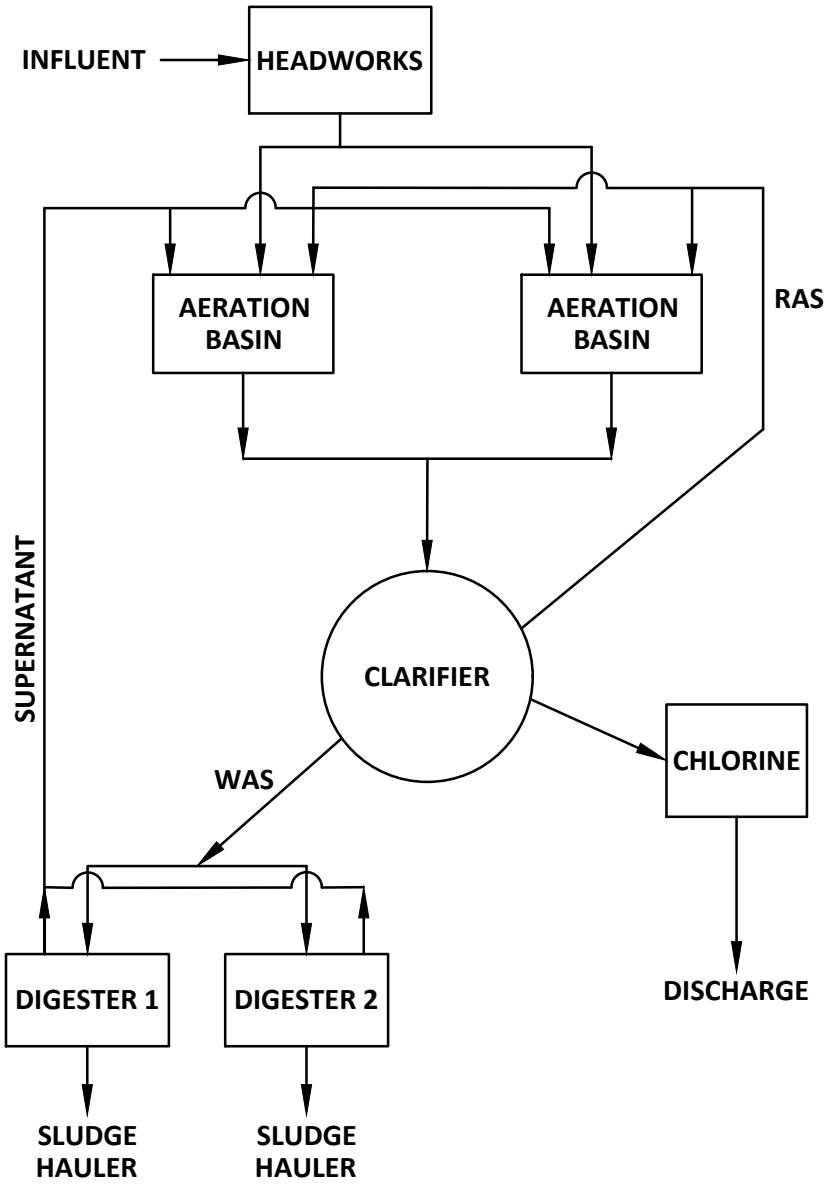
Treatment Unit Type	Number of Units	Dimensions (L X W X D)
Interim I Phase – 0.12 MGD		
Aeration Basins	2	40 ft L X 12 ft W X 10.45 ft SWD
Clarifier	1	35 ft Diameter X 10 ft SWD
Chlorine Contact Basin	1	20 ft L X 12 ft W X 8.58 ft SWD
Aerobic Digesters	2	20 ft L X 12 ft W X 10.5 ft SWD
Interim II Phase – 1.05 MGD		
SBR Basins	4	75 ft L X 25 ft W X 24 SWD
Chlorine Basins	2	58 ft L X 8 ft W X 11.5 SWD
Aerobic Digesters	2	60 ft L X 12 ft W X 10.5 SWD
Ultimate Phase – 2.8 MGD		
SBR Basins	9	75 ft L X 25 ft W X 24 SWD
Chlorine Basins	4	58 ft L X 8 ft W X 11.5 SWD
Aerobic Digesters	4	25 ft L X 40 ft W X 12.5 SWD

SWD – Side Wall Depth
L – Length
D – Depth
W – Width

ATTACHMENT NO. 12

PROCESS FLOW DIAGRAMS

0.12 MGD
PROPOSED INTERIM I PHASE
GENERATION PARK
MANAGEMENT DISTRICT



GENERATION PARK
A McCord Development Property

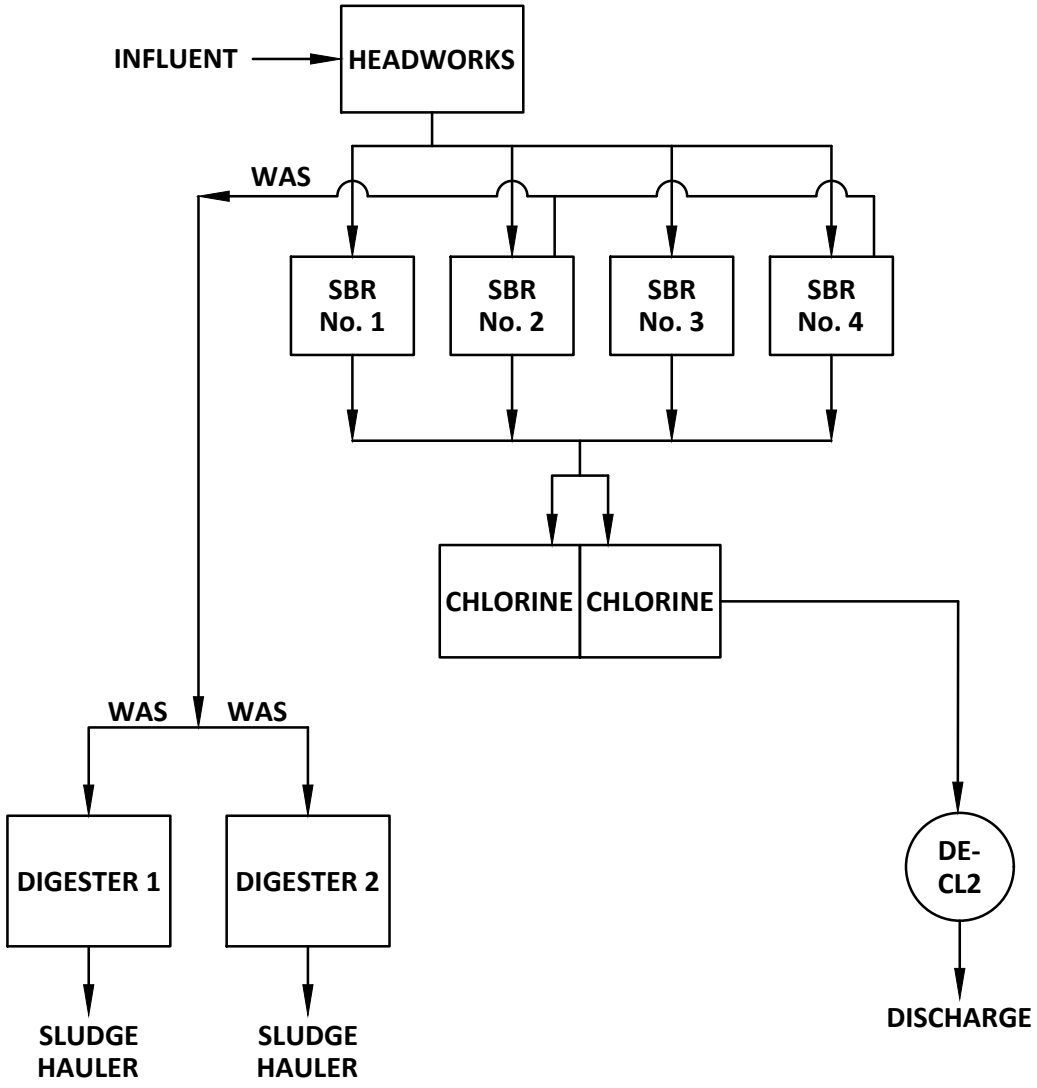
IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Tx. 77040
713.462.3178
TxEng Firm 2726
TxSurv Firm 10110700

PROCESS FLOW DIAGRAM 1

DATE: 1/6/2025 | SCALE: N.T.S.

X:\13300\13390\1204 TO 143 Generation Park East\CAD\Exhibits\2025-01-04 PED\PROC-FLOW-DIAG.dwg [0.12 MGD] Plotted: Feb 11, 2025 at 3:29pm by idouglas (Last Saved by: idouglas)

1.05 MGD
PROPOSED INTERIM II PHASE
GENERATION PARK
MANAGEMENT DISTRICT



GENERATION PARK
A McCord Development Property

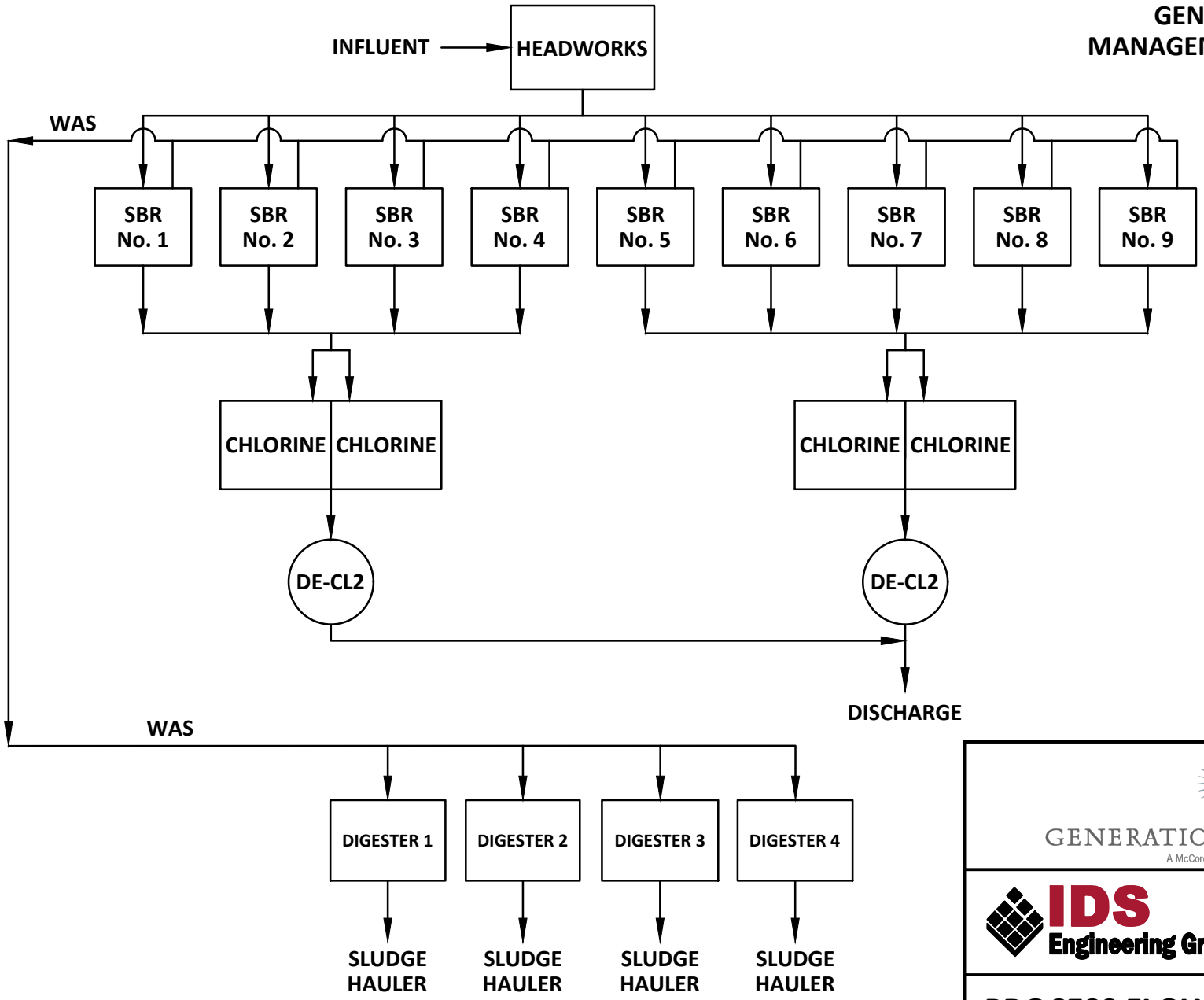
IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Tx. 77040
713.462.3178
TxEng Firm 2726
TxSurv Firm 10110700

PROCESS FLOW DIAGRAM 2

DATE: 1/6/2025 | SCALE: N.T.S.

X:\13300\13390\1204 TO 143 Generation Park East\CAD\Exhibits\2025-01-04 PFD\PROC-FLOW-DIAG.dwg [1.05 MGD] Plotted: Feb 11, 2025 at 3:30pm by idouglas (Last Saved by: idouglas)

2.8 MGD
FINAL PHASE
GENERATION PARK
MANAGEMENT DISTRICT



GENERATION PARK
A McCord Development Property

IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Tx. 77040
713.462.3178
TxEng Firm 2726
TxSurv Firm 10110700

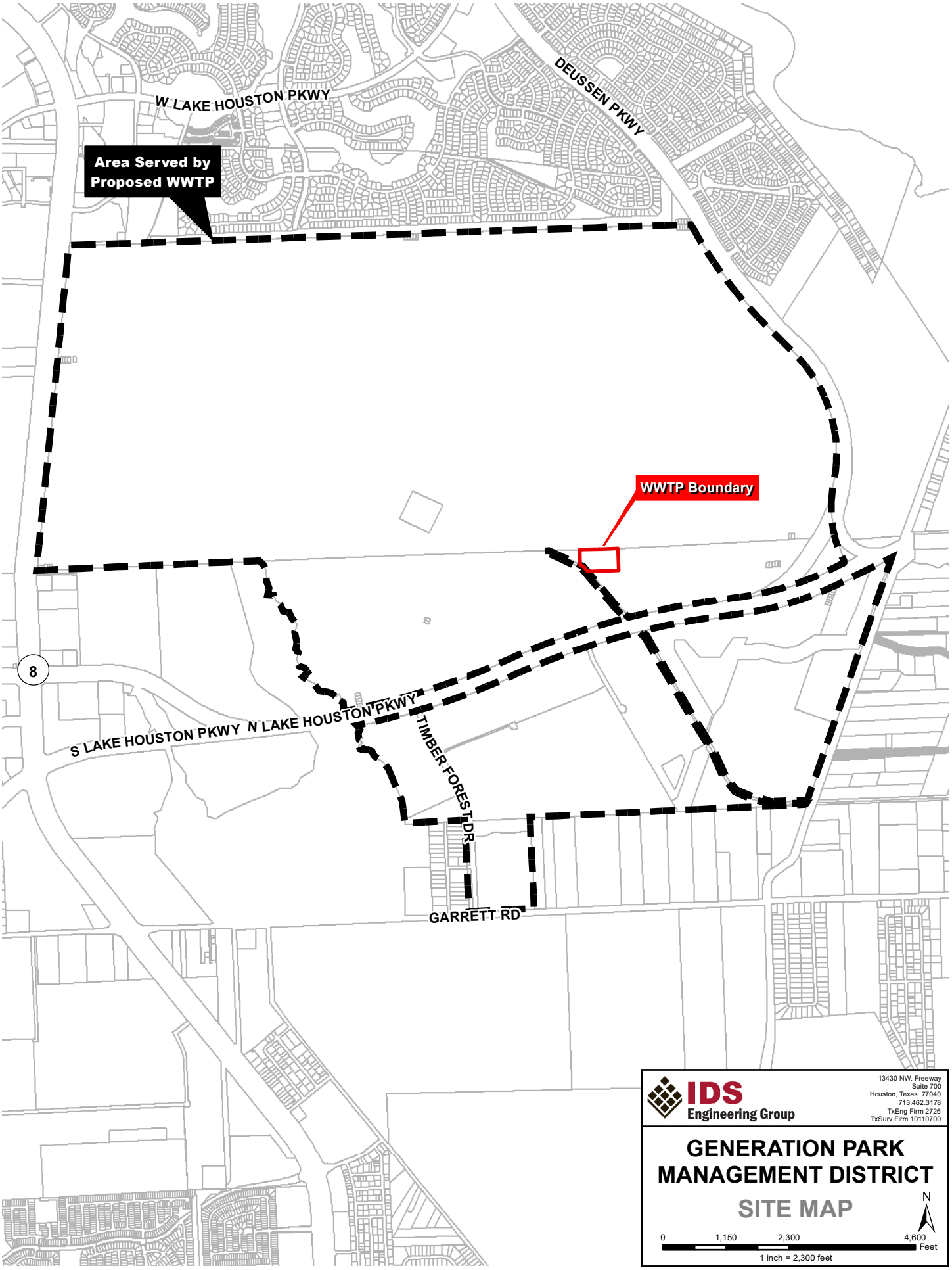
PROCESS FLOW DIAGRAM 3

DATE: 2/11/2025 | SCALE: N.T.S.

\\idseg.com\fs\Projects\1300\13901204 TO 143 Generation Park East\CAD\Exhibits\2025-01-04 PFD\PROC-FLOW-DIAG.dwg [2.800 MGD] Plotted Feb 11, 2025 at 5:51pm by tbradshaw (Last Saved by: tbradshaw)

ATTACHMENT NO. 13

SITE MAP



IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Texas 77040
713.462.3178
TxEng Firm 2726
TxSurv Firm 10110700

GENERATION PARK MANAGEMENT DISTRICT

SITE MAP

N

0 1,150 2,300 4,600 Feet

1 inch = 2,300 feet

IDS Engineering Group \\houvgisdb1\Projects\1300\1339-012-04_GPMD2024_TPDES_GPEWWTP\SiteMap_8.5X11.mxd Plotted: 1/27/2025 at 9:14:57 AM by vtrevino

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 56)

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 No. 14

B. Regionalization of facilities

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

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

1. *Municipally incorporated areas*

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

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

☐ Yes ☒ No ☐ Not Applicable

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

If yes, attach correspondence from the city.

Attachment: Click to enter text.

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

Attachment: Click to enter text.

2. *Utility CCN areas*

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

☐ Yes ☒ No

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

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

Attachment: Click to enter text.

3. Nearby WWTPs or collection systems

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

☒ Yes ☐ No

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

Attachment: See Attachment No. 15

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 No. 15

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: N/A

Section 2. Proposed Organic Loading (Instructions Page 58)

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		
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	1.2 MGD	300 mg/L
Motel		
Restaurant		
Hospital		
Nursing home		
Other	1.6 MGD	300-350 mg/L
TOTAL FLOW from all sources	2.8 MGD	
AVERAGE BOD_5 from all sources		approx. 315 mg/L

Section 3. Proposed Effluent Quality and Disinfection (Instructions Page 58)

A. Existing/Interim I Phase Design Effluent Quality

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

Total Suspended Solids, mg/l: 15 mg/L

Ammonia Nitrogen, mg/l: 3 mg/L

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: 4.0 mg/L

Other: Click to enter text.

B. Interim II Phase Design Effluent Quality

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

Total Suspended Solids, mg/l: 15 mg/L

Ammonia Nitrogen, mg/l: 3 mg/L

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: 4.0 mg/L

Other: Click to enter text.

C. Final Phase Design Effluent Quality

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

Total Suspended Solids, mg/l: 15 mg/L

Ammonia Nitrogen, mg/l: 3 mg/L

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: 4.0 mg/L

Other: Click to enter text.

D. Disinfection Method

Identify the proposed method of disinfection.

☒ Chlorine: 1.0 to 4.0 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: Sodium Bisulfite

Section 4. Design Calculations (Instructions Page 58)

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 No. 16

Section 5. Facility Site (Instructions Page 59)

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.

FIRM Panel No. 48201C0520L. See Attachment No. 17.

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 No. 18

Section 6. Permit Authorization for Sewage Sludge Disposal (Instructions Page 59)

A. Beneficial use authorization

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

☐ Yes ☒ No

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

B. Sludge processing authorization

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

☐ Sludge Composting

☐ Marketing and Distribution of sludge

☐ Sludge Surface Disposal or Sludge Monofill

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

Section 7. Sewage Sludge Solids Management Plan (Instructions Page 60)

Attach a solids management plan to the application.

Attachment: See Attachment No. 19

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.

ATTACHMENT NO. 14

JUSTIFICATION OF PERMIT NEED

Generation Park Management District

East Wastewater Treatment Plant

Domestic Technical Report 1.1 – Section 1.A. Justification of permit need

Generation Park Management District currently has two permitted wastewater treatment facilities with permit numbers WQ0014625001 and WQ0015015001. The Generation Park Management District Wastewater Treatment Facility 2 (GPMD WWTF2) (WQ0015015001) has not been placed into operation. It is proposed that the new facility proposed in this permit application will take the place of GPMD WWTF2 and all flow that would have been treated at GPMD WWTF2 will be treated at this new site.

The ultimate service area for this facility will consist of approximately 2,900 acres of mixed-use development and currently contains a 1.4 million square foot warehouse facility. This facility is currently not occupied but will require 55,000 GPD of wastewater capacity after its estimated occupancy date of Summer 2027. The developer is in the process of selling two additional industrial sites, one of which requires 7,000 GPD of wastewater capacity, expected in late 2026. The proposed Interim Phase I WWTP (0.12 MGD) would be required to treat these flows.

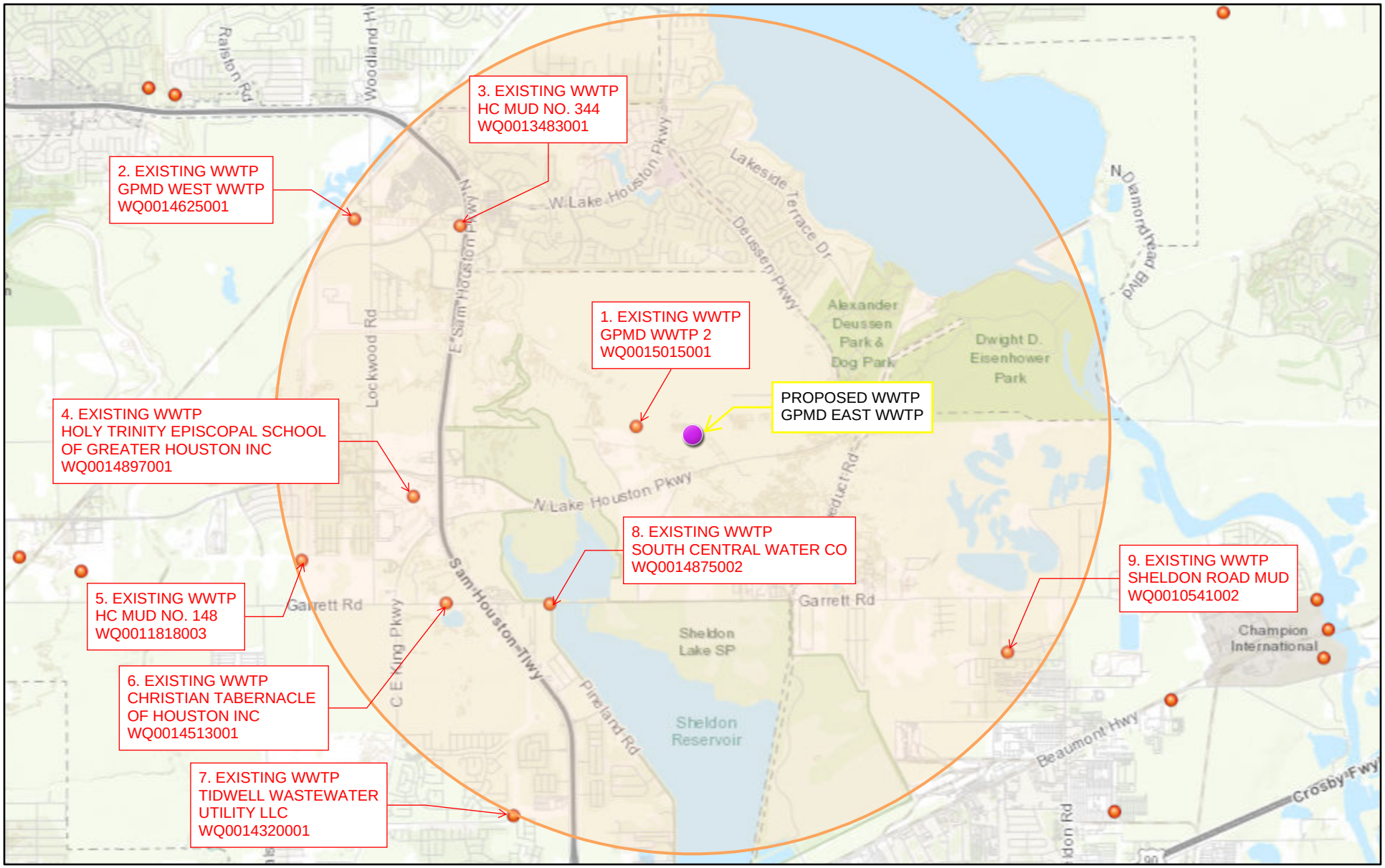
The other industrial site is expected to require 800,000 GPD of wastewater capacity by Q2 of 2029. The proposed Interim Phase II WWTP (1.05 MGD) will treat these flows in addition to the flows described in Phase I.

The second industrial site will require an additional 350,000 GPD by Summer 2032 pushing total flows to 1.2 MGD. Additional land within the District is also being offered for sale which we estimate will increase the required WWTP capacity to 2.8 MGD.

ATTACHMENT NO. 15

NEARBY WWTPS MAP & PROOF OF MAILING REQUEST FOR SERVICE

Nearby Wastewater Treatment Facilities (3 miles)



2/11/2025, 9:22:39 AM

Wastewater Outfalls

1:72,224

0 0.5 1 2 mi

0 0.75 1.5 3 km

TCEQ, City of Houston, HPB, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA

Web AppBuilder for ArcGIS

City of Houston, HPB, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA | TCEQ |

1. **Permittee Name – Generation Park Management District (Wastewater Treatment Facility 2)**

   Permit No. – WQ0015015001

   Same permittee as proposed Wastewater Treatment Plant. This WWTP & Permit will be abandoned if proposed permit is approved and new WWTP is built.

2. **Permittee Name – Generation Park Management District (West Wastewater Treatment Plant)**

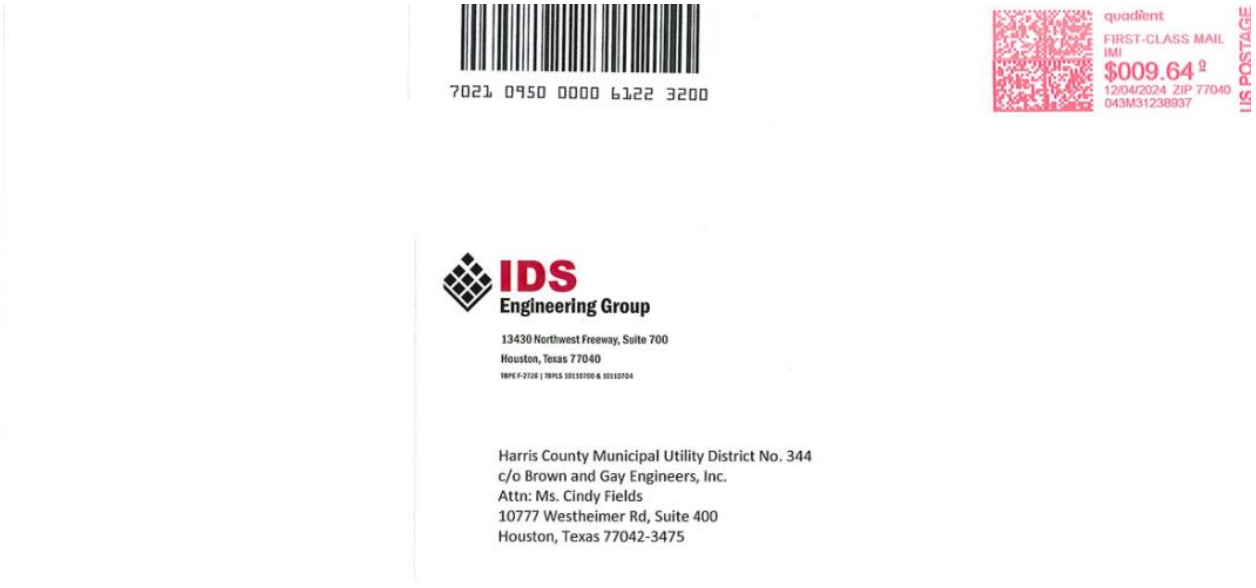
   Permit No. – WQ0014625001

   Same permittee as proposed Wastewater Treatment Plant. This plant was designed to serve the current and future needs of the west side of Generation Park Management District.

3. Permittee Name – Harris County Municipal Utility District No. 344

Permit No. – WQ0013483001

Proof of Mailing Request via Certified Mail:



Copy of Request & Correspondence Received: See next page

IDS
Engineering Group

December 3, 2024

Harris County Municipal Utility District No. 344
c/o Brown and Gay Engineers, Inc.
Attn: Ms. Cindy Fields
10777 Westheimer Rd, Suite 400
Houston, TX 77042-3475

To Whom it May Concern:

We are writing to you on behalf of Generation Park Management District which is seeking a Texas Pollutant Discharge Elimination System (TPDES) discharge permit for a proposed Wastewater Treatment Plant. We are in the process of preparing the permit application for this operation. The projected ultimate flow is 2.8 MGD and the district's developer, McCord Development, Inc., currently owns a site sufficient in size for the facility.

As part of the TPDES discharge permit application process, the TCEQ requires that we contact each wastewater discharge permit holder within a three-mile radius of the proposed facility to solicit information about available treatment capacity. Your permitted wastewater treatment plant is within the three-mile radius and we are therefore inquiring about the availability of capacity.

Please complete the short questionnaire below and return within 5 days to our office. You may also email your response to aburns@idseg.com. Please call me at (832) 590-7153 if you have any questions or need additional information. Thank you for your timely response to this matter.

Respectfully,

AnnMarie Burns, E.I.T
Design Engineer

Reply

Date: 12/10/24
Name of Permitee: HCMUD344
Address: _____

Capacity Available Now (Yes/No)? _____
Willing to Expand Plant (Yes/No)? _____
Date Available: _____

Terms (if capacity available): _____

Name of Person Responding: CINDY FIELDS
Title: ENGINEER
Telephone: 713-488-8343
Fax: _____

\\IDSEG.COM\FS\PROJECTS\1300\133901204 TO 145 GENERATION PARK EAST\ENG-PM\CORRES\ATTACHMENT CAPACITY INQUIRY LETTERS (HC MUD 344).DOCX

4. Permittee Name – Holy Trinity Episcopal School of Greater Houston Inc

Permit No. – WQ0014897001

Proof of Mailing Request via Certified Mail:



Copy of Request & Correspondence Received: See next page

IDS Engineering Group

December 3, 2024

Holy Trinity Episcopal School
11810 Lockwood Road
Houston, Texas 77044

To Whom it May Concern:

We are writing to you on behalf of Generation Park Management District which is seeking a Texas Pollutant Discharge Elimination System (TPDES) discharge permit for a proposed Wastewater Treatment Plant. We are in the process of preparing the permit application for this operation. The projected ultimate flow is 2.8 MGD and the district's developer, McCord Development, Inc., currently owns a site sufficient in size for the facility.

As part of the TPDES discharge permit application process, the TCEQ requires that we contact each wastewater discharge permit holder within a three-mile radius of the proposed facility to solicit information about available treatment capacity. Your permitted wastewater treatment plant is within the three-mile radius and we are therefore inquiring about the availability of capacity.

Please complete the short questionnaire below and return within 5 days to our office. You may also email your response to aburns@idseg.com. Please call me at (832) 590-7153 if you have any questions or need additional information. Thank you for your timely response to this matter.

Respectfully,

AnnMarie Burns, E.I.T
Design Engineer

Reply

Date: _____
Name of Permitee: _____
Address: _____
_____
Capacity Available Now (Yes/No)? _____
Willing to Expand Plant (Yes/No)? _____
Date Available: _____

Terms (if capacity available): _____
_____
_____
Name of Person Responding: _____
Title: _____
Telephone: _____
Fax: _____

X:\1300\133901204 TO 143 GENERATION PARK EAST\ENG-PM\CORRES\ATTACHMENT CAPACITY INQUIRY LETTERS (HOLY TRINITY EPISCOPAL SCHOOL).DOCX

No response received.

School no longer exists. See screenshot from website below (https://hteshouston.org/):



As of June 2023 Holy Trinity Episcopal School closed it's door to students. We are in the process of selling the property.

Student and Employment records requests can be placed by email or voicemail.

Email: info@hteshouston.org

Phone: 281-608-8252

Other requests will be forwarded to the responsible parties.

5. Permittee Name – Harris County Municipal Utility District No. 148

Permit No. – WQ0011818003

Proof of Mailing Request via Certified Mail:



Copy of Request & Correspondence Received: See next page

IDS Engineering Group

December 3, 2024

Harris County Municipal Utility District No. 148
c/o Langford Engineering, Inc.
Attn: Mr. Craig Hajovsky
1080 W Sam Houston Pkwy N, Suite 200
Houston, Texas 77043-5014

To Whom it May Concern:

We are writing to you on behalf of Generation Park Management District which is seeking a Texas Pollutant Discharge Elimination System (TPDES) discharge permit for a proposed Wastewater Treatment Plant. We are in the process of preparing the permit application for this operation. The projected ultimate flow is 2.8 MGD and the district's developer, McCord Development, Inc., currently owns a site sufficient in size for the facility.

As part of the TPDES discharge permit application process, the TCEQ requires that we contact each wastewater discharge permit holder within a three-mile radius of the proposed facility to solicit information about available treatment capacity. Your permitted wastewater treatment plant is within the three-mile radius and we are therefore inquiring about the availability of capacity.

Please complete the short questionnaire below and return within 5 days to our office. You may also email your response to aburns@idseg.com. Please call me at (832) 590-7153 if you have any questions or need additional information. Thank you for your timely response to this matter.

Respectfully,

AnnMarie Burns, E.I.T
Design Engineer

Reply

Date: 1/15/2025
Name of Permitee: Harris County MUD No. 148
Address: 2929 ALLEN PARKWAY, SUITE 3150
HOUSTON, TEXAS 77019
Capacity Available Now (Yes/No)? No
Willing to Expand Plant (Yes/No)? No
Date Available: N/A

Terms (if capacity available): N/A

Name of Person Responding: Craig A. Hajovsky, P.E.
Title: Engineer for the District
Telephone: 713-461-3530
Fax:

\\IDSEG.COM\FS\PROJECTS\1300\133901204 TO 143 GENERATION PARK EAST\ENG-PM\CORRES\ATTACHMENT CAPACITY INQUIRY LETTERS (HC MUD 148).DOCX

6. **Permittee Name – Christian Tabernacle of Houston Inc**

Permit No. – WQ0014513001

Proof of Mailing Request via Certified Mail:



Copy of Request & Correspondence Received: See next page for copy of request. No response received.

IDS Engineering Group

December 3, 2024

Inspire Church (Christian Tabernacle of Houston)
11727 E. Sam Houston Pkwy N.
Houston, Texas 77044

To Whom it May Concern:

We are writing to you on behalf of Generation Park Management District which is seeking a Texas Pollutant Discharge Elimination System (TPDES) discharge permit for a proposed Wastewater Treatment Plant. We are in the process of preparing the permit application for this operation. The projected ultimate flow is 2.8 MGD and the district's developer, McCord Development, Inc., currently owns a site sufficient in size for the facility.

As part of the TPDES discharge permit application process, the TCEQ requires that we contact each wastewater discharge permit holder within a three-mile radius of the proposed facility to solicit information about available treatment capacity. Your permitted wastewater treatment plant is within the three-mile radius and we are therefore inquiring about the availability of capacity.

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Respectfully,

AnnMarie Burns, E.I.T
Design Engineer

Reply

Date: _____
Name of Permitee: _____
Address: _____
_____
Capacity Available Now (Yes/No)? _____
Willing to Expand Plant (Yes/No)? _____
Date Available: _____

Terms (if capacity available): _____
_____
_____
Name of Person Responding: _____
Title: _____
Telephone: _____
Fax: _____

X:\1300\133901204 TO 143 GENERATION PARK EAST\ENG-PM\CORRES\ATTACHMENT CAPACITY INQUIRY LETTERS (CHRISTIAN TABERNACLE).DOCX

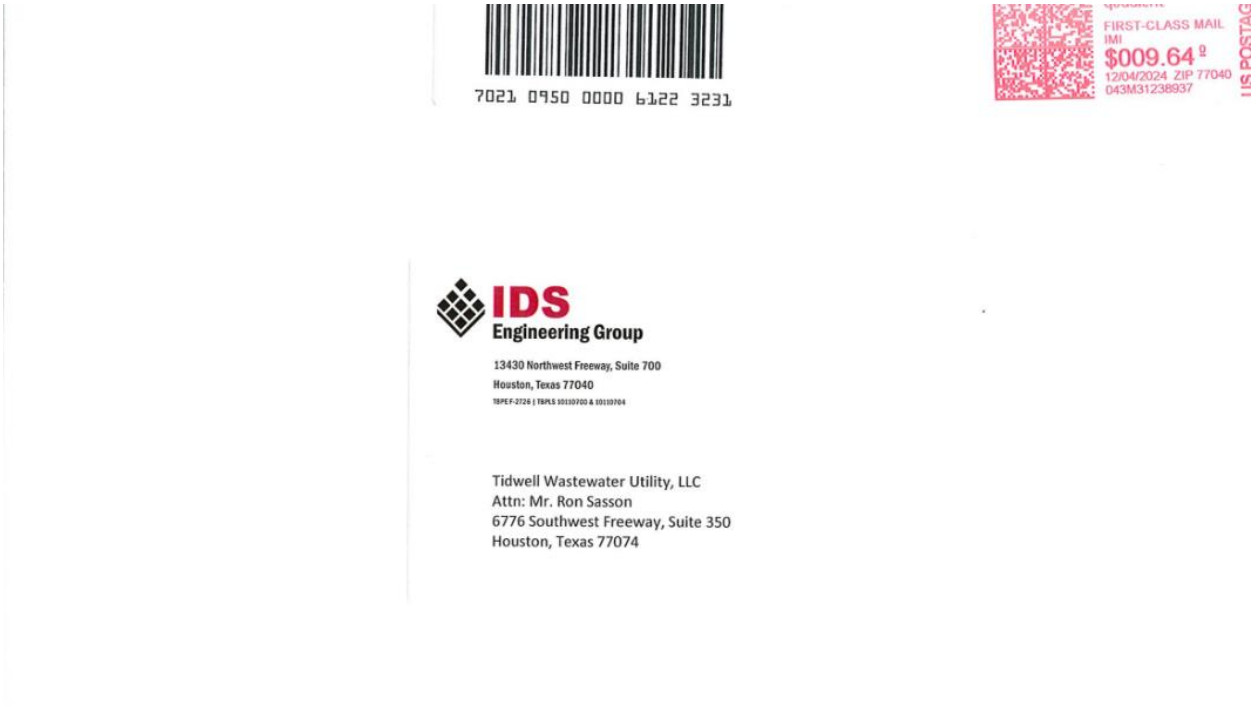
13430 Northwest Freeway, Suite 700, Houston, Texas 77040
TxEng Firm 2726 | TxSurv Firm 10110700
t 713.462.3178
idseg.com

infrastructure design solutions

7. Permittee Name – Tidwell Wastewater Utility LLC

Permit No. – WQ0014320001

Proof of Mailing Request via Certified Mail:



Copy of Request & Correspondence Received: See next page for copy of request. No response received.

IDS Engineering Group

December 3, 2024

Tidwell Wastewater Utility, LLC
Attn: Mr. Ron Sasson
6776 Southwest Freeway, Suite 350
Houston, Texas 77074

To Whom it May Concern:

We are writing to you on behalf of Generation Park Management District which is seeking a Texas Pollutant Discharge Elimination System (TPDES) discharge permit for a proposed Wastewater Treatment Plant. We are in the process of preparing the permit application for this operation. The projected ultimate flow is 2.8 MGD and the district's developer, McCord Development, Inc., currently owns a site sufficient in size for the facility.

As part of the TPDES discharge permit application process, the TCEQ requires that we contact each wastewater discharge permit holder within a three-mile radius of the proposed facility to solicit information about available treatment capacity. Your permitted wastewater treatment plant is within the three-mile radius and we are therefore inquiring about the availability of capacity.

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Respectfully,

AnnMarie Burns, E.I.T
Design Engineer

Reply

Date: _____
Name of Permitee: _____
Address: _____
_____
Capacity Available Now (Yes/No)? _____
Willing to Expand Plant (Yes/No)? _____
Date Available: _____

Terms (if capacity available): _____
_____
_____
Name of Person Responding: _____
Title: _____
Telephone: _____
Fax: _____

X:\1300\133901204 TO 143 GENERATION PARK EAST\ENG-PM\CORRES\ATTACHMENT CAPACITY INQUIRY LETTERS (TIDWELL WASTEWATER UTILITY LLC).DOCX

8. **Permittee Name – South Central Water Co**

Permit No. – WQ0014875002

Permit has been sold to: Undine Development

Proof of Mailing Request via Certified Mail: correspondence with Undine Development via email & phone call

Copy of Request & Correspondence Received: See next page

IDS Engineering Group

December 5, 2024

Undine Group, LLC
Attn: Mr. Jeff Goebel
17681 Telge Road
Cypress, Texas 77429

To Whom it May Concern:

We are writing to you on behalf of Generation Park Management District which is seeking a Texas Pollutant Discharge Elimination System (TPDES) discharge permit for a proposed Wastewater Treatment Plant. We are in the process of preparing the permit application for this operation. The projected ultimate flow is 2.8 MGD and the district's developer, McCord Development, Inc., currently owns a site sufficient in size for the facility.

As part of the TPDES discharge permit application process, the TCEQ requires that we contact each wastewater discharge permit holder within a three-mile radius of the proposed facility to solicit information about available treatment capacity. Your permitted wastewater treatment plant is within the three-mile radius and we are therefore inquiring about the availability of capacity.

Please complete the short questionnaire below and return within 5 days to our office. You may also email your response to aburns@idseg.com. Please call me at (832) 590-7153 if you have any questions or need additional information. Thank you for your timely response to this matter.

Respectfully,

AnnMarie S. Burns

AnnMarie Burns, E.I.T
Design Engineer

Reply

Date: 12/16/24
Name of Permittee: Undine
Address: 17681 Telge Rd Cypress TX 77429
Capacity Available Now (Yes/No)? NO
Willing to Expand Plant (Yes/No)? NO
Date Available: _____

Terms (if capacity available): _____

Name of Person Responding: Jeff Goebel
Title: Business Dev
Telephone: 713-724-9321
Fax: _____

X:\1300\133901204 TO 143 GENERATION PARK EAST\ENG-PM\CORRES\ATTACHMENT CAPACITY INQUIRY LETTERS (SOUTH CENTRAL WATER CO UNDINE).DOCX

13430 Northwest Freeway, Suite 700, Houston, Texas 77040
TxEng Firm 2726 | TxSurv Firm 10110700
t 713.462.3178
idseg.com

infrastructure design solutions

9. Permittee Name – Sheldon Road Municipal Utility District

Permit No. – WQ0010541002

Proof of Mailing Request via Certified Mail:



Copy of Request & Correspondence Received: See next page

IDS Engineering Group

December 3, 2024

Sheldon Road Municipal Utility District
c/o HDR Engineering, Inc.
Attn: Mr. Ryan Nokelby
4828 Loop Central Dr., Suite 800
Houston, Texas 77081-2220

To Whom it May Concern:

We are writing to you on behalf of Generation Park Management District which is seeking a Texas Pollutant Discharge Elimination System (TPDES) discharge permit for a proposed Wastewater Treatment Plant. We are in the process of preparing the permit application for this operation. The projected ultimate flow is 2.8 MGD and the district's developer, McCord Development, Inc., currently owns a site sufficient in size for the facility.

As part of the TPDES discharge permit application process, the TCEQ requires that we contact each wastewater discharge permit holder within a three-mile radius of the proposed facility to solicit information about available treatment capacity. Your permitted wastewater treatment plant is within the three-mile radius and we are therefore inquiring about the availability of capacity.

Please complete the short questionnaire below and return within 5 days to our office. You may also email your response to aburns@idseg.com. Please call me at (832) 590-7153 if you have any questions or need additional information. Thank you for your timely response to this matter.

Respectfully,

AnnMarie Burns, E.I.T
Design Engineer

Reply

Date: 12/20/24
Name of Permitee: Sheldon Road MUD
Address: 9419 Lamkin Road, Houston, Tx 77049
Capacity Available Now (Yes/No)? (No)
Willing to Expand Plant (Yes/No)? (No)
Date Available: N/A

Terms (if capacity available): N/A

Name of Person Responding: Ryan Nokelby, P.E.
Title: District Engineer
Telephone: 713-622-9264
Fax: 713-622-9265

X:\1300\133901204 TO 143 GENERATION PARK EAST\ENG-PM\CORRES\ATTACHMENT CAPACITY INQUIRY LETTERS (SHELDON RD MUD).DOCX

13430 Northwest Freeway, Suite 700, Houston, Texas 77040
TxEng Firm 2726 | TxSurv Firm 10110700
t 713.462.3178
idseg.com

infrastructure design solutions

ATTACHMENT NO. 16

DESIGN CALCULATIONS

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase I - 0.120 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Design Parameters

Influent Flow Characteristics - The hydraulic design of the facility must ensure that the plant will operate under the most extreme conditions anticipated. The plant process and hydraulic design for this facility are as follows:

Average Design Flow	0.12	MGD	Influent BOD_5	350	mg / l
	83	gpm	Influent BOD5	350	lbs / day
Peaking Factor	4		Influent TSS	250	mg / l
Peak Flow	0.48	MGD			
	333	gpm	Influent NH3-N	75	mg/L

Effluent Characteristics

BOD_5	S_e	10	mg/L
TSS	TSS_e	15	mg/L
NH_3-N	N_e	3	mg/L

The calculations below are based on minimum TCEQ sizing parameters but may not reflect actual treatment unit dimensions. Values shown are the minimum that will be provided.

Aeration

Criteria	*Value*	*Regulation Section*
Maximum Organic Loading Rate (lbs BOD5/day/1000 cu ft)	35	217.154(b)(Table F.1)
Reactor MLSSS Level at normal operating level (mg/l)	3000-5000	

Aeration Volume Required	10,008	cu. ft.

Volume Provided:

Length	40	ft
Width	12	ft
SWD	10.45	ft
# Tanks	2	
Volume Provided	10,032	cu. ft.
Effective Organic Loading	34.92	lbs BOD_5/day/1000 cu. ft.

Clarifier

Criteria	*Value*		*Regulation Section*
TCEQ Maximum Surface Loading (Qpk)	1200	gal/day/s.f. at peak flow	217.154(c)(Table F.2)
TCEQ Minimum Detention Time (Qpk)	1.8	hours at peak flow	217.154(c)(Table F.2)
TCEQ Maximum Weir Loading (Qpk)	30000	gal/day/ft	217.152(c)(4)
TCEQ Minimum Side Water Depth (SWD)	10	ft	217.152(g)(2)(A)/(B)
TCEQ Maximum Stilling Well Velocity	0.15	ft/sec	217.152(a)(4)

Surface Area Required Required	400	sq. ft.
Volume Required	4813	cu. ft.
Length of weir required	16	ft.

Volume Provided:

Diameter	35	ft
SWD	10.00	ft
# Tanks	1	
Weir Diameter	33	ft
Surface Area Provided	962	sq. ft.
Volume Provided	9,621	cu. ft.
Weir length provided	104	ft.

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase I - 0.120 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

CHEMICAL (CHLORINE) DISINFECTION

Chlorination

				Regulation Section
Minimum Cl_2 Contact Time		20	minutes	217.281(b)(1)
Chlorine basin volume required		6,667	gallons	
Phase I				
Length	20 ft			
Width	12 ft			
Depth @ design	8.58 ft			
Number of Basins	1			
Volume Provided	15,403 gallons			
Volume provided greater than or equal to required volume		YES		
TCEQ min. design Cl_2 dose		8	mg / l	217.272(b)
Cylinder size		150	lbs	
Withdrawal factor		1	(Use 1.0 for 150 # cylinder and 8.0 for 2000 # cylinders)	217.273(a)(1)
Threshold Temperatures (Low Ambient Temperature?)		65	Use 65 for indoor storage	217.273(a)(1)
Capacity of chlorine disinfection system @ max. flow		32	lbs per day	217.272(a) K.1
Avg. daily chlorine usage @ average flow		8	lbs per day	
Max. withdrawal rate per cylinder		65	lbs per day (Formula for vacuum systems only)	217.273(a)(1) K.2
No. of Cylinders required per bank		1		
One bank of cylinders will last		19	days at average flow and typical chlorine usage	

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase I - 0.120 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Digesters

TCEQ Minimum Sludge Retention Time	40	days	217.249(t)(4)(B)(Table J.2)
TCEQ Min. Volatile Solids Loading Rate	100	lb / day / 1,000 cu. ft.	217.249(t)(7)(D)
TCEQ Max. Volatile Solids Loading Rate	200	lb / day / 1,000 cu. ft.	217.249(t)(7)(D)

Influent BOD_5	350	lb/ day
Effluent BOD_5	10	lb/ day
BOD_5 to Digester	340	lb/ day

Volume Required from Metcalf and Eddy, "Wastewater Engineering," 4th Edition

Hydraulic Detention Time of the Aeration Basins

$$\theta\,(\text{Gal}) = \left(\frac{\text{Volume of Aeration Basins in Gallons}}{\text{Average Influent Flow in Gallons / Day}}\right) * 24\ \text{hrs/day}$$

BOD_5 *Utilized*

$$BOD_5 utilized\left(\text{lbs } BOD_5/\text{day}\right) = Q * (S_i - S_e)$$

NH_3-N *Utilized*

$$NH_3 utilized\left(\text{lbs } NH_3/\text{day}\right) = Q * (N_i - N_e)$$

Hydraulic Detention Time of Aeration Basins / SBRs	15.01	Hours
BOD_5 *utilized*	340	lb BOD_5 / day
NH_3 *utilized*	72	lb NH_3-N / day

S	BOD_5 Concentration		
N	NH_3-N Concentration		
i	Influent (subscript)		
e	Effluent (subscript)		
Q	Average Design Flow		
Q_{design}	Peak Flow		
Q_W	Waste Sludge Flow to Digester		
X_W	Waste Sludge Concentration	8,500	mg/L
Y	Yield Coefficient	0.6	VSS/lb BOD_5
Y_n	Yield Coefficient (nitrification)	0.15	VSS/lb NH_3-N
k_d	Endogenous Decay Coefficent	0.06	/day
k_{dn}	Endogenous Decay Coeff. (nitrification)	0.30	/day
P_n	Volatile Fraction of X	0.70	
	MLVSS/MLSS Ratio	0.70	
S_{sl}	Specific Gravity of Sludge	1.005	
X	Sludge Concentration in Digester	25,000	mg/L
P_s	Percent Solids in Digester	2.5	
$TSS_{\%}$	% of TSS that is inert	50	%
ρ_w	Specific Weight of Water	8.34	lbs / gallon

Typical Values

Variable	Range		Source
X_W	0.8	2.5	M&E, 4th ed., pg. 14
Y	0.4	0.8	M&E, 4th ed., pg. 58
Y_n	0.04	0.29	WEF MoP 8, Vol I, p
k_d	0.06	0.15	M&E, 4th ed., pg. 58
k_{dn}	0.3	3.0	WEF MoP 8, Vol I, p
P_n	0.59	0.88	M&E, 4th ed., pg. 14
S_{sl}	1.005	1.005	M&E, 4th ed., pg. 14
X	15,000	40,000	M&E, 4th ed., pg. 14
P_s	1.5	4	M&E, 4th ed., pg. 14

Carbonaceous Yield Coefficient Observed — M&E, 4th ed. Pg. 595

$$Y_{c,obs} = \left(\frac{Y}{1 + k_d * \theta}\right)$$

Nitrogenous Yield Coefficient — M&E, 4th ed. Pg. 595

$$Y_{n,obs} = \left(\frac{Y_n}{1 + k_{dn} * \theta}\right)$$

Carbonaceous Sludge Production (MLVSS) — M&E, 4th ed. Pg. 681

$$P_{x,c}\left(\text{lb/day}\right) = Y_{c,obs} * Q * (S_i - S_e) = Y_{c,obs} * BOD_5 utilized$$

Nitrogenous Sludge Production (MLVSS) — M&E, 4th ed. Pg. 681

$$P_{x,n}\left(\text{lb/day}\right) = Y_{n,obs} * Q * (N_i - N_e) = Y_{n,obs} * NH_3 utilized$$

Inert Sludge Production — M&E, 4th ed. Pg. 681

$$P_{x,i}\left(\text{lb/day}\right) = Q_{design} * TSS_{\%} * (TSS_i - TSS_e) * 8.34$$

Total Sludge Production — M&E, 4th ed. Pg. 682

$$P_x\left(\text{lb/day}\right) = P_{x,c} + P_{x,n} + P_{x,i}$$

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase I - 0.120 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Waste Sludge Flow to Digester — M&E, 4th ed. Pg. 1458

$$Q_w = \frac{\text{Total Sludge Production, Dry Solids}}{\rho_w S_{sl} P_s}$$

Required Volume — M&E, 4th ed. Pg. 1537

$$V\,(\text{Gal}) = \left(\frac{Q_w}{X}\right)\left(\frac{(X_w + Y * S_i)}{k_d * P_n + \frac{1}{SRT}}\right)$$

$Y_{c,obs}$	Carbonaceous Yield Coefficient	0.58	
$P_{x,c}$	Carbonaceous Sludge Production	197	lb / day (MLVSS)
		281	lb / day (MLSS)
$Y_{n,obs}$	Nitrogenous Yield Coefficient	0.13	
$P_{x,n}$	Nitrogenous Sludge Production	9.10	lb / day (MLVSS)
		13.00	lb / day (MLSS)
Inert Sludge Production (TSS), Dry Solids		118	lb / day
Total Sudge Production, Volatile Solids		206	lb / day
Volatile Solids Loading Rate		41	lb / day / 1,000 cu. ft.
Total Sudge Production, Dry Solids		500	lb / day
Q_W	Waste Sludge Flow to Digester	2,386	gallons / day
Digester Volume Required		12,408	gallons
		1,659	cu. ft.

Volume Provided:		
Length	20	ft
Width	12	ft
SWD	10.5	
# Tanks	2	
Volume	5,040	cu. ft.

Total Digester Vol. available	5,040	cu. ft.
Volume greater than required	YES	

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase I - 0.120 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Air Requirements

Criteria			*Value*	*Regulation*
Air requirements for Aeration basins	$O_2R = \frac{1.2(BOD_5) + 4.3(NH_3 - N)}{BOD_5}$	2.12	lb oxygen per lb BOD	217.155(a)(3)
Air requirements for digesters		30	SCFM /1000 cu. ft.	217.249(d)(1)(C)***
Air requirements for post aeration		20	SCFM /1000 cu. ft.	not regulated by TCEQ
Minimum mixing requirements		0.12	SCFM /sq. ft.	217.155 (b)(3)(B)
Diffuser transfer efficiency		6.5%	(In wastewater)	217.155 (b)(2)(B)
Design Submergence		10.00	feet	
Diffuser Submergence Correction Factor		1.56	@ design flow depth	217.155 (b)(2)(D)

Corrected Air Flowrate @ Design Submergence = 718 SCFM

$$= \frac{\{(\text{lb BOD}) * (\text{lb Oxygen / lb BOD})\} * \text{Correction Factor}}{(\text{T.E.})\ (\text{lb Oxygen / lb air})\ (\text{lb air / cu. ft.})\ (\text{min / day})}$$

217.155 (b)(2)(C)

Air required for digesters: 151 SCFM

Air required for post aeration 41 SCFM

Air Requiremetns for air lift pumps 40 SCFM

Total Air Requiremetns 950

Use (3) 500 SCFM blowers

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase II - 1.05 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Design Parameters

Influent Flow Characteristics - The hydraulic design of the facility must ensure that the plant will operate under the most extreme conditions anticipated. The plant process and hydraulic design for this facility are as follows:

Average Design Flow	1.05	MGD	Influent BOD_5	350	mg / l
	729	gpm	Influent BOD5	3065	lbs / day
Peaking Factor	4		Influent TSS	250	mg / l
Peak Flow	4.2	MGD			
	2,917	gpm	Influent NH3-N	75	mg/L

Effluent Characteristics

BOD_5	S_e	10	mg/L
TSS	TSS_e	15	mg/L
NH_3-N	N_e	3	mg/L

The calculations below are based on minimum TCEQ sizing parameters but may not reflect actual treatment unit dimensions. Values shown are the minimum that will be provided.

SBR FOUR BASIN SYSTEM

Criteria	*Value*	*Regulation Section*
Maximum Organic Loading Rate (lbs BOD5/day/1000 cu ft)	35	217.156(a)(6)
Reactor MLSSS Level at normal operating level (mg/l)	3000-5000	217.156(a)(7)
Min Side Water Depth (ft)	12	217.156(a)(9)

Aeration Volume Required 87,570 cu. ft.

Volume Provided:

SBR Cycle Time @ Desing ADF	288	min		
SBR Cycle Time @ Peak Flow	144	min		
			Design Side Water Depths	
Length	75	ft	24.00	ft - Design max water level at peak flow w/ all basins operating
Width	25	ft	17.74	ft - Water level at design flow w/ all basins operating
			18.99	ft - Water level at design flow w/ 1 basin out of service
			21.49	ft - Calculated max water level at peak flow w/ all basins operating
			23.98	ft - Calculated max water level at peak flow w/ 1 basin out of service
# Tanks	4		14.00	ft - Minimum water level

Volume (w/ one basin out of service per TCEQ 217.156 (c 106,825 cu. ft.

Effective Organic Loading with one basin out of service at design water depth 28.69 lbs BOD_5/day/1000 cu. ft.

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase II - 1.05 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

CHEMICAL (CHLORINE) DISINFECTION

Chlorination

				Regulation Section
Minimum Cl_2 Contact Time		20	minutes	217.281(b)(1)
Max. Decant Rate per SBR Basins		3,889		
Maximum No. of Basins Decanting at one time		1		
Chlorine basin volume required at max. decant rate		77,778	gallons	
Phase I				
Length	58 ft			
Width	8 ft			
Depth @ design	11.5 ft			
Number of Basins	2			
Volume Provided	79,827 gallons			
Volume provided greater than or equal to required volume		YES		
Max. Decant Flow Rate		3,889	gpm	
Daily Average Flow		729	gpm	
TCEQ min. design Cl_2 dose		8	mg / l	217.272(b)
Cylinder size		2000	lbs	
Withdrawal factor		8	(Use 1.0 for 150 # cylinder and 8.0 for 2000 # cylinders)	217.273(a)(1)
Threshold Temperatures (Low Ambient Temperature?)		65	Use 65 for indoor storage	217.273(a)(1)
Capacity of chlorine disinfection system @ max. flow		374	lbs per day	217.272(a) K.1
Avg. daily chlorine usage @ average flow		70	lbs per day	
Max. withdrawal rate per cylinder		520	lbs per day (Formula for vacuum systems only)	217.273(a)(1) K.2
No. of Cylinders required per bank		1		
One bank of cylinders will last		29	days at average flow and typical chlorine usage	

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase II - 1.05 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Digesters

TCEQ Minimum Sludge Retention Time	40	days	217.249(t)(4)(B)(Table J.2)
TCEQ Min. Volatile Solids Loading Rate	100	lb / day / 1,000 cu. ft.	217.249(t)(7)(D)
TCEQ Max. Volatile Solids Loading Rate	200	lb / day / 1,000 cu. ft.	217.249(t)(7)(D)

Influent BOD_5	3065	lb/ day
Effluent BOD_5	88	lb/ day
BOD_5 to Digester	2977	lb/ day

Volume Required from Metcalf and Eddy, "Wastewater Engineering," 4th Edition

Hydraulic Detention Time of the Aeration Basins

$$\theta\,(\text{Gal}) = \left(\frac{\text{Volume of Aeration Basins in Gallons}}{\text{Average Influent Flow in Gallons / Day}}\right) * 24\ \text{hrs/day}$$

BOD_5 *Utilized*

$$BOD_5 utilized\left(\text{lbs } BOD_5/\text{day}\right) = Q * (S_i - S_e)$$

NH_3-N *Utilized*

$$NH_3 utilized\left(\text{lbs } NH_3/\text{day}\right) = Q * (N_i - N_e)$$

Hydraulic Detention Time of Aeration Basins / SBRs	18.26	Hours
BOD_5 *utilized*	2,977	lb BOD_5 / day
NH_3 *utilized*	631	lb NH_3-N / day

S	BOD_5 Concentration			
N	NH_3-N Concentration			
i	Influent (subscript)			
e	Effluent (subscript)			
Q	Average Design Flow			
Q_{design}	Peak Flow			
Q_W	Waste Sludge Flow to Digester			
X_W	Waste Sludge Concentration	8,500	mg/L	
Y	Yield Coefficient	0.6	VSS/lb BOD_5	
Y_n	Yield Coefficient (nitrification)	0.15	VSS/lb NH_3-N	
k_d	Endogenous Decay Coefficent	0.06	/day	
k_{dn}	Endogenous Decay Coeff. (nitrification)	0.30	/day	
P_n	Volatile Fraction of X	0.70		
	MLVSS/MLSS Ratio	0.70		
S_{sl}	Specific Gravity of Sludge	1.005		
X	Sludge Concentration in Digester	25,000	mg/L	
P_s	Percent Solids in Digester	2.5		
$TSS_{\%}$	% of TSS that is inert	50	%	
ρ_w	Specific Weight of Water	8.34	lbs / gallon	

Typical Values

Variable	Range		Source
X_W	0.8	2.5	M&E, 4th ed., pg. 14
Y	0.4	0.8	M&E, 4th ed., pg. 58
Y_n	0.04	0.29	WEF MoP 8, Vol I, p
k_d	0.06	0.15	M&E, 4th ed., pg. 58
k_{dn}	0.3	3.0	WEF MoP 8, Vol I, p
P_n	0.59	0.88	M&E, 4th ed., pg. 14
S_{sl}	1.005	1.005	M&E, 4th ed., pg. 14
X	15,000	40,000	M&E, 4th ed., pg. 14
P_s	1.5	4	M&E, 4th ed., pg. 14

Carbonaceous Yield Coefficient Observed — M&E, 4th ed. Pg. 595

$$Y_{c,obs} = \left(\frac{Y}{1 + k_d * \theta}\right)$$

Nitrogenous Yield Coefficient — M&E, 4th ed. Pg. 595

$$Y_{n,obs} = \left(\frac{Y_n}{1 + k_{dn} * \theta}\right)$$

Carbonaceous Sludge Production (MLVSS) — M&E, 4th ed. Pg. 681

$$P_{x,c}\left(\text{lb/day}\right) = Y_{c,obs} * Q * (S_i - S_e) = Y_{c,obs} * BOD_5 utilized$$

Nitrogenous Sludge Production (MLVSS) — M&E, 4th ed. Pg. 681

$$P_{x,n}\left(\text{lb/day}\right) = Y_{n,obs} * Q * (N_i - N_e) = Y_{n,obs} * NH_3 utilized$$

Inert Sludge Production — M&E, 4th ed. Pg. 681

$$P_{x,i}\left(\text{lb/day}\right) = Q_{design} * TSS_{\%} * (TSS_i - TSS_e) * 8.34$$

Total Sludge Production — M&E, 4th ed. Pg. 682

$$P_x\left(\text{lb/day}\right) = P_{x,c} + P_{x,n} + P_{x,i}$$

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase II - 1.05 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Waste Sludge Flow to Digester — M&E, 4th ed. Pg. 1458

$$Q_w = \frac{\text{Total Sludge Production, Dry Solids}}{\rho_w S_{sl} P_s}$$

Required Volume — M&E, 4th ed. Pg. 1537

$$V\,(\text{Gal}) = \left(\frac{Q_w}{X}\right)\left(\frac{(X_w + Y * S_i)}{k_d * P_n + \frac{1}{SRT}}\right)$$

$Y_{c,obs}$	Carbonaceous Yield Coefficient	0.57	
$P_{x,c}$	Carbonaceous Sludge Production	1,708	lb / day (MLVSS)
		2,441	lb / day (MLSS)
$Y_{n,obs}$	Nitrogenous Yield Coefficient	0.12	
$P_{x,n}$	Nitrogenous Sludge Production	77.00	lb / day (MLVSS)
		110.00	lb / day (MLSS)
Inert Sludge Production (TSS), Dry Solids		1029	lb / day
Total Sudge Production, Volatile Solids		1785	lb / day
Volatile Solids Loading Rate		118	lb / day / 1,000 cu. ft.
Total Sudge Production, Dry Solids		4336	lb / day
Q_W	Waste Sludge Flow to Digester	20,693	gallons / day
Digester Volume Required		107,602	gallons
		14,385	cu. ft.

Volume Provided:		
Length	60	ft
Width	12	ft
SWD	10.5	
# Tanks	2	
Volume	15,120	cu. ft.

Total Digester Vol. available	15,120	cu. ft.
Volume greater than required	YES	

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase II - 1.05 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Air Requirements

Criteria		*Value*		*Regulation*
Air requirements for SBR basins	$O_2R = \frac{1.2(BOD_5) + 4.3(NH_3 - N)}{BOD_5}$	2.12	lb oxygen per lb BOD	217.155(a)(3)
Air requirements for digesters		30	SCFM /1000 cu. ft.	217.249(d)(1)(C)***
Air requirements for post aeration		10	SCFM /1000 cu. ft.	not regulated by TCEQ
Minimum mixing requirements		0.12	SCFM /sq. ft.	217.155 (b)(3)(B)
Diffuser transfer efficiency		11.7%	(In wastewater)	217.155 (b)(2)(B)
Design Submergence		17.74	feet	
Diffuser Submergence Correction Factor		0.75	@ design flow depth	217.155 (b)(2)(D)
Number of Basins, with one out of service		3		
Design Aeration Time		0.50	days/basin	

Corrected Air Flowrate @ Design Submergence = 1668 SCFM

$$= \frac{\{(\text{lb BOD}) * (\text{lb Oxygen / lb BOD})\} * \text{Correction Factor}}{(\text{T.E.})\ (\text{lb Oxygen / lb air})\ (\text{lb air / cu. ft.})\ (\text{min / day})}$$

217.155 (b)(2)(C)

Minimum Air Flowrate @ Design Aeration Time Per Basin = 1112 SCFM per basin

$$= \frac{\text{Corrected Air Flow Rate}}{\text{Design Aeration Time X No. of Basins}}$$

Verify mixing requirements:			0.22	OK	
Provide	4	SBR Blowers @	1112	SCFM	each (1 per basin w/ 1 standby)
Maximum water depth over diffuser			25	feet	top of SBR basin minus 1 ft for hieght of diffuse
Pressure loss in piping			0.7	psi	
Pressure @ blowers			11.3	psi	
Air required for digesters:			454	SCFM	
Provide	3	Digester Blowers @	227	SCFM	each (1 per basin w/ 1 standby)
Air required for post aeration			107	SCFM	
Provide	2	Post-Air Blower(s) @	53	SCFM	

IDS Engineering Group

Project: Generation Park East WWTP
Job Number:
Design By: VHW
Checked By: KP
Date: 2/25/2025

Description: Phase II - 1.05 MGD

Final Process Calculations

Decanter Sizing Per TCEQ Chapter 217.156(b)(8), requiring the decant system to accommodate the design flow with a constant cycle time with the largest tank out of service

Basin Dimentions

Width	25	feet
Length	75	feet
Min SWD	14	feet
Max SWD	24.5	feet

Condition No. 1: -Basins in service 4 basins All Basins in Service
-Decant flow of 3,889 gpm

% of Design Flow	Flow Rate MGD	No. of Cycles/day	Total Cycle Time minutes	Batch Volume Gallon	Fill React minutes	React minutes	Fill Settle minutes	Settle minutes	Fill Decant minutes	Decant minutes	Fill Idle minutes	Idle minutes	Total Fill minutes	Total React minutes	Total Settle minutes	Total Decant minutes	Volume Decant gal	Decant Depth ft.	Basin water Surface Elevation ft
100%	1.05	5.00	288	52,500	173	0	45	0	14	0	56.7	0	288	173	45	14	52,500	3.7	17.74
150%	1.58	5.00	288	78,750	173	0	45	0	20	0	50.0	0	288	173	45	20	78,750	5.6	19.61
200%	2.10	5.00	288	105,000	173	0	45	0	27	0	43.2	0	288	173	45	27	105,000	7.5	21.49
250%	2.63	6.66	216	98,536	130	0	45	0	25	0	16	0	216	130	45	25	98,536	7.0	21.03
300%	3.15	6.66	216	118,243	130	0	45	0	30	0	11	0	216	130	45	30	118,243	8.4	22.43
350%	3.68	10.00	144	91,875	71	0	45	0	24	0	4	0	144	71	45	24	91,875	6.6	20.55
400%	4.20	10.00	144	105,000	67	0	45	0	27	0	5	0	144	67	45	27	105,000	7.5	21.49

Condition No. 2: -Basins in service 3 basins One Basin Out of Service
-Decant flow of 3,889 gpm

% of Design Flow	Flow Rate MGD	No. of Cycles/day	Total Cycle Time minutes	Batch Volume Gallon	Fill React minutes	React minutes	Fill Settle minutes	Settle minutes	Fill Decant minutes	Decant minutes	Fill Idle minutes	Idle minutes	Total Fill minutes	Total React minutes	Total Settle minutes	Total Decant minutes	Volume Decant gal	Decant Depth ft.	Basin water Surface Elevation ft
100%	1.05	5.00	288	70,000	144	0	45	0	18	0	81.0	0	288	144	45	18	70,000	5.0	18.99
150%	1.58	5.00	288	105,000	144	0	45	0	27	0	72.0	0	288	144	45	27	105,000	7.5	21.49
200%	2.10	5.00	288	140,000	144	0	45	0	36	0	63.0	0	288	144	45	36	140,000	10.0	23.98
250%	2.63	6.66	216	131,381	108	0	45	0	34	0	29	0	216	108	45	34	131,381	9.4	23.37
300%	3.15	10.00	144	105,000	72	0	45	0	27	0	0	0	144	72	45	27	105,000	7.5	21.49
350%	3.68	10.00	144	122,500	68	0	45	0	32	0	-1	0	144	68	45	32	122,500	8.7	22.73
400%	4.20	10.00	144	140,000	63	0	45	0	36	0	0	0	144	63	45	36	140,000	10.0	23.98

Decant Size from Above 3,889 gpm

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase III - 2.8 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Design Parameters

Influent Flow Characteristics - The hydraulic design of the facility must ensure that the plant will operate under the most extreme conditions anticipated. The plant process and hydraulic design for this facility are as follows:

Average Design Flow	2.8	MGD	Influent BOD_5	350	mg / l
	1,944	gpm	Influent BOD5	8173	lbs / day
Peaking Factor	4		Influent TSS	300	mg / l
Peak Flow	11.2	MGD			
	7,778	gpm	Influent NH3-N	75	mg/L

Effluent Characteristics

BOD_5	S_e	10	mg/L
TSS	TSS_e	15	mg/L
NH_3-N	N_e	3	mg/L

The calculations below are based on minimum TCEQ sizing parameters but may not reflect actual treatment unit dimensions. Values shown are the minimum that will be provided.

SBR FOUR BASIN SYSTEM

Criteria	*Value*	*Regulation Section*
Maximum Organic Loading Rate (lbs BOD5/day/1000 cu ft)	35	217.156(a)(6)
Reactor MLSSS Level at normal operating level (mg/l)	3000-5000	217.156(a)(7)
Min Side Water Depth (ft)	12	217.156(a)(9)

Aeration Volume Required 233,520 cu. ft.

Volume Provided:

SBR Cycle Time @ Desing ADF	288	min		
SBR Cycle Time @ Peak Flow	144	min		
			Design Side Water Depths	
Length	75	ft	24.00	ft - Design max water level at peak flow w/ all basins operating
Width	25	ft	17.44	ft - Water level at design flow w/ all basins operating
			17.99	ft - Water level at design flow w/ 1 basin out of service
			21.87	ft - Calculated max water level at peak flow w/ all basins operating
			22.98	ft - Calculated max water level at peak flow w/ 1 basin out of service
# Tanks	9		13.00	ft - Minimum water level

Volume (w/ one basin out of service per TCEQ 217.156 (c 269,866 cu. ft.

Effective Organic Loading with one basin out of service at design water depth 30.29 lbs BOD_5/day/1000 cu. ft.

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase III - 2.8 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

CHEMICAL (CHLORINE) DISINFECTION

Chlorination

				Regulation Section
Minimum Cl_2 Contact Time		20	minutes	217.281(b)(1)
Max. Decant Rate per SBR Basins		3,889		
Maximum No. of Basins Decanting at one time		2		
Chlorine basin volume required at max. decant rate		155,556	gallons	
Phase I				
Length	58 ft			
Width	8 ft			
Depth @ design	11.5 ft			
Number of Basins	4			
Volume Provided	159,653 gallons			
Volume provided greater than or equal to required volume		YES		
Max. Decant Flow Rate		7,778	gpm	
Daily Average Flow		1,944	gpm	
TCEQ min. design Cl_2 dose		8	mg / l	217.272(b)
Cylinder size		2000	lbs	
Withdrawal factor		8	(Use 1.0 for 150 # cylinder and 8.0 for 2000 # cylinders)	217.273(a)(1)
Threshold Temperatures (Low Ambient Temperature?)		65	Use 65 for indoor storage	217.273(a)(1)
Capacity of chlorine disinfection system @ max. flow		747	lbs per day	217.272(a) K.1
Avg. daily chlorine usage @ average flow		187	lbs per day	
Max. withdrawal rate per cylinder		520	lbs per day (Formula for vacuum systems only)	217.273(a)(1) K.2
No. of Cylinders required per bank		2		
One bank of cylinders will last		21	days at average flow and typical chlorine usage	

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase III - 2.8 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Digesters

TCEQ Minimum Sludge Retention Time	40	days	217.249(t)(4)(B)(Table J.2)
TCEQ Min. Volatile Solids Loading Rate	100	lb / day / 1,000 cu. ft.	217.249(t)(7)(D)
TCEQ Max. Volatile Solids Loading Rate	200	lb / day / 1,000 cu. ft.	217.249(t)(7)(D)

Influent BOD_5	8173	lb/ day
Effluent BOD_5	234	lb/ day
BOD_5 to Digester	7940	lb/ day

Volume Required from Metcalf and Eddy, "Wastewater Engineering," 4th Edition

Hydraulic Detention Time of the Aeration Basins

$$\theta\,(\text{Gal}) = \left(\frac{\text{Volume of Aeration Basins in Gallons}}{\text{Average Influent Flow in Gallons / Day}}\right) * 24\ \text{hrs/day}$$

BOD_5 *Utilized*

$$BOD_5 utilized\left(\text{lbs } BOD_5/\text{day}\right) = Q * (S_i - S_e)$$

NH_3-N *Utilized*

$$NH_3 utilized\left(\text{lbs } NH_3/\text{day}\right) = Q * (N_i - N_e)$$

Hydraulic Detention Time of Aeration Basins / SBRs	17.30	Hours
BOD_5 *utilized*	7,940	lb BOD_5 / day
NH_3 *utilized*	1,681	lb NH_3-N / day

S	BOD_5 Concentration			
N	NH_3-N Concentration			
i	Influent (subscript)			
e	Effluent (subscript)			
Q	Average Design Flow			
Q_{design}	Peak Flow			
Q_W	Waste Sludge Flow to Digester			
X_W	Waste Sludge Concentration	8,500	mg/L	
Y	Yield Coefficient	0.6	VSS/lb BOD_5	
Y_n	Yield Coefficient (nitrification)	0.15	VSS/lb NH_3-N	
k_d	Endogenous Decay Coefficent	0.06	/day	
k_{dn}	Endogenous Decay Coeff. (nitrification)	0.30	/day	
P_n	Volatile Fraction of X	0.70		
	MLVSS/MLSS Ratio	0.70		
S_{sl}	Specific Gravity of Sludge	1.005		
X	Sludge Concentration in Digester	25,000	mg/L	
P_s	Percent Solids in Digester	2.5		
$TSS_{\%}$	% of TSS that is inert	50	%	
ρ_w	Specific Weight of Water	8.34	lbs / gallon	

Typical Values

Variable	Range		Source
X_W	0.8	2.5	M&E, 4th ed., pg. 14
Y	0.4	0.8	M&E, 4th ed., pg. 58
Y_n	0.04	0.29	WEF MoP 8, Vol I, p
k_d	0.06	0.15	M&E, 4th ed., pg. 58
k_{dn}	0.3	3.0	WEF MoP 8, Vol I, p
P_n	0.59	0.88	M&E, 4th ed., pg. 14
S_{sl}	1.005	1.005	M&E, 4th ed., pg. 14
X	15,000	40,000	M&E, 4th ed., pg. 14
P_s	1.5	4	M&E, 4th ed., pg. 14

Carbonaceous Yield Coefficient Observed — M&E, 4th ed. Pg. 595

$$Y_{c,obs} = \left(\frac{Y}{1 + k_d * \theta}\right)$$

Nitrogenous Yield Coefficient — M&E, 4th ed. Pg. 595

$$Y_{n,obs} = \left(\frac{Y_n}{1 + k_{dn} * \theta}\right)$$

Carbonaceous Sludge Production (MLVSS) — M&E, 4th ed. Pg. 681

$$P_{x,c}\left(\text{lb/day}\right) = Y_{c,obs} * Q * (S_i - S_e) = Y_{c,obs} * BOD_5 utilized$$

Nitrogenous Sludge Production (MLVSS) — M&E, 4th ed. Pg. 681

$$P_{x,n}\left(\text{lb/day}\right) = Y_{n,obs} * Q * (N_i - N_e) = Y_{n,obs} * NH_3 utilized$$

Inert Sludge Production — M&E, 4th ed. Pg. 681

$$P_{x,i}\left(\text{lb/day}\right) = Q_{design} * TSS_{\%} * (TSS_i - TSS_e) * 8.34$$

Total Sludge Production — M&E, 4th ed. Pg. 682

$$P_x\left(\text{lb/day}\right) = P_{x,c} + P_{x,n} + P_{x,i}$$

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase III - 2.8 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Waste Sludge Flow to Digester — M&E, 4th ed. Pg. 1458

$$Q_w = \frac{\text{Total Sludge Production, Dry Solids}}{\rho_w S_{sl} P_s}$$

Required Volume — M&E, 4th ed. Pg. 1537

$$V\,(\text{Gal}) = \left(\frac{Q_w}{X}\right)\left(\frac{(X_w + Y * S_i)}{k_d * P_n + \frac{1}{SRT}}\right)$$

$Y_{c,obs}$	Carbonaceous Yield Coefficient	0.58	
$P_{x,c}$	Carbonaceous Sludge Production	4,566	lb / day (MLVSS)
		6,523	lb / day (MLSS)
$Y_{n,obs}$	Nitrogenous Yield Coefficient	0.12	
$P_{x,n}$	Nitrogenous Sludge Production	207.36	lb / day (MLVSS)
		296.22	lb / day (MLSS)
Inert Sludge Production (TSS), Dry Solids		3328	lb / day
Total Sudge Production, Volatile Solids		4774	lb / day
Volatile Solids Loading Rate		95	lb / day / 1,000 cu. ft.
Total Sudge Production, Dry Solids		11593	lb / day
Q_W	Waste Sludge Flow to Digester	55,326	gallons / day
Digester Volume Required		287,695	gallons
		38,462	cu. ft.

Volume Provided:		
Length	25	ft
Width	40	ft
SWD	12.5	
# Tanks	4	
Volume	50,000	cu. ft.

Total Digester Vol. available	50,000	cu. ft.
Volume greater than required	YES	

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase III - 2.8 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Air Requirements

Criteria		*Value*		*Regulation*
Air requirements for SBR basins	$O_2R = \frac{1.2(BOD_5) + 4.3(NH_3 - N)}{BOD_5}$	2.12	lb oxygen per lb BOD	217.155(a)(3)
Air requirements for digesters		30	SCFM /1000 cu. ft.	217.249(d)(1)(C)***
Air requirements for post aeration		10	SCFM /1000 cu. ft.	not regulated by TCEQ
Minimum mixing requirements		0.12	SCFM /sq. ft.	217.155 (b)(3)(B)
Diffuser transfer efficiency		11.7%	(In wastewater)	217.155 (b)(2)(B)
Design Submergence		17.44	feet	
Diffuser Submergence Correction Factor		0.76	@ design flow depth	217.155 (b)(2)(D)
Number of Basins, with one out of service		8		
Design Aeration Time		0.50	days/basin	

Corrected Air Flowrate @ Design Submergence = 4557 SCFM

$$= \frac{\{(\text{lb BOD}) * (\text{lb Oxygen / lb BOD})\} * \text{Correction Factor}}{(\text{T.E.})\ (\text{lb Oxygen / lb air})\ (\text{lb air / cu. ft.})\ (\text{min / day})}$$

217.155 (b)(2)(C)

Minimum Air Flowrate @ Design Aeration Time Per Basin = 1139 SCFM per basin

$$= \frac{\text{Corrected Air Flow Rate}}{\text{Design Aeration Time X No. of Basins}}$$

Verify mixing requirements:			0.27	OK	
Provide	9	SBR Blowers @	1139	SCFM	each (1 per basin w/ 1 standby)
Maximum water depth over diffuser			25	feet	top of SBR basin minus 1 ft for hieght of diffuse
Pressure loss in piping			0.7	psi	
Pressure @ blowers			11.3	psi	
Air required for digesters:			1500	SCFM	
Provide	5	Digester Blowers @	375	SCFM	each (1 per basin w/ 1 standby)
Air required for post aeration			213	SCFM	
Provide	4	Post-Air Blower(s) @	53	SCFM	

IDS Engineering Group
Project: Generation Park East WWTP
Job Number:
Design By: VHW
Checked By: KP
Date: 2/25/2025

Description: Phase III- 2.8 MGD

Final Process Calculations

Decanter Sizing Per TCEQ Chapter 217.156(b)(8), requiring the decant system to accommodate the design flow with a constant cycle time with the largest tank out of service

Basin Dimentions

Width	25	feet
Length	75	feet
Min SWD	14	feet
Max SWD	24.5	feet

Condition No. 1: -Basins in service 9 basins All Basins in Service
-Decant flow of 3,889 gpm

% of Design Flow	Flow Rate MGD	No. of Cycles/day	Total Cycle Time minutes	Batch Volume Gallon	Fill React minutes	React minutes	Fill Settle minutes	Settle minutes	Fill Decant minutes	Decant minutes	Fill Idle minutes	Idle minutes	Total Fill minutes	Total React minutes	Total Settle minutes	Total Decant minutes	Volume Decant gal	Decant Depth ft.	Basin water Surface Elevation ft
100%	2.80	5.00	288	62,222	173	0	45	0	16	0	54.2	0	288	173	45	16	62,222	4.4	18.44
150%	4.20	5.00	288	93,333	173	0	45	0	24	0	46.2	0	288	173	45	24	93,333	6.7	20.65
200%	5.60	5.00	288	124,444	173	0	45	0	32	0	38.2	0	288	173	45	32	124,444	8.9	22.87
250%	7.00	6.66	216	116,783	130	0	45	0	30	0	11	0	216	130	45	30	116,783	8.3	22.33
300%	8.40	6.66	216	140,140	130	0	45	0	36	0	5	0	216	130	45	36	140,140	10.0	23.99
350%	9.80	10.00	144	108,889	71	0	45	0	28	0	0	0	144	71	45	28	108,889	7.8	21.76
400%	11.20	10.00	144	124,444	67	0	45	0	32	0	0	0	144	67	45	32	124,444	8.9	22.87

Condition No. 2: -Basins in service 8 basins One Basin Out of Service
-Decant flow of 3,889 gpm

% of Design Flow	Flow Rate MGD	No. of Cycles/day	Total Cycle Time minutes	Batch Volume Gallon	Fill React minutes	React minutes	Fill Settle minutes	Settle minutes	Fill Decant minutes	Decant minutes	Fill Idle minutes	Idle minutes	Total Fill minutes	Total React minutes	Total Settle minutes	Total Decant minutes	Volume Decant gal	Decant Depth ft.	Basin water Surface Elevation ft
100%	2.80	5.00	288	70,000	144	0	45	0	18	0	81.0	0	288	144	45	18	70,000	5.0	18.99
150%	4.20	5.00	288	105,000	144	0	45	0	27	0	72.0	0	288	144	45	27	105,000	7.5	21.49
200%	5.60	5.00	288	140,000	144	0	45	0	36	0	63.0	0	288	144	45	36	140,000	10.0	23.98
250%	7.00	6.66	216	131,381	108	0	45	0	34	0	29	0	216	108	45	34	131,381	9.4	23.37
300%	8.40	6.66	216	157,658	108	0	45	0	41	0	23	0	216	108	45	41	157,658	11.2	25.24
350%	9.80	10.00	144	122,500	68	0	45	0	32	0	0	0	144	68	45	32	122,500	8.7	22.73
400%	11.20	10.00	144	140,000	63	0	45	0	36	0	0	0	144	63	45	36	140,000	10.0	23.98

Decant Size from Above 3,889 gpm

ATTACHMENT NO. 17

FIRM PANEL

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevation** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevation (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum (NAVD). Users of this FIRM should be aware that coastal flood elevations may also be provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this community. Elevations shown in the Summary of Stillwater Elevations table should be used for construction, and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The **projection** used in the preparation of this map is Universal Tranverse Mercator (UTM) zone 15. The **horizontal datum** is NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum.** For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242,** or visit their website at www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by the Harris Galveston Area Council and was revised and enhanced by Harris County.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

An accompanying Flood Insurance Study report, Letters of Map Revision or Letters of Map Amendment revising portions of this panel, and digital versions of this PANEL may be available. Contact the **FEMA Map Service Center** at the following phone numbers and Internet address for information on all related products available from FEMA;

Phone: 800-358-9616
FAX: 800-358-9620
www.fema.gov/msc

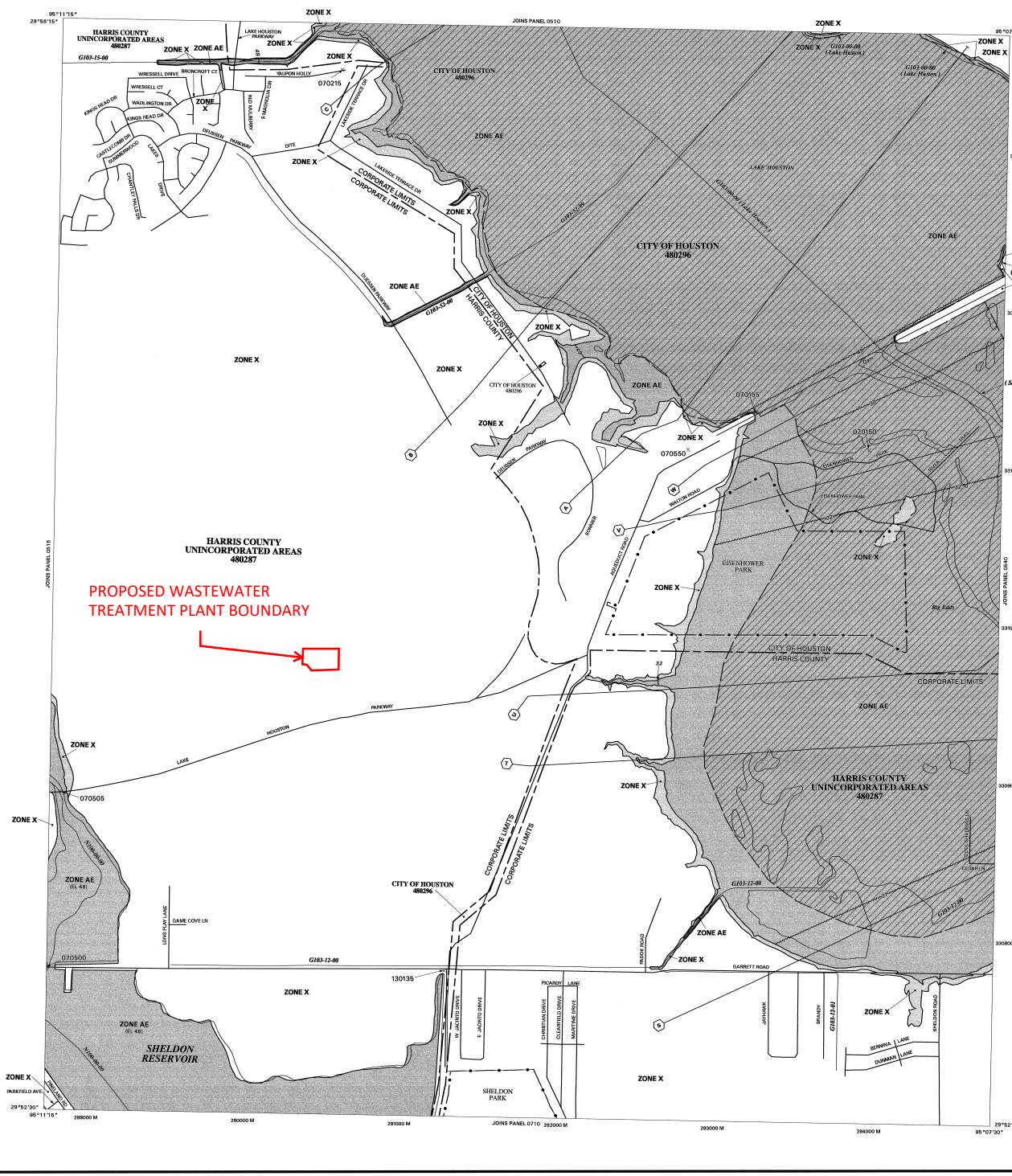
If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at www.fema.gov.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report may reflect stream channel distances that differ from what is shown on this map.

Vertical Datum Adjustment due to subsidence is the 2001 adjustment.

Benchmarks shown on this map were provided by either Harris County or the National Geodetic Survey. To obtain elevation, description, and location information for benchmarks provided by Harris County, please contact the Permits Office of the Public Infrastructure Department at (713) 956-3000 or visit their website at http://www.eng.hctx.net/permits. For information regarding the benchmarks provided by the National Geodetic Survey, please see note above.

Some bridges and other structures shown on the detailed studied streams are not labeled. See corresponding flood profile for appropriate name.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD EVENT

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

- **ZONE A** No base flood elevations determined.
- **ZONE AE** Base flood elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** Area of special flood hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood event.
- **ZONE A99** Area to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no base flood elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no base flood elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- (A) (A) — Cross Section Line
- (23) (23) — Transect Line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4276000M — 1000-meter Universal Transverse Mercator grid values, zone 15
- 600000 FT — 5000-foot grid ticks
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel).
- M1.5 — River Mile

MAP REPOSITORY
Refer to Repository Listing on Index Map

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 28, 1990

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
SEPTEMBER 30, 1992
NOVEMBER 6, 1996
APRIL 20, 2000
JUNE 18, 2007: to change base flood elevations, to add special flood hazard areas, to change special flood hazard areas, to change zone designations, to reflect updated topographic information, and to change floodway.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

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

MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

PANEL 0520L

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

PANEL 520 OF 1150
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HARRIS COUNTY, UNINCORPORATED AREAS	480287	0520	L
HOUSTON, CITY OF	480296	0520	L

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

MAP NUMBER
48201C0520L

MAP REVISED:
JUNE 18, 2007

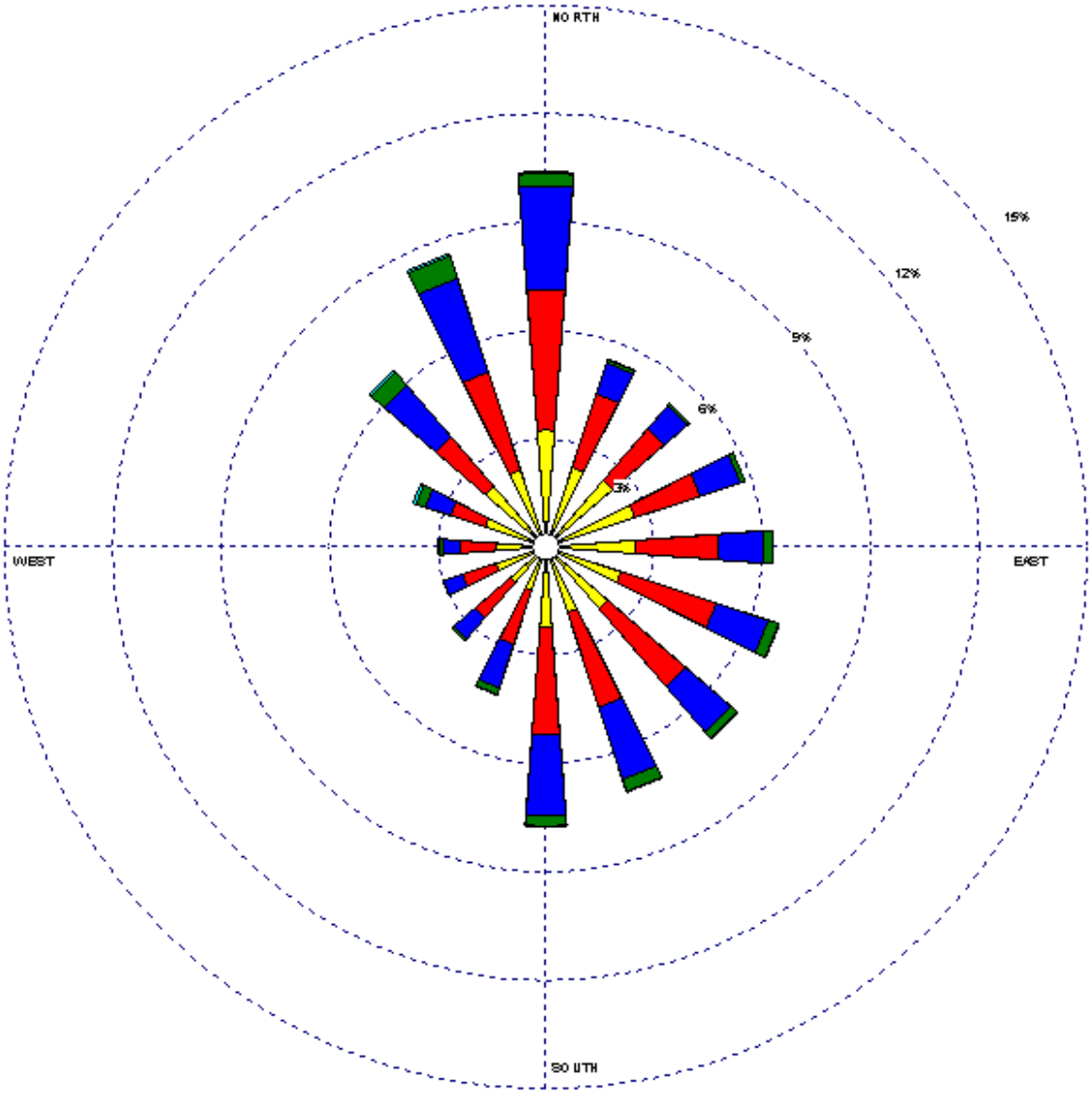
Federal Emergency Management Agency

ATTACHMENT NO. 18

WIND ROSE

WIND ROSE PLOT

Station #12960 - HOUSTON/INTERCONTINENTAL ARPT, TX



Wind Speed (m/s)

- > 11.06
- 8.49 - 11.06
- 5.40 - 8.49
- 3.34 - 5.40
- 1.80 - 3.34
- 0.51 - 1.80

MODELER	DATE	COMPANY NAME
Sara West	8/29/2002	USDA-ARS
DISPLAY	**UNIT**	**COMMENTS**
Wind Speed	m/s	
AVG. WIND SPEED	**CALM WINDS**	
4.47 m/s	5.38%	
ORIENTATION	**PLOT YEAR-DATE-TIME**	
Direction (blowing from)	1961 Feb 1 - Feb 29 Midnight - 11 PM	

WRPLOT View 3.3 by Lakes Environmental Software - www.lakes-environmental.com

ATTACHMENT NO. 19

SEWAGE SLUDGE SOLIDS MANAGEMENT PLAN

Technical Report 1.1
Section 7. Sewage Sludge Solids Management Plan

Interim I Phase - Capacity of Digester

Design Flow	**0.12**	MGD Influent Flow
Minimum Retention Time	**40**	days
Digester Volume	**5,040**	ft^3
Digester Dimensions	**2 @ 20' length x 12' width x 10.5' SWD**	
Side Water Depth	**10.5**	ft.
Digester Sludge Retention Time	**40**	days

CBOD5 Removal	Influent concentration	**350.0**	mg/l
	Effluent concentration	**10.0**	mg/l
	Net removal	**340.0**	mg/l

Solids Generated	**100% Flow**	**75% Flow**	**50% Flow**	**25% Flow**
Pounds BOD5/day removed	**340**	**255**	**170**	**85**
Pounds of dry sludge produced*	**116**	**87**	**58**	**29**
Pounds of wet sludge produced**	**4,628**	**3,471**	**2,314**	**1,157**
Volume of wet sludge produced in gals.	**556**	**417**	**278**	**139**
Volume of wet sludge produced in ft^3	**74**	**56**	**37**	**19**

*Assuming 0.340 pounds of dry sludge produced per pound of BOD5 removed.
**Assuming 2.5% solids.

MLSS operating range = 3000 mg/l

Settled sludge from the clarifier will be wasted to the digesters. At the digesters, the sludge is further thickened by decanting mechanisms.

Removal Schedule (days)	**100% Flow**	**75% Flow**	**50% Flow**	**25% Flow**
Days between sludge removal	**68**	**90**	**136**	**271**

After thickening, the sludge is periodically transported by Magna Flow Environmental (Hauler Registration #21484) to the Mt. Houston Road WWTP Sludge Processing Site (TCEQ Permit No. 0011154001).

Technical Report 1.1
Section 7. Sewage Sludge Solids Management Plan

Interim II Phase - Capacity of Digester

Design Flow	**1.05**	MGD Influent Flow
Minimum Retention Time	**40**	days
Digester Volume	**15,120**	ft^3
Digester Dimensions	**2 @ 60' length x 12' width x 10.5' SWD**	
Side Water Depth	**10.5**	ft.
Digester Sludge Retention Time	**40**	days

CBOD5 Removal	Influent concentration	**350.0**	mg/l
	Effluent concentration	**10.0**	mg/l
	Net removal	**340.0**	mg/l

Solids Generated	**100% Flow**	**75% Flow**	**50% Flow**	**25% Flow**
Pounds BOD5/day removed	**2,977**	**2,233**	**1,489**	**744**
Pounds of dry sludge produced*	**1,012**	**759**	**506**	**253**
Pounds of wet sludge produced**	**40,492**	**30,369**	**20,246**	**10,123**
Volume of wet sludge produced in gals.	**4,867**	**3,650**	**2,433**	**1,217**
Volume of wet sludge produced in ft^3	**651**	**488**	**325**	**163**

*Assuming 0.340 pounds of dry sludge produced per pound of BOD5 removed.
**Assuming 2.5% solids.

MLSS operating range = 3,000-5,000 mg/l

Settled sludge from the clarifier will be wasted to the digesters. At the digesters, the sludge is further thickened by decanting mechanisms.

Removal Schedule (days)	**100% Flow**	**75% Flow**	**50% Flow**	**25% Flow**
Days between sludge removal	**23**	**31**	**46**	**93**

After thickening, the sludge is periodically transported by Magna Flow Environmental (Hauler Registration #21484) to the Mt. Houston Road WWTP Sludge Processing Site (TCEQ Permit No. 0011154001).

Technical Report 1.1
Section 7. Sewage Sludge Solids Management Plan

Ultimate Phase - Capacity of Digester

Design Flow	**2.80**	MGD Influent Flow
Minimum Retention Time	**40**	days
Digester Volume	**50,000**	ft^3
Digester Dimensions	**4 @ 25' length x 40' width x 12.5' SWD**	
Side Water Depth	**12.5**	ft.
Digester Sludge Retention Time	**40**	days

CBOD5 Removal	Influent concentration	**350.0**	mg/l
	Effluent concentration	**10.0**	mg/l
	Net removal	**340.0**	mg/l

Solids Generated	**100% Flow**	**75% Flow**	**50% Flow**	**25% Flow**
Pounds BOD5/day removed	**7,940**	**5,955**	**3,970**	**1,985**
Pounds of dry sludge produced*	**2,699**	**2,025**	**1,350**	**675**
Pounds of wet sludge produced**	**107,980**	**80,985**	**53,990**	**26,995**
Volume of wet sludge produced in gals.	**12,978**	**9,734**	**6,489**	**3,245**
Volume of wet sludge produced in ft^3	**1,735**	**1,301**	**867**	**434**

*Assuming 0.340 pounds of dry sludge produced per pound of BOD5 removed.
**Assuming 2.5% solids.

MLSS operating range = 3,000-5,000 mg/l

Settled sludge from the clarifier will be wasted to the digesters. At the digesters, the sludge is further thickened by decanting mechanisms.

Removal Schedule (days)	**100% Flow**	**75% Flow**	**50% Flow**	**25% Flow**
Days between sludge removal	**29**	**38**	**58**	**115**

After thickening, the sludge is periodically transported by Magna Flow Environmental (Hauler Registration #21484) to the Mt. Houston Road WWTP Sludge Processing Site (TCEQ Permit No. 0011154001).

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 2.0: RECEIVING WATERS

The following information is required for all TPDES permit applications.

Section 1. Domestic Drinking Water Supply (Instructions Page 63)

Is there a surface water intake for domestic drinking water supply located within 5 miles downstream from the point or proposed point of discharge?

☐ Yes ☒ No

If **no**, proceed it Section 2. **If yes**, provide the following:

Owner of the drinking water supply: N/A

Distance and direction to the intake: N/A

Attach a USGS map that identifies the location of the intake.

Attachment: N/A

Section 2. Discharge into Tidally Affected Waters (Instructions Page 63)

Does the facility discharge into tidally affected waters?

☐ Yes ☒ No

If **no**, proceed to Section 3. **If yes**, complete the remainder of this section. If no, proceed to Section 3.

A. Receiving water outfall

Width of the receiving water at the outfall, in feet: N/A

B. Oyster waters

Are there oyster waters in the vicinity of the discharge?

☐ Yes ☐ No

If yes, provide the distance and direction from outfall(s).

N/A

C. Sea grasses

Are there any sea grasses within the vicinity of the point of discharge?

☐ Yes ☐ No

If yes, provide the distance and direction from the outfall(s).

N/A

Section 3. Classified Segments (Instructions Page 63)

Is the discharge directly into (or within 300 feet of) a classified segment?

☐ Yes ☒ No

If yes, this Worksheet is complete.

If no, complete Sections 4 and 5 of this Worksheet.

Section 4. Description of Immediate Receiving Waters (Instructions Page 63)

Name of the immediate receiving waters: Click to enter text.

A. Receiving water type

Identify the appropriate description of the receiving waters.

☐ Stream

☐ Freshwater Swamp or Marsh

☒ Lake or Pond

Surface area, in acres: 0.77 ac

Average depth of the entire water body, in feet: 3.3 ft

Average depth of water body within a 500-foot radius of discharge point, in feet: 3.3 ft

☐ Man-made Channel or Ditch

☐ Open Bay

☐ Tidal Stream, Bayou, or Marsh

☐ Other, specify: Click to enter text.

B. Flow characteristics

If a stream, man-made channel or ditch was checked above, provide the following. For existing discharges, check one of the following that best characterizes the area *upstream* of the discharge. For new discharges, characterize the area *downstream* of the discharge (check one).

☐ Intermittent - dry for at least one week during most years

☐ Intermittent with Perennial Pools - enduring pools with sufficient habitat to maintain significant aquatic life uses

☐ Perennial - normally flowing

Check the method used to characterize the area upstream (or downstream for new dischargers).

☐ USGS flow records

☐ Historical observation by adjacent landowners

☐ Personal observation

☐ Other, specify: Click to enter text.

C. Downstream perennial confluences

List the names of all perennial streams that join the receiving water within three miles downstream of the discharge point.

None

D. Downstream characteristics

Do the receiving water characteristics change within three miles downstream of the discharge (e.g., natural or man-made dams, ponds, reservoirs, etc.)?

☒ Yes ☐ No

If yes, discuss how.

At approximately 1.5 miles downstream of the discharge point, the receiving water characteristics transition from a series of man-made detention basins and channels connected by reinforced concrete box culverts to the natural watershed of the San Jacinto River.

E. Normal dry weather characteristics

Provide general observations of the water body during normal dry weather conditions.

The detention pond does not yet exist. It will be excavated and connected to a series of existing detention basins before construction of the proposed WWTP and outfall.

Date and time of observation: 2/10/2025, 3:00 pm

Was the water body influenced by stormwater runoff during observations?

☐ Yes ☒ No

Section 5. General Characteristics of the Waterbody (Instructions Page 65)

A. Upstream influences

Is the immediate receiving water upstream of the discharge or proposed discharge site influenced by any of the following? Check all that apply.

☐ Oil field activities
☐ Urban runoff
☐ Upstream discharges
☐ Agricultural runoff
☐ Septic tanks
☒ Other(s), specify: immediate receiving water of the proposed discharge site does not yet exist

B. Waterbody uses

Observed or evidences of the following uses. Check all that apply.

- ☐ Livestock watering
- ☐ Irrigation withdrawal
- ☐ Fishing
- ☐ Domestic water supply
- ☐ Park activities
- ☐ Contact recreation
- ☐ Non-contact recreation
- ☐ Navigation
- ☐ Industrial water supply
- ☒ Other(s), specify: does not yet exist

C. Waterbody aesthetics

Check one of the following that best describes the aesthetics of the receiving water and the surrounding area.

- ☐ Wilderness: outstanding natural beauty; usually wooded or unpastured area; water clarity exceptional
- ☐ Natural Area: trees and/or native vegetation; some development evident (from fields, pastures, dwellings); water clarity discolored
- ☐ Common Setting: not offensive; developed but uncluttered; water may be colored or turbid
- ☐ Offensive: stream does not enhance aesthetics; cluttered; highly developed; dumping areas; water discolored

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 2.1: STREAM PHYSICAL CHARACTERISTICS

Required for new applications, major facilities, and applications adding an outfall.

Worksheet 2.1 is not required for discharges to intermittent streams or discharges directly to (or within 300 feet of) a classified segment.

Section 1. General Information (Instructions Page 65)

Date of study: February 10, 2025 Time of study: 3:00 pm

Stream name: N/A

Location: 29.8997, -95.1696

Type of stream upstream of existing discharge or downstream of proposed discharge (check one).

☐ Perennial ☐ Intermittent with perennial pools

Section 2. Data Collection (Instructions Page 65)

Number of stream bends that are well defined: N/A

Number of stream bends that are moderately defined: N/A

Number of stream bends that are poorly defined: N/A

Number of riffles: N/A

Evidence of flow fluctuations (check one):

☐ Minor ☐ moderate ☐ severe

Indicate the observed stream uses and if there is evidence of flow fluctuations or channel obstruction/modification.

Detention pond has not yet been cleared or excavated. Excavation will occur prior to construction of the proposed WWTP and outfall.

Stream transects

In the table below, provide the following information for each transect downstream of the existing or proposed discharges. Use a separate row for each transect.

Table 2.1(1) - Stream Transect Records

Stream type at transect Select riffle, run, glide, or pool. See Instructions, Definitions section.	**Transect location**	**Water surface width (ft)**	**Stream depths (ft)** at 4 to 10 points along each transect from the channel bed to the water surface. Separate the measurements with commas.
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Section 3. Summarize Measurements (Instructions Page 65)

Streambed slope of entire reach, from USGS map in feet/feet: N/A

Approximate drainage area above the most downstream transect (from USGS map or county highway map, in square miles): N/A

Length of stream evaluated, in feet: N/A

Number of lateral transects made: N/A

Average stream width, in feet: N/A

Average stream depth, in feet: N/A

Average stream velocity, in feet/second: N/A

Instantaneous stream flow, in cubic feet/second: N/A

Indicate flow measurement method (type of meter, floating chip timed over a fixed distance, etc.): N/A

Size of pools (large, small, moderate, none): N/A

Maximum pool depth, in feet: N/A

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 87)

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: N/A

Significant IUs – non-categorical:

Number of IUs: 0

Average Daily Flows, in MGD: N/A

Other IUs:

Number of IUs: 0

Average Daily Flows, in MGD: N/A

B. Treatment plant interference

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

☐ Yes ☒ No

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

N/A

C. Treatment plant pass through

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

☐ Yes ☒ No

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

N/A

D. Pretreatment program

Does your POTW have an approved pretreatment program?

☐ Yes ☒ No

If yes, complete Section 2 only of this Worksheet.

Is your POTW required to develop an approved pretreatment program?

☐ Yes ☒ No

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

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

Section 2. POTWs with Approved Programs or Those Required to Develop a Program (Instructions Page 87)

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.

N/A

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.

N/A

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
N/A				

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.

N/A

Section 3. Significant Industrial User (SIU) Information and Categorical Industrial User (CIU) (Instructions Page 88)

A. General information

Company Name: N/A

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).

N/A

C. Product and service information

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

N/A

D. Flow rate information

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

Process Wastewater:

Discharge, in gallons/day: N/A

Discharge Type: ☐ Continuous ☐ Batch ☐ Intermittent

Non-Process Wastewater:

Discharge, in gallons/day: N/A

Discharge Type: ☐ Continuous ☐ Batch ☐ Intermittent

E. Pretreatment standards

Is the SIU or CIU subject to technically based local limits as defined in the *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: N/A

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.

N/A

IDS Engineering Group

March 26, 2025

Abesha H. Michael
Applications Review and Processing Team (MC148)
Texas Commission on Environmental Quality
12100 Park 35 Circle
Austin, Texas 78753

Reference: Notice of Deficiency Letter dated March 11, 2025
Application for Proposed Permit No.: WQ0016745001 (EPA I.D. No. TX0147567)
Applicant Name: Generation Park Management District (CN604386060)
MRA Northeast, L.P. (CN606362754)
Site Name: Generation Park Management District East WWTP (RN12166004)
IDS Project No. 1339-012-04

Dear Ms. Michael,

Thank you for your review of the new permit application referenced above. Please see our responses below.

1. The hardcopies (one original and two copies) were mailed to TCEQ and delivered March 11, 2025. The tracking number was 772552863164 and the package was signed for by "D. Alba."

2. The address for the applicant (Generation Park Management District) should be used on the permit and for permit correspondence from the TCEQ. For clarity, the address is 1300 Post Oak Blvd, Suite 2400, Houston, TX 77056.

3. Per our phone conversation on 3/25/2025, the location description will remain as "Approximately 1,400 ft north of the intersection of Lake Houston Parkway and Common Dock Drive."

4. Revised Plain Language Summaries in both English and Spanish are attached.

5. An updated Signature Page for the Administrative Report 1.0 is attached. Additionally, the original was mailed to TCEQ on March 26, 2025.

6. The land east-northeast of the co-applicant property boundary is Deussen Park, which is owned by Harris County. The Affected Landowner map has been updated to reflect this information, attached. Also attached are an updated Affected Landowner Cross-Reference List and Microsoft Word file for the mailing labels.

7. The NORI should read as follows (corrections are in red):

   Generation Park Management District and MRA Northeast, L.P., 1300 Post Oak Boulevard, Suite 2400, Houston, Texas 77056, has applied to the Texas Commission on Environmental Quality (TCEQ) for proposed Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0016745001 (EPA I.D. No. TX0147567) to authorize the discharge of treated wastewater at a volume not to exceed a daily average flow of 2,800,000 gallons per day. The domestic wastewater treatment facility will be located approximately 1,400 feet north of the intersection of Lake Houston Parkway and Common Dock Drive, near the city of Houston, in Harris County, Texas (77044). The discharge route will be from the plant site to an unnamed detention basin; thence to storm sewer; thence to a series of unnamed detention basins and channels; thence to an unnamed tributary; thence to San Jacinto River Tidal. TCEQ received this application on March 5, 2025. The permit application will be available for viewing and copying at TCEQ Region 12 Office, Suite H, 5425 Polk Street, Houston, in Harris 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/tpdes-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=-95.170277,29.900833&level=18

   Further information may also be obtained from Generation Park Management District and MRA Northeast, L.P. at the address stated above or by calling Mr. Vernon Webb II, P.E., District Engineer, IDS Engineering Group, at (832) 590-7210.

8. The translated Spanish NORI is attached as a Microsoft Word document.

A complete revised permit application has been uploaded to the TCEQ file transfer system. The revised application also includes updates from the technical review dated March 14, 2025. Technical Report 1.0 Section 9D and Technical Report 1.1 Section 3C were revised in accordance with the comments received.

Sincerely,

AnnMarie Burns, E.I.T.
Design Engineer

cc: Vernon H. Webb, II, P.E., IDS Engineering Group
Daniel Ringold, Schwartz, Page & Harding, L.L.P.

X:\1300\133901204 TO 143 Generation Park East\Eng-PM\Reports\Response to 3-11-2025 letter\Response Letter.docx

IDS Engineering Group

13430 Northwest Freeway, Suite 700, Houston, Texas 77040
TBPE F-2726 | TBPLS 10110700 & 10110704
t 713.462.3178
idseg.com

DOMESTIC WASTEWATER PERMIT RENEWAL APPLICATION - REVISED

Texas Commission on Environmental Quality

Generation Park Management District

IDS Project No. 1339-012-04

February 2025



3/26/2025

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- Attachment No. 3 – Public Involvement Plan Form (Administrative Report 1.0, Section 8.G.)
- Attachment No. 4 – USGS Topographic Map (Administrative Report 1.0, Section 13)
- Attachment No. 5 – Copy of Payment Voucher

Administrative Report 1.1

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- Attachment No. 14 – Justification of Permit Need (Technical Report 1.1, Section 1.A.)
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Worksheet 2.1: Stream Physical Characteristics

Worksheet 6.0: Industrial Waste Contribution

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the application.

APPLICANT NAME: Generation Park Management District

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

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

	Y	N		Y	N
Administrative Report 1.0	☒	☐	Original USGS Map	☒	☐
Administrative Report 1.1	☒	☐	Affected Landowners Map	☒	☐
SPIF	☒	☐	Landowner Disk or Labels	☒	☐
Core Data Form	☒	☐	Buffer Zone Map	☒	☐
Public Involvement Plan Form	☒	☐	Flow Diagram	☒	☐
Technical Report 1.0	☒	☐	Site Drawing	☒	☐
Technical Report 1.1	☒	☐	Original Photographs	☒	☐
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Worksheet 4.0	☐	☒			
Worksheet 5.0	☐	☒			
Worksheet 6.0	☒	☐			
Worksheet 7.0	☐	☒			

For TCEQ Use Only

Segment Number _____County _____
Expiration Date _____Region_____
Permit Number _____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

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

Section 1. Application Fees (Instructions Page 26)

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

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

Minor Amendment (for any flow) $150.00 ☐

Payment Information:

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

Check/Money Order Amount: Click to enter text.

Name Printed on Check: Click to enter text.

EPAY — Voucher Number: 751697/751698

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?

Generation Park Management District

(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: 604386060

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: Neuhaus, Charles W.

Title: Board 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?

MRA Northeast, L.P.

(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: Mr. Last Name, First Name: McCord, Frederick R.

Title: President Credential: Click to enter text.

Provide a brief description of the need for a co-permittee: The co-applicant is the current owner of the land where the treatment facility will be located.

C. Core Data Form

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

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: Webb II, Vernon

Title: District Engineer Credential: P.E.

Organization Name: IDS Engineering Group

Mailing Address: 13430 Northwest Fwy, Suite 700 City, State, Zip Code: Houston, TX 77040

Phone No.: 832-590-7210 E-mail Address: vwebb@idseg.com

Check one or both: ☒ Administrative Contact ☒ Technical Contact

B. Prefix: Mr. Last Name, First Name: Ringold, Daniel

Title: District Attorney Credential: Click to enter text.

Organization Name: Schwartz, Page & Harding, L.L.P.

Mailing Address: 1300 Post Oak Blvd, Suite 2400 City, State, Zip Code: Houston, TX 77056

Phone No.: 713-623-4531 E-mail Address: dringold@sphllp.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: Neuhaus, Charles W.

Title: Board President Credential: Click to enter text.

Organization Name: c/o Schwartz, Page & Harding, L.L.P.

Mailing Address: 1300 Post Oak Blvd, Suite 2400 City, State, Zip Code: Houston, TX 77056

Phone No.: (713) 623-4531 E-mail Address: Click to enter text.

B. Prefix: Mr. Last Name, First Name: Deboben III, John R.

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

Organization Name: c/o Schwartz, Page & Harding, L.L.P.

Mailing Address: 1300 Post Oak Blvd, Suite 2400 City, State, Zip Code: Houston, TX 77056

Phone No.: (713) 623-4531 E-mail Address: Click to enter text.

Section 6. Billing Contact Information (Instructions Page 27)

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

Prefix: Ms. Last Name, First Name: Colondres, Cynthia

Title: District Bookkeeper Credential: Click to enter text.

Organization Name: Municipal Accounts & Consulting, L.P.

Mailing Address: 1281 Brittmoore Rd. City, State, Zip Code: Houston, TX 77043

Phone No.: (713) 623-4539 E-mail Address: ccolondres@municipalaccounts.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: Ms. Last Name, First Name: Chapa, Vanessa

Title: Compliance Manager Credential: Click to enter text.

Organization Name: Inframark

Mailing Address: 2002 W Grand Pkwy N., Suite 100 City, State, Zip Code: Katy, TX, 77449

Phone No.: (281) 877-2612 E-mail Address: vanessa.chapa@inframark.com

Section 8. Public Notice Information (Instructions Page 27)

A. Individual Publishing the Notices

Prefix: Ms. Last Name, First Name: Riley, Vonda

Title: Administrative Assistant Credential: Click to enter text.

Organization Name: IDS Engineering Group

Mailing Address: 13430 Northwest Fwy, Suite 700 City, State, Zip Code: Houston, TX 77040

Phone No.: (713) 462-3178 E-mail Address: vriley@idseg.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: Webb II, Vernon

Title: District Engineer Credential: P.E.

Organization Name: IDS Engineering Group

Mailing Address: 13430 Northwest Fwy, Suite 700 City, State, Zip Code: Houston, TX 77040

Phone No.: (832) 590-7210 E-mail Address: vwebb@idseg.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: TCEQ Region 12 Office

Location within the building: Reception Area

Physical Address of Building: 5425 Polk Street

City: Houston County: Harris

Contact (Last Name, First Name): N/A

Phone No.: (713) 767-3500 Ext.: Click to enter text.

E. Bilingual Notice Requirements

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

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

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

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

   ☒ Yes ☐ No

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

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

   ☒ Yes ☐ No

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

   ☐ Yes ☒ No

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

   ☐ Yes ☒ No

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

F. Plain Language Summary Template

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

Attachment: Attachment 2

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 3

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

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

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

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

Generation Park Management District East Wastewater Treatment Plant

C. Owner of treatment facility: Generation Park Management District

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: MRA Northeast, L.P.

Mailing Address: 250 Assay Street, Suite 200 City, State, Zip Code: Houston, TX 77044

Phone No.: (713) 860-3000 E-mail Address: scloonan@mccord.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: Landowner is co-applicant.

E. Owner of effluent disposal site:

Prefix: N/A Last Name, First Name: N/A

Title: N/A Credential: N/A

Organization Name: N/A

Mailing Address: N/A City, State, Zip Code: N/A

Phone No.: N/A E-mail Address: N/A

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

Attachment: N/A

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

Prefix: N/A Last Name, First Name: N/A

Title: N/A Credential: N/A

Organization Name: N/A

Mailing Address: N/A City, State, Zip Code: N/A

Phone No.: N/A E-mail Address: N/A

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

Attachment: N/A

Section 10. TPDES Discharge Information (Instructions Page 31)

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

☐ Yes ☐ No

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

Approximately 1,400 ft north of the intersection of Lake Houston Parkway and Common Dock Drive in Harris County, Texas 77044.

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:

To an unnamed detention basin, thence to storm sewer, thence to a series of unnamed detention basins and channels, thence to an unnamed tributary, thence to San Jacinto River Tidal in Segment No. 1001 of the San Jacinto River Basin.

City nearest the outfall(s): Houston

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

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

☐ Yes ☒ No

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

☐ Authorization granted ☐ Authorization pending

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

Attachment: N/A

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

Section 11. TLAP Disposal Information (Instructions Page 32)

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

☐ Yes ☐ No

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

N/A

B. City nearest the disposal site: N/A

C. County in which the disposal site is located: N/A

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

N/A

E. For **TLAPs**, please identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: N/A

Section 12. Miscellaneous Information (Instructions Page 32)

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

☐ Yes ☒ No

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

☐ Yes ☐ No ☒ Not Applicable

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

N/A

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

☐ Yes ☒ No

If yes, list each person formerly employed by the TCEQ who represented your company and was paid for service regarding the application: N/A

D. Do you owe any fees to the TCEQ?

☐ Yes ☒ No

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

Account number: N/A

Amount past due: N/A

E. Do you owe any penalties to the TCEQ?

☐ Yes ☒ No

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

Enforcement order number: N/A

Amount past due: N/A

Section 13. Attachments (Instructions Page 33)

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

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

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

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

☐ Attachment 1 for Individuals as co-applicants

☒ Other Attachments. Please specify: Attachment 1 – Core Data Forms; Attachment 2 – Plain Language Summary (English and Spanish); Attachment 3 – Public Involvement Plan Form; Attachment 4 – USGS Topographic Map, Attachment 5 – Copy of Payment Voucher

Section 14. Signature Page (Instructions Page 34)

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

Permit Number: Click to enter text.

Applicant: Generation Park Management District

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): Mr. Charles W. Neuhaus

Signatory title: Board President

Signature: _____ Date: 3-19-25

(Use blue ink)

Subscribed and Sworn to before me by the said Charles W. Neuhaus

on this 19th day of March, 20 25.

My commission expires on the 28th day of January, 20 25.

Linda L Knox

Notary Public

LINDA L KNOX
Notary Public, State of Texas
Comm. Expires 01-28-2029
Notary ID 448502-4

Harris

County, Texas

Section 14. Signature Page (Instructions Page 34)

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

Permit Number: Click to enter text.

Applicant: MRA Northeast, L.P.

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): Mr. Frederick R. McCord

Signatory title: President

Signature: _____ Date: 2-14-25

(Use blue ink)

Subscribed and Sworn to before me by the said Frederick R. McCord, Jr.

on this 14th day of February, 2025.

My commission expires on the 12th day of October, 2025.

_____

Notary Public

SHAWN WESLEY CLOONAN
Notary Public, State of Texas
Comm. Expires 10-12-2028
Notary ID 126589235

[SEAL]

Harris

County, Texas

ATTACHMENT NO. 1

CORE DATA FORMS

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 604386060		**RN**

SECTION II: Customer Information

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

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

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

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

Generation Park Management District

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 ☐ Local ☐ State ☒ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

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

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

15. Mailing Address:

Schwartz, Page & Harding, L.L.P.
1300 Post Oak Blvd, Suite 2400

City	Houston	**State**	TX	**ZIP**	77056	**ZIP + 4**	

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

18. Telephone Number	**19. Extension or Code**	**20. Fax Number** *(if applicable)*

(713) 623-4531		(713) 623-6143

SECTION III: Regulated Entity Information

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

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

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

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

Generation Park Management District East Wastewater Treatment Plant

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

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

25. Description to Physical Location:	Approximately 1,400 ft north of the intersection of Lake Houston Parkway and Common Dock Drive.				
26. Nearest City			**State**	**Nearest ZIP Code**	
Houston			TX	77044	

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

27. Latitude (N) In Decimal:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	54	3.32	-95	10	13.44

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

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

Wastewater Treatment Facility

34. Mailing Address:	**Schwartz, Page & Harding, L.L.P.**							
	1300 Post Oak Blvd, Suite 2400							
	City	**Houston**	**State**	**TX**	**ZIP**	**77056**	**ZIP + 4**	**3078**
35. E-Mail Address:	**dringold@sphllp.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(713) 623-4531		**(713) 623-6143**

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

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

SECTION IV: Preparer Information

40. Name:	AnnMarie Burns	41. Title:	Design Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(832) 590-7153		( ) -	aburns@idseg.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:	Generation Park Management District	Job Title:	Board President
Name *(In Print)*:	Charles W. Neuhaus	Phone:	( ) 713 - 502 4515
Signature:		Date:	12/18/14

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

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

SECTION II: Customer Information

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

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

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

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

MRA Northeast, L.P.

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
0800309222	32035641169	76-0559742	N/A

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

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

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

☐ Owner ☐ Operator ☐ Owner & Operator ☒ Other: Current owner of land where treatment facility will be located.
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant

15. Mailing Address:	MRA Northeast, L.P.							
	250 Assay St., Suite 200							
	City	Houston	**State**	TX	**ZIP**	77044	**ZIP + 4**	3506

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

18. Telephone Number	**19. Extension or Code**	**20. Fax Number** *(if applicable)*

(713) 623-4531		(713) 623-6143

SECTION III: Regulated Entity Information

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

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

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

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

Generation Park Management District East Wastewater Treatment Plant

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

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

25. Description to Physical Location:	Approximately 1,400 ft north of the intersection of Lake Houston Parkway and Common Dock Drive.				
26. Nearest City			**State**		**Nearest ZIP Code**
Houston			TX		77044

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

27. Latitude (N) In Decimal:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
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4952			

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

Wastewater Treatment Facility

34. Mailing Address:	**Schwartz, Page & Harding, L.L.P.**							
	1300 Post Oak Blvd, Suite 2400							
	City	**Houston**	**State**	**TX**	**ZIP**	**77056**	**ZIP + 4**	**3078**
35. E-Mail Address:	**dringold@sphllp.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(713) 623-4531		**(713) 623-6143**

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

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

SECTION IV: Preparer Information

40. Name:	AnnMarie Burns	41. Title:	Design Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(832) 590-7153		( ) -	aburns@idseg.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:	MRA Northeast, L.P.	Job Title:	President
Name *(In Print)*:	Frederick R. McCord	Phone:	( ) -
Signature:		Date:	2/14/2025

ATTACHMENT NO. 2

PLAIN LANGUAGE SUMMARY
(ENGLISH AND SPANISH)

SUMMARY OF APPLICATION IN PLAIN LANGUAGE FOR TPDES OR TLAP PERMIT APPLICATIONS

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

Generation Park Management District (CN604386060) and MRA Northeast, L.P. (CN606362754) proposes to operate Generation Park Management District East Wastewater Treatment Plant (RN112166004),. a domestic wastewater treatment facility. The facility will be located approximately 1,400 ft north of the intersection of Lake Houston Parkway and Common Dock Drive, in Houston, Harris County, Texas 77044.

This application is for a new permit to discharge at an ultimate average flow of 2,800,000 gallons per day of treated domestic wastewater via an outfall into a series of detention basins and ultimately to the San Jacinto River Basin.

Discharges from the facility are expected to contain Carbonaceous Biochemical Oxygen Demand (5-day)($CBOD_5$), total suspended solids (TSS), and ammonia nitrogen (NH_3-N). Additional potential pollutants are unknown as this is a new wastewater treatment plant. Domestic wastewater will be treated by activated sludge process with single stage nitrification.

RESUMEN DE LA SOLICITUD EN LENGUAJE SENCILLO PARA LAS SOLICITUDES DE PERMISOS TPDES O TLAP

El siguiente resumen se proporciona para esta solicitud de permiso de calidad del agua pendiente que está siendo revisada por la Comisión de Calidad Ambiental de Texas según lo requerido por el Capítulo 39 del Código Administrativo de Texas 30. La información proporcionada en este resumen puede cambiar durante la revisión técnica de la solicitud y no es una representación ejecutiva fedérale de la solicitud de permiso.

El Distrito de Gestión de Generation Park (CN604386060) y MRA Northeast, L.P. (CN606362754) propone operar Planta de Tratamiento de Aguas Residuales del Este del Distrito de Gestión de Generation Park (RN112166004), una instalación de tratamiento de aguas residuales domésticas. La instalación está ubicada en aproximadamente 1,400 pies al norte de la intersección de Lake Houston Parkway y Common Dock Drive, en Houston, Condado de Harris, Texas 77044. Esta solicitud es para un nuevo permiso para descargar un caudal promedio final de 2.800.000 galones por día de aguas residuales domésticas tratadas a través de un desagüe en una serie de cuencas de detención y, en última instancia, en la cuenca del río San Jacinto.

Se espera que las descargas de la instalación contengan Demanda bioquímica de oxígeno carbonoso (5-días)($CBOD_5$), sólidos suspendidos totales (TSS) y nitrógeno amoniaco (NH_3-N). Se desconocen otros posibles contaminantes ya que se trata de una nueva planta de tratamiento de aguas residuales.. Aguas residuales domésticas. estará tratado por roceso de lodos activados con nitrificación en una sola etapa.

ATTACHMENT NO. 3

PUBLIC INVOLVEMENT PLAN FORM

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.

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 NO. 4

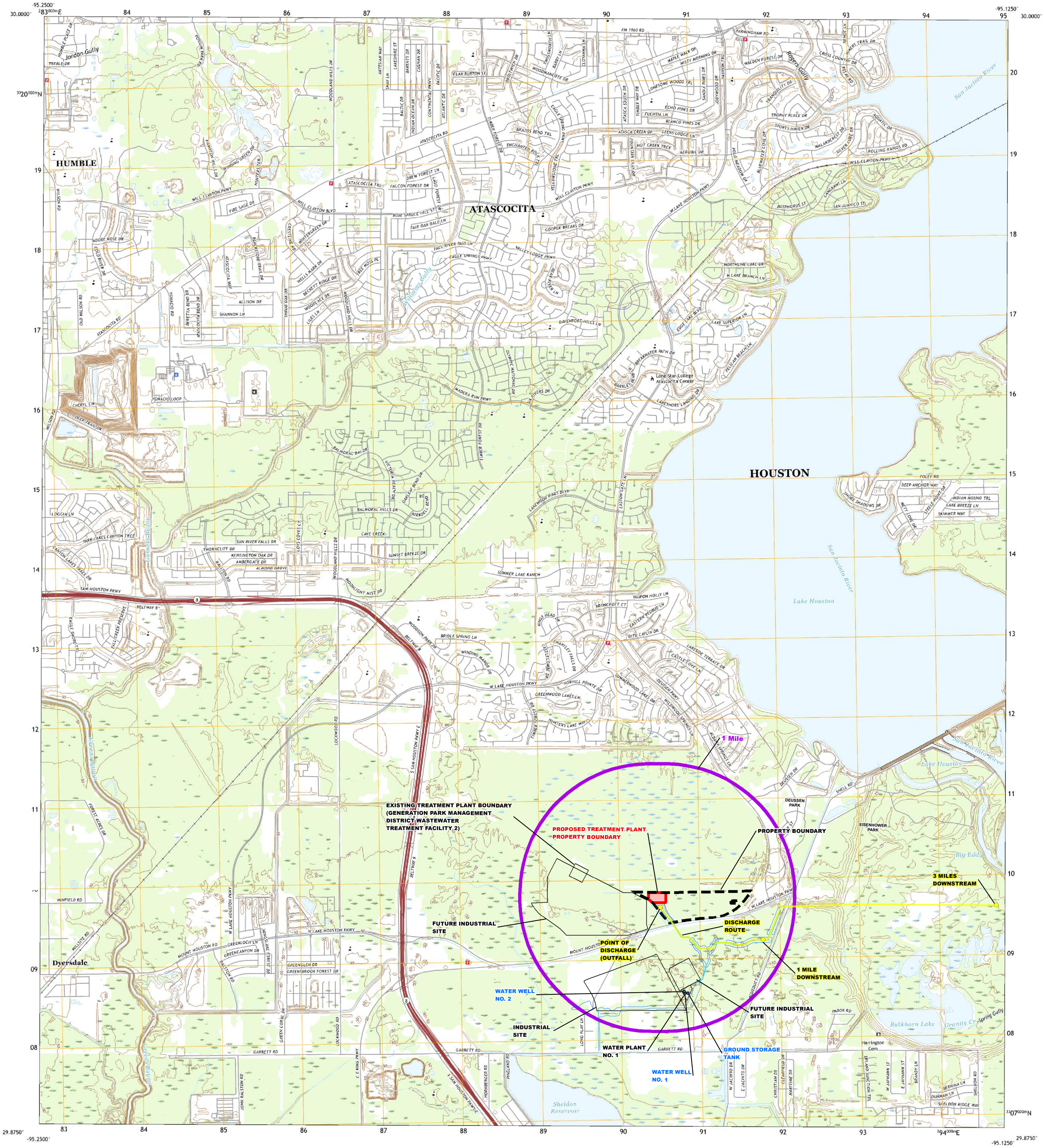
USGS TOPOGRAPHIC MAP

USGS science for a changing world

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

The National Map US Topo

HARMASTON QUADRANGLE
TEXAS - HARRIS COUNTY
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 15R

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 2016 - November 2016
Roads.....U.S. Census Bureau, 2015 - 2019
Names.....GNIS, 1979 - 2022
Hydrography.....National Hydrography Dataset, 2002 - 2018

MN
GN
1°6' 20 MILS
2°15' 40 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

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

TEXAS
QUADRANGLE LOCATION

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

IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Texas 77040
713.462.3178
TxEng Firm 2726
Tx Surv Firm 10110700

N
0 1,000 2,000 4,000 6,000 8,000 Feet
1 inch = 2,000 feet

GENERATION PARK MANAGEMENT DISTRICT
USGS 7.5' QUADRANGLE MAP

ATTACHMENT NO. 5

COPY OF PAYMENT VOUCHER

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:	582EA000653750
Date:	02/21/2025 10:21 AM
Payment Method:	CC - Authorization 0000021420
ePay Actor:	ANNMARIE BURNS
Actor Email:	dgillamac@idseg.com
IP:	216.201.136.178
TCEQ Amount:	$2,050.00
Texas.gov Price:	$2,096.38*

* 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:	ANNMARIE BURNS
Company:	IDS ENGINEERING GROUP
Address:	13430 NORTHWEST FREEWAY, HOUSTON, TX 77040
Phone:	713-462-3178

Cart Items

Click on the voucher number to see the voucher details.

Voucher	Fee Description	AR Number	Amount
751697	WW PERMIT - FACILITY WITH FLOW >= 1.0 MGD - NEW AND MAJOR AMENDMENTS		$2,000.00
751698	30 TAC 305.53B WQ NOTIFICATION FEE		$50.00
		TCEQ Amount:	$2,050.00

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.

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DOMESTIC WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

The following information is required for new and amendment applications.

Section 1. Affected Landowner Information (Instructions Page 36)

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

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

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

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

☐ USB Drive ☒ Four sets of labels

D. Provide the source of the landowners' names and mailing addresses: Harris County Appraisal District

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

☐ Yes ☒ No

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

Click to enter text.

Section 2. Original Photographs (Instructions Page 38)

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

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

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

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

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

Section 3. Buffer Zone Map (Instructions Page 38)

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

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

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

☒ Ownership

☒ Restrictive easement

☐ Nuisance odor control

☐ Variance

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

☒ Yes ☐ No

DOMESTIC WASTEWATER PERMIT APPLICATION

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

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

Attachment: See Attachment No. 9

ATTACHMENT NO. 7

ORIGINAL PHOTOGRAPHS WITH MAP

Generation Park Management District East Wastewater Treatment Plant

Domestic Administrative Report 1.1 – Section 2 Original Photographs

- Photograph of new treatment unit location:
  Area is currently wooded and is not yet cleared.



- <u>Photographs of proposed discharge point:</u>
  Area is currently wooded and is not yet cleared. Effluent will discharge into detention pond, which has not yet been excavated.





\\idseg.com\fs\Projects\1300\133901204 TO 143 Generation Park East\CAD\Exhibits\2025-02-10 OUTFALL AERIAL\GP EAST-WWTP OUTFALL DETN POND G.dwg [11x17] Plotted Feb 10, 2025 at 9:07am by tbradshaw (Last Saved by: tbradshaw)

1804.19 ACRES
MRA NORTHEAST #2, L.P.
FILE NO. 20110043079, O.P.R.R.P.

HL&P ESMT.
FILE No. D057381,
H.C.D.R.

PROPOSED
WWTP

WWTP DISCHARGE

OUTFALL
LAT=29°53'59.1182"N
LONG=-95°10'10.7635"W

POND G

TOP BANK EL 51.0

100 YR WSEL 46.9

NWSEL 34.8

BOTTOM EL 31.5

30' MAINTENANCE BERM (TYP.)

5:1

5:1

87.953 ACRES - TRACT III
MRA NORTHEAST, L.P.
FILE NO. X426083, O.P.R.R.P.

285.301 ACRES - TRACT 1
MRA NORTHEAST, L.P.
FILE NO. X426083, O.P.R.R.P.

50' HUMBLE OIL &
REFINING CO. (FEE STRIP)
VOL. 5353, PG. 149, H.C.D.R.

PIPELINE FEE STRIP

LAKE HOUSTON PARKWAY
(300' R.O.W.)

LOCATION OF
PHOTOGRAPH #1,
FACING EAST

LOCATION OF
PHOTOGRAPH #2,
FACING NORTHEAST

LOCATION OF
PHOTOGRAPH #3,
FACING EAST

N
W E
S

200' 0' 200'

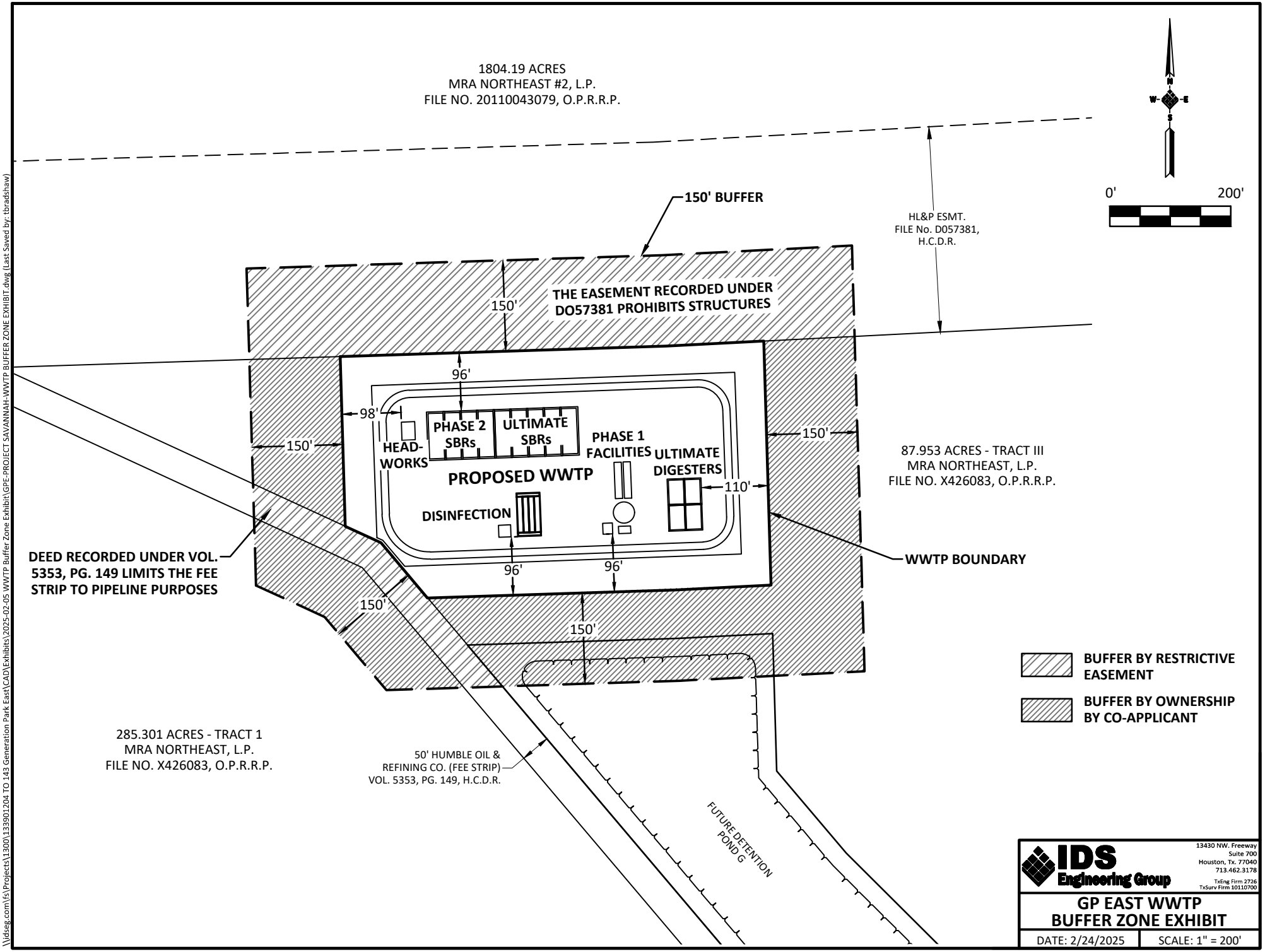
SCALE

1"=200'

GP EAST WWTP
OUTFALL AERIAL
DATE: 2/10/25
DATE: 1" = 200'

ATTACHMENT NO. 8

BUFFER ZONE MAP



IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Tx. 77040
713.462.3178
TxEng Firm 2726
TxSurv Firm 10110700

GP EAST WWTP BUFFER ZONE EXHIBIT

DATE: 2/24/2025 | SCALE: 1" = 200'

\\idseg.com\s\Projects\13001\133901204 TO 143 Generation Park East\CAD\Exhibits\2025-02-05 WWTP Buffer Zone Exhibit\GPE-PROJECT SAVANNAH-WWTP BUFFER ZONE EXHIBIT.dwg (Last Saved by: tbradshaw)

ATTACHMENT NO. 9

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

FOR AGENCIES REVIEWING DOMESTIC OR INDUSTRIAL TPDES WASTEWATER PERMIT APPLICATIONS

TCEQ USE ONLY:

Application type: ____Renewal ____Major Amendment ____Minor Amendment ____New

County: _____ Segment Number: _____

Admin Complete Date: _____

Agency Receiving SPIF:

_____ Texas Historical Commission _____ U.S. Fish and Wildlife

_____ Texas Parks and Wildlife Department _____ U.S. Army Corps of Engineers

This form applies to TPDES permit applications only. (Instructions, Page 53)

Complete this form as a separate document. TCEQ will mail a copy to each agency as required by our agreement with EPA. If any of the items are not completely addressed or further information is needed, we will contact you to provide the information before issuing the permit. Address each item completely.

Do not refer to your response to any item in the permit application form. Provide each attachment for this form separately from the Administrative Report of the application. The application will not be declared administratively complete without this SPIF form being completed in its entirety including all attachments. Questions or comments concerning this form may be directed to the Water Quality Division's Application Review and Processing Team by email at WQ-ARPTeam@tceq.texas.gov or by phone at (512) 239-4671.

The following applies to all applications:

1. Permittee: Generation Park Management District

   Permit No. WQ00 Click here to enter text EPA ID No. TX Click here to enter text

   Address of the project (or a location description that includes street/highway, city/vicinity, and county):

   Approximately 1,400 ft north of the intersection of Lake Houston Parkway and Common Dock Drive in Harris County, TX 77044.

Provide the name, address, phone and fax number of an individual that can be contacted to answer specific questions about the property.

Prefix (Mr., Ms., Miss): Mr.

First and Last Name: Vernon H. Webb, II

Credential (P.E, P.G., Ph.D., etc.): P.E.

Title: District Engineer

Mailing Address: 13430 Northwest Freeway, Suite 700

City, State, Zip Code: Houston, TX 77040

Phone No.: (713) 462-3178 Ext.: Click here to enter text Fax No.: Click here to enter text

E-mail Address: vwebb@idseg.com

2. List the county in which the facility is located: Harris
3. If the property is publicly owned and the owner is different than the permittee/applicant, please list the owner of the property.

N/A

4. Provide a description of the effluent discharge route. The discharge route must follow the flow of effluent from the point of discharge to the nearest major watercourse (from the point of discharge to a classified segment as defined in 30 TAC Chapter 307). If known, please identify the classified segment number.

Effluent will discharge to an unnamed detention basin, thence to storm sewer, thence to a series of unnamed detention basins and channels, thence to an unnamed tributary, thence to San Jacinto River Tidal in Segment No. 1001 of the San Jacinto River Basin.

5. Please provide a separate 7.5-minute USGS quadrangle map with the project boundaries plotted and a general location map showing the project area. Please highlight the discharge route from the point of discharge for a distance of one mile downstream. (This map is required in addition to the map in the administrative report).

Provide original photographs of any structures 50 years or older on the property.

Does your project involve any of the following? Check all that apply.

- ☒ Proposed access roads, utility lines, construction easements
- ☐ Visual effects that could damage or detract from a historic property's integrity
- ☐ Vibration effects during construction or as a result of project design
- ☒ Additional phases of development that are planned for the future
- ☐ Sealing caves, fractures, sinkholes, other karst features

☒ Disturbance of vegetation or wetlands

1. List proposed construction impact (surface acres to be impacted, depth of excavation, sealing of caves, or other karst features):

Construction of the wastewater treatment plant will include grading of the site, installation of utilities, site paving, equipment, and treatment basins. Excavation depth will not exceed approximately 20 feet. Construction, including clearing, will impact approximately 5.5 acres.

2. Describe existing disturbances, vegetation, and land use:

The site is currently wooded. There is one cleared area which was previously used for oil and gas exploration.

THE FOLLOWING ITEMS APPLY ONLY TO APPLICATIONS FOR NEW TPDES PERMITS AND MAJOR AMENDMENTS TO TPDES PERMITS

3. List construction dates of all buildings and structures on the property:

There are no existing buildings or structures.

4. Provide a brief history of the property, and name of the architect/builder, if known.

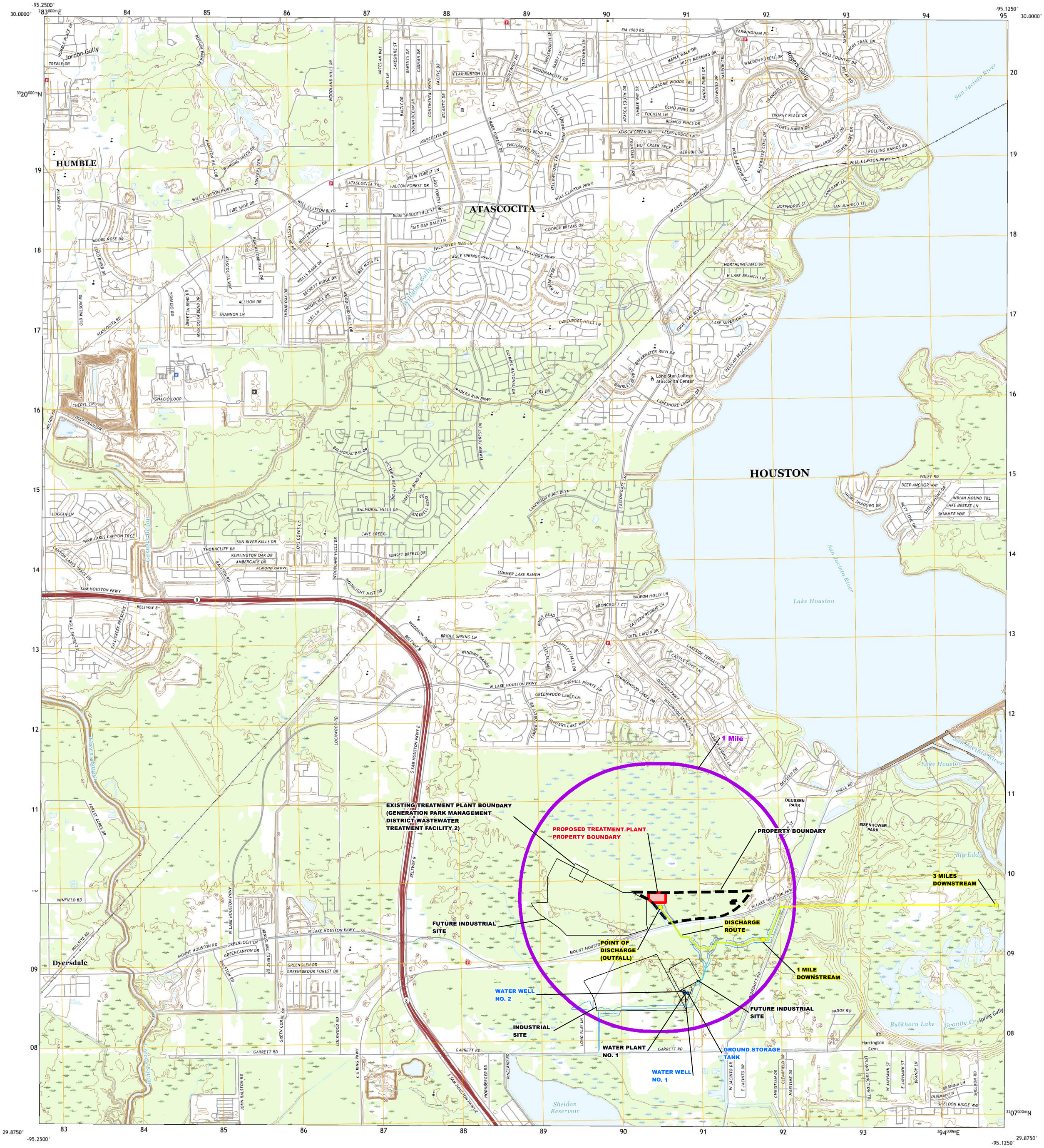
The site was previously owned by the King Cattle & Timber Company, and was also used for oil and gas activities.

USGS science for a changing world

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

The National Map US Topo

HARMASTON QUADRANGLE
TEXAS - HARRIS COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
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MN
GN
1°6' 20 MILS
2°15' 40 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

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

TEXAS
QUADRANGLE LOCATION

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

IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Texas 77040
713.462.3178
TxEng Firm 2726
Tx Surv Firm 10110700

N
0 1,000 2,000 4,000 6,000 8,000 Feet
1 inch = 2,000 feet

GENERATION PARK MANAGEMENT DISTRICT
USGS 7.5' QUADRANGLE MAP

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~~ Domestic 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.)
TCEQ ePay Voucher Receipt is included, see Attachment No. 5

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

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 42)

A. Existing/Interim I Phase

Design Flow (MGD): 0.12

2-Hr Peak Flow (MGD): 0.48

Estimated construction start date: February 2026

Estimated waste disposal start date: September 2026

B. Interim II Phase

Design Flow (MGD): 1.05

2-Hr Peak Flow (MGD): 4.2

Estimated construction start date: February 2027

Estimated waste disposal start date: August 2029

C. Final Phase

Design Flow (MGD): 2.8

2-Hr Peak Flow (MGD): 11.2

Estimated construction start date: January 2030

Estimated waste disposal start date: June 2032

D. Current Operating Phase

Provide the startup date of the facility: N/A

Section 2. Treatment Process (Instructions Page 42)

A. Current Operating Phase

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

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

See Attachment No. 10

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 No. 11		

C. Process Flow Diagram

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

Attachment: See Attachment No. 12

Section 3. Site Information and Drawing (Instructions Page 43)

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

- Latitude: 29° 53' 59.12" N
- Longitude: -95° 10' 10.76" W

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

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

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

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

Attachment: See Attachment No. 13

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

This wastewater treatment plant will serve the east side of Generation Park Management District. The area is generally bounded by Beltway 8 and Sheldon Reservoir to the West, Summerwood to the North, Deussen Parkway and Aqueduct Road to the east, and Garrett Road to the South.

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
Generation Park East Collection System	**Generation Park Management District**	**Publicly Owned**	1675
		Choose an item.	
		Choose an item.	
		Choose an item.	

Section 4. Unbuilt Phases (Instructions Page 44)

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

☐ Yes ☒ No

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

☐ Yes ☐ No

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

Click to enter text.

Section 5. Closure Plans (Instructions Page 44)

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

☐ Yes ☒ No

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

☐ Yes ☐ No

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

N/A

Section 6. Permit Specific Requirements (Instructions Page 44)

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: N/A

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**.

N/A

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.

N/A

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*.

N/A

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.

N/A

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.

N/A

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.

N/A

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:

N/A

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.

N/A

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.

N/A

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.

N/A

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

F. Discharges to the Lake Houston Watershed

Does the facility discharge in the Lake Houston watershed?

☐ Yes ☐ No

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

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

1. Acceptance of sludge from other WWTPs

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

☐ Yes ☐ No

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

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

N/A

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

2. Acceptance of septic waste

Is the facility accepting or will it accept septic waste?

☐ Yes ☐ No

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

☐ Yes ☐ No

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

☐ Yes ☐ No

If yes to any of the above, provide the date the plant started or is anticipated to start accepting septic waste, an estimate of monthly septic waste acceptance (gallons or millions of gallons), an estimate of the 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.

N/A

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

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

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

☐ Yes ☐ No

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

N/A

Section 7. Pollutant Analysis of Treated Effluent (Instructions Page 49)

Is the facility in operation?

☐ Yes ☒ No

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

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

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

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

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
$CBOD_5$, mg/l					
Total Suspended Solids, mg/l					
Ammonia Nitrogen, mg/l					
Nitrate Nitrogen, mg/l					
Total Kjeldahl Nitrogen, mg/l					
Sulfate, mg/l					
Chloride, mg/l					
Total Phosphorus, mg/l					
pH, standard units					
Dissolved Oxygen*, mg/l					
Chlorine Residual, mg/l					
E.coli (CFU/100ml) freshwater					
Entercocci (CFU/100ml) saltwater					
Total Dissolved Solids, mg/l					
Electrical Conductivity, µmohs/cm, †					
Oil & Grease, mg/l					
Alkalinity ($CaCO_3$)*, mg/l					

*TPDES permits only
†TLAP permits only

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

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

Section 8. Facility Operator (Instructions Page 49)

Facility Operator Name: Inframark, LLC

Facility Operator's License Classification and Level: (Wastewater Operations Company)

Facility Operator's License Number: OC0000232

Section 9. Sludge and Biosolids Management and Disposal (Instructions Page 50)

A. WWTP's Sewage Sludge or 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 Sewage Sludge or 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. Sewage Sludge or Biosolids Management

Provide information on the *intended* sewage sludge or biosolids management practice. Do not enter every management practice that you want authorized in the permit, as the

permit will authorize all sewage sludge or 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
Disposal in Landfill	Off-site Third-Party Handler or Preparer	Bulk	60 metric tons (estimated per year)	Class B: PSRP Aerobic Digestion	Option 4: SOUR <=1.5 mg 02/hr/g total solids at 20C (<2% solids)
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): Click to enter text.

D. Disposal site

Disposal site name: Mt Houston Road WWTP Sludge Processing Site

TCEQ permit or registration number: WQ0005023000

County where disposal site is located: Harris

E. Transportation method

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

Name of the hauler: Magna Flow Environmental

Hauler registration number: 21484

Sludge is transported as a:

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

Section 10. Permit Authorization for Sewage Sludge Disposal (Instructions Page 52)

A. Beneficial use authorization

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

☐ Yes ☐ No

If yes, are you requesting to continue this authorization to land apply biosolids 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 Biosolids	☐ 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 54)

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 55)

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: N/A

Title: N/A

Signature: _____

Date: _____

ATTACHMENT NO. 10

TREATMENT PROCESS DESCRIPTION

Generation Park Management District

East Wastewater Treatment Plant

Domestic Technical Report 1.0 – Section 2. Treatment Process Description

Current Operating Phase

All phases are proposed; plant is not currently operating.

Proposed Interim Phase I (0.12 MGD)

The proposed Interim Phase I plant is a steel plant, designed to treat 0.12 MGD average daily flow with a 0.48 MGD peak flow (4Q). The treatment process is activated sludge process with complete mix single stage nitrification.

Wastewater will be pumped through an influent force main to the headworks, which will have a manual bar screen. The effluent from the screens will proceed to two (2) aeration basins for biological treatment. From the aeration basins, the mixed liquor will flow to a single clarifier for settling.

The settled sludge from the clarifier will either be returned to the aeration basins as Recycled Activated Sludge (RAS) or wasted into two (2) digesters as Waste Activated Sludge (WAS). Each digester has aerators and airlift decanters to further thicken the sludge and return the supernatant back to the aeration basins, while the sludge is periodically removed and wet hauled to another facility for further dewatering and disposal.

The settled final clarifier effluent will flow to a chlorine contact basin for disinfection. Finally, the disinfected effluent will be discharged into a man-made detention pond and ultimately into the San Jacinto River.

Proposed Interim Phase II (1.05 MGD)

The proposed Interim Stage II plant will include four (4) of the nine (9) ultimate sequencing batch reactors (SBRs) and repurpose the basins from the steel plant as digesters. It will be designed to treat 1.05 MGD average daily flow and 4.2 MGD peak flow, with one SBR out of service. Each SBR treats 350,000 gallons per day.

The wastewater influent will flow into a headworks structure and then to the SBRs for biological treatment and settling using an activated sludge process with single stage nitrification. Fine bubble diffusers and/or jet aerators will be used for aeration and decanters will be used for removing the clarified supernatant effluent. Positive displacement blowers will supply air to the SBR basins.

The proposed Interim Phase II will also include two (2) chlorine contact basins, for final disinfection of the effluent. The disinfected effluent will then be de-chlorinated and discharged into a man-made detention pond and ultimately into the San Jacinto River.

Excess sludge from the SBRs will continue to digesters, which will contain a decant mechanism for thickening the sludge. The steel aeration basins and digesters from the Proposed Stage I package plant will be converted as necessary and repurposed as digesters in this phase. The decanted digester supernatant will be returned to the SBR treatment basins, and thickened sludge will be periodically removed and wet hauled to another facility for further dewatering and disposal.

Proposed Ultimate Phase (2.8 MGD)

In the proposed ultimate phase, five (5) additional concrete sequencing batch reactors (SBRs) will be added to the four (4) SBRs proposed in the 1.05 MGD Interim II phase, for a total of nine (9) SBRs. The ultimate plant will be designed to treat 2.8 MGD average daily flow and 11.2 MGD peak flow, with one SBR out of service. Each SBR treats 350,000 gallons per day.

The wastewater influent will flow into a headworks structure and then to the SBRs for biological treatment and settling using an activated sludge process with single stage nitrification. Fine bubble diffusers and/or jet aerators will be used for aeration and decanters will be used for removing the clarified supernatant effluent. Positive displacement blowers will supply air to the SBR basins.

The proposed ultimate phase will include four (4) chlorine contact basins, for final disinfection of the effluent. The disinfected effluent will then be de-chlorinated and discharged into a man-made detention pond and ultimately into the San Jacinto River.

Excess sludge from the SBRs will continue to digesters, which will contain a decant mechanism for thickening the sludge. The proposed ultimate phase will include four (4) digesters. The decanted digester supernatant will be returned to the SBR treatment basins, and thickened sludge will be periodically removed and wet hauled to another facility for further dewatering and disposal.

ATTACHMENT NO. 11

TREATMENT UNITS

Generation Park Management District

East Wastewater Treatment Plant

Domestic Technical Report 1.0 – Table 1.0(1) Treatment Units

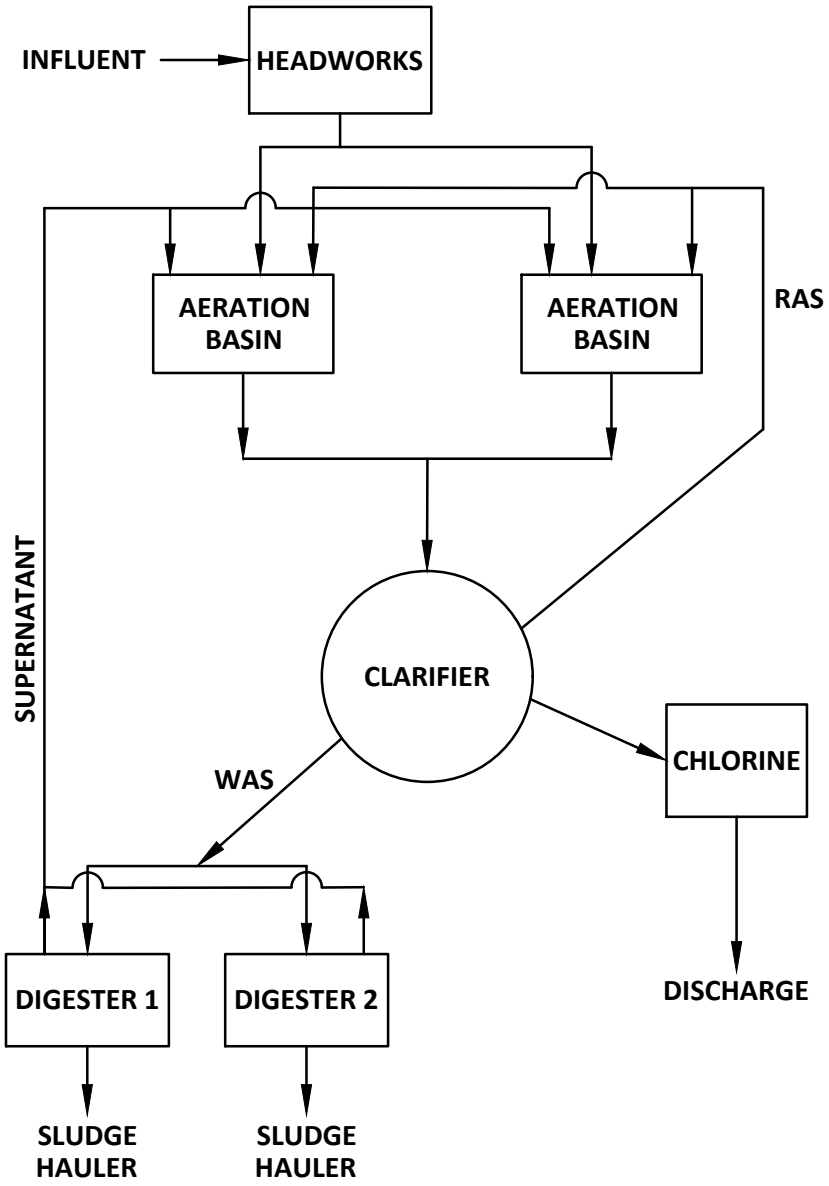
Treatment Unit Type	Number of Units	Dimensions (L X W X D)
Interim I Phase – 0.12 MGD		
Aeration Basins	2	40 ft L X 12 ft W X 10.45 ft SWD
Clarifier	1	35 ft Diameter X 10 ft SWD
Chlorine Contact Basin	1	20 ft L X 12 ft W X 8.58 ft SWD
Aerobic Digesters	2	20 ft L X 12 ft W X 10.5 ft SWD
Interim II Phase – 1.05 MGD		
SBR Basins	4	75 ft L X 25 ft W X 24 SWD
Chlorine Basins	2	58 ft L X 8 ft W X 11.5 SWD
Aerobic Digesters	2	60 ft L X 12 ft W X 10.5 SWD
Ultimate Phase – 2.8 MGD		
SBR Basins	9	75 ft L X 25 ft W X 24 SWD
Chlorine Basins	4	58 ft L X 8 ft W X 11.5 SWD
Aerobic Digesters	4	25 ft L X 40 ft W X 12.5 SWD

SWD – Side Wall Depth
L – Length
D – Depth
W – Width

ATTACHMENT NO. 12

PROCESS FLOW DIAGRAMS

0.12 MGD
PROPOSED INTERIM I PHASE
GENERATION PARK
MANAGEMENT DISTRICT



GENERATION PARK
A McCord Development Property

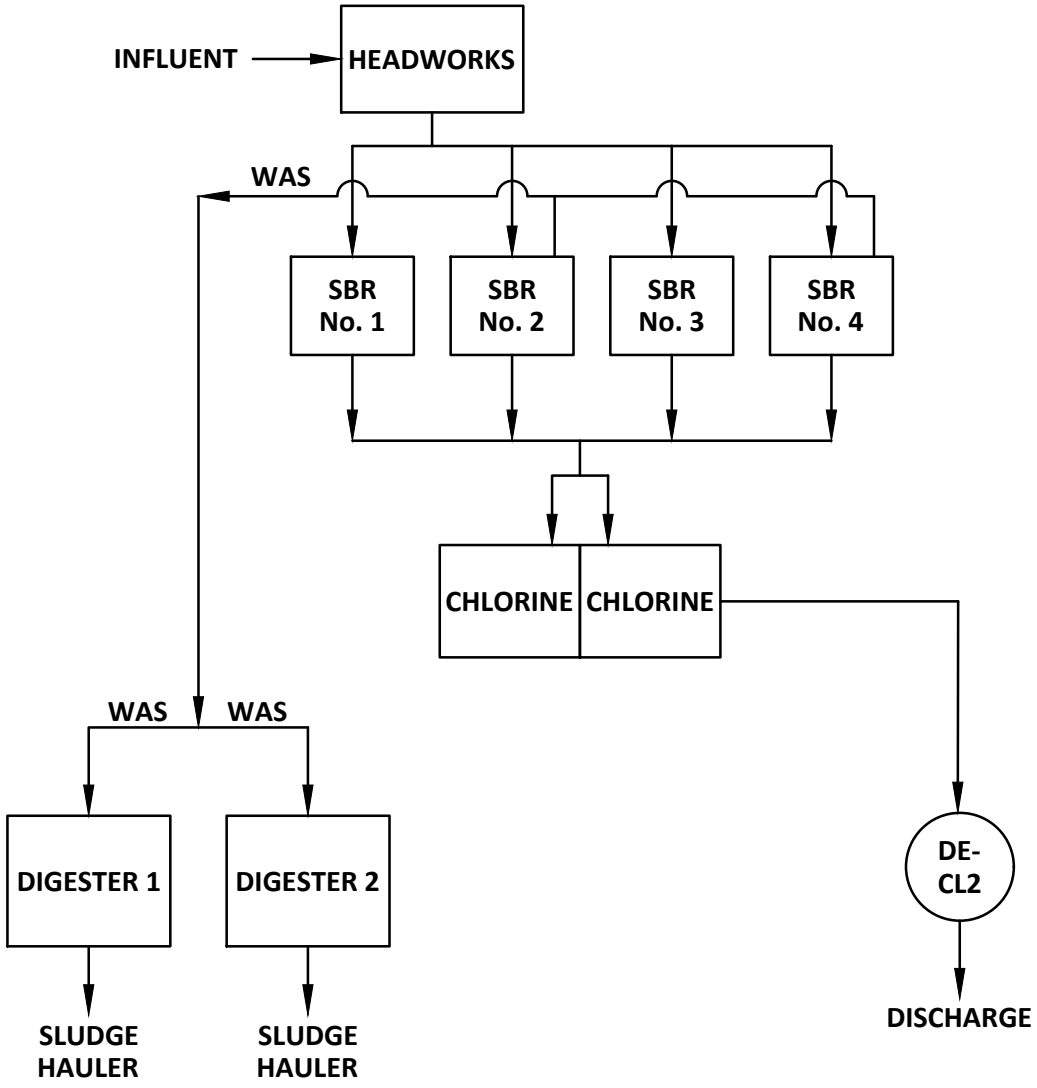
IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Tx. 77040
713.462.3178
TxEng Firm 2726
TxSurv Firm 10110700

PROCESS FLOW DIAGRAM 1

DATE: 1/6/2025 | SCALE: N.T.S.

X:\13300\13390\1204 TO 143 Generation Park East\CAD\Exhibits\2025-01-04 PED\PROC-FLOW-DIAG.dwg [0.12 MGD] Plotted: Feb 11, 2025 at 3:29pm by idouglas (Last Saved by: idouglas)

1.05 MGD
PROPOSED INTERIM II PHASE
GENERATION PARK
MANAGEMENT DISTRICT



GENERATION PARK
A McCord Development Property

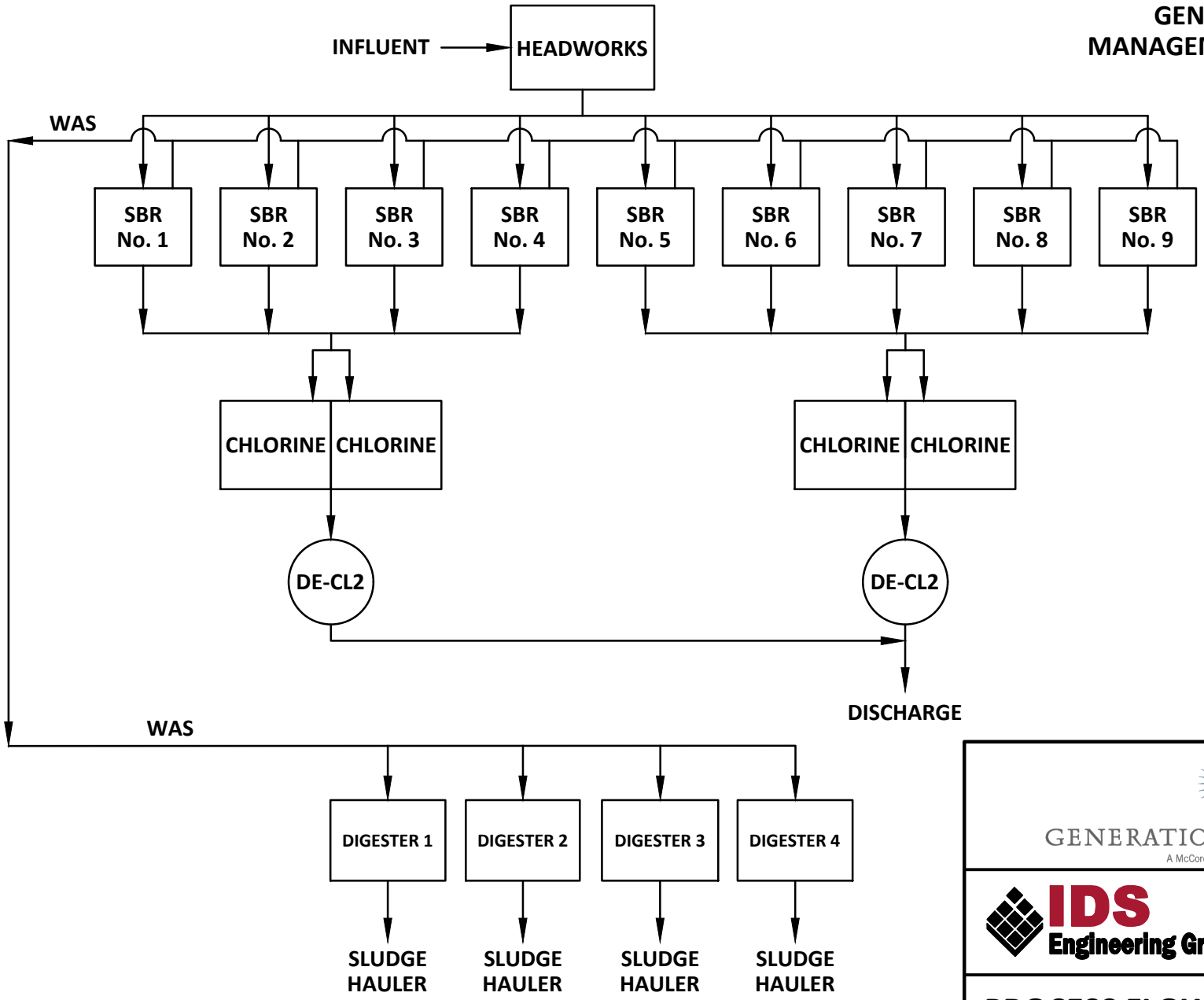
IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Tx. 77040
713.462.3178
TxEng Firm 2726
TxSurv Firm 10110700

PROCESS FLOW DIAGRAM 2

DATE: 1/6/2025 | SCALE: N.T.S.

X:\13300\13390\1204 TO 143 Generation Park East\CAD\Exhibits\2025-01-04 PFD\PROC-FLOW-DIAG.dwg [1.05 MGD] Plotted: Feb 11, 2025 at 3:30pm by idouglas (Last Saved by: idouglas)

2.8 MGD
FINAL PHASE
GENERATION PARK
MANAGEMENT DISTRICT



GENERATION PARK
A McCord Development Property

IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Tx. 77040
713.462.3178
TxEng Firm 2726
TxSurv Firm 10110700

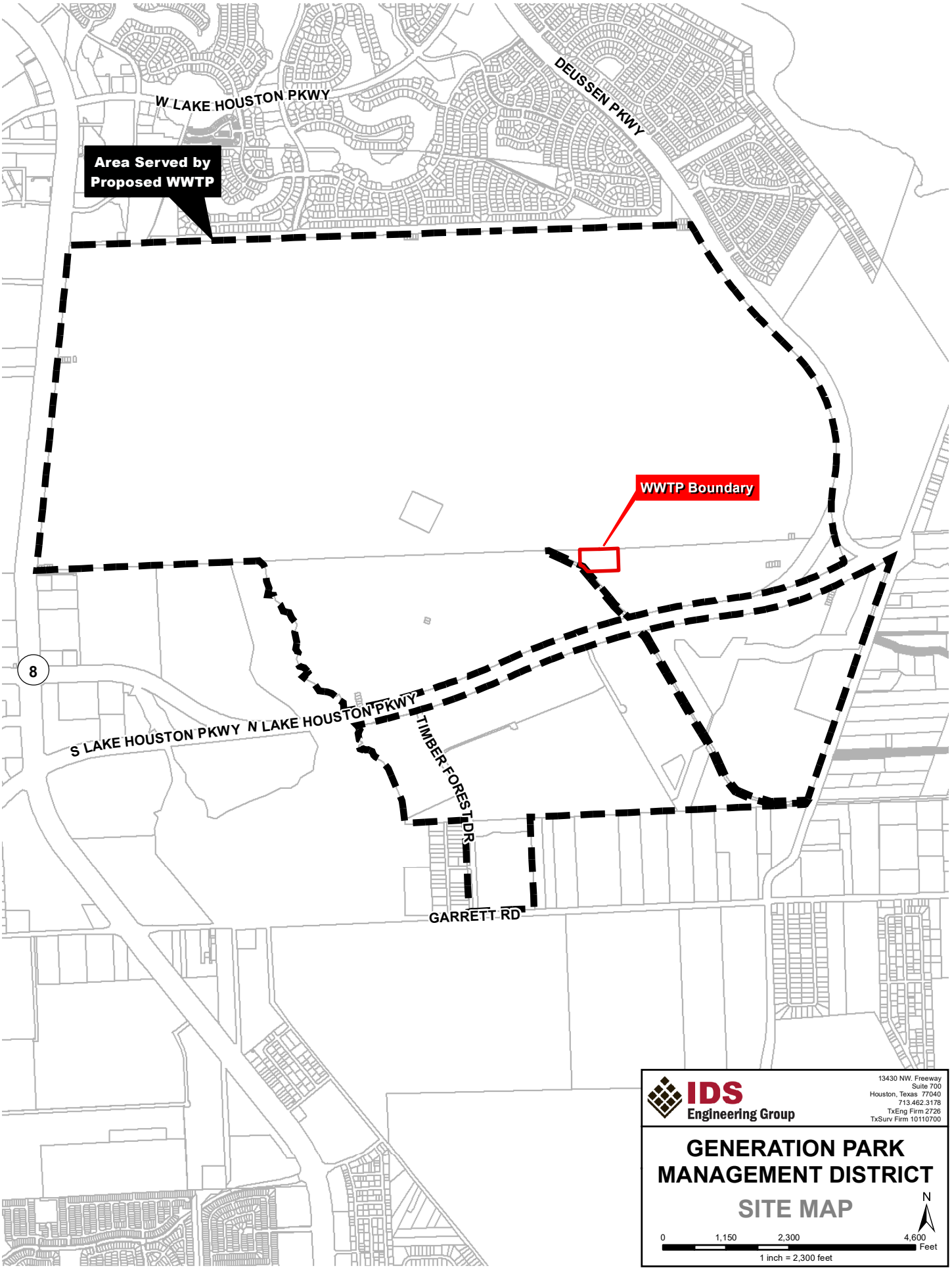
PROCESS FLOW DIAGRAM 3

DATE: 2/11/2025 | SCALE: N.T.S.

\\idseg.com\fs\Projects\1300\13901204 TO 143 Generation Park East\CAD\Exhibits\2025-01-04 PFD\PROC-FLOW-DIAG.dwg [2.800 MGD] Plotted Feb 11, 2025 at 5:51pm by tbradshaw (Last Saved by: tbradshaw)

ATTACHMENT NO. 13

SITE MAP



IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Texas 77040
713.462.3178
TxEng Firm 2726
TxSurv Firm 10110700

GENERATION PARK MANAGEMENT DISTRICT

SITE MAP

N

0 1,150 2,300 4,600 Feet

1 inch = 2,300 feet

IDS Engineering Group \\houvgisdb1\Projects\1300\1339-012-04_GPMD2024_TPDES_GPEWWTP\SiteMap_8.5X11.mxd Plotted: 1/27/2025 at 9:14:57 AM by vtrevino

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 56)

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 No. 14

B. Regionalization of facilities

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

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

1. *Municipally incorporated areas*

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

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

☐ Yes ☒ No ☐ Not Applicable

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

If yes, attach correspondence from the city.

Attachment: Click to enter text.

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

Attachment: Click to enter text.

2. *Utility CCN areas*

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

☐ Yes ☒ No

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

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

Attachment: Click to enter text.

3. Nearby WWTPs or collection systems

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

☒ Yes ☐ No

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

Attachment: See Attachment No. 15

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 No. 15

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: N/A

Section 2. Proposed Organic Loading (Instructions Page 58)

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		
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	1.2 MGD	300 mg/L
Motel		
Restaurant		
Hospital		
Nursing home		
Other	1.6 MGD	300-350 mg/L
TOTAL FLOW from all sources	2.8 MGD	
AVERAGE BOD_5 from all sources		approx. 315 mg/L

Section 3. Proposed Effluent Quality and Disinfection (Instructions Page 58)

A. Existing/Interim I Phase Design Effluent Quality

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

Total Suspended Solids, mg/l: 15 mg/L

Ammonia Nitrogen, mg/l: 3 mg/L

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: 4.0 mg/L

Other: E. coli, colony forming units per 100mL: 126

B. Interim II Phase Design Effluent Quality

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

Total Suspended Solids, mg/l: 15 mg/L

Ammonia Nitrogen, mg/l: 3 mg/L

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: 4.0 mg/L

Other: E. coli, colony forming units per 100mL: 126

C. Final Phase Design Effluent Quality

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

Total Suspended Solids, mg/l: 15 mg/L

Ammonia Nitrogen, mg/l: 3 mg/L

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: 4.0 mg/L

Other: E. coli, colony forming units per 100mL: 126

D. Disinfection Method

Identify the proposed method of disinfection.

☒ Chlorine: 1.0 to 4.0 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: Sodium Bisulfite

Section 4. Design Calculations (Instructions Page 58)

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 No. 16

Section 5. Facility Site (Instructions Page 59)

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.

FIRM Panel No. 48201C0520L. See Attachment No. 17.

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 No. 18

Section 6. Permit Authorization for Sewage Sludge Disposal (Instructions Page 59)

A. Beneficial use authorization

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

☐ Yes ☒ No

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

B. Sludge processing authorization

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

☐ Sludge Composting

☐ Marketing and Distribution of sludge

☐ Sludge Surface Disposal or Sludge Monofill

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

Section 7. Sewage Sludge Solids Management Plan (Instructions Page 60)

Attach a solids management plan to the application.

Attachment: See Attachment No. 19

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.

ATTACHMENT NO. 14

JUSTIFICATION OF PERMIT NEED

Generation Park Management District

East Wastewater Treatment Plant

Domestic Technical Report 1.1 – Section 1.A. Justification of permit need

Generation Park Management District currently has two permitted wastewater treatment facilities with permit numbers WQ0014625001 and WQ0015015001. The Generation Park Management District Wastewater Treatment Facility 2 (GPMD WWTF2) (WQ0015015001) has not been placed into operation. It is proposed that the new facility proposed in this permit application will take the place of GPMD WWTF2 and all flow that would have been treated at GPMD WWTF2 will be treated at this new site.

The ultimate service area for this facility will consist of approximately 2,900 acres of mixed-use development and currently contains a 1.4 million square foot warehouse facility. This facility is currently not occupied but will require 55,000 GPD of wastewater capacity after its estimated occupancy date of Summer 2027. The developer is in the process of selling two additional industrial sites, one of which requires 7,000 GPD of wastewater capacity, expected in late 2026. The proposed Interim Phase I WWTP (0.12 MGD) would be required to treat these flows.

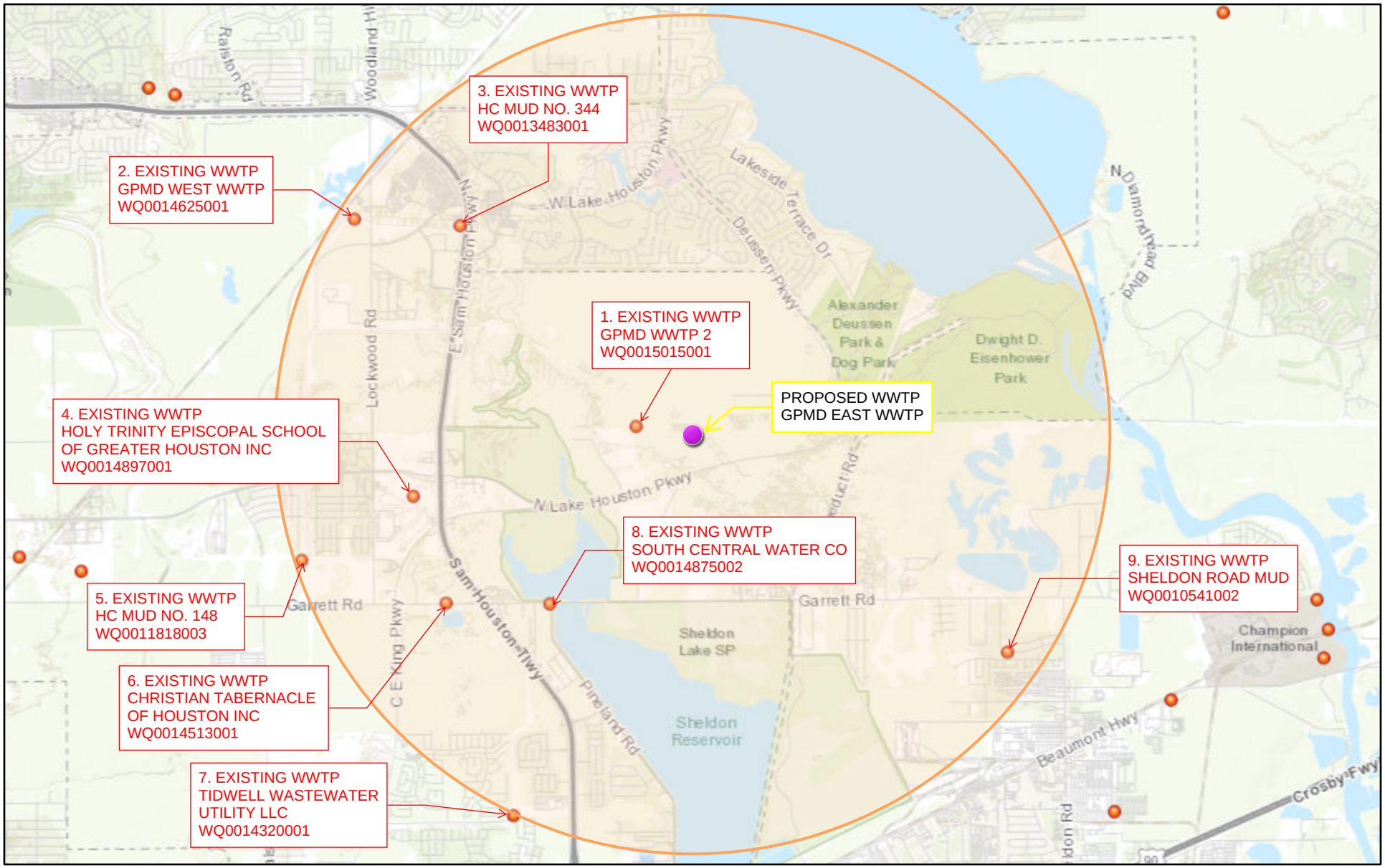
The other industrial site is expected to require 800,000 GPD of wastewater capacity by Q2 of 2029. The proposed Interim Phase II WWTP (1.05 MGD) will treat these flows in addition to the flows described in Phase I.

The second industrial site will require an additional 350,000 GPD by Summer 2032 pushing total flows to 1.2 MGD. Additional land within the District is also being offered for sale which we estimate will increase the required WWTP capacity to 2.8 MGD.

ATTACHMENT NO. 15

NEARBY WWTPS MAP & PROOF OF MAILING REQUEST FOR SERVICE

Nearby Wastewater Treatment Facilities (3 miles)



2/11/2025, 9:22:39 AM

Wastewater Outfalls

1:72,224

0 0.5 1 2 mi

0 0.75 1.5 3 km

TCEQ, City of Houston, HPB, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA

Web AppBuilder for ArcGIS

City of Houston, HPB, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA | TCEQ |

1. **Permittee Name – Generation Park Management District (Wastewater Treatment Facility 2)**

   Permit No. – WQ0015015001

   Same permittee as proposed Wastewater Treatment Plant. This WWTP & Permit will be abandoned if proposed permit is approved and new WWTP is built.

2. **Permittee Name – Generation Park Management District (West Wastewater Treatment Plant)**

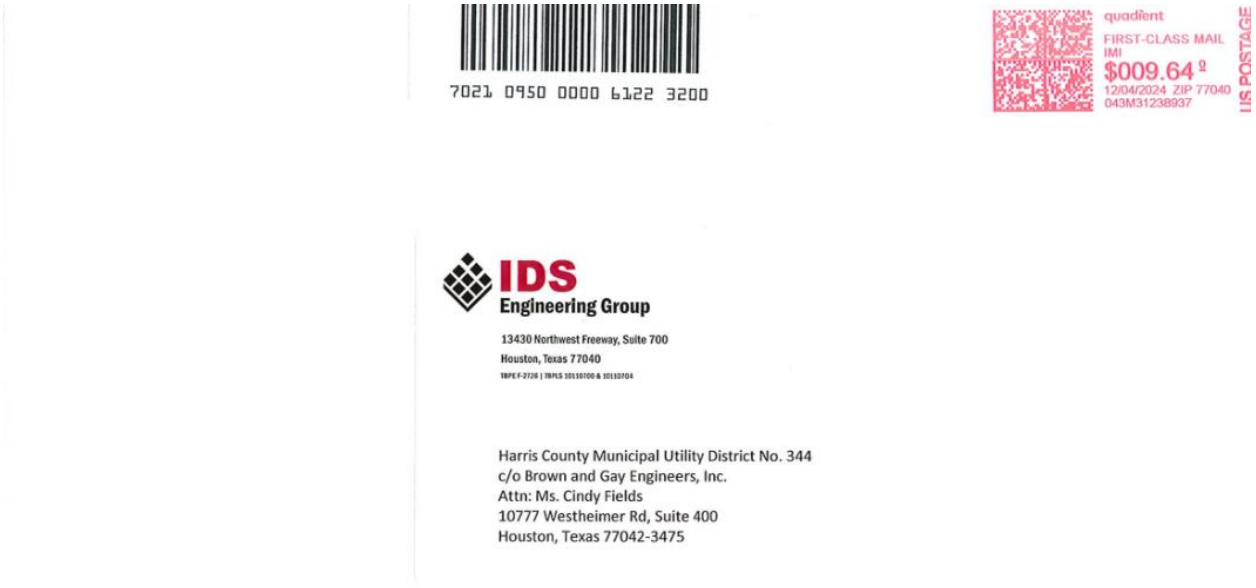
   Permit No. – WQ0014625001

   Same permittee as proposed Wastewater Treatment Plant. This plant was designed to serve the current and future needs of the west side of Generation Park Management District.

3. Permittee Name – Harris County Municipal Utility District No. 344

Permit No. – WQ0013483001

Proof of Mailing Request via Certified Mail:



Copy of Request & Correspondence Received: See next page

IDS
Engineering Group

December 3, 2024

Harris County Municipal Utility District No. 344
c/o Brown and Gay Engineers, Inc.
Attn: Ms. Cindy Fields
10777 Westheimer Rd, Suite 400
Houston, TX 77042-3475

To Whom it May Concern:

We are writing to you on behalf of Generation Park Management District which is seeking a Texas Pollutant Discharge Elimination System (TPDES) discharge permit for a proposed Wastewater Treatment Plant. We are in the process of preparing the permit application for this operation. The projected ultimate flow is 2.8 MGD and the district's developer, McCord Development, Inc., currently owns a site sufficient in size for the facility.

As part of the TPDES discharge permit application process, the TCEQ requires that we contact each wastewater discharge permit holder within a three-mile radius of the proposed facility to solicit information about available treatment capacity. Your permitted wastewater treatment plant is within the three-mile radius and we are therefore inquiring about the availability of capacity.

Please complete the short questionnaire below and return within 5 days to our office. You may also email your response to aburns@idseg.com. Please call me at (832) 590-7153 if you have any questions or need additional information. Thank you for your timely response to this matter.

Respectfully,

AnnMarie Burns, E.I.T
Design Engineer

Reply

Date: 12/10/24
Name of Permitee: HCMUD344
Address: _____

Capacity Available Now (Yes/No)? _____
Willing to Expand Plant (Yes/No)? _____
Date Available: _____

Terms (if capacity available): _____

Name of Person Responding: CINDY FIELDS
Title: ENGINEER
Telephone: 713-488-8343
Fax: _____

\\IDSEG.COM\FS\PROJECTS\1300\133901204 TO 145 GENERATION PARK EAST\ENG-PM\CORRES\ATTACHMENT CAPACITY INQUIRY LETTERS (HC MUD 344).DOCX

4. Permittee Name – Holy Trinity Episcopal School of Greater Houston Inc

Permit No. – WQ0014897001

Proof of Mailing Request via Certified Mail:



Copy of Request & Correspondence Received: See next page

IDS Engineering Group

December 3, 2024

Holy Trinity Episcopal School
11810 Lockwood Road
Houston, Texas 77044

To Whom it May Concern:

We are writing to you on behalf of Generation Park Management District which is seeking a Texas Pollutant Discharge Elimination System (TPDES) discharge permit for a proposed Wastewater Treatment Plant. We are in the process of preparing the permit application for this operation. The projected ultimate flow is 2.8 MGD and the district's developer, McCord Development, Inc., currently owns a site sufficient in size for the facility.

As part of the TPDES discharge permit application process, the TCEQ requires that we contact each wastewater discharge permit holder within a three-mile radius of the proposed facility to solicit information about available treatment capacity. Your permitted wastewater treatment plant is within the three-mile radius and we are therefore inquiring about the availability of capacity.

Please complete the short questionnaire below and return within 5 days to our office. You may also email your response to aburns@idseg.com. Please call me at (832) 590-7153 if you have any questions or need additional information. Thank you for your timely response to this matter.

Respectfully,

AnnMarie Burns, E.I.T
Design Engineer

Reply

Date: _____
Name of Permitee: _____
Address: _____
_____
Capacity Available Now (Yes/No)? _____
Willing to Expand Plant (Yes/No)? _____
Date Available: _____

Terms (if capacity available): _____
_____
_____
Name of Person Responding: _____
Title: _____
Telephone: _____
Fax: _____

X:\1300\133901204 TO 143 GENERATION PARK EAST\ENG-PM\CORRES\ATTACHMENT CAPACITY INQUIRY LETTERS (HOLY TRINITY EPISCOPAL SCHOOL).DOCX

No response received.

School no longer exists. See screenshot from website below (https://hteshouston.org/):



As of June 2023 Holy Trinity Episcopal School closed it's door to students. We are in the process of selling the property.

Student and Employment records requests can be placed by email or voicemail.

Email: info@hteshouston.org

Phone: 281-608-8252

Other requests will be forwarded to the responsible parties.

5. Permittee Name – Harris County Municipal Utility District No. 148

Permit No. – WQ0011818003

Proof of Mailing Request via Certified Mail:



Copy of Request & Correspondence Received: See next page

IDS Engineering Group

December 3, 2024

Harris County Municipal Utility District No. 148
c/o Langford Engineering, Inc.
Attn: Mr. Craig Hajovsky
1080 W Sam Houston Pkwy N, Suite 200
Houston, Texas 77043-5014

To Whom it May Concern:

We are writing to you on behalf of Generation Park Management District which is seeking a Texas Pollutant Discharge Elimination System (TPDES) discharge permit for a proposed Wastewater Treatment Plant. We are in the process of preparing the permit application for this operation. The projected ultimate flow is 2.8 MGD and the district's developer, McCord Development, Inc., currently owns a site sufficient in size for the facility.

As part of the TPDES discharge permit application process, the TCEQ requires that we contact each wastewater discharge permit holder within a three-mile radius of the proposed facility to solicit information about available treatment capacity. Your permitted wastewater treatment plant is within the three-mile radius and we are therefore inquiring about the availability of capacity.

Please complete the short questionnaire below and return within 5 days to our office. You may also email your response to aburns@idseg.com. Please call me at (832) 590-7153 if you have any questions or need additional information. Thank you for your timely response to this matter.

Respectfully,

AnnMarie Burns, E.I.T
Design Engineer

Reply

Date: 1/15/2025
Name of Permitee: Harris County MUD No. 148
Address: 2929 ALLEN PARKWAY, SUITE 3150
HOUSTON, TEXAS 77019
Capacity Available Now (Yes/No)? No
Willing to Expand Plant (Yes/No)? No
Date Available: N/A

Terms (if capacity available): N/A

Name of Person Responding: Craig A. Hajovsky, P.E.
Title: Engineer for the District
Telephone: 713-461-3530
Fax:

\\IDSEG.COM\FS\PROJECTS\1300\133901204 TO 143 GENERATION PARK EAST\ENG-PM\CORRES\ATTACHMENT CAPACITY INQUIRY LETTERS (HC MUD 148).DOCX

6. **Permittee Name – Christian Tabernacle of Houston Inc**

Permit No. – WQ0014513001

Proof of Mailing Request via Certified Mail:



Copy of Request & Correspondence Received: See next page for copy of request. No response received.

IDS Engineering Group

December 3, 2024

Inspire Church (Christian Tabernacle of Houston)
11727 E. Sam Houston Pkwy N.
Houston, Texas 77044

To Whom it May Concern:

We are writing to you on behalf of Generation Park Management District which is seeking a Texas Pollutant Discharge Elimination System (TPDES) discharge permit for a proposed Wastewater Treatment Plant. We are in the process of preparing the permit application for this operation. The projected ultimate flow is 2.8 MGD and the district's developer, McCord Development, Inc., currently owns a site sufficient in size for the facility.

As part of the TPDES discharge permit application process, the TCEQ requires that we contact each wastewater discharge permit holder within a three-mile radius of the proposed facility to solicit information about available treatment capacity. Your permitted wastewater treatment plant is within the three-mile radius and we are therefore inquiring about the availability of capacity.

Please complete the short questionnaire below and return within 5 days to our office. You may also email your response to aburns@idseg.com. Please call me at (832) 590-7153 if you have any questions or need additional information. Thank you for your timely response to this matter.

Respectfully,

AnnMarie Burns, E.I.T
Design Engineer

Reply

Date: _____
Name of Permitee: _____
Address: _____
_____
Capacity Available Now (Yes/No)? _____
Willing to Expand Plant (Yes/No)? _____
Date Available: _____

Terms (if capacity available): _____
_____
_____
Name of Person Responding: _____
Title: _____
Telephone: _____
Fax: _____

X:\1300\133901204 TO 143 GENERATION PARK EAST\ENG-PM\CORRES\ATTACHMENT CAPACITY INQUIRY LETTERS (CHRISTIAN TABERNACLE).DOCX

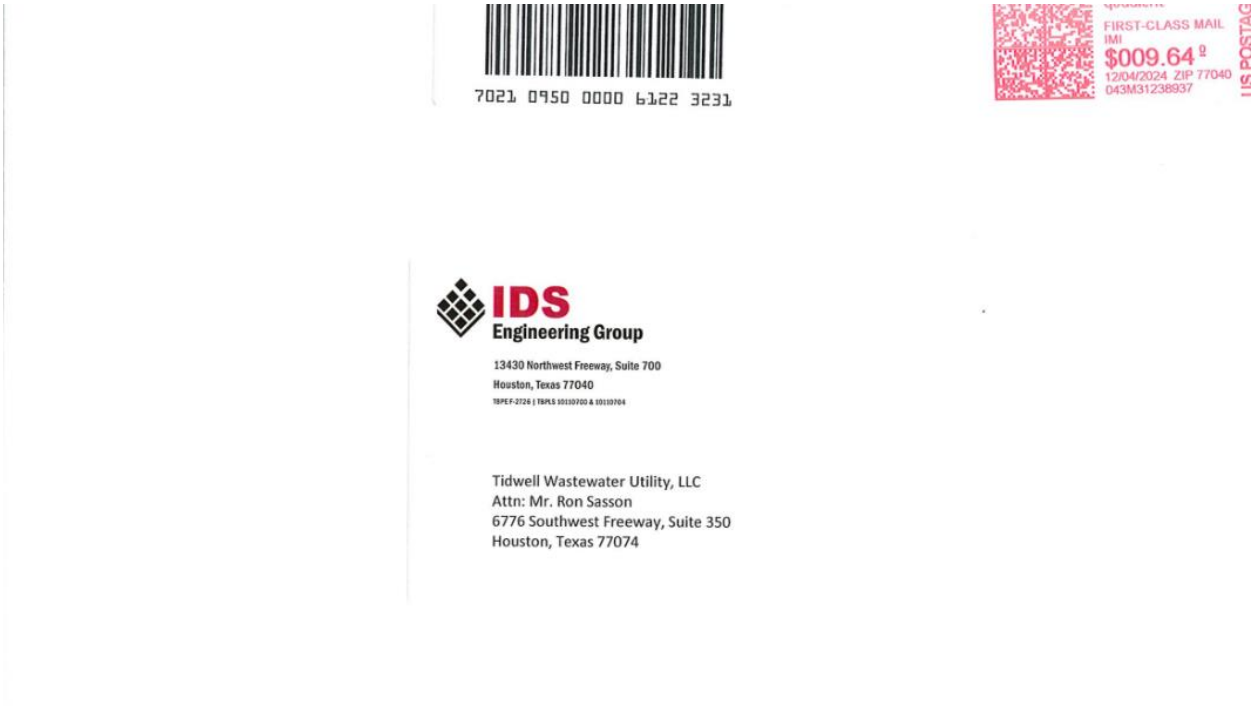
13430 Northwest Freeway, Suite 700, Houston, Texas 77040
TxEng Firm 2726 | TxSurv Firm 10110700
t 713.462.3178
idseg.com

infrastructure design solutions

7. Permittee Name – Tidwell Wastewater Utility LLC

Permit No. – WQ0014320001

Proof of Mailing Request via Certified Mail:



Copy of Request & Correspondence Received: See next page for copy of request. No response received.

IDS Engineering Group

December 3, 2024

Tidwell Wastewater Utility, LLC
Attn: Mr. Ron Sasson
6776 Southwest Freeway, Suite 350
Houston, Texas 77074

To Whom it May Concern:

We are writing to you on behalf of Generation Park Management District which is seeking a Texas Pollutant Discharge Elimination System (TPDES) discharge permit for a proposed Wastewater Treatment Plant. We are in the process of preparing the permit application for this operation. The projected ultimate flow is 2.8 MGD and the district's developer, McCord Development, Inc., currently owns a site sufficient in size for the facility.

As part of the TPDES discharge permit application process, the TCEQ requires that we contact each wastewater discharge permit holder within a three-mile radius of the proposed facility to solicit information about available treatment capacity. Your permitted wastewater treatment plant is within the three-mile radius and we are therefore inquiring about the availability of capacity.

Please complete the short questionnaire below and return within 5 days to our office. You may also email your response to aburns@idseg.com. Please call me at (832) 590-7153 if you have any questions or need additional information. Thank you for your timely response to this matter.

Respectfully,

AnnMarie Burns, E.I.T
Design Engineer

Reply

Date: _____
Name of Permitee: _____
Address: _____
_____
Capacity Available Now (Yes/No)? _____
Willing to Expand Plant (Yes/No)? _____
Date Available: _____

Terms (if capacity available): _____
_____
_____
Name of Person Responding: _____
Title: _____
Telephone: _____
Fax: _____

X:\1300\133901204 TO 143 GENERATION PARK EAST\ENG-PM\CORRES\ATTACHMENT CAPACITY INQUIRY LETTERS (TIDWELL WASTEWATER UTILITY LLC).DOCX

8. **Permittee Name – South Central Water Co**

Permit No. – WQ0014875002

Permit has been sold to: Undine Development

Proof of Mailing Request via Certified Mail: correspondence with Undine Development via email & phone call

Copy of Request & Correspondence Received: See next page

IDS Engineering Group

December 5, 2024

Undine Group, LLC
Attn: Mr. Jeff Goebel
17681 Telge Road
Cypress, Texas 77429

To Whom it May Concern:

We are writing to you on behalf of Generation Park Management District which is seeking a Texas Pollutant Discharge Elimination System (TPDES) discharge permit for a proposed Wastewater Treatment Plant. We are in the process of preparing the permit application for this operation. The projected ultimate flow is 2.8 MGD and the district's developer, McCord Development, Inc., currently owns a site sufficient in size for the facility.

As part of the TPDES discharge permit application process, the TCEQ requires that we contact each wastewater discharge permit holder within a three-mile radius of the proposed facility to solicit information about available treatment capacity. Your permitted wastewater treatment plant is within the three-mile radius and we are therefore inquiring about the availability of capacity.

Please complete the short questionnaire below and return within 5 days to our office. You may also email your response to aburns@idseg.com. Please call me at (832) 590-7153 if you have any questions or need additional information. Thank you for your timely response to this matter.

Respectfully,

AnnMarie S. Burns

AnnMarie Burns, E.I.T
Design Engineer

Reply

Date: 12/16/24
Name of Permittee: Undine
Address: 17681 Telge Rd Cypress TX 77429
Capacity Available Now (Yes/No)? NO
Willing to Expand Plant (Yes/No)? NO
Date Available: _____

Terms (if capacity available): _____

Name of Person Responding: Jeff Goebel
Title: Business Dev
Telephone: 713-724-9321
Fax: _____

X:\1300\133901204 TO 143 GENERATION PARK EAST\ENG-PM\CORRES\ATTACHMENT CAPACITY INQUIRY LETTERS (SOUTH CENTRAL WATER CO UNDINE).DOCX

13430 Northwest Freeway, Suite 700, Houston, Texas 77040
TxEng Firm 2726 | TxSurv Firm 10110700
t 713.462.3178
idseg.com

infrastructure design solutions

9. Permittee Name – Sheldon Road Municipal Utility District

Permit No. – WQ0010541002

Proof of Mailing Request via Certified Mail:



Copy of Request & Correspondence Received: See next page

IDS Engineering Group

December 3, 2024

Sheldon Road Municipal Utility District
c/o HDR Engineering, Inc.
Attn: Mr. Ryan Nokelby
4828 Loop Central Dr., Suite 800
Houston, Texas 77081-2220

To Whom it May Concern:

We are writing to you on behalf of Generation Park Management District which is seeking a Texas Pollutant Discharge Elimination System (TPDES) discharge permit for a proposed Wastewater Treatment Plant. We are in the process of preparing the permit application for this operation. The projected ultimate flow is 2.8 MGD and the district's developer, McCord Development, Inc., currently owns a site sufficient in size for the facility.

As part of the TPDES discharge permit application process, the TCEQ requires that we contact each wastewater discharge permit holder within a three-mile radius of the proposed facility to solicit information about available treatment capacity. Your permitted wastewater treatment plant is within the three-mile radius and we are therefore inquiring about the availability of capacity.

Please complete the short questionnaire below and return within 5 days to our office. You may also email your response to aburns@idseg.com. Please call me at (832) 590-7153 if you have any questions or need additional information. Thank you for your timely response to this matter.

Respectfully,

AnnMarie Burns, E.I.T
Design Engineer

Reply

Date: 12/20/24
Name of Permitee: Sheldon Road MUD
Address: 9419 Lamkin Road, Houston, Tx 77049
Capacity Available Now (Yes/No)? (No)
Willing to Expand Plant (Yes/No)? (No)
Date Available: N/A

Terms (if capacity available): N/A

Name of Person Responding: Ryan Nokelby, P.E.
Title: District Engineer
Telephone: 713-622-9264
Fax: 713-622-9265

X:\1300\133901204 TO 143 GENERATION PARK EAST\ENG-PM\CORRES\ATTACHMENT CAPACITY INQUIRY LETTERS (SHELDON RD MUD).DOCX

13430 Northwest Freeway, Suite 700, Houston, Texas 77040
TxEng Firm 2726 | TxSurv Firm 10110700
t 713.462.3178
idseg.com

infrastructure design solutions

ATTACHMENT NO. 16

DESIGN CALCULATIONS

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase I - 0.120 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Design Parameters

Influent Flow Characteristics - The hydraulic design of the facility must ensure that the plant will operate under the most extreme conditions anticipated. The plant process and hydraulic design for this facility are as follows:

Average Design Flow	0.12	MGD	Influent BOD_5	350	mg / l
	83	gpm	Influent BOD5	350	lbs / day
Peaking Factor	4		Influent TSS	250	mg / l
Peak Flow	0.48	MGD			
	333	gpm	Influent NH3-N	75	mg/L

Effluent Characteristics

BOD_5	S_e	10	mg/L
TSS	TSS_e	15	mg/L
NH_3-N	N_e	3	mg/L

The calculations below are based on minimum TCEQ sizing parameters but may not reflect actual treatment unit dimensions. Values shown are the minimum that will be provided.

Aeration

Criteria	*Value*	*Regulation Section*
Maximum Organic Loading Rate (lbs BOD5/day/1000 cu ft)	35	217.154(b)(Table F.1)
Reactor MLSSS Level at normal operating level (mg/l)	3000-5000	

Aeration Volume Required	10,008	cu. ft.

Volume Provided:

Length	40	ft
Width	12	ft
SWD	10.45	ft
# Tanks	2	
Volume Provided	10,032	cu. ft.
Effective Organic Loading	34.92	lbs BOD_5/day/1000 cu. ft.

Clarifier

Criteria	*Value*		*Regulation Section*
TCEQ Maximum Surface Loading (Qpk)	1200	gal/day/s.f. at peak flow	217.154(c)(Table F.2)
TCEQ Minimum Detention Time (Qpk)	1.8	hours at peak flow	217.154(c)(Table F.2)
TCEQ Maximum Weir Loading (Qpk)	30000	gal/day/ft	217.152(c)(4)
TCEQ Minimum Side Water Depth (SWD)	10	ft	217.152(g)(2)(A)/(B)
TCEQ Maximum Stilling Well Velocity	0.15	ft/sec	217.152(a)(4)

Surface Area Required Required	400	sq. ft.
Volume Required	4813	cu. ft.
Length of weir required	16	ft.

Volume Provided:

Diameter	35	ft
SWD	10.00	ft
# Tanks	1	
Weir Diameter	33	ft
Surface Area Provided	962	sq. ft.
Volume Provided	9,621	cu. ft.
Weir length provided	104	ft.

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase I - 0.120 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

CHEMICAL (CHLORINE) DISINFECTION

Chlorination

				Regulation Section
Minimum Cl_2 Contact Time		20	minutes	217.281(b)(1)
Chlorine basin volume required		6,667	gallons	
Phase I				
Length	20 ft			
Width	12 ft			
Depth @ design	8.58 ft			
Number of Basins	1			
Volume Provided	15,403 gallons			
Volume provided greater than or equal to required volume		YES		
TCEQ min. design Cl_2 dose		8	mg / l	217.272(b)
Cylinder size		150	lbs	
Withdrawal factor		1	(Use 1.0 for 150 # cylinder and 8.0 for 2000 # cylinders)	217.273(a)(1)
Threshold Temperatures (Low Ambient Temperature?)		65	Use 65 for indoor storage	217.273(a)(1)
Capacity of chlorine disinfection system @ max. flow		32	lbs per day	217.272(a) K.1
Avg. daily chlorine usage @ average flow		8	lbs per day	
Max. withdrawal rate per cylinder		65	lbs per day (Formula for vacuum systems only)	217.273(a)(1) K.2
No. of Cylinders required per bank		1		
One bank of cylinders will last		19	days at average flow and typical chlorine usage	

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase I - 0.120 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Digesters

TCEQ Minimum Sludge Retention Time	40	days	217.249(t)(4)(B)(Table J.2)
TCEQ Min. Volatile Solids Loading Rate	100	lb / day / 1,000 cu. ft.	217.249(t)(7)(D)
TCEQ Max. Volatile Solids Loading Rate	200	lb / day / 1,000 cu. ft.	217.249(t)(7)(D)

Influent BOD_5	350	lb/ day
Effluent BOD_5	10	lb/ day
BOD_5 to Digester	340	lb/ day

Volume Required from Metcalf and Eddy, "Wastewater Engineering," 4th Edition

Hydraulic Detention Time of the Aeration Basins

$$\theta\,(\text{Gal}) = \left(\frac{\text{Volume of Aeration Basins in Gallons}}{\text{Average Influent Flow in Gallons / Day}}\right) * 24\ \text{hrs/day}$$

BOD_5 *Utilized*

$$BOD_5 utilized\left(\text{lbs } BOD_5/\text{day}\right) = Q * (S_i - S_e)$$

NH_3-N *Utilized*

$$NH_3 utilized\left(\text{lbs } NH_3/\text{day}\right) = Q * (N_i - N_e)$$

Hydraulic Detention Time of Aeration Basins / SBRs	15.01	Hours
BOD_5 *utilized*	340	lb BOD_5 / day
NH_3 *utilized*	72	lb NH_3-N / day

S	BOD_5 Concentration		
N	NH_3-N Concentration		
i	Influent (subscript)		
e	Effluent (subscript)		
Q	Average Design Flow		
Q_{design}	Peak Flow		
Q_W	Waste Sludge Flow to Digester		
X_W	Waste Sludge Concentration	8,500	mg/L
Y	Yield Coefficient	0.6	VSS/lb BOD_5
Y_n	Yield Coefficient (nitrification)	0.15	VSS/lb NH_3-N
k_d	Endogenous Decay Coefficent	0.06	/day
k_{dn}	Endogenous Decay Coeff. (nitrification)	0.30	/day
P_n	Volatile Fraction of X	0.70	
	MLVSS/MLSS Ratio	0.70	
S_{sl}	Specific Gravity of Sludge	1.005	
X	Sludge Concentration in Digester	25,000	mg/L
P_s	Percent Solids in Digester	2.5	
$TSS_{\%}$	% of TSS that is inert	50	%
ρ_w	Specific Weight of Water	8.34	lbs / gallon

Typical Values

Variable	Range		Source
X_W	0.8	2.5	M&E, 4th ed., pg. 14
Y	0.4	0.8	M&E, 4th ed., pg. 58
Y_n	0.04	0.29	WEF MoP 8, Vol I, p
k_d	0.06	0.15	M&E, 4th ed., pg. 58
k_{dn}	0.3	3.0	WEF MoP 8, Vol I, p
P_n	0.59	0.88	M&E, 4th ed., pg. 14
S_{sl}	1.005	1.005	M&E, 4th ed., pg. 14
X	15,000	40,000	M&E, 4th ed., pg. 14
P_s	1.5	4	M&E, 4th ed., pg. 14

Carbonaceous Yield Coefficient Observed — M&E, 4th ed. Pg. 595

$$Y_{c,obs} = \left(\frac{Y}{1 + k_d * \theta}\right)$$

Nitrogenous Yield Coefficient — M&E, 4th ed. Pg. 595

$$Y_{n,obs} = \left(\frac{Y_n}{1 + k_{dn} * \theta}\right)$$

Carbonaceous Sludge Production (MLVSS) — M&E, 4th ed. Pg. 681

$$P_{x,c}\left(\text{lb/day}\right) = Y_{c,obs} * Q * (S_i - S_e) = Y_{c,obs} * BOD_5 utilized$$

Nitrogenous Sludge Production (MLVSS) — M&E, 4th ed. Pg. 681

$$P_{x,n}\left(\text{lb/day}\right) = Y_{n,obs} * Q * (N_i - N_e) = Y_{n,obs} * NH_3 utilized$$

Inert Sludge Production — M&E, 4th ed. Pg. 681

$$P_{x,i}\left(\text{lb/day}\right) = Q_{design} * TSS_{\%} * (TSS_i - TSS_e) * 8.34$$

Total Sludge Production — M&E, 4th ed. Pg. 682

$$P_x\left(\text{lb/day}\right) = P_{x,c} + P_{x,n} + P_{x,i}$$

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase I - 0.120 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Waste Sludge Flow to Digester — M&E, 4th ed. Pg. 1458

$$Q_w = \frac{\text{Total Sludge Production, Dry Solids}}{\rho_w S_{sl} P_s}$$

Required Volume — M&E, 4th ed. Pg. 1537

$$V\,(\text{Gal}) = \left(\frac{Q_w}{X}\right)\left(\frac{(X_w + Y * S_i)}{k_d * P_n + \frac{1}{SRT}}\right)$$

$Y_{c,obs}$	Carbonaceous Yield Coefficient	0.58	
$P_{x,c}$	Carbonaceous Sludge Production	197	lb / day (MLVSS)
		281	lb / day (MLSS)
$Y_{n,obs}$	Nitrogenous Yield Coefficient	0.13	
$P_{x,n}$	Nitrogenous Sludge Production	9.10	lb / day (MLVSS)
		13.00	lb / day (MLSS)
Inert Sludge Production (TSS), Dry Solids		118	lb / day
Total Sudge Production, Volatile Solids		206	lb / day
Volatile Solids Loading Rate		41	lb / day / 1,000 cu. ft.
Total Sudge Production, Dry Solids		500	lb / day
Q_W	Waste Sludge Flow to Digester	2,386	gallons / day
Digester Volume Required		12,408	gallons
		1,659	cu. ft.

Volume Provided:		
Length	20	ft
Width	12	ft
SWD	10.5	
# Tanks	2	
Volume	5,040	cu. ft.

Total Digester Vol. available	5,040	cu. ft.
Volume greater than required	YES	

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase I - 0.120 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Air Requirements

Criteria			*Value*	*Regulation*
Air requirements for Aeration basins	$O_2R = \frac{1.2(BOD_5) + 4.3(NH_3 - N)}{BOD_5}$	2.12	lb oxygen per lb BOD	217.155(a)(3)
Air requirements for digesters		30	SCFM /1000 cu. ft.	217.249(d)(1)(C)***
Air requirements for post aeration		20	SCFM /1000 cu. ft.	not regulated by TCEQ
Minimum mixing requirements		0.12	SCFM /sq. ft.	217.155 (b)(3)(B)
Diffuser transfer efficiency		6.5%	(In wastewater)	217.155 (b)(2)(B)
Design Submergence		10.00	feet	
Diffuser Submergence Correction Factor		1.56	@ design flow depth	217.155 (b)(2)(D)

Corrected Air Flowrate @ Design Submergence = 718 SCFM

$$= \frac{\{(\text{lb BOD}) * (\text{lb Oxygen / lb BOD})\} * \text{Correction Factor}}{(\text{T.E.})\ (\text{lb Oxygen / lb air})\ (\text{lb air / cu. ft.})\ (\text{min / day})}$$

217.155 (b)(2)(C)

Air required for digesters: 151 SCFM

Air required for post aeration 41 SCFM

Air Requiremetns for air lift pumps 40 SCFM

Total Air Requiremetns 950

Use (3) 500 SCFM blowers

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase II - 1.05 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Design Parameters

Influent Flow Characteristics - The hydraulic design of the facility must ensure that the plant will operate under the most extreme conditions anticipated. The plant process and hydraulic design for this facility are as follows:

Average Design Flow	1.05	MGD	Influent BOD_5	350	mg / l
	729	gpm	Influent BOD5	3065	lbs / day
Peaking Factor	4		Influent TSS	250	mg / l
Peak Flow	4.2	MGD			
	2,917	gpm	Influent NH3-N	75	mg/L

Effluent Characteristics

BOD_5	S_e	10	mg/L
TSS	TSS_e	15	mg/L
NH_3-N	N_e	3	mg/L

The calculations below are based on minimum TCEQ sizing parameters but may not reflect actual treatment unit dimensions. Values shown are the minimum that will be provided.

SBR FOUR BASIN SYSTEM

Criteria	*Value*	*Regulation Section*
Maximum Organic Loading Rate (lbs BOD5/day/1000 cu ft)	35	217.156(a)(6)
Reactor MLSSS Level at normal operating level (mg/l)	3000-5000	217.156(a)(7)
Min Side Water Depth (ft)	12	217.156(a)(9)

Aeration Volume Required 87,570 cu. ft.

Volume Provided:

SBR Cycle Time @ Desing ADF	288	min		
SBR Cycle Time @ Peak Flow	144	min		
			Design Side Water Depths	
Length	75	ft	24.00	ft - Design max water level at peak flow w/ all basins operating
Width	25	ft	17.74	ft - Water level at design flow w/ all basins operating
			18.99	ft - Water level at design flow w/ 1 basin out of service
			21.49	ft - Calculated max water level at peak flow w/ all basins operating
			23.98	ft - Calculated max water level at peak flow w/ 1 basin out of service
# Tanks	4		14.00	ft - Minimum water level

Volume (w/ one basin out of service per TCEQ 217.156 (c 106,825 cu. ft.

Effective Organic Loading with one basin out of service at design water depth 28.69 lbs BOD_5/day/1000 cu. ft.

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase II - 1.05 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

CHEMICAL (CHLORINE) DISINFECTION

Chlorination

				Regulation Section
Minimum Cl_2 Contact Time		20	minutes	217.281(b)(1)
Max. Decant Rate per SBR Basins		3,889		
Maximum No. of Basins Decanting at one time		1		
Chlorine basin volume required at max. decant rate		77,778	gallons	
Phase I				
Length	58 ft			
Width	8 ft			
Depth @ design	11.5 ft			
Number of Basins	2			
Volume Provided	79,827 gallons			
Volume provided greater than or equal to required volume		YES		
Max. Decant Flow Rate		3,889	gpm	
Daily Average Flow		729	gpm	
TCEQ min. design Cl_2 dose		8	mg / l	217.272(b)
Cylinder size		2000	lbs	
Withdrawal factor		8	(Use 1.0 for 150 # cylinder and 8.0 for 2000 # cylinders)	217.273(a)(1)
Threshold Temperatures (Low Ambient Temperature?)		65	Use 65 for indoor storage	217.273(a)(1)
Capacity of chlorine disinfection system @ max. flow		374	lbs per day	217.272(a) K.1
Avg. daily chlorine usage @ average flow		70	lbs per day	
Max. withdrawal rate per cylinder		520	lbs per day (Formula for vacuum systems only)	217.273(a)(1) K.2
No. of Cylinders required per bank		1		
One bank of cylinders will last		29	days at average flow and typical chlorine usage	

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase II - 1.05 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Digesters

TCEQ Minimum Sludge Retention Time	40	days	217.249(t)(4)(B)(Table J.2)
TCEQ Min. Volatile Solids Loading Rate	100	lb / day / 1,000 cu. ft.	217.249(t)(7)(D)
TCEQ Max. Volatile Solids Loading Rate	200	lb / day / 1,000 cu. ft.	217.249(t)(7)(D)

Influent BOD_5	3065	lb/ day
Effluent BOD_5	88	lb/ day
BOD_5 to Digester	2977	lb/ day

Volume Required from Metcalf and Eddy, "Wastewater Engineering," 4th Edition

Hydraulic Detention Time of the Aeration Basins

$$\theta\,(\text{Gal}) = \left(\frac{\text{Volume of Aeration Basins in Gallons}}{\text{Average Influent Flow in Gallons / Day}}\right) * 24\ \text{hrs/day}$$

BOD_5 *Utilized*

$$BOD_5 utilized\left(\text{lbs } BOD_5/\text{day}\right) = Q * (S_i - S_e)$$

NH_3-N *Utilized*

$$NH_3 utilized\left(\text{lbs } NH_3/\text{day}\right) = Q * (N_i - N_e)$$

Hydraulic Detention Time of Aeration Basins / SBRs	18.26	Hours
BOD_5 *utilized*	2,977	lb BOD_5 / day
NH_3 *utilized*	631	lb NH_3-N / day

S	BOD_5 Concentration			
N	NH_3-N Concentration			
i	Influent (subscript)			
e	Effluent (subscript)			
Q	Average Design Flow			
Q_{design}	Peak Flow			
Q_W	Waste Sludge Flow to Digester			
X_W	Waste Sludge Concentration	8,500	mg/L	
Y	Yield Coefficient	0.6	VSS/lb BOD_5	
Y_n	Yield Coefficient (nitrification)	0.15	VSS/lb NH_3-N	
k_d	Endogenous Decay Coefficent	0.06	/day	
k_{dn}	Endogenous Decay Coeff. (nitrification)	0.30	/day	
P_n	Volatile Fraction of X	0.70		
	MLVSS/MLSS Ratio	0.70		
S_{sl}	Specific Gravity of Sludge	1.005		
X	Sludge Concentration in Digester	25,000	mg/L	
P_s	Percent Solids in Digester	2.5		
$TSS_{\%}$	% of TSS that is inert	50	%	
ρ_w	Specific Weight of Water	8.34	lbs / gallon	

Typical Values

Variable	Range		Source
X_W	0.8	2.5	M&E, 4th ed., pg. 14
Y	0.4	0.8	M&E, 4th ed., pg. 58
Y_n	0.04	0.29	WEF MoP 8, Vol I, p
k_d	0.06	0.15	M&E, 4th ed., pg. 58
k_{dn}	0.3	3.0	WEF MoP 8, Vol I, p
P_n	0.59	0.88	M&E, 4th ed., pg. 14
S_{sl}	1.005	1.005	M&E, 4th ed., pg. 14
X	15,000	40,000	M&E, 4th ed., pg. 14
P_s	1.5	4	M&E, 4th ed., pg. 14

Carbonaceous Yield Coefficient Observed — M&E, 4th ed. Pg. 595

$$Y_{c,obs} = \left(\frac{Y}{1 + k_d * \theta}\right)$$

Nitrogenous Yield Coefficient — M&E, 4th ed. Pg. 595

$$Y_{n,obs} = \left(\frac{Y_n}{1 + k_{dn} * \theta}\right)$$

Carbonaceous Sludge Production (MLVSS) — M&E, 4th ed. Pg. 681

$$P_{x,c}\left(\text{lb/day}\right) = Y_{c,obs} * Q * (S_i - S_e) = Y_{c,obs} * BOD_5 utilized$$

Nitrogenous Sludge Production (MLVSS) — M&E, 4th ed. Pg. 681

$$P_{x,n}\left(\text{lb/day}\right) = Y_{n,obs} * Q * (N_i - N_e) = Y_{n,obs} * NH_3 utilized$$

Inert Sludge Production — M&E, 4th ed. Pg. 681

$$P_{x,i}\left(\text{lb/day}\right) = Q_{design} * TSS_{\%} * (TSS_i - TSS_e) * 8.34$$

Total Sludge Production — M&E, 4th ed. Pg. 682

$$P_x\left(\text{lb/day}\right) = P_{x,c} + P_{x,n} + P_{x,i}$$

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase II - 1.05 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Waste Sludge Flow to Digester — M&E, 4th ed. Pg. 1458

$$Q_w = \frac{\text{Total Sludge Production, Dry Solids}}{\rho_w S_{sl} P_s}$$

Required Volume — M&E, 4th ed. Pg. 1537

$$V\,(\text{Gal}) = \left(\frac{Q_w}{X}\right)\left(\frac{(X_w + Y * S_i)}{k_d * P_n + \frac{1}{SRT}}\right)$$

$Y_{c,obs}$	Carbonaceous Yield Coefficient	0.57	
$P_{x,c}$	Carbonaceous Sludge Production	1,708	lb / day (MLVSS)
		2,441	lb / day (MLSS)
$Y_{n,obs}$	Nitrogenous Yield Coefficient	0.12	
$P_{x,n}$	Nitrogenous Sludge Production	77.00	lb / day (MLVSS)
		110.00	lb / day (MLSS)
Inert Sludge Production (TSS), Dry Solids		1029	lb / day
Total Sudge Production, Volatile Solids		1785	lb / day
Volatile Solids Loading Rate		118	lb / day / 1,000 cu. ft.
Total Sudge Production, Dry Solids		4336	lb / day
Q_W	Waste Sludge Flow to Digester	20,693	gallons / day
Digester Volume Required		107,602	gallons
		14,385	cu. ft.

Volume Provided:		
Length	60	ft
Width	12	ft
SWD	10.5	
# Tanks	2	
Volume	15,120	cu. ft.

Total Digester Vol. available	15,120	cu. ft.
Volume greater than required	YES	

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase II - 1.05 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Air Requirements

Criteria		*Value*		*Regulation*
Air requirements for SBR basins	$O_2R = \frac{1.2(BOD_5) + 4.3(NH_3 - N)}{BOD_5}$	2.12	lb oxygen per lb BOD	217.155(a)(3)
Air requirements for digesters		30	SCFM /1000 cu. ft.	217.249(d)(1)(C)***
Air requirements for post aeration		10	SCFM /1000 cu. ft.	not regulated by TCEQ
Minimum mixing requirements		0.12	SCFM /sq. ft.	217.155 (b)(3)(B)
Diffuser transfer efficiency		11.7%	(In wastewater)	217.155 (b)(2)(B)
Design Submergence		17.74	feet	
Diffuser Submergence Correction Factor		0.75	@ design flow depth	217.155 (b)(2)(D)
Number of Basins, with one out of service		3		
Design Aeration Time		0.50	days/basin	

Corrected Air Flowrate @ Design Submergence = 1668 SCFM

$$= \frac{\{(\text{lb BOD}) * (\text{lb Oxygen / lb BOD})\} * \text{Correction Factor}}{(\text{T.E.})\ (\text{lb Oxygen / lb air})\ (\text{lb air / cu. ft.})\ (\text{min / day})}$$

217.155 (b)(2)(C)

Minimum Air Flowrate @ Design Aeration Time Per Basin = 1112 SCFM per basin

$$= \frac{\text{Corrected Air Flow Rate}}{\text{Design Aeration Time X No. of Basins}}$$

Verify mixing requirements:			0.22	OK	
Provide	4	SBR Blowers @	1112	SCFM	each (1 per basin w/ 1 standby)
Maximum water depth over diffuser			25	feet	top of SBR basin minus 1 ft for hieght of diffuse
Pressure loss in piping			0.7	psi	
Pressure @ blowers			11.3	psi	
Air required for digesters:			454	SCFM	
Provide	3	Digester Blowers @	227	SCFM	each (1 per basin w/ 1 standby)
Air required for post aeration			107	SCFM	
Provide	2	Post-Air Blower(s) @	53	SCFM	

IDS Engineering Group

Project: Generation Park East WWTP
Job Number:
Design By: VHW
Checked By: KP
Date: 2/25/2025

Description: Phase II - 1.05 MGD

Final Process Calculations

Decanter Sizing Per TCEQ Chapter 217.156(b)(8), requiring the decant system to accommodate the design flow with a constant cycle time with the largest tank out of service

Basin Dimentions

Width	25	feet
Length	75	feet
Min SWD	14	feet
Max SWD	24.5	feet

Condition No. 1: -Basins in service 4 basins All Basins in Service
-Decant flow of 3,889 gpm

% of Design Flow	Flow Rate MGD	No. of Cycles/day	Total Cycle Time minutes	Batch Volume Gallon	Fill React minutes	React minutes	Fill Settle minutes	Settle minutes	Fill Decant minutes	Decant minutes	Fill Idle minutes	Idle minutes	Total Fill minutes	Total React minutes	Total Settle minutes	Total Decant minutes	Volume Decant gal	Decant Depth ft.	Basin water Surface Elevation ft
100%	1.05	5.00	288	52,500	173	0	45	0	14	0	56.7	0	288	173	45	14	52,500	3.7	17.74
150%	1.58	5.00	288	78,750	173	0	45	0	20	0	50.0	0	288	173	45	20	78,750	5.6	19.61
200%	2.10	5.00	288	105,000	173	0	45	0	27	0	43.2	0	288	173	45	27	105,000	7.5	21.49
250%	2.63	6.66	216	98,536	130	0	45	0	25	0	16	0	216	130	45	25	98,536	7.0	21.03
300%	3.15	6.66	216	118,243	130	0	45	0	30	0	11	0	216	130	45	30	118,243	8.4	22.43
350%	3.68	10.00	144	91,875	71	0	45	0	24	0	4	0	144	71	45	24	91,875	6.6	20.55
400%	4.20	10.00	144	105,000	67	0	45	0	27	0	5	0	144	67	45	27	105,000	7.5	21.49

Condition No. 2: -Basins in service 3 basins One Basin Out of Service
-Decant flow of 3,889 gpm

% of Design Flow	Flow Rate MGD	No. of Cycles/day	Total Cycle Time minutes	Batch Volume Gallon	Fill React minutes	React minutes	Fill Settle minutes	Settle minutes	Fill Decant minutes	Decant minutes	Fill Idle minutes	Idle minutes	Total Fill minutes	Total React minutes	Total Settle minutes	Total Decant minutes	Volume Decant gal	Decant Depth ft.	Basin water Surface Elevation ft
100%	1.05	5.00	288	70,000	144	0	45	0	18	0	81.0	0	288	144	45	18	70,000	5.0	18.99
150%	1.58	5.00	288	105,000	144	0	45	0	27	0	72.0	0	288	144	45	27	105,000	7.5	21.49
200%	2.10	5.00	288	140,000	144	0	45	0	36	0	63.0	0	288	144	45	36	140,000	10.0	23.98
250%	2.63	6.66	216	131,381	108	0	45	0	34	0	29	0	216	108	45	34	131,381	9.4	23.37
300%	3.15	10.00	144	105,000	72	0	45	0	27	0	0	0	144	72	45	27	105,000	7.5	21.49
350%	3.68	10.00	144	122,500	68	0	45	0	32	0	-1	0	144	68	45	32	122,500	8.7	22.73
400%	4.20	10.00	144	140,000	63	0	45	0	36	0	0	0	144	63	45	36	140,000	10.0	23.98

Decant Size from Above 3,889 gpm

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase III - 2.8 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Design Parameters

Influent Flow Characteristics - The hydraulic design of the facility must ensure that the plant will operate under the most extreme conditions anticipated. The plant process and hydraulic design for this facility are as follows:

Average Design Flow	2.8	MGD	Influent BOD_5	350	mg / l
	1,944	gpm	Influent BOD5	8173	lbs / day
Peaking Factor	4		Influent TSS	300	mg / l
Peak Flow	11.2	MGD			
	7,778	gpm	Influent NH3-N	75	mg/L

Effluent Characteristics

BOD_5	S_e	10	mg/L
TSS	TSS_e	15	mg/L
NH_3-N	N_e	3	mg/L

The calculations below are based on minimum TCEQ sizing parameters but may not reflect actual treatment unit dimensions. Values shown are the minimum that will be provided.

SBR FOUR BASIN SYSTEM

Criteria	*Value*	*Regulation Section*
Maximum Organic Loading Rate (lbs BOD5/day/1000 cu ft)	35	217.156(a)(6)
Reactor MLSSS Level at normal operating level (mg/l)	3000-5000	217.156(a)(7)
Min Side Water Depth (ft)	12	217.156(a)(9)

Aeration Volume Required 233,520 cu. ft.

Volume Provided:

SBR Cycle Time @ Desing ADF	288	min		
SBR Cycle Time @ Peak Flow	144	min		
			Design Side Water Depths	
Length	75	ft	24.00	ft - Design max water level at peak flow w/ all basins operating
Width	25	ft	17.44	ft - Water level at design flow w/ all basins operating
			17.99	ft - Water level at design flow w/ 1 basin out of service
			21.87	ft - Calculated max water level at peak flow w/ all basins operating
			22.98	ft - Calculated max water level at peak flow w/ 1 basin out of service
# Tanks	9		13.00	ft - Minimum water level

Volume (w/ one basin out of service per TCEQ 217.156 (c 269,866 cu. ft.

Effective Organic Loading with one basin out of service at design water depth 30.29 lbs BOD_5/day/1000 cu. ft.

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase III - 2.8 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

CHEMICAL (CHLORINE) DISINFECTION

Chlorination

				Regulation Section
Minimum Cl_2 Contact Time		20	minutes	217.281(b)(1)
Max. Decant Rate per SBR Basins		3,889		
Maximum No. of Basins Decanting at one time		2		
Chlorine basin volume required at max. decant rate		155,556	gallons	
Phase I				
Length	58 ft			
Width	8 ft			
Depth @ design	11.5 ft			
Number of Basins	4			
Volume Provided	159,653 gallons			
Volume provided greater than or equal to required volume		YES		
Max. Decant Flow Rate		7,778	gpm	
Daily Average Flow		1,944	gpm	
TCEQ min. design Cl_2 dose		8	mg / l	217.272(b)
Cylinder size		2000	lbs	
Withdrawal factor		8	(Use 1.0 for 150 # cylinder and 8.0 for 2000 # cylinders)	217.273(a)(1)
Threshold Temperatures (Low Ambient Temperature?)		65	Use 65 for indoor storage	217.273(a)(1)
Capacity of chlorine disinfection system @ max. flow		747	lbs per day	217.272(a) K.1
Avg. daily chlorine usage @ average flow		187	lbs per day	
Max. withdrawal rate per cylinder		520	lbs per day (Formula for vacuum systems only)	217.273(a)(1) K.2
No. of Cylinders required per bank		2		
One bank of cylinders will last		21	days at average flow and typical chlorine usage	

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase III - 2.8 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Digesters

TCEQ Minimum Sludge Retention Time	40	days	217.249(t)(4)(B)(Table J.2)
TCEQ Min. Volatile Solids Loading Rate	100	lb / day / 1,000 cu. ft.	217.249(t)(7)(D)
TCEQ Max. Volatile Solids Loading Rate	200	lb / day / 1,000 cu. ft.	217.249(t)(7)(D)

Influent BOD_5	8173	lb/ day
Effluent BOD_5	234	lb/ day
BOD_5 to Digester	7940	lb/ day

Volume Required from Metcalf and Eddy, "Wastewater Engineering," 4th Edition

Hydraulic Detention Time of the Aeration Basins

$$\theta\,(\text{Gal}) = \left(\frac{\text{Volume of Aeration Basins in Gallons}}{\text{Average Influent Flow in Gallons / Day}}\right) * 24\ \text{hrs/day}$$

BOD_5 *Utilized*

$$BOD_5 utilized\left(\text{lbs } BOD_5/\text{day}\right) = Q * (S_i - S_e)$$

NH_3-N *Utilized*

$$NH_3 utilized\left(\text{lbs } NH_3/\text{day}\right) = Q * (N_i - N_e)$$

Hydraulic Detention Time of Aeration Basins / SBRs	17.30	Hours
BOD_5 *utilized*	7,940	lb BOD_5 / day
NH_3 *utilized*	1,681	lb NH_3-N / day

S	BOD_5 Concentration			
N	NH_3-N Concentration			
i	Influent (subscript)			
e	Effluent (subscript)			
Q	Average Design Flow			
Q_{design}	Peak Flow			
Q_W	Waste Sludge Flow to Digester			
X_W	Waste Sludge Concentration	8,500	mg/L	
Y	Yield Coefficient	0.6	VSS/lb BOD_5	
Y_n	Yield Coefficient (nitrification)	0.15	VSS/lb NH_3-N	
k_d	Endogenous Decay Coefficent	0.06	/day	
k_{dn}	Endogenous Decay Coeff. (nitrification)	0.30	/day	
P_n	Volatile Fraction of X	0.70		
	MLVSS/MLSS Ratio	0.70		
S_{sl}	Specific Gravity of Sludge	1.005		
X	Sludge Concentration in Digester	25,000	mg/L	
P_s	Percent Solids in Digester	2.5		
$TSS_{\%}$	% of TSS that is inert	50	%	
ρ_w	Specific Weight of Water	8.34	lbs / gallon	

Typical Values

Variable	Range		Source
X_W	0.8	2.5	M&E, 4th ed., pg. 14
Y	0.4	0.8	M&E, 4th ed., pg. 58
Y_n	0.04	0.29	WEF MoP 8, Vol I, p
k_d	0.06	0.15	M&E, 4th ed., pg. 58
k_{dn}	0.3	3.0	WEF MoP 8, Vol I, p
P_n	0.59	0.88	M&E, 4th ed., pg. 14
S_{sl}	1.005	1.005	M&E, 4th ed., pg. 14
X	15,000	40,000	M&E, 4th ed., pg. 14
P_s	1.5	4	M&E, 4th ed., pg. 14

Carbonaceous Yield Coefficient Observed — M&E, 4th ed. Pg. 595

$$Y_{c,obs} = \left(\frac{Y}{1 + k_d * \theta}\right)$$

Nitrogenous Yield Coefficient — M&E, 4th ed. Pg. 595

$$Y_{n,obs} = \left(\frac{Y_n}{1 + k_{dn} * \theta}\right)$$

Carbonaceous Sludge Production (MLVSS) — M&E, 4th ed. Pg. 681

$$P_{x,c}\left(\text{lb/day}\right) = Y_{c,obs} * Q * (S_i - S_e) = Y_{c,obs} * BOD_5 utilized$$

Nitrogenous Sludge Production (MLVSS) — M&E, 4th ed. Pg. 681

$$P_{x,n}\left(\text{lb/day}\right) = Y_{n,obs} * Q * (N_i - N_e) = Y_{n,obs} * NH_3 utilized$$

Inert Sludge Production — M&E, 4th ed. Pg. 681

$$P_{x,i}\left(\text{lb/day}\right) = Q_{design} * TSS_{\%} * (TSS_i - TSS_e) * 8.34$$

Total Sludge Production — M&E, 4th ed. Pg. 682

$$P_x\left(\text{lb/day}\right) = P_{x,c} + P_{x,n} + P_{x,i}$$

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase III - 2.8 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Waste Sludge Flow to Digester — M&E, 4th ed. Pg. 1458

$$Q_w = \frac{\text{Total Sludge Production, Dry Solids}}{\rho_w S_{sl} P_s}$$

Required Volume — M&E, 4th ed. Pg. 1537

$$V\,(\text{Gal}) = \left(\frac{Q_w}{X}\right)\left(\frac{(X_w + Y * S_i)}{k_d * P_n + \frac{1}{SRT}}\right)$$

$Y_{c,obs}$	Carbonaceous Yield Coefficient	0.58	
$P_{x,c}$	Carbonaceous Sludge Production	4,566	lb / day (MLVSS)
		6,523	lb / day (MLSS)
$Y_{n,obs}$	Nitrogenous Yield Coefficient	0.12	
$P_{x,n}$	Nitrogenous Sludge Production	207.36	lb / day (MLVSS)
		296.22	lb / day (MLSS)
Inert Sludge Production (TSS), Dry Solids		3328	lb / day
Total Sudge Production, Volatile Solids		4774	lb / day
Volatile Solids Loading Rate		95	lb / day / 1,000 cu. ft.
Total Sudge Production, Dry Solids		11593	lb / day
Q_W	Waste Sludge Flow to Digester	55,326	gallons / day
Digester Volume Required		287,695	gallons
		38,462	cu. ft.

Volume Provided:		
Length	25	ft
Width	40	ft
SWD	12.5	
# Tanks	4	
Volume	50,000	cu. ft.

Total Digester Vol. available	50,000	cu. ft.
Volume greater than required	YES	

IDS Engineering Group

Project:	Generation Park East WWTP	Description:	Phase III - 2.8 MGD
Job Number:	1339-012-04		
Design By:	VHW		
Checked By:	KP		
Date:	2/25/2025		

Final Process Calculations

Air Requirements

Criteria		*Value*		*Regulation*
Air requirements for SBR basins	$O_2R = \frac{1.2(BOD_5) + 4.3(NH_3 - N)}{BOD_5}$	2.12	lb oxygen per lb BOD	217.155(a)(3)
Air requirements for digesters		30	SCFM /1000 cu. ft.	217.249(d)(1)(C)***
Air requirements for post aeration		10	SCFM /1000 cu. ft.	not regulated by TCEQ
Minimum mixing requirements		0.12	SCFM /sq. ft.	217.155 (b)(3)(B)
Diffuser transfer efficiency		11.7%	(In wastewater)	217.155 (b)(2)(B)
Design Submergence		17.44	feet	
Diffuser Submergence Correction Factor		0.76	@ design flow depth	217.155 (b)(2)(D)
Number of Basins, with one out of service		8		
Design Aeration Time		0.50	days/basin	

Corrected Air Flowrate @ Design Submergence = 4557 SCFM

$$= \frac{\{(\text{lb BOD}) * (\text{lb Oxygen / lb BOD})\} * \text{Correction Factor}}{(\text{T.E.})\ (\text{lb Oxygen / lb air})\ (\text{lb air / cu. ft.})\ (\text{min / day})}$$

217.155 (b)(2)(C)

Minimum Air Flowrate @ Design Aeration Time Per Basin = 1139 SCFM per basin

$$= \frac{\text{Corrected Air Flow Rate}}{\text{Design Aeration Time X No. of Basins}}$$

Verify mixing requirements:			0.27	OK	
Provide	9	SBR Blowers @	1139	SCFM	each (1 per basin w/ 1 standby)
Maximum water depth over diffuser			25	feet	top of SBR basin minus 1 ft for hieght of diffuse
Pressure loss in piping			0.7	psi	
Pressure @ blowers			11.3	psi	
Air required for digesters:			1500	SCFM	
Provide	5	Digester Blowers @	375	SCFM	each (1 per basin w/ 1 standby)
Air required for post aeration			213	SCFM	
Provide	4	Post-Air Blower(s) @	53	SCFM	

IDS Engineering Group
Project: Generation Park East WWTP
Job Number:
Design By: VHW
Checked By: KP
Date: 2/25/2025

Description: Phase III- 2.8 MGD

Final Process Calculations

Decanter Sizing Per TCEQ Chapter 217.156(b)(8), requiring the decant system to accommodate the design flow with a constant cycle time with the largest tank out of service

Basin Dimentions

Width	25	feet
Length	75	feet
Min SWD	14	feet
Max SWD	24.5	feet

Condition No. 1: -Basins in service 9 basins All Basins in Service
-Decant flow of 3,889 gpm

% of Design Flow	Flow Rate MGD	No. of Cycles/day	Total Cycle Time minutes	Batch Volume Gallon	Fill React minutes	React minutes	Fill Settle minutes	Settle minutes	Fill Decant minutes	Decant minutes	Fill Idle minutes	Idle minutes	Total Fill minutes	Total React minutes	Total Settle minutes	Total Decant minutes	Volume Decant gal	Decant Depth ft.	Basin water Surface Elevation ft
100%	2.80	5.00	288	62,222	173	0	45	0	16	0	54.2	0	288	173	45	16	62,222	4.4	18.44
150%	4.20	5.00	288	93,333	173	0	45	0	24	0	46.2	0	288	173	45	24	93,333	6.7	20.65
200%	5.60	5.00	288	124,444	173	0	45	0	32	0	38.2	0	288	173	45	32	124,444	8.9	22.87
250%	7.00	6.66	216	116,783	130	0	45	0	30	0	11	0	216	130	45	30	116,783	8.3	22.33
300%	8.40	6.66	216	140,140	130	0	45	0	36	0	5	0	216	130	45	36	140,140	10.0	23.99
350%	9.80	10.00	144	108,889	71	0	45	0	28	0	0	0	144	71	45	28	108,889	7.8	21.76
400%	11.20	10.00	144	124,444	67	0	45	0	32	0	0	0	144	67	45	32	124,444	8.9	22.87

Condition No. 2: -Basins in service 8 basins One Basin Out of Service
-Decant flow of 3,889 gpm

% of Design Flow	Flow Rate MGD	No. of Cycles/day	Total Cycle Time minutes	Batch Volume Gallon	Fill React minutes	React minutes	Fill Settle minutes	Settle minutes	Fill Decant minutes	Decant minutes	Fill Idle minutes	Idle minutes	Total Fill minutes	Total React minutes	Total Settle minutes	Total Decant minutes	Volume Decant gal	Decant Depth ft.	Basin water Surface Elevation ft
100%	2.80	5.00	288	70,000	144	0	45	0	18	0	81.0	0	288	144	45	18	70,000	5.0	18.99
150%	4.20	5.00	288	105,000	144	0	45	0	27	0	72.0	0	288	144	45	27	105,000	7.5	21.49
200%	5.60	5.00	288	140,000	144	0	45	0	36	0	63.0	0	288	144	45	36	140,000	10.0	23.98
250%	7.00	6.66	216	131,381	108	0	45	0	34	0	29	0	216	108	45	34	131,381	9.4	23.37
300%	8.40	6.66	216	157,658	108	0	45	0	41	0	23	0	216	108	45	41	157,658	11.2	25.24
350%	9.80	10.00	144	122,500	68	0	45	0	32	0	0	0	144	68	45	32	122,500	8.7	22.73
400%	11.20	10.00	144	140,000	63	0	45	0	36	0	0	0	144	63	45	36	140,000	10.0	23.98

Decant Size from Above 3,889 gpm

ATTACHMENT NO. 17

FIRM PANEL

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevation** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevation (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum (NAVD). Users of this FIRM should be aware that coastal flood elevations may also be provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this community. Elevations shown in the Summary of Stillwater Elevations table should be used for construction, and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The **projection** used in the preparation of this map is Universal Tranverse Mercator (UTM) zone 15. The **horizontal datum** is NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum.** For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242,** or visit their website at www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by the Harris Galveston Area Council and was revised and enhanced by Harris County.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

An accompanying Flood Insurance Study report, Letters of Map Revision or Letters of Map Amendment revising portions of this panel, and digital versions of this PANEL may be available. Contact the **FEMA Map Service Center** at the following phone numbers and Internet address for information on all related products available from FEMA;

Phone: 800-358-9616
FAX: 800-358-9620
www.fema.gov/msc

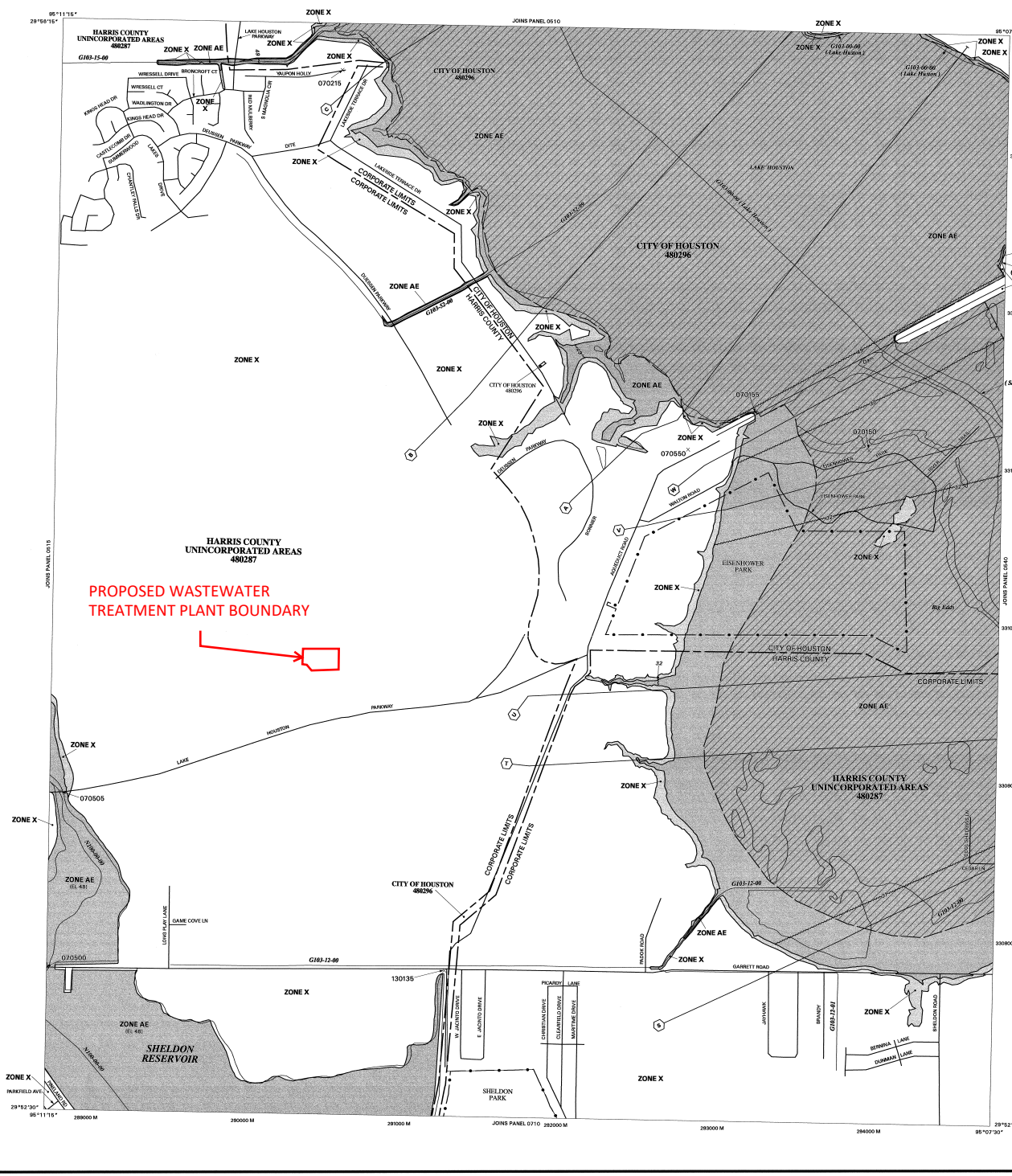
If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at www.fema.gov.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report may reflect stream channel distances that differ from what is shown on this map.

Vertical Datum Adjustment due to subsidence is the 2001 adjustment.

Benchmarks shown on this map were provided by either Harris County or the National Geodetic Survey. To obtain elevation, description, and location information for benchmarks provided by Harris County, please contact the Permits Office of the Public Infrastructure Department at (713) 956-3000 or visit their website at http://www.eng.hctx.net/permits. For information regarding the benchmarks provided by the National Geodetic Survey, please see note above.

Some bridges and other structures shown on the detailed studied streams are not labeled. See corresponding flood profile for appropriate name.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD EVENT

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

- **ZONE A** No base flood elevations determined.
- **ZONE AE** Base flood elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** Area of special flood hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood event.
- **ZONE A99** Area to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no base flood elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no base flood elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- (A) (A) — Cross Section Line
- (23) (23) — Transect Line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4276000M — 1000-meter Universal Transverse Mercator grid values, zone 15
- 600000 FT — 5000-foot grid ticks
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel).
- M1.5 — River Mile

MAP REPOSITORY
Refer to Repository Listing on Index Map

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 28, 1990

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
SEPTEMBER 30, 1992
NOVEMBER 6, 1996
APRIL 20, 2000
JUNE 18, 2007: to change base flood elevations, to add special flood hazard areas, to change special flood hazard areas, to change zone designations, to reflect updated topographic information, and to change floodway.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

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

MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

PANEL 0520L

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

PANEL 520 OF 1150
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HARRIS COUNTY, UNINCORPORATED AREAS	480287	0520	L
HOUSTON, CITY OF	480296	0520	L

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

MAP NUMBER
48201C0520L

MAP REVISED:
JUNE 18, 2007

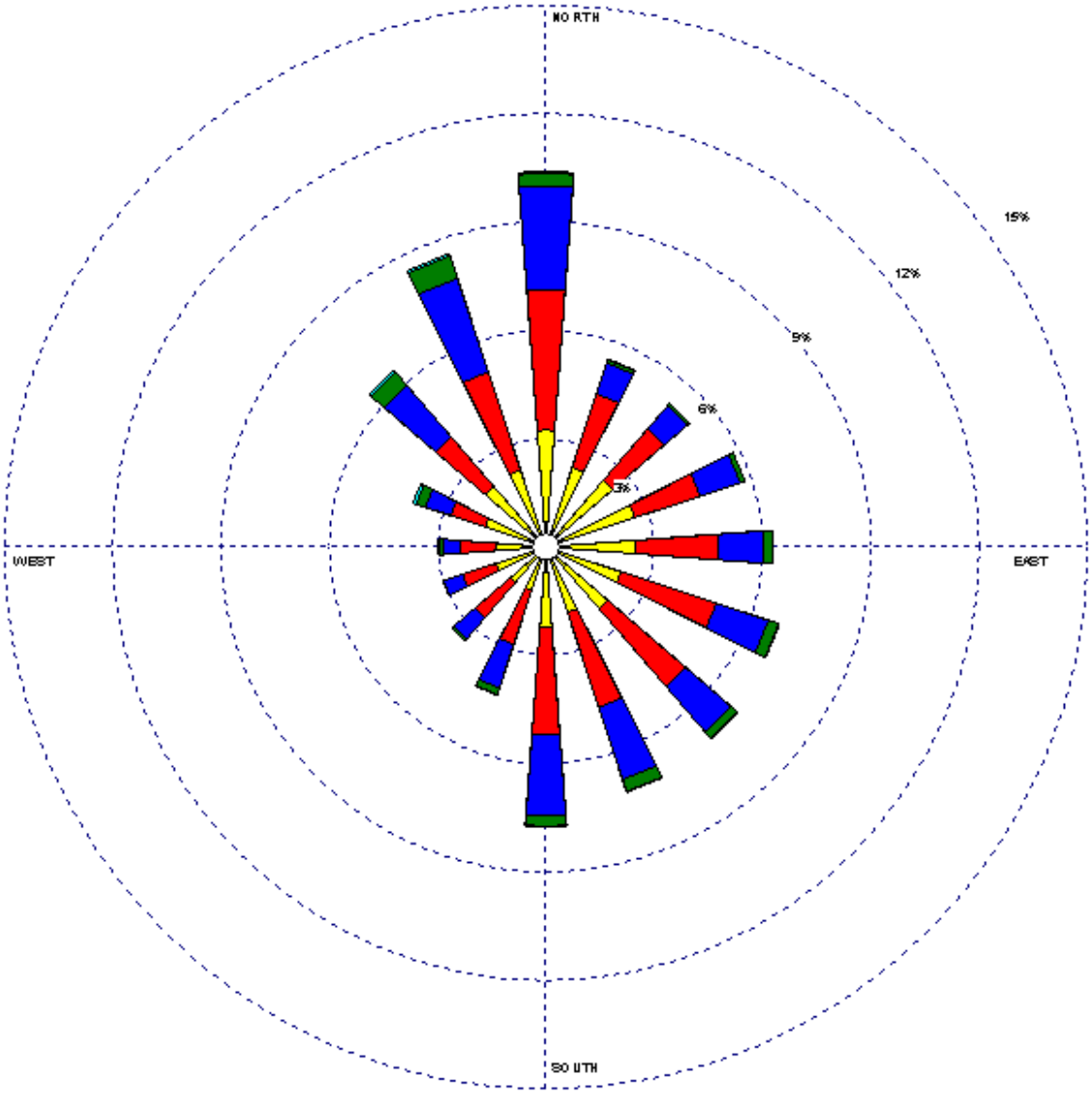
Federal Emergency Management Agency

ATTACHMENT NO. 18

WIND ROSE

WIND ROSE PLOT

Station #12960 - HOUSTON/INTERCONTINENTAL ARPT, TX



Wind Speed (m/s)

- > 11.06
- 8.49 - 11.06
- 5.40 - 8.49
- 3.34 - 5.40
- 1.80 - 3.34
- 0.51 - 1.80

MODELER	DATE	COMPANY NAME
Sara West	8/29/2002	USDA-ARS
DISPLAY	**UNIT**	**COMMENTS**
Wind Speed	m/s	
AVG. WIND SPEED	**CALM WINDS**	
4.47 m/s	5.38%	
ORIENTATION	**PLOT YEAR-DATE-TIME**	
Direction (blowing from)	1961 Feb 1 - Feb 29 Midnight - 11 PM	

WRPLOT View 3.3 by Lakes Environmental Software - www.lakes-environmental.com

ATTACHMENT NO. 19

SEWAGE SLUDGE SOLIDS MANAGEMENT PLAN

Technical Report 1.1
Section 7. Sewage Sludge Solids Management Plan

Interim I Phase - Capacity of Digester

Design Flow	**0.12**	MGD Influent Flow
Minimum Retention Time	**40**	days
Digester Volume	**5,040**	ft^3
Digester Dimensions	**2 @ 20' length x 12' width x 10.5' SWD**	
Side Water Depth	**10.5**	ft.
Digester Sludge Retention Time	**40**	days

CBOD5 Removal	Influent concentration	**350.0**	mg/l
	Effluent concentration	**10.0**	mg/l
	Net removal	**340.0**	mg/l

Solids Generated	**100% Flow**	**75% Flow**	**50% Flow**	**25% Flow**
Pounds BOD5/day removed	**340**	**255**	**170**	**85**
Pounds of dry sludge produced*	**116**	**87**	**58**	**29**
Pounds of wet sludge produced**	**4,628**	**3,471**	**2,314**	**1,157**
Volume of wet sludge produced in gals.	**556**	**417**	**278**	**139**
Volume of wet sludge produced in ft^3	**74**	**56**	**37**	**19**

*Assuming 0.340 pounds of dry sludge produced per pound of BOD5 removed.
**Assuming 2.5% solids.

MLSS operating range = 3000 mg/l

Settled sludge from the clarifier will be wasted to the digesters. At the digesters, the sludge is further thickened by decanting mechanisms.

Removal Schedule (days)	**100% Flow**	**75% Flow**	**50% Flow**	**25% Flow**
Days between sludge removal	**68**	**90**	**136**	**271**

After thickening, the sludge is periodically transported by Magna Flow Environmental (Hauler Registration #21484) to the Mt. Houston Road WWTP Sludge Processing Site (TCEQ Permit No. 0011154001).

Technical Report 1.1
Section 7. Sewage Sludge Solids Management Plan

Interim II Phase - Capacity of Digester

Design Flow	**1.05**	MGD Influent Flow
Minimum Retention Time	**40**	days
Digester Volume	**15,120**	ft^3
Digester Dimensions	**2 @ 60' length x 12' width x 10.5' SWD**	
Side Water Depth	**10.5**	ft.
Digester Sludge Retention Time	**40**	days

CBOD5 Removal	Influent concentration	**350.0**	mg/l
	Effluent concentration	**10.0**	mg/l
	Net removal	**340.0**	mg/l

Solids Generated	**100% Flow**	**75% Flow**	**50% Flow**	**25% Flow**
Pounds BOD5/day removed	**2,977**	**2,233**	**1,489**	**744**
Pounds of dry sludge produced*	**1,012**	**759**	**506**	**253**
Pounds of wet sludge produced**	**40,492**	**30,369**	**20,246**	**10,123**
Volume of wet sludge produced in gals.	**4,867**	**3,650**	**2,433**	**1,217**
Volume of wet sludge produced in ft^3	**651**	**488**	**325**	**163**

*Assuming 0.340 pounds of dry sludge produced per pound of BOD5 removed.
**Assuming 2.5% solids.

MLSS operating range = 3,000-5,000 mg/l

Settled sludge from the clarifier will be wasted to the digesters. At the digesters, the sludge is further thickened by decanting mechanisms.

Removal Schedule (days)	**100% Flow**	**75% Flow**	**50% Flow**	**25% Flow**
Days between sludge removal	**23**	**31**	**46**	**93**

After thickening, the sludge is periodically transported by Magna Flow Environmental (Hauler Registration #21484) to the Mt. Houston Road WWTP Sludge Processing Site (TCEQ Permit No. 0011154001).

Technical Report 1.1
Section 7. Sewage Sludge Solids Management Plan

Ultimate Phase - Capacity of Digester

Design Flow	**2.80**	MGD Influent Flow
Minimum Retention Time	**40**	days
Digester Volume	**50,000**	ft^3
Digester Dimensions	**4 @ 25' length x 40' width x 12.5' SWD**	
Side Water Depth	**12.5**	ft.
Digester Sludge Retention Time	**40**	days

CBOD5 Removal	Influent concentration	**350.0**	mg/l
	Effluent concentration	**10.0**	mg/l
	Net removal	**340.0**	mg/l

Solids Generated	**100% Flow**	**75% Flow**	**50% Flow**	**25% Flow**
Pounds BOD5/day removed	**7,940**	**5,955**	**3,970**	**1,985**
Pounds of dry sludge produced*	**2,699**	**2,025**	**1,350**	**675**
Pounds of wet sludge produced**	**107,980**	**80,985**	**53,990**	**26,995**
Volume of wet sludge produced in gals.	**12,978**	**9,734**	**6,489**	**3,245**
Volume of wet sludge produced in ft^3	**1,735**	**1,301**	**867**	**434**

*Assuming 0.340 pounds of dry sludge produced per pound of BOD5 removed.
**Assuming 2.5% solids.

MLSS operating range = 3,000-5,000 mg/l

Settled sludge from the clarifier will be wasted to the digesters. At the digesters, the sludge is further thickened by decanting mechanisms.

Removal Schedule (days)	**100% Flow**	**75% Flow**	**50% Flow**	**25% Flow**
Days between sludge removal	**29**	**38**	**58**	**115**

After thickening, the sludge is periodically transported by Magna Flow Environmental (Hauler Registration #21484) to the Mt. Houston Road WWTP Sludge Processing Site (TCEQ Permit No. 0011154001).

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 2.0: RECEIVING WATERS

The following information is required for all TPDES permit applications.

Section 1. Domestic Drinking Water Supply (Instructions Page 63)

Is there a surface water intake for domestic drinking water supply located within 5 miles downstream from the point or proposed point of discharge?

☐ Yes ☒ No

If **no**, proceed it Section 2. **If yes**, provide the following:

Owner of the drinking water supply: N/A

Distance and direction to the intake: N/A

Attach a USGS map that identifies the location of the intake.

Attachment: N/A

Section 2. Discharge into Tidally Affected Waters (Instructions Page 63)

Does the facility discharge into tidally affected waters?

☐ Yes ☒ No

If **no**, proceed to Section 3. **If yes**, complete the remainder of this section. If no, proceed to Section 3.

A. Receiving water outfall

Width of the receiving water at the outfall, in feet: N/A

B. Oyster waters

Are there oyster waters in the vicinity of the discharge?

☐ Yes ☐ No

If yes, provide the distance and direction from outfall(s).

N/A

C. Sea grasses

Are there any sea grasses within the vicinity of the point of discharge?

☐ Yes ☐ No

If yes, provide the distance and direction from the outfall(s).

N/A

Section 3. Classified Segments (Instructions Page 63)

Is the discharge directly into (or within 300 feet of) a classified segment?

☐ Yes ☒ No

If yes, this Worksheet is complete.

If no, complete Sections 4 and 5 of this Worksheet.

Section 4. Description of Immediate Receiving Waters (Instructions Page 63)

Name of the immediate receiving waters: Click to enter text.

A. Receiving water type

Identify the appropriate description of the receiving waters.

☐ Stream

☐ Freshwater Swamp or Marsh

☒ Lake or Pond

Surface area, in acres: 0.77 ac

Average depth of the entire water body, in feet: 3.3 ft

Average depth of water body within a 500-foot radius of discharge point, in feet: 3.3 ft

☐ Man-made Channel or Ditch

☐ Open Bay

☐ Tidal Stream, Bayou, or Marsh

☐ Other, specify: Click to enter text.

B. Flow characteristics

If a stream, man-made channel or ditch was checked above, provide the following. For existing discharges, check one of the following that best characterizes the area *upstream* of the discharge. For new discharges, characterize the area *downstream* of the discharge (check one).

☐ Intermittent - dry for at least one week during most years

☐ Intermittent with Perennial Pools - enduring pools with sufficient habitat to maintain significant aquatic life uses

☐ Perennial - normally flowing

Check the method used to characterize the area upstream (or downstream for new dischargers).

☐ USGS flow records

☐ Historical observation by adjacent landowners

☐ Personal observation

☐ Other, specify: Click to enter text.

C. Downstream perennial confluences

List the names of all perennial streams that join the receiving water within three miles downstream of the discharge point.

None

D. Downstream characteristics

Do the receiving water characteristics change within three miles downstream of the discharge (e.g., natural or man-made dams, ponds, reservoirs, etc.)?

☒ Yes ☐ No

If yes, discuss how.

At approximately 1.5 miles downstream of the discharge point, the receiving water characteristics transition from a series of man-made detention basins and channels connected by reinforced concrete box culverts to the natural watershed of the San Jacinto River.

E. Normal dry weather characteristics

Provide general observations of the water body during normal dry weather conditions.

The detention pond does not yet exist. It will be excavated and connected to a series of existing detention basins before construction of the proposed WWTP and outfall.

Date and time of observation: 2/10/2025, 3:00 pm

Was the water body influenced by stormwater runoff during observations?

☐ Yes ☒ No

Section 5. General Characteristics of the Waterbody (Instructions Page 65)

A. Upstream influences

Is the immediate receiving water upstream of the discharge or proposed discharge site influenced by any of the following? Check all that apply.

☐ Oil field activities
☐ Urban runoff
☐ Upstream discharges
☐ Agricultural runoff
☐ Septic tanks
☒ Other(s), specify: immediate receiving water of the proposed discharge site does not yet exist

B. Waterbody uses

Observed or evidences of the following uses. Check all that apply.

- ☐ Livestock watering
- ☐ Irrigation withdrawal
- ☐ Fishing
- ☐ Domestic water supply
- ☐ Park activities
- ☐ Contact recreation
- ☐ Non-contact recreation
- ☐ Navigation
- ☐ Industrial water supply
- ☒ Other(s), specify: does not yet exist

C. Waterbody aesthetics

Check one of the following that best describes the aesthetics of the receiving water and the surrounding area.

- ☐ Wilderness: outstanding natural beauty; usually wooded or unpastured area; water clarity exceptional
- ☐ Natural Area: trees and/or native vegetation; some development evident (from fields, pastures, dwellings); water clarity discolored
- ☐ Common Setting: not offensive; developed but uncluttered; water may be colored or turbid
- ☐ Offensive: stream does not enhance aesthetics; cluttered; highly developed; dumping areas; water discolored

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 2.1: STREAM PHYSICAL CHARACTERISTICS

Required for new applications, major facilities, and applications adding an outfall.

Worksheet 2.1 is not required for discharges to intermittent streams or discharges directly to (or within 300 feet of) a classified segment.

Section 1. General Information (Instructions Page 65)

Date of study: February 10, 2025 Time of study: 3:00 pm

Stream name: N/A

Location: 29.8997, -95.1696

Type of stream upstream of existing discharge or downstream of proposed discharge (check one).

☐ Perennial ☐ Intermittent with perennial pools

Section 2. Data Collection (Instructions Page 65)

Number of stream bends that are well defined: N/A

Number of stream bends that are moderately defined: N/A

Number of stream bends that are poorly defined: N/A

Number of riffles: N/A

Evidence of flow fluctuations (check one):

☐ Minor ☐ moderate ☐ severe

Indicate the observed stream uses and if there is evidence of flow fluctuations or channel obstruction/modification.

Detention pond has not yet been cleared or excavated. Excavation will occur prior to construction of the proposed WWTP and outfall.

Stream transects

In the table below, provide the following information for each transect downstream of the existing or proposed discharges. Use a separate row for each transect.

Table 2.1(1) - Stream Transect Records

Stream type at transect Select riffle, run, glide, or pool. See Instructions, Definitions section.	**Transect location**	**Water surface width (ft)**	**Stream depths (ft)** at 4 to 10 points along each transect from the channel bed to the water surface. Separate the measurements with commas.
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Section 3. Summarize Measurements (Instructions Page 65)

Streambed slope of entire reach, from USGS map in feet/feet: N/A

Approximate drainage area above the most downstream transect (from USGS map or county highway map, in square miles): N/A

Length of stream evaluated, in feet: N/A

Number of lateral transects made: N/A

Average stream width, in feet: N/A

Average stream depth, in feet: N/A

Average stream velocity, in feet/second: N/A

Instantaneous stream flow, in cubic feet/second: N/A

Indicate flow measurement method (type of meter, floating chip timed over a fixed distance, etc.): N/A

Size of pools (large, small, moderate, none): N/A

Maximum pool depth, in feet: N/A

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 87)

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: N/A

Significant IUs – non-categorical:

Number of IUs: 0

Average Daily Flows, in MGD: N/A

Other IUs:

Number of IUs: 0

Average Daily Flows, in MGD: N/A

B. Treatment plant interference

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

☐ Yes ☒ No

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

N/A

C. Treatment plant pass through

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

☐ Yes ☒ No

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

N/A

D. Pretreatment program

Does your POTW have an approved pretreatment program?

☐ Yes ☒ No

If yes, complete Section 2 only of this Worksheet.

Is your POTW required to develop an approved pretreatment program?

☐ Yes ☒ No

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

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

Section 2. POTWs with Approved Programs or Those Required to Develop a Program (Instructions Page 87)

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.

N/A

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.

N/A

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
N/A				

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.

N/A

Section 3. Significant Industrial User (SIU) Information and Categorical Industrial User (CIU) (Instructions Page 88)

A. General information

Company Name: N/A

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).

N/A

C. Product and service information

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

N/A

D. Flow rate information

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

Process Wastewater:

Discharge, in gallons/day: N/A

Discharge Type: ☐ Continuous ☐ Batch ☐ Intermittent

Non-Process Wastewater:

Discharge, in gallons/day: N/A

Discharge Type: ☐ Continuous ☐ Batch ☐ Intermittent

E. Pretreatment standards

Is the SIU or CIU subject to technically based local limits as defined in the *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: N/A

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.

N/A

Abesha Michael

From: AnnMarie Burns (IDS) <ABurns@idseg.com>
Sent: Friday, April 11, 2025 11:48 AM
To: Abesha Michael
Cc: Vernon Webb (IDS); Daniel Ringold (Schwartz Page & Harding)
Subject: RE: Application for Proposed Permit No. WQ0016745001 - Notice of Deficiency Letter
Attachments: AffectedLandowner_11X17 Revised 4-11-2025.pdf; Landowner List Labels Revised 4-11-2025.docx; Affected Landowner Cross-Reference List Revised 4-11-2025.pdf; TX SOS Info 2025.04.11.pdf

Good morning,
Thanks for your phone call yesterday. As discussed, please see attached updated Affected Landowners Map, Cross-Reference List, and labels.
Per our conversation, MRA Northeast, L.P. and MRA Northeast #2, L.P. are two separate legal entities. I've also attached documentation from the Texas Secretary of State website for the two organizations showing separate filing numbers, dates of filing, and tax IDs.

Please let me know if you have any further questions. Thanks,

IDS Engineering Group

AnnMarie Burns, E.I.T.
Design Engineer

13430 Northwest Freeway, Suite 700, Houston, Texas 77040
Main: 713.462.3178 | Direct: 832.590.7153
ABurns@idseg.com
Website | Facebook | Linkedin

TxEng Firm 2726 | TxSurv Firm 10110700

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From: Abesha Michael <Abesha.Michael@tceq.texas.gov>
Sent: Monday, April 7, 2025 11:47 AM
To: AnnMarie Burns (IDS) <ABurns@idseg.com>
Subject: RE: Application for Proposed Permit No. WQ0016745001 - Notice of Deficiency Letter

[EXTERNAL EMAIL]

Good morning,
I received your response. The letter mailed out before I received the response,
Thank you,

Abesha H. Michael
Applications Review & Processing Team
Water Quality Division Support Section
Water Quality Division, MC 148
PO Box 13087
Austin, Texas 78711
Phone: o: 512-239-4912
Email: abesha.michael@tceq.texas.gov

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---

From: AnnMarie Burns (IDS) <ABurns@idseg.com>
Sent: Monday, April 7, 2025 8:53 AM
To: Abesha Michael <Abesha.Michael@tceq.texas.gov>
Cc: Vernon Webb (IDS) <VWebb@idseg.com>
Subject: RE: Application for Proposed Permit No. WQ0016745001 - Notice of Deficiency Letter

Good morning,
We received the attached notice stating that you had not received a complete response to the Notice of Deficiency email sent March 11, 2025.
Could you let us know what you are still missing? I believe I have responded to all of the emails I have received.

Thanks,

IDS Engineering Group

AnnMarie Burns, E.I.T.
Design Engineer

13430 Northwest Freeway, Suite 700, Houston, Texas 77040
Main: 713.462.3178 | Direct: 832.590.7153
ABurns@idseg.com
Website | Facebook | Linkedin

TxEng Firm 2726 | TxSurv Firm 10110700

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From: Abesha Michael <Abesha.Michael@tceq.texas.gov>
Sent: Friday, April 4, 2025 1:47 PM
To: AnnMarie Burns (IDS) <ABurns@idseg.com>
Subject: RE: Application for Proposed Permit No. WQ0016745001 - Notice of Deficiency Letter

[EXTERNAL EMAIL]

Thank you,

Abesha H. Michael
Applications Review & Processing Team
Water Quality Division Support Section
Water Quality Division, MC 148
PO Box 13087
Austin, Texas 78711
Phone: o: 512-239-4912
Email: abesha.michael@tceq.texas.gov

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---

From: AnnMarie Burns (IDS) <ABurns@idseg.com>
Sent: Friday, April 4, 2025 12:05 PM
To: Abesha Michael <Abesha.Michael@tceq.texas.gov>
Cc: Vernon Webb (IDS) <VWebb@idseg.com>; Daniel Ringold (Schwartz Page & Harding) <dringold@sphllp.com>
Subject: RE: Application for Proposed Permit No. WQ0016745001 - Notice of Deficiency Letter

Good afternoon,
Please see attached updated Landowners Map, Cross-Reference List, and labels.

Let us know if anything further is needed to declare this application administratively complete. Thanks,

IDS Engineering Group

AnnMarie Burns, E.I.T.
Design Engineer

13430 Northwest Freeway, Suite 700, Houston, Texas 77040
Main: 713.462.3178 | Direct: 832.590.7153
ABurns@idseg.com
Website | Facebook | Linkedin

TxEng Firm 2726 | TxSurv Firm 10110700

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From: Abesha Michael <Abesha.Michael@tceq.texas.gov>
Sent: Tuesday, April 1, 2025 4:05 PM
To: AnnMarie Burns (IDS) <ABurns@idseg.com>
Cc: Vernon Webb (IDS) <VWebb@idseg.com>; Daniel Ringold (Schwartz Page & Harding) <dringold@sphllp.com>
Subject: RE: Application for Proposed Permit No. WQ0016745001 - Notice of Deficiency Letter

[EXTERNAL EMAIL]

Good afternoon,
Thank you for the affected landowners map, list, and labels. However, when the landowner is the co-applicant, we need to notify all the surrounding landowners of the co-applicant property. Please submit the complete cross-referenced mailing and mailing labels asap.
Thank you,

Abesha H. Michael
Applications Review & Processing Team
Water Quality Division Support Section
Water Quality Division, MC 148
PO Box 13087
Austin, Texas 78711
Phone: o: 512-239-4912
Email: abesha.michael@tceq.texas.gov

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From: AnnMarie Burns (IDS) <ABurns@idseg.com>
Sent: Wednesday, March 26, 2025 1:58 PM
To: Abesha Michael <Abesha.Michael@tceq.texas.gov>
Cc: Vernon Webb (IDS) <VWebb@idseg.com>; Daniel Ringold (Schwartz Page & Harding) <dringold@sphllp.com>
Subject: RE: Application for Proposed Permit No. WQ0016745001 - Notice of Deficiency Letter

Good afternoon,
Please see attached response & related attachments to the Notice of Deficiency letter sent on March 11, 2025. A complete revised permit application was also uploaded to the TCEQ file transfer system.

Please let us know if there is any further information we can provide. Thank you,

IDS Engineering Group

AnnMarie Burns, E.I.T.
Design Engineer

13430 Northwest Freeway, Suite 700, Houston, Texas 77040
Main: 713.462.3178 | Direct: 832.590.7153
ABurns@idseg.com
Website | Facebook | Linkedin

TxEng Firm 2726 | TxSurv Firm 10110700

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From: Abesha Michael <Abesha.Michael@tceq.texas.gov>
Sent: Tuesday, March 11, 2025 1:21 PM
To: Lindsey Whatley (IDS) <LWhatley@idseg.com>
Subject: FW: Application for Proposed Permit No. WQ0016745001 - Notice of Deficiency Letter

[EXTERNAL EMAIL]

Forwarded

From: Abesha Michael
Sent: Tuesday, March 11, 2025 1:00 PM
To: vwebb@idseg.com
Cc: dringold@sphllp.com
Subject: Application for Proposed Permit No. WQ0016745001 - Notice of Deficiency Letter

Dear Mr. Webb II:

The attached Notice of Deficiency letter sent on March 11, 2025, requests additional information needed to declare the application administratively complete. Please send the complete response to my attention by March 25, 2025.

Thank you,

Abesha H. Michael
Applications Review & Processing Team
Water Quality Division Support Section
Water Quality Division, MC 148
PO Box 13087
Austin, Texas 78711
Phone: o: 512-239-4912
Email: abesha.michael@tceq.texas.gov

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Affected Landowner Cross-Reference List

ID	Owner	Mailing Address	City	State	Zip Code
1	GENERATION PARK MANAGEMENT DISTRICT (APPLICANT)	1300 POST OAK BLVD STE 2400	HOUSTON	TX	77056-3044
2	MRA NORTHEAST LP (CO-APPLICANT)	250 ASSAY ST, STE 200	HOUSTON	TX	77044-3506
3	MRA NORTHEAST #2 LP	250 ASSAY ST, STE 200	HOUSTON	TX	77044-3506
4	KINDER MORGAN TEJAS PIPELINE LP	500 DALLAS ST, STE 1000	HOUSTON	TX	77002-4718
5	COUNTY OF HARRIS	PO BOX 1525	HOUSTON	TX	77251-1525
6	HARRIS COUNTY MUD NO 427	1300 POST OAK BLVD STE 2400	HOUSTON	TX	77056-3078
7	TRAHAN LEONA M	12630 AQUEDUCT RD	HOUSTON	TX	77044-5220
8	RODRIGUEZ LUIS M	12530 AQUEDUCT RD	HOUSTON	TX	77044-5218
9	WHEELER RAY L & IMELDA	12310 AQUEDUCT RD	HOUSTON	TX	77044-5214
10	BEJAR HILDA	12222 AQUEDUCT RD	HOUSTON	TX	77044-5212
11	ALESSI ROBERTO	15010 SUMMER KNOLL LN	HOUSTON	TX	77044-2596
12	ROMERO HUGO	11760 PADOK RD APT 37	HOUSTON	TX	77044-7203
13	GARCIA CELINO C	12216 AQUEDUCT RD	HOUSTON	TX	77044-5212
14	RAMIREZ FRANCISCO	12210 AQUEDUCT RD	HOUSTON	TX	77044-5212
15	CURRIE CASEY	7139 CRESTED QUAIL	SAN ANTONIO	TX	78250-7212
16	VAZQUEZ JOSE A	12120 AQUEDUCT RD	HOUSTON	TX	77044-5210
17	MILTON THEODORE J	12712 W LAKE HOUSTON PKWY STE B	HOUSTON	TX	77044-6469
18	HURTADO RAMIRO & GUADALUPE	12112 AQUEDUCT RD	HOUSTON	TX	77044-5210
19	OLIVAS HECTOR M & IRMA	12102 AQUEDUCT RD	HOUSTON	TX	77044-5210
20	J & R GROUP LLC	12930 PECAN SHORES DR	HOUSTON	TX	77044-1873
21	HURTADO ERNESTO	12112 AQUEDUCT RD	HOUSTON	TX	77044-5210
22	RODRIGUEZ JOSE N	2218 4TH ST	GALENA PARK	TX	77547-2704
23	CRUZ JOSE LUIS & FLOR ESTELA	20010 DEERSLAYER	CROSBY	TX	77532
24	FRYER LONNIE & JUDITH	12206 AQUEDUCT RD	HOUSTON	TX	77044-5212
25	HURTADO ESTEVAN	12112 AQUEDUCT RD	HOUSTON	TX	77044-5210
26	GARZA DANIEL	11976 AQUEDUCT RD	HOUSTON	TX	77044-5206
27	DE LEON GUSTAVO	11964 AQUEDUCT RD	HOUSTON	TX	77044-5206
28	BENITEZ ELMER	15240 GARRETT RD	HOUSTON	TX	77044-5846
29	GARZA HUMBERTO	11952 AQUEDUCT RD	HOUSTON	TX	77044-5206

30	BENITEZ ELMER & DAMARY	15240 GARRETT RD	HOUSTON	TX	77044-5846
31	CAVAZOS IRENE ZORAIDA	7531 FALL CREEK BEND	HUMBLE	TX	77396-3555
32	CEJA CARLOS	11940 AQUEDUCT RD	HOUSTON	TX	77044-5206
33	HERNANDEZ SOCORRO TAPIA	11938 AQUEDUCT RD	HOUSTON	TX	77044-5206
34	SANTILLAN MARCO & LINDA	11928 AQUEDUCT RD	HOUSTON	TX	77044-5206
35	VILLALPANDO KAREN R	PO BOX 55362	HOUSTON	TX	77044-5111
36	GUZMAN KATHRYN E & REYNALDO	11934 AQUEDUCT RD	HOUSTON	TX	77044-5206
37	HEIL EDWIN D & RHONDA V	11924 AQUEDUCT RD	HOUSTON	TX	77044-5206
38	FOUR BROTHERS LLC	PO BOX 96494	HOUSTON	TX	77213-6494
39	FERNANDEZ JAIME	11952 AQUEDUCT RD	HOUSTON	TX	77044
40	MACIAS CRISOFORO	12626 GREEN RIVER DR	HOUSTON	TX	77044-2308
41	RICHISON SHARON D	11900 AQUEDUCT RD	HOUSTON	TX	77044-5206
42	PENNINGTON ANGELA M	9839 FM 1511	BUFFALO	TX	75831-5846
43	CONLON JOHN	1481 WHITE WATER DR	NEW BRAUNFEI	TX	78132-3221
44	STAUFFER REAL ESTATE LLC	14205 GARRETT RD	HOUSTON	TX	77044-6430
45	TEXAS REAL ESTATE CAPITAL FUND II LLC	PO BOX 27022	HOUSTON	TX	77227-7022
46	JOHNSTON DONALD RAY JR C/O PEGGY DENISE KEETON JOHNSTON ESTATE OF	13819 GARRETT RD	HOUSTON	TX	77044-6421
47	PROJECT CHANNEL LAND LLC	11750 KATY FWY STE 420	HOUSTON	TX	77079-3122
48	UNITED THERAPEUTICS CORPORATION	55 T.W. ALEXANDER DRIVE	RESEARCH TRIA	NC	27709
49	TEXAS PARKS & WILDLIFE DEPARTMENT C/O HARRIS COUNTY ROW DEPT	PO BOX 1525	HOUSTON	TX	77251-1525
50	TEXAS PARKS & WILDLIFE DEPARTMENT	4200 SMITH SCHOOL RD	AUSTIN	TX	78744-3218
51	HART RAMONA	11739 LONG PLAY LN	HOUSTON	TX	77044-5247
52	TRAHAN MILDRED W	11730 LONG PLAY LN	HOUSTON	TX	77044-5248
53	DEAJON SHANNON C	11730 LONG PLAY LN	HOUSTON	TX	77044-5248
54	GARZA ERASMO	14018 MEADOWLAKE CT	HOUSTON	TX	77044-6174
55	SPEER MARVIN	13623 GAME COVE LN	HOUSTON	TX	77044-5231
56	SPEER MARGARET E	11630 LONG PLAY LN	HOUSTON	TX	77044-5246
57	CERDA EDWIN B	11622 LONG PLAY LN	HOUSTON	TX	77044-5246
58	GUY ANTHONY HARMAN	11618 LONG PLAY LN	HOUSTON	TX	77044-5246
59	REYES LARRY	6726 HAWTHORNE FALLS LN	HOUSTON	TX	77049-3876
60	MOUTON MATTHEW K & DELIA F	11610 LONG PLAY LN #5	HOUSTON	TX	77044-5246

61	ALLEE PROPERTIES LLC	4511 UPPER OXBOW TRACE	FULSHEAR	TX	77441-4512
62	UNITED STATES OF AMERICA	PO BOX 1229	GALVESTON	TX	77553-1229
63	CHILLES BRETT	220 CARUTHERS LN	HOUSTON	TX	77024-6812
64	SKLAR MICHAEL A	3414 OVERBROOK LN	HOUSTON	TX	77027-4140
65	FRM MRA HOLDINGS #1 LTD	250 ASSAY ST STE 200	HOUSTON	TX	77044-3506
66	DEBOBEN CRISTINA MARIA	11006 HUNTERS PARK DR	HOUSTON	TX	77024
67	TAAFFE DINA	2428 SWIFT BLVD	HOUSTON	TX	77030-1806
68	CHILDRESS WENDIE S	3470 OVERBROOK LN	HOUSTON	TX	77027-4140
69	WOODSON VICKI G	5110 SAN FELIPE ST UNIT 251W	HOUSTON	TX	77056-3643
70	VAUGHN BARBARA H	2211 DUNRAVEN LN	HOUSTON	TX	77019-6601
71	DEBOBEN JOHN R III	11006 HUNTERS PARK DR	HOUSTON	TX	77024-5410
72	TAAFFE RYAN H	2428 SWIFT BLVD	HOUSTON	TX	77030-1806

MRA NORTHEAST #2 LP
C/O MCCORD DEVELOPMENT INC
250 ASSAY ST STE 200
HOUSTON TX 77044-3506

KINDER MORGAN TEJAS PIPELINE LP
500 DALLAS ST STE 1000
HOUSTON TX 77002-4718

COUNTY OF HARRIS
PO BOX 1525
HOUSTON TX 77251-1525

HARRIS COUNTY MUD NO 427
1300 POST OAK BLVD STE 2400
HOUSTON TX 77056-3078

LEONA M TRAHAN
12630 AQUEDUCT RD
HOUSTON TX 77044-5220

LUIS M RODRIGUEZ
12530 AQUEDUCT RD
HOUSTON TX 77044-5218

RAY L AND IMELDA WHEELER
12310 AQUEDUCT RD
HOUSTON TX 77044-5214

HILDA BEJAR
12222 AQUEDUCT RD
HOUSTON TX 77044-5212

ROBERTO ALESSI
15010 SUMMER KNOLL LN
HOUSTON TX 77044-2596

HUGO ROMERO
11760 PADOK RD APT 37
HOUSTON TX 77044-7203

CELINO C GARCIA
12216 AQUEDUCT RD
HOUSTON TX 77044-5212

FRANCISCO RAMIREZ
12210 AQUEDUCT RD
HOUSTON TX 77044-5212

CASEY CURRIE
7139 CRESTED QUAIL
SAN ANTONIO TX 78250-7212

JOSE A VAZQUEZ
12120 AQUEDUCT RD
HOUSTON TX 77044-5210

THEODORE J MILTON
12712 W LAKE HOUSTON PKWY STE B
HOUSTON TX 77044-6469

RAMIRO AND GUADALUPE HURTADO
12112 AQUEDUCT RD
HOUSTON TX 77044-5210

HECTOR M AND IRMA OLIVAS
12102 AQUEDUCT RD
HOUSTON TX 77044-5210

J & R GROUP LLC
12930 PECAN SHORES DR
HOUSTON TX 77044-1873

ERNESTO HURTADO
12112 AQUEDUCT RD
HOUSTON TX 77044-5210

JOSE N RODRIGUEZ
2218 4TH ST
GALENA PARK TX 77547-2704

JOSE LUIS AND FLOR ESTELA CRUZ
20010 DEERSLAYER
CROSBY TX 77532

LONNIE AND JUDITH FRYER
12206 AQUEDUCT RD
HOUSTON TX 77044-5212

ESTEVAN HURTADO
12112 AQUEDUCT RD
HOUSTON TX 77044-5210

DANIEL GARZA
11976 AQUEDUCT RD
HOUSTON TX 77044-5206

GUSTAVO DE LEON
11964 AQUEDUCT RD
HOUSTON TX 77044-5206

ELMER BENITEZ
15240 GARRETT RD
HOUSTON TX 77044-5846

HUMBERTO GARZA
11952 AQUEDUCT RD
HOUSTON TX 77044-5206

ELMER AND DAMARY BENITEZ
15240 GARRETT RD
HOUSTON TX 77044-5846

IRENE ZORAIDA CAVAZOS
7531 FALL CREEK BEND
HUMBLE TX 77396-3555

CARLOS CEJA
11940 AQUEDUCT RD
HOUSTON TX 77044-5206

SOCORRO TAPIA HERNANDEZ
11938 AQUEDUCT RD
HOUSTON TX 77044-5206

MARCO AND LINDA SANTILLAN
11928 AQUEDUCT RD
HOUSTON TX 77044-5206

KAREN R VILLALPANDO
PO BOX 55362
HOUSTON TX 77044-5111

KATHRYN E AND REYNALDO GUZMAN
11934 AQUEDUCT RD
HOUSTON TX 77044-5206

EDWIN D AND RHONDA V HEIL
11924 AQUEDUCT RD
HOUSTON TX 77044-5206

FOUR BROTHERS LLC
PO BOX 96494
HOUSTON TX 77213-6494

JAIME FERNANDEZ
11952 AQUEDUCT RD
HOUSTON TX 77044

CRISOFORO MACIAS
12626 GREEN RIVER DR
HOUSTON TX 77044-2308

SHARON D RICHISON
11900 AQUEDUCT RD
HOUSTON TX 77044-5206

ANGELA M PENNINGTON
9839 FM 1511
BUFFALO TX 75831-5846

JOHN CONLON
1481 WHITE WATER DR
NEW BRAUNFELS TX 78132-3221

STAUFFER REAL ESTATE LLC
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HOUSTON TX 77044-6430

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11750 KATY FWY STE 420
HOUSTON TX 77079-3122

UNITED THERAPEUTICS CORPORATION
55 T W ALEXANDER DRIVE
RESEARCH TRIANGLE PARK NC 27709

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C/O HARRIS COUNTY ROW DEPT
PO BOX 1525
HOUSTON TX 77251-1525

TEXAS PARKS & WILDLIFE DEPARTMENT
4200 SMITH SCHOOL RD
AUSTIN TX 78744-3218

RAMONA HART
11739 LONG PLAY LN
HOUSTON TX 77044-5247

MILDRED W TRAHAN
11730 LONG PLAY LN
HOUSTON TX 77044-5248

SHANNON C DEAJON
11730 LONG PLAY LN
HOUSTON TX 77044-5248

ERASMO GARZA
14018 MEADOWLAKE CT
HOUSTON TX 77044-6174

MARVIN SPEER
13623 GAME COVE LN
HOUSTON TX 77044-5231

MARGARET E SPEER
11630 LONG PLAY LN
HOUSTON TX 77044-5246

EDWIN B CERDA
11622 LONG PLAY LN
HOUSTON TX 77044-5246

ANTHONY HARMAN GUY
11618 LONG PLAY LN
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6726 HAWTHORNE FALLS LN
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4511 UPPER OXBOW TRACE
FULSHEAR TX 77441-4512

UNITED STATES OF AMERICA
PO BOX 1229
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BRETT CHILLES
220 CARUTHERS LN
HOUSTON TX 77024-6812

MICHAEL A SKLAR
3414 OVERBROOK LN
HOUSTON TX 77027-4140

FRM MRA HOLDINGS #1 LTD
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CRISTINA MARIA DEBOBEN
11006 HUNTERS PARK DR
HOUSTON TX 77024

DINA TAAFFE
2428 SWIFT BLVD
HOUSTON TX 77030-1806

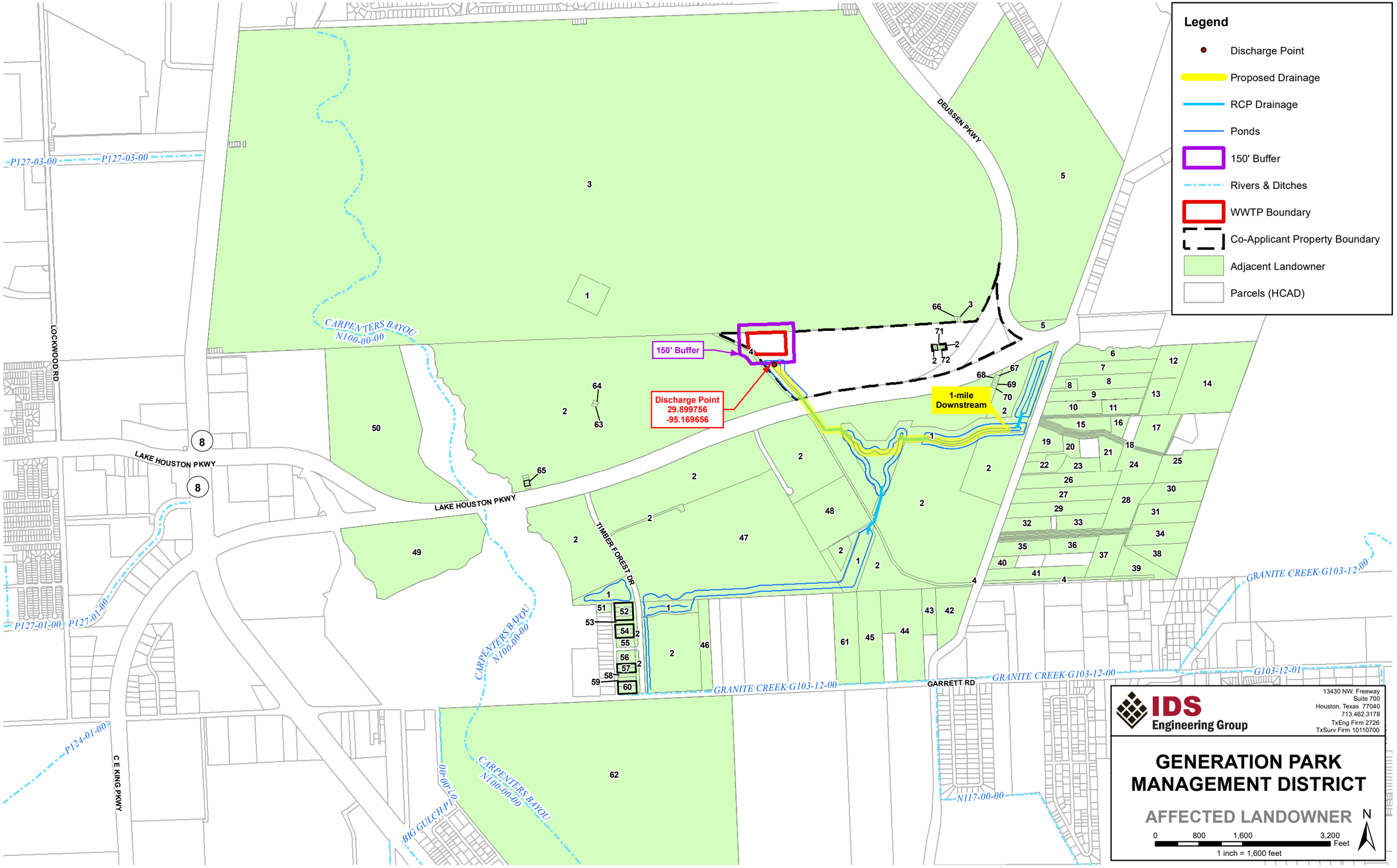
WENDIE S CHILDRESS
3470 OVERBROOK LN
HOUSTON TX 77027-4140

VICKI G WOODSON
5110 SAN FELIPE ST UNIT 251W
HOUSTON TX 77056-3643

BARBARA H VAUGHN
2211 DUNRAVEN LN
HOUSTON TX 77019-6601

JOHN R DEBOBEN III
11006 HUNTERS PARK DR
HOUSTON TX 77024-5410

RYAN H TAAFFE
2428 SWIFT BLVD
HOUSTON TX 77030-1806



IDS Engineering Group
13430 NW. Freeway
Suite 700
Houston, Texas 77040
713.462.3178
TxEng Firm 2726
TxSurv Firm 10110700

GENERATION PARK MANAGEMENT DISTRICT

AFFECTED LANDOWNER

N

0 800 1,600 3,200 Feet

1 inch = 1,600 feet

IDS Engineering Group \\houvgisdb1\Projects\130011339-012-04_GPMD2024_TPDES_GPEWWTP\AffectedLandowner_11X17.mxd Plotted: 4/11/2025 at 10:55:09 AM by VTrevino

TPDES PERMIT NO.
WQ0016745001
[For TCEQ office use only - EPA I.D. No. TX0147567]

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

PERMIT TO DISCHARGE WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

Generation Park Management District and MRA Northeast, L.P.

whose mailing address is

1300 Post Oak Boulevard, Suite 2400
Houston, Texas 77056,

is authorized to treat and discharge wastes from the Generation Park Management District East Wastewater Treatment Facility, SIC Code 4952

located 1,400 feet north of the intersection of Lake Houston Parkway and Common Dock Drive, in Harris County, Texas 77044

to a detention basin, thence to a storm sewer, thence to a detention basin, thence to a series of ditches, thence to an unnamed tributary, thence to San Jacinto River Tidal in Segment No. 1001 of the San Jacinto River Basin

only according to effluent limitations, monitoring requirements, and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation, or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

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

ISSUED DATE

For the Commission

INTERIM I EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through the completion of expansion to the 1.05 million gallons per day (MGD) facility, the permittee is authorized to discharge subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 0.12 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 333 gallons per minute.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg	7-day Avg	Daily Max	Single Grab	Report Daily Avg. & Max. Single Grab	
	mg/l (lbs/day)	mg/l	mg/l	mg/l	Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (10)	15	25	35	One/week	Grab
Total Suspended Solids	15 (15)	25	40	60	One/week	Grab
Ammonia Nitrogen	3 (3.0)	6	10	15	One/week	Grab
E. coli, colony-forming units or most probable number per 100 ml	126	N/A	N/A	399	One/month	Grab

2. The effluent shall contain a total chlorine residual of at least 1.0 mg/l and shall not exceed a total chlorine residual of 4.0 mg/l after a detention time of at least 20 minutes (based on peak flow), and shall be monitored five times per week by grab sample. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month by grab sample.

4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.

6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored once per week by grab sample.

INTERIM II EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 001

1. During the period beginning upon the completion of expansion to the 1.05 million gallons per day (MGD) facility and lasting through the completion of expansion to the 2.80 MGD facility, the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 1.05 MGD*.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg	7-day Avg	Daily Max	Single Grab	Report Daily Avg. & Max. Single Grab	
	mg/l (lbs/day)	mg/l	mg/l	mg/l	Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (88)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (131)	25	40	60	Two/week	Composite
Ammonia Nitrogen	3 (26)	6	10	15	Two/week	Composite
E. coli, colony-forming units or most probable number per 100 ml	126	N/A	N/A	399	One/week	Grab

   *See Other Requirement No. 10

2. 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) and shall be monitored daily by grab sample at each chlorine contact chamber. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l total chlorine residual and shall monitor total chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored once per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

Page 2a
FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 001

1. During the period beginning the completion of expansion to the 2.80 million gallons per day (MGD) facility and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 2.80 MGD*.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg	7-day Avg	Daily Max	Single Grab	Report Daily Avg. & Daily Max.	
	mg/l (lbs/day)	mg/l	mg/l	mg/l	Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (234)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (350)	25	40	60	Two/week	Composite
Ammonia Nitrogen	2 (47)	5	10	15	Two/week	Composite
E. coli, colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	One/week	Grab

   *See Other Requirement No. 10

2. 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) and shall be monitored daily by grab sample at each chlorine contact chamber. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l total chlorine residual and shall monitor total chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored twice per week by grab sample.

7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC § 305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§ 5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in TWC § 26.001 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. 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 one million gallons per day or greater permitted flow.

    b. 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.

    c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.

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

    e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.

    f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

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.

d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the sampling day.

The daily discharge determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily discharge determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

e. Bacteria concentration (*E. coli* or Enterococci) - Colony Forming Units (CFU) or Most Probable Number (MPN) of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the nth root of the product of all measurements made in a calendar month, where n equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substituted value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.

f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).

g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), 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 that 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 AND REPORTING REQUIREMENTS

1. Self-Reporting

Monitoring results shall be provided 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 and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, effluent monitoring data shall be submitted each month, to the Enforcement Division (MC 224), by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act (CWA); TWC §§ 26, 27, and 28; and THSC § 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 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 § 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 (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) 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, application or certification. 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 the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

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. For Publicly Owned Treatment Works (POTWs), effective December 21, 2025, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. 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 that exceeds any effluent limitation in the permit.

      iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES 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. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.

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).

11. All POTWs must provide adequate notice to the Executive Director of the following:

    a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to CWA § 301 or § 306 if it were directly discharging those pollutants;

    b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and

    c. For the purpose of this paragraph, adequate notice shall include information on:

       i. The quality and quantity of effluent introduced into the POTW; and

       ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

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 that 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 TWC§ 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 Other Requirements section of this permit.

h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.

i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under TWC §§ 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) for violations including, but not limited to, negligently or knowingly violating the federal CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).

3. Inspections and Entry

a. Inspection and entry shall be allowed as prescribed in the TWC Chapters 26, 27, and 28, and THSC § 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 TWC § 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 to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or

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

      iii. 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 TWC § 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.

   f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA § 307(a) for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or

prohibition. The permittee shall comply with effluent standards or prohibitions established under CWA § 307(a) for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

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 that requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Relationship to Water Rights

   Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to TWC Chapter 11.

8. Property Rights

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

9. 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.

10. 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.

11. 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 TWC § 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 required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other 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 that 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% 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% 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% of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

      If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 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. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.

11. Facilities that 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 Registration 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 § 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.

12. For industrial facilities to which the requirements of 30 TAC § 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC § 361.

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SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site, 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 supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.

3. The 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 the Interim I phase, and annually in the Interim II and Final phases, 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 12) 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 12) 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)(3)(A) for specific information;

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

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

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

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

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

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

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

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

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

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

Alternative 1

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

vi. Turf grown on land where biosolids are applied shall not be harvested for 1 year after application of the 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. Biosolids shall be injected below the surface of the land.

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

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

Alternative 10-

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

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

C. Monitoring Requirements

Toxicity Characteristic Leaching Procedure (TCLP) Test	- once during the term of this permit in the Interim I phase, and annually for the Interim II and Final phases
PCBs	- once during the term of this permit in the Interim I phase, and annually for the Interim II and Final phases

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

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

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

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

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

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

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

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

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

A. Pollutant Limits

Table 2

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

Table 3

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

*Dry weight basis

B. Pathogen Control

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

C. Management Practices

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

2. Bulk biosolids not meeting Class A 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 biosolids to the land is prohibited except in accordance with the instruction on the label or information sheet.

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

D. Notification Requirements

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

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

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

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

E. Record Keeping Requirements

The documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a biosolids material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply.

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

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

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

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

5. The following certification statement:

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

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

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

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

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

   d. The date and time 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 biosolids 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 12) 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 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 meets the requirements in 30 TAC § 330 concerning the quality of the sludge or biosolids disposed in a municipal solid waste landfill.

B. If the permittee generates sewage sludge 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. Sewage sludge or biosolids shall be tested once during the term of this permit in the Interim I phase, and annually for the Interim II and Final phases 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 12) 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 12) and the Enforcement Division (MC 224), by September 30 of each year.

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

E. 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.

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 12) and the Enforcement Division (MC 224).

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

2. Toxicity Characteristic Leaching Procedure (TCLP) results.

3. Annual sludge 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 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 12) 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.

OTHER REQUIREMENTS

1. 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 in the Interim I phase, and Category B facility in the Interim II and Final phases, must be operated by a chief operator or an operator holding a Class C license or higher in the Interim I phase, and Class B license or higher in the Interim II and Final phases. 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 that 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.

2. The facility is not located in the Coastal Management Program boundary.

3. There is no mixing zone established for this discharge to an intermittent stream. Acute toxic criteria apply at the point of discharge.

4. Prior to construction of the Interim I, II, and Final phase treatment facilities, the permittee shall submit 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). The evidence of legal restrictions shall be submitted to the Executive Director in care of the TCEQ Wastewater Permitting Section (MC 148). The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). See Attachment A.

5. The permittee shall provide facilities for the protection of its wastewater treatment facility from a 100-year flood.

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

7. Prior to construction of the Interim I, II, and Final phase treatment facilities, the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) a summary transmittal letter in accordance with 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 30 TAC Chapter 217, Design Criteria for Domestic Wastewater Systems. The permittee shall clearly show how the treatment system will meet the effluent limitations required on Pages 2, 2a, and 2b of this permit. A copy of the summary transmittal letter shall be available at the plant site for inspection by authorized representatives of the TCEQ.

8. **Within 120 days from the start-up of the facility,** the permittee shall complete Attachment B with the analytical results for Outfall 001. The completed tables with the results of these analysis and laboratory reports shall be submitted to the Municipal Permits Team, Wastewater Permitting Section MC 148, TCEQ Water Quality Division. Based on a technical review of the submitted analytical results, an amendment may be initiated by TCEQ staff to include additional effluent limitations and/or monitoring requirements. Test methods utilized to complete the tables shall be according to the test procedures specified in the Definitions and Standard Permit Conditions section of this permit and sensitive enough to detect the parameters listed in Attachment B at the minimum analytical level (MAL).

9. 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 from the facility described by this permit, whichever occurs first. The permittee shall provide written notice to the TCEQ Regional Office (MC Region 12) and the Applications Review and Processing Team (MC 148) of the Water Quality Division, as well as the Harris County Pollution Control Services Department, in writing at least forty-five 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.

10. This facility is designed for batch discharge. Maximum 2-hour peak flow limits are not included in the permit. The permittee shall operate the disinfection facilities to ensure that the effluent complies with permit limits for bacteria and chlorine residual. This provision does not limit or restrict future inclusion of peak flow limits.

CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS

1. The following pollutants may not be introduced into the treatment facility:

    a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste streams with a closed-cup flash point of less than 140° Fahrenheit (60° Celsius) using the test methods specified in 40 CFR § 261.21;

    b. Pollutants which will cause corrosive structural damage to the POTW, but in no case shall there be discharges with a pH lower than 5.0 standard units, unless the works are specifically designed to accommodate such discharges;

    c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;

    d. Any pollutant, including oxygen-demanding pollutants (e.g., biochemical oxygen demand), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;

    e. Heat in amounts which will inhibit biological activity in the POTW, resulting in Interference, but in no case shall there be heat in such quantities that the temperature at the POTW treatment plant exceeds 104° Fahrenheit (40° Celsius) unless the Executive Director, upon request of the POTW, approves alternate temperature limits;

    f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;

    g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and

    h. Any trucked or hauled pollutants except at discharge points designated by the POTW.

2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under 40 CFR Part 403 [*rev. Federal Register/ Vol. 70/ No. 198/ Friday, October 14, 2005/ Rules and Regulations, pages 60134-60798*].

3. The permittee shall provide adequate notification to the Executive Director, care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, within 30 days subsequent to the permittee's knowledge of either of the following:

    a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants; and

    b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

    Any notice shall include information on the quality and quantity of effluent to be introduced into the treatment works and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

Revised July 2007

BIOMONITORING REQUIREMENTS

48-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

   a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival of the test organisms.

   b. **Within 90 days of initial discharge of the 1.05 MGD facility**, the permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this part of this permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms," fifth edition (EPA-821-R-02-012) or its most recent update:

      1) Acute static renewal 48-hour definitive toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia)*. A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

      2) Acute static renewal 48-hour definitive toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

      The permittee must perform and submit a valid test for each test species during the required reporting period for that species. A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution. A repeat test shall include the control and all effluent dilutions and use the appropriate number of organisms and replicates, as specified above. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

   c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution concentrations are 32%, 42%, 56%, 75%, and 100% effluent. The critical dilution, defined as 100% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.

   d. This permit may be amended to require a WET limit, a chemical-specific limit, a best management practice, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.

e. Testing Frequency Reduction

1) If none of the first four consecutive quarterly tests demonstrates significant lethal effects, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.

2) If one or more of the first four consecutive quarterly tests demonstrates significant lethal effects, the permittee shall continue quarterly testing for that species until this permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant lethal effects, the permittee shall resume a quarterly testing frequency for that species until this permit is reissued.

2. Required Toxicity Testing Conditions

a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fails to meet any of the following criteria:

1) a control mean survival of 90% or greater; and

2) a coefficient of variation percent (CV%) of 40 or less for both the control and critical dilution. However, if significant lethality is demonstrated, a CV% greater than 40 shall not invalidate the test. The CV% requirement does not apply when significant lethality occurs.

b. Statistical Interpretation

1) For the water flea and fathead minnow tests, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be in accordance with the manual referenced in Part 1.b.

2) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test results are interpreted and reported correctly. The document entitled “Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)” (EPA 821-B-00-004) provides guidance on determining the validity of test results.

3) If significant lethality is demonstrated (that is, there is a statistically significant difference in survival at the critical dilution when compared to the survival in the control), the conditions of test acceptability are met, and the survival of the test organisms are equal to or greater than 90% in the critical dilution and all dilutions below that, then the permittee shall report a survival No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.

4) The NOEC is defined as the greatest effluent dilution at which no significant lethality is demonstrated. The Lowest Observed Effect

Concentration (LOEC) is defined as the lowest effluent dilution at which significant lethality is demonstrated. Significant lethality is defined as a statistically significant difference the survival of the test organism in a specified effluent dilution when compared to the survival of the test organism in the control.

5) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 2.

6) Pursuant to the responsibility assigned to the permittee in Part 2.b.2), test results that demonstrate a non-monotonic (non-continuous) concentration-response relationship may be submitted, prior to the due date, for technical review. The guidance manual referenced in Item 2 will be used when making a determination of test acceptability.

7) TCEQ staff will review test results for consistency with rules, procedures, and permit requirements.

c. Dilution Water

1) Dilution water used in the toxicity tests must be the receiving water collected at a point upstream of the discharge point as close as possible to the discharge point but unaffected by the discharge. Where the toxicity tests are conducted on effluent discharges to receiving waters that are classified as intermittent streams, or where the toxicity tests are conducted on effluent discharges where no receiving water is available due to zero flow conditions, the permittee shall:

a) substitute a synthetic dilution water that has a pH, hardness, and alkalinity similar to that of the closest downstream perennial water unaffected by the discharge; or

b) use the closest downstream perennial water unaffected by the discharge.

2) Where the receiving water proves unsatisfactory as a result of preexisting instream toxicity (i.e. fails to fulfill the test acceptance criteria Part 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of Part 2.a;

b) the test indicating receiving water toxicity was carried out to completion; and

c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3.

3) The synthetic dilution water shall consist of standard, moderately hard, reconstituted water. Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.

d. Samples and Composites

1) The permittee shall collect a minimum of two composite samples from Outfall 001. The second composite sample will be used for the renewal of the dilution concentrations for each toxicity test.

2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.

3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first composite sample. The holding time for the subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.

4) If Outfall 001 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.

5) The effluent sample shall not be dechlorinated after sample collection.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b for every valid and invalid toxicity test initiated, whether carried to completion or not.

b. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit.

1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12-month period.

2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.

3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.

4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.

c. Enter the following codes for the appropriate parameters for valid tests only:

1) For the water flea, Parameter TEM3D, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

2) For the water flea, Parameter TOM3D, report the NOEC for survival.

3) For the water flea, Parameter TXM3D, report the LOEC for survival.

4) For the fathead minnow, Parameter TEM6C, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

5) For the fathead minnow, Parameter TOM6C, report the NOEC for survival.

6) For the fathead minnow, Parameter TXM6C, report the LOEC for survival.

d. Enter the following codes for retests only:

1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

4. Persistent Toxicity

The requirements of this part apply only when a toxicity test demonstrates significant lethality. Significant lethality was defined in Part 2.b.

a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates significant lethality. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined

as the last day of the test.

b. If one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5.

c. The provisions of Part 4.a. are suspended upon completion of the two retests and submittal of the TRE action plan and schedule defined in Part 5.

5. Toxicity Reduction Evaluation

a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall describe an approach for the reduction or elimination of lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:

1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall

conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;

3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and

4) Project Organization - The TRE action plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.

c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.

d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

1) results and interpretation of any chemical specific analyses for the identified and suspected pollutant performed during the quarter;

2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;

3) any data and substantiating documentation which identifies the pollutant(s) and source of effluent toxicity;

4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;

5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and

6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.

e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.

f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification/TRE. The report shall provide information pertaining to the specific control mechanism selected that will, when implemented, result in the reduction of effluent toxicity to no significant lethality at the critical dilution. The report shall also provide a specific corrective action schedule for implementing the selected control mechanism.

h. Based on the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.

i. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 1 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

Dates and Times Composites Collected — Date Time / Date Time

No. 1 FROM: _____ TO: _____

No. 2 FROM: _____ TO: _____

Test initiated: _____am/pm _____ date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	32%	42%	56%	75%	100%
24h	A						
	B						
	C						
	D						
	E						
48h	A						
	B						
	C						
	D						
	E						
Mean at test end							
CV%*							

*Coefficient of Variation = Standard Deviation x 100/mean

Dunnett's Procedure or Steel's Many-One Rank Test as appropriate:

Is the mean survival at 48 hours significantly less than the control survival?

CRITICAL DILUTION (100%): _____ YES _____ NO

Enter percent effluent corresponding to the NOEC below:

1) NOEC survival = _____% effluent

2) LOEC survival = _____% effluent

TABLE 1 (SHEET 2 OF 2)

FATHEAD MINNOW SURVIVAL

Dates and Times Composites Collected

Date Time Date Time

No. 1 FROM: _____ TO: _____

No. 2 FROM: _____ TO: _____

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	32%	42%	56%	75%	100%
24h	A						
	B						
	C						
	D						
	E						
48h	A						
	B						
	C						
	D						
	E						
Mean at test end							
CV%*							

* Coefficient of Variation = standard deviation x 100/mean

Dunnett's Procedure or Steel's Many-One Rank Test as appropriate:

Is the mean survival at 48 hours significantly less than the control survival?

CRITICAL DILUTION (100%): _____ YES _____ NO

Enter percent effluent corresponding to the NOEC below:

1) NOEC survival = _____% effluent

2) LOEC survival = _____% effluent

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

a. The permittee shall test the effluent for lethality in accordance with the provisions in this section. Such testing will determine compliance with Texas Surface Water Quality Standard 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.

b. Within 90 days of initial discharge of the 1.05 MGD facility, the toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms," fifth edition (EPA-821-R-02-012) or its most recent update:

1) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

2) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. The control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.

d. This permit may be amended to require a WET limit, a best management practice, a chemical-specific limit, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.

e. As the dilution series specified in the 48-Hour Acute Biomonitoring Requirements includes a 100% effluent concentration, the results from those tests may fulfill the requirements of this section; any tests performed in the proper time interval may be substituted. Compliance will be evaluated as specified in Part 1.a. The 50% survival in 100% effluent for a 24-hour period standard applies to all tests utilizing a 100% effluent dilution, regardless of whether the results are submitted to comply with the minimum testing frequency.

2. Required Toxicity Testing Conditions

a. Test Acceptance – The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.

b. Dilution Water - In accordance with Part 1.c., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.

c. Samples and Composites

1) The permittee shall collect one composite sample from Outfall 001.

2) The permittee shall collect the composite sample such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.

3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. The sample shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.

4) If Outfall 001 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report.

5) The effluent sample shall not be dechlorinated after sample collection.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated.

b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit.

1) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.

2) Quarterly biomonitoring test results are due on or before April 20th, July 20th, and October 20th, and January 20th for biomonitoring conducted

during the previous calendar quarter.

c. Enter the following codes for the appropriate parameters for valid tests only:

1) For the water flea, Parameter TIE3D, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

2) For the fathead minnow, Parameter TIE6C, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

d. Enter the following codes for retests only:

1) For retest number 1, Parameter 22415, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

2) For retest number 2, Parameter 22416, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

4. Persistent Mortality

The requirements of this part apply when a toxicity test demonstrates significant lethality, which is defined as a mean mortality of 50% or greater of organisms exposed to the 100% effluent concentration for 24 hours.

a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These effluent concentrations are 6%, 13%, 25%, 50%, and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.

b. If one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5.

5. Toxicity Reduction Evaluation

a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE

is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall lead to the successful elimination of significant lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:

1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;

3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and

4) Project Organization - The TRE Action Plan should describe the project staff, manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.

c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.

d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly TRE Activities Reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail

information regarding the TRE activities including:

1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;

2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;

3) any data and substantiating documentation that identifies the pollutant and source of effluent toxicity;

4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;

5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and

6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.

e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Ttesting for the less sensitive species shall continue at the frequency specified in Part 1.b.

f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 18 months from the last test day of the retest that

demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall specify the control mechanism that will, when implemented, reduce effluent toxicity as specified in Part 5.h. The report shall also specify a corrective action schedule for implementing the selected control mechanism.

h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE.

The permittee may be exempted from complying with 30 TAC § 307.6(e)(2)(B) upon proving that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g., metals) form a salt compound. Following the exemption, this permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

i. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, require a compliance schedule for implementing corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.

j. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN*						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = _____% effluent

TABLE 2 (SHEET 2 OF 2)

FATHEAD MINNOW SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

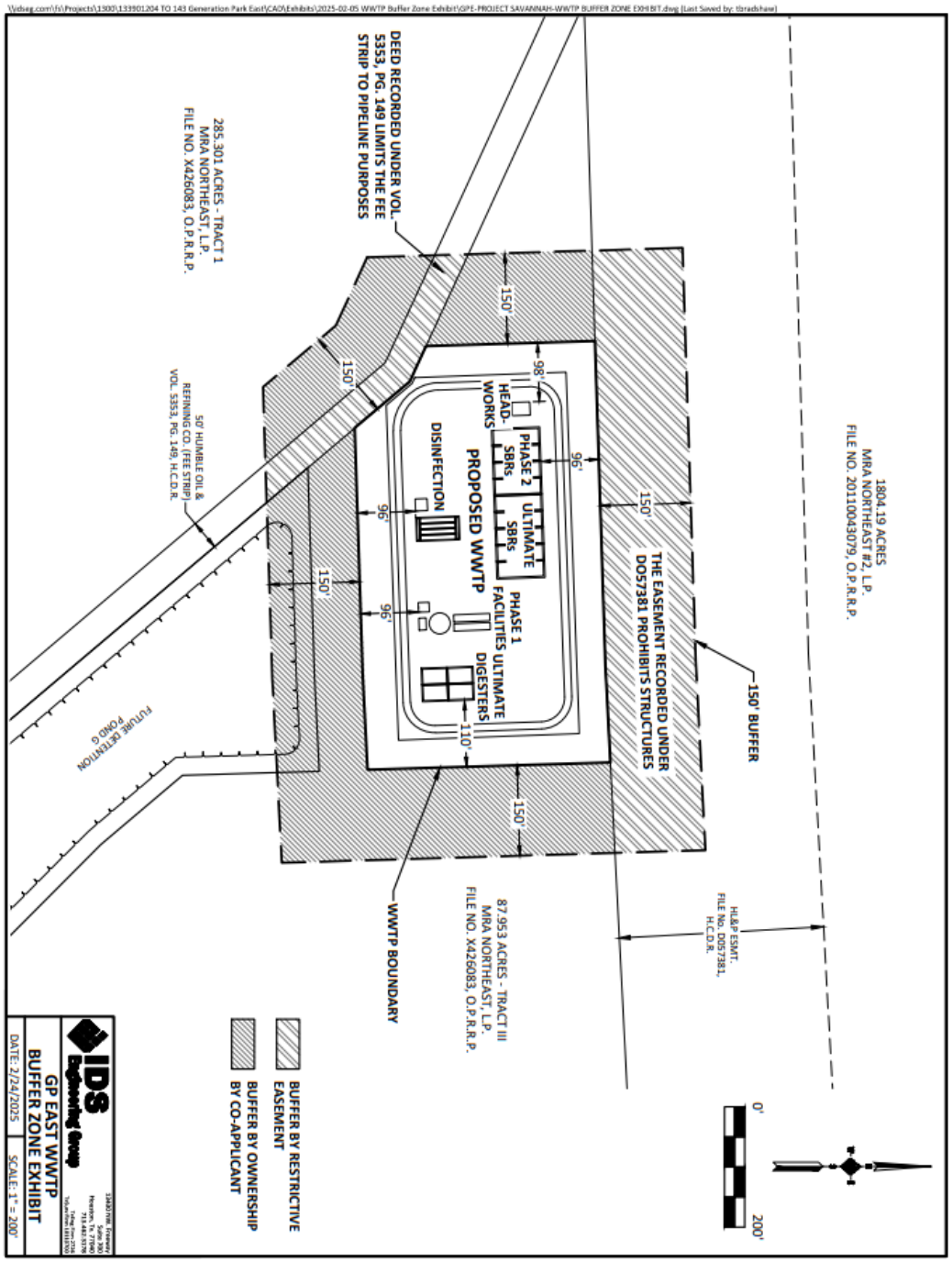
PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = _____% effluent

Attachment A
Buffer Zone Map
Generation Park Management District East WWTP – WQ0016745001



Attachment B
WQ0016745001_Generation Park Management District

DOMESTIC WORKSHEET 4.0

POLLUTANT ANALYSES REQUIREMENTS*

Section 1. Toxic Pollutants

For pollutants identified in Table 4.0(1), indicate type of sample.
Grab ☐ Composite ☐

Date and time sample(s) collected:

Table 4.0(1) – Toxics Analysis

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acrylonitrile				50
Aldrin				0.01
Aluminum				2.5
Anthracene				10
Antimony				5
Arsenic				0.5
Barium				3
Benzene				10
Benzidine				50
Benzo(a)anthracene				5
Benzo(a)pyrene				5
Bis(2-chloroethyl)ether				10
Bis(2-ethylhexyl)phthalate				10
Bromodichloromethane				10
Bromoform				10
Cadmium				1
Carbon Tetrachloride				2
Carbaryl				5
Chlordane*				0.2
Chlorobenzene				10
Chlorodibromomethane				10

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Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Chloroform				10
Chlorpyrifos				0.05
Chromium (Total)				3
Chromium (Tri) **(*1)**				N/A
Chromium (Hex)				3
Copper				2
Chrysene				5
p-Chloro-m-Cresol				10
4,6-Dinitro-o-Cresol				50
p-Cresol				10
Cyanide **(*2)**				10
4,4'- DDD				0.1
4,4'- DDE				0.1
4,4'- DDT				0.02
2,4-D				0.7
Demeton (O and S)				0.20
Diazinon				0.5/0.1
1,2-Dibromoethane				10
m-Dichlorobenzene				10
o-Dichlorobenzene				10
p-Dichlorobenzene				10
3,3'-Dichlorobenzidine				5
1,2-Dichloroethane				10
1,1-Dichloroethylene				10
Dichloromethane				20
1,2-Dichloropropane				10
1,3-Dichloropropene				10

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Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Dicofol				1
Dieldrin				0.02
2,4-Dimethylphenol				10
Di-n-Butyl Phthalate				10
Diuron				0.09
Endosulfan I (alpha)				0.01
Endosulfan II (beta)				0.02
Endosulfan Sulfate				0.1
Endrin				0.02
Ethylbenzene				10
Fluoride				500
Guthion				0.1
Heptachlor				0.01
Heptachlor Epoxide				0.01
Hexachlorobenzene				5
Hexachlorobutadiene				10
Hexachlorocyclohexane (alpha)				0.05
Hexachlorocyclohexane (beta)				0.05
gamma-Hexachlorocyclohexane (Lindane)				0.05
Hexachlorocyclopentadiene				10
Hexachloroethane				20
Hexachlorophene				10
Lead				0.5
Malathion				0.1
Mercury				0.005
Methoxychlor				2

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Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Methyl Ethyl Ketone				50
Mirex				0.02
Nickel				2
Nitrate-Nitrogen				100
Nitrobenzene				10
N-Nitrosodiethylamine				20
N-Nitroso-di-n-Butylamine				20
Nonylphenol				333
Parathion (ethyl)				0.1
Pentachlorobenzene				20
Pentachlorophenol				5
Phenanthrene				10
Polychlorinated Biphenyls (PCB's) **(*3)**				0.2
Pyridine				20
Selenium				5
Silver				0.5
1,2,4,5-Tetrachlorobenzene				20
1,1,2,2-Tetrachloroethane				10
Tetrachloroethylene				10
Thallium				0.5
Toluene				10
Toxaphene				0.3
2,4,5-TP (Silvex)				0.3
Tributyltin (see instructions for explanation)				0.01
1,1,1-Trichloroethane				10
1,1,2-Trichloroethane				10

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Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Trichloroethylene				10
2,4,5-Trichlorophenol				50
TTHM (Total Trihalomethanes)				10
Vinyl Chloride				10
Zinc				5

(*1) Determined by subtracting hexavalent Cr from total Cr.

(*2) Cyanide, amenable to chlorination or weak-acid dissociable.

(*3) The sum of seven PCB congeners 1242, 1254, 1221, 1232, 1248, 1260, and 1016.

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Section 2. Priority Pollutants

For pollutants identified in Tables 4.0(2)A-E, indicate type of sample.
Grab ☐ Composite ☐
Date and time sample(s) collected:

Table 4.0(2)A – Metals, Cyanide, Phenols

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Antimony				5
Arsenic				0.5
Beryllium				0.5
Cadmium				1
Chromium (Total)				3
Chromium (Hex)				3
Chromium (Tri) (*1)				N/A
Copper				2
Lead				0.5
Mercury				0.005
Nickel				2
Selenium				5
Silver				0.5
Thallium				0.5
Zinc				5
Cyanide (*2)				10
Phenols, Total				10

(*1) Determined by subtracting hexavalent Cr from total Cr.

(*2) Cyanide, amenable to chlorination or weak-acid dissociable

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Table 4.0(2)B – Volatile Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acrolein				50
Acrylonitrile				50
Benzene				10
Bromoform				10
Carbon Tetrachloride				2
Chlorobenzene				10
Chlorodibromomethane				10
Chloroethane				50
2-Chloroethylvinyl Ether				10
Chloroform				10
Dichlorobromomethane [Bromodichloromethane]				10
1,1-Dichloroethane				10
1,2-Dichloroethane				10
1,1-Dichloroethylene				10
1,2-Dichloropropane				10
1,3-Dichloropropylene [1,3-Dichloropropene]				10
1,2-Trans-Dichloroethylene				10
Ethylbenzene				10
Methyl Bromide				50
Methyl Chloride				50
Methylene Chloride				20
1,1,2,2-Tetrachloroethane				10
Tetrachloroethylene				10
Toluene				10
1,1,1-Trichloroethane				10
1,1,2-Trichloroethane				10
Trichloroethylene				10
Vinyl Chloride				10

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Table 4.0(2)C – Acid Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
2-Chlorophenol				10
2,4-Dichlorophenol				10
2,4-Dimethylphenol				10
4,6-Dinitro-o-Cresol				50
2,4-Dinitrophenol				50
2-Nitrophenol				20
4-Nitrophenol				50
P-Chloro-m-Cresol				10
Pentalchlorophenol				5
Phenol				10
2,4,6-Trichlorophenol				10

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Table 4.0(2)D – Base/Neutral Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acenaphthene				10
Acenaphthylene				10
Anthracene				10
Benzidine				50
Benzo(a)Anthracene				5
Benzo(a)Pyrene				5
3,4-Benzofluoranthene				10
Benzo(ghi)Perylene				20
Benzo(k)Fluoranthene				5
Bis(2-Chloroethoxy)Methane				10
Bis(2-Chloroethyl)Ether				10
Bis(2-Chloroisopropyl)Ether				10
Bis(2-Ethylhexyl)Phthalate				10
4-Bromophenyl Phenyl Ether				10
Butyl benzyl Phthalate				10
2-Chloronaphthalene				10
4-Chlorophenyl phenyl ether				10
Chrysene				5
Dibenzo(a,h)Anthracene				5
1,2-(o)Dichlorobenzene				10
1,3-(m)Dichlorobenzene				10
1,4-(p)Dichlorobenzene				10
3,3-Dichlorobenzidine				5
Diethyl Phthalate				10
Dimethyl Phthalate				10
Di-n-Butyl Phthalate				10
2,4-Dinitrotoluene				10
2,6-Dinitrotoluene				10
Di-n-Octyl Phthalate				10
1,2-Diphenylhydrazine (as Azo-benzene)				20
Fluoranthene				10
Fluorene				10
Hexachlorobenzene				5
Hexachlorobutadiene				10
Hexachlorocyclo-pentadiene				10
Hexachloroethane				20

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Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Indeno(1,2,3-cd)pyrene				5
Isophorone				10
Naphthalene				10
Nitrobenzene				10
N-Nitrosodimethylamine				50
N-Nitrosodi-n-Propylamine				20
N-Nitrosodiphenylamine				20
Phenanthrene				10
Pyrene				10
1,2,4-Trichlorobenzene				10

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Table 4.0(2)E - Pesticides

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Aldrin				0.01
alpha-BHC (Hexachlorocyclohexane)				0.05
beta-BHC (Hexachlorocyclohexane)				0.05
gamma-BHC (Hexachlorocyclohexane)				0.05
delta-BHC (Hexachlorocyclohexane)				0.05
Chlordane				0.2
4,4-DDT				0.02
4,4-DDE				0.1
4,4,-DDD				0.1
Dieldrin				0.02
Endosulfan I (alpha)				0.01
Endosulfan II (beta)				0.02
Endosulfan Sulfate				0.1
Endrin				0.02
Endrin Aldehyde				0.1
Heptachlor				0.01
Heptachlor Epoxide				0.01
PCB-1242				0.2
PCB-1254				0.2
PCB-1221				0.2
PCB-1232				0.2
PCB-1248				0.2
PCB-1260				0.2
PCB-1016				0.2
Toxaphene				0.3

Section 3. Dioxin/Furan Compounds

A. Are any of the following compounds used by a contributing industrial user or significant industrial user that is part of the collection system for the facility that you have reason to believe are present in the influent to the WWTP?

Yes ☐ No ☐

If **yes**, identify which compound(s) are potentially sent to the facility.

☐ 2,4,5-trichlorophenoxy acetic acid
Common Name 2,4,5-T, CASRN 93-76-5

☐ 2-(2,4,5-trichlorophenoxy) propanoic acid
Common Name Silvex or 2,4,5-TP, CASRN 93-72-1

☐ 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate
Common Name Erbon, CASRN 136-25-4

☐ 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate
Common Name Ronnel, CASRN 299-84-3

☐ 2,4,5-trichlorophenol
Common Name TCP, CASRN 95-95-4

☐ hexachlorophene
Common Name HCP, CASRN 70-30-4

For each compound identified, provide a brief description of the conditions of its/their presence at the facility.

B. Do you know or have any reason to believe that 2,3,7,8 Tetrachlorodibenzo-P-Dioxin (TCDD) or any congeners of TCDD may be present in your effluent?

Yes ☐ No ☐

If **yes**, provide a brief description of the conditions for its presence.

If you responded **yes** to either Subsection A **or** B, complete Table 4.0(2)F.

For pollutants identified in Table 4.0(2)F, indicate type of sample.

Grab ☐ Composite ☐

Date and time sample(s) collected:

TABLE 4.0(2)F - DIOXIN/FURAN COMPOUNDS

Attachment B
WQ0016745001_Generation Park Management District

Compound	Toxic Equivalency Factors	Wastewater Concentration (ppq)	Wastewater Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Equivalents (ppt)	MAL (ppq)
2,3,7,8 TCDD	1					10
1,2,3,7,8 PeCDD	0.5					50
2,3,7,8 HxCDDs	0.1					50
1,2,3,4,6,7,8 HpCDD	0.01					50
2,3,7,8 TCDF	0.1					10
1,2,3,7,8 PeCDF	0.05					50
2,3,4,7,8 PeCDF	0.5					50
2,3,7,8 HxCDFs	0.1					50
2,3,4,7,8 HpCDFs	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					0.5
PCB 81	0.0003					0.5
PCB 126	0.1					0.5
PCB 169	0.03					0.5
Total						

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For draft Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0016745001, EPA I.D. No. TX0147567, to discharge to water in the state.

Issuing Office: Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Applicant: Generation Park Management District and MRA Northeast, L.P.
1300 Post Oak Boulevard, Suite 2400
Houston, Texas 77056,

Prepared By: Paula Palmar
Municipal Permits Team
Wastewater Permitting Section (MC 148)
Water Quality Division
(512) 239-4561

Date: September 5, 2025

Permit Action: New Permit

1. 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**.

2. APPLICANT ACTIVITY

The applicant has applied to the Texas Commission on Environmental Quality (TCEQ) for a new permit to authorize the discharge of treated domestic wastewater at a daily average flow not to exceed 0.12 million gallons per day (MGD) in the Interim I phase, and an annual average flow not to exceed 1.05 MGD in the Interim II phase, and 2.80 MGD in the Final phase. The proposed wastewater treatment facility will serve the east side of Generation Park Management District.

3. FACILITY AND DISCHARGE LOCATION

The plant site will be located approximately 1,400 feet north of the intersection of Lake Houston Parkway and Common Dock Drive, in Harris County, Texas 77044.

Outfall Location:

Outfall Number	Latitude	Longitude
001	29.899756 N	95.169656 W

The treated effluent will be discharged to a detention basin, thence to a storm sewer, thence to a detention basin, thence to a series of ditches, thence to an unnamed tributary, thence to San Jacinto River Tidal in Segment No. 1001 of the San Jacinto River Basin. The unclassified receiving water uses are limited aquatic life use for Detention basins, and minimal aquatic life use for Ditches and Unnamed tributary. The designated uses for Segment No. 1001 are primary contact recreation and high aquatic life use.

4. TREATMENT PROCESS DESCRIPTION AND SEWAGE SLUDGE DISPOSAL

The Generation Park Management District East Wastewater Treatment Facility (WWTF) will be an activated sludge process plant operated in the complete mix single stage nitrification mode in the Interim I phase. The WWTF will be using sequencing batch reactors (SBRs) in the Interim II and Final phases. Treatment units in the Interim I phase will include a bar screen, two aeration basins, a final clarifier, two aerobic digesters, and a chlorine contact chamber. Treatment units in the Interim II phase will include a bar screen, a fine screen, four SBRs, two aerobic digesters, two chlorine contact chambers and a dechlorination chamber. Treatment units in the Final phase will include a bar screen, two fine screens, nine SBRs, four aerobic digesters, four chlorine contact chambers and two Dechlorination chambers. The facility has not been constructed.

Sludge generated from the treatment facility is hauled by a registered transporter and disposed of at a TCEQ-permitted landfill, Magna Flow Environmental, Permit No. 21484, in Harris County. The draft permit also authorizes the disposal of sludge at a TCEQ-authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge.

5. INDUSTRIAL WASTE CONTRIBUTION

The draft permit includes pretreatment requirements that are appropriate for a facility of this size and complexity. The facility does not appear to receive significant industrial wastewater contributions.

6. SUMMARY OF SELF-REPORTED EFFLUENT ANALYSES

Self-reporting data is not available since the facility is not in operation.

7. DRAFT PERMIT CONDITIONS AND MONITORING REQUIREMENTS

The effluent limitations and monitoring requirements for those parameters that are limited in the draft permit are as follows:

A. INTERIM I PHASE EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The daily average flow of effluent shall not exceed 0.12 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 333 gallons per minute (gpm).

Parameter	30-Day Average		7-Day Average	Daily Maximum
	mg/l	lbs/day	mg/l	mg/l
$CBOD_5$	10	10	15	25
TSS	15	15	25	40
NH_3-N	3	3	6	10
DO (minimum)	4.0	N/A	N/A	N/A
E. coli, CFU or MPN per 100 ml	126	N/A	N/A	N/A

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month by grab sample. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

The effluent shall contain a total chlorine residual of at least 1.0 mg/l and shall not exceed a total chlorine residual of 4.0 mg/l after a detention time of at least 20 minutes (based on peak flow), and shall be monitored five times per week by grab sample. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

Parameter	Monitoring Requirement
Flow, MGD	Continuous
$CBOD_5$	One/week
TSS	One/week
NH_3-N	One/week
DO	One/week
E. coli	One/month

B. INTERIM II PHASE EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The annual average flow of effluent shall not exceed 1.05 MGD.

Parameter	30-Day Average		7-Day Average	Daily Maximum
	mg/l	lbs/day	mg/l	mg/l
$CBOD_5$	10	88	15	25
TSS	15	131	25	40
NH_3-N	3	26	6	10
DO (minimum)	4.0	N/A	N/A	N/A
E. coli, CFU or MPN	126	N/A	N/A	N/A

per 100 ml

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

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) and shall be monitored daily by grab sample at each chlorine contact chamber. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l total chlorine residual and shall monitor total chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

Parameter	Monitoring Requirement
Flow, MGD	Continuous
$CBOD_5$	Two/week
TSS	Two/week
NH_3-N	Two/week
DO	Two/week
E. coli	One/week

C. FINAL PHASE EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The annual average flow of effluent shall not exceed 2.80 MGD.

Parameter	30-Day Average		7-Day Average	Daily Maximum
	mg/l	lbs/day	mg/l	mg/l
$CBOD_5$	10	234	15	25
TSS	15	350	25	40
NH_3-N	2	47	5	10
DO (minimum)	6.0	N/A	N/A	N/A
E. coli, CFU or MPN/100 ml	126	N/A	N/A	399

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

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) and shall be monitored daily by grab sample at each chlorine contact chamber. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l total chlorine residual and shall monitor total chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

Parameter	Monitoring Requirement
Flow, MGD	Continuous
$CBOD_5$	Two/week
TSS	Two/week
NH_3-N	Two/week
DO	Two/week

E. coli	One/week

C. SEWAGE SLUDGE REQUIREMENTS

The draft permit includes Sludge Provisions according to the requirements of 30 TAC Chapter 312, Sludge Use, Disposal, and Transportation. Sludge generated from the treatment facility is hauled by a registered transporter and disposed of at a TCEQ-permitted landfill, Magna Flow Environmental, Permit No. 21484, in Harris County. The draft permit also authorizes the disposal of sludge at a TCEQ-authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge.

D. PRETREATMENT REQUIREMENTS

Permit requirements for pretreatment are based on TPDES regulations contained in 30 TAC Chapter 305, which references 40 Code of Federal Regulations (CFR) Part 403, "General Pretreatment Regulations for Existing and New Sources of Pollution" *[rev. Federal Register/ Vol. 70/ No. 198/ Friday, October 14, 2005/ Rules and Regulations, pages 60134-60798].* The permit includes specific requirements that establish responsibilities of local government, industry, and the public to implement the standards to control pollutants which pass through or interfere with treatment processes in publicly owned treatment works or which may contaminate the sewage sludge. This permit has appropriate pretreatment language for a facility of this size and complexity.

E. WHOLE EFFLUENT TOXICITY (BIOMONITORING) REQUIREMENTS

(1) The draft permit includes 48-hour acute freshwater biomonitoring requirements as follows. The permit requires five dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 32%, 42%, 56%, 75%, and 100%. The low-flow effluent concentration (critical dilution) is defined as 100% effluent. The critical dilution is in accordance with the "Aquatic Life Criteria" section of the "Water Quality Based Effluent Limitations/Conditions" section.

(a) Acute static renewal 48-hour definitive toxicity tests using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*). The frequency of the testing is once per quarter for at least the first year of testing, after which the permittee may apply for a testing frequency reduction.

(b) Acute static renewal 48-hour definitive toxicity test using the fathead minnow (*Pimephales promelas*). The frequency of the testing is once per quarter for at least the first year of testing, after which the permittee may apply for a testing frequency reduction.

(2) The draft permit includes the following minimum 24-hour acute freshwater biomonitoring requirements at a frequency of once per six months:

(a) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*).

(b) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*).

F. BUFFER ZONE REQUIREMENTS

Prior to construction of the treatment facility, the permittee shall submit 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). The evidence of legal restrictions shall be submitted to the Executive Director in care of the TCEQ Wastewater Permitting Section (MC 148). The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). (See Attachment C.)

G. SUMMARY OF CHANGES FROM APPLICATION

The applicant requested effluent limitations, based on a 30-day average, of *10* mg/l BOD_5, *15* mg/l TSS, *3* mg/l NH_3-N, 126 colonies of *E. coli* per 100 ml and 4.0 mg/l minimum DO in all the phases. However, effluent limitations in the Interim I and Interim II phases of the draft permit, based on a 30-day average, are 10 mg/l (C)BOD_5, 15 mg/l TSS, 3 mg/l NH_3-N, 126 CFU or MPN of *E. coli* per 100 ml and 4.0 mg/l minimum DO. The effluent limitations in the Final phase of the draft permit, based on a 30-day average, are 10 mg/l (C)BOD_5, 15 mg/l TSS**, 2 mg/l NH_3-N,** 126 CFU or MPN of *E. coli* per 100 ml and **6.0 mg/l minimum DO.**

8. DRAFT PERMIT RATIONALE

A. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

Regulations promulgated in Title 40 of the CFR require that technology-based limitations be placed in wastewater discharge permits based on effluent limitations guidelines, where applicable, or on best professional judgment (BPJ) in the absence of guidelines.

Effluent limitations for maximum and minimum pH are in accordance with 40 CFR § 133.102(c) and 30 TAC § 309.1(b).

B. WATER QUALITY SUMMARY AND COASTAL MANAGEMENT PLAN

(1) WATER QUALITY SUMMARY

The treated effluent is discharged to a detention basin, thence to a storm sewer, thence to a detention basin, thence to a series of ditches, thence to an unnamed tributary, thence to San Jacinto River Tidal in Segment No. 1001 of the San Jacinto River Basin. The unclassified receiving water uses are limited aquatic life use for Detention basins and minimal aquatic life use for Ditches and Unnamed tributary. The designated uses for Segment No. 1001 are primary contact recreation and high aquatic life use. The effluent limitations in the draft permit will maintain and protect the existing instream uses. In accordance with 30 Texas Administrative Code §307.5 and the Procedures to Implement the Texas Surface Water Quality Standards (June 2010), an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. This review has preliminarily determined that no water bodies with exceptional, high, or intermediate aquatic life uses are present within the stream reach assessed; therefore, no Tier 2 degradation determination is required. No significant degradation of water quality is expected in water bodies with exceptional, high, or intermediate aquatic life uses downstream, and existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

The discharge from this permit action is not expected to have an effect on any federal endangered or threatened aquatic or aquatic dependent species or proposed species or their critical habitat. This determination is based on the United States Fish and Wildlife Service's (USFWS) biological opinion on the State of Texas authorization of the Texas Pollutant Discharge Elimination System TPDES (September 14, 1998; October 21, 1998 update). To make this determination for TPDES permits, TCEQ and EPA only considered aquatic or aquatic dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. The permit does not require EPA review with respect to the presence of endangered or threatened species.

Segment No. 1001 is currently listed on the State's inventory of impaired and threatened waters (the 2024 CWA § 303(d) list). The listings are for dioxin in edible tissue and Polychlorinated Biphenyl (PCBs) in edible tissue from Lake Houston Dam to IH 10 (Assessment Units 1001_01 and 1001_02). This is a public domestic wastewater treatment facility. The facility does not receive industrial wastewater contributions, therefore the effluent from this facility should not contribute to the dioxin, PCBs in edible tissue impairment of this segment.

The TMDL project *Fourteen Total Maximum Daily Loads for Nickel in the Houston Ship Channel System* (TMDL Project No.1) has been withdrawn and is no longer applicable to Segment no. 1001.

The effluent limitations and conditions in the draft permit comply with EPA-approved portions of the 2018 Texas Surface Water Quality Standards (TSWQS), 30 TAC §§ 307.1 - 307.10, effective March 1, 2018; 2014 TSWQS, effective March 6, 2014; 2010 TSWQS, effective July 22, 2010; and 2000 TSWQS, effective July 26, 2000.

(2) CONVENTIONAL PARAMETERS

Effluent limitations for the conventional effluent parameters (i.e., Five-Day Biochemical Oxygen Demand or Five-Day Carbonaceous Biochemical Oxygen Demand, Ammonia Nitrogen, etc.) are based on stream standards and waste load allocations for water quality-limited streams as established in the TSWQS and the State of Texas Water Quality Management Plan (WQMP).

The effluent limits recommended above have been reviewed for consistency with the State of Texas Water Quality Management Plan (WQMP). The proposed limits are not contained in the approved WQMP. However, these limits will be included in the next WQMP update.

The effluent limitations in the draft permit meet the requirements for secondary treatment and the requirements for disinfection according to 30 TAC Chapter 309, Subchapter A: Effluent Limitations.

(3) COASTAL MANAGEMENT PLAN

The facility is not located in the Coastal Management Program boundary.

C. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS

(1) GENERAL COMMENTS

The Texas Surface Water Quality Standards (30 TAC Chapter 307) state that surface waters will not be toxic to man, or to terrestrial or aquatic life. The methodology outlined in the "Procedures to Implement the Texas Surface Water Quality Standards" is designed to ensure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to ensure that no source will be allowed to discharge any wastewater that: (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation that threatens human health.

(2) AQUATIC LIFE CRITERIA

(a) SCREENING

Water quality-based effluent limitations are calculated from freshwater aquatic life criteria found in Table 1 of the Texas Surface Water Quality Standards (30 TAC Chapter 307).

There is no mixing zone or zone of initial dilution for this discharge directly to an intermittent stream; acute freshwater criteria apply at the end of pipe. Chronic freshwater criteria do not apply to discharges to intermittent streams where there is no perennial waterbody within three miles downstream from the point of discharge. The following critical effluent percentage is being used:

Acute Effluent %: 100%

Waste load allocations (WLAs) are calculated using the above estimated effluent percentages, criteria outlined in the Texas Surface Water Quality Standards, and partitioning coefficients for metals (when appropriate and designated in the implementation procedures). The WLA is the end-of-pipe effluent concentration that can be discharged when, after mixing in the receiving stream, instream numerical criteria will not be exceeded.

From the WLA, a long-term average (LTA) is calculated using a log normal probability distribution, a given coefficient of variation (0.6), and a 99th percentile confidence level.

The LTA is used to calculate a daily average and daily maximum effluent limitation for the protection of aquatic life using the same statistical considerations with the 99th percentile confidence level and a standard number of monthly effluent samples collected (12).

Assumptions used in deriving the effluent limitations include segment values for hardness, chlorides, pH, and total suspended solids (TSS) according to the segment-specific values contained in the TCEQ guidance document *"Procedures to Implement the Texas Surface Water Quality Standards*." The segment values are 3123 mg/l chlorides, 7.5 standard units for pH, and 8 mg/l for TSS. For additional details on the calculation of water quality-based effluent limitations, refer to the TCEQ guidance document.

TCEQ practice for determining significant potential is to compare the reported analytical data against percentages of the calculated daily average water quality-based effluent

limitation. Permit limitations are required when analytical data reported in the application exceeds 85% of the calculated daily average water quality-based effluent limitation. Monitoring and reporting is required when analytical data reported in the application exceeds 70% of the calculated daily average water quality-based effluent limitation.

(b) PERMIT ACTION

No analytical data is available for screening against water quality-based effluent limitations because the facility is not in operation.

(3) AQUATIC ORGANISM BIOACCUMULATION CRITERIA

(a) SCREENING

The discharge point is located at a distance greater than three miles upstream of perennial waters. Human health screening is not applicable because of the distance between the discharge point and perennial waters that support fisheries.

(b) PERMIT ACTION

No analytical data is available for screening against water quality-based effluent limitations because the facility is not in operation.

(4) DRINKING WATER SUPPLY PROTECTION

(a) SCREENING

Water Quality Segment No. 1001, which receives the discharge from this facility, is not designated as a public water supply. Screening reported analytical data of the effluent against water quality-based effluent limitations calculated for the protection of a drinking water supply is not applicable.

(b) PERMIT ACTION

No analytical data is available for screening against water quality-based effluent limitations because the facility is not in operation.

(5) WHOLE EFFLUENT TOXICITY (BIOMONITORING) CRITERIA

(a) SCREENING

TCEQ has determined that there may be pollutants present in the effluent that may have the potential to cause toxic conditions in the receiving stream. Whole effluent biomonitoring is the most direct measure of potential toxicity that incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity.

A reasonable potential (RP) determination was performed in accordance with 40 CFR §122.44(d)(1)(ii) to determine whether the discharge will reasonably be expected to cause or contribute to an exceedance of a state water quality standard or criterion within

that standard. Each test species is evaluated separately. The RP determination is based on representative data from the previous three years of chronic WET testing. This determination was performed in accordance with the methodology outlined in the TCEQ letter to the EPA dated December 28, 2015, and approved by the EPA in a letter dated December 28, 2015.

With no WET testing history, and therefore zero failures, a determination of no RP was made. Both test species may be eligible for the testing frequency reduction after one year of quarterly testing.

(b) PERMIT ACTION

This is a new facility. WET testing will commence within 90 days of initial discharge of the 1.05 MGD Interim II phase facility.

(6) WHOLE EFFLUENT TOXICITY CRITERIA (24-HOUR ACUTE)

(a) SCREENING

This is a new facility. WET testing will commence within 90 days of initial discharge of the 1.05 MGD Interim II facility.

(b) PERMIT ACTION

The applicant is not currently monitoring whole effluent toxicity because the requirements do not take effect until the 1.05 MGD Interim II phase facility.

9. WATER QUALITY VARIANCE REQUESTS

No variance requests have been received.

10. 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 Paula Palmar at (512) 239-4561.

11. ADMINISTRATIVE RECORD

The following items were considered in developing the draft permit:

A. APPLICATION

Application received on March 5, 2025, and additional information received on March 17, 2025.

B. MEMORANDA

Interoffice Memoranda from the Water Quality Assessment Section of the TCEQ Water Quality Division. Interoffice Memorandum from the Pretreatment Team of the TCEQ Water Quality Division.

C. MISCELLANEOUS

Federal Clean Water Act § 402; Texas Water Code § 26.027; 30 TAC Chapters 30, 305, 309, 312, and 319; Commission policies; and U.S. Environmental Protection Agency guidelines.

Texas Surface Water Quality Standards, 30 TAC §§ 307.1 - 307.10.

Procedures to Implement the Texas Surface Water Quality Standards (IP), Texas Commission on Environmental Quality, June 2010, as approved by the U.S. Environmental Protection Agency, and the IP, January 2003, for portions of the 2010 IP not approved by the U.S. Environmental Protection Agency.

Texas 2024 Clean Water Act Section 303(d) List, Texas Commission on Environmental Quality,

June 26, 2024; approved by the U.S. Environmental Protection Agency on November 13, 2024.

Texas Natural Resource Conservation Commission, Guidance Document for Establishing Monitoring Frequencies for Domestic and Industrial Wastewater Discharge Permits, Document No. 98-001.000-OWR-WQ, May 1998.

Attachment A: Calculated Water Quality Based Effluent Limitations

TEXTOX MENU #1 - INTERMITTENT STREAM

The water quality-based effluent limitations developed below are calculated using:

Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life
"Procedures to Implement the Texas Surface Water Quality Standards," TCEQ, June 2010

PERMIT INFORMATION

Permittee Name:	Generation Managements District and MRA Northeast L,P
TPDES Permit No:	WQ0016745001
Outfall No:	001
Prepared By:	Paula Palmar
Date:	September 5, 2025

DISCHARGE INFORMATION

Intermittent Receiving Waterbody:	to a detention basin
Segment No:	1001
TSS (mg/L):	8
pH (Standard Units):	7.5
Hardness (mg/L as $CaCO_3$):	N/A
Chloride (mg/L):	3123
Effluent Flow for Aquatic Life (MGD):	2.8
Critical Low Flow [7Q2] (cfs):	0
% Effluent for Acute Aquatic Life:	100

CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE):

Stream/River Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*	*Source*	*Water Effect Ratio (WER)*	Source
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	104892.47	0.544		1.00	Assumed
Cadmium	6.60	-1.13	379759.21	0.248		1.00	Assumed
Chromium (total)	6.52	-0.93	478769.32	0.207		1.00	Assumed
Chromium (trivalent)	6.52	-0.93	478769.32	0.207		1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.02	-0.74	224757.09	0.357		1.00	Assumed
Lead	6.45	-0.80	533983.71	0.190		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	5.69	-0.57	149705.83	0.455		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	281719.76	0.307		1.00	Assumed
Zinc	6.10	-0.70	293654.74	0.299		1.00	Assumed

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*FW Acute Criterion (µg/L)*	*WLAa (µg/L)*	*LTAa (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Aldrin	3.0	3.00	1.72	2.52	5.34
Aluminum	991	991	568	834	1765
Arsenic	340	625	358	526	1114
Cadmium	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Carbaryl	2.0	2.00	1.15	1.68	3.56
Chlordane	2.4	2.40	1.38	2.02	4.27
Chlorpyrifos	0.083	0.0830	0.0476	0.0699	0.147
Chromium (trivalent)	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!

Chromium (hexavalent)	15.7	15.7	9.00	13.2	27.9
Copper	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Cyanide (free)	45.8	45.8	26.2	38.5	81.6
4,4'-DDT	1.1	1.10	0.630	0.926	1.96
Demeton	N/A	N/A	N/A	N/A	N/A
Diazinon	0.17	0.170	0.0974	0.143	0.302
Dicofol [Kelthane]	59.3	59.3	34.0	49.9	105
Dieldrin	0.24	0.240	0.138	0.202	0.427
Diuron	210	210	120	176	374
Endosulfan I (*alpha*)	0.22	0.220	0.126	0.185	0.392
Endosulfan II (*beta*)	0.22	0.220	0.126	0.185	0.392
Endosulfan sulfate	0.22	0.220	0.126	0.185	0.392
Endrin	0.086	0.0860	0.0493	0.0724	0.153
Guthion [Azinphos Methyl]	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.52	0.520	0.298	0.438	0.926
Hexachlorocyclohexane (*gamma*) [Lindane]	1.126	1.13	0.645	0.948	2.00
Lead	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Malathion	N/A	N/A	N/A	N/A	N/A
Mercury	2.4	2.40	1.38	2.02	4.27
Methoxychlor	N/A	N/A	N/A	N/A	N/A
Mirex	N/A	N/A	N/A	N/A	N/A
Nickel	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Nonylphenol	28	28.0	16.0	23.5	49.8
Parathion (ethyl)	0.065	0.0650	0.0372	0.0547	0.115
Pentachlorophenol	14.41833	14.4	8.26	12.1	25.6
Phenanthrene	30	30.0	17.2	25.2	53.4
Polychlorinated Biphenyls [PCBs]	2.0	2.00	1.15	1.68	3.56
Selenium	20	20.0	11.5	16.8	35.6
Silver	0.8	29.0	16.6	24.4	51.6
Toxaphene	0.78	0.780	0.447	0.657	1.38
Tributyltin [TBT]	0.13	0.130	0.0745	0.109	0.231
2,4,5 Trichlorophenol	136	136	77.9	114	242
Zinc	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS:

Aquatic Life	***70% of Daily Avg.***	***85% of Daily Avg.***
Parameter	***(µg/L)***	***(µg/L)***
Aldrin	1.76	2.14
Aluminum	584	709
Arsenic	368	447
Cadmium	#VALUE!	#VALUE!
Carbaryl	1.17	1.43
Chlordane	1.41	1.71
Chlorpyrifos	0.0489	0.0594
Chromium (trivalent)	#VALUE!	#VALUE!
Chromium (hexavalent)	9.25	11.2
Copper	#VALUE!	#VALUE!
Cyanide (free)	27.0	32.7
4,4'-DDT	0.648	0.787
Demeton	N/A	N/A
Diazinon	0.100	0.121
Dicofol [Kelthane]	34.9	42.4

Dieldrin	0.141	0.171
Diuron	123	150
Endosulfan I (*alpha*)	0.129	0.157
Endosulfan II (*beta*)	0.129	0.157
Endosulfan sulfate	0.129	0.157
Endrin	0.0507	0.0615
Guthion [Azinphos Methyl]	N/A	N/A
Heptachlor	0.306	0.372
Hexachlorocyclohexane (*gamma*) [Lindane]	0.663	0.806
Lead	#VALUE!	#VALUE!
Malathion	N/A	N/A
Mercury	1.41	1.71
Methoxychlor	N/A	N/A
Mirex	N/A	N/A
Nickel	#VALUE!	#VALUE!
Nonylphenol	16.5	20.0
Parathion (ethyl)	0.0383	0.0465
Pentachlorophenol	8.50	10.3
Phenanthrene	17.6	21.4
Polychlorinated Biphenyls [PCBs]	1.17	1.43
Selenium	11.7	14.3
Silver	17.0	20.7
Toxaphene	0.459	0.558
Tributyltin [TBT]	0.0766	0.0930
2,4,5 Trichlorophenol	80.1	97.3
Zinc	#VALUE!	#VALUE!

Attachment B
WQ0016745001_Generation Park Management District

Compound	Toxic Equivalency Factors	Wastewater Concentration (ppq)	Wastewater Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Equivalents (ppt)	MAL (ppq)
2,3,7,8 TCDD	1					10
1,2,3,7,8 PeCDD	0.5					50
2,3,7,8 HxCDDs	0.1					50
1,2,3,4,6,7,8 HpCDD	0.01					50
2,3,7,8 TCDF	0.1					10
1,2,3,7,8 PeCDF	0.05					50
2,3,4,7,8 PeCDF	0.5					50
2,3,7,8 HxCDFs	0.1					50
2,3,4,7,8 HpCDFs	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					0.5
PCB 81	0.0003					0.5
PCB 126	0.1					0.5
PCB 169	0.03					0.5
Total						