



Technical Package Cover Page

This file contains the following documents:

1. Summary of application (in plain language)
 - English
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 2. First notice (NORI-Notice of Receipt of Application and Intent to Obtain a Permit)
 - English
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 3. Second notice (NAPD-Notice of Preliminary Decision)
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 4. Application materials
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-



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
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3. Segundo aviso (NAPD, Aviso de Decisión Preliminar)
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4. Materiales de la solicitud
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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

**SUMMARY OF APPLICATION IN PLAIN
LANGUAGE FOR TPDES OR TLAP PERMIT
APPLICATIONS****Summary of Application (in plain language) Template and
Instructions for Texas Pollutant Discharge Elimination System
(TPDES) and Texas Land Application (TLAP) Permit
Applications**

Applicants should use this template to develop a plain language summary of your facility and application as required by Title 30, Texas Administrative Code (30 TAC), Chapter 39, Subchapter H. You may modify the template as necessary to accurately describe your facility as long as the summary includes the following information: (1) the function of the proposed plant or facility; (2) the expected output of the proposed plant or facility; (3) the expected pollutants that may be emitted or discharged by the proposed plant or facility; and (4) how you will control those pollutants, so that the proposed plant will not have an adverse impact on human health or the environment.

If you are subject to the alternative language notice requirements in 30 TAC Section 39.426, **you must provide a translated copy of the completed plain language summary in the appropriate alternative language as part of your application package.** For your convenience, a Spanish template has been provided below.

**ENGLISH TEMPLATE FOR TPDES or TLAP NEW/RENEWAL/AMENDMENT APPLICATIONS
INDUSTRIAL WASTEWATER/STORMWATER**

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.

Coletto Creek Power, LLC (CN605521988) operates the Coletto Creek Power Station (RN100226919), with a total generating capacity of a nominal net 632 megawatts. The facility is located at 45 Farm-to-Market Road 2987 near the Town of Fannin, Goliad County, Texas 77960.

This application is to amend TPDES Permit No. WQ0002159000 to add proposed internal Outfall 401, to add a proposed retention pond, and to update the name of the Secondary Pond. Outfall 401 would discharge low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater. The facility currently has one final Outfall 001 and three internal outfalls (101, 201, 301), which discharge to the final outfall.

Outfall 001 is authorized to discharge a maximum average of 557 million gallons per day of once-through cooling water, treated domestic wastewater, ash transport water, low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater. Cooling water is withdrawn from Coletto Creek Reservoir. Treatment processes include oil/water separation and solids settling. Domestic wastewater is treated in an aerobic septic system with spray field.

The discharge from Outfall 001 is subject to federal effluent limitation guidelines at 40 CFR Part 423. The pollutants expected from these discharges include free available and total residual chlorine, total suspended solids, oil and grease, metals, pH, and temperature.

PLANTILLA EN ESPAÑOL PARA SOLICITUDES NUEVAS/RENOVACIONES/ENMIENDAS DE TPDES o TLAP**AGUAS RESIDUALES INDUSTRIALES /AGUAS PLUVIALES**

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.

Coletto Creek Power, LLC (CN605521988) opera la central eléctrica Coletto Creek (RN100226919), con una capacidad total de generación nominal neta de 632 megavatios. La instalación está ubicada en el 45 Farm-to-Market Road 2987, cerca de la localidad de Fannin, Condado de Goliad, Texas 77960.

Esta solicitud es para la modificación el permiso TPDES No. WQ0002159000 para añadir el Outfall interno 401 propuesto, añadir un estanque de retención propuesto y actualizar el nombre del estanque secundario. El Outfall 401 descargaría residuos de bajo volumen, residuos de limpieza de metales, escorrentía de pilas de carbón y aguas pluviales. La instalación tiene actualmente el Outfall final 001 y tres Outfalls internos (101, 201, 301), que descargan al Outfall final.

El Outfall 001 está autorizado a verter un promedio máximo de 557 millones de galones al día de agua de refrigeración de un solo paso, aguas residuales domésticas tratadas, agua de transporte de cenizas, residuos de bajo volumen, residuos de limpieza de metales, escorrentía de pilas de carbón y aguas pluviales. El agua de refrigeración se extrae del embalse de Coletto Creek. Los procesos de tratamiento incluyen la separación de aceite y agua y la sedimentación de sólidos. Las aguas residuales domésticas se tratan en un sistema séptico aeróbico con campo de aspersión.

El vertido del Outfall 001 está sujeto a las directrices federales de limitación de efluentes del título 40 del CFR, parte 423. Los contaminantes que se esperan de estos vertidos incluyen cloro libre disponible y residual total, sólidos suspendidos totales, aceites y grasas, metales, pH y temperatura.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



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

PERMIT NO. WQ0002159000

APPLICATION. Coletto Creek Power, LLC, 6555 Sierra Drive, Irving, Texas 75039, which owns a coal-fired steam electric generating facility, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0002159000 (EPA I.D. No. TX0070068) to authorize the addition of new proposed internal Outfall 401 for the discharge of low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater, addition of a new proposed Retention Pond to the list of impoundments in Other Requirement No. 17, and to change the label for the Secondary Pond. The facility is located at 45 Farm-to-Market Road 2987, near Fannin, in Goliad County, Texas 77960. The discharge route is from the plant site directly to Coletto Creek Reservoir, which is part of Coletto Creek. TCEQ received this application on June 5, 2025. The permit application will be available for viewing and copying at Goliad County Clerk's Office, 127 North Courthouse Square, Goliad, in Goliad County, Texas, and at Victoria County Clerk's Office, 115 North Bridge Street, Victoria, in Victoria 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=-97.214444,28.712777&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 Coletto Creek Power, LLC at the address stated above or by calling Mr. Ryan Bayle, Environmental Manager, Luminant Generation Company LLC, at 214-875-8294.

Issuance Date: June 25, 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 MODIFICACION

PERMISO NO. WQ0002159000

SOLICITUD. Coletto Creek Power, LLC, 6555 Sierra Drive, Irving, Texas 75039, propietaria de una planta generadora de electricidad a vapor a carbón, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) la modificación del Permiso n.º WQ0002159000 del Sistema de Eliminación de Descargas Contaminantes de Texas (TPDES) (N.º de identificación de la EPA: TX0070068) para autorizar la adición del nuevo Desagüe Interno 401 propuesto para la descarga de residuos de bajo volumen, residuos de limpieza de metales, escorrentía de pilas de carbón y aguas pluviales, la adición de un nuevo Estanque de Retención propuesto a la lista de embalses del Requisito n.º 17, y el cambio de la etiqueta del Estanque Secundario. La planta está ubicada en 45 Farm-to-Market Road 2987, cerca de Fannin, en el condado de Goliad, Texas 77960. La ruta de descarga va desde la planta directamente al embalse de Coletto Creek, que forma parte de Coletto Creek. La TCEQ recibió esta solicitud el 5 de junio de 2025. La solicitud de permiso estará disponible para su consulta y copia en la Oficina del Secretario del Condado de Goliad, ubicada en 127 North Courthouse Square, Goliad, Texas, y en la Oficina del Secretario del Condado de Victoria, ubicada en 115 North Bridge Street, Victoria, Texas, antes de la fecha de publicación de este aviso en el periódico. La solicitud, incluyendo sus actualizaciones y los avisos correspondientes, están disponibles 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 instalación se proporciona como cortesía pública y no forma parte de la solicitud ni del aviso. Para conocer la ubicación exacta, consulte la solicitud.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-97.214444,28.712777&level=18>

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

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

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

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

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

Después del cierre de todos los períodos de comentarios y de petición que aplican, el Director Ejecutivo enviará la solicitud y cualquier petición para reconsideración o para una audiencia de caso impugnado a los Comisionados de la TCEQ para su consideración durante una reunión programada de la Comisión.

La Comisión sólo puede conceder una solicitud de una audiencia de caso impugnado sobre los temas que el solicitante haya presentado en sus comentarios oportunos que no fueron retirados posteriormente. **Si se concede una audiencia, el tema de la audiencia estará limitado a cuestiones de hecho en disputa o cuestiones mixtas de hecho y de derecho relacionadas a intereses pertinentes y materiales de calidad del agua que se hayan presentado durante el período de comentarios.**

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

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

CONTACTOS E INFORMACIÓN A LA AGENCIA. Todos los comentarios públicos y solicitudes deben ser presentadas electrónicamente vía <http://www14.tceq.texas.gov/epic/eComment/> o por escrito dirigidos a la Comisión de Texas de Calidad Ambiental, Oficial de la Secretaría (Office of Chief Clerk), MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Tenga en cuenta que cualquier información personal que usted proporcione, incluyendo su nombre, número de teléfono, dirección de correo electrónico y dirección física pasarán a formar parte del registro público de la Agencia. Para obtener más información acerca de esta solicitud de permiso o el proceso de permisos, llame al programa de educación pública de la TCEQ, gratis, al 1-800-687-4040. Si desea información en español, puede llamar al 1-800-687-4040.

También se puede obtener información adicional del Coletto Creek Power, LLC a la dirección indicada arriba o llamando a Sr. Ryan Bayle, P.G., Environmental Manager, al 214-875-8294.

Fecha de emisión: 25 de junio de 2025

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



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

AMENDMENT

PERMIT NO. WQ0002159000

APPLICATION AND PRELIMINARY DECISION. Coletto Creek Power, LLC, 6555 Sierra Drive, Irving, Texas 75039, which operates Coletto Creek Power Station, currently a coal-fired steam electric generating facility with future plans to convert to natural gas-fired, has applied to the Texas Commission on Environmental Quality (TCEQ) for a major amendment without renewal of Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0002159000 to add a new internal Outfall 401 for the discharge of low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater; add a new Retention Pond to the list of impoundments in Other Requirement No. 17; and change the label of the Secondary Pond. The draft permit authorizes the discharge of once-through cooling water (condenser cooling water and auxiliary cooling water) from Unit 1 and previously monitored effluent (treated domestic wastewater, bottom ash transport water, low volume waste sources, metal cleaning wastes, stormwater runoff, and coal pile runoff) at a daily average flow not to exceed 557,000,000 gallons per day via Outfall 001. The TCEQ received this application on June 5, 2025.

The facility is located at 45 Farm-to-Market Road 2987, near the Town of Fannin, Goliad County, Texas 77960. This link to an electronic map of the site or facility's general location is provided as a public courtesy and is not part of the application or notice. For the exact location, refer to the application.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-97.214444,28.712777&level=18>

The effluent is discharged directly to Coletto Creek Reservoir, which is part of Coletto Creek in Segment No. 1807 of the Guadalupe River Basin. The designated uses for Segment No. 1807 are primary contact recreation, public water supply, and high aquatic life use.

In accordance with Title 30 Texas Administrative Code Section 307.5 and 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. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in Coletto Creek Reservoir, which has been identified as having high aquatic life use. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

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 Goliad County Clerk's Office, 127 North Courthouse Square, Goliad, in Goliad County, Texas, and at Victoria County Clerk's Office, 115 North Bridge Street, Victoria, in Victoria County, Texas. The application, including any updates, and associated notices are available electronically at the following webpage:

<https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications>

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>.

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 written or oral comment or to ask questions about the application. Generally, the 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 public comments, the Executive Director will consider the comments and prepare a response to all relevant and material, or significant public comments. **The response to comments, along with the Executive Director's decision on the application, will be mailed to everyone who submitted public comments or who requested to be on a 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 a timely 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 requests 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 added to: (1) the permanent list for a specific applicant name and permit number; and (2) the mailing list for a specific county. If you wish to be placed on the permanent and 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, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at <https://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 <https://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 <https://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. 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 <https://www.tceq.texas.gov/agency/decisions/participation/permitting-participation>. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Coletto Creek Power, LLC at the address stated above or by calling Mr. Ryan Bayle, Environmental Manager, Luminant Generating Company LLC, at 214-875-8294.

Issued: November 12, 2025

Comisión De Calidad Ambiental Del Estado De Texas



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

MODIFICACIÓN

PERMISO NO. WQ 0002159000

SOLICITUD Y DECISIÓN PRELIMINAR. Coletto Creek Power, LLC, 6555 Sierra Drive, Irving, Texas 75039, que opera la central eléctrica Coletto Creek, actualmente una instalación generadora de vapor a carbón con planes futuros para convertirla a gas natural, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) una modificación importante sin renovación del Permiso del Sistema de Eliminación de Descargas de Contaminantes de Texas (TPDES) No. WQ0002159000 para agregar un nuevo emisario interno 401 para la descarga de desechos de bajo volumen, desechos de limpieza de metales, escorrentía de pilas de carbón y aguas pluviales; agregar un nuevo estanque de retención a la lista de embalses en el Requisito No. 17; y cambiar la etiqueta del estanque secundario. El borrador del permiso autoriza la descarga de agua de refrigeración de un solo paso (agua de refrigeración del condensador y agua de refrigeración auxiliar) de la Unidad 1 y de efluentes previamente monitoreados (aguas residuales domésticas tratadas, agua de transporte de cenizas de fondo, fuentes de residuos de bajo volumen, residuos de limpieza de metales, escorrentía pluvial y escorrentía de pilas de carbón) a un caudal promedio diario que no exceda los 557.000.000 galones por día a través del emisario 001. La TCEQ recibió esta solicitud el 5 de junio de 2025.

Las instalaciones se encuentran en el número 45 de la Carretera Rural 2987, cerca del pueblo de Fannin, condado de Goliad, Texas 77960. Este enlace a un mapa electrónico con la ubicación general del sitio o las instalaciones se proporciona a título informativo y no forma parte de la solicitud ni del aviso. Para conocer la ubicación exacta, consulte la solicitud.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-97.214444,28.712777&level=18>

El efluente se descarga directamente al embalse de Coletto Creek, que forma parte del arroyo Coletto en el segmento n.º 1807 de la cuenca del río Guadalupe. Los usos designados para el segmento n.º 1807 son recreación de contacto directo, abastecimiento público de agua y uso intensivo de vida acuática.

De conformidad con el Título 30, Sección 307.5 del Código Administrativo de Texas y los Procedimientos de la TCEQ para la Implementación de las Normas de Calidad del Agua Superficial de Texas (junio de 2010), se realizó una revisión de no degradación de las aguas receptoras. Una revisión de no degradación de Nivel 1 determinó preliminarmente que los usos actuales del agua no se verán afectados por este permiso. Se mantendrán los criterios numéricos y descriptivos para proteger dichos usos. Una revisión de Nivel 2 determinó preliminarmente que no se espera una degradación significativa de la calidad del agua en el embalse de Coletto Creek, el cual se ha identificado como de alta actividad acuática. Se mantendrán y protegerán los usos actuales. La determinación preliminar puede ser revisada y modificada si se recibe nueva información.

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 Goliad County Clerk's Office, 127 North Courthouse Square, Goliad, in Goliad County, Texas, and at Victoria County Clerk's Office, 115 North Bridge Street, Victoria, in Victoria County, Texas. La solicitud está disponible para su consulta y reproducción a través del siguiente enlace:

<https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tlap-applications>.

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

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.

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

LISTA DE CORREO. Si somete comentarios públicos, un pedido para una audiencia administrativa de lo contencioso o una reconsideración de la decisión del Director Ejecutivo, la Oficina del Secretario Principal enviará por correo los avisos públicos en relación con la solicitud. Además, puede pedir que la TCEQ ponga su nombre en una o más de las listas de 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 específico. Si desea que se agregue su nombre en una de las listas designe cual lista(s) y envía por correo su pedido a la Oficina del Secretario Principal de la TCEQ.

Todos los comentarios escritos del público y los pedidos una reunión deben ser presentados durante los 30 días después de la publicación del aviso a la Oficina del Secretario Principal, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or por el internet a <https://www.tceq.texas.gov/goto/comment>. 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.

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

CONTACTOS E INFORMACIÓN DE LA AGENCIA. Los comentarios y solicitudes públicas deben enviarse electrónicamente a <https://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 la TCEQ, sin cargo, al 1-800-687-4040 o visite su sitio web en <https://www.tceq.texas.gov/agency/decisions/participation/permitting-participation>. Si desea información en español, puede llamar al 1-800-687-4040.

También se puede obtener información adicional del Coletto Creek Power, LLC a la dirección indicada arriba o llamando a Sr. Ryan Bayle, Gerente Ambiental, Luminant Generating Company LLC, al 214-875-8294.

Fecha de emisión 12 de noviembre de 2025

Brooke T. Paup, *Chairwoman*
Bobby Janecka, *Commissioner*
Catarina R. Gonzales, *Commissioner*
Kelly Keel, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 5, 2025

Re: Confirmation of Submission of the Major Amendment without Renewal for Industrial Wastewater Authorization.

Dear Applicant:

This is an acknowledgement that you have successfully completed Major Amendment without Renewal for the Industrial Wastewater authorization.

ER Account Number: ER002931
Application Reference Number: 783775
Authorization Number: WQ0002159000
Site Name: Coletto Creek Power Station
Regulated Entity: RN100226919 - Coletto Creek Power Station
Customer(s): CN605521988 - Coletto Creek Power, LLC

Please be aware that TCEQ staff may contact your designated contact for any additional information.

If you have any questions, you may contact the Applications Review and Processing Team by email at WQ-ARPTeam@tceq.texas.gov or by telephone at (512) 239-4671.

Sincerely,
Applications Review and Processing Team
Water Quality Division

Texas Commission on Environmental Quality
Update Domestic or Industrial Individual Permit
WQ0002159000

Site Information (Regulated Entity)

What is the name of the site to be authorized?	COLETO CREEK POWER STATION
Does the site have a physical address?	Yes
Physical Address	
Number and Street	45 FM 2987
City	FANNIN
State	TX
ZIP	77960
County	GOLIAD
Latitude (N) (##.#####)	28.712777
Longitude (W) (-###.#####)	-97.214444
Primary SIC Code	4911
Secondary SIC Code	
Primary NAICS Code	221119
Secondary NAICS Code	

Regulated Entity Site Information

What is the Regulated Entity's Number (RN)?	RN100226919
What is the name of the Regulated Entity (RE)?	COLETO CREEK POWER STATION
Does the RE site have a physical address?	Yes

Physical Address

Number and Street	45 FM 2987
City	FANNIN
State	TX
ZIP	77960
County	GOLIAD
Latitude (N) (##.#####)	28.731111
Longitude (W) (-###.#####)	-97.215277
Facility NAICS Code	
What is the primary business of this entity?	INDUSTRIAL

Coleto -Customer (Applicant) Information (Owner)

How is this applicant associated with this site?	Owner
What is the applicant's Customer Number (CN)?	CN605521988
Type of Customer	Corporation

Full legal name of the applicant:

Legal Name	Coletto Creek Power, LLC
Texas SOS Filing Number	802989013
Federal Tax ID	
State Franchise Tax ID	10305996836
State Sales Tax ID	
Local Tax ID	
DUNS Number	
Number of Employees	0-20
Independently Owned and Operated?	Yes
I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas.	Yes

Responsible Authority Contact

Organization Name	Coletto Creek Power, LLC
Prefix	MS
First	RENEE
Middle	
Last	COLLINS
Suffix	
Credentials	
Title	SENIOR DIRECTOR ENVIRONMENTAL SERVICES

Responsible Authority Mailing Address

Enter new address or copy one from list:

Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	6555 SIERRA DR
Routing (such as Mail Code, Dept., or Attn:)	
City	IRVING
State	TX
ZIP	75039
Phone (###-###-####)	2148758338
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	RENEE.COLLINS@LUMINANT.COM

Billing Contact**Responsible contact for receiving billing statements:**

Select the permittee that is responsible for payment of the annual fee.	CN605521988, Coletto Creek Power, LLC
---	---------------------------------------

Organization Name	LUMINANT GENERATION COMPANY LLC
Prefix	MR
First	RYAN
Middle	
Last	BAYLE
Suffix	
Credentials	
Title	ENVIRONMENTAL MANAGER
Enter new address or copy one from list:	
Mailing Address	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	6555 SIERRA DR
Routing (such as Mail Code, Dept., or Attn:)	
City	IRVING
State	TX
ZIP	75039
Phone (###-###-####)	2148758294
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	RYAN.BAYLE@LUMINANT.COM

Application Contact

Person TCEQ should contact for questions about this application:

Same as another contact?	Billing Contact
Organization Name	LUMINANT GENERATION COMPANY LLC
Prefix	MR
First	RYAN
Middle	
Last	BAYLE
Suffix	
Credentials	
Title	ENVIRONMENTAL MANAGER
Enter new address or copy one from list:	
Mailing Address	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	6555 SIERRA DR

Routing (such as Mail Code, Dept., or Attn:)

City

IRVING

State

TX

ZIP

75039

Phone (###-###-####)

2148758294

Extension

Alternate Phone (###-###-####)

Fax (###-###-####)

E-mail

RYAN.BAYLE@LUMINANT.COM

Technical Contact

Person TCEQ should contact for questions about this application:

Same as another contact?

Organization Name

LUMINANT GENERATION COMPANY
LLC

Prefix

MR

First

DUSTIN

Middle

Last

MANTHEI

Suffix

Credentials

Title

ENVIRONMENTAL MANAGER

Enter new address or copy one from list:

Mailing Address

Address Type

Domestic

Mailing Address (include Suite or Bldg. here, if applicable)

6555 SIERRA DR

Routing (such as Mail Code, Dept., or Attn:)

City

IRVING

State

TX

ZIP

75039

Phone (###-###-####)

2142957334

Extension

Alternate Phone (###-###-####)

Fax (###-###-####)

E-mail

DUSTIN.MANTHEI@LUMINANT.COM

DMR Contact

**Person responsible for submitting Discharge Monitoring Report
Forms:**

Same as another contact?

Organization Name

LUMINANT GENERATION COMPANY
LLC

Prefix

First

JOSH

Middle

Last

WHITAKER

Suffix

Credentials

Title

DIRECTOR ENVIRONMENTAL

Enter new address or copy one from list:

Mailing Address:

Address Type

Domestic

Mailing Address (include Suite or Bldg. here, if applicable)

6555 SIERRA DR

Routing (such as Mail Code, Dept., or Attn:)

City

IRVING

State

TX

ZIP

75039

Phone (###-###-####)

2178758378

Extension

Alternate Phone (###-###-####)

Fax (###-###-####)

E-mail

JOSH.WHITAKE@LUMINANT.COM

Section 1# Permit Contact

Permit Contact#: 1

Person TCEQ should contact throughout the permit term.

1) Same as another contact?

Application Contact

2) Organization Name

LUMINANT GENERATION COMPANY
LLC

3) Prefix

MR

4) First

RYAN

5) Middle

6) Last

BAYLE

7) Suffix

8) Credentials

9) Title

ENVIRONMENTAL MANAGER

Mailing Address

10) Enter new address or copy one from list

11) Address Type	Domestic
11.1) Mailing Address (include Suite or Bldg. here, if applicable)	6555 SIERRA DR
11.2) Routing (such as Mail Code, Dept., or Attn:)	
11.3) City	IRVING
11.4) State	TX
11.5) ZIP	75039
12) Phone (###-###-####)	2148758294
13) Extension	
14) Alternate Phone (###-###-####)	
15) Fax (###-###-####)	
16) E-mail	RYAN.BAYLE@LUMINANT.COM

Section 2# Permit Contact

Permit Contact#: 2

Person TCEQ should contact throughout the permit term.

1) Same as another contact?	Technical Contact
2) Organization Name	LUMINANT GENERATION COMPANY LLC
3) Prefix	MR
4) First	DUSTIN
5) Middle	
6) Last	MANTHEI
7) Suffix	
8) Credentials	
9) Title	ENVIRONMENTAL MANAGER

Mailing Address

10) Enter new address or copy one from list

11) Address Type	Domestic
11.1) Mailing Address (include Suite or Bldg. here, if applicable)	6555 SIERRA DR
11.2) Routing (such as Mail Code, Dept., or Attn:)	
11.3) City	IRVING
11.4) State	TX
11.5) ZIP	75039
12) Phone (###-###-####)	2142957334
13) Extension	
14) Alternate Phone (###-###-####)	
15) Fax (###-###-####)	
16) E-mail	DUSTIN.MANTHEI@LUMINANT.COM

Owner Information

Owner of Treatment Facility

- | | |
|--|----------------------------|
| 1) Prefix | |
| 2) First and Last Name | |
| 3) Organization Name | COLETO CREEK POWER LLC |
| 4) Mailing Address | 6555 SIERRA DR |
| 5) City | IRVING |
| 6) State | TX |
| 7) Zip Code | 75039 |
| 8) Phone (###-###-####) | 2148758338 |
| 9) Extension | |
| 10) Email | RENEE.COLLINS@LUMINANT.COM |
| 11) What is ownership of the treatment facility? | Private |

Owner of Land (where treatment facility is or will be)

- | | |
|---|----------------------------|
| 12) Prefix | |
| 13) First and Last Name | |
| 14) Organization Name | COLETO CREEK POWER LLC |
| 15) Mailing Address | 6555 SIERRA DR |
| 16) City | IRVING |
| 17) State | TX |
| 18) Zip Code | 75039 |
| 19) Phone (###-###-####) | 2148758338 |
| 20) Extension | |
| 21) Email | RENEE.COLLINS@LUMINANT.COM |
| 22) Is the landowner the same person as the facility owner or co-applicant? | Yes |

General Information Renewal-Amendment

- | | |
|--|---------------------------------|
| 1) Current authorization expiration date: | 11/20/2028 |
| 2) Current Facility operational status: | Active |
| 3) Is the facility located on or does the treated effluent cross American Indian Land? | No |
| 4) What is the application type that you are seeking? | Major Amendment without Renewal |

4.1) Describe the proposed changes:

1-Add a new proposed internal Outfall 401 for the discharge of low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater 2-Add a new proposed Retention Pond to the list of impoundments in Other Requirement No. 17 and 3-Change the label for the Secondary Pond.

5) Current Authorization type:

Industrial Wastewater

5.1) What is your EPA facility classification?

Major

5.1.1) Select the applicable fee

Major Amendment - \$2,050

6) What is the classification for your authorization?

TPDES

6.1) What is the EPA Identification Number?

TX0070068

6.2) Is the wastewater treatment facility location in the existing permit accurate?

Yes

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

Yes

6.4) City nearest the outfall(s):

FANNIN

6.5) County where the outfalls are located:

GOLIAD|VICTORIA

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

No

6.7) Is the daily average discharge at your facility of 5 MGD or more?

Yes

6.7.1) Provide the names of all counties located within 100 statute miles downstream of the point(s) of discharge:

CALHOUN|GOLIAD|REFUGIO|VICTORIA

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

No

Public Notice Information

Individual Publishing the Notices

1) Prefix

MR

2) First and Last Name

RYAN BAYLE

3) Credential

4) Title

ENVIRONMENTAL MANAGER

5) Organization Name

LUMINANT GENERATION COMPANY LLC

6) Mailing Address

6555 SIERRA DR

7) Address Line 2

8) City

IRVING

9) State

TX

10) Zip Code

75039

11) Phone (###-###-####)

2148758294

12) Extension

13) Fax (###-###-####)

14) Email

RYAN.BAYLE@LUMINANT.COM

Contact person to be listed in the Notices

15) Prefix

MR

16) First and Last Name

RYAN BAYLE

17) Credential

18) Title

ENVIRONMENTAL MANAGER

19) Organization Name

LUMINANT GENERATION COMPANY
LLC

20) Phone (###-###-####)

2148758294

21) Fax (###-###-####)

22) Email

RYAN..BAYLE@LUMINANT.COM

Bilingual Notice Requirements

23) 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

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

No

23.2) Do the students at these schools attend a bilingual education program at another location?

Yes

23.3) 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)?

No

23.4) Which language is required by the bilingual program?

SPANISH

Section 1# Public Viewing Information**County#: 1**

1) County

GOLIAD

2) Public building name

GOLIAD COUNTY CLERK OFFICE

3) Location within the building

4) Physical Address of Building

127 N COURTHOUSE SQUARE

5) City

GOLIAD

6) Contact Name

7) Phone (###-###-####)

3616453294

8) Extension

9) Is the location open to the public?

Yes

County#: 2

1) County

VICTORIA

2) Public building name

VICTORIA COUNTY CLERK OFFICE

3) Location within the building

ROOM 103

4) Physical Address of Building	115 N BRIDGE ST
5) City	VICTORIA
6) Contact Name	
7) Phone (###-###-####)	3615751478
8) Extension	
9) Is the location open to the public?	Yes

Plain Language

1) Plain Language

[File Properties]

File Name	LANG_Attachment PLS-1 Plain Language Summary WQ0002159000 2025.pdf
Hash	42F81261323A1103BA0D96FADA5C19A609FB7D6C3C394991928DACE163ABB29A
MIME-Type	application/pdf

Supplemental Permit Information Form

1) Supplemental Permit Information Form (SPIF)

[File Properties]

File Name	SPIF_Attachment SPIF-1 WQ0002159000 Supplemental Permit Information Form 2025.pdf
Hash	1CFFFC7EA9EA3C430C60917B65290C8B999E14F772C79375EC00DA7DD1B411C7
MIME-Type	application/pdf

[File Properties]

File Name	SPIF_Attachment SPIF-2 WQ0002159000 USGS Maps.pdf
Hash	3334BFBCB22E346024D445891CCC3E5F09503C8BB4BC6357881A2507AD91DC44
MIME-Type	application/pdf

Industrial Attachments

1) Attach an 8.5"x11", reproduced portion of the most current and original USGS Topographic Quadrangle Map(s) that meets the 1:24,000 scale.

[File Properties]

File Name	MAP_Attachment A-2 WQ0002159000 USGS Maps.pdf
Hash	181BFDE149E64AF69279A09C5EEF1C1E65EDE08514D19127112767BD856671E6
MIME-Type	application/pdf

2) Public Involvement Plan (TCEQ Form 20960)

[File Properties]

File Name	PIP_Attachment PIP-1 Public Involvement Plan pg1 WQ0002159000 2025.pdf
Hash	15DF3C08024CBF3FDC9FDD7B973C313514C4EC94940C9F7DC373BA378A36E13A
MIME-Type	application/pdf

3) Administrative Report 1.1

[File Properties]

File Name	ARPT_WQ0002159000 TPDES Administrative Report 1-1 2025.pdf
Hash	57097109E23E1E88CE97B11E3F0A3ED1A6C742E3A89696A4F079BE9050793154
MIME-Type	application/pdf

4) I confirm that all required sections of Technical Report 1.0 are complete and will be included in the Technical Attachment.	Yes
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4.1) I confirm that Worksheet 4.0 (Receiving Waters) is complete and included in the Technical Attachment.	Yes
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4.2) Are you planning to include Worksheet 4.1 (Waterbody Physical Characteristics) in the Technical Attachment?	No
--	----

4.3) Are you planning to include Worksheet 6.0 (Industrial Waste Contribution) in the Technical Attachment?	No
---	----

4.4) Are you planning to include Worksheet 7.0 (Stormwater Discharges Associated with Industrial Activities) to the Technical Attachment?	No
---	----

4.5) Are you planning to include Worksheet 8.0 (Aquaculture) in the Technical Attachment?	No
---	----

4.6) Are you planning to include Worksheet 9.0 (Class V Injection Well Inventory/Authorization) in the Technical Attachment?	No
--	----

4.7) Are you planning to include Worksheet 10.0 (Quarries in the John Graves Scenic Riverway) in the Technical Attachment?	No
--	----

4.8) Are you planning to include Worksheet 11.0 (Cooling Water System Information) in the Technical Attachment?	No
---	----

4.9) Are you planning to include Worksheet 11.1 (Impingement Mortality) in the Technical Attachment?	No
--	----

4.10) Are you planning to include Worksheet 11.2 (Source Water Biological Data) in the Technical Attachment?	No
--	----

4.11) Are you planning to include Worksheet 11.3 (Entrainment) in the Technical Attachment?	No
---	----

4.12) Technical Attachment

[File Properties]

File Name	TECH_WQ0002159000 TPDES Amendment Technical Report 2025.pdf
Hash	810DDCE965940BDA16F2E97619B49C8510FD4A21CD7962C1917AFA8A6E026056

MIME-Type	application/pdf
5) Affected Landowners Map	
[File Properties]	
File Name	LANDMP_Attachment A-3-1 WQ0002159000 Landowner Map.pdf
Hash	24B85ABE99C02A9C528886E06EEA614AD66669EA7493691EA595E90F38CA3065
MIME-Type	application/pdf
6) Landowners Cross Reference List	
[File Properties]	
File Name	LANDCRL_Attachment A-3-2 WQ0002159000 Landowner List.pdf
Hash	F8ACA03E5C74B13123C9D1188B7CFE5338AFF42FB6F4F3B0385B275D12AA8044
MIME-Type	application/pdf
7) Landowner Avery Template	
[File Properties]	
File Name	LANDAT_Attachment A-3-3 WQ0002159000 Landowner Labels.docx
Hash	663BF8849BB4396A65FE764E55D795712EC939BA2629BF6232D3B6AC143E656B
MIME-Type	application/vnd.openxmlformats- officedocument.wordprocessingml.document
8) Flow Diagram	
[File Properties]	
File Name	FLDIA_WQ0002159000 Figure 2 Water Balance Flow Diagram 2025.pdf
Hash	033EC41962B966168093DE99DA47369125DD46AB6C661755E72A0F6470D427D8
MIME-Type	application/pdf
9) Site Drawing	
[File Properties]	
File Name	SITEDR_Attachment T-2 WQ0002159000 Site Arrangement Plot Plan.pdf
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MIME-Type	application/pdf
10) Original Photographs	
[File Properties]	
File Name	ORIGPH_Attachment A-1 WQ0002159000 Coletto Creek Outfall Photos 2025.pdf
Hash	1F92D72B9933C3975DB57A1E3B121F175EC5410556424DEEB00768A9D341A3C9

MIME-Type	application/pdf
11) Design Calculations	
[File Properties]	
File Name	DES_CAL_WQ0002159000 Table 1 Outfall Wastewaters.pdf
Hash	23838C7025D58351F7BF78CE8FCF73BC9BC4E5B5CDF85984A8C09B641B3855FE
MIME-Type	application/pdf
12) Solids Management Plan	
13) Water Balance	
[File Properties]	
File Name	WB_WQ0002159000 Figure 2 Water Balance Flow Diagram 2025.pdf
Hash	033EC41962B966168093DE99DA47369125DD46AB6C661755E72A0F6470D427D8
MIME-Type	application/pdf
14) Other Attachments	
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MIME-Type	application/pdf

Certification

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

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.

1. I am Renee A Collins, the owner of the STEERS account ER009906.
2. I have the authority to sign this data on behalf of the applicant named above.
3. I have personally examined the foregoing and am familiar with its content and the content of any attachments, and based upon my personal knowledge and/or inquiry of any individual responsible for information contained herein, that this information is true, accurate, and complete.
4. I further certify that I have not violated any term in my TCEQ STEERS participation agreement and that I have no reason to believe that the confidentiality or use of my password has been compromised at any time.
5. I understand that use of my password constitutes an electronic signature legally equivalent to my written signature.
6. I also understand that the attestations of fact contained herein pertain to the implementation, oversight and enforcement of a state and/or federal environmental program and must be true and complete to the best of my knowledge.
7. I am aware that criminal penalties may be imposed for statements or omissions that I know or have reason to believe are untrue or misleading.
8. I am knowingly and intentionally signing Update Domestic or Industrial Individual Permit WQ0002159000.
9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEQ.

OWNER Signature: Renee A Collins OWNER

Customer Number:	CN605521988
Legal Name:	Coleto Creek Power, LLC
Account Number:	ER009906
Signature IP Address:	136.226.100.207
Signature Date:	2025-06-04
Signature Hash:	F3CA92C838DEE2B58F45AD30B06BEDC348A2B2B85F06302E533C41C11BFC8597
Form Hash Code at time of Signature:	8CC02999D4A9E3F4F225220026CDA45AD409378761B7F0DB258F3FBA0D0795F8

Fee Payment

Transaction by:	The application fee payment transaction was made by ER002931/Ryan Bayle
Paid by:	The application fee was paid by RYAN BAYLE
Fee Amount:	\$2000.00
Paid Date:	The application fee was paid on 2025-06-05
Transaction/Voucher number:	The transaction number is 582EA000671159 and the voucher number is 769694

Submission

Reference Number:	The application reference number is 783775
Submitted by:	The application was submitted by ER002931/ Ryan Bayle
Submitted Timestamp:	The application was submitted on 2025-06-05 at 13:27:58 CDT
Submitted From:	The application was submitted from IP address 170.85.101.21
Confirmation Number:	The confirmation number is 657268
Steers Version:	The STEERS version is 6.91
Permit Number:	The permit number is WQ0002159000

Additional Information

Application Creator: This account was created by Dianna Kocurek

Coletto Creek Power, LLC
Coletto Creek Power Station
TPDES WQ0002159000 Amendment Application 2025

Application Contents

Administrative Report 1.0
Administrative Report 1.1
Technical Report 1.0
 Worksheet 1 Effluent Guidelines
 Worksheet 4 Receiving Waters

Attachments

Cross-reference to
Application Item

SPIF-1	Supplemental Permit Information Form (SPIF)	AR
SPIF-2	USGS Maps (7 sheets)	SPIF-7
PLS-1	Plain Language Summary	AR1.0-9.f
PIP-1	Public Information Plan	AR1.0-9.g
A-1	Outfall Photos	AR1.1-2
A-2	USGS Maps (7 sheets)	AR1.0-11.b
A-3-1	Landowner Maps (7 sheets)	AR1.1-1.a
A-3-2	Landowner List	AR1.1-1.c
A-3-3	Landowner Mailing Labels	AR1.1-1.b
T-0	Amendment Requests	TR-13
T-1	Facility Description	
	Table 1. Wastewater Sources by Outfall	TR-2.b, 4; W1-3
	Figure 1. Coletto Creek Reservoir Configuration	
	Figure 2. Water Balance Flow Diagram	TR-2.b
T-2	Site Arrangement Plot Plan	TR-1.d
T-3	Treatment Chemicals and SDSs	TR-5.b

Reference Key

AR1.x	Administrative Report
TR	Technical Report
SPIF	Supplemental Permit Information Form
W#	Worksheet #

INDUSTRIAL WASTEWATER PERMIT APPLICATION

ADMINISTRATIVE REPORT 1.1

The following information is required for new and amendment applications.

Item 1. Affected Landowner Information (Instructions, Page 35)

- a. Attach a landowner map or drawing, with scale, as applicable. Check the box next to each item to confirm it has been provided.
- ☒ 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 (e.g., irrigation area or subsurface drainfield site) and all evaporation/holding ponds within the applicant's property.
 - ☐ The property boundaries of all landowners surrounding the applicant's property boundaries where the effluent disposal site is located.
 - ☐ The boundaries of the sludge land application site (for land application of sewage sludge for beneficial use) and the property boundaries of landowners within one-quarter mile of 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 (e.g., sludge surface disposal site or sludge monofil) is located.
- Attachment: A-3-1 Landowner Map
- b. ☒ that the landowners list has also been provided as mailing labels in electronic format (Avery 5160). Attachment: A-3-3 Landowner Labels
- c. Check this box to confirm a separate list with the landowners' names and mailing addresses cross-referenced to the landowner's map has been provided. Provide the source of the landowners' names and mailing addresses: Attachment A-3-2 Landowner List (Goliad and Victoria Counties Appraisal Districts)

- 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): N/A

Item 2. Original Photographs (Instructions, Page 37)

Provide original ground level photographs. Check the box next to each of the following items to indicate it is included.

- ☐ 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.

Attachment: A-1 Outfall Photos



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

**SUMMARY OF APPLICATION IN PLAIN
LANGUAGE FOR TPDES OR TLAP PERMIT
APPLICATIONS****Summary of Application (in plain language) Template and
Instructions for Texas Pollutant Discharge Elimination System
(TPDES) and Texas Land Application (TLAP) Permit
Applications**

Applicants should use this template to develop a plain language summary of your facility and application as required by Title 30, Texas Administrative Code (30 TAC), Chapter 39, Subchapter H. You may modify the template as necessary to accurately describe your facility as long as the summary includes the following information: (1) the function of the proposed plant or facility; (2) the expected output of the proposed plant or facility; (3) the expected pollutants that may be emitted or discharged by the proposed plant or facility; and (4) how you will control those pollutants, so that the proposed plant will not have an adverse impact on human health or the environment.

If you are subject to the alternative language notice requirements in 30 TAC Section 39.426, **you must provide a translated copy of the completed plain language summary in the appropriate alternative language as part of your application package.** For your convenience, a Spanish template has been provided below.

**ENGLISH TEMPLATE FOR TPDES or TLAP NEW/RENEWAL/AMENDMENT APPLICATIONS
INDUSTRIAL WASTEWATER/STORMWATER**

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.

Coletto Creek Power, LLC (CN605521988) operates the Coletto Creek Power Station (RN100226919), with a total generating capacity of a nominal net 632 megawatts. The facility is located at 45 Farm-to-Market Road 2987 near the Town of Fannin, Goliad County, Texas 77960.

This application is to amend TPDES Permit No. WQ0002159000 to add proposed internal Outfall 401, to add a proposed retention pond, and to update the name of the Secondary Pond. Outfall 401 would discharge low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater. The facility currently has one final Outfall 001 and three internal outfalls (101, 201, 301), which discharge to the final outfall.

Outfall 001 is authorized to discharge a maximum average of 557 million gallons per day of once-through cooling water, treated domestic wastewater, ash transport water, low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater. Cooling water is withdrawn from Coletto Creek Reservoir. Treatment processes include oil/water separation and solids settling. Domestic wastewater is treated in an aerobic septic system with spray field.

The discharge from Outfall 001 is subject to federal effluent limitation guidelines at 40 CFR Part 423. The pollutants expected from these discharges include free available and total residual chlorine, total suspended solids, oil and grease, metals, pH, and temperature.

PLANTILLA EN ESPAÑOL PARA SOLICITUDES NUEVAS/RENOVACIONES/ENMIENDAS DE TPDES o TLAP**AGUAS RESIDUALES INDUSTRIALES /AGUAS PLUVIALES**

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.

Coletto Creek Power, LLC (CN605521988) opera la central eléctrica Coletto Creek (RN100226919), con una capacidad total de generación nominal neta de 632 megavatios. La instalación está ubicada en el 45 Farm-to-Market Road 2987, cerca de la localidad de Fannin, Condado de Goliad, Texas 77960.

Esta solicitud es para la modificación el permiso TPDES No. WQ0002159000 para añadir el Outfall interno 401 propuesto, añadir un estanque de retención propuesto y actualizar el nombre del estanque secundario. El Outfall 401 descargaría residuos de bajo volumen, residuos de limpieza de metales, escorrentía de pilas de carbón y aguas pluviales. La instalación tiene actualmente el Outfall final 001 y tres Outfalls internos (101, 201, 301), que descargan al Outfall final.

El Outfall 001 está autorizado a verter un promedio máximo de 557 millones de galones al día de agua de refrigeración de un solo paso, aguas residuales domésticas tratadas, agua de transporte de cenizas, residuos de bajo volumen, residuos de limpieza de metales, escorrentía de pilas de carbón y aguas pluviales. El agua de refrigeración se extrae del embalse de Coletto Creek. Los procesos de tratamiento incluyen la separación de aceite y agua y la sedimentación de sólidos. Las aguas residuales domésticas se tratan en un sistema séptico aeróbico con campo de aspersión.

El vertido del Outfall 001 está sujeto a las directrices federales de limitación de efluentes del título 40 del CFR, parte 423. Los contaminantes que se esperan de estos vertidos incluyen cloro libre disponible y residual total, sólidos suspendidos totales, aceites y grasas, metales, pH y temperatura.



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:

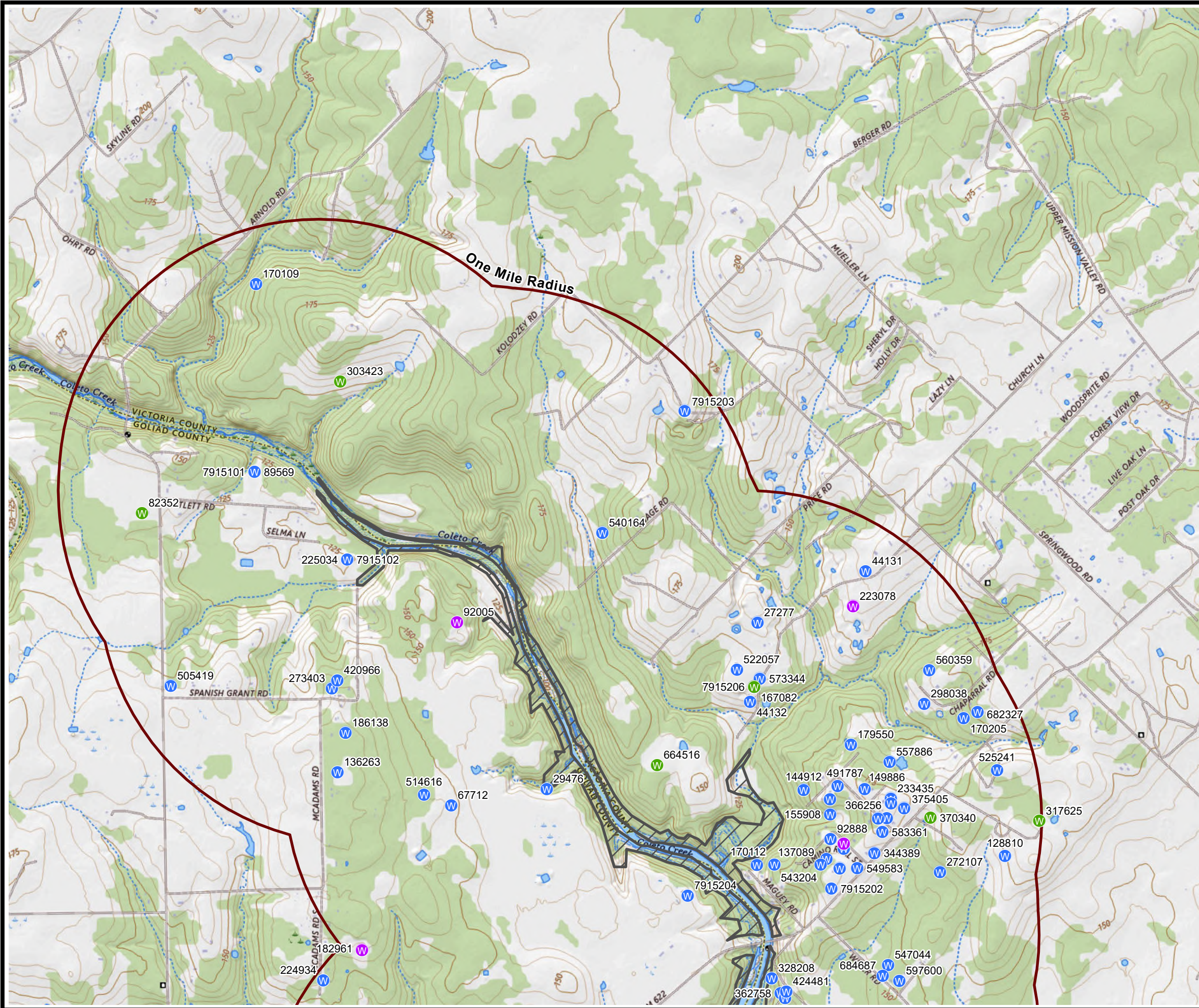
- Austin
- Dallas
- Fort Worth
- Houston
- San Antonio
- West Texas
- Texas Panhandle
- Along the Texas/Mexico Border
- Other geographical locations should be decided on a case-by-case basis

**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.

The activity does not meet all three of the above criteria.

J:\Prj\Coletto Creek\TPDES 2025\Coletto Creek GIS.aprx



LEGEND
 Coletto Creek Power, LLC Property Boundary
 One Mile Radius
TWDB Wells
 Domestic / Public Supply
 Industrial / Monitor
 Irrigation / Stock
 Plugged / Destroyed / Unused / Other
 Rig Supply / Test Well

MAP KEY
A small inset map showing the location of the main map area within a larger region. The main map area is highlighted with a red box and labeled with the number 1. Other numbered regions (2-7) are shown for context. A north arrow and a scale bar (0 to 2,000 feet) are also present.

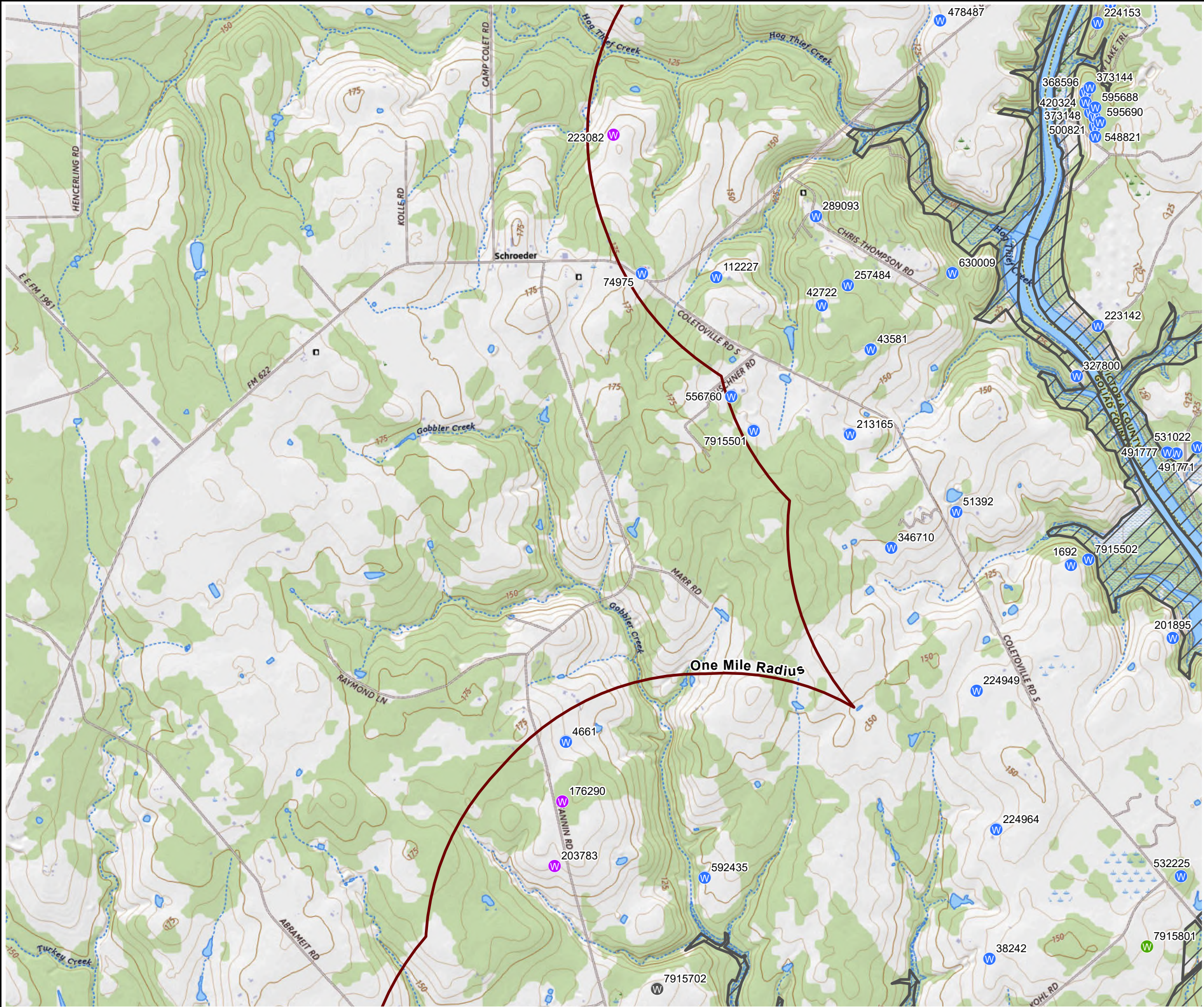
0 1,000 2,000 FEET
1" = 2,000 FEET
1:24,000

Sources:
1. TWDB Wells - Texas Water Development Board GIS Data, April 2025.
2. USGS Topographic Quadrangles 7.5 Minute Series: Schroeder, Fannin, & Hensley Lake, TX 2022

COLETO CREEK POWER, LLC FANNIN, TEXAS WQ0002159000			
USGS MAP FIGURE 1 OF 7			
DRAWN BY:	S WILSON	SCALE:	TPDES 2025
CHECKED BY:	D KOCUREK	AS NOTED	USGS Map
APPROVED BY:	D KOCUREK	DATE PRINTED:	
DATE:	May 2025	5/19/2025	

your mapping professional

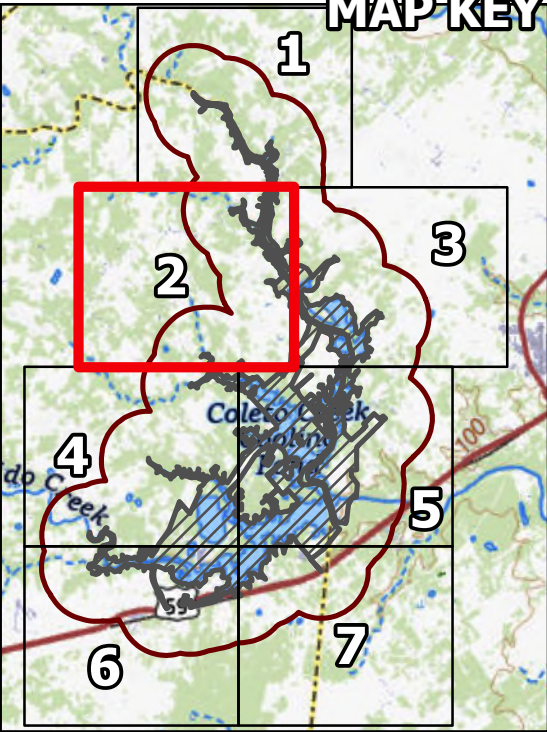
www.SiteMapLLC.com
Ph. 409-998-1834
Ph. 409-738-2133



LEGEND

- Coletto Creek Power, LLC Property Boundary
- One Mile Radius
- TWDB Wells**
 - Domestic / Public Supply
 - Industrial / Monitor
 - Irrigation / Stock
 - Plugged / Destroyed / Unused / Other
 - Rig Supply / Test Well

MAP KEY



0 1,000 2,000
FEET
1" = 2,000 FEET
1:24,000

Sources:
1. TWDB Wells - Texas Water Development Board GIS Data, April 2025.
2. USGS Topographic Quadrangles 7.5 Minute Series: Schroeder, Fannin, & Hensley Lake, TX 2022

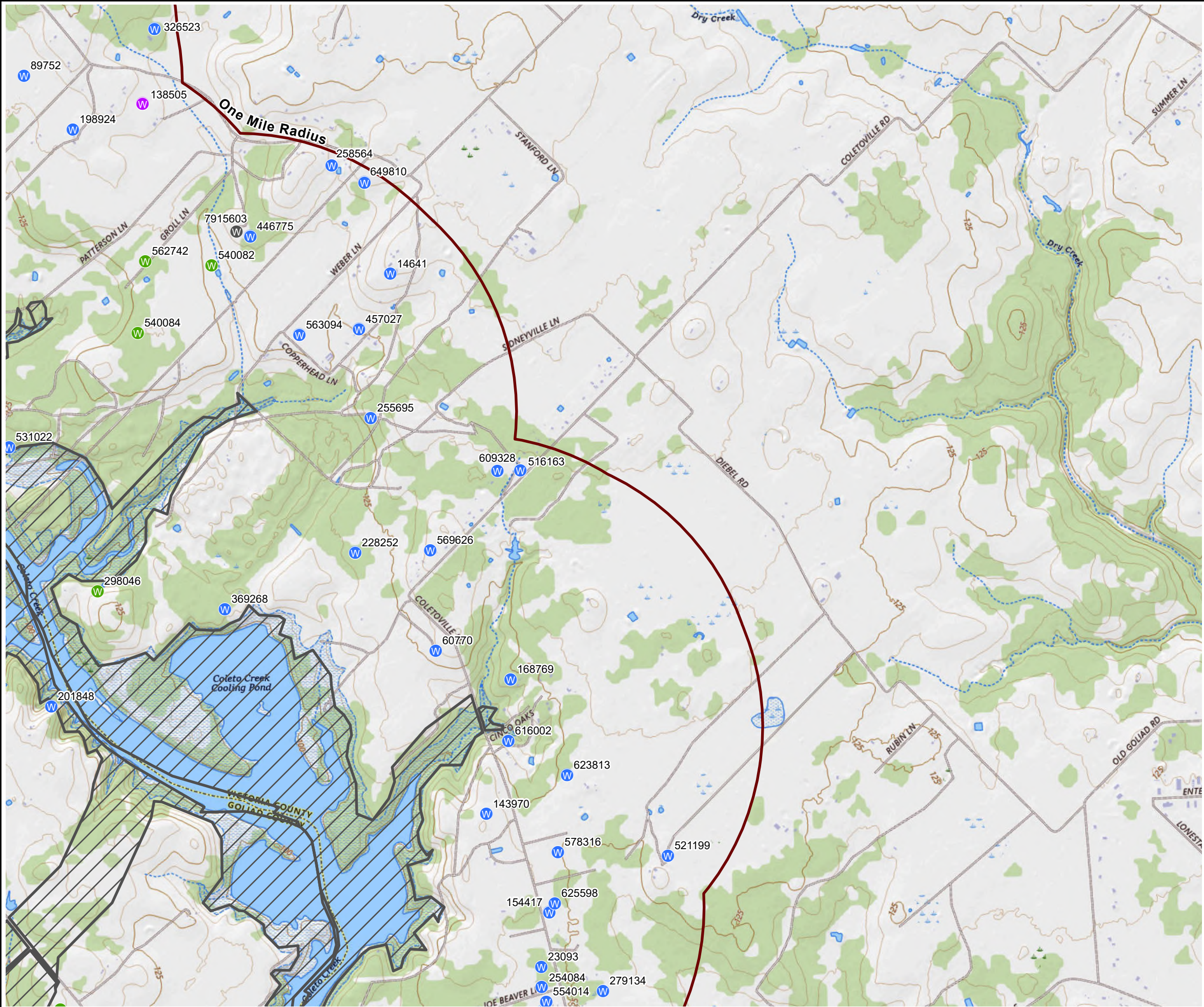
COLETO CREEK POWER, LLC
FANNIN, TEXAS
WQ0002159000

USGS MAP
FIGURE 2 OF 7

DRAWN BY:	S WILSON	SCALE:	TPDES 2025
CHECKED BY:	D KOCUREK	AS NOTED	USGS Map
APPROVED BY:	D KOCUREK	DATE PRINTED:	
DATE:	May 2025	5/19/2025	



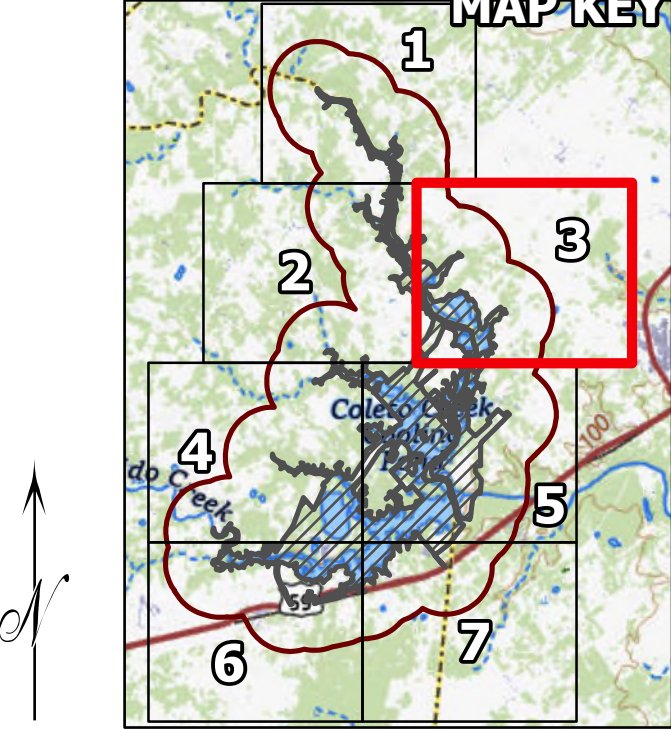
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Ph. 409-738-2133



LEGEND

- Coletto Creek Power, LLC Property Boundary
- One Mile Radius
- TWDB Wells
 - Domestic / Public Supply
 - Industrial / Monitor
 - Irrigation / Stock
 - Plugged / Destroyed / Unused / Other
 - Rig Supply / Test Well

MAP KEY



0 1,000 2,000 FEET
1" = 2,000 FEET
1:24,000

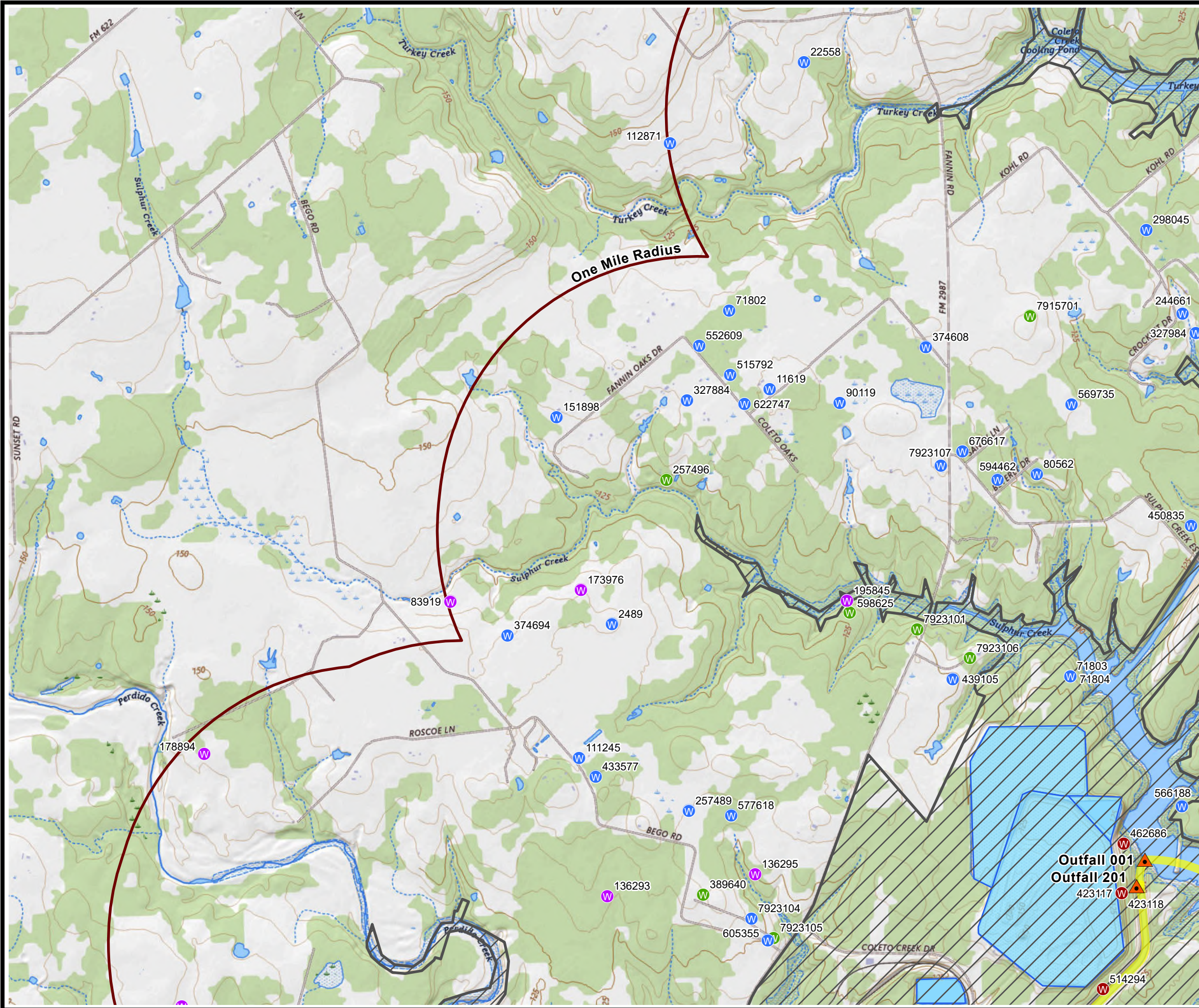
Sources:
1. TWDB Wells - Texas Water Development Board GIS Data, April 2025.
2. USGS Topographic Quadrangles 7.5 Minute Series: Schroeder, Fannin, & Hensley Lake, TX 2022

COLETO CREEK POWER, LLC FANNIN, TEXAS WQ0002159000			
USGS MAP FIGURE 3 OF 7			
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CHECKED BY:	D KOCUREK	AS NOTED	USGS Map
APPROVED BY:	D KOCUREK	DATE PRINTED:	
DATE:	May 2025	5/19/2025	



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Ph. 409-738-2133

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LEGEND
 Coletto Creek Power, LLC Property Boundary
 Ponds
 Outfall Location
 Discharge Route
 One Mile Radius
TWDB Wells
 Domestic / Public Supply
 Industrial / Monitor
 Irrigation / Stock
 Plugged / Destroyed / Unused / Other
 Rig Supply / Test Well

MAP KEY

0 1,000 2,000 FEET
1" = 2,000 FEET
1:24,000
Sources:
1. TWDB Wells - Texas Water Development Board GIS Data, April 2025.
2. USGS Topographic Quadrangles 7.5 Minute Series: Schroeder, Fannin, & Hensley Lake, TX 2022

COLETO CREEK POWER, LLC
FANNIN, TEXAS
WQ0002159000

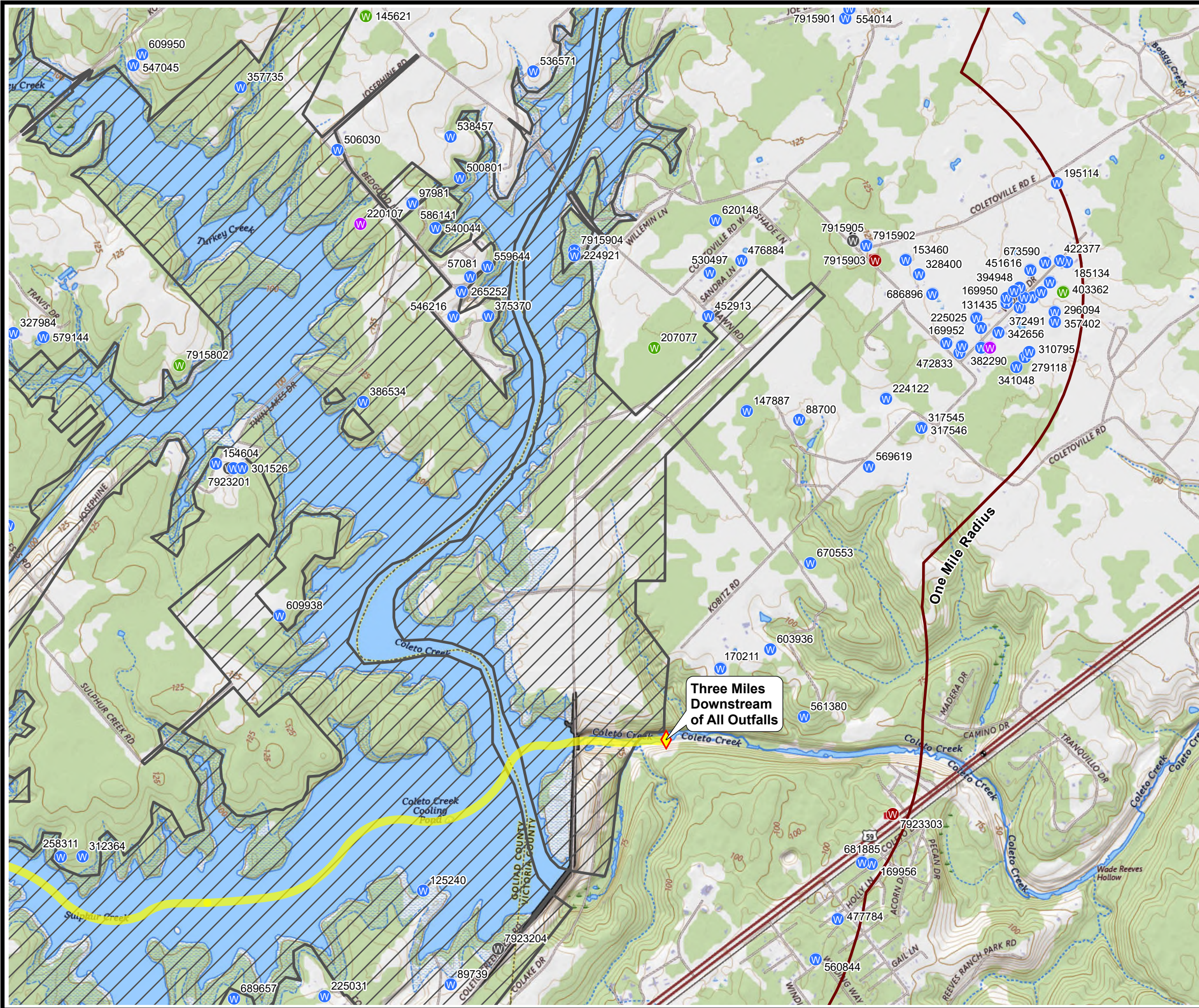
USGS MAP
FIGURE 4 OF 7

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CHECKED BY:	D KOCUREK	AS NOTED	USGS Map
APPROVED BY:	D KOCUREK	DATE PRINTED:	
DATE:	May 2025	5/19/2025	

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Ph. 409-998-1834
Ph. 409-738-2133

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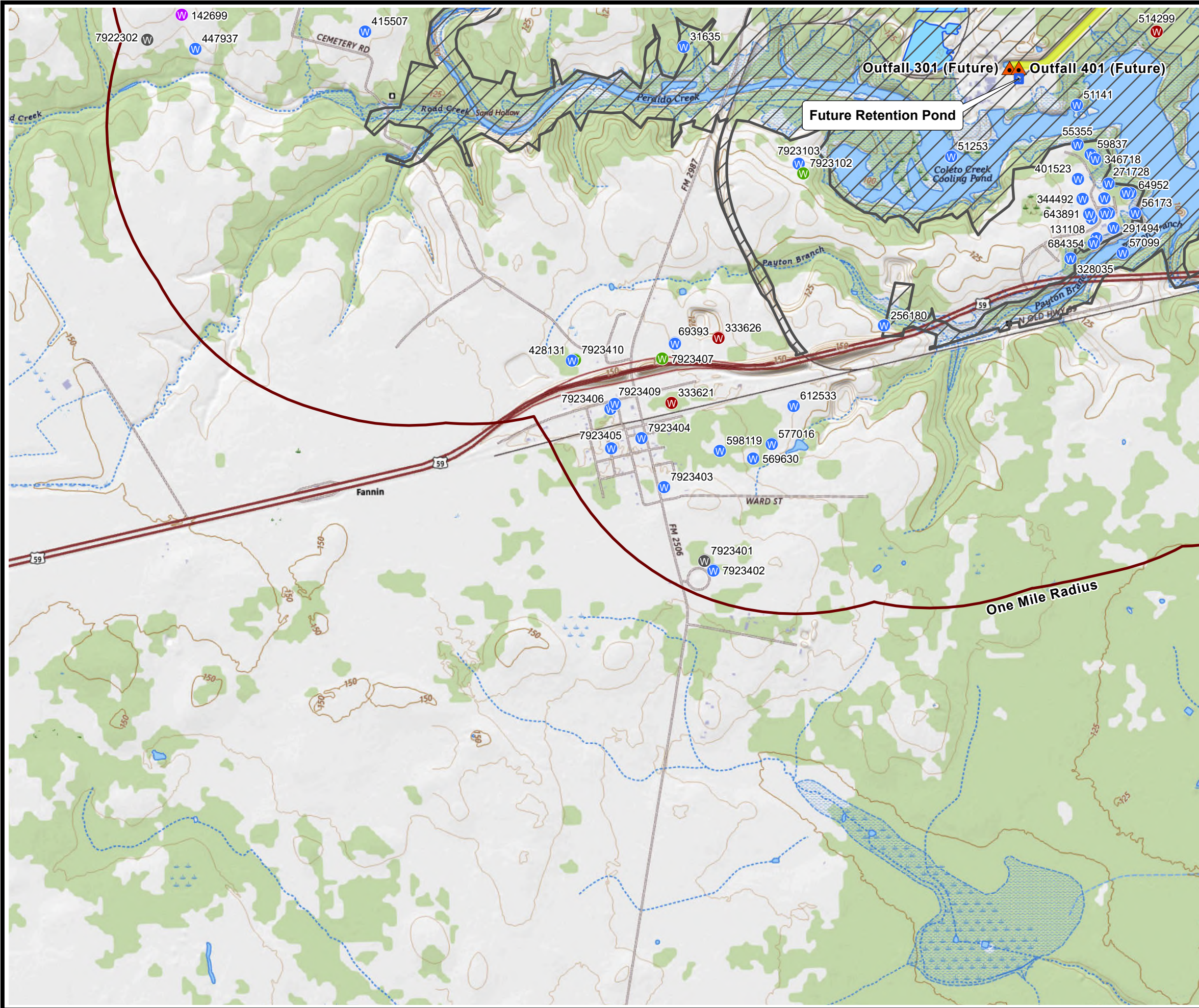
LEGEND
 Coletto Creek Power, LLC Property Boundary
 Discharge Route
 Downstream Marker
 One Mile Radius
TWDB Wells
 Domestic / Public Supply
 Industrial / Monitor
 Irrigation / Stock
 Plugged / Destroyed / Unused / Other
 Rig Supply / Test Well

MAP KEY

0 1,000 2,000 FEET
1" = 2,000 FEET
1:24,000
Sources:
1. TWDB Wells - Texas Water Development Board GIS Data, April 2025.
2. USGS Topographic Quadrangles 7.5 Minute Series: Schroeder, Fannin, & Hensley Lake, TX 2022

COLETO CREEK POWER, LLC FANNIN, TEXAS WQ0002159000			
USGS MAP FIGURE 5 OF 7			
DRAWN BY:	S WILSON	SCALE:	PROJ. NO. TPDES 2025
CHECKED BY:	D KOCUREK	AS NOTED	USGS Map
APPROVED BY:	D KOCUREK	DATE PRINTED:	
DATE:	May 2025	5/19/2025	
		www.SiteMapLLC.com Ph. 409-998-1834 Ph. 409-738-2133	

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LEGEND

- Coletto Creek Power, LLC Property Boundary
- Future Retention Pond
- Ponds
- Outfall Location
- Discharge Route
- One Mile Radius

TWDB Wells

- Domestic / Public Supply
- Industrial / Monitor
- Irrigation / Stock
- Plugged / Destroyed / Unused / Other
- Rig Supply / Test Well

MAP KEY

The map key shows a grid of 7 numbered areas (1-7) with a red box highlighting area 6. A north arrow and a scale bar (0 to 2,000 feet) are also present.

0 1,000 2,000 FEET

1" = 2,000 FEET
1:24,000

Sources:
1. TWDB Wells - Texas Water Development Board GIS Data, April 2025.
2. USGS Topographic Quadrangles 7.5 Minute Series: Schroeder, Fannin, & Hensley Lake, TX 2022

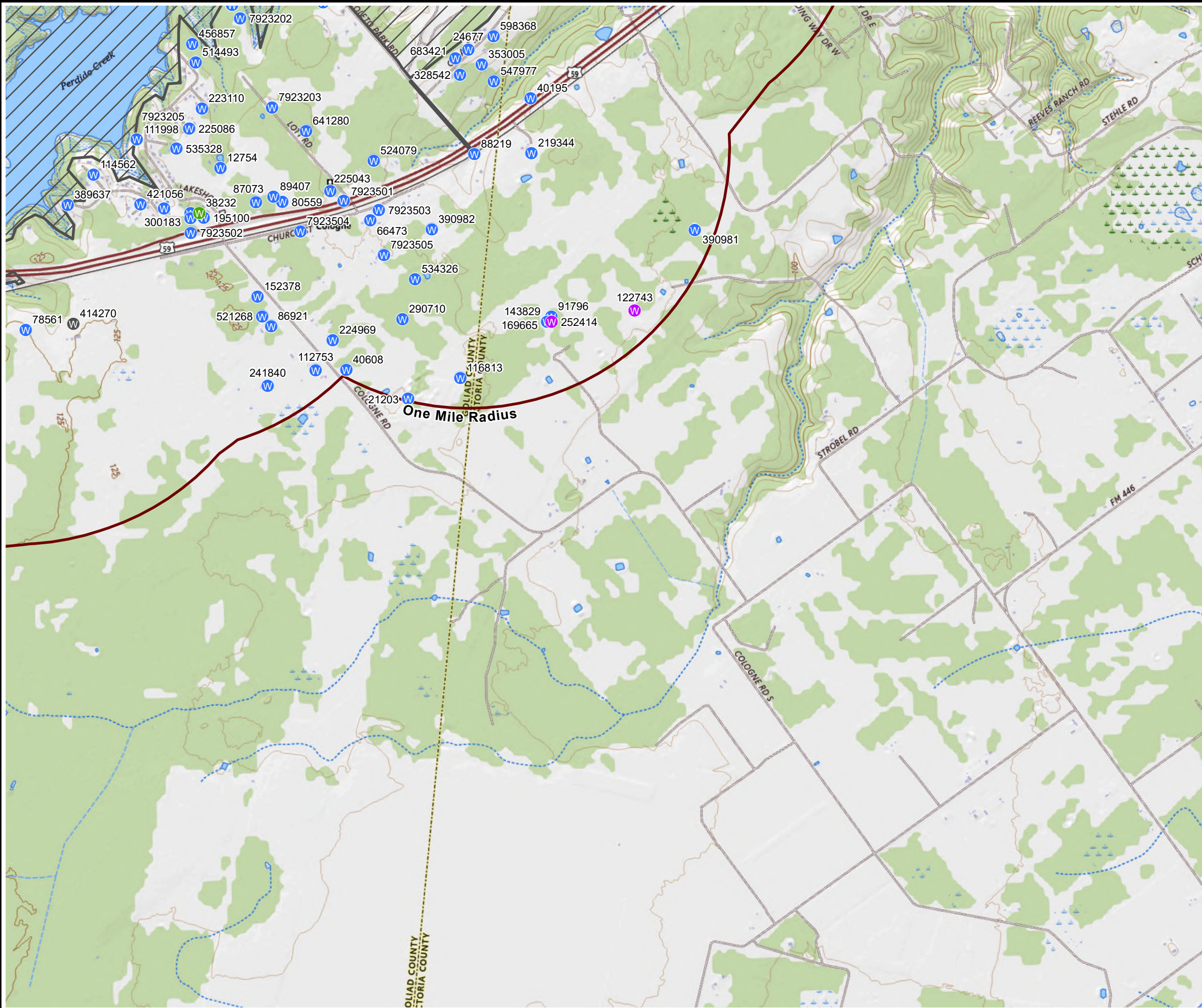
COLETO CREEK POWER, LLC
FANNIN, TEXAS
WQ0002159000

USGS MAP
FIGURE 6 OF 7

DRAWN BY:	S WILSON	SCALE:	AS NOTED	PROJ. NO.	TPDES 2025
CHECKED BY:	D KOCUREK	DATE PRINTED:	5/19/2025	USGS Map	
APPROVED BY:	D KOCUREK				
DATE:	May 2025				

sitemap
your mapping professional

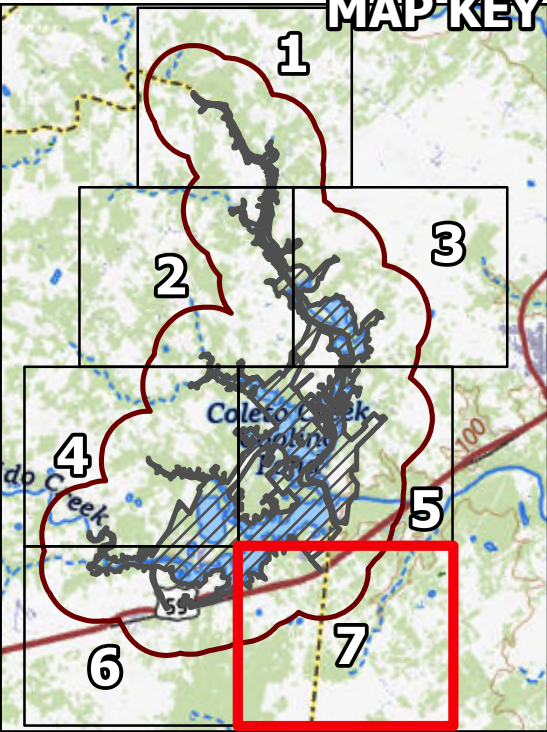
www.SiteMapLLC.com
Ph. 409-998-1834
Ph. 409-738-2133



LEGEND

- Coletto Creek Power, LLC Property Boundary
- One Mile Radius
- TWDB Wells**
 - Domestic / Public Supply
 - Industrial / Monitor
 - Irrigation / Stock
 - Plugged / Destroyed / Unused / Other
 - Rig Supply / Test Well

MAP KEY



0 1,000 2,000
FEET
1" = 2,000 FEET
1:24,000

Sources:
1. TWDB Wells - Texas Water Development Board GIS Data, April 2025.
2. USGS Topographic Quadrangles 7.5 Minute Series: Schroeder, Fannin, & Hensley Lake, TX 2022

COLETO CREEK POWER, LLC
FANNIN, TEXAS
WQ0002159000

USGS MAP
FIGURE 7 OF 7

DRAWN BY:	S WILSON	SCALE:	PROJ. NO.	TPDES 2025
CHECKED BY:	D KOCUREK	AS NOTED	USGS Map	
APPROVED BY:	D KOCUREK	DATE PRINTED:		
DATE:	May 2025	5/19/2025		



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Ph. 409-998-1834
Ph. 409-738-2133

ATTACHMENT A-3-2
Landowner List
Coletto Creek Power Station
WQ0002159000

MAP ID	OWNER NAME	ADDRESS	CITY	STATE	ZIP CODE
1	ANAYA SUSIE ANNA (STARNES)	64 SPRING RIDGE	VICTORIA	TX	77904
2	ASKEW JENELL KOLLE	4517 TRIANGLE AVE APT 502	AUSTIN	TX	78751
3	AWALT LISA	81 SANDRA LN	VICTORIA	TX	77905
4	BAGWELL JOHN D & LINDA M	P O BOX 5114	VICTORIA	TX	77903
5	BARCLAY HAL JR & JUDY	1593 HOWARD LN	VICTORIA	TX	77905
6	BECK ROBIN ETAL	901 WEBER LN	VICTORIA	TX	77905
7	BERGER JAMES J	PO BOX 856	PORT OCONNOR	TX	77982
8	BERNHARD MATTHEW	258 CINCO OAKS	VICTORIA	TX	77905
9	BIEDIGER ALFRED O III	3499 WEBER RD	VICTORIA	TX	77905-3135
10	BONE JO ANN P	199 SHADE LN	VICTORIA	TX	77905
11	BRAGG MELANIE J & WILLEMIN DAVID W	384 ALOE RD	VICTORIA	TX	77905
12	BROWN PATTI KOBITZ	1709 BENEDICT CT	ROWLETT	TX	75088
13	BRUNS MARGARET GAY	11638 FM 622	GOLIAD	TX	77963
14	BURES TODD ANTHONY JR & HANNAH LEIGH MITCHELL	15 SANDRA LANE	VICTORIA	TX	77905
15	BURRIS DONALD L	905 COLAKE DR	VICTORIA	TX	77905-4001
16	CHARLES EDWARD J JR & KIMBERLY DRAKE	21 MAGUEY	VICTORIA	TX	77905-3114
17	CHRISTOPHER PAUL WAYNE	157 SHADE LN	VICTORIA	TX	77905
18	CLEMMONS ANDREW CHARLES	900 OSAGE RD	VICTORIA	TX	77905-2593
19	COLETO LAKE ESTATES HOMEOWNERS ASSOCIATION INC	443 WATERS EDGE DR	VICTORIA	TX	77905-3182
20	COLLINS AMANDA BEDGOOD & SHANE WELSEY COLLINS	102 TURTLE ROCK DR	VICTORIA	TX	77904
21	DANIEL JON HARVEY JR & STEPHANIE ANN	908 WEST LAKE TRAIL	VICTORIA	TX	77905
22	DE ATLEY CAROL MAREK	104 WHISPERING CREEK	VICTORIA	TX	77904
23	DIEBEL LOUIS C	3497 WEBER RD	VICTORIA	TX	77905
24	DIETZEL BARBARA ANN LEMKE	3484 COLETOVILLE RD EAST	VICTORIA	TX	77905
25	DIETZEL DENNIS D & DEE	1053 COLLETOVILLE RD W	VICTORIA	TX	77905
26	DIETZEL GLENN HARVEY FAMILY TRUST	3484 COLETOVILLE RD E	VICTORIA	TX	77905
27	FAREK HENRIETTA DIETZEL & HAROLD (LIFE ESTATE)	2620 WEBER RD	VICTORIA	TX	77905
28	FOSS BRAD & MYLES MCLEAN	4436 COLETOVILLE RD	VICTORIA	TX	77905
29	FOSS YVONNE (LIFE ESTATE)	4278 COLETOVILLE RD	VICTORIA	TX	77905
30	FOTIADES STEPHEN M JR & RHONDA F	57 MAGUEY	VICTORIA	TX	77905-3114
31	FRANK WILLIAM E & GAIL & JAMES R CREEKMORE JR	1595 HOWARD LN	VICTORIA	TX	77905
32	FRANKE KODY RYAN	PO BOX 111	BLOOMINGTON	TX	77951
33	FREEMAN STANLEY M	6422 WINTHROP TERRACE TRL	KATY	TX	77493
34	GETSCHMANN RUSSELL	283 MAGUEY	VICTORIA	TX	77905
35	GISLER CURTIS JAMES	810 PRICE RD	VICTORIA	TX	77905
36	GREEN BETTY FAYE	799 SUNSET RD	GOLIAD	TX	77963
37	GUERRA BARBARA	41 SANDRA LN	VICTORIA	TX	77905
38	HARTMAN MADELENE	78 S MAGNOLIA POND	THE WOODLANDS	TX	77381
39	HERBOLD ERIC & SAMANTHA K	932 WESTLAKE TRAIL	VICTORIA	TX	77905
40	HODGKINSON RYAN	304 E HILLER ST	VICTORIA	TX	77901
41	JANAK BRENDA	9539 KINDLETREE DR	HOUSTON	TX	77040
42	JANYSEK JERRETT LYNN & CHARA LEIAN	1131 COUNTY RD 352	KARNES CITY	TX	78118
43	JANYSEK TIMOTHY RAY	1387 HOWARD LANE	VICTORIA	TX	77905
44	JOCHETZ SHANE & SHELBY	268 MAGUEY DR	VICTORIA	TX	77905
45	JOHNSON LYNETTE	428 BRADY RD	INEZ	TX	77968-3001
46	JOHNSTON JOSEPH ROSCOE	1133 WEBER LN	VICTORIA	TX	77905-3125
47	JORDAN BRYAN COLLINS	3918 COLETOVILLE RD	VICTORIA	TX	77905
48	JORDAN NICOLE & BRANDON	3922 COLETOVILLE RD	VICTORIA	TX	77905
49	KATCH KEITH & CYNTHIA	961 OSAGE RD	VICTORIA	TX	77905
50	KOLLE DENNIS RAY & LAURIE ANN & INNOCENTI LORI KOLLE	3928 OLD GOLIAD RD	VICTORIA	TX	77905
51	KUECKER L P & G M REVOC TRUST	930 PRICE ROAD	VICTORIA	TX	77905
52	KUECKER SIDNEY M & BECKY J	645 HUNTERS CIR	VICTORIA	TX	77905-9854
53	LAGAL KAY M GISLER & CAROL A GISLER WATKINS	807 BERGER RD	VICTORIA	TX	77905
54	LEMKE KENNETH ALLEN	3417 COLLETOVILLE RD E	VICTORIA	TX	77905
55	MAREK WARREN LEE & TRACY LYNN HALLAM	149 SANDRA LN	VICTORIA	TX	77905
56	MAYES REX & MARY	320 MAGUEY	VICTORIA	TX	77905
57	MC GINNIS CHERYL G	924 PRICE RD	VICTORIA	TX	77905
58	MENDOZA ERNESTO JR & MARY ANN	189 SANDRA LN	VICTORIA	TX	77905
59	MOODY BROCK L & AMANDA L	213 CHARLESTON DR	VICTORIA	TX	77904
60	MOWDY HAL & LENORA	866 WESTLAKE TRL	VICTORIA	TX	77905
61	NRKRUE L L C	304 SALEM CROSSING DR	VICTORIA	TX	77904
62	PANTEL STANLEY RAY & MARK A	4396 LEDGESTONE TR	COLLEGE STATION	TX	77845
63	PATTERSON PATRICK DOWE TRUSTEE	120 PATTERSON LN	VICTORIA	TX	77905
64	PIERCE CAROLYN MARIE & JEFFREY W	316 CAMINO REAL ST	VICTORIA	TX	77905
65	RAMIREZ LIBRADA L	4605 E NORTH	VICTORIA	TX	77901
66	RAYBON WALTER L & PAMELA K	229 MAGUEY	VICTORIA	TX	77905
67	RIEMENSCHNEIDER NEAL & URSULA	126 WATERS EDGE	VICTORIA	TX	77905
68	RYAN MICHAEL W & CONNIE S	812 WESTLAKE TRL	VICTORIA	TX	77905-2123
69	SAGER NORREAN	2248 FM 3157	CUERO	TX	77954-6646
70	SANDHOP AUGUSTA H ESTATE	608 N WELLS	EDNA	TX	77957
71	SEALE ROBERT A SPEND THRIFT TRUST	1598 KOLODZEY RD	VICTORIA	TX	77905
72	SEALS KENNETH P & CAROLYN A	315 MAGUEY	VICTORIA	TX	77905
73	SEWALT STEVEN L & SHERYL D	PO BOX 2183	VICTORIA	TX	77902
74	SHUTTER KENNETH ROBERT	702 TEXAS STAR DR	RICHMOND	TX	77469
75	SHUTTER STEPHEN EDWARD	120 KOBITZ RD	VICTORIA	TX	77905
76	SMITH KATIE L & WILLIAM J	95 DAWN DR	VICTORIA	TX	77905
77	STANFORD FRED & PATRICE	PO BOX 4583	VICTORIA	TX	77903
78	STAVINOHA MICHAEL L & JAMIE L B	379 CAMINO REAL	VICTORIA	TX	77905-3149
79	THORN LYNDA & RICHARD GALLARDO	80 WATERS EDGE DR	VICTORIA	TX	77905-3290
80	TOTAH JOSEPH L ETAL	2180 W VINEYARD ST #112	WAILUKU	HI	96793
81	TUCKER JAMES BRADLEY & KIMBERLY JANE	834 WEST LAKE TRAIL	VICTORIA	TX	77905
82	VERRET NELSON & SABRINA	195 SANDRA LN	VICTORIA	TX	77905

ATTACHMENT A-3-2
Landowner List
Coletto Creek Power Station
WQ0002159000

MAP ID	OWNER NAME	ADDRESS	CITY	STATE	ZIP CODE
83	WALDORFF CONNIE	3489 WEBER RD	VICTORIA	TX	77905
84	WALK EMMA 2007 TRUST	388 HARTNELL ROAD	SANTA MARIA	CA	93455
85	WARTSBAUGH GEORGE CHARLES JR & ALISON	22 WATERS EDGE	VICTORIA	TX	77905
86	WENDEL HALLEY B & JANE B	83 MAGUEY	VICTORIA	TX	77905
87	WEST D A	443 WATERS EDGE DR	VICTORIA	TX	77905-3182
88	WIELAND DON RAY & SUSAN	3010 FM 240	YORKTOWN	TX	78164
89	WILLEMEN CHARLES F JR ETAL	924 WILLEMEN LN	VICTORIA	TX	77905
90	WOODALL CHARLES GEORGE & JANET (LIFE ESTATE)	192 WESTLAKE TRAIL	VICTORIA	TX	77905
91	WOYTASCZYK GAIL	806 PRICE RD	VICTORIA	TX	77905
92	ZANDONATTI MARLIES & HILARY A ZANSONATTI	1411 KOBITZ RD	VICTORIA	TX	77905
93	ZAPLAC CHARLES W & NANCY	886-A OSAGE RD	VICTORIA	TX	77905-2521
94	AJRAMI ABED	181 BURES RD	VICTORIA	TX	77905
95	ALBRECHT DEAN EDWARD	728 COLETO PARK RD	VICTORIA	TX	77905
96	ANDREWS DAVID & DEBRA	1002 SCENIC LOOP DR	GOLIAD	TX	77963
97	ANGER JOHN PAUL & LISA B	P O DRAWER A	VICTORIA	TX	77902
98	ANGERSTEIN PAUL & CRISTINA GALLEGOS	1149 SPANISH GRANT RD	GOLIAD	TX	77963
99	ARCHER DAVID G. & DEBRA K. LIFE ESTATE & AARON D ARCHER ETAL	281 TWIN LAKE DRIVE	VICTORIA	TX	77905
100	BAKER MATTHEW & MEGAN	953 BEDGOOD LN	VICTORIA	TX	77905
101	BARFIELD ALANA S	P O BOX 187	FANNIN	TX	77960
102	BARFIELD FRANK TODD III	P O BOX 1015	COLUMBUS	TX	78934
103	BARKER BLAINE F II ET UX	1235 NORTH LOOP WEST, SUITE 205	HOUSTON	TX	77008
104	BARNETT MICHAEL & CATHY	274 LAKEVIEW	VICTORIA	TX	77905
105	BARNETT MICHAEL K ET UX	274 LAKEVIEW DR	VICTORIA	TX	77905
106	BARRETT CARL W ET UX	2 CARRINGTON COURT	BAY CITY	TX	77414
107	BELK JEREMY & LAUREN	355 PERDIDO POINT CIRCLE	VICTORIA	TX	77905
108	BERAN WAYNE B ET UX	562 LAKESHORE DR	VICTORIA	TX	77905
109	BEYER CHRISTINE	669 COUNTY ROAD 422	D.HANIF	TX	78850
110	BLAIN ROBERT L ET UX	640 LAKESHORE DR	VICTORIA	TX	77905
111	BOUCHER BRENDA SUE	504 BARTLETT	VICTORIA	TX	77905
112	BOYD CHARLES R	340 LAKEVIEW DR	VICTORIA	TX	77905
113	BRANDL RICHARD JR & STACEY	859 LAKESHORE DRIVE	VICTORIA	TX	77905
114	BRITTEN DEBRA ANNE	3096 PETERSON WAY	BRYAN	TX	77802
115	BROWN ERIC K & LAURA RENEE	345 LAKEVIEW DRIVE	VICTORIA	TX	77905
116	BROWN SUSAN WITTE & JAN WITTE MULLE	10819 SHELL CREEK CT	HOUSTON	TX	77345
117	BRUNS GAY L	185 LAKEVIEW DR	VICTORIA	TX	77905
118	BUHLER LISA & JOSEPH	327 COLETO PARK RD	VICTORIA	TX	77905
119	BURNETT ROBERT G & CAROL	1974 STATE HIGHWAY 119	GOLIAD	TX	77963
120	CARAWAY JAMES E ET UX	334 LAKESHORE DR	VICTORIA	TX	77905
121	CAREY DANIEL L & LEE A	636 BARLETT RD	VICTORIA	TX	77905
122	CAWTHON ELISABETH ALBRECHT	7236 SPANISH GRANT	GALVESTON	TX	77554
123	CHAPA CARLOS V & ERMELINDA	65 PERDIDO OAK DR	VICTORIA	TX	77905
124	CHILDRESS TERESA	768 LAKESHORE DR	VICTORIA	TX	77905
125	CHOVANEC MARK A & LISA	277 LAKEVIEW DR	VICTORIA	TX	77905
126	COLES ARTHUR RAY JR & DONNA	P O BOX 51	FANNIN	TX	77960
127	COLETO LAKE RV LLC	9454 WILSHIRE BLVD PENTHOUSE	BEVERLY HILLS	CA	90212
128	COPE RUBY PIEPER	3753 COLETOVILLE RD SOUTH	VICTORIA	TX	77905
129	COUNCIL JOSHUA LOREN	613 N SAN PATRICIO	GOLIAD	TX	77963
130	COURVILLE SCOTT W & DANIELLE M	448 TRAVIS	VICTORIA	TX	77905
131	DAVIS KEVIN B & KIMBERLY	699 BEDGOOD LN	VICTORIA	TX	77905
132	DAY DUSTIN C & JANET DENISE	2409 TWIN OAKS DR	PORTLAND	TX	78374
133	DERMODY LINDA	3353 FM 2987	VICTORIA	TX	77905
134	DIETZEL GLENN HARVEY FAMILY TRUST	3484 COLATOVILLE RD E	VICTORIA	TX	77905
135	DIETZEL JEFFREY PAUL	402 PAISANO DR	VICTORIA	TX	77904
136	DIETZEL MILTON RAWLEY JR	955 BAYMEADOW DR	PORT LAVACA	TX	77979
137	DIETZEL RUBY M	5572 HANSELMAN RD	VICTORIA	TX	77905
138	DODDS MICHAEL M & JESSICA L	107 TWIN LAKES CIR	VICTORIA	TX	77905
139	DUPREE BRYAN K & VIKKI L	72 PERDIDO CT	VICTORIA	TX	77905
140	EDWARDS GARY & CHARLENE	662 LAKESHORE DR	VICTORIA	TX	77905
141	EVANS DAN LEE	352 LAKESHORE DR	VICTORIA	TX	77905
142	FOSTER WILLIAM C	2616 FLAGSTICK DRIVE	MATHEWS	NC	28104
143	FRANKE KELLY K & BETTY L	889 CR 224	KARNES CITY	TX	78118
144	FRIEDRICHS RICK G & CAROL E	22349 MUESCHKE	TOMBALL	TX	77377
145	GALVEZ SERGIO A & GUADALUPE C	209 KINGWOOD FOREST DR	VICTORIA	TX	77904
146	GAMBLIN DEBORAH B	P O BOX 768	GOLIAD	TX	77960
147	GARDNER ROBERT J & RENEE M LF EST	129 COLETO PARK RD	VICTORIA	TX	77905
148	GARRISON RODNEY & CAROLYN	3522 ARBOR	HOUSTON	TX	77004
149	GIBBS STEPHEN B & CARLEE H	53 TWIN LAKE DRIVE	VICTORIA	TX	77905
150	GOHMERT JOHN LLOYD ET UX	840 LAKESHORE DR	VICTORIA	TX	77905
151	GOLDEN GRADY	1177 BEDGOOD LN	VICTORIA	TX	77905
152	GOLDEN JULIANNE	4513 HEBERT LANE	CORPUS CHRISTI	TX	78413
153	GORDON GEORGE E FAM TR UTA ET AL	3110 BRIAR COURT	SUGARLAND	TX	77478
154	GORDON/BIGHAM TRUSTS & GEORGE E GORDON TTEE	3110 BRIAR CT	SUGAR LAND	TX	77478
155	GRASON JOHN C JR & JO ANNE	975 BEDGOOD LN	VICTORIA	TX	77905
156	GRAY LARRY J & LINDA K	323 PERDIDO POINTE CIR	VICTORIA	TX	77905
157	GREEN PATRICK ALLAN	1175 BEDGOOD LANE	VICTORIA	TX	77905
158	GREGORY OSCAR EXEMPT DESCENDANT'S TRUST	7831 US HWY 87 N	VICTORIA	TX	77904
159	GRUBBS DONALD R ET UX	595 PERDIDO POINTE CIR	VICTORIA	TX	77905
160	HALE DONALD K & SHARI	2646 SULPHUR CREEK ESTS RD	VICTORIA	TX	77905
161	HANCOCK MARK A & SANDRA	P O BOX 5	FANNIN	TX	77960
162	HANLEY MICHAEL & PATRICIA	576 LAKESHORE DR	VICTORIA	TX	77905
163	HANLEY RANCH PARTNERSHIP	576 LAKESHORE DR	VICTORIA	TX	77905
164	HARRIS CRAIG WAYNE	1094 COLETOVILLE RD S	VICTORIA	TX	77905

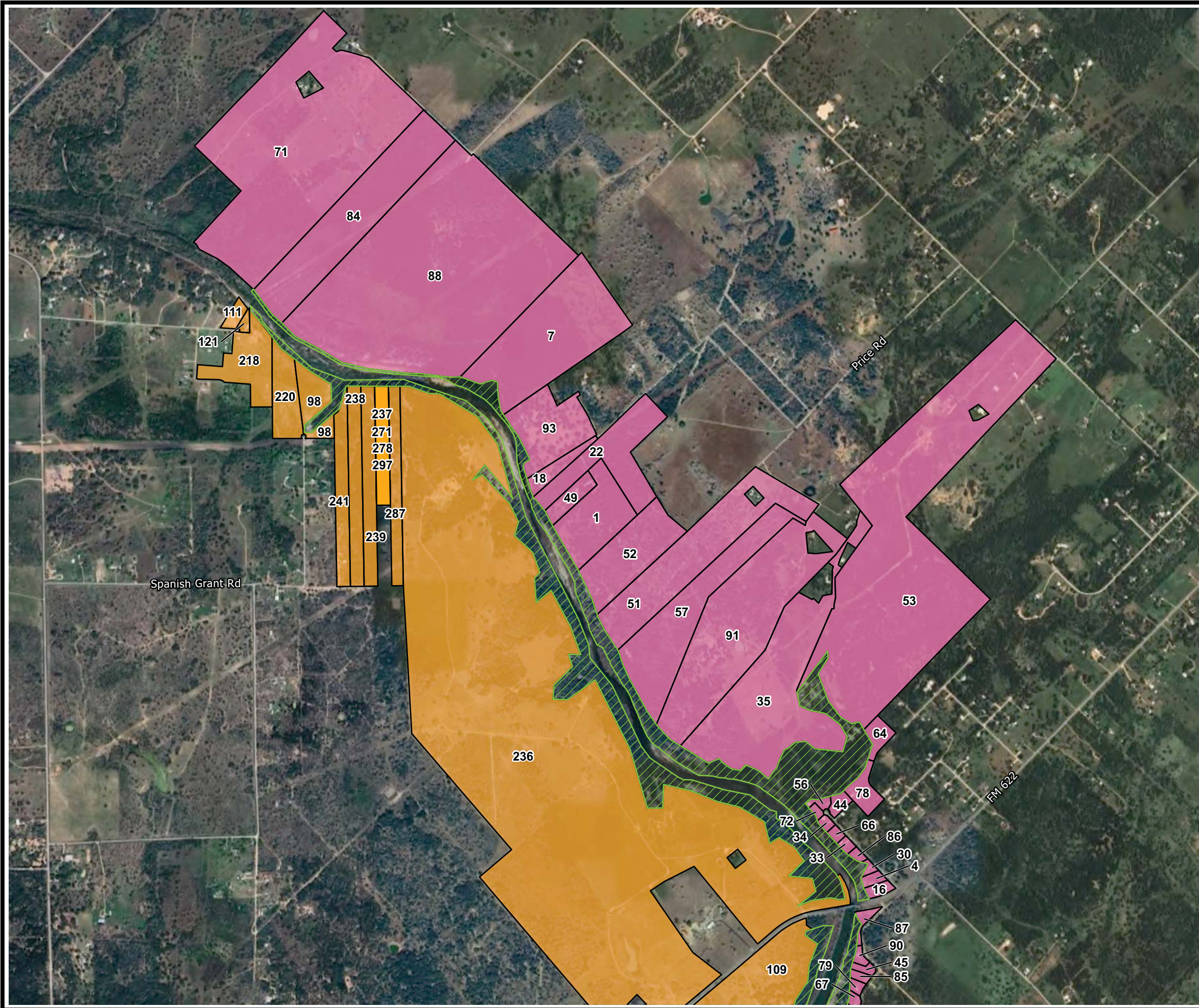
ATTACHMENT A-3-2
Landowner List
Coleta Creek Power Station
WQ0002159000

MAP ID	OWNER NAME	ADDRESS	CITY	STATE	ZIP CODE
165	HARRIS JANICE L EST	241 N MASQUITE DR	VICTORIA	TX	77905
166	HARRIS STEVEN R	939 COLETOVILLE RD S	VICTORIA	TX	77905
167	HARRISON THOMAS WAYNE ET UX	P O BOX 163	FANNIN	TX	77960
168	HARTMAN DENISE & WADE	149 LAKEVIEW DR	VICTORIA	TX	77905
169	HEAD REVOCABLE LIVING TRUST	617 PERDIDO POINT CIR	VICTORIA	TX	77905
170	HEARD MYRA S	P O BOX 85	FANNIN	TX	77960
171	HEIBEL NANCY & JASON HERNANDEZ	668 COLETO PARK RD	RAISIN	TX	77905
172	HEIMANN JACOB HENRY & KELCI MARIE	2013 E MIMOSA	VICTORIA	TX	77901
173	HEMPHILL DOLORES LIFE ESTATE	992 CHURCH ST	VICTORIA	TX	77905
174	HENDERSON JOE BRENT & CHARLOTTE R	251 LAKEVIEW DR	VICTORIA	TX	77905
175	HENRY PHILLIP	3053 COLETOVILLE RD S	VICTORIA	TX	77905
176	HENSEL HARLAN ET UX	1171 BEDGOOD LN	VICTORIA	TX	77905
177	HEPPARD MELISSA DAWN & MICHAEL RAY VASQUEZ	416 LAKESHORE DRIVE	VICTORIA	TX	77905
178	HILL BILLY W	PO BOX 115	THOMASTON	TX	77989
179	HILL DAVID M	138 STANGE LANE	VICTORIA	TX	77905
180	HOLCOMB JOYCE SPEAKERMAN EST	3705 WM SCARBROUGH	SCHERTZ	TX	78154
181	HOLLAND NATHAN & HOLLY	86 LAKEPLACE	VICTORIA	TX	77905
182	HORADAM HENRY L JR	8988 FM 446	VICTORIA	TX	77905
183	HORADAM JAMES F FAMILY TRUST & BRYAN HORADAM TTEE	PO BOX 151	FANNIN	TX	77960
184	HORADAM VICTOR WM	6054 ABERDEEN	DALLAS	TX	75230
185	HOSEK HENRY A III & JANET	95 PERDIDO OAKS	VICTORIA	TX	77905
186	HOTZ ROGER D JR & MEAGAN	760 LAKESHORE DR	VICTORIA	TX	77905
187	HOWARD CLINT & JENNIFER	P O BOX 3527	VICTORIA	TX	77903
188	JANOTA J TODD	388 LAKESHORE DR	VICTORIA	TX	77905
189	JANYSEK VIVIAN J	108 PERDIDO OAKS	VICTORIA	TX	77905
190	JEANE MICHAEL L & MARIA CRISTINA	67 PERDIDO OAKS DR.	VICTORIA	TX	77905
191	JOHNSON ALBERT F	105 WINDY WAY DR	VICTORIA	TX	77904
192	JOHNSON JAMES W	1889 KOHL RD	VICTORIA	TX	77900
193	JOSEPH TRUCKING INC DBA WOOD HIGH GRAIN	968 DODD RD	INEZ	TX	77968
194	KEZAR MICHAEL D	157 TWIN LAKES CIRCLE	VICTORIA	TX	77905
195	KLIEM RICKY & LINDA	10194 FM 444 S	INEZ	TX	77968
196	KLIMITCHECK ROBERT J JR & REBECCA	548 LAKESHORE DR	VICTORIA	TX	77905
197	KOEHLER GARY D & CHARLOTTE A	P O BOX 72	BELTON	TX	76513
198	KUNKEL CLIFFORD G	604 KING ARTHUR ST	VICTORIA	TX	77904
199	LAUNDRIE THOMAS F & PAMELA G	722 LAKESHORE DR	VICTORIA	TX	77905
200	LINEBARGER DEBBIE	99 LAKEOAK	VICTORIA	TX	77905
201	LORENZEN PRESTON C & DARLA G	80 LAKEWAY COURT	VICTORIA	TX	77904
202	LOTT SHAVOHN KYLE	20375 MATHIS LANDING DR	CYPRESS	TX	77433
203	MACHICEK DUSTIN A	536 LAKESHORE DR	VICTORIA	TX	77905
204	MAIKOETTER RANCH LLC	104 PECOS DR	VICTORIA	TX	77904
205	MANGUM JASON & CASSIE L	137 LAKEVIEW DR	VICTORIA	TX	77905
206	MANUEL JAYNE	503 FLOYD ST	BLACKBURG	TX	24060
207	MARSHALL MIKE & JEAN	301 LAKEVIEW DR	VICTORIA	TX	77905
208	MARTIN JANA	530 FANNIN RD	VICTORIA	TX	77905
209	MARTIN JOSHUA D & KRISTIN R WAGNER	458 LAKESHORE DR	VICTORIA	TX	77905
210	MATOS KERMIT CRUZ	5919 FOREST LEDGE STREET	SAN ANTONIO	TX	78240
211	MAY DON E & SANDRA KAY	331 LAKEVIEW DR	VICTORIA	TX	77905
212	MCADAMS SHANE PRESTON	12705 US HWY 59 S	VICTORIA	TX	77905
213	MCCONNELL SHANNON JON & AMY MARIE	1718 BREEZY BEND DRIVE	KATY	TX	77494
214	MCELROY BRENDA	8939 ST HWY 97 E	STOCKDALE	TX	78160
215	MCFADIN LEWIS P JR	303 LAKEVIEW DRIVE	VICTORIA	TX	77905
216	MCNEIL AIMEE J	P O BOX 152	FANNIN	TX	77960
217	MOON RUSSELL DEWAYNE	210 YUMS DR	VICTORIA	TX	77904
218	MORENO ESTEBAN	617 BARTLETT RD	VICTORIA	TX	77905
219	NARANJO CRISTELIA /LIFE EST & TERESA H THEODORIDIS	624 COLETO PARK RD	VICTORIA	TX	77905
220	NARANJO FRED H JR & WENDY	1150 SPANISH GRANT RD	GOLIAD	TX	77963
221	NEAL DAVID	13747 FM 622	VICTORIA	TX	77905
222	NEUVAR KAYSI	328 COLAKE DR	VICTORIA	TX	77905
223	NEUVAR KYLE R ET UX	328 COLAKE DR	VICTORIA	TX	77905
224	NORTON JAKE & STACEY	308 LAKESHORE DR	VICTORIA	TX	77963
225	OBELGONER JAMES ROBERT	1246 US HWY 77N	HALLETTSVILLE	TX	77964
226	OLADE MARIA	470 TRAVIS	GOLIAD	TX	77963
227	OLQUIN JONATHAN M	3503 MEADOW LANE ST	VICTORIA	TX	77905
228	PALMER DAN C	570 COLETO PARK RD	VICTORIA	TX	77905
229	PARKS JACKIE	955 THOMASTON RIVER RD	CUERO	TX	77954
230	PENTECOST MICHAEL	922 US HIGHWAY 59 S	VICTORIA	TX	77905
231	PERDIDO POINTE CIVIC COMMITTEE	PO BOX 176	FANNIN	TX	77960
232	PERDIDO POINTE ESTATES	3110 BRIAR COURT	SUGARLAND	TX	77478
233	POST HELEN	3073 FM 2987	VICTORIA	TX	77905
234	POST PAUL T DESCENDANTS TRUST	3075 FM 2987	VICTORIA	TX	77905
235	POWELL MARTHA J	900 DIKE # 2 SERVICE RD	VICTORIA	TX	77905
236	PREISS RANDY	15042 FM 622	VICTORIA	TX	77905
237	PRINCE ANDREW III ET AL	PO BOX 4481	VICTORIA	TX	77903
238	PRINCE PERRY EST	6901 WILLOW OAK DRIVE	CORPUS CHRISTI	TX	78413
239	PRINCE THELMA EST	4121 OAK ARBOR DR	DALLAS	TX	75233
240	RAFTER J PROPERTIES LLC	36 HUNTERS CIRCLE	VICTORIA	TX	77905
241	RAMOS RAMICO SR	753 SPANISH GRANT RD	GOLIAD	TX	77963
242	RAMPLEY WM HARVEY ET UX	PO BOX 63	GOLIAD	TX	77963
243	RARRAT MICHAEL & KARLA	64 COLAKE DR	VICTORIA	TX	77905
244	RAY JOE DAVID & DENESE J	618 LAKESHORE DR	VICTORIA	TX	77905
245	REYNOLDS DONNA	230 LABORATORY RD	FLORESVILLE	TX	78114
246	RILEY MARY ANN	107 TRENTWOOD	VICTORIA	TX	77901

ATTACHMENT A-3-2
Landowner List
Coleta Creek Power Station
WQ0002159000

MAP ID	OWNER NAME	ADDRESS	CITY	STATE	ZIP CODE
247	ROHDE ROCKY & MICHELLE	943 LAKESHORE DR	VICTORIA	TX	77905
248	SCHERER GREG	7875 US HWY 87N	VICTORIA	TX	77904
249	SCHMIDT PHIL R	88 SCHMIDT DR	VICTORIA	TX	77905
250	SCHMIDT SKANDY L	3007 COLETOVILLE RD S	VICTORIA	TX	77904
251	SEGLER DEREK & AMY	P O BOX 118	FANNIN	TX	77960
252	SEWALT STEVE & SHERYL	P O BOX 2183	VICTORIA	TX	77902
253	SHANNON JACQUELYN ASHLEY	623 CROCKETT DRIVE	VICTORIA	TX	77905
254	SHARKEY ROBERT & LUCY	231 N SEAKIST LN	PORT LAVACA	TX	77979
255	SINGLES SANDY & TONI	2031 KOHL ROAD	VICTORIA	TX	77905
256	SONSALLA SCOTT E & LORETTA L	653 PERDIDO POINT CIR	VICTORIA	TX	77905
257	SPEAKERMAN RAYMOND EST ET AL	302 HARRISON	VICTORIA	TX	77904
258	SPIES HARVEY R	101 HILL CREEK LANE	VICTORIA	TX	77905
259	STANFORD BRETT ANTHONY	PO BOX 4583	VICTORIA	TX	77903
260	STANFORD FRED & PATRICE	6910 US HW 59 N	VICTORIA	TX	77905
261	STANFORD JUSTIN	2049 SULPHUR CREEK EST	VICTORIA	TX	77905
262	STANGE CURTIS D	2710 COLETOVILLE RD S	VICTORIA	TX	77905
263	STANGE WADE NICHOLAS	103 CANTERBURY LANE	VICTORIA	TX	77904
264	STANGE WILLIAM NOEL JR	2459 COLETOVILLE RD S	VICTORIA	TX	77905
265	STONE GABLE INVESTMENTS LLC	P O BOX 4969	VICTORIA	TX	77903
266	STRATMANN RODNEY C	282 LAKEVIEW DR	VICTORIA	TX	77905
267	STRATTON NATALIE & WILLIAM EASLEY JR	183 EDDIE ST	VICTORIA	TX	77905
268	STROOP MARK & BARBARA	129 TWIN LAKE CIRCLE	VICTORIA	TX	77905
269	SULLINS CATHY ET AL	2620 WEBER RD	VICTORIA	TX	77905
270	SWICKHEIMER RANCHES LTD	P O BOX 217	FANNIN	TX	77960
271	TERRELL LUCILLE	1920 CHERRY AVE	SIGNAL HILL	CA	90755
272	THIGPEN JIMMY E	P O BOX 428	TEMPLE	TX	76503
273	TODD ELIZA WILKERSON EST	806 E CONVENT	VICTORIA	TX	77901
274	TRAUTWEIN COLLEEN	8246 S US HWY 183	CUERO	TX	77954
275	TSCHOEPE TYSON L & SARAH	518 SUNSET DR	VICTORIA	TX	77904
276	TUMLINSON JANET SEPARATE TRUST & JANET TUMLINSON TTEE	7542 E FM 1961	GOLIAD	TX	77963
277	TUTTLE DONALD	401 JOSEPHINE RD	VICTORIA	TX	77905
278	VARNADO JONELL	51 LONGVIEW DR	VICTORIA	TX	77904
279	VAUGHN TERENCE GLEN ET UX	85 LAKEVIEW DR	VICTORIA	TX	77905
280	VOLKMER BARBARA A LIFE ESTATE	1645 COLETOVILLE RD SOUTH	VICTORIA	TX	77905
281	WACKER SANDRA GAYLE	361 JOSEPHINE RD	VICTORIA	TX	77905
282	WAGNER MILTON STEVE & DIANA LYN	1785 KOHL RD	VICTORIA	TX	77905
283	WALDEN HAROLD RAY & VALERIE G	1381 COLETOVILLE RD S	VICTORIA	TX	77905
284	WALL MATTHEW J JR & BARBARA M	PO BOX 16097	SUGARLAND	TX	77496
285	WALLS GENEVIEVE ET AL	3225 CALUMET	HOUSTON	TX	77004
286	WALLS HOMER B EST & HOWELL WALLS	5 CHLOE COURT	LONG BEACH	MS	39560
287	WASHINGTON PATRICK ET AL	19022 BRESCIA LN	KATY	TX	77449
288	WATT'S CHARLES A	680 LAKESHORE DR	VICTORIA	TX	77905
289	WDS RANCH LTD	4119 HIGHGROVE DR	DALLAS	TX	75220
290	WEAVER WILLIAM O & DEBRA F	372 LAKESHORE	VICTORIA	TX	77905
291	WELFEL TRENT	101 LAKEPLACE	VICTORIA	TX	77905
292	WELFEL TRENT & REAGAN GASCH	252 LAKEVIEW DRIVE	VICTORIA	TX	77905
293	WHITFIELD BILLY M ET UX	903 RANCH RD	GEORGETOWN	TX	78628
294	WILLIAMS FRED A& BARBARA A LIVING TRUST	179 LAKEVIEW DR	VICTORIA	TX	77905
295	WYOTEX REALTY LLC	P O BOX 280969	LAKEWOOD	CO	80228
296	YOUNG J R EST	522 ROYAL OAK DRIVE	PASS CHRISTIAN	MS	39571
297	YOUNG LEROY JR	1920 CHERRY AVE	SIGNAL HILL	CA	90755
298	YOUNGBLOOD VICKIE	973 CHURCH ST	VICTORIA	TX	77905
299	BURES LEROY	159 BURES RD	VICTORIA	TX	77905
300	HEINOLD LARRY M ET UX	1287 COLETOVILLE RD S	VICTORIA	TX	77905
301	YOUNG JAMES GARLAND & ETHEL JOYCE	PO BOX 56	FANNIN	TX	77960
302	UNKNOWN	UNKNOWN	UNKNOWN		
303	UNKNOWN	UNKNOWN	UNKNOWN		
304	UNKNOWN	UNKNOWN	UNKNOWN		
305	UNKNOWN	UNKNOWN	UNKNOWN		
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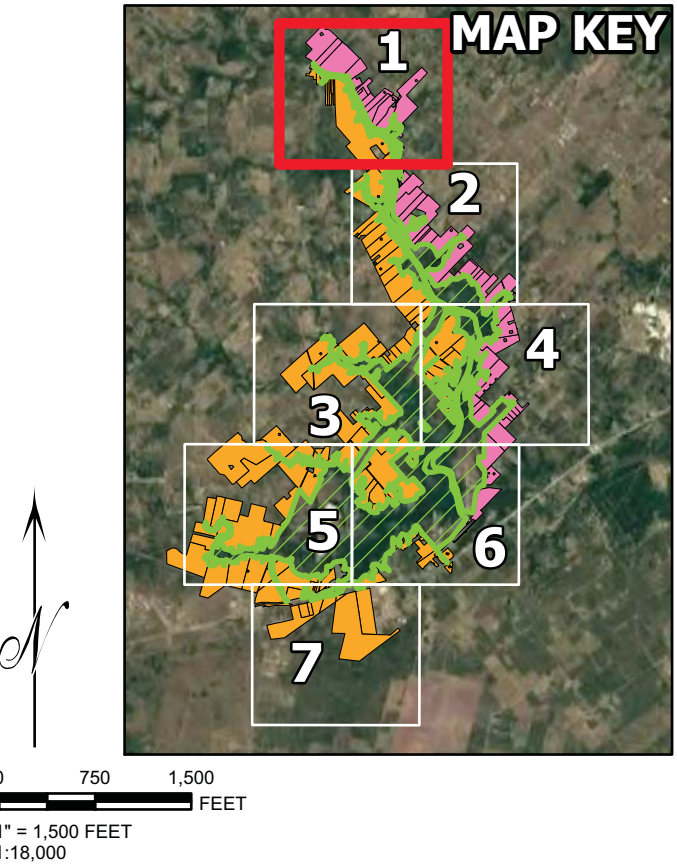
5/19/25



LEGEND

-  Coletto Creek Power, LLC Property Boundary
-  Victoria County Adjacent Landowners
-  Goliad County Adjacent Landowners

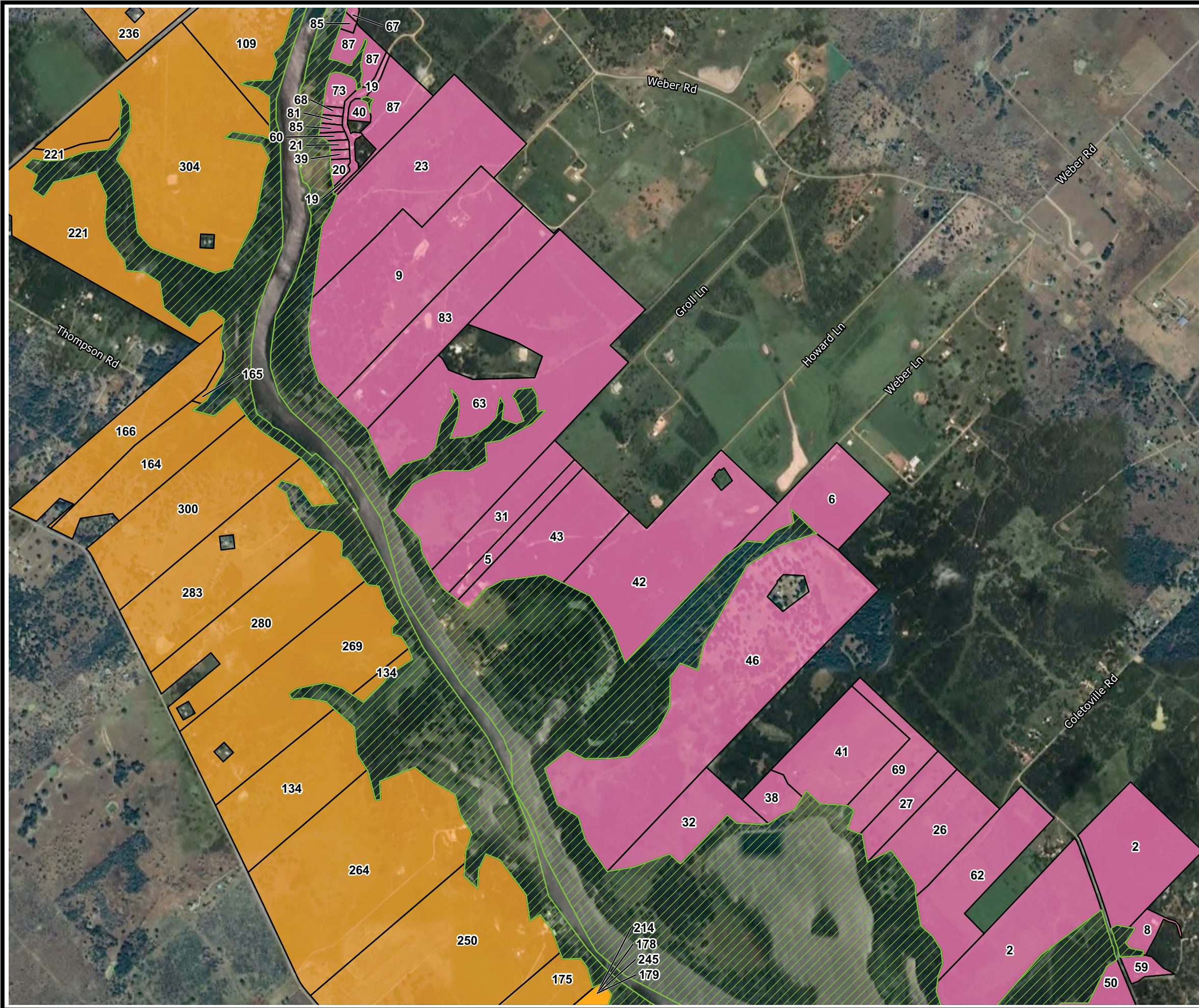
Sources:
1. Coletto Creek Power, LLC Property Boundary created from American Surveying & Mapping Inc. ZipMap Exhibit of Coletto Creek Reservoir and Power Plant, dated 03-29-17, and Goliad and Victoria County Appraisal Districts GIS Data, May 2025.
2. Adjacent Landowner Parcel data from Goliad and Victoria County Appraisal Districts GIS Data, May 2025



COLETO CREEK POWER, LLC FANNIN, TEXAS WQ0002159000		
ADJACENT LANDOWNER MAP FIGURE 1 OF 7		
DRAWN BY: S WILSON	SCALE: AS NOTED	PROJ. NO. TPDES 2025
CHECKED BY: D KOCUREK		Adjacent Landowner
APPROVED BY: D KOCUREK	DATE PRINTED: 5/19/2025	
DATE: May 2025		



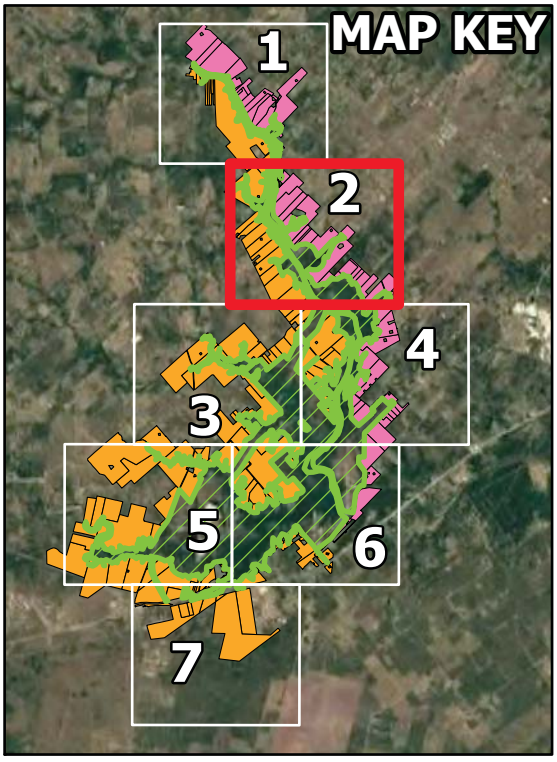
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Ph. 409-738-2133



LEGEND

- Coletto Creek Power, LLC Property Boundary
- Victoria County Adjacent Landowners
- Goliad County Adjacent Landowners

Sources:
1. Coletto Creek Power, LLC Property Boundary created from American Surveying & Mapping Inc. ZipMap Exhibit of Coletto Creek Reservoir and Power Plant, dated 03-29-17, and Goliad and Victoria County Appraisal Districts GIS Data, May 2025.
2. Adjacent Landowner Parcel data from Goliad and Victoria County Appraisal Districts GIS Data, May 2025



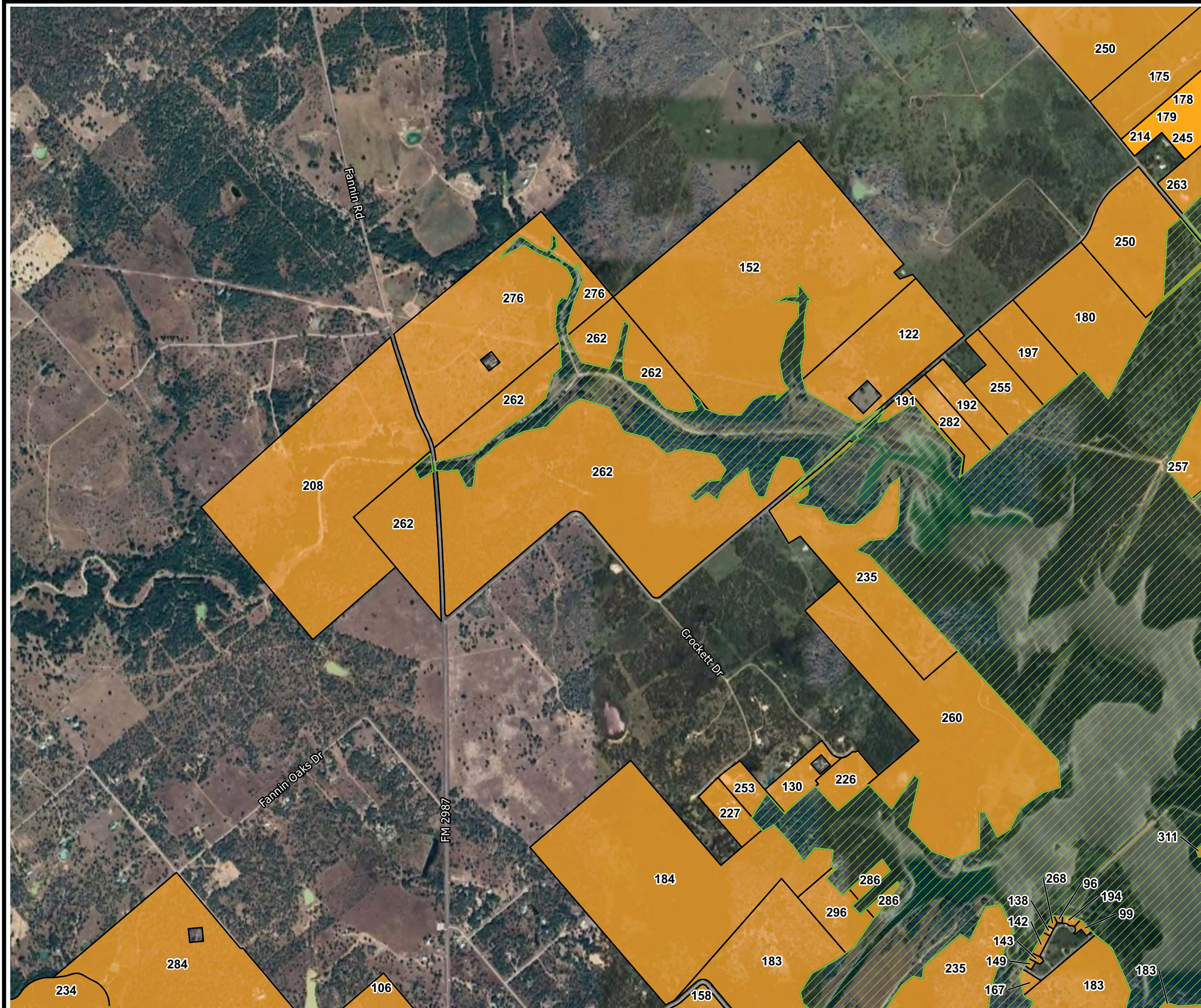
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1" = 1,500 FEET
1:18,000

COLETO CREEK POWER, LLC
FANNIN, TEXAS
WQ0002159000

ADJACENT LANDOWNER MAP
FIGURE 2 OF 7

DRAWN BY:	S WILSON	SCALE:	AS NOTED	PROJ. NO.	TPDES 2025
CHECKED BY:	D KOCUREK			Adjacent Landowner	
APPROVED BY:	D KOCUREK	DATE PRINTED:	5/19/2025		
DATE:	May 2025				

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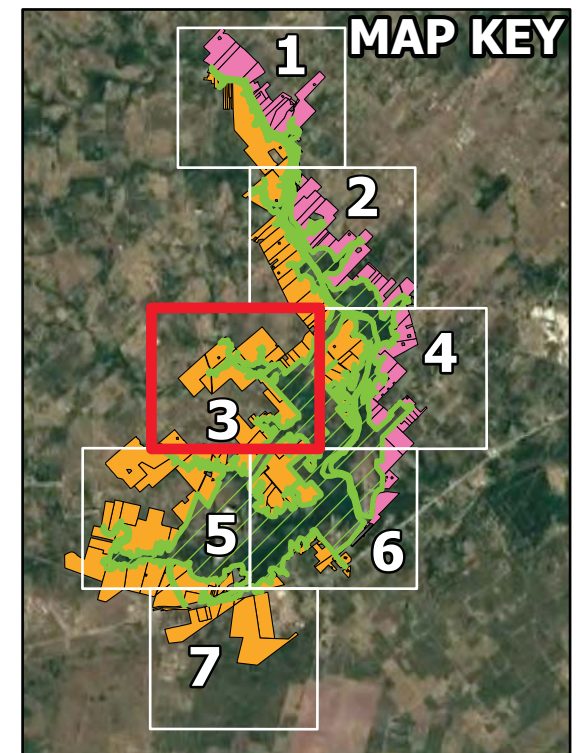


LEGEND

-  Coletto Creek Power, LLC Property Boundary
 1 Victoria County Adjacent Landowners
 94 Goliad County Adjacent Landowners

Sources:

1. Coletto Creek Power, LLC Property Boundary created from American Surveying & Mapping Inc. ZipMap Exhibit of Coletto Creek Reservoir and Power Plant, dated 03-29-17, and Goliad and Victoria County Appraisal Districts GIS Data, May 2025.
2. Adjacent Landowner Parcel data from Goliad and Victoria County Appraisal Districts GIS Data, May 2025



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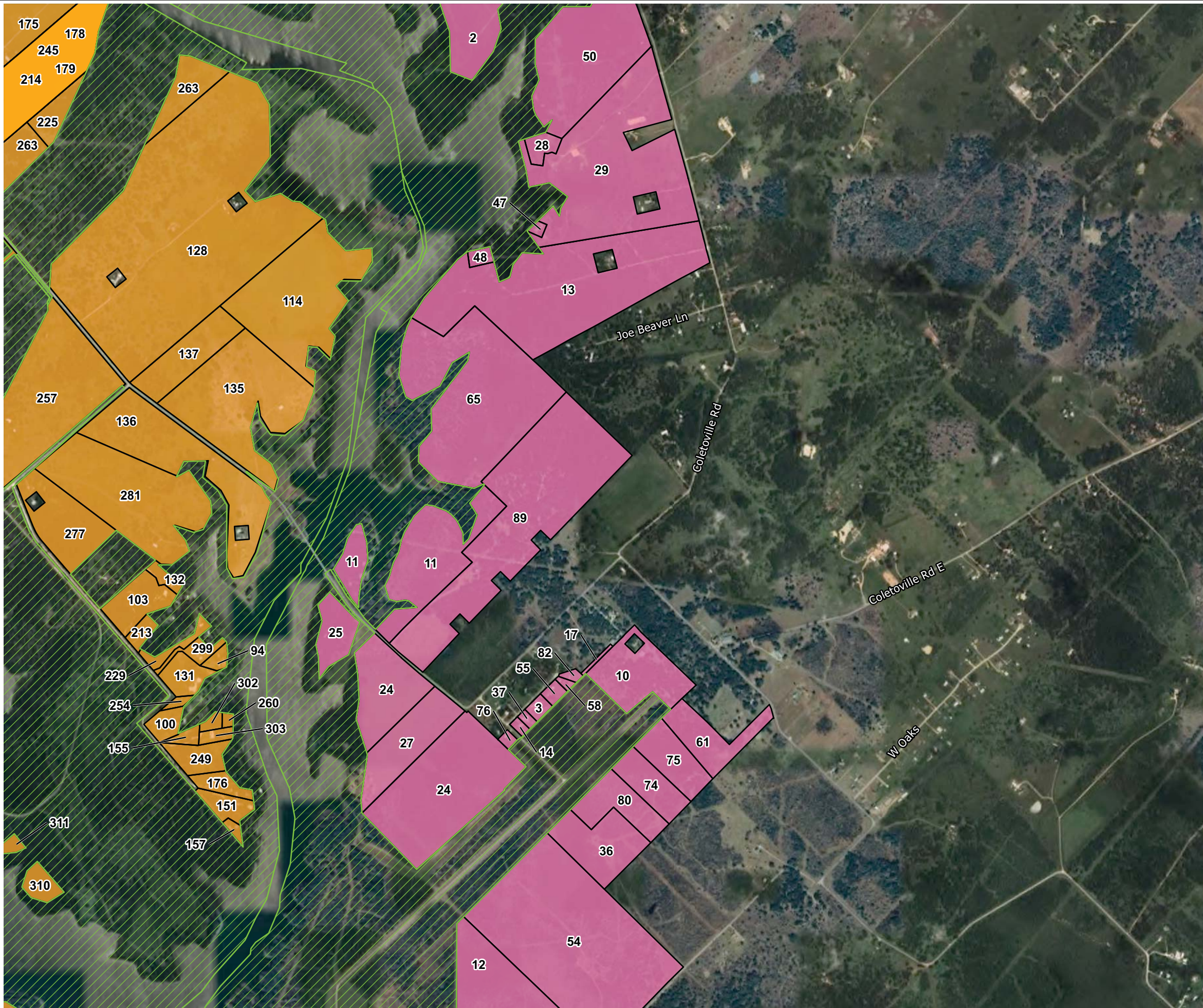
**COLETO CREEK POWER, LLC
FANNIN, TEXAS
WQ0002159000**

ADJACENT LANDOWNER MAP
FIGURE 3 OF 7

DRAWN BY: S WILSON	SCALE:	PROJ. NO. TPDES 2025
CHECKED BY: D KOCUREK	AS NOTED	Adjacent Landowner
APPROVED BY: D KOCUREK	DATE PRINTED:	
DATE: May 2025	5/19/2025	



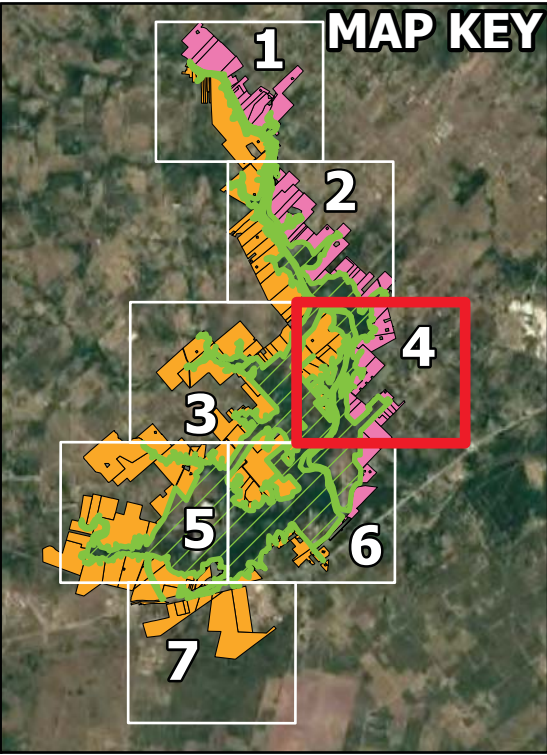
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LEGEND

-  Coletoville Creek Power, LLC Property Boundary
-  Victoria County Adjacent Landowners
-  Goliad County Adjacent Landowners

Sources:
1. Coletoville Creek Power, LLC Property Boundary created from American Surveying & Mapping Inc. ZipMap Exhibit of Coletoville Creek Reservoir and Power Plant, dated 03-29-17, and Goliad and Victoria County Appraisal Districts GIS Data, May 2025.
2. Adjacent Landowner Parcel data from Goliad and Victoria County Appraisal Districts GIS Data, May 2025



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COLETO CREEK POWER, LLC
FANNIN, TEXAS
WQ0002159000

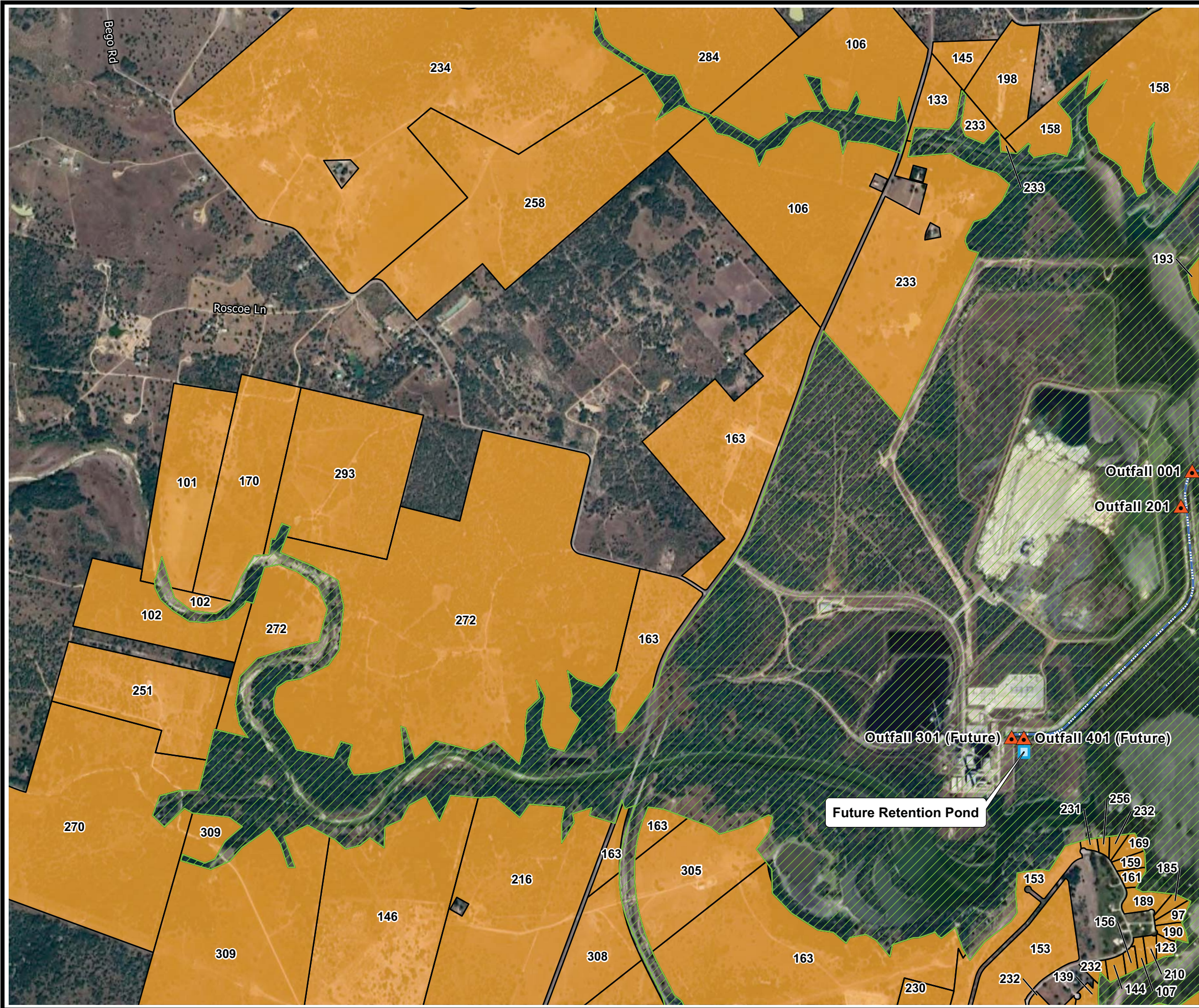
ADJACENT LANDOWNER MAP
FIGURE 4 OF 7

DRAWN BY:	S WILSON	SCALE:	AS NOTED	PROJ. NO.	TPDES 2025
CHECKED BY:	D KOCUREK				Adjacent Landowner
APPROVED BY:	D KOCUREK	DATE PRINTED:	5/19/2025		
DATE:	May 2025				



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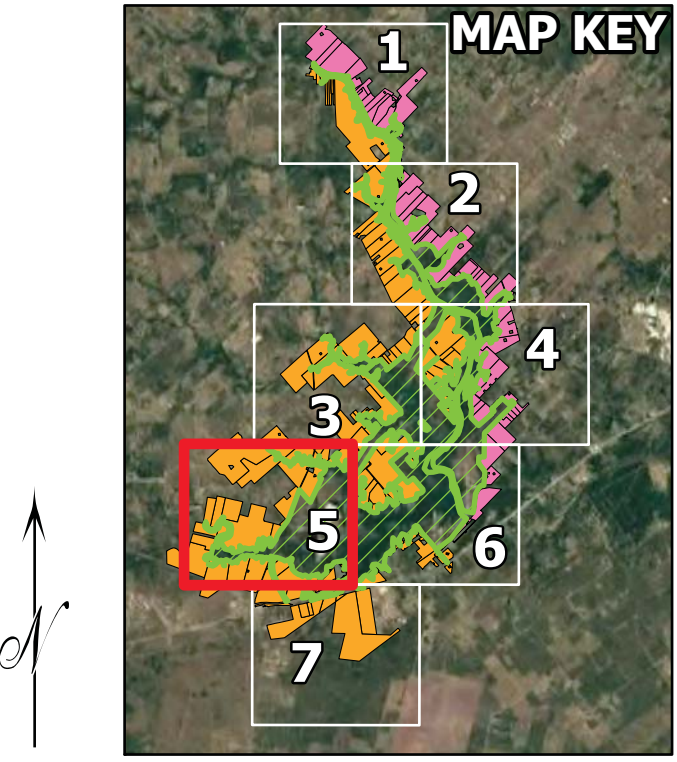
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LEGEND

- Coletto Creek Power, LLC Property Boundary
- Victoria County Adjacent Landowners
- Goliad County Adjacent Landowners
- Future Retention Pond
- Outfall Location
- Discharge Route

Sources:
1. Coletto Creek Power, LLC Property Boundary created from American Surveying & Mapping Inc. ZipMap Exhibit of Coletto Creek Reservoir and Power Plant, dated 03-29-17, and Goliad and Victoria County Appraisal Districts GIS Data, May 2025.
2. Adjacent Landowner Parcel data from Goliad and Victoria County Appraisal Districts GIS Data, May 2025

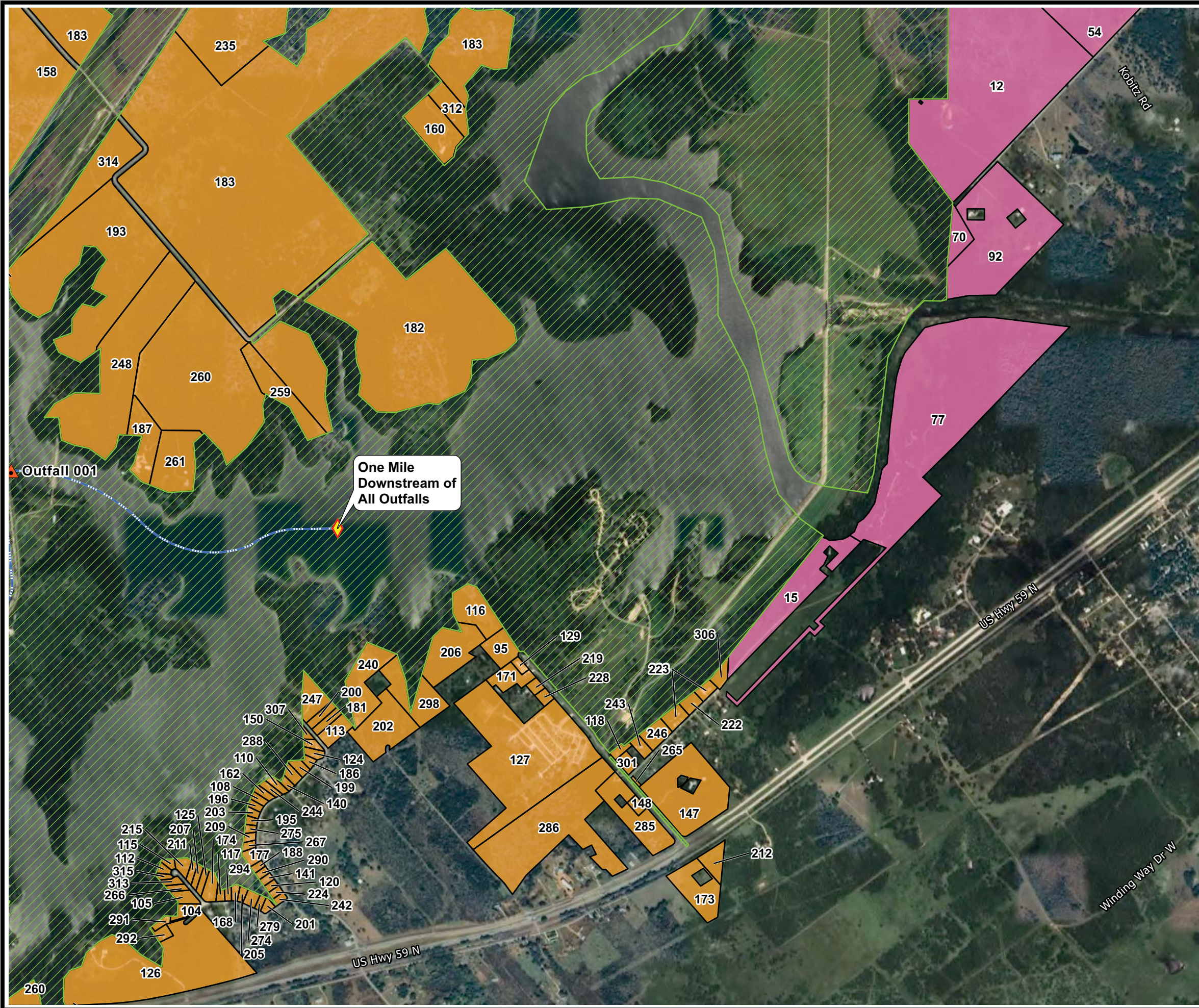


COLETO CREEK POWER, LLC
FANNIN, TEXAS
WQ0002159000

ADJACENT LANDOWNER MAP
FIGURE 5 OF 7

DRAWN BY:	S WILSON	SCALE:	AS NOTED	PROJ. NO.	TPDES 2025
CHECKED BY:	D KOCUREK				Adjacent Landowner
APPROVED BY:	D KOCUREK	DATE PRINTED:	5/19/2025		
DATE:	May 2025				

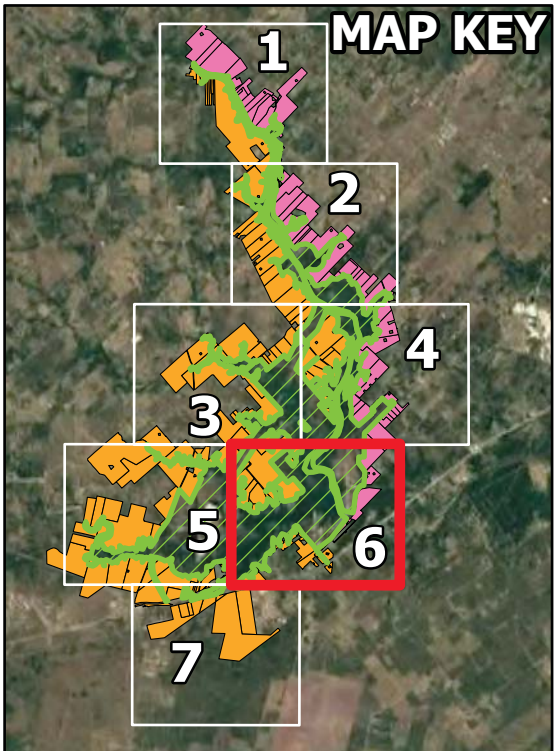
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LEGEND

- Coletto Creek Power, LLC Property Boundary
- Victoria County Adjacent Landowners
- Goliad County Adjacent Landowners
- Outfall Location
- Discharge Route
- Downstream Marker

Sources:
1. Coletto Creek Power, LLC Property Boundary created from American Surveying & Mapping Inc. ZipMap Exhibit of Coletto Creek Reservoir and Power Plant, dated 03-29-17, and Goliad and Victoria County Appraisal Districts GIS Data, May 2025.
2. Adjacent Landowner Parcel data from Goliad and Victoria County Appraisal Districts GIS Data, May 2025

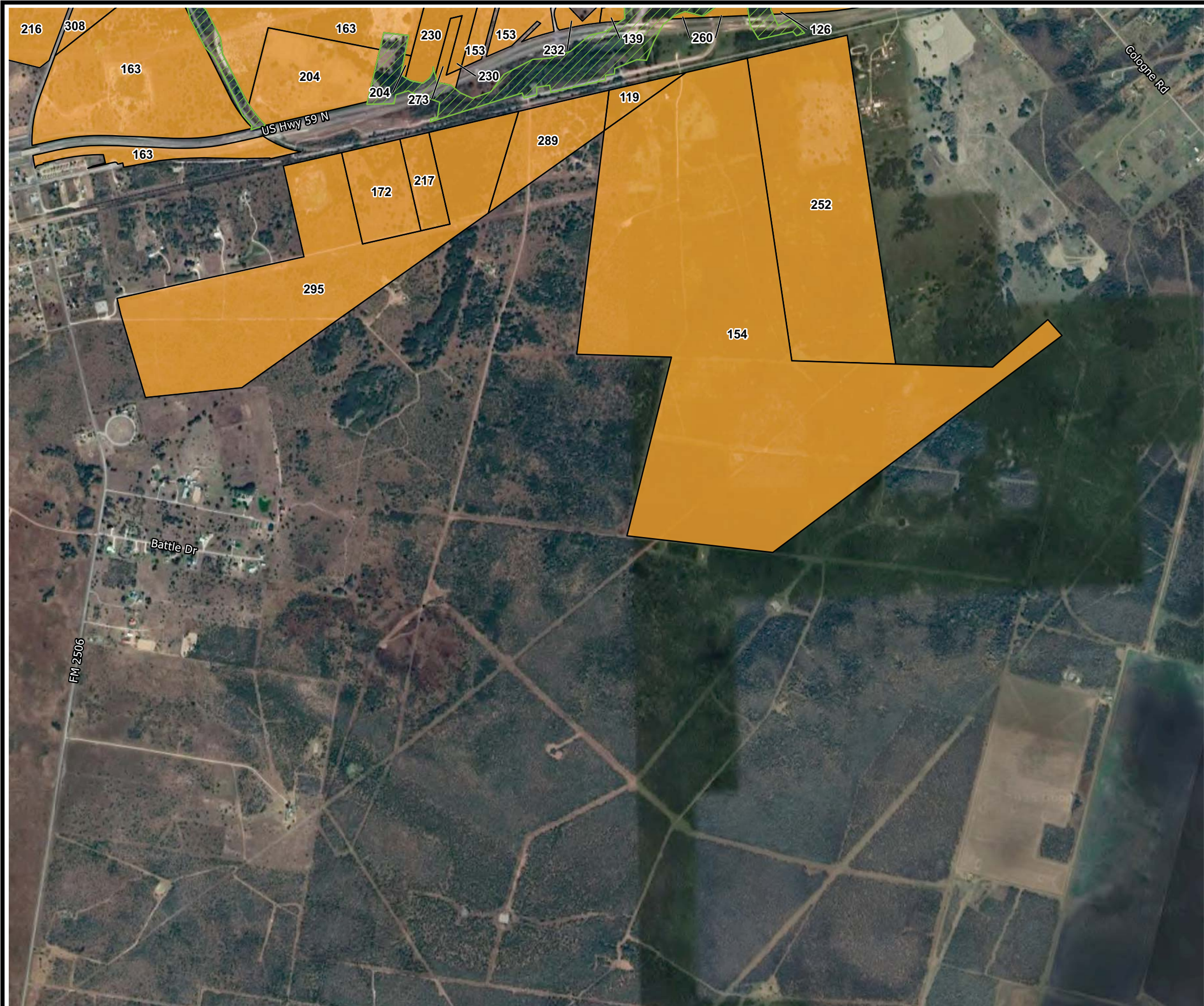


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1" = 1,500 FEET
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COLETO CREEK POWER, LLC FANNIN, TEXAS WQ0002159000		
ADJACENT LANDOWNER MAP FIGURE 6 OF 7		
DRAWN BY: S WILSON	SCALE: AS NOTED	PROJ. NO. TPDES 2025
CHECKED BY: D KOCUREK		Adjacent Landowner
APPROVED BY: D KOCUREK	DATE PRINTED: 5/19/2025	
DATE: May 2025		



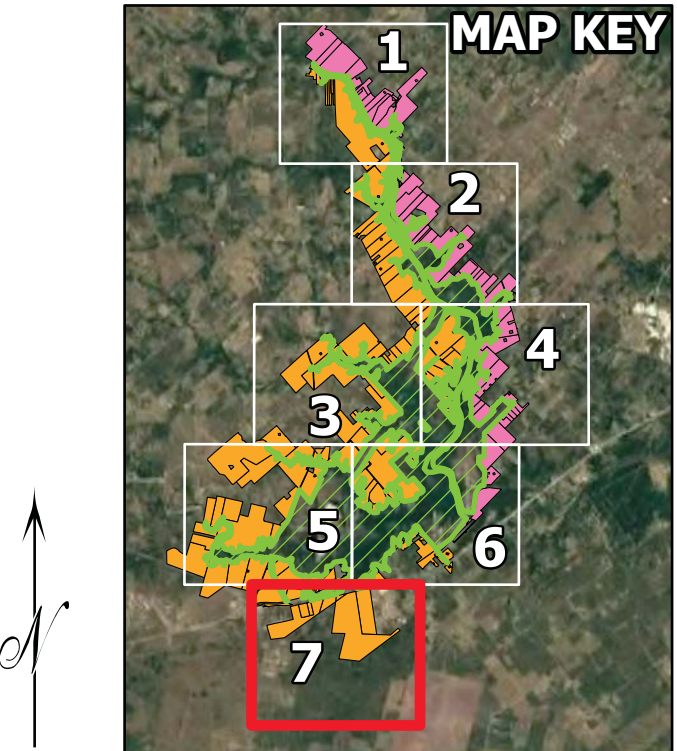
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LEGEND

- Coletto Creek Power, LLC Property Boundary
- Victoria County Adjacent Landowners
- Goliad County Adjacent Landowners

Sources:
1. Coletto Creek Power, LLC Property Boundary created from American Surveying & Mapping Inc. ZipMap Exhibit of Coletto Creek Reservoir and Power Plant, dated 03-29-17, and Goliad and Victoria County Appraisal Districts GIS Data, May 2025.
2. Adjacent Landowner Parcel data from Goliad and Victoria County Appraisal Districts GIS Data, May 2025



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1" = 1,500 FEET
1:18,000

COLETO CREEK POWER, LLC
FANNIN, TEXAS
WQ0002159000

ADJACENT LANDOWNER MAP
FIGURE 7 OF 7

DRAWN BY:	S WILSON	SCALE:	TPDES 2025
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APPROVED BY:	D KOCUREK	DATE PRINTED:	
DATE:	May 2025	5/19/2025	



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Ph. 409-738-2133

ANAYA SUSIE ANNA (STARNES)
64 SPRING RIDGE
VICTORIA TX 77904

ASKEW JENELL KOLLE
4517 TRIANGLE AVE APT 502
AUSTIN TX 78751

AWALT LISA
81 SANDRA LN
VICTORIA TX 77905

BAGWELL JOHN D & LINDA M
P O BOX 5114
VICTORIA TX 77903

BARCLAY HAL JR & JUDY
1593 HOWARD LN
VICTORIA TX 77905

BECK ROBIN ETAL
901 WEBER LN
VICTORIA TX 77905

BERGER JAMES J
PO BOX 856
PORT OCONNOR TX 77982

BERNHARD MATTHEW
258 CINCO OAKS
VICTORIA TX 77905

BIEDIGER ALFRED O III
3499 WEBER RD
VICTORIA TX 77905-3135

BONE JO ANN P
199 SHADE LN
VICTORIA TX 77905

BRAGG MELANIE J & WILLEMIN
DAVID W
384 ALOE RD
VICTORIA TX 77905

BROWN PATTI KOBITZ
1709 BENEDICT CT
ROWLETT TX 75088

BRUNS MARGARET GAY
11638 FM 622
GOLIAD TX 77963

BURES TODD ANTHONY JR &
HANNAH LEIGH MITCHELL
15 SANDRA LANE
VICTORIA TX 77905

BURRIS DONALD L
905 COLAKE DR
VICTORIA TX 77905-4001

CHARLES EDWARD J JR &
KIMBERLY DRAKE
21 MAGUEY
VICTORIA TX 77905-3114

CHRISTOPHER PAUL WAYNE
157 SHADE LN
VICTORIA TX 77905

CLEMMONS ANDREW CHARLES
900 OSAGE RD
VICTORIA TX 77905-2593

COLETO LAKE ESTATES
HOMEOWNERS ASSOCIATION INC
443 WATERS EDGE DR
VICTORIA TX 77905-3182

COLLINS AMANDA BEDGOOD &
SHANE WELSEY COLLINS
102 TURTLE ROCK DR
VICTORIA TX 77904

DANIEL JON HARVEY JR &
STEPHANIE ANN
908 WEST LAKE TRAIL
VICTORIA TX 77905

DE ATLEY CAROL MAREK
104 WHISPERING CREEK
VICTORIA TX 77904

DIEBEL LOUIS C
3497 WEBER RD
VICTORIA TX 77905

DIETZEL BARBARA ANN LEMKE
3484 COLETOVILLE RD EAST
VICTORIA TX 77905

DIETZEL DENNIS D & DEE
1053 COLLETOVILLE RD W
VICTORIA TX 77905

DIETZEL GLENN HARVEY FAMILY
TRUST
3484 COLETOVILLE RD E
VICTORIA TX 77905

FAREK HENRIETTA DIETZEL &
HAROLD (LIFE ESTATE)
2620 WEBER RD
VICTORIA TX 77905

FOSS BRAD & MYLES MCLEAN
4436 COLETOVILLE RD
VICTORIA TX 77905

FOSS YVONNE (LIFE ESTATE)
4278 COLETOVILLE RD
VICTORIA TX 77905

FOTIADES STEPHEN M JR &
RHONDA F
57 MAGUEY
VICTORIA TX 77905-3114

FRANK WILLIAM E & GAIL & JAMES R
CREEKMORE JR
1595 HOWARD LN
VICTORIA TX 77905

FRANKE KODY RYAN
PO BOX 111
BLOOMINGTON TX 77951

FREEMAN STANLEY M
6422 WINTHROP TERRACE TRL
KATY TX 77493

GETSCHMANN RUSSELL
283 MAGUEY
VICTORIA TX 77905

GISLER CURTIS JAMES
810 PRICE RD
VICTORIA TX 77905

GREEN BETTY FAYE
799 SUNSET RD
GOLIAD TX 77963

GUERRA BARBARA
41 SANDRA LN
VICTORIA TX 77905

HARTMAN MADELENE
78 S MAGNOLIA POND
THE WOODLANDS TX 77381

HERBOLD ERIC & SAMANTHA K
932 WESTLAKE TRAIL
VICTORIA TX 77905

HODGKINSON RYAN
304 E HILLER ST
VICTORIA TX 77901

JANAK BRENDA
9539 KINDLETREE DR
HOUSTON TX 77040

JANYSEK JERRETT LYNN & CHARA
LEIAN
1131 COUNTY RD 352
KARNES CITY TX 78118

JANYSEK TIMOTHY RAY
1387 HOWARD LANE
VICTORIA TX 77905

JOCHETZ SHANE & SHELBY
268 MAGUEY DR
VICTORIA TX 77905

JOHNSON LYNETTE
428 BRADY RD
INEZ TX 77968-3001

JOHNSTON JOSEPH ROSCOE
1133 WEBER LN
VICTORIA TX 77905-3125

JORDAN BRYAN COLLINS
3918 COLETOVILLE RD
VICTORIA TX 77905

JORDAN NICOLE & BRANDON
3922 COLETOVILLE RD
VICTORIA TX 77905

KATCH KEITH & CYNTHIA
961 OSAGE RD
VICTORIA TX 77905

KOLLE DENNIS RAY & LAURIE ANN &
INNOCENTI LORI KOLLE
3928 OLD GOLIAD RD
VICTORIA TX 77905

KUECKER L P & G M REVOC TRUST
930 PRICE ROAD
VICTORIA TX 77905

KUECKER SIDNEY M & BECKY J
645 HUNTERS CIR
VICTORIA TX 77905-9854

LAGAL KAY M GISLER & CAROL A
GISLER WATKINS
807 BERGER RD
VICTORIA TX 77905

LEMKE KENNETH ALLEN
3417 COLLETOVILLE RD E
VICTORIA TX 77905

MAREK WARREN LEE & TRACY
LYNN HALLAM
149 SANDRA LN
VICTORIA TX 77905

MAYES REX & MARY
320 MAGUEY
VICTORIA TX 77905

MC GINNIS CHERYL G
924 PRICE RD
VICTORIA TX 77905

MENDOZA ERNESTO JR & MARY
ANN
189 SANDRA LN
VICTORIA TX 77905

MOODY BROCK L & AMANDA L
213 CHARLESTON DR
VICTORIA TX 77904

MOWDY HAL & LENORA
866 WESTLAKE TRL
VICTORIA TX 77905

NRKRUE L L C
304 SALEM CROSSING DR
VICTORIA TX 77904

PIERCE CAROLYN MARIE & JEFREY W
316 CAMINO REAL ST
VICTORIA TX 77905

RIEMENSCHNEIDER NEAL & URSULA
126 WATERS EDGE
VICTORIA TX 77905

SANDHOP AUGUSTA H ESTATE
608 N WELLS
EDNA TX 77957

SEWALT STEVEN L & SHERYL D
PO BOX 2183
VICTORIA TX 77902

SMITH KATIE L & WILLIAM J
95 DAWN DR
VICTORIA TX 77905

THORN LYNDA & RICHARD GALLARDO
80 WATERS EDGE DR
VICTORIA TX 77905-3290

VERRET NELSON & SABRINA
195 SANDRA LN
VICTORIA TX 77905

WARTSBAUGH GEORGE CHARLES JR & ALISON
22 WATERS EDGE
VICTORIA TX 77905

WIELAND DON RAY & SUSAN
3010 FM 240
YORKTOWN TX 78164

PANTEL STANLEY RAY & MARK A
4396 LEDGESTONE TR
COLLEGE STATION TX 77845

RAMIREZ LIBRADA L
4605 E NORTH
VICTORIA TX 77901

RYAN MICHAEL W & CONNIE S
812 WESTLAKE TRL
VICTORIA TX 77905-2123

SEALE ROBERT A SPEND THRIFT TRUST
1598 KOLODZEY RD
VICTORIA TX 77905

SHUTTER KENNETH ROBERT
702 TEXAS STAR DR
RICHMOND TX 77469

STANFORD FRED & PATRICE
PO BOX 4583
VICTORIA TX 77903

TOTAH JOSEPH L ETAL
2180 W VINEYARD ST #112
WAILUKU HI 96793

WALDORFF CONNIE
3489 WEBER RD
VICTORIA TX 77905

WENDEL HALLEY B & JANE B
83 MAGUEY
VICTORIA TX 77905

WILLEMIN CHARLES F JR ETAL
924 WILLEMIN LN
VICTORIA TX 77905

PATTERSON PATRICK DOWE TRUSTEE
120 PATTERSON LN
VICTORIA TX 77905

RAYBON WALTER L & PAMELA K
229 MAGUEY
VICTORIA TX 77905

SAGER NORREAN
2248 FM 3157
CUERO TX 77954-6646

SEALS KENNETH P & CAROLYN A
315 MAGUEY
VICTORIA TX 77905

SHUTTER STEPHEN EDWARD
120 KOBITZ RD
VICTORIA TX 77905

STAVINOHAM MICHAEL L & JAMIE L B
379 CAMINO REAL
VICTORIA TX 77905-3149

TUCKER JAMES BRADLEY & KIMBERLY JANE
834 WEST LAKE TRAIL
VICTORIA TX 77905

WALK EMMA 2007 TRUST
388 HARTNELL ROAD
SANTA MARIA CA 93455

WEST D A
443 WATERS EDGE DR
VICTORIA TX 77905-3182

WOODALL CHARLES GEORGE & JANET (LIFE ESTATE)
192 WESTLAKE TRAIL
VICTORIA TX 77905

WOYTASCZYK GAIL
806 PRICE RD
VICTORIA TX 77905

ZANDONATTI MARLIES & HILARY A
ZANSONATTI
1411 KOBITZ RD
VICTORIA TX 77905

ZAPLAC CHARLES W & NANCY
886-A OSAGE RD
VICTORIA TX 77905-2521

AJRAMI ABED
181 BURES RD
VICTORIA TX 77905

ALBRECHT DEAN EDWARD
728 COLETO PARK RD
VICTORIA TX 77905

ANDREWS DAVID & DEBRA
1002 SCENIC LOOP DR
GOLIAD TX 77963

ANGER JOHN PAUL & LISA B
P O DRAWER A
VICTORIA TX 77902

ANGERSTEIN PAUL & CRISTINA
GALLEGOS
1149 SPANISH GRANT RD
GOLIAD TX 77963

ARCHER DAVID G. & DEBRA K. LIFE
ESTATE & AARON D ARCHER ETAL
281 TWIN LAKE DRIVE
VICTORIA TX 77905

BAKER MATTHEW & MEGAN
953 BEDGOOD LN
VICTORIA TX 77905

BARFIELD ALANA S
P O BOX 187
FANNIN TX 77960

BARFIELD FRANK TODD III
P O BOX 1015
COLUMBUS TX 78934

BARKER BLAINE F II ET UX
1235 NORTH LOOP WEST, SUITE 205
HOUSTON TX 77008

BARNETT MICHAEL & CATHY
274 LAKEVIEW
VICTORIA TX 77905

BARNETT MICHAEL K ET UX
274 LAKEVIEW DR
VICTORIA TX 77905

BARRETT CARL W ET UX
2 CARRINGTON COURT
BAY CITY TX 77414

BELK JEREMY & LAUREN
355 PERDIDO POINT CIRCLE
VICTORIA TX 77905

BERAN WAYNE B ET UX
562 LAKESHORE DR
VICTORIA TX 77905

BEYER CHRISTINE
669 COUNTY ROAD 422
D,HANIF TX 78850

BLAIN ROBERT L ET UX
640 LAKESHORE DR
VICTORIA TX 77905

BOUCHER BRENDA SUE
504 BARTLETT
VICTORIA TX 77905

BOYD CHARLES R
340 LAKEVIEW DR
VICTORIA TX 77905

BRANDL RICHARD JR & STACEY
859 LAKESHORE DRIVE
VICTORIA TX 77905

BRITTEN DEBRA ANNE
3096 PETERSON WAY
BRYAN TX 77802

BROWN ERIC K & LAURA RENEE
345 LAKEVIEW DRIVE
VICTORIA TX 77905

BROWN SUSAN WITTE & JAN WITTE
MULLE
10819 SHELL CREEK CT
HOUSTON TX 77345

BRUNS GAY L
185 LAKEVIEW DR
VICTORIA TX 77905

BUHLER LISA & JOSEPH
327 COLETO PARK RD
VICTORIA TX 77905

BURNETT ROBERT G & CAROL
1974 STATE HIGHWAY 119
GOLIAD TX 77963

CARAWAY JAMES E ET UX
334 LAKESHORE DR
VICTORIA TX 77905

CAREY DANIEL L & LEE A
636 BARLETT RD
VICTORIA TX 77905

CAWTHON ELISABETH ALBRECHT
7236 SPANISH GRANT
GALVESTON TX 77554

CHAPA CARLOS V & ERMELINDA
65 PERDIDO OAK DR
VICTORIA TX 77905

CHILDRESS TERESA
768 LAKESHORE DR
VICTORIA TX 77905

CHOVANEK MARK A & LISA
277 LAKEVIEW DR
VICTORIA TX 77905

COLES ARTHUR RAY JR & DONNA
P O BOX 51
FANNIN TX 77960

COLETO LAKE RV LLC
9454 WILSHIRE BLVD PENTHOUSE
BEVERLY HILLS CA 90212

COPE RUBY PIEPER
3753 COLETOVILLE RD SOUTH
VICTORIA TX 77905

COUNCIL JOSHUA LOREN
613 N SAN PATRICIO
GOLIAD TX 77963

COURVILLE SCOTT W & DANIELLE M
448 TRAVIS
VICTORIA TX 77905

DAVIS KEVIN B & KIMBERERLY
699 BEDGOOD LN
VICTORIA TX 77905

DAY DUSTIN C & JANET DENISE
2409 TWIN OAKS DR
PORTLAND TX 78374

DERMODY LINDA
3353 FM 2987
VICTORIA TX 77905

DIETZEL GLENN HARVEY FAMILY
TRUST
3484 COLATOVILLE RD E
VICTORIA TX 77905

DIETZEL JEFFREY PAUL
402 PAISANO DR
VICTORIA TX 77904

DIETZEL MILTON RAWLEY JR
955 BAYMEADOW DR
PORT LAVACA TX 77979

DIETZEL RUBY M
5572 HANSELMAN RD
VICTORIA TX 77905

DODDS MICHAEL M & JESSICA L
107 TWIN LAKES CIR
VICTORIA TX 77905

DUPREE BRYAN K & VIKKI L
72 PERDIDO CT
VICTORIA TX 77905

EDWARDS GARY & CHARLENE
662 LAKESHORE DR
VICTORIA TX 77905

EVANS DAN LEE
352 LAKESHORE DR
VICTORIA TX 77905

FOSTER WILLIAM C
2616 FLAGSTICK DRIVE
MATHEWS NC 28104

FRANKE KELLY K & BETTY L
889 CR 224
KARNES CITY TX 78118

FRIEDRICHS RICK G & CAROL E
22349 MUESCHKE
TOMBALL TX 77377

GALVEZ SERGIO A & GUADALUPE C
209 KINGWOOD FOREST DR
VICTORIA TX 77904

GAMBLIN DEBORAH B
P O BOX 768
GOLIAD TX 77960

GARDNER ROBERT J & RENEE M LF
EST
129 COLETO PARK RD
VICTORIA TX 77905

GARRISON RODNEY & CAROLYN
3522 ARBOR
HOUSTON TX 77004

GIBBS STEPHEN B & CARLEE H
53 TWIN LAKE DRIVE
VICTORIA TX 77905

GOHMERT JOHN LLOYD ET UX
840 LAKESHORE DR
VICTORIA TX 77905

GOLDEN GRADY
1177 BEDGOOD LN
VICTORIA TX 77905

GOLDEN JULIANNE
4513 HEBERT LANE
CORPUS CHRISTI TX 78413

GORDON GEORGE E FAM TR UTA ET
AL
3110 BRIAR COURT
SUGARLAND TX 77478

GORDON/BIGHAM TRUSTS &
GEORGE E GORDON TTEE
3110 BRIAR CT
SUGAR LAND TX 77478

GRASON JOHN C JR & JO ANNE
975 BEDGOOD LN
VICTORIA TX 77905

GRAY LARRY J & LINDA K
323 PERDIDO POINTE CIR
VICTORIA TX 77905

GREEN PATRICK ALLAN
1175 BEDGOOD LANE
VICTORIA TX 77905

GREGORY OSCAR EXEMPT
DESCENDANT'S TRUST
7831 US HWY 87 N
VICTORIA TX 77904

GRUBBS DONALD R ET UX
595 PERDIDO POINTE CIR
VICTORIA TX 77905

HALE DONALD K & SHARI
2646 SULPHUR CREEK ESTS RD
VICTORIA TX 77905

HANCOCK MARK A & SANDRA
P O BOX 5
FANNIN TX 77960

HANLEY MICHAEL & PATRICIA
576 LAKESHORE DR
VICTORIA TX 77905

HANLEY RANCH PARTNERSHIP
576 LAKESHORE DR
VICTORIA TX 77905

HARRIS CRAIG WAYNE
1094 COLETOVILLE RD S
VICTORIA TX 77905

HARRIS JANICE L EST
241 N MASQUITE DR
VICTORIA TX 77905

HARRIS STEVEN R
939 COLETOVILLE RD S
VICTORIA TX 77905

HARRISON THOMAS WAYNE ET UX
P O BOX 163
FANNIN TX 77960

HARTMAN DENISE & WADE
149 LAKEVIEW DR
VICTORIA TX 77905

HEAD REVOCABLE LIVING TRUST
617 PERDIDO POINT CIR
VICTORIA TX 77905

HEARD MYRA S
P O BOX 85
FANNIN TX 77960

HEIBEL NANCY & JASON
HERNANDEZ
668 COLETO PARK RD
RAISIN TX 77905

HEIMANN JACOB HENRY & KELCI
MARIE
2013 E MIMOSA
VICTORIA TX 77901

HEMPHILL DOLORES LIFE ESTATE
992 CHURCH ST
VICTORIA TX 77905

HENDERSON JOE BRENT &
CHARLOTTE R
251 LAKEVIEW DR
VICTORIA TX 77905

HENRY PHILLIP
3053 COLETOVILLE RD S
VICTORIA TX 77905

HENSEL HARLAN ET UX
1171 BEDGOOD LN
VICTORIA TX 77905

HEPPARD MELISSA DAWN &
MICHAEL RAY VASQUEZ
416 LAKESHORE DRIVE
VICTORIA TX 77905

HILL BILLY W
PO BOX 115
THOMASTON TX 77989

HILL DAVID M
138 STANGE LANE
VICTORIA TX 77905

HOLCOMB JOYCE SPEAKERMAN
EST
3705 WM SCARBROUGH
SCHERTZ TX 78154

HOLLAND NATHAN & HOLLY
86 LAKEPLACE
VICTORIA TX 77905

HORADAM HENRY L JR
8988 FM 446
VICTORIA TX 77905

HORADAM JAMES F FAMILY TRUST
& BRYAN HORADAM TTEE
PO BOX 151
FANNIN TX 77960

HORADAM VICTOR WM
6054 ABERDEEN
DALLAS TX 75230

HOSEK HENRY A III & JANET
95 PERDIDO OAKS
VICTORIA TX 77905

HOTZ ROGER D JR & MEAGAN
760 LAKESHORE DR
VICTORIA TX 77905

HOWARD CLINT & JENNIFER
P O BOX 3527
VICTORIA TX 77903

JANOTA J TODD
388 LAKESHORE DR
VICTORIA TX 77905

JANYSEK VIVIAN J
108 PERDIDO OAKS
VICTORIA TX 77905

JEANE MICHAEL L & MARIA
CRISTINA
67 PERDIDO OAKS DR.
VICTORIA TX 77905

JOHNSON ALBERT F
105 WINDY WAY DR
VICTORIA TX 77904

JOHNSON JAMES W
1889 KOHL RD
VICTORIA TX 77900

JOSEPH TRUCKING INC DBA WOOD
HIGH GRAIN
968 DODD RD
INEZ TX 77968

KEZAR MICHAEL D
157 TWIN LAKES CIRCLE
VICTORIA TX 77905

KLIEM RICKY & LINDA
10194 FM 444 S
INEZ TX 77968

KLIMITCHECK ROBERT J JR &
REBECCA
548 LAKESHORE DR
VICTORIA TX 77905

KOEHLER GARY D & CHARLOTTE A
P O BOX 72
BELTON TX 76513

KUNKEL CLIFFORD G
604 KING ARTHUR ST
VICTORIA TX 77904

LAUNDRIE THOMAS F & PAMELA G
722 LAKESHORE DR
VICTORIA TX 77905

LINEBARGER DEBBIE
99 LAKEOAK
VICTORIA TX 77905

LORENZEN PRESTON C & DARLA G
80 LAKEWAY COURT
VICTORA TX 77904

LOTT SHAVOHN KYLE
20375 MATHIS LANDING DR
CYPRESS TX 77433

MACHICEK DUSTIN A
536 LAKESHORE DR
VICTORIA TX 77905

MAIKOETTER RANCH LLC
104 PECOS DR
VICTORIA TX 77904

MANGUM JASON & CASSIE L
137 LAKEVIEW DR
VICTORIA TX 77905

MANUEL JAYNE
503 FLOYD ST
BLACKBURG TX 24060

MARSHALL MIKE & JEAN
301 LAKEVIEW DR
VICTORIA TX 77905

MARTIN JANA
530 FANNIN RD
VICTORIA TX 77905

MARTIN JOSHUA D & KRISTIN R
WAGNER
458 LAKESHORE DR
VICTORIA TX 77905

MATOS KERMIT CRUZ
5919 FOREST LEDGE STREET
SAN ANTONIO TX 78240

MAY DON E & SANDRA KAY
331 LAKEVIEW DR
VICTORIA TX 77905

MCADAMS SHANE PRESTON
12705 US HWY 59 S
VICTORIA TX 77905

MCCONNELL SHANNON JON & AMY
MARIE
1718 BREEZY BEND DRIVE
KATY TX 77494

MCELROY BRENDA
8939 ST HWY 97 E
STOCKDALE TX 78160

MCFADIN LEWIS P JR
303 LAKEVIEW DRIVE
VICTORIA TX 77905

MCNEIL AIMEE J
P O BOX 152
FANNIN TX 77960

MOON RUSSELL DEWAYNE
210 YUMS DR
VICTORIA TX 77904

MORENO ESTEBAN
617 BARTLETT RD
VICTORIA TX 77905

NARANJO CRISTELIA /LIFE EST &
TERESA H THEODORIDIS
624 COLETO PARK RD
VICTORIA TX 77905

NARANJO FRED H JR & WENDY
1150 SPANISH GRANT RD
GOLIAD TX 77963

NEAL DAVID
13747 FM 622
VICTORIA TX 77905

NEUVAR KAYSI
328 COLAKE DR
VICTORIA TX 77905

NEUVAR KYLE R ET UX
328 COLAKE DR
VICTORIA TX 77905

NORTON JAKE & STACEY
308 LAKESHORE DR
VICTORIA TX 77963

OBELGONER JAMES ROBERT
1246 US HWY 77N
HALLETTSVILLE TX 77964

OLADE MARIA
470 TRAVIS
GOLIAD TX 77963

OLQUIN JONATHAN M
3503 MEADOW LANE ST
VICTORIA TX 77905

PALMER DAN C
570 COLETO PARK RD
VICTORIA TX 77905

PARKS JACKIE
955 THOMASTON RIVER RD
CUERO TX 77954

PENTECOST MICHAEL
922 US HIGHWAY 59 S
VICTORIA TX 77905

PERDIDO POINTE CIVIC COMMITTEE
PO BOX 176
FANNIN TX 77960

PERDIDO POINTE ESTATES
3110 BRIAR COURT
SUGARLAND TX 77478

POST HELEN
3073 FM 2987
VICTORIA TX 77905

POST PAUL T DESCENDANTS TRUST
3075 FM 2987
VICTORIA TX 77905

POWELL MARTHA J
900 DIKE # 2 SERVICE RD
VICTORIA TX 77905

PREISS RANDY
15042 FM 622
VICTORIA TX 77905

PRINCE ANDREW III ET AL
PO BOX 4481
VICTORIA TX 77903

PRINCE PERRY EST
6901 WILLOW OAK DRIVE
CORPUS CHRISTI TX 78413

PRINCE THELMA EST
4121 OAK ARBOR DR
DALLAS TX 75233

RAFTER J PROPERTIES LLC
36 HUNTERS CIRCLE
VICTORIA TX 77905

RAMOS RAMICO SR
753 SPANISH GRANT RD
GOLIAD TX 77963

RAMPLEY WM HARVEY ET UX
PO BOX 63
GOLIAD TX 77963

RARRAT MICHAEL & KARLA
64 COLAKE DR
VICTORIA TX 77905

RAY JOE DAVID & DENESE J
618 LAKESHORE DR
VICTORIA TX 77905

REYNOLDS DONNA
230 LABORATORY RD
FLORESVILLE TX 78114

RILEY MARY ANN
107 TRENTWOOD
VICTORIA TX 77901

ROHDE ROCKY & MICHELLE
943 LAKESHORE DR
VICTORIA TX 77905

SCHERER GREG
7875 US HWY 87N
VICTORIA TX 77904

SCHMIDT PHIL R
88 SCHMIDT DR
VICTORIA TX 77905

SCHMIDT SKANDY L
3007 COLETOVILLE RD S
VICTORIA TX 77904

SEGLER DEREK & AMY
P O BOX 118
FANNIN TX 77960

SEWALT STEVE & SHERYL
P O BOX 2183
VICTORIA TX 77902

SHANNON JACQUELYN ASHLEY
623 CROCKETT DRIVE
VICTORIA TX 77905

SHARKEY ROBERT & LUCY
231 N SEAKIST LN
PORT LAVACA TX 77979

SINGLES SANDY & TONI
2031 KOHL ROAD
VICTORIA TX 77905

SONSALLA SCOTT E & LORETTA L
653 PERDIDO POINT CIR
VICTORIA TX 77905

SPEAKERMAN RAYMOND EST ET AL
302 HARRISON
VICTORIA TX 77904

SPIES HARVEY R
101 HILL CREEK LANE
VICTORIA TX 77905

STANFORD BRETT ANTHONY
PO BOX 4583
VICTORIA TX 77903

STANFORD FRED & PATRICE
6910 US HW 59 N
VICTORIA TX 77905

STANFORD JUSTIN
2049 SULPHUR CREEK EST
VICTORIA TX 77905

STANGE CURTIS D
2710 COLETOVILLE RD S
VICTORIA TX 77905

STANGE WADE NICHOLAS
103 CANTERBURY LANE
VICTORIA TX 77904

STANGE WILLIAM NOEL JR
2459 COLETOVILLE RD S
VICTORIA TX 77905

STONE GABLE INVESTMENTS LLC
P O BOX 4969
VICTORIA TX 77903

STRATMANN RODNEY C
282 LAKEVIEW DR
VICTORIA TX 77905

STRATTON NATALIE & WILLIAM
EASLEY JR
183 EDDIE ST
VICTORIA TX 77905

STROOP MARK & BARBARA
129 TWIN LAKE CIRCLE
VICTORIA TX 77905

SULLINS CATHY ET AL
2620 WEBER RD
VICTORIA TX 77905

SWICKHEIMER RANCHES LTD
P O BOX 217
FANNIN TX 77960

TERRELL LUCILLE
1920 CHERRY AVE
SIGNAL HILL CA 90755

THIGPEN JIMMY E
P O BOX 428
TEMPLE TX 76503

TODD ELIZA WILKERSON EST
806 E CONVENT
VICTORIA TX 77901

TRAUTWEIN COLLEEN
8246 S US HWY 183
CUERO TX 77954

TSCHOEPE TYSON L & SARAH
518 SUNSET DR
VICTORIA TX 77904

TUMLINSON JANET SEPARATE
TRUST & JANET TUMLINSON TTEE
7542 E FM 1961
GOLIAD TX 77963

TUTTLE DONALD
401 JOSEPHINE RD
VICTORIA TX 77905

VARNADO JONELL
51 LONGVIEW DR
VICTORIA TX 77904

VAUGHN TERENCE GLEN ET UX
85 LAKEVIEW DR
VICTORIA TX 77905

VOLKMER BARBARA A LIFE ESTATE
1645 COLETOVILLE RD SOUTH
VICTORIA TX 77905

WACKER SANDRA GAYLE
361 JOSEPHINE RD
VICTORIA TX 77905

WAGNER MILTON STEVE & DIANA
LYN
1785 KOHL RD
VICTORIA TX 77905

WALDEN HAROLD RAY & VALERIE G
1381 COLETOVILLE RD S
VICTORIA TX 77905

WALL MATTHEW J JR & BARBARA M
PO BOX 16097
SUGARLAND TX 77496

WALLS GENEVIEVE ET AL
3225 CALUMET
HOUSTON TX 77004

WALLS HOMER B EST & HOWELL
WALLS
5 CHLOE COURT
LONG BEACH MS 39560

WASHINGTON PATRICK ET AL
19022 BRESCIA LN
KATY TX 77449

WATTS CHARLES A
680 LAKESHORE DR
VICTORIA TX 77905

WDS RANCH LTD
4119 HIGHGROVE DR
DALLAS TX 75220

WEAVER WILLIAM O & DEBRA F
372 LAKESHORE
VICTORIA TX 77905

WELFEL TRENT
101 LAKEPLACE
VICTORIA TX 77905

WELFEL TRENT & REAGAN GASCH
252 LAKEVIEW DRIVE
VICTORIA TX 77905

WHITFIELD BILLY M ET UX
903 RANCH RD
GEORGETOWN TX 78628

WILLIAMS FRED A& BARBARA A
LIVING TRUST
179 LAKEVIEW DR
VICTORIA TX 77905

WYOTEX REALTY LLC
P O BOX 280969
LAKEWOOD CO 80228

YOUNG J R EST
522 ROYAL OAK DRIVE
PASS CHRISTIAN MS 39571

YOUNG LEROY JR
1920 CHERRY AVE
SIGNAL HILL CA 90755

YOUNGBLOOD VICKIE
973 CHURCH ST
VICTORIA TX 77905

BURES LEROY
159 BURES RD
VICTORIA TX 77905

HEINOLD LARRY M ET UX
1287 COLETOVILLE RD S
VICTORIA TX 77905

YOUNG JAMES GARLAND & ETHEL
JOYCE
PO BOX 56
FANNIN TX 77960

UNKNOWN
UNKNOWN
UNKNOWN

UNKNOWN
UNKNOWN
UNKNOWN

UNKNOWN
UNKNOWN
UNKNOWN

UNKNOWN
UNKNOWN
UNKNOWN

UNKNOWN
UNKNOWN
UNKNOWN

UNKNOWN
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UNKNOWN

ATTACHMENT A-1 Outfall Photos Coletto Creek Power Station (WQ0002159000)



Aerial View

1



Photo Map 1

2

ATTACHMENT A-1 Outfall Photos Coletto Creek Power Station (WQ0002159000)

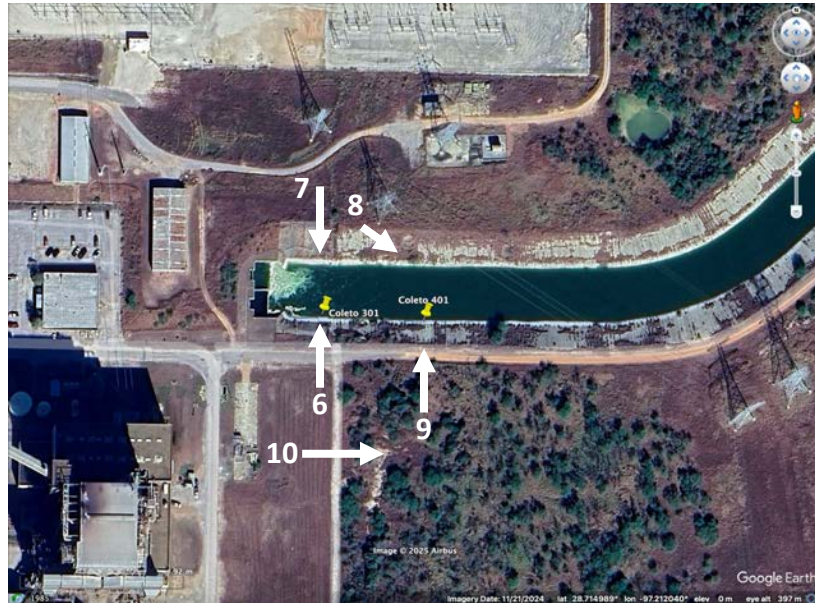


Photo Map 2

3



Photo 1: Location where Outfall 001 enters Coletto Creek Reservoir
(Sulphur Creek arm of reservoir)

4

ATTACHMENT A-1 Outfall Photos
Coleta Creek Power Station (WQ0002159000)



Photo 2: Upstream of Outfall 001

5



Photo 3: Downstream of Outfall 001

6

ATTACHMENT A-1 Outfall Photos
Coletto Creek Power Station (WQ0002159000)



Photo 4: Outfall 201 looking upstream

7



Photo 5: Outfall 201 looking downstream

8

ATTACHMENT A-1 Outfall Photos
Coletto Creek Power Station (WQ0002159000)



Photo 6: Outfall 301 (future) looking north

9



Photo 7: Outfall 301 (future) looking south

10

ATTACHMENT A-1 Outfall Photos
Coleta Creek Power Station (WQ0002159000)



Photo 8: Outfall 401 (future) view across channel

11



Photo 9: Outfall 401 (future) view from south

12

ATTACHMENT A-1 Outfall Photos
Coletto Creek Power Station (WQ0002159000)



Photo 10: Site for new Retention Pond

Attachment SPIF-1

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 WO-ARPTeam@tceq.texas.gov or by phone at (512) 239-4671.

The following applies to all applications:

1. Permittee: Coletto Creek Power, LLC

Permit No. WQ00 02159000

EPA ID No. TX 0070068

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

45 Farm-to-Market Road 2987, near the Town of Fannin, Goliad County, Texas 77960

Attachment SPIF-1

3. 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: Ryan Bayle

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

Title: Environmental Manager

Mailing Address: Luminant Generation Company LLC

City, State, Zip Code: 6555 Sierra Drive, Irving, TX 75039

Phone No.: 214-875-8294 Ext.: N/A Fax No.: N/A

E-mail Address: ryan.bayle@luminant.com

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

N/A

6. 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.

Directly to Coleta Creek Reservoir, part of Coleta Creek in Segment No. 1807 of the Guadalupe River Basin

7. 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).

Attachment SPIF-2 USGS Map

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

N/A. Facility is less than 50 years old.

Attachment SPIF-1

9. 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
- X Additional phases of development that are planned for the future
- ☐ Sealing caves, fractures, sinkholes, other karst features
- ☐ Disturbance of vegetation or wetlands

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

~10 acres for natural gas pipeline, <1 acre for new retention pond

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

The facility is an electricity generation station. The power plant includes a 3,100-acre cooling reservoir, paved and unpaved areas for electrical systems, and impoundments for waste storage and wastewater treatment.

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

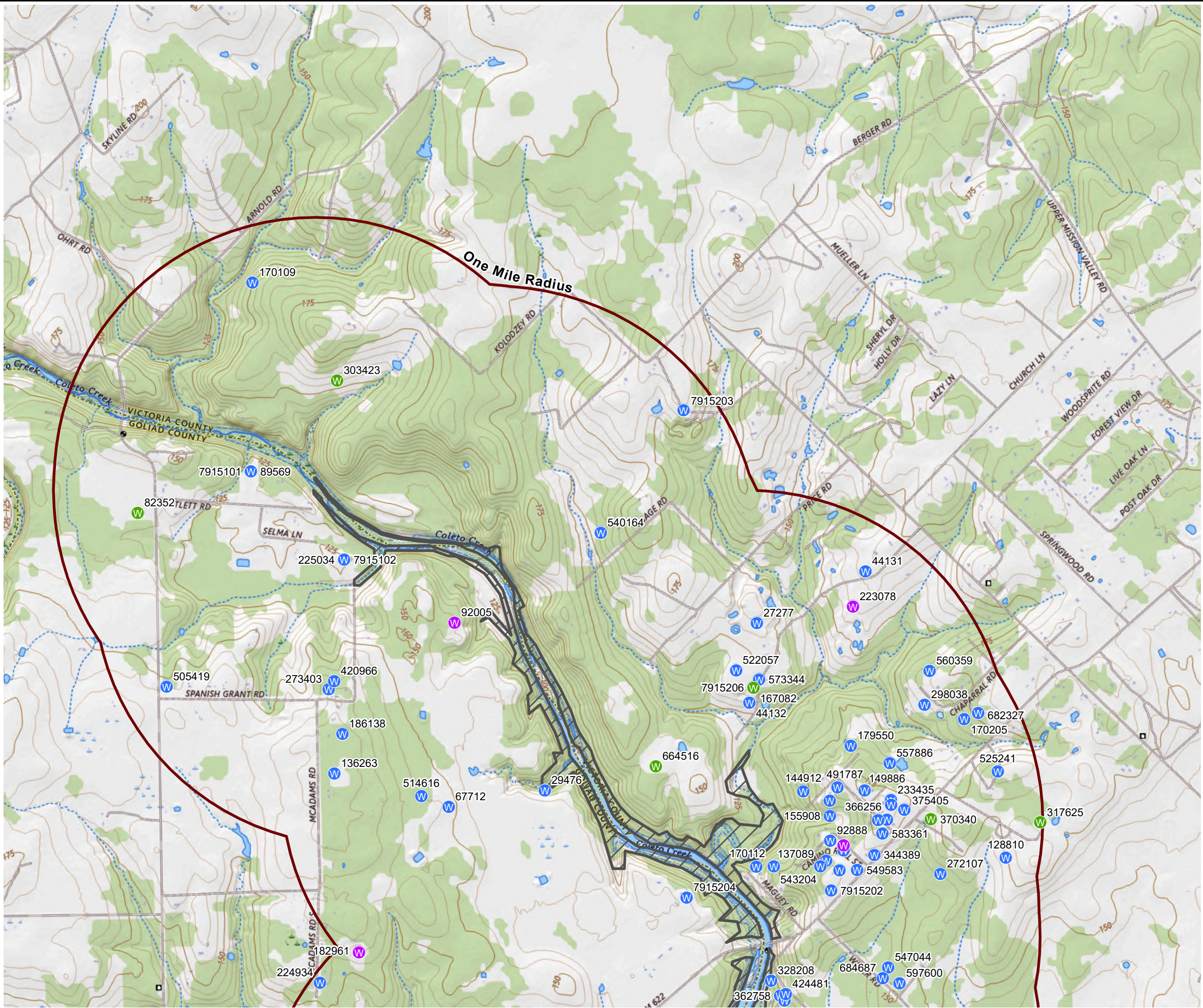
1. List construction dates of all buildings and structures on the property:

Unit 1, associated buildings and equipment, and the cooling reservoir were constructed from 1976-1980.

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

Prior to construction of Unit 1, the property was rangeland. Zachry Construction Corporation was the construction company for Unit 1. Sargent and Lundy Engineers was the design firm for Unit 1 construction.

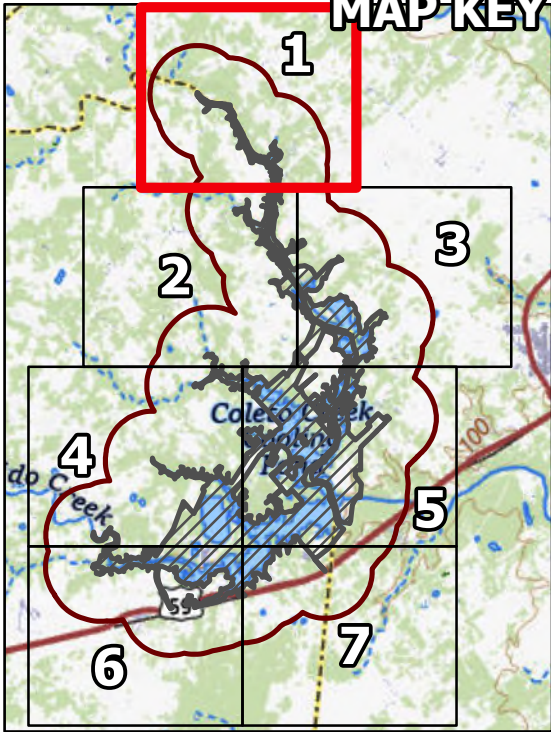
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LEGEND

- Coletto Creek Power, LLC Property Boundary
- One Mile Radius
- TWDB Wells**
 - Domestic / Public Supply
 - Industrial / Monitor
 - Irrigation / Stock
 - Plugged / Destroyed / Unused / Other
 - Rig Supply / Test Well

MAP KEY



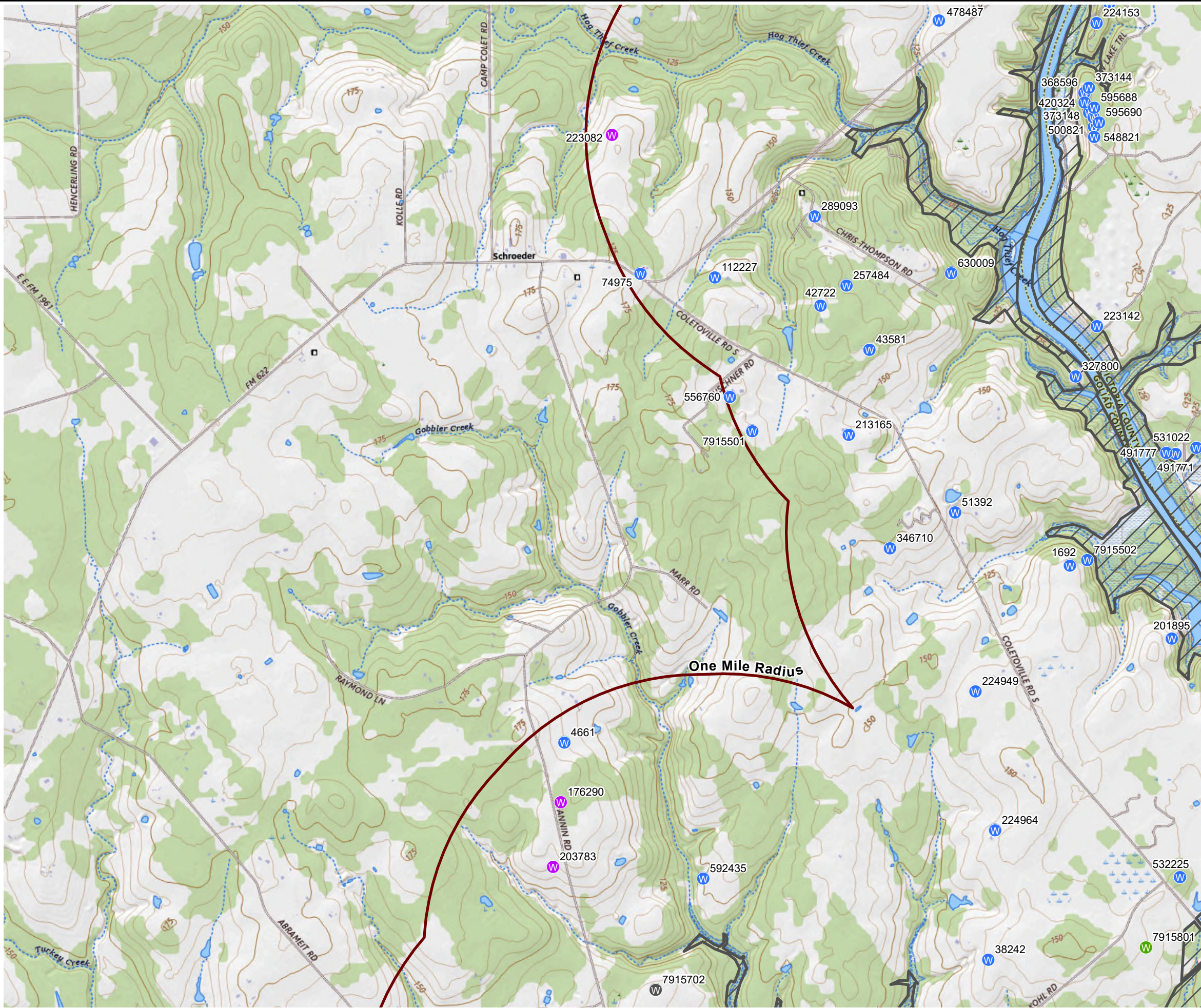
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Sources:
1. TWDB Wells - Texas Water Development Board GIS Data, April 2025.
2. USGS Topographic Quadrangles 7.5 Minute Series: Schroeder, Fannin, & Hensley Lake, TX 2022
1" = 2,000 FEET
1:24,000

COLETO CREEK POWER, LLC FANNIN, TEXAS WQ0002159000			
USGS MAP FIGURE 1 OF 7			
DRAWN BY:	S WILSON	SCALE:	TPDES 2025
CHECKED BY:	D KOCUREK	AS NOTED	USGS Map
APPROVED BY:	D KOCUREK	DATE PRINTED:	
DATE:	May 2025	5/19/2025	



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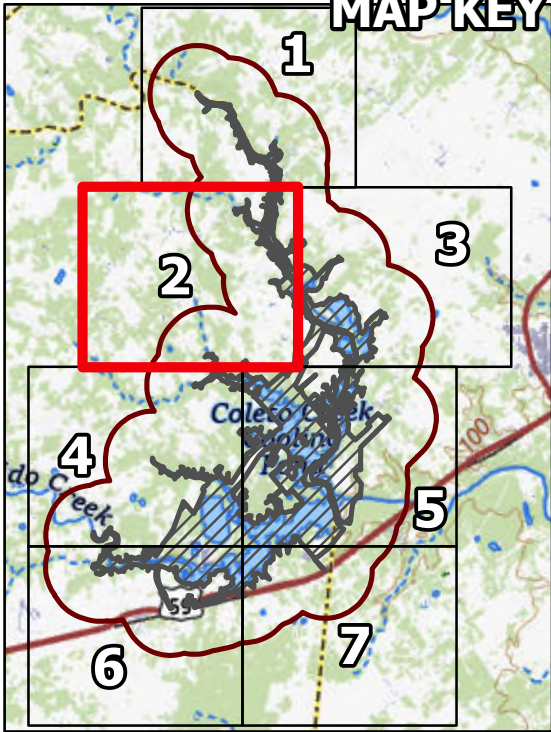
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LEGEND

- Coletto Creek Power, LLC Property Boundary
- One Mile Radius
- TWDB Wells**
 - Domestic / Public Supply
 - Industrial / Monitor
 - Irrigation / Stock
 - Plugged / Destroyed / Unused / Other
 - Rig Supply / Test Well

MAP KEY



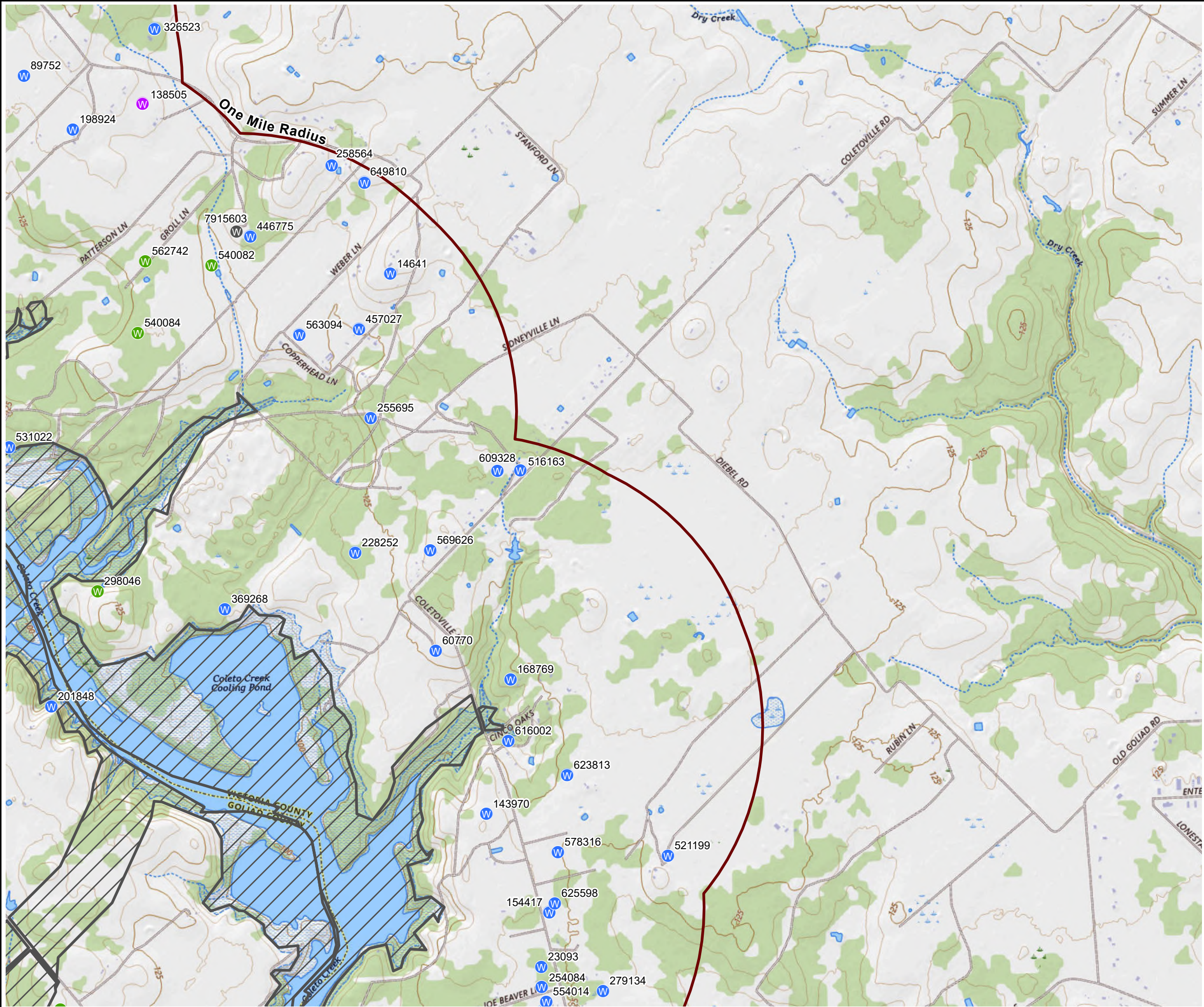
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Sources:
1. TWDB Wells - Texas Water Development Board GIS Data, April 2025.
2. USGS Topographic Quadrangles 7.5 Minute Series: Schroeder, Fannin, & Hensley Lake, TX 2022

COLETO CREEK POWER, LLC FANNIN, TEXAS WQ0002159000			
USGS MAP FIGURE 2 OF 7			
DRAWN BY:	S WILSON	SCALE:	PROJ. NO. TPDES 2025
CHECKED BY:	D KOCUREK	AS NOTED	USGS Map
APPROVED BY:	D KOCUREK	DATE PRINTED:	
DATE:	May 2025	5/19/2025	



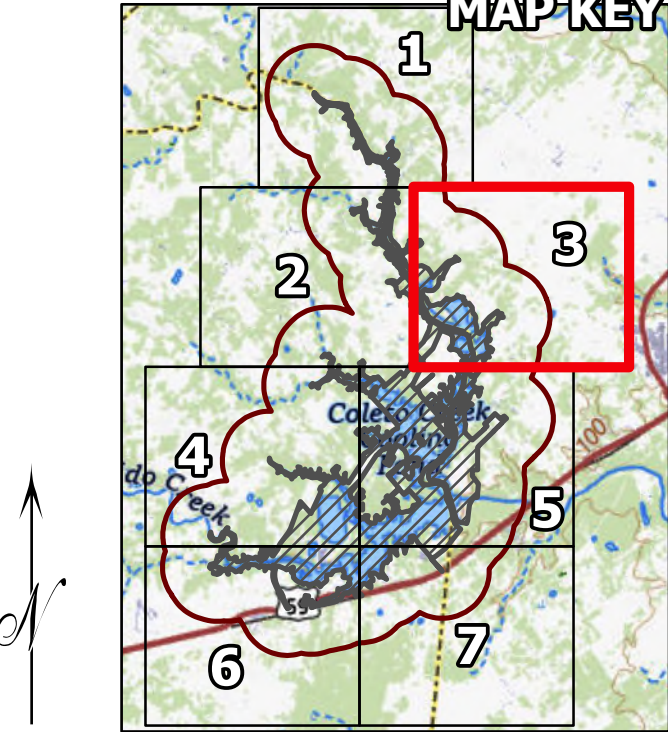
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LEGEND

- Coletto Creek Power, LLC Property Boundary
- One Mile Radius
- TWDB Wells**
 - Domestic / Public Supply
 - Industrial / Monitor
 - Irrigation / Stock
 - Plugged / Destroyed / Unused / Other
 - Rig Supply / Test Well

MAP KEY



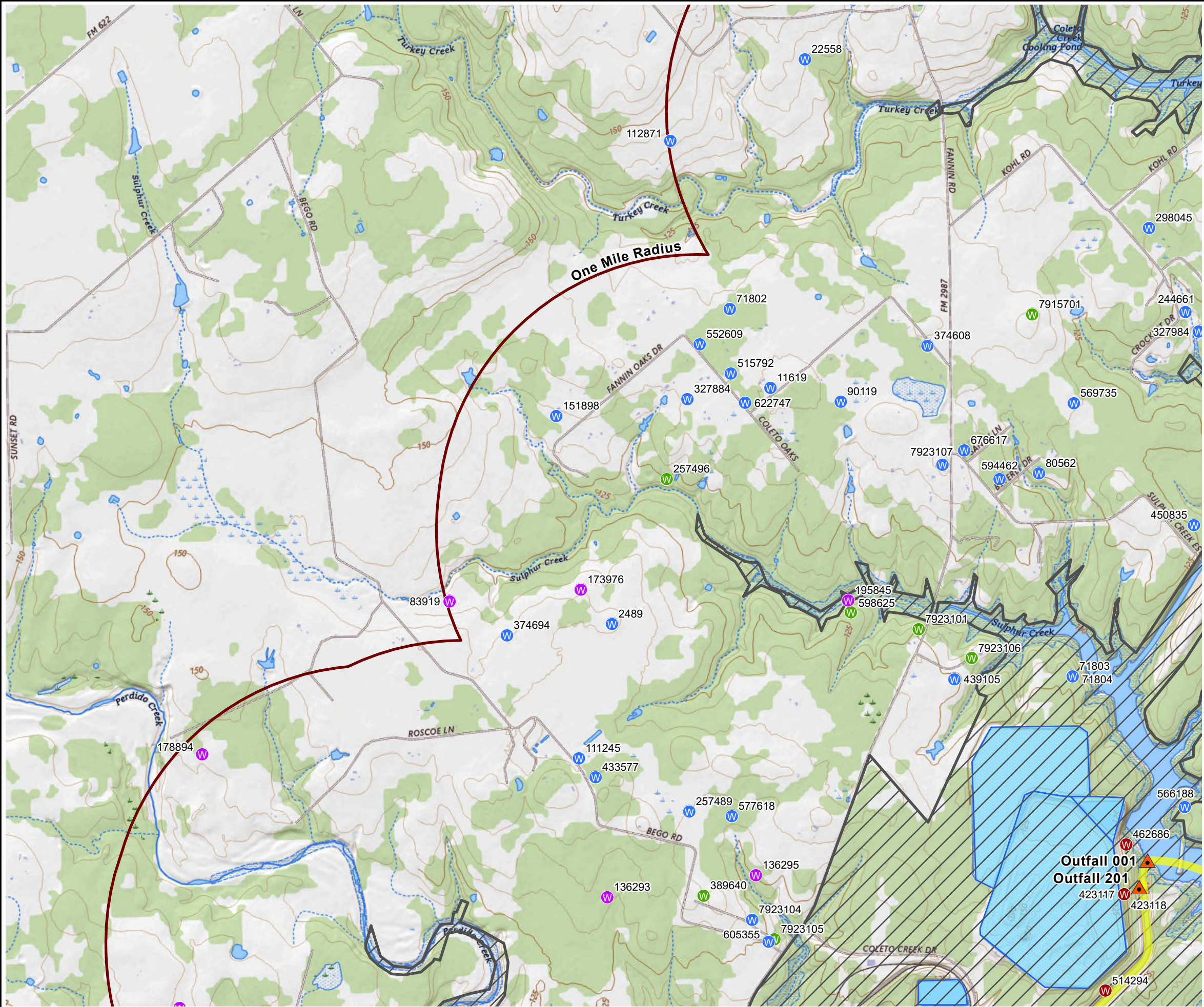
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Sources:
1. TWDB Wells - Texas Water Development Board GIS Data, April 2025.
2. USGS Topographic Quadrangles 7.5 Minute Series: Schroeder, Fannin, & Hensley Lake, TX 2022

COLETO CREEK POWER, LLC FANNIN, TEXAS WQ0002159000			
USGS MAP FIGURE 3 OF 7			
DRAWN BY:	S WILSON	SCALE:	TPDES 2025
CHECKED BY:	D KOCUREK	AS NOTED	USGS Map
APPROVED BY:	D KOCUREK	DATE PRINTED:	
DATE:	May 2025	5/19/2025	



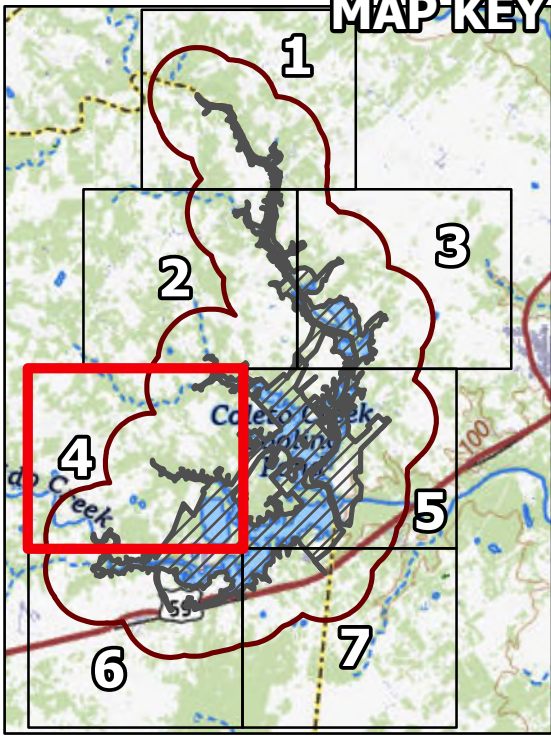
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LEGEND

- Coletto Creek Power, LLC Property Boundary
- Ponds
- Outfall Location
- Discharge Route
- One Mile Radius
- TWDB Wells**
 - Domestic / Public Supply
 - Industrial / Monitor
 - Irrigation / Stock
 - Plugged / Destroyed / Unused / Other
 - Rig Supply / Test Well

MAP KEY



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FEET
1" = 2,000 FEET
1:24,000

Sources:
1. TWDB Wells - Texas Water Development Board GIS Data, April 2025.
2. USGS Topographic Quadrangles 7.5 Minute Series: Schroeder, Fannin, & Hensley Lake, TX 2022

COLETO CREEK POWER, LLC
FANNIN, TEXAS
WQ0002159000

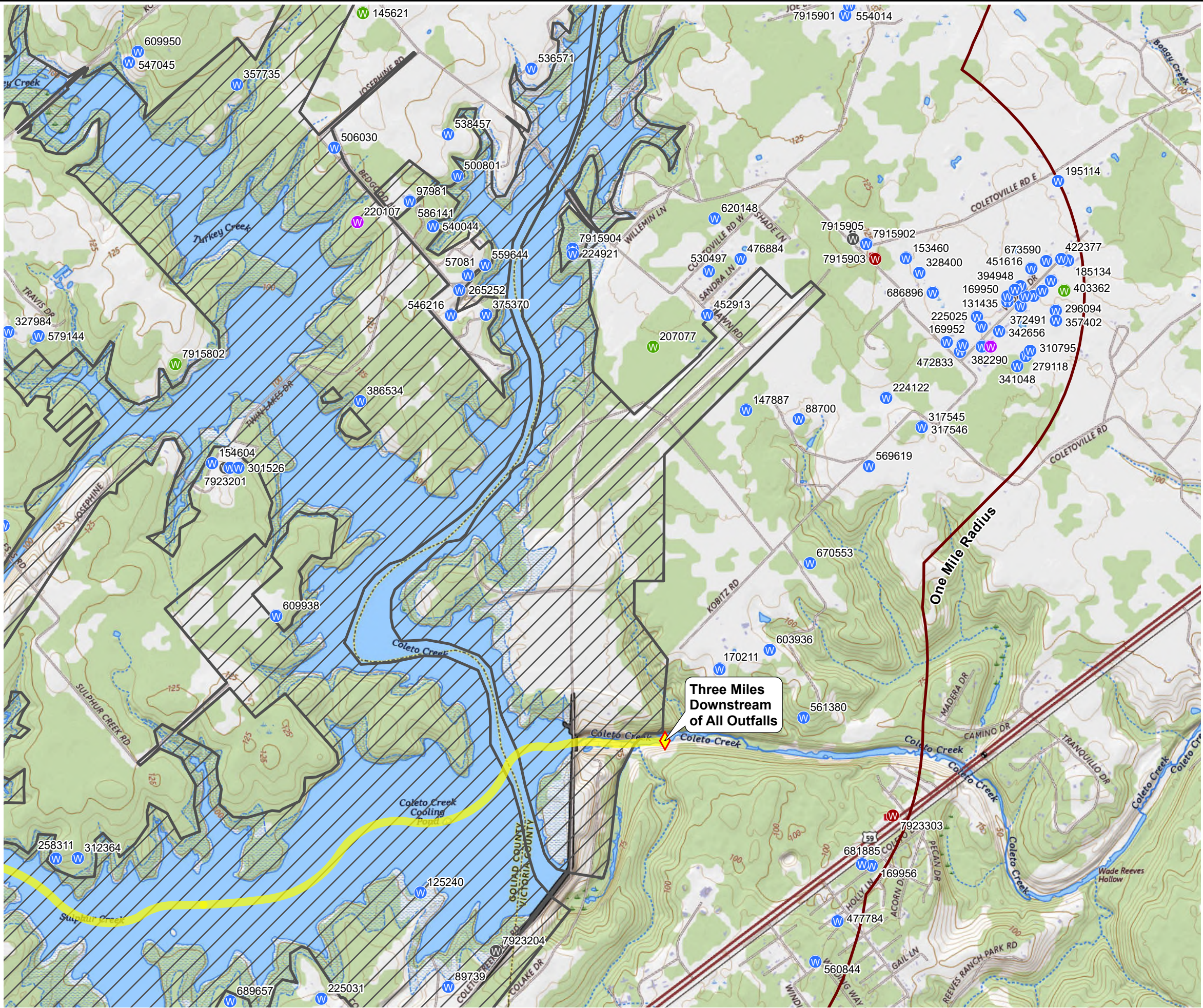
USGS MAP
FIGURE 4 OF 7

DRAWN BY:	S WILSON	SCALE:	TPDES 2025
CHECKED BY:	D KOCUREK	AS NOTED	USGS Map
APPROVED BY:	D KOCUREK	DATE PRINTED:	
DATE:	May 2025	5/19/2025	



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Ph. 409-738-2133

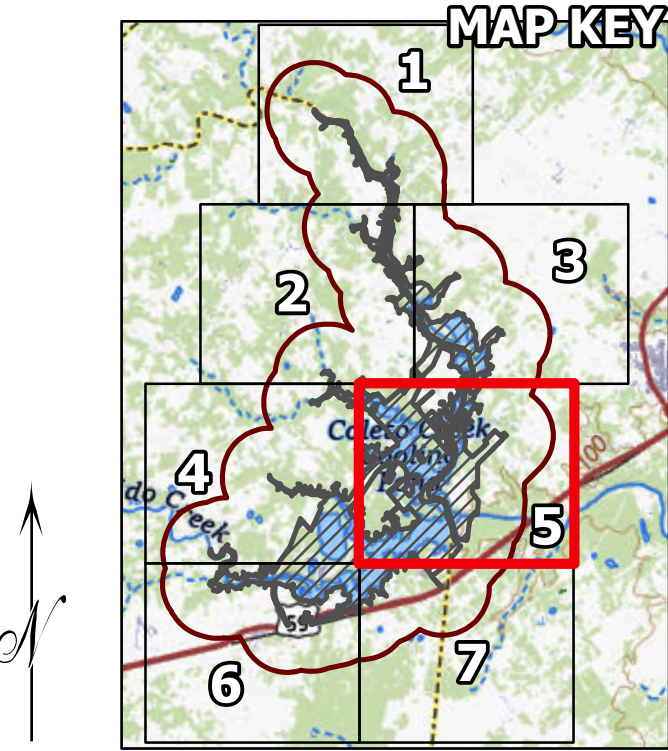
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LEGEND

- Coletto Creek Power, LLC Property Boundary
 - Discharge Route
 - Downstream Marker
 - One Mile Radius
- TWDB Wells
- Domestic / Public Supply
 - Industrial / Monitor
 - Irrigation / Stock
 - Plugged / Destroyed / Unused / Other
 - Rig Supply / Test Well

MAP KEY



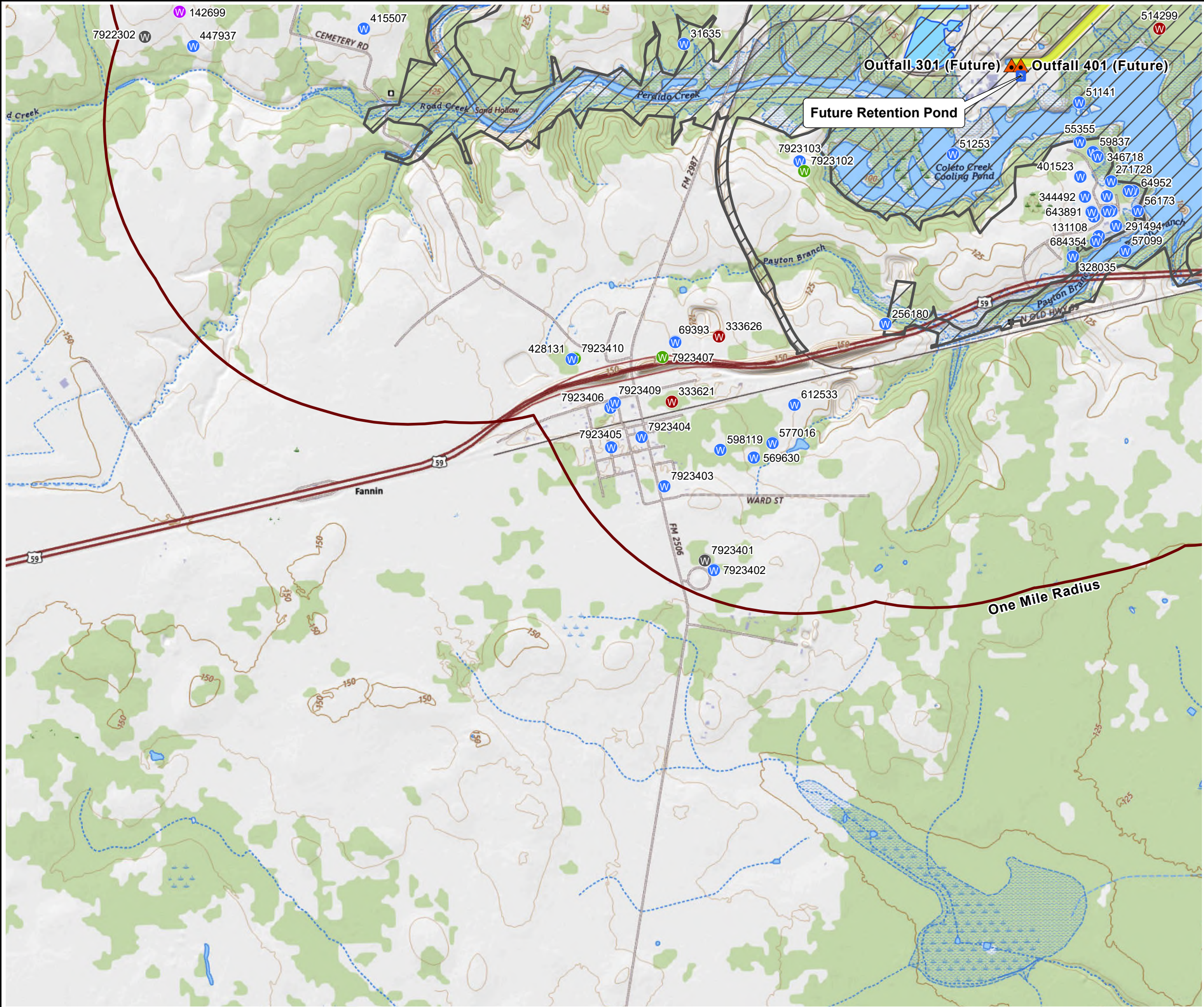
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 1" = 2,000 FEET
 1:24,000

Sources:
 1. TWDB Wells - Texas Water Development Board GIS Data, April 2025.
 2. USGS Topographic Quadrangles 7.5 Minute Series: Schroeder, Fannin, & Hensley Lake, TX 2022

COLETO CREEK POWER, LLC FANNIN, TEXAS WQ0002159000			
USGS MAP FIGURE 5 OF 7			
DRAWN BY:	S WILSON	SCALE:	TPDES 2025
CHECKED BY:	D KOCUREK	AS NOTED	USGS Map
APPROVED BY:	D KOCUREK	DATE PRINTED:	
DATE:	May 2025	5/19/2025	



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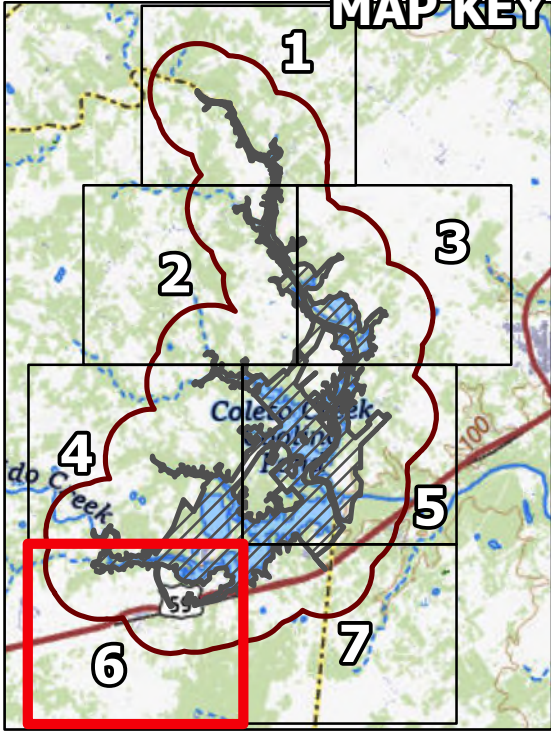
LEGEND

- Coletto Creek Power, LLC Property Boundary
- Future Retention Pond
- Ponds
- Outfall Location
- Discharge Route
- One Mile Radius

TWDB Wells

- Domestic / Public Supply
- Industrial / Monitor
- Irrigation / Stock
- Plugged / Destroyed / Unused / Other
- Rig Supply / Test Well

MAP KEY



0 1,000 2,000
FEET
1" = 2,000 FEET
1:24,000

Sources:
1. TWDB Wells - Texas Water Development Board GIS Data, April 2025.
2. USGS Topographic Quadrangles 7.5 Minute Series: Schroeder, Fannin, & Hensley Lake, TX 2022

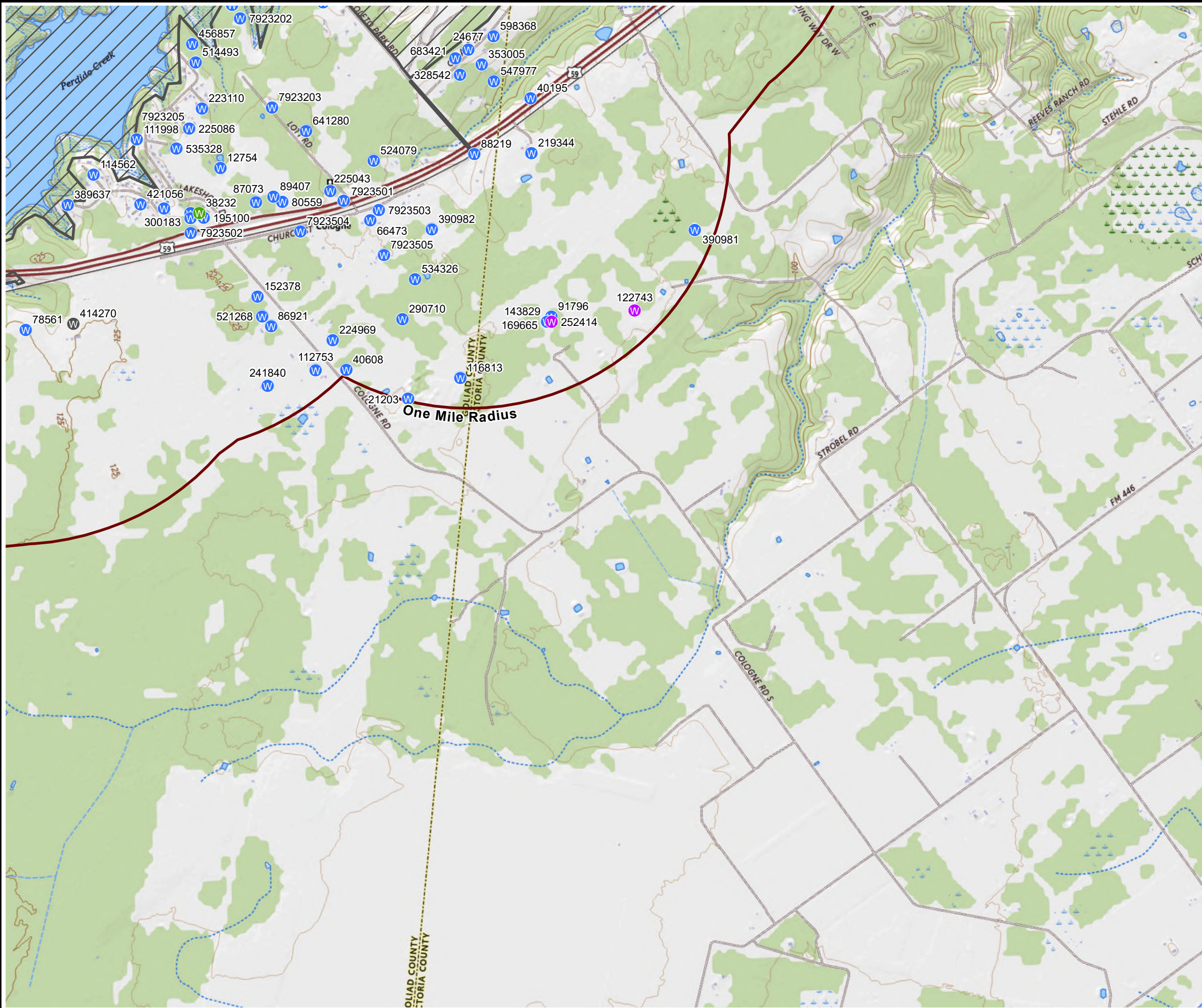
COLETO CREEK POWER, LLC
FANNIN, TEXAS
WQ0002159000

USGS MAP
FIGURE 6 OF 7

DRAWN BY:	S WILSON	SCALE:	TPDES 2025
CHECKED BY:	D KOCUREK	AS NOTED	USGS Map
APPROVED BY:	D KOCUREK	DATE PRINTED:	
DATE:	May 2025	5/19/2025	



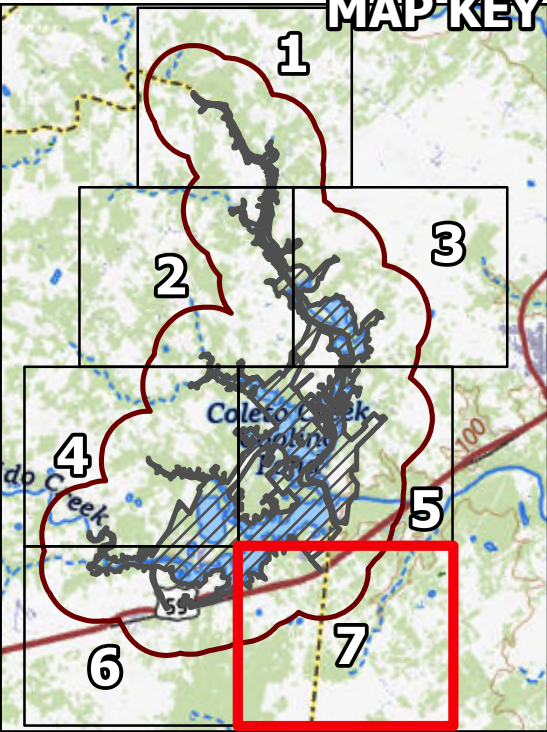
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LEGEND

- Coletto Creek Power, LLC Property Boundary
- One Mile Radius
- TWDB Wells**
 - Domestic / Public Supply
 - Industrial / Monitor
 - Irrigation / Stock
 - Plugged / Destroyed / Unused / Other
 - Rig Supply / Test Well

MAP KEY



0 1,000 2,000
FEET
1" = 2,000 FEET
1:24,000

Sources:
1. TWDB Wells - Texas Water Development Board GIS Data, April 2025.
2. USGS Topographic Quadrangles 7.5 Minute Series: Schroeder, Fannin, & Hensley Lake, TX 2022

COLETO CREEK POWER, LLC
FANNIN, TEXAS
WQ0002159000

USGS MAP
FIGURE 7 OF 7

DRAWN BY:	S WILSON	SCALE:	PROJ. NO.	TPDES 2025
CHECKED BY:	D KOCUREK	AS NOTED		USGS Map
APPROVED BY:	D KOCUREK	DATE PRINTED:		
DATE:	May 2025	5/19/2025		



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Ph. 409-738-2133



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION

TECHNICAL REPORT 1.0

The following information is **required** for all applications for a TLAP or an individual TPDES discharge permit.

For **additional information** or clarification on the requested information, please refer to the [Instructions for Completing the Industrial Wastewater Permit Application](#)¹ available on the TCEQ website. Please contact the Industrial Permits Team at 512-239-4671 with any questions about this form.

If more than one outfall is included in the application, provide applicable information for each individual outfall. **If an item does not apply to the facility, enter N/A** to indicate that the item has been considered. Include separate reports or additional sheets as **clearly cross-referenced attachments** and provide the attachment number in the space provided for the item the attachment addresses.

NOTE: This application is for an industrial wastewater permit only. Additional authorizations from the TCEQ Waste Permits Division or the TCEQ Air Permits Division may be needed.

Item 1. Facility/Site Information (Instructions, Page 39)

- a. Describe the general nature of the business and type(s) of industrial and commercial activities. Include all applicable SIC codes (up to 4).

Coletto Creek Power Station is a steam electric power generation facility. Fuel is used for combustion and conversion to water to steam for turbines, which then generate electricity. Currently, the station uses coal as a fuel source, but plans to convert to natural gas by 2027. Cooling water is passed through condensers in the plant and returned to Coletto Creek Reservoir. The facility has one unit with a nominal net 632-megawatt capacity.

Applicable SIC code is 4911 (Electric Services).

- b. Describe all wastewater-generating processes at the facility.

See Attachment T-1 Facility Description.

- c. Provide a list of raw materials, major intermediates, and final products handled at the facility.

Materials List

Raw Materials	Intermediate Products	Final Products
Coal Natural gas (conversion from coal by 2027)	None	Electric power

Attachment: N/A

¹

https://www.tceq.texas.gov/permitting/wastewater/industrial/TPDES_industrial_wastewater_steps.html

d. Attach a facility map (drawn to scale) with the following information:

- Production areas, maintenance areas, materials-handling areas, waste-disposal areas, and water intake structures.
- The location of each unit of the WWTP including the location of wastewater collection sumps, impoundments, outfalls, and sampling points, if significantly different from outfall locations.

Attachment: A-2 USGS Maps, T-2 Site Arrangement Plot Plan

e. Is this a new permit application for an existing facility?

☐ Yes ☒ No

If **yes**, provide background discussion: N/A

f. Is/will the treatment facility/disposal site be located above the 100-year frequency flood level.

☒ Yes ☐ No

List source(s) used to determine 100-year frequency flood plain: San Antonio River Authority, Preliminary FEMA FIRM

If **no**, provide the elevation of the 100-year frequency flood plain and describe what protective measures are used/proposed to prevent flooding (including tail water and rainfall run-on controls) of the treatment facility and disposal area: N/A

Attachment: N/A

g. For **new** or **major amendment** permit applications, will any construction operations result in a discharge of fill material into a water in the state?

☐ Yes ☒ No ☐ N/A (renewal only)

h. If **yes** to Item 1.g, has the applicant applied for a USACE CWA Chapter 404 Dredge and Fill permit?

☐ Yes ☐ No

If **yes**, provide the permit number: N/A

If **no**, provide an approximate date of application submittal to the USACE: N/A

Item 2. Treatment System (Instructions, Page 40)

a. List any physical, chemical, or biological treatment process(es) used/proposed to treat wastewater at this facility. Include a description of each treatment process, starting with initial treatment and finishing with the outfall/point of disposal.

See Attachment T-1 Facility Description.

b. Attach a flow schematic **with a water balance** showing all sources of water and wastewater flow into the facility, wastewater flow into and from each treatment unit, and wastewater flow to each outfall/point of disposal.

Attachment: T-1 Facility Description, Figure 2 Water Balance Flow Diagram

Item 3. Impoundments (Instructions, Page 40)

Does the facility use or plan to use any wastewater impoundments (e.g., lagoons or ponds?)

☒ Yes ☐ No

If **no**, proceed to Item 4. If **yes**, complete **Item 3.a** for **existing** impoundments and **Items 3.a - 3.e** for **new or proposed** impoundments. **NOTE:** See instructions, Pages 40-42, for additional information on the attachments required by Items 3.a – 3.e.

- a. Complete the table with the following information for each existing, new, or proposed impoundment. Attach additional copies of the Impoundment Information table, if needed.

Use Designation: Indicate the use designation for each impoundment as Treatment (T), Disposal (D), Containment (C), or Evaporation (E).

Associated Outfall Number: Provide an outfall number if a discharge occurs or will occur.

Liner Type: Indicate the liner type as Compacted clay liner (C), In-situ clay liner (I), Synthetic/plastic/rubber liner (S), or Alternate liner (A). **NOTE:** See instructions for further detail on liner specifications. If an alternate liner (A) is selected, include an attachment that provides a description of the alternate liner and any additional technical information necessary for an evaluation.

Leak Detection System: If any leak detection systems are in place/planned, enter Y for yes. Otherwise, enter N for no.

Groundwater Monitoring Wells and Data: If groundwater monitoring wells are in place/planned, enter Y for yes. Otherwise, enter N for no. Attach any existing groundwater monitoring data.

Dimensions: Provide the dimensions, freeboard, surface area, storage capacity of the impoundments, and the maximum depth (not including freeboard). For impoundments with irregular shapes, submit surface area instead of length and width.

Compliance with 40 CFR Part 257, Subpart D: If the impoundment is required to be in compliance with 40 CFR Part 257, Subpart D, enter Y for yes. Otherwise, enter N for no.

Date of Construction: Enter the date construction of the impoundment commenced (mm/dd/yy).

Impoundment Information

Parameter	Pond #1 Primary Ash Pond	Pond #2 Secondary Pond	Pond #3 Coal Pile Retention Pond	Pond #4 Evaporation Pond	Pond #5 Retention Pond (future)
Use Designation: (T) (D) (C) or (E)	T	T	T	E	T
Associated Outfall Number	N/A (Pond No. 2)	201	301	N/A	401 (future)
Liner Type (C) (I) (S) or (A)	C	C	C	C	C
Alt. Liner Attachment Reference	N/A	N/A	N/A	N/A	N/A
Leak Detection System, Y/N	N	N	N	N	N
Groundwater Monitoring Wells, Y/N	Y	Y	Y	Y	N

Parameter	Pond #1 Primary Ash Pond	Pond #2 Secondary Pond	Pond #3 Coal Pile Retention Pond	Pond #4 Evaporation Pond	Pond #5 Retention Pond (future)
Groundwater Monitoring Data Attachment	N/A	N/A	N/A	N/A	N/A
Pond Bottom Located Above The Seasonal High-Water Table, Y/N	Y	Y	Y	Y	Y
Length (ft)	Irregular	Irregular	Irregular	Irregular	140
Width (ft)	Irregular	Irregular	Irregular	Irregular	105
Max Depth From Water Surface (ft), Not Including Freeboard	-	-	-	-	6
Freeboard (ft)	2	2	2	2	2
Surface Area (acres)	190	10	10	100	0.32
Storage Capacity (gallons)	880,000,000	99,000,000	44,000,000	81,500,000	449,000
40 CFR Part 257, Subpart D, Y/N	Y	N*	N	N*	N
Date of Construction	1978	1978	1978	1978	2026 (future)
* Considered to receive only de minimis accounts of coal combustion residuals (CCR) and as such does not meet the definition of a CCR impoundment (it is not designed to hold an accumulation of CCR and liquid). The reference to de minimis CCR is found in the preamble to the 2015 final rule (80 FR 21357).					

Attachment: N/A

The following information (**Items 3.b – 3.e**) is required only for **new or proposed** impoundments.

- b. For new or proposed impoundments, attach any available information on the following items. If attached, check **yes** in the appropriate box. Otherwise, check **no** or **not yet designed**.

1. Liner data

☐ Yes ☐ No ☒ Not yet designed

2. Leak detection system or groundwater monitoring data

☐ Yes ☒ No ☐ Not yet designed

3. Groundwater impacts

☐ Yes ☒ No ☐ Not yet designed

NOTE: Item b.3 is required if the bottom of the pond is not above the seasonal high-water table in the shallowest water-bearing zone.

Attachment: A certification for construction of the liner for the future Retention Pond will be submitted to the TCEQ in accordance with Other Requirement No. 19 of the TPDES permit.

For TLAP applications: Items 3.c – 3.e are not required, continue to Item 4.

- c. Attach a USGS map or a color copy of original quality and scale which accurately locates and identifies all known water supply wells and monitor wells within ½-mile of the impoundments.

Attachment: N/A

- d. Attach copies of State Water Well Reports (e.g., driller's logs, completion data, etc.), and data on depths to groundwater for all known water supply wells including a description of how the depths to groundwater were obtained.

Attachment: N/A

- e. Attach information pertaining to the groundwater, soils, geology, pond liner, etc. used to assess the potential for migration of wastes from the impoundments or the potential for contamination of groundwater or surface water.

Attachment: N/A

Item 4. Outfall/Disposal Method Information (Instructions, Page 42)

Complete the following tables to describe the location and wastewater discharge or disposal operations for each outfall for discharge, and for each point of disposal for TLAP operations.

If there are more outfalls/points of disposal at the facility than the spaces provided, copies of pages 6 and/or numbered accordingly (i.e., page 6a, 6b, etc.) may be used to provide information on the additional outfalls.

For TLAP applications: Indicate the disposal method and each individual irrigation area **I**, evaporation pond **E**, or subsurface drainage system **S** by providing the appropriate letter designation for the disposal method followed by a numerical designation for each disposal area in the space provided for **Outfall** number (e.g. **E1** for evaporation pond 1, **I2** for irrigation area No. 2, etc.).

Outfall Longitude and Latitude

Outfall No.	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
001	28.726033	-97.203758
101	*	*
201	28.724554	-97.204318
301*	28.714934 (estimated)	-97.212579 (estimated)
401 (proposed outfall)	28.714904 (estimated)	-97.211994 (estimated)
* Outfalls 101 and 301 are authorized by the current TPDES permit, but have not yet been constructed/located.		

Outfall Location Description

Outfall No.	Location Description
001	Where once-through cooling water is discharged from the canal that discharges to the Coletto Creek Reservoir
101	The effluent from the treatment facility prior to mixing with other wastestreams
201	The effluent from the Secondary Pond prior to mixing with once-through cooling water and discharge to Coletto Creek Reservoir

Outfall No.	Location Description
301	Effluent from the coal pile retention pond prior to mixing with once-through cooling water and discharge to Coleta Creek Reservoir
401	Effluent from the Retention Pond prior to mixing with once-through cooling water and discharge to Coleta Creek Reservoir

Description of Sampling Point(s) (if different from Outfall location)

Outfall No.	Description of sampling point
001	Same as outfall location
101	Same as outfall location
201	Same as outfall location
301	Same as outfall location
401	Same as outfall location

Outfall Flow Information – Permitted and Proposed

Outfall No.	Permitted Daily Avg Flow (MGD)	Permitted Daily Max Flow (MGD)	Proposed Daily Avg Flow (MGD)	Proposed Daily Max Flow (MGD)	Anticipated Discharge Date (mm/dd/yy)
001	557	560	557	560	N/A
101	0.010	0.012	0.010	0.012	N/A
201	Intermittent and flow-variable	Intermittent and flow-variable	Intermittent and flow-variable	Intermittent and flow-variable	N/A
301	Intermittent and flow-variable	Intermittent and flow-variable	Intermittent and flow-variable	Intermittent and flow-variable	N/A
401	-	-	Intermittent and flow-variable	Intermittent and flow-variable	2027

Outfall Discharge – Method and Measurement

Outfall No.	Pumped Discharge? Y/N	Gravity Discharge? Y/N	Type of Flow Measurement Device Used
001	Y	N	Pump curve chart
101	*	*	*
201	N	Y	Weir
301	*	*	*
401	N	Y	*

* To be determined in final design.

Outfall Discharge – Flow Characteristics

Outfall No.	Intermittent Discharge? Y/N	Continuous Discharge? Y/N	Seasonal Discharge? Y/N	Discharge Duration (hrs/day)	Discharge Duration (days/mo)	Discharge Duration (mo/yr)
001	N	Y	N	24	31	12
101	N	Y	N	24	31	12
201	Y	N	N	Variable	Variable	Variable
301	Y	N	N	Variable	Variable	Variable
401	Y	N	N	Variable	Variable	Variable

Outfall Wastestream Contributions

Outfall No. **001, 101, 201, 301, 401**

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
See Attachment T-1 Facility Description, Table 1 Wastewater Sources by Outfall.		

Attachment: N/A

Item 5. Blowdown and Once-Through Cooling Water Discharges (Instructions, Page 43)

a. Indicate if the facility currently or proposes to:

- ☐ Yes ☒ No Use cooling towers that discharge blowdown or other wastestreams
- ☒ Yes ☐ No Use boilers that discharge blowdown or other wastestreams
- ☒ Yes ☐ No Discharge once-through cooling water

NOTE: If the facility uses or plans to use cooling towers or once-through cooling water, Item 12 is required.

b. If **yes** to any of the above, attach an SDS with the following information for each chemical additive.

- Manufacturers Product Identification Number
- Product use (e.g., biocide, fungicide, corrosion inhibitor, etc.)
- Chemical composition including CASRN for each ingredient
- Classify product as non-persistent, persistent, or bioaccumulative
- Product or active ingredient half-life
- Frequency of product use (e.g., 2 hours/day once every two weeks)
- Product toxicity data specific to fish and aquatic invertebrate organisms
- Concentration of whole product or active ingredient, as appropriate, in wastestream.

In addition to each SDS, attach a summary of the above information for each specific wastestream and the associated chemical additives. Specify which outfalls are affected.

Attachment: T-3 Treatment Chemicals and SDSs

c. Cooling Towers and Boilers

If the facility currently or proposes to use cooling towers or boilers that discharge blowdown or other wastestreams to the outfall(s), complete the following table.

Cooling Towers and Boilers

Type of Unit	Number of Units	Daily Avg Blowdown (gallons/day)	Daily Max Blowdown (gallons/day)
Cooling Towers	0	N/A	N/A
Boilers	1	10,000	12,000

Item 6. Stormwater Management (Instructions, Page 44)

Will any existing/proposed outfalls discharge stormwater associated with industrial activities, as defined at 40 CFR § 122.26(b)(14), commingled with any other wastestream?

☒ Yes ☐ No

If **yes**, briefly describe the industrial processes and activities that occur outdoors or in a manner which may result in exposure of the activities or materials to stormwater: See Attachment T-1 Facility Description.

Item 7. Domestic Sewage, Sewage Sludge, and Septage Management and Disposal (Instructions, Page 44)

Domestic Sewage - Waste and wastewater from humans or household operations that is discharged to a wastewater collection system or otherwise enters a treatment works.

- a. Check the box next to the appropriate method of domestic sewage and domestic sewage sludge treatment or disposal. Complete Worksheet 5.0 or Item 7.b if directed to do so.
- ☐ Domestic sewage is routed (i.e., connected to or transported to) to a WWTP permitted to receive domestic sewage for treatment, disposal, or both. Complete Item 7.b.
 - ☒ Domestic sewage disposed of by an on-site septic tank and drainfield system. Complete Item 7.b. (*Note: Aerobic septic system with spray field*)
 - ☐ Domestic and industrial treatment sludge ARE commingled prior to use or disposal.
 - ☐ Industrial wastewater and domestic sewage are treated separately, and the respective sludge IS NOT commingled prior to sludge use or disposal. Complete Worksheet 5.0.
 - ☐ Facility is a POTW. Complete Worksheet 5.0.
 - ☐ Domestic sewage is not generated on-site.
 - ☐ Other (e.g., portable toilets), specify and Complete Item 7.b: N/A
- b. Provide the name and TCEQ, NPDES, or TPDES Permit No. of the waste-disposal facility which receives the domestic sewage/septage. If hauled by motorized vehicle, provide the name and TCEQ Registration No. of the hauler.

Domestic Sewage Plant/Hauler Name

Plant/Hauler Name	Permit/Registration No.
N/A - Not related to amendment request	

Item 8. Improvements or Compliance/Enforcement Requirements (Instructions, Page 45)

- a. Is the permittee currently required to meet any implementation schedule for compliance or enforcement?
- ☒ Yes ☐ No
- b. Has the permittee completed or planned for any improvements or construction projects?
- ☒ Yes ☐ No

- c. If **yes** to either 8.a or 8.b, provide a brief summary of the requirements and a status update: See Other Requirement No. 26 in TPDES permit.

Item 9. Toxicity Testing (Instructions, Page 45)

Have any biological tests for acute or chronic toxicity been made on any of the discharges or on a receiving water in relation to the discharge within the last three years?

☒ Yes ☐ No

If **yes**, identify the tests and describe their purposes: Routine biomonitoring is conducted for Outfall 001 as specified in the current TPDES permit.

Additionally, attach a copy of all tests performed which **have not** been submitted to the TCEQ or EPA. **Attachment:** N/A

Item 10. Off-Site/Third Party Wastes (Instructions, Page 45)

- a. Does or will the facility receive wastes from off-site sources for treatment at the facility, disposal on-site via land application, or discharge via a permitted outfall?

☐ Yes ☒ No

If **yes**, provide responses to Items 10.b through 10.d below.

If **no**, proceed to Item 11.

- b. Attach the following information to the application:

- List of wastes received (including volumes, characterization, and capability with on-site wastes).
- Identify the sources of wastes received (including the legal name and addresses of the generators).
- Description of the relationship of waste source(s) with the facility's activities.

Attachment: N/A

- c. Is or will wastewater from another TCEQ, NPDES, or TPDES permitted facility commingled with this facility's wastewater after final treatment and prior to discharge via the final outfall/point of disposal?

☐ Yes ☐ No

If **yes**, provide the name, address, and TCEQ, NPDES, or TPDES permit number of the contributing facility and a copy of any agreements or contracts relating to this activity.

Attachment: N/A

- d. Is this facility a POTW that accepts/will accept process wastewater from any SIU and has/is required to have an approved pretreatment program under the NPDES/TPDES program?

☐ Yes ☐ No

If **yes**, **Worksheet 6.0** of this application **is required**.

Item 11. Radioactive Materials (Instructions, Page 46)

- a. Are/will radioactive materials be mined, used, stored, or processed at this facility?

☐ Yes ☒ No

If **yes**, use the following table to provide the results of one analysis of the effluent for all radioactive materials that may be present. Provide results in pCi/L.

Radioactive Materials Mined, Used, Stored, or Processed

Radioactive Material Name	Concentration (pCi/L)
N/A	

- b. Does the applicant or anyone at the facility have any knowledge or reason to believe that radioactive materials may be present in the discharge, including naturally occurring radioactive materials in the source waters or on the facility property?

☐ Yes ☒ No

If **yes**, use the following table to provide the results of one analysis of the effluent for all radioactive materials that may be present. Provide results in pCi/L. Do not include information provided in response to Item 11.a.

Radioactive Materials Present in the Discharge

Radioactive Material Name	Concentration (pCi/L)
N/A	

Item 12. Cooling Water (Instructions, Page 46)

- a. Does the facility use or propose to use water for cooling purposes?

☒ Yes
☐ No
☐ Decommissioned: N/A
☐ To Be Decommissioned: N/A

If **yes**, complete Items 12.b thru 12.f. If **no**, stop here.

If **decommissioned**, provide the date operation ceased and stop here.

If to **be decommissioned**, provide the date operation is anticipated to cease and stop here.

- b. Cooling water is/will be obtained from a groundwater source (e.g., on-site well).

☐ Yes ☒ No

If **yes**, stop here. If **no**, continue.

c. Cooling Water Supplier

1. Provide the name of the owner(s) and operator(s) for the CWIS that supplies or will supply water for cooling purposes to the facility.

Cooling Water Intake Structure(s) Owner(s) and Operator(s)

CWIS ID				
Owner				
Operator				
N/A - Not related to permit amendment.				

2. Cooling water is/will be obtained from a Public Water Supplier (PWS)

☐ No ☐ Yes; PWS No.: N/A

If **no**, continue. If **yes**, provide the PWS Registration No. and stop here.

3. Cooling water is/will be obtained from a reclaimed water source?

☐ No ☐ Yes; Auth No.: N/A

If **no**, continue. If **yes**, provide the Reuse Authorization No. and stop here.

4. Cooling water is/will be obtained from an Independent Supplier

☐ No ☐ Yes; AIF: N/A

If **no**, proceed to Item 12.d. If **yes**, provide the actual intake flow of the Independent Supplier's CWIS that is/will be used to provide water for cooling purposes and proceed.

d. 316(b) General Criteria

1. The CWIS(s) used to provide water for cooling purposes to the facility has or will have a cumulative design intake flow of 2 MGD or greater.

☐ Yes ☐ No

2. At least 25% of the total water withdrawn by the CWIS(s) is/will be used at the facility exclusively for cooling purposes on an annual average basis.

☐ Yes ☐ No

3. The CWIS(s) withdraw(s)/propose(s) to withdraw water for cooling purposes from surface waters that meet the definition of Waters of the United States in *40 CFR § 122.2*.

☐ Yes ☐ No. Explanation: N/A

If **no**, provide an explanation of how the waterbody does not meet the definition of Waters of the United States in *40 CFR § 122.2*.

If **yes** to all three questions in Item 12.d, the facility **meets** the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA. Proceed to **Item 12.f**.

If **no** to any of the questions in Item 12.d, the facility **does not meet** the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA; however, a determination is required based upon BPJ. Proceed to **Item 12.e**.

- e. The facility does not meet the minimum requirements to be subject to the fill requirements of Section 316(b) **and uses/proposes to use cooling towers.**

☐ Yes ☐ No

If **yes**, stop here. If **no**, complete Worksheet 11.0, Items 1.a, 1.b.1-3 and 6, 2.b.1, and 3.a to allow for a determination based upon BPJ.

f. Oil and Gas Exploration and Production

1. The facility is subject to requirements at 40 CFR Part 435, Subparts A or D.

☐ Yes ☐ No

If **yes**, continue. If **no**, skip to Item 12.g.

2. The facility is an existing facility as defined at 40 CFR § 125.92(k) or a new unit at an existing facility as defined at 40 CFR § 125.92(u).

☐ Yes ☐ No

If **yes**, complete Worksheet 11.0, Items 1.a, 1.b.1-3 and 6, 2.b.1, and 3.a to allow for a determination based upon BPJ. If **no**, skip to Item 12.g.3.

g. Compliance Phase and Track Selection

1. Phase I – New facility subject to 40 CFR Part 125, Subpart I

☐ Yes ☐ No

If **yes**, check the box next to the compliance track selection, attach the requested information, and complete Worksheet 11.0, Items 2 and 3, and Worksheet 11.2.

☐ Track I – AIF greater than 2 MGD, but less than 10 MGD

- Attach information required by 40 CFR §§ 125.86(b)(2)-(4).

☐ Track I – AIF greater than 10 MGD

- Attach information required by 40 CFR § 125.86(b).

☐ Track II

- Attach information required by 40 CFR § 125.86(c).

Attachment: N/A

2. Phase II – Existing facility subject to 40 CFR Part 125, Subpart J

☐ Yes ☐ No

If **yes**, complete Worksheets 11.0 through 11.3, as applicable.

3. Phase III – New facility subject to 40 CFR Part 125, Subpart N

☐ Yes ☐ No

If **yes**, check the box next to the compliance track selection and provide the requested information.

☐ Track I – Fixed facility

- Attach information required by 40 CFR § 125.136(b) and complete Worksheet

11.0, Items 2 and 3, and Worksheet 11.2.

- ☐ Track I – Not a fixed facility
 - Attach information required by 40 CFR § 125.136(b) and complete Worksheet 11.0, Item 2 (except CWIS latitude/longitude under Item 2.a).
- ☐ Track II – Fixed facility
 - Attach information required by 40 CFR § 125.136(c) and complete Worksheet 11.0, Items 2 and 3.

Attachment: N/A

Item 13. Permit Change Requests (Instructions, Page 48)

This item is only applicable to existing permitted facilities.

a. Is the facility requesting a **major amendment** of an existing permit?

☒ Yes ☐ No

If **yes**, list each request individually and provide the following information: 1) detailed information regarding the scope of each request and 2) a justification for each request. Attach any supplemental information or additional data to support each request.

1. Add a new proposed internal Outfall 401 for the discharge of low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater.
2. Add a new proposed Retention Pond to the list of impoundments in Other Requirement No. 17.

b. Is the facility requesting any **minor amendments** to the permit?

☒ Yes ☐ No

If **yes**, list and describe each change individually.

Change the label of the Secondary Ash Pond to the Secondary Pond on pages 2b and 17 of the permit.

c. Is the facility requesting any **minor modifications** to the permit?

☐ Yes ☒ No

If **yes**, list and describe each change individually.

N/A

INDUSTRIAL WASTEWATER PERMIT APPLICATION

WORKSHEET 1.0: EPA CATEGORICAL EFFLUENT GUIDELINES

This worksheet **is required** for all applications for TPDES permits for discharges of wastewaters subject to EPA categorical effluent limitation guidelines (ELGs).

Item 1. Categorical Industries (Instructions, Page 53)

Is this facility subject to any 40 CFR categorical ELGs outlined on page 53 of the instructions?

☒ Yes ☐ No

If **no**, this worksheet is not required. If **yes**, provide the appropriate information below.

40 CFR Effluent Guideline

Industry	40 CFR Part
Steam Electric Power Generating	423

Item 2. Production/Process Data (Instructions, Page 54)

NOTE: For all TPDES permit applications requesting individual permit coverage for discharges of oil and gas exploration and production wastewater (discharges into or adjacent to water in the state, falling under the Oil and Gas Extraction Effluent Guidelines – 40 CFR Part 435), see Worksheet 12.0, Item 2 instead.

a. Production Data

Provide appropriate data for effluent guidelines with production-based effluent limitations.

Production Data

Subcategory	Actual Quantity/Day	Design Quantity/Day	Units
N/A			

b. Organic Chemicals, Plastics, and Synthetic Fibers Manufacturing Data (40 CFR Part 414)

Provide each applicable subpart and the percent of total production. Provide data for metal-bearing and cyanide-bearing wastestreams, as required by *40 CFR Part 414, Appendices A and B*.

Percentage of Total Production

Subcategory	Percent of Total Production	Appendix A and B - Metals	Appendix A - Cyanide
N/A			

c. Refineries (40 CFR Part 419)

Provide the applicable subcategory and a brief justification.

N/A

Item 3. Process/Non-Process Wastewater Flows (Instructions, Page 54)

Provide a breakdown of wastewater flow(s) generated by the facility, including both process and non-process wastewater flow(s). Specify which wastewater flows are to be authorized for discharge under this permit and the disposal practices for wastewater flows, excluding domestic, which are not to be authorized for discharge under this permit.

See Attachment T-1 Facility Description, Table 1 Wastewater Flows by Outfall.

Item 4. New Source Determination (Instructions, Page 54)

Provide a list of all wastewater-generating processes subject to EPA categorical ELGs, identify the appropriate guideline Part and Subpart, and provide the date the process/construction commenced.

Wastewater Generating Processes Subject to Effluent Guidelines

Process	EPA Guideline Part	EPA Guideline Subpart	Date Process/Construction Commenced
Once through cooling water	423	N/A	1978
Fly ash and bottom ash transport water	423	N/A	1978
Low volume wastes	423	N/A	1978
Metal cleaning waste	423	N/A	1978
Coal pile runoff	423	N/A	1978

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 4.0: RECEIVING WATERS

This worksheet is **required** for all TPDES permit applications.

Item 1. Domestic Drinking Water Supply (Instructions, Page 80)

- a. There is a surface water intake for domestic drinking water supply located within 5 (five) miles downstream from the point/proposed point of discharge.

☐ Yes ☒ No

If **no**, stop here and proceed to Item 2. If **yes**, provide the following information:

1. The legal name of the owner of the drinking water supply intake: N/A
2. The distance and direction from the outfall to the drinking water supply intake: N/A

- b. Locate and identify the intake on the USGS 7.5-minute topographic map provided for Administrative Report 1.0.

☐ Check this box to confirm the above requested information is provided.

Item 2. Discharge Into Tidally Influenced Waters (Instructions, Page 80)

If the discharge is to tidally influenced waters, complete this section. Otherwise, proceed to Item 3.

- a. Width of the receiving water at the outfall: N/A feet

- b. Are there oyster reefs in the vicinity of the discharge?

☐ Yes ☐ No

If **yes**, provide the distance and direction from the outfall(s) to the oyster reefs: N/A

- c. Are there sea grasses within the vicinity of the point of discharge?

☐ Yes ☐ No

If **yes**, provide the distance and direction from the outfall(s) to the grasses: N/A

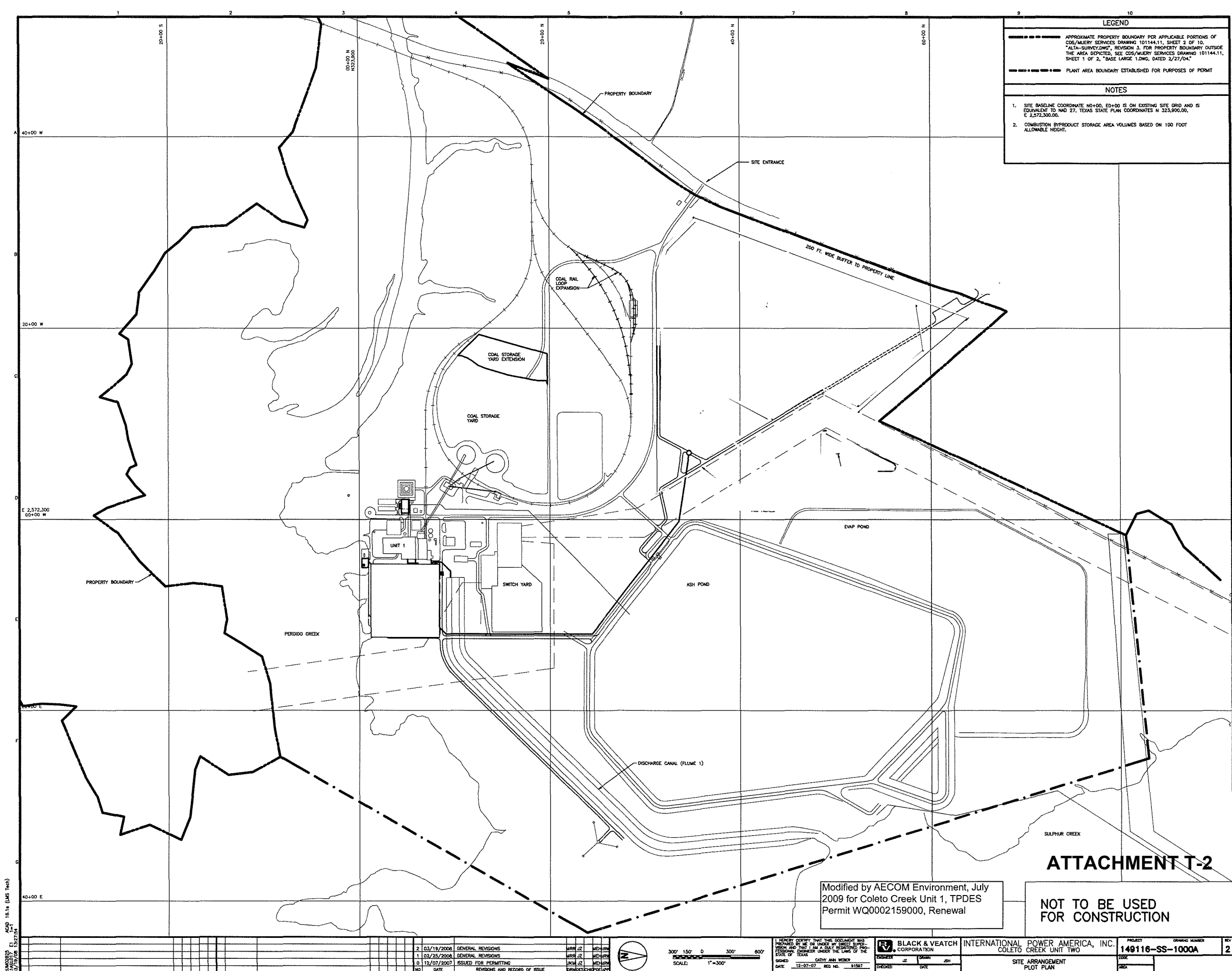
Item 3. Classified Segment (Instructions, Page 80)

The discharge is/will be directly into (or within 300 feet of) a classified segment.

☒ Yes ☐ No

If **yes**, stop here and do not complete Items 4 and 5 of this worksheet or Worksheet 4.1.

If **no**, complete Items 4 and 5 and Worksheet 4.1 may be required.

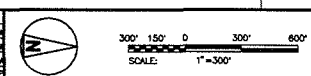


ATTACHMENT T-2

NOT TO BE USED
FOR CONSTRUCTION

SCALE: 1"=300'

NO.	DATE	REVISIONS AND RECORD OF ISSUE
2	03/19/2008	GENERAL REVISIONS
1	02/25/2008	GENERAL REVISIONS
0	12/07/2007	ISSUED FOR PERMITTING



I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A QUALIFIED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF TEXAS.

SIGNED: CARY ANN WEBER
DATE: 12-07-07 REG. NO.: 81592

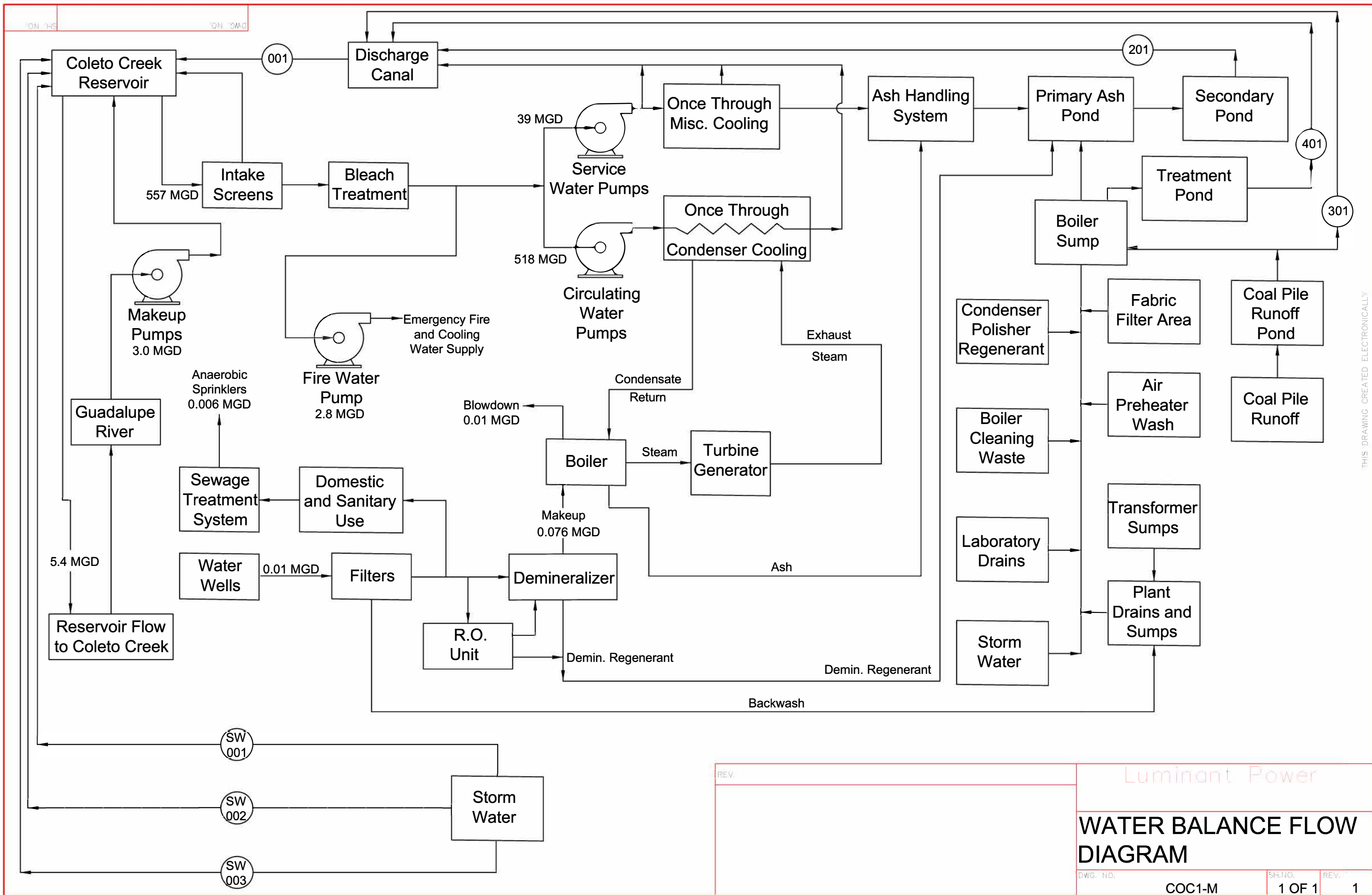
BLACK & VEATCH
CORPORATION

INTERNATIONAL POWER AMERICA, INC.
COLETO CREEK UNIT TWO

PROJECT: 149116-SS-1000A
DRAWING NUMBER: 2
SITE ARRANGEMENT PLOT PLAN

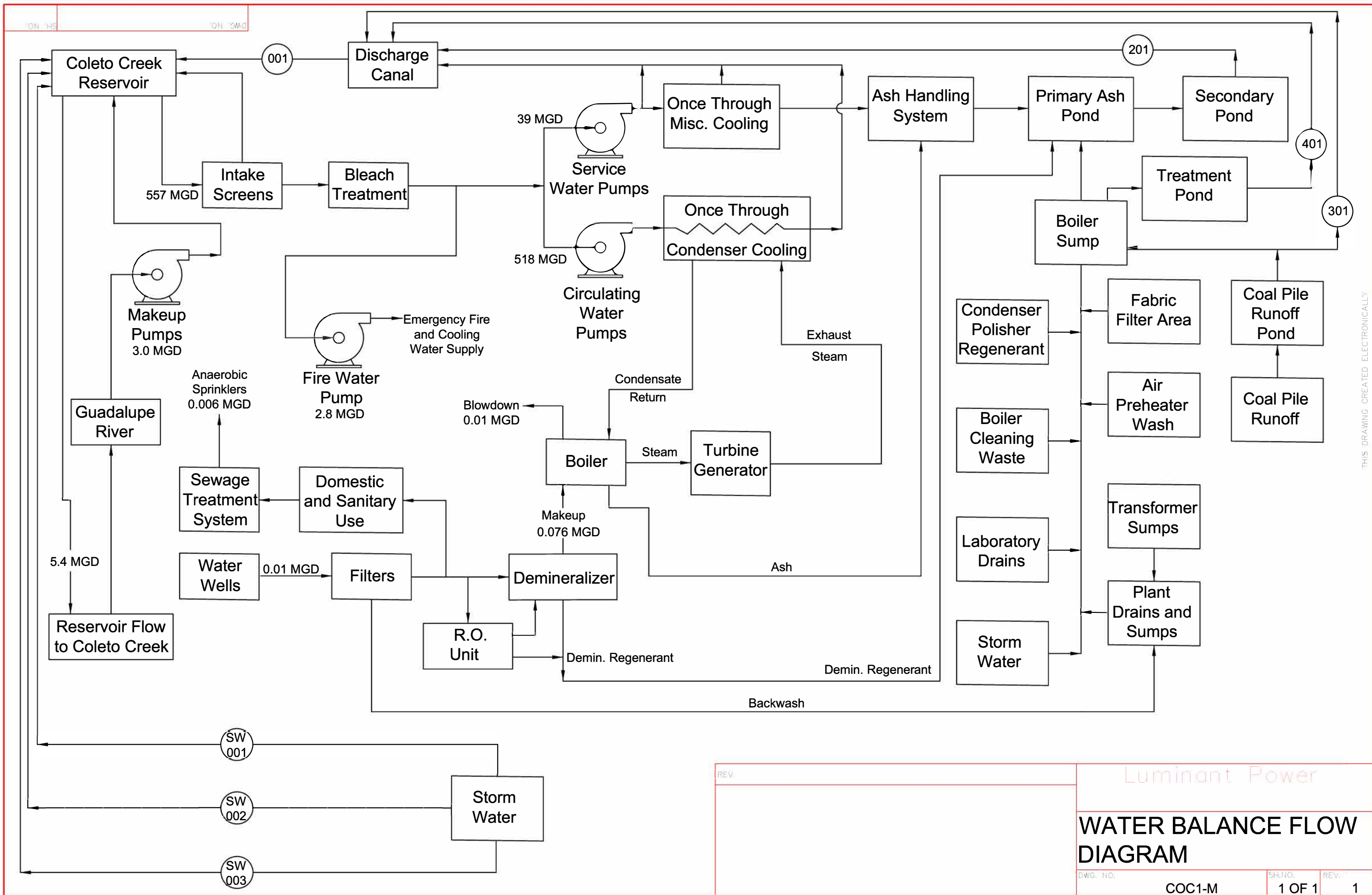
Table 1. Wastewater Sources by Outfall

Outfall		Wastewater Sources	Applicable Effluent Guideline 40 CFR 423	Monthly Average (MGD)
001	001	Once-through cooling water (condenser cooling water and auxiliary cooling water) from Unit 1	423.12(b)(1) 423.12(b)(6) 423.13(b)(1)	557
	101	Treated domestic wastewater	N/A	0.01
	201	Fly ash transport water <i>(no longer generated)</i>	N/A	Intermittent and flow-variable
		Bottom ash transport water	423.12(b)(1) 423.12(b)(4) 423.13(k)(1)-(2)	
		Low volume waste sources	423.12(b)(1) 423.12(b)(3)	
		Metal cleaning waste	423.12(b)(1) 423.12(b)(5)	
		Stormwater	N/A	
	301	Coal pile runoff	423.12(b)(1) 423.12(b)(9)-(10)	Intermittent and flow-variable
		Treated domestic wastewater (Outfall 101)	N/A	
	401 (proposed)	Low volume waste sources	423.12(b)(1) 423.12(b)(3)	Intermittent and flow-variable
		Metal cleaning waste	423.12(b)(1) 423.12(b)(5)	
		Coal pile runoff	423.12(b)(1) 423.12(b)(9)-(10)	
		Stormwater	N/A	
MGD - million gallons per day				



THIS DRAWING CREATED ELECTRONICALLY

REV.		Luminant Power	
		WATER BALANCE FLOW DIAGRAM	
DWG. NO.		COC1-M	REV.
		1 OF 1	1



THIS DRAWING CREATED ELECTRONICALLY

REV.		Luminant Power	
		WATER BALANCE FLOW DIAGRAM	
DWG. NO.		SH. NO.	REV.
COC1-M		1 OF 1	1

ATTACHMENT T-0
COLETO CREEK POWER STATION
AMENDMENT REQUESTS
TPDES PERMIT No. WQ0002159000

1. Add Internal Outfall 401.....	2
2. Add Retention Pond to Other Requirement No. 17	2
3. Label Change	2

COLETO CREEK POWER STATION AMENDMENT REQUESTS TPDES PERMIT NO. WQ0002159000

Coletto Creek Power, LLC requests the following amendments to TPDES Permit No. WQ0002159000 for the Coletto Creek Power Station.

1. Add a new proposed internal Outfall 401 for the discharge of low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater.
2. Add a new proposed Retention Pond to the list of impoundments in Other Requirement No. 17.
3. Change the label for the Secondary Pond.

Further discussion of the requested amendments is provided in the following sections.

1. ADD INTERNAL OUTFALL 401

Coletto Creek Power requests the addition of new proposed internal Outfall 401 to authorize the discharge of low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater. Outfall 401 is one of the changes planned at the facility as part of its conversion from coal to natural gas for the production of electricity.

Low volume wastes, metal cleaning wastes, and some stormwater are routed to the boiler sump. The boiler sump currently discharges to the Primary Ash Pond, which flows to the Secondary Pond, which flows to internal Outfall 201. Both ponds are scheduled to be closed and wastewaters from the boiler sump will be rerouted to a new proposed Retention Pond. Outfall 401 will be the discharge from the Retention Pond to Flume 1, which flows to final Outfall 001.

Coal pile runoff will be rerouted to discharge into Flume 1 via Outfall 301. Rerouting of water from the Coal Pile Retention Pond will also include the option to discharge to the boiler sump with eventual discharge via Outfall 401.

Outfall 201 will be retained in the TPDES permit until closure of the ponds and when all discharges to the outfall have ceased.

2. ADD RETENTION POND TO OTHER REQUIREMENT NO. 17

Coletto Creek Power requests that the new proposed Retention Pond be added to the list of facility impoundments in Other Requirement No. 17 in the TPDES permit.

3. LABEL CHANGE

The label for the Secondary Ash Pond should be changed to the Secondary Pond on page 2b (Outfall 201) and page 17 (Other Requirement No. 17).

ATTACHMENT T-1

COLETO CREEK POWER, LLC COLETO CREEK POWER STATION FACILITY DESCRIPTION

SITE OPERATIONS.....	2
COOLING WATER SYSTEM	2
OUTFALLS.....	3
WASTEWATER SOURCES.....	3
Once-through Cooling Water	3
Low Pressure Service Water	4
Coal Storage and Handling System.....	4
Ash Handling System.....	4
Evaporation Pond	4
Boiler Water Circuit	5
Low Volume Waste Processes	5
Domestic Wastewater.....	6
Stormwater	6
EFFLUENT GUIDELINES.....	6

TABLE 1. WASTEWATER SOURCES BY OUTFALL

FIGURE 1. COLETO CREEK RESERVOIR CONFIGURATION

FIGURE 2. WATER BALANCE FLOW DIAGRAM

COLETO CREEK POWER, LLC

COLETO CREEK POWER STATION

FACILITY DESCRIPTION

This document describes the Coletto Creek Power Station near Fannin, Texas in relation to its wastewater discharge TPDES Permit No. WQ0002159000. The station is located on approximately 8,000 acres on FM 2987.

This description includes outfall locations and wastewaters discharged, wastewater and stormwater management, and applicability of national effluent guidelines.

SITE OPERATIONS

Coletto Creek Power Station currently uses coal to produce electricity, but expects to complete conversion to natural gas by 2027. The generation capacity of Coletto Creek Unit One (CC1) is a nominal net 632 megawatts.

Below is a summary of changes that are planned for the facility. Additional detail is provided in the sections that follow.

Planned facility changes

- Conversion of fuel source from coal to natural gas
- After conversion to natural gas, rerouting of some wastewaters to a new Retention Pond, with discharge via new Outfall 401

COOLING WATER SYSTEM

Coletto Creek Power, LLC owns the cooling water intake structure (CWIS) and wastewater treatment system that services CC1. CC1 uses water from Coletto Creek Reservoir for cooling. Coletto Creek Reservoir was completed in 1980 for use as an industrial cooling impoundment and covers approximately 3,100 acres. A dam with a spillway to Coletto Creek is located on the southeast side of the Reservoir. The Reservoir receives drainage from four major creeks; they are from south to north, Perdido Creek, Sulphur Creek, Turkey Creek, and Coletto Creek (see Figure 1). The drainage area for the Reservoir is approximately 507 square miles, and the average depth of the Reservoir is about eleven feet. The Coletto Creek Power Station is located on the southwestern side of the Reservoir between the Perdido Creek and Turkey Creek arms. The Coletto Creek Reservoir dam and park facilities are maintained by the Guadalupe- Blanco River Authority (GBRA).

Coletto Creek Power, LLC owns and operates the CWIS. The facility is subject to the requirements of Section 316(b) of the Clean Water Act (CWA) because the CWIS withdraws more than 2 million gallons per day (MGD) and more than 25% of the water withdrawn is used for cooling purposes within the facility. Coletto Creek Reservoir is a cooling water impoundment and the TCEQ has determined that the facility's CWIS is operated in a manner consistent with a closed-cycle recirculating system

(CCRS), as defined at 40 CFR 125.92(c). The operation of a CCRS reduces withdrawals from surface waters effectively, thereby reducing the impingement and entrainment of aquatic organisms. The TCEQ has determined that the facility meets Best Technology Available (BTA) standards.

OUTFALLS

There are four outfalls (001, 101, 201, 301) authorized by the current TPDES permit. Outfall 401 is a new proposed outfall. Sources of wastewater for each outfall are listed in Table 1. A wastewater flow diagram is provided in Figure 2.

Outfall 001 is the primary outfall, used to discharge once-through cooling water from the condenser and miscellaneous heat exchangers. Outfall 001 flows from the Flume 1 discharge canal to the Sulphur Creek arm of Coletto Creek Reservoir.

Outfall 101 is authorized to discharge treated domestic (sanitary) wastewater. It is currently inactive, but is being retained in the TPDES permit should it be reactivated.

Outfall 201 is authorized to discharge bottom ash transport water, low volume waste, metal cleaning waste, and stormwater. Fly ash transport water, which was previously discharged through Outfall 201, is no longer generated. Outfall 201 receives effluent from the Secondary Pond and discharges into the Flume 1 discharge canal where it commingles with other wastewaters discharged via Outfall 001.

Outfall 301 was added to the TPDES permit in 2023 for the discharge of coal pile runoff and treated domestic wastewater (via Outfall 101), but it has not been constructed yet. The facility plans to construct Outfall 301 where it will discharge into the Flume 1 discharge canal.

Outfall 401 is a proposed outfall that will discharge low volume waste, metal cleaning waste, coal pile runoff, and stormwater. These wastewaters will be routed to a proposed Retention Pond. Outfall 401 will be the discharge from the Retention Pond into the Flume 1 discharge canal.

WASTEWATER SOURCES

Once-through Cooling Water

Once-through cooling water is used to cool and condense steam for reuse, and circulates continuously when the plant is generating electricity. Water is pumped from the Perdido Creek arm of the Reservoir into the condensers after passing through traveling intake screens. The circulating flow is periodically chlorinated upstream of the condensers to control biofouling.

Once-through cooling water is discharged from the condenser at the head of Flume 1, which continues approximately one-mile before entering the Sulphur Creek arm of the Reservoir (see Figure 1). The TPDES monitoring location for Outfall 001 is in Flume 1 approximately 200 feet upstream of the confluence with Sulphur Creek. Dike 1 on the Sulphur Creek arm prevents the cooling water from entering the main part of the reservoir at that location. Flume 2 routes the cooling water to the Turkey Creek arm of the Reservoir. Dike 2 on the Turkey Creek arm regulates the upstream level and returns

the cooling water to the main body of the Coletto Creek Reservoir. Thermal load is rejected from the water during this travel by evaporative cooling.

Low Pressure Service Water

The low pressure service water system provides cooling for miscellaneous heat exchangers in the plant and also supplies the fire protection system. The system is fed by pumps located at the intake along with the main circulating pumps behind the intake screens. The wastewater is either discharged with the circulating water from the condenser to Outfall 001, or is used in the ash handling system with eventual discharge to Outfall 201.

Coal Storage and Handling System

Coal is stored in an on-site pile and runoff from the coal pile storage area is contained in a 10-acre Coal Pile Retention Pond. Water from coal storage area dust suppression also drains to the pond. Although much of the water evaporates in the Coal Pile Retention Pond, water may be routed from the pond to Outfall 301 or routed to the boiler sump where it would commingle with other wastewaters that will discharge through Outfall 401.

Ash Handling System

Bottom ash is removed from the boiler in an enclosed wet system. Bottom ash, economizer ash, and mill rejects are hydraulically sluiced to the 190-acre Primary Ash Pond. Solids settle in this pond. Water overflows a weir into a 10-acre Secondary Pond for final settling. The Secondary Pond effluent is routed to Outfall 201. Makeup water for ash transport comes from the low pressure service water system.

Fly ash is pneumatically conveyed to silos from where it can be loaded into trucks and sold for beneficial reuse. Bottom ash may also be dewatered and trucked off-site for beneficial reuse.

The Primary Ash Pond is scheduled for closure by October 2028. Dewatering and consolidation activities are expected to begin in 2025. The station will continue to operate during closure activities. Flows to the Primary Ash Pond will eventually cease. Outfall 201 will remain in use until the Primary Ash Pond and Secondary Pond are completely dewatered and closed.

Evaporation Pond

The Evaporation Pond is currently inactive with no wastewaters routed to it.

Boiler Water Circuit

The boiler water circuit consists of high purity, chemically treated water that circulates in a closed loop in the steam cycle. To maintain purity, a portion is periodically discharged (boiler blowdown). The boiler is periodically drained for maintenance, and the drainage is routed through the plant drains.

The boiler sump receives boiler blowdown, boiler cleaning wastes, filter backwash from well water treatment, other wastewaters from condenser polisher regenerant, fabric filter area, air preheater wash, transformer sumps, and plant drains and sumps, and some stormwater.

The boiler sump is currently pumped to the Primary Ash Pond. The boiler sump discharge will be rerouted to a new Retention Pond east of Unit 1. Proposed Outfall 401 will be the discharge from the Retention Pond into Flume 1. The rerouting of the boiler sump discharge is planned during the station fuel conversion outage and expected to be completed by 2027. Along with these changes, rerouting of water from the Coal Pile Retention Pond will include the option to discharge to the boiler sump with eventual discharge via Outfall 401.

Low Volume Waste Processes

Low volume wastes include, but are not limited to, floor drainage (washdown, runoff), laboratory and sampling streams, boiler blowdown, and water treatment system wastewater. All of the low volume wastes are currently authorized for discharge through Outfall 201.

Because the facility handles coal dust and accumulates dust from the atmosphere, both plant area washdown and runoff are controlled. Oil/water separators installed at the facility are listed below. The water effluent from the separators are currently discharged to the Primary Ash Pond via the boiler sump.

Oil/water Separators

- Precipitator area: 5,000-gallon capacity
- Transformer area: 19,000-gallon capacity
- Storeroom: 50-gallon capacity
- Turbine/generator area: 200-gallon capacity
- Tractor garage area: 100-gallon capacity

Two on-site groundwater wells provide water for the potable water system and boiler makeup water system. The well water is treated as needed for facility needs.

The treated water is supplied to the potable water system and to the reverse osmosis (RO) and demineralizer systems for the boiler water makeup system. Water for potable water use is chlorinated and distributed from an aboveground tank. Treatment for boiler makeup water consists of two parallel treatment processes, one consisting of a RO unit followed by a demineralizer and the other consisting only of a demineralizer. Concentrate (reject) from the RO is pumped to the Primary Ash Pond via the boiler sump. The demineralizer resin is regenerated on-site. Acid is used to regenerate the cation resin

and caustic is used to regenerate the anion resin. Regeneration wastes are collected in a sump before being pumped to the Primary Ash Pond via the boiler sump.

A condensate polisher is provided downstream of the condenser. The polisher protects the cycle water from leaks in the condenser and other sources of contamination. The resin from the polisher is regenerated on-site in the same resin regeneration system used for the demineralizer. Regeneration wastes are routed to the boiler sump.

Laboratory wastes of approximately 120 gallons per day (gpd) are routed to the boiler sump. Sampling streams include a mercury sorbent trap sampling system for emissions monitoring, which generates about a quart a week of condensate water with some metals in it.

Facility metal process equipment requires cleaning infrequently. This includes, but is not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning. These cleaning processes generally are performed when the unit is shut down, and have specific procedures to ensure that wastes are handled in an appropriate manner. Wastewater from metal cleaning may be directed to the Primary Ash Pond via the boiler sump.

Domestic Wastewater

The on-site domestic (sanitary) wastewater treatment package plant has been inactivated. Currently, domestic wastewater is treated in an on-site aerobic septic system with spray field and there is no discharge of treated domestic wastewater. However, Outfall 101, which is in the current TPDES permit for the discharge of treated domestic wastewater, is being retained as a future option.

Stormwater

Stormwater from the powerblock area of the plant is routed to the Primary Ash Pond via the boiler sump. A large portion of the solids settle in the Primary Ash Pond. Water from the Primary Ash Pond overflows to the Secondary Pond for final settling. Water from the Secondary Pond can be discharged through Outfall 201.

Stormwater from areas of the plant that are not routed to the Primary Ash Pond via the boiler sump is discharged from outfalls authorized under TCEQ's multi-sector general permit (MSGP) No. TXR05T691.

EFFLUENT GUIDELINES

National effluent guidelines that apply to process wastewaters at the Coletto Creek Power Station are those for Steam Electric Power Generating at 40 CFR 423 (see Table 1 for wastewater sources and flows).

Table 1. Wastewater Sources by Outfall

Outfall		Wastewater Sources	Applicable Effluent Guideline 40 CFR 423	Monthly Average (MGD)
001	001	Once-through cooling water (condenser cooling water and auxiliary cooling water) from Unit 1	423.12(b)(1) 423.12(b)(6) 423.13(b)(1)	557
	101	Treated domestic wastewater	N/A	0.01
	201	Fly ash transport water <i>(no longer generated)</i>	N/A	Intermittent and flow-variable
		Bottom ash transport water	423.12(b)(1) 423.12(b)(4) 423.13(k)(1)-(2)	
		Low volume waste sources	423.12(b)(1) 423.12(b)(3)	
		Metal cleaning waste	423.12(b)(1) 423.12(b)(5)	
		Stormwater	N/A	
	301	Coal pile runoff	423.12(b)(1) 423.12(b)(9)-(10)	Intermittent and flow-variable
		Treated domestic wastewater (Outfall 101)	N/A	
	401 (proposed)	Low volume waste sources	423.12(b)(1) 423.12(b)(3)	Intermittent and flow-variable
		Metal cleaning waste	423.12(b)(1) 423.12(b)(5)	
		Coal pile runoff	423.12(b)(1) 423.12(b)(9)-(10)	
		Stormwater	N/A	
MGD - million gallons per day				

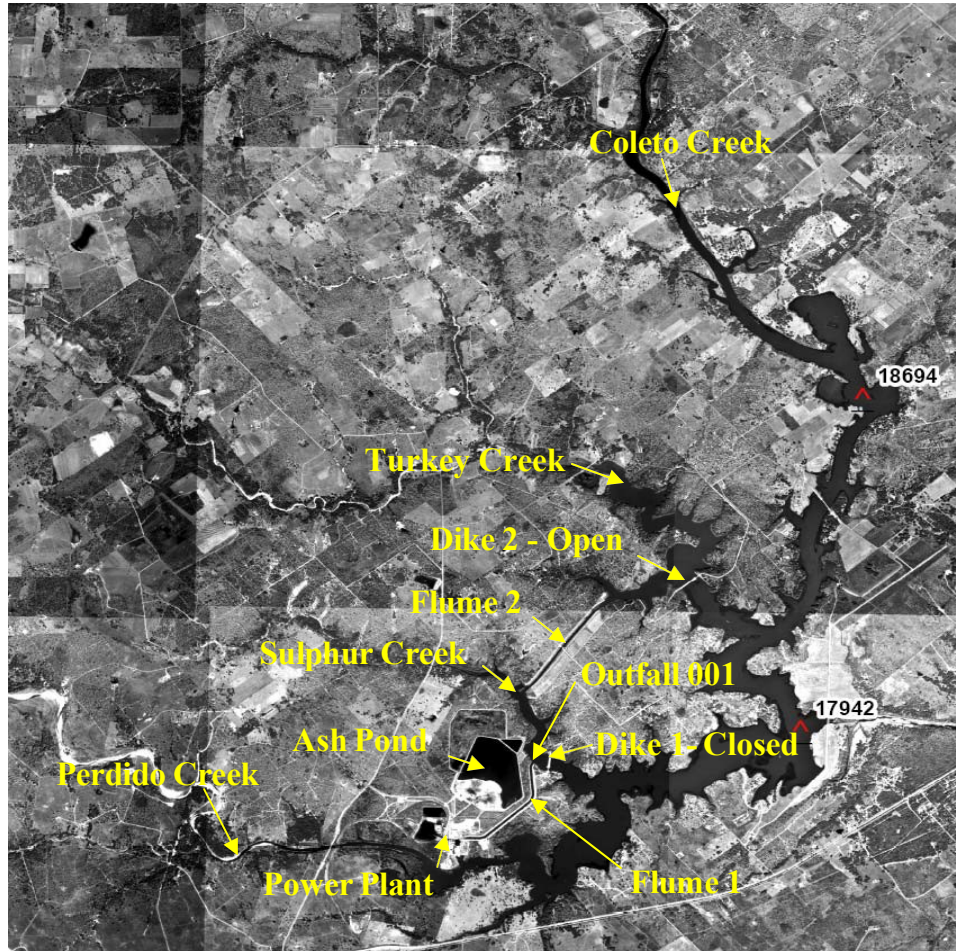


Figure 1. Coledo Creek Reservoir Configuration

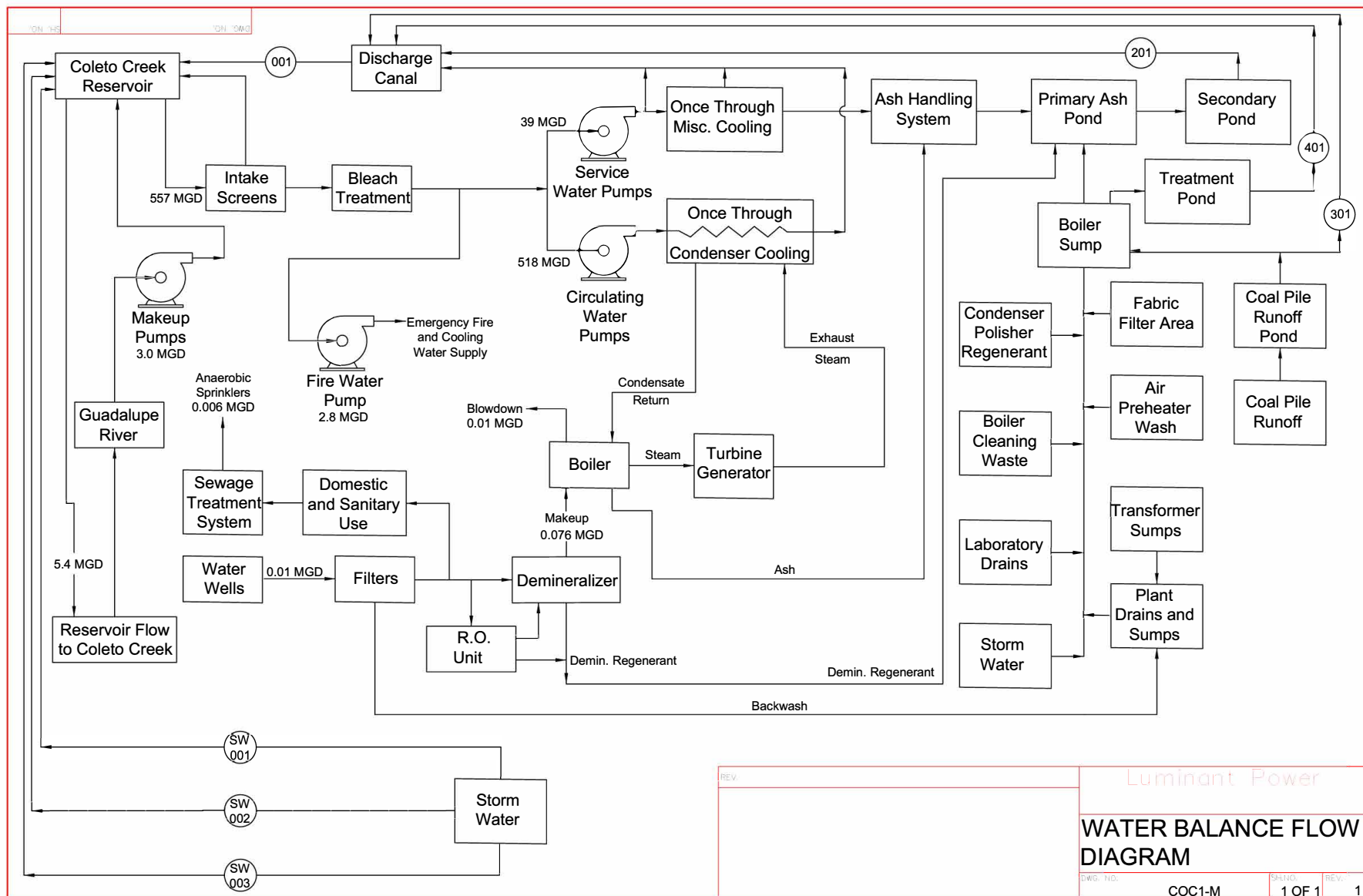


Figure 2. Water Balance Flow Diagram

ATTACHMENT T-3
Treatment Chemicals
Coleto Creek Power WQ0002159000

Product Name	Usage	Dosage	Chemicals Listed in SDS [CAS]	Aquatic Toxicity Data in SDS	Bioaccumulation / Persistence Data in SDS
Ammonium hydroxide	pH adjustment	Intermittent as needed	Ammonium hydroxide [1336-21-6]	Yes	Yes
BULAB 6067	Biocide	Intermittent as needed	Gluteraldehyde [111-30-8]	Yes	No
Caustic soda	pH adjustment	Continuous low concentration feed	Sodium hydroxide [1310-73-2]	Yes	No
ChemTreat P850L	Water clarification	Intermittent as needed	No hazardous ingredients listed	Yes	No
ChemTreat P975L	Water clarification	Intermittent as needed	No hazardous ingredients listed	Yes	No
RoClean L403	Raw water treatment	Intermittent as needed	Chelate agent F [N/A]	Yes	No
			Inorganic phosphorous compounds [N/A]		
			Organic acid B [N/A]		
RoClean P111	Raw water treatment	Intermittent as needed	Chelate agent F [N/A]	Yes	No
			Polyphosphate sale [N/A]		
			Oxygenated inorganic salt [N/A]		
			Carbonate sale [N/A]		
Sodium bisulfite	Raw water treatment	Intermittent as needed	Sodium bisulfite [7631-90-5]	No	No
Sodium hypochlorite	Biocide	Intermittent, not exceeding 2 hours/day	Hypochlorous acid, sodium salt [7681-52-9]	Yes	No
Sulfuric acid	pH adjustment	Intermittent as needed	Sulfuric acid [7664-93-9]	Yes	No
Vitec 3000 NSF	Raw water treatment	Intermittent as needed	Deflocculant / sequestrant [N/A]	Yes	Yes
			Chelate agent [N/A]		

6/3/25



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MSDS No:

Version No:

Order No:

Univar USA Inc., 17425 NE Union Hill Rd., Redmond WA 98052
(425) 889 3400

Emergency Assistance

For emergency assistance involving chemicals call
Chemtrec - (800) 424-9300

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VERSION:009 2008-07-14

The Version Date and Number for this MSDS is : 07/14/2008 - #009

PRODUCT NAME: AMMONIUM HYDROXIDE (4 19% NH3)

MSDS NUMBER: MZA5916A

DATE ISSUED: 07/14/2008

SUPERSEDES: 12/10/2004

ISSUED BY: 008614

=====

AMMONIUM HYDROXIDE (4 - 19% NH3)

=====

1. PRODUCT IDENTIFICATION

SYNONYMS: AMMONIUM HYDROXIDE SOLUTIONS; AMMONIA AQUEOUS; AMMONIA
SOLUTIONS

CAS NO: 1336-21-6

CHEMICAL FORMULA: NH4OH IN H2O

Distributed by:
Univar USA Inc.
17425 NE Union Hill Rd.
Redmond, WA 98052
425-889-3400

=====

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO	PERCENT	HAZARDOUS
AMMONIUM HYDROXIDE	1336-21-6	>4	YES
WATER	7732-18-5	<96%	NO

CONTAINS BETWEEN 4 AND 19% AMMONIA.

=====

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

POISON! DANGER! CORROSIVE. MAY BE FATAL IF SWALLOWED OR INHALED. MIST AND
VAPOR CAUSE BURNS TO EVERY AREA OF CONTACT.

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POTENTIAL HEALTH EFFECTS

INHALATION:

VAPORS AND MISTS CAUSE IRRITATION TO THE RESPIRATORY TRACT. HIGHER CONCENTRATIONS CAN CAUSE BURNS, PULMONARY EDEMA AND DEATH. BRIEF EXPOSURE TO 5000 PPM CAN BE FATAL.

INGESTION:

TOXIC! MAY CAUSE CORROSION TO THE ESOPHAGUS AND STOMACH WITH PERFORATION AND PERITONITIS. SYMPTOMS MAY INCLUDE PAIN IN THE MOUTH, CHEST, AND ABDOMEN, WITH COUGHING, VOMITING AND COLLAPSE. INGESTION OF AS LITTLE AS 3-4 ML MAY BE FATAL.

SKIN CONTACT:

CAUSES IRRITATION AND BURNS TO THE SKIN.

EYE CONTACT:

VAPORS CAUSE IRRITATION. SPLASHES CAUSE SEVERE PAIN, EYE DAMAGE, AND PERMANENT BLINDNESS.

CHRONIC EXPOSURE:

REPEATED EXPOSURE MAY CAUSE DAMAGE TO THE TISSUES OF THE MUCOUS MEMBRANES, UPPER RESPIRATORY TRACT, EYES AND SKIN.

AGGRAVATION OF PRE-EXISTING CONDITIONS:

PERSONS WITH PRE-EXISTING EYE DISORDERS OR IMPAIRED RESPIRATORY FUNCTION MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS MATERIAL.

=====

4. FIRST AID MEASURES

INHALATION:

REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN IMMEDIATELY.

INGESTION:

IF SWALLOWED, DO NOT INDUCE VOMITING. GIVE LARGE QUANTITIES OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT:

IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN, IMMEDIATELY. WASH CLOTHING BEFORE REUSE.

EYE CONTACT:

IMMEDIATELY FLUSH EYES WITH GENTLE BUT LARGE STREAM OF WATER FOR AT LEAST 15 MINUTES, LIFTING LOWER AND UPPER EYELIDS OCCASIONALLY. CALL A PHYSICIAN IMMEDIATELY. IMMEDIATE ACTION IS CRITICAL TO MINIMIZE POSSIBILITY OF BLINDNESS.

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5. FIRE FIGHTING MEASURES

FIRE:

AUTOIGNITION TEMPERATURE: 651C (1204F)

FLAMMABLE LIMITS IN AIR % BY VOLUME:

LEL: 16; UEL: 25

EXPLOSION:

FLAMMABLE VAPORS MAY ACCUMULATE IN CONFINED SPACES.

FIRE EXTINGUISHING MEDIA:

USE ANY MEANS SUITABLE FOR EXTINGUISHING SURROUNDING FIRE. USE WATER SPRAY TO BLANKET FIRE, COOL FIRE EXPOSED CONTAINERS, AND TO FLUSH NON-IGNITED SPILLS OR VAPORS AWAY FROM FIRE.

SPECIAL INFORMATION:

IN THE EVENT OF A FIRE, WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN THE PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.

=====

6. ACCIDENTAL RELEASE MEASURES

VENTILATE AREA OF LEAK OR SPILL. KEEP UNNECESSARY AND UNPROTECTED PEOPLE AWAY FROM AREA OF SPILL. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT AS SPECIFIED IN SECTION 8. CONTAIN AND RECOVER LIQUID WHEN POSSIBLE. DO NOT FLUSH CAUSTIC RESIDUES TO THE SEWER. RESIDUES FROM SPILLS CAN BE DILUTED WITH WATER, NEUTRALIZED WITH DILUTE ACID SUCH AS ACETIC, HYDROCHLORIC OR SULFURIC. ABSORB NEUTRALIZED CAUSTIC RESIDUE ON CLAY, VERMICULITE OR OTHER INERT SUBSTANCE AND PACKAGE IN A SUITABLE CONTAINER FOR DISPOSAL. US REGULATIONS (CERCLA) REQUIRE REPORTING SPILLS AND RELEASES TO SOIL, WATER AND AIR IN EXCESS OF REPORTABLE QUANTITIES. THE TOLL FREE NUMBER FOR THE US COAST GUARD NATIONAL RESPONSE CENTER IS (800) 424-8802. J. T. BAKER NEUTRACIT(R)-2 OR BUCAIM(R) CAUSTIC NEUTRALIZERS ARE RECOMMENDED FOR SPILLS OF THIS PRODUCT.

=====

7. HANDLING AND STORAGE

KEEP IN A TIGHTLY CLOSED CONTAINER, STORED IN A COOL, DRY, VENTILATED AREA. PROTECT AGAINST PHYSICAL DAMAGE. SEPARATE FROM INCOMPATIBILITIES. STORE BELOW 25C. PROTECT FROM DIRECT SUNLIGHT. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTY SINCE THEY RETAIN PRODUCT RESIDUES (VAPORS, LIQUID); OBSERVE ALL WARNINGS AND PRECAUTIONS LISTED FOR THE PRODUCT.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS:

-OSHA PERMISSIBLE EXPOSURE LIMIT (PEL):

50 PPM (NH3)

-ACGIH THRESHOLD LIMIT VALUE (TLV):

25 PPM (NH3) (TWA) 35 PPM (STEL)

VENTILATION SYSTEM:

A SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURES BELOW THE AIRBORNE EXPOSURE LIMITS. LOCAL EXHAUST VENTILATION IS GENERALLY PREFERRED BECAUSE IT CAN CONTROL THE EMISSIONS OF THE CONTAMINANT AT ITS SOURCE, PREVENTING DISPERSION OF IT INTO THE GENERAL WORK AREA. PLEASE REFER TO THE ACGIH DOCUMENT, "INDUSTRIAL VENTILATION, A MANUAL OF RECOMMENDED PRACTICES", MOST RECENT EDITION, FOR DETAILS.

PERSONAL RESPIRATORS (NIOSH APPROVED):

IF THE EXPOSURE LIMIT IS EXCEEDED AND ENGINEERING CONTROLS ARE NOT FEASIBLE, A FULL FACEPIECE RESPIRATOR WITH AN AMMONIA/METHYLAMINE CARTRIDGE MAY BE WORN UP TO 50 TIMES THE EXPOSURE LIMIT OR THE MAXIMUM USE CONCENTRATION SPECIFIED BY THE APPROPRIATE REGULATORY AGENCY OR RESPIRATOR SUPPLIER, WHICHEVER IS LOWEST. FOR EMERGENCIES OR INSTANCES WHERE THE EXPOSURE LEVELS ARE NOT KNOWN, USE A FULL-FACEPIECE POSITIVE-PRESSURE, AIR-SUPPLIED RESPIRATOR. WARNING: AIR PURIFYING RESPIRATORS DO NOT PROTECT WORKERS IN OXYGEN-DEFICIENT ATMOSPHERES.

SKIN PROTECTION:

WEAR IMPERVIOUS PROTECTIVE CLOTHING, INCLUDING BOOTS, GLOVES, LAB COAT, APRON OR COVERALLS, AS APPROPRIATE, TO PREVENT SKIN CONTACT. NEOPRENE AND NITRILE RUBBER ARE RECOMMENDED MATERIALS. POLYVINYL ALCOHOL IS NOT RECOMMENDED.

EYE PROTECTION:

USE CHEMICAL SAFETY GOGGLES AND/OR FULL FACE SHIELD WHERE DUSTING OR SPLASHING OF SOLUTIONS IS POSSIBLE. MAINTAIN EYE WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREA.

=====

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

CLEAR, COLORLESS SOLUTION.

BOILING POINT:

CA. 36C (CA. 97F)

ODOR:

AMMONIA ODOR.

MELTING POINT:

-72C (-98F)

SOLUBILITY:

INFINITELY SOLUBLE.

VAPOR DENSITY (AIR=1):

0.60 NH3

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SPECIFIC GRAVITY: VAPOR PRESSURE (MM HG):
0.9 (28% NH4OH) 115 @ 20C FOR 10% SOLUTION;
580 @ 20C FOR 28% SOLUTION.

PH: EVAPORATION RATE (BUAC=1):
13.8 (29% SOLUTION). NO INFORMATION FOUND.

% VOLATILES BY VOLUME @ 21C (70F):
NO INFORMATION FOUND.

10. STABILITY AND REACTIVITY

STABILITY:
STABLE UNDER ORDINARY CONDITIONS OF USE AND STORAGE.

HAZARDOUS DECOMPOSITION PRODUCTS:
BURNING MAY PRODUCE AMMONIA, NITROGEN OXIDES.

HAZARDOUS POLYMERIZATION:
WILL NOT OCCUR.

INCOMPATIBILITIES:
ACIDS, ACROLEIN, DIMETHYL SULFATE, HALOGENS, SILVER NITRATE, PROPYLENE
OXIDE, NITROMETHANE, SILVER OXIDE, SILVER PERMANGANATE, OLEUM,
BETA-PROPIOLACTONE. MOST COMMON METALS.

CONDITIONS TO AVOID:
HEAT, SUNLIGHT, INCOMPATIBLES, SOURCES OF IGNITION.

11. TOXICOLOGICAL INFORMATION

FOR AMMONIUM HYDROXIDE:
ORAL RAT LD50: 350 MG/KG; EYE, RABBIT, STANDARD DRAIZE, 250 UG; SEVERE,
INVESTIGATED AS A MUTAGEN.
FOR AMMONIA:
INHALATION RAT LC50: 2000 PPM/4-HR; INVESTIGATED AS A TUMORIGEN, MUTAGEN.

-----\CANCER LISTS\-----
---NTP CARCINOGEN---
INGREDIENT KNOWN ANTICIPATED IARC CATEGOR

AMMONIUM HYDROXIDE (1336-21-6) NO NO NONE
WATER (7732-18-5) NO NO NONE

12. ECOLOGICAL INFORMATION

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ENVIRONMENTAL FATE:
THIS MATERIAL IS NOT EXPECTED TO SIGNIFICANTLY BIOACCUMULATE.

ENVIRONMENTAL TOXICITY:
24 HR LC50 RAINBOW TROUT: 0.008 MG/L;
96 HR LC50 FATHEAD MINNOW: 8.2 MG/L;
48 HR LC50 BLUEGILL: 0.024 MG/L;
48 HR EC50 WATER FLEA: 0.66 MG/L

=====

13. DISPOSAL CONSIDERATIONS

WHATEVER CANNOT BE SAVED FOR RECOVERY OR RECYCLING SHOULD BE MANAGED IN AN APPROPRIATE AND APPROVED WASTE FACILITY. ALTHOUGH NOT A LISTED RCRA HAZARDOUS WASTE, THIS MATERIAL MAY EXHIBIT ONE OR MORE CHARACTERISTICS OF A HAZARDOUS WASTE AND REQUIRE APPROPRIATE ANALYSIS TO DETERMINE SPECIFIC DISPOSAL REQUIREMENTS. PROCESSING, USE OR CONTAMINATION OF THIS PRODUCT MAY CHANGE THE WASTE MANAGEMENT OPTIONS. STATE AND LOCAL DISPOSAL REGULATIONS MAY DIFFER FROM FEDERAL DISPOSAL REGULATIONS.

DISPOSE OF CONTAINER AND UNUSED CONTENTS IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS.

=====

14. TRANSPORT INFORMATION

DOMESTIC (LAND, D.O.T.)

PROPER SHIPPING NAME: AMMONIA SOLUTIONS (WITH 4-19% AMMONIA)
HAZARD CLASS: 8
UN/NA: UN2672 PACKING GROUP: III

=====

15. REGULATORY INFORMATION

WHMIS CLASSIFICATION: D1B, E

-----\CHEMICAL INVENTORY STATUS - PART 1\-----
INGREDIENT TSCA EC JAPAN AUSTRALIA

AMMONIUM HYDROXIDE (1336-21-6) YES YES YES YES
WATER (7732-18-5) YES YES YES YES

-----\CHEMICAL INVENTORY STATUS - PART 2\-----
--CANADA--
INGREDIENT KOREA DSL NDSL PHIL.

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AMMONIUM HYDROXIDE (1336-21-6)	YES	YES	NO	YES
WATER (7732-18-5)	YES	YES	NO	YES

-----\FEDERAL, STATE & INTERNATIONAL REGULATIONS - PART 1\-----				
	-SARA 302-		-----SARA 313-----	
INGREDIENT	RQ	TPQ	LIST	CHEMICAL CATG
-----	---	-----	---	-----
AMMONIUM HYDROXIDE (1336-21-6)	NO	NO	NO	NO
WATER (7732-18-5)	NO	NO	NO	NO

-----\FEDERAL, STATE & INTERNATIONAL REGULATIONS - PART 2\-----			
		-RCRA-	-TSCA-
INGREDIENT	CERCLA	261.33	8(D)
-----	-----	-----	---
AMMONIUM HYDROXIDE (1336-21-6)	1000	NO	NO
WATER (7732-18-5)	NO	NO	NO

CHEMICAL WEAPONS CONVENTION: NO TSCA 12(B): NO CDTA: NO
SARA 311/312: ACUTE: YES CHRONIC: YES FIRE: NO PRESSURE: NO
REACTIVITY: NO (MIXTURE / LIQUID)

AUSTRALIAN HAZCHEM CODE: 2P
POISON SCHEDULE: S6

WHMIS: THIS MSDS HAS BEEN PREPARED ACCORDING TO THE HAZARD CRITERIA OF
THE CONTROLLED PRODUCTS REGULATIONS (CPR) AND THE MSDS CONTAINS
ALL OF THE INFORMATION REQUIRED BY THE CPR.

=====

16. OTHER INFORMATION

NFPA RATINGS:
HEALTH: 3 FLAMMABILITY: 1 REACTIVITY: 0

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For Additional Information contact MSDS Coordinator during business hours, Pacific time: (425) 889-3400

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All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Univar makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Univar's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein.

This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process

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Section 1. Identification

GHS product identifier : BULAB 6067

Other means of identification : Biocides

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

See label and/or technical data sheet, if available.

Supplier's details : Buckman Laboratories, Inc.
1256 North McLean Boulevard
Memphis, TN 38108
Phone 1-800-282-5626

Emergency telephone number (with hours of operation) : 24 Hour Emergency Phone (901) 767-2722

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : ACUTE TOXICITY (oral) - Category 3
ACUTE TOXICITY (inhalation) - Category 2
SKIN CORROSION/IRRITATION - Category 1B
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
RESPIRATORY SENSITIZATION - Category 1
SKIN SENSITIZATION - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Fatal if inhaled.
Toxic if swallowed.
Causes severe skin burns and eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause respiratory irritation.

Precautionary statements

Prevention : Wear protective gloves. Wear eye or face protection. Wear respiratory protection. In case of inadequate ventilation wear respiratory protection. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Section 2. Hazards identification

- Response** : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
- Storage** : Store locked up.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : None known.

Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Biocides

Product code : BLB6067

Ingredient name	%	CAS number
Glutaraldehyde	45	111-30-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

While some substances are claimed as trade secret in accordance with the provision of OSHA 29 CFR 1910.1200(i), all known hazards are clearly communicated within this document.

Per Appendix D 1910.1200 OSHA, ranges can be used when there is batch-to-batch variability in a mixture or a trade secret claim.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : - Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for further treatment advice.
- Inhalation** : - Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible.
- Call a poison control center or doctor for further treatment advice.
- Skin contact** : - Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.
- Ingestion** : - Call poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water, if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.
- Notes to physician** : Probable mucosal damage may contraindicate the use of gastric lavage.

Section 4. First aid measures

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
- Satisfactory Materials of Construction** : Not available.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Glutaraldehyde	ACGIH (United States). CEIL: 0.2 mg/m ³ CEIL: 0.05 ppm ACGIH TLV (United States, 4/2014). Skin sensitizer. C: 0.05 ppm OSHA PEL 1989 (United States, 3/1989). CEIL: 0.2 ppm CEIL: 0.8 mg/m ³

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 8. Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid. [Colorless to light yellow.]
- Color** : Colorless to light yellow.
- Odor** : Characteristic.
- Odor threshold** : <1 ppm
- pH** : 3.1 to 4.5
- Melting point** : -17°C (1.4°F)
- Boiling point** : 100.7°C (213.3°F)
- Flash point** : Closed cup: >100°C (>212°F) [Pensky-Martens.]
- Evaporation rate** : 1 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : 0.04 kPa (0.3 mm Hg) [room temperature]
- Vapor density** : Not available.
- Relative density** : 1.12
- Dispersibility properties** : Not available.
- Solubility** : Easily soluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.
- VOC** : Not available.

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Glutaraldehyde BULAB 6067	LD50 Oral	Mouse	100 mg/kg	-
	LD50 Oral	Rat	134 mg/kg	-
	LD50 Oral	Rat	134 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat - Female	0.28 mg/l	4 hours
	LC50 Inhalation Dusts and mists	Rat - Male	0.35 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Female	200 mg/kg	-

Conclusion/Summary : Not tested, data based on 50% aqueous solution.

Irritation/Corrosion

Not available.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
Glutaraldehyde	skin	Rabbit	Sensitizing
	Respiratory	Rat	Sensitizing

Mutagenicity

Not available.

Conclusion/Summary : For glutaraldehyde: In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were predominantly negative.

Carcinogenicity

This product has not been tested unless noted in summary results.

Conclusion/Summary : In a NTP chronic 2-year inhalation study on glutaraldehyde, no carcinogenicity was seen in rats or in mice. An increase in large granular lymphocytes in Fischer rats dosed with glutaraldehyde for two years was random or a secondary carcinogenic effect due to a modifying influence on the occurrence of this common neoplasm in this rat strain.

Reproductive toxicity

Not available.

Conclusion/Summary : For glutaraldehyde: In animal studies, did not interfere with reproduction.

Section 11. Toxicological information

Teratogenicity

Not available.

Conclusion/Summary : For glutaraldehyde: Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Glutaraldehyde	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Dermal, Inhalation.
Routes of entry not anticipated: Oral.

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : Fatal if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin contact : Causes severe burns. May cause an allergic skin reaction.
Ingestion : Toxic if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness
Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
wheezing and breathing difficulties
asthma
Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Section 11. Toxicological information

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	297.8 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
BULAB 6067	Acute EC50 2.64 mg/l	Algae	96 hours
	Acute EC50 0.69 mg/l	Daphnia	48 hours
	Acute LC50 10.8 mg/l	Fish	96 hours

Section 13. Disposal considerations

- Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- RCRA classification** : When disposed of, this product may be regulated as a RCRA Hazardous Waste with the characteristics of corrosivity.

Section 14. Transport information

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	2922	2922	2922
UN proper shipping name	☒ CORROSIVE LIQUID, TOXIC, N.O.S. (Glutaraldehyde, solution)	☒ CORROSIVE LIQUID, TOXIC, N.O.S. (Glutaraldehyde, solution). Marine pollutant (Glutaraldehyde)	☒ CORROSIVE LIQUID, TOXIC, N.O.S. (Glutaraldehyde, solution)
Transport hazard class(es)	8 (6.1) 	8 (6.1) 	8 (6.1) 
Packing group	II	II	II
Environmental hazards	No.	Yes.	No.
Additional information	Remarks ERG Guide 154	☒ The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules (EmS) F-A, S-B IMDG Code Segregation group 1 - Acids Remarks ERG Guide 154, HazMat Code 4936015	The environmentally hazardous substance mark may appear if required by other transportation regulations. Remarks ERG Guide 154, ERG Code 8P

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

Potential impurities present in trace quantities are included in the regulatory listings of this section.

U.S. Federal regulations : ☒ **United States inventory (TSCA 8b):** This product is subject to regulation under the US Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and is therefore exempt from US Toxic Substances Control Act (TSCA) Inventory listing requirements.

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Section 15. Regulatory information

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Glutaraldehyde	45	No.	No.	No.	Yes.	No.

CERCLA

: CERCLA: Hazardous substances.: No products were found.

FDA

: This product is allowed under the following FDA (21 CFR) sections :173.320 (Limitations: as a single additive in beet-sugar mills at a level not higher than 250 ppm); 175.105;176.170 & 176.180 (Limitation: as an antimicrobial agent in pigment and filler slurries used in the manufacture of paper and paperboard at levels not to exceed 300 parts per million by slurry weight of the slurry solids.); 176.300.

EPA Reg. No.

: 1448-421

FIFRA

: This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

Corrosive. May be fatal if swallowed. Causes irreversible eye damage. Causes skin burns. Harmful if absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Harmful if inhaled. Causes asthmatic signs and symptoms in hyper-reactive individuals. Do not swallow. Do not get in eyes, on skin, or on clothing. Avoid breathing vapor. Wear goggles, protective clothing, and butyl or nitrile gloves. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	3
Flammability	1
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Section 16. Other information

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of printing	: 5/23/2016.
Date of issue/Date of revision	: 5/23/2016.
Date of previous issue	: 5/26/2015.
Version	: 0.02
Prepared by	: Buckman Regulatory Affairs
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Buckman Laboratories, Inc. warrants that this product conforms to its chemical description and is reasonably fit for the purpose referred to in the directions for use when used in accordance with the directions under normal conditions. Buyer assumes the risk of any use outside of such directions.

Seller makes no other warranty or representation of any kind, express or implied, concerning the product, including NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS OF THE GOODS FOR ANY OTHER PARTICULAR PURPOSE. No such warranties shall be implied by law and no agent of seller is authorized to alter this warranty in any way except in writing with a specific reference to this warranty.

The exclusive remedy against seller shall be in a claim for damages not to exceed the purchase price of the product, without regard to whether such a claim is based upon breach of warranty or tort.

Any controversy or claim arising out or relating to this contract, or breach thereof, shall be settle by arbitration

Section 16. Other information

in accordance with the commercial arbitration rules of the American Arbitration Association, and judgment upon the rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.

MATERIAL SAFETY DATA SHEET



Bayer MaterialScience

Bayer MaterialScience LLC
Product Safety & Regulatory Affairs
100 Bayer Road
Pittsburgh, PA 15205-9741
USA

TRANSPORTATION EMERGENCY

CALL CHEMTREC: (800) 424-9300
INTERNATIONAL: (703) 527-3887

NON-TRANSPORTATION

Emergency Phone: Call Chemtrec
Information Phone: (800) 662-2927

1. Product and Company Identification

Product Name: CAUSTIC SODA SOLUTION (50%)
Material Number: 5452627
CAS-No.: 1310-73-2

2. Hazards Identification

Emergency Overview

Danger **Color:** Clear, Opaque **Form:** liquid **Odor:** Odorless.

Water runoff from fire fighting may be corrosive. Irritating gases/fumes may be given off during burning or thermal decomposition. Contact with metals liberates flammable gas. Reacts violently with water. Causes respiratory tract burns. Causes skin burns. May be harmful if absorbed through skin. Causes eye burns. Causes digestive tract burns. Harmful if swallowed.

Potential Health Effects

Primary Routes of Entry: Skin Contact, Eye Contact, Ingestion, Inhalation

Medical Conditions Aggravated by Exposure: Skin disorders, Respiratory disorders, Eye disorders

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

Inhalation

Acute Inhalation

For Component: Sodium hydroxide

Corrosive with symptoms of coughing, burning, ulceration, and pain.

Skin

Acute Skin

For Component: Sodium hydroxide

Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage.

Eye

Acute Eye

For Component: Sodium hydroxide

Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage.

Ingestion

Acute Ingestion

For Component: Sodium hydroxide

Harmful if swallowed. Corrosive to the digestive tract with symptoms of burning and ulceration.

General Effects of Exposure

Chronic Effects of Exposure

For Product: CAUSTIC SODA SOLUTION (50%)

Repeated or prolonged overexposure may cause effects as noted under acute health effects.

Carcinogenicity:

No carcinogenic substances as defined by IARC, NTP and/or OSHA

3. Composition/Information on Ingredients

Hazardous components

<u>Weight percent</u>	<u>Components</u>	<u>CAS-No.</u>
45 - 55%	Sodium hydroxide	1310-73-2

4. First aid measures

Eye contact

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Call a physician immediately.

Skin contact

Wash off immediately with plenty of water for at least 15 minutes. Immediately remove contaminated clothing and shoes. Call a physician immediately. Wash clothing and shoes before reuse.

Inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration using a pocket mask type resuscitator. Call a physician immediately.

Ingestion

Do not induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention. Never give anything by mouth to an unconscious person.

5. Firefighting measures

Suitable extinguishing media:

Carbon dioxide (CO₂), Foam, Dry chemical

Special Fire Fighting Procedures

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

Unusual Fire/Explosion Hazards

Water runoff from fire fighting may be corrosive. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. Contact with metals liberates flammable gas.

6. Accidental release measures**Spill and Leak Procedures**

Cleanup personnel must use appropriate personal protective equipment. Cover spill with inert material (e. g., dry sand or earth) and collect for proper disposal. Do not allow spilled material or wash water to enter sewers, surface waters, or groundwater systems. Decontaminant/Neutralizer: Dilute hydrochloric acid solution. Wash spill area with water. Collect wash water for approved disposal.

7. Handling and storage**Storage period**

Not Applicable

Handling/Storage Precautions

Do not breathe vapours or spray mist. Do not get on skin or clothing. Do not get in eyes. Do not taste or swallow. Use only with adequate ventilation/personal protection. Wash thoroughly after handling. Keep container closed when not in use.

Further Info on Storage Conditions

Material can be stored safely at ambient temperatures. Do not expose to direct sunlight. Protect from freezing. This product is corrosive to metal(s). Product can react with water.

8. Exposure controls/personal protection**Sodium hydroxide (1310-73-2)**

US. ACGIH Threshold Limit Values

Ceiling Limit Value: 2 mg/m³

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

PEL: 2 mg/m³

Industrial Hygiene/Ventilation Measures

General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection

Permeation resistant gloves.

Eye protection

Chemical resistant goggles must be worn., Chemical safety goggles in combination with a full face shield if a splash hazard exists.

Skin and body protection

Permeation resistant clothing and foot protection.

Additional Protective Measures

Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

9. Physical and chemical properties

Form:	liquid
Color:	Clear, Opaque
Odor:	Odorless
pH:	14
Melting Point:	12 °C (53.6 °F)
Boiling point/boiling range:	140 °C (284 °F) @ 1,013 hPa
Flash point:	Not Applicable
Vapour pressure:	13 mmHg @ 15.56 °C (60.01 °F)
Density:	1.54 g/cm ³ @ 15 °C (59 °F) (DIN 51757) 1.52 g/cm ³ @ 20 °C (68 °F) (DIN 51757) 1.505 g/cm ³ @ 50 °C (122 °F) (DIN 51757)
Specific Gravity:	1.53 @ 15.56 °C (60.01 °F)
Solubility in Water:	Soluble
Viscosity, dynamic:	79 mPa.s @ 20 °C (68 °F)

10. Stability and reactivity

Hazardous Reactions

Hazardous polymerisation does not occur.

Hazardous polymerisation does not occur.

Stability

Stable

Stable

Materials to avoid

Combustible material, Acids, Halogenated compounds, Halogens, Metals, Oxidizing agents, Peroxides, Organic nitro compounds

Oxidizing agents

Conditions to avoid

Avoid contact with moisture / water. Do not expose to direct sunlight. Protect from freezing.

Heat, flames and sparks.

Hazardous decomposition products

By Fire and Thermal Decomposition: Sodium oxides, other potentially toxic fumes

Other decomposition products Hydrogen;

By Fire and Thermal Decomposition: Phenol; Carbon monoxide, Carbon oxides, other potentially toxic fumes

11. Toxicological information

Toxicity Data for CAUSTIC SODA SOLUTION (50%)

Toxicity Data for Sodium hydroxide

Acute oral toxicity

LD50: 140 - 340 mg/kg (Rat)

Acute dermal toxicity

LD50: 1,350 mg/kg (rabbit)

Skin irritation

Human, Corrosive

Eye irritation

Human, severe irritant

Sensitisation

Skin sensitisation:: negative (Human experience, Patch Test)

Mutagenicity

Genetic Toxicity in Vitro:

Ames: negative (Salmonella typhimurium)

Positive and negative results were seen in various in vitro studies.

Genetic Toxicity in Vivo:

Micronucleus Assay: (mouse, Male/Female, intraperitoneal)

negative

12. Ecological information

Ecological Data for CAUSTIC SODA SOLUTION (50%)

Ecological Data for Sodium hydroxide

Acute and Prolonged Toxicity to Fish

LC50: 45.4 mg/L (50 %, pH 8) (Rainbow (Donaldson) Trout (Oncorhynchus mykiss), 96 h)

Acute Toxicity to Aquatic Invertebrates

LC100: 156 mg/L (pH 9.1 - 9.5) (Water flea (Daphnia magna))

Toxicity to Aquatic Plants

The freshwater algae are destroyed at a pH of >8.5.

13. Disposal considerations

Waste Disposal Method

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

Empty Container Precautions

Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Label precautions also apply to this container when empty.

14. Transport information

Land transport (DOT)

Proper shipping name: Sodium hydroxide solution
Hazard Class or Division: 8
UN/NA Number: UN1824
Packaging group: II
Hazard Label(s): Corrosive

RSPA/DOT Regulated Components:

Sodium hydroxide

Reportable Quantity: 907 kg (2000 lb)

Sea transport (IMDG)

Proper shipping name: SODIUM HYDROXIDE SOLUTION
Hazard Class or Division: 8
UN number: UN1824
Packaging group: II
Hazard Label(s): CORROSIVE

Air transport (ICAO/IATA)

Proper shipping name: Sodium hydroxide solution
Hazard Class or Division: 8
UN number: UN1824
Packaging group: II
Hazard Label(s): CORROSIVE

Additional Transportation Information

Pollution category: Y - Ship type: 3

15. Regulatory information

United States Federal Regulations

OSHA Hazcom Standard Rating: Hazardous

US. Toxic Substances Control Act: Listed on the TSCA Inventory.

US. EPA CERCLA Hazardous Substances (40 CFR 302):

Components

Sodium hydroxide Reportable quantity: 1000 lbs

SARA Section 311/312 Hazard Categories:

Acute Health Hazard, Reactivity Hazard, Chronic Health Hazard

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):

Components

None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:

Components

None

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261)

Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste., In its purchased form, this product meets the criteria of corrosivity under 40 CFR 261.22(a), and, when discarded in that form, should be managed as a hazardous waste.

State Right-To-Know Information

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

<u>Weight percent</u>	<u>Components</u>	<u>CAS-No.</u>
>=1%	Water	7732-18-5
45 - 55%	Sodium hydroxide	1310-73-2

New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:

<u>Weight percent</u>	<u>Components</u>	<u>CAS-No.</u>
45 - 55%	Sodium hydroxide	1310-73-2

California Prop. 65:

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

16. Other information

NFPA 704M Rating

Health	3
Flammability	0
Reactivity	2
Other	

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

HMIS Rating

Health	3*
Flammability	0
Physical Hazard	2

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

* = Chronic Health Hazard

The method of hazard communication for Bayer MaterialScience LLC is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by Bayer MaterialScience LLC as a customer service.

Contact person: Product Safety Department

Telephone: (412) 777-2835
MSDS Number: 112000014025
Version Date: 07/20/2014
Report version: 2.10

This information is furnished without warranty, express or implied. This information is believed to be accurate to the best knowledge of Bayer MaterialScience LLC. The information in this MSDS relates only to the specific material designated herein. Bayer MaterialScience LLC assumes no legal responsibility for use of or reliance upon the information in this MSDS.

|| Changes since the last version are highlighted in the margin. This version replaces all previous versions.



SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Product Name:	ChemTreat P850L
Product Use:	Water Clarification Agent
Supplier's Name:	ChemTreat, Inc.
Emergency Telephone Number:	(800)424-9300 (Toll Free)
Address (Corporate Headquarters):	5640 Cox Road Glen Allen, VA 23060
Telephone Number for Information:	(800)648-4579
Date of SDS:	October 9, 2019
Revision Date:	October 9, 2019
Revision Number:	19100901AN

Section 2. Hazard(s) Identification

Signal Word:	None
GHS Classification(s):	Non-Hazardous Substance
Hazard Statement(s):	Non-Hazardous Substance
Precautionary Statement(s):	No significant health risks are expected from exposures under normal conditions of use.
Prevention:	None.
Response:	None.
Storage:	None.
Disposal:	None.
System of Classification Used:	Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).
Hazards Not Otherwise Classified:	None.



Section 3. Composition/Hazardous Ingredients

Component	CAS Registry #	Wt. %
Components not listed are either non hazardous or in concentration of less than 1%	N/A	N/A

Comments If chemical identity and/or exact percentage of composition has been withheld, this information is considered to be a trade secret.

Section 4. First Aid Measures

Inhalation: Call a POISON CENTER or doctor/physician if you feel unwell.

Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Skin: Call a poison center or doctor/physician if you feel unwell.

Ingestion: Rinse mouth. Call a poison center or doctor/physician if you feel unwell.

Most Important Symptoms: N/D

Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary: N/A

Section 5. Fire Fighting Measures

Flammability of the Product: Not flammable.

Suitable Extinguishing Media: Use extinguishing media suitable to surrounding fire.

Specific Hazards Arising from the Chemical: None known.

Protective Equipment: If product is involved in a fire, wear full protective clothing including a positive-pressure, NIOSH approved, self-contained breathing apparatus.



Section 6. Accidental Release Measures

Personal Precautions:	Use appropriate Personal Protective Equipment (PPE).
Environmental Precautions:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.
Methods for Cleaning up:	Contain and recover liquid when possible. Flush spill area with water spray. Material is very slippery if spilled.
Other Statements:	None.

Section 7. Handling and Storage

Handling:	Wear appropriate Personal Protective Equipment (PPE) when handling this product. Do not get in eyes, or on skin and clothing. Wash thoroughly after handling. Do not ingest. Avoid breathing vapors, mist or dust.
Storage:	Store away from incompatible materials (see Section 10). Store at ambient temperatures. Keep container securely closed when not in use. Label precautions also apply to empty container. Recondition or dispose of empty containers in accordance with government regulations. For Industrial use only. Protect from heat and sources of ignition. Store above Freeze Point.

Section 8. Exposure Controls/Personal Protection

Exposure Limits

Component	Source	Exposure Limits
Components not listed are either non hazardous or in concentration of less than 1%	N/E	N/E

Engineering Controls:	Use only with adequate ventilation. The use of local ventilation is recommended to control emission near the source.
------------------------------	--

Personal Protection

Eyes:	Safety glasses are recommended if risk of eye contact.
Skin:	Wear butyl rubber or neoprene gloves. Wash them after each use and replace as necessary. If conditions warrant, wear protective clothing such as boots, aprons, and coveralls to prevent skin contact.
Respiratory:	If misting occurs, use NIOSH approved organic vapor/acid gas dual cartridge respirator with a dust/mist prefilter in accordance with 29 CFR 1910.134.

Section 9. Physical and Chemical Properties

Physical State and Appearance:	Liquid, Colorless, Clear
Specific Gravity:	1.002 @ 20°C
pH:	7.0 @ 20°C, 100.0%
Freezing Point:	36°F
Flash Point:	N/D
Odor:	Mild
Melting Point:	N/A
Initial Boiling Point and Boiling Range:	N/D
Solubility in Water:	N/D
Evaporation Rate:	N/D
Vapor Density:	N/D
Molecular Weight:	N/D
Viscosity:	N/A
Flammability (solid, gas):	N/D
Flammable Limits:	N/A
Autoignition Temperature:	N/A
Density:	8.36 LB/GA
Vapor Pressure:	N/D
% VOC:	0
Odor Threshold	N/D
n-octanol Partition Coefficient	N/D
Decomposition Temperature	N/D

Section 10. Stability and Reactivity

Chemical Stability:	Stable at normal temperatures and pressures.
Incompatibility with Various Substances:	Strong oxidizers, Strong bases.
Hazardous Decomposition Products:	Oxides of nitrogen, Oxides of carbon.
Possibility of Hazardous Reactions:	None known.
Reactivity:	N/D
Conditions To Avoid:	N/D

Section 11. Toxicological Information

Acute Toxicity

Chemical Name	Exposure	Type of Effect	Concentration	Species
N/D	N/D	N/D	N/D	N/D

Carcinogenicity Category

Component	Source	Code	Brief Description
Components not listed are either non hazardous or in concentration of less than 1%	N/E	N/E	N/E

Likely Routes of Exposure: N/D

Symptoms

Inhalation:	N/D
Eye Contact:	N/D
Skin Contact:	N/D
Ingestion:	N/D

Skin Corrosion/Irritation: N/D



Serious Eye Damage/Eye Irritation: N/D

Sensitization: N/D

Germ Cell Mutagenicity: N/D

Reproductive/Developmental Toxicity: N/D

Specific Target Organ Toxicity

Single Exposure: N/D

Repeated Exposure: N/D

Aspiration Hazard: N/D

Comments: None.

Section 12. Ecological Information

Ecotoxicity

Species	Duration	Type of Effect	Test Results
Ceriodaphnia dubia	48h	LC50	840.9 mg/l
Algae	96h	EC50	>500 mg/l
Fathead Minnow	96h	LC50	>1000 mg/l
	48h	LC50	>10000 mg/l
Daphnia pulex	48h	LC50	8680 mg/l

Persistence and Biodegradability: N/D

Bioaccumulative Potential: N/D

Mobility In Soil: N/D

Other Adverse Effects: N/D

Comments: Water clarification polymers function by multipoint adsorption and charge neutralization with suspended solids. Polymers inherently migrate with solids in the separation process and with the exception of uneconomic overdose do not remain in the clarified waters. Aquatic toxicity determinations in test method protocol waters without suspended solids overestimate the toxicity compared to natural receiving waters.

Section 13. Disposal Considerations

Dispose of in accordance with local, state and federal regulations.

Section 14. Transport Information

Controlling Regulation	UN/NA#:	Proper Shipping Name:	Technical Name:	Hazard Class:	Packing Group:
DOT	N/A	COMPOUND, INDUSTRIAL WATER TREATMENT, LIQUID	N/A	N/A	N/A
IMDG	N/A	COMPOUND, INDUSTRIAL WATER TREATMENT, LIQUID	N/A	N/A	N/A
TDG	N/A	COMPOUND, INDUSTRIAL WATER TREATMENT, LIQUID	N/A	N/A	N/A
ICAO	N/A	COMPOUND, INDUSTRIAL WATER TREATMENT, LIQUID	N/A	N/A	N/A

Note: N/A

Section 15. Regulatory Information

Inventory Status

United States (TSCA):
Canada (DSL/NDSL):

All ingredients listed.
All ingredients listed.

Federal Regulations

SARA Title III Rules

Sections 311/312 Hazard
Classes

Fire Hazard:	No
Reactive Hazard:	No
Release of Pressure:	No
Acute Health Hazard:	Yes
Chronic Health Hazard:	No

Other Sections

Component	Section 313 Toxic Chemical	Section 302 EHS TPQ	CERCLA RQ
Components not listed are either non hazardous or in concentration of less than 1%	N/A	N/A	N/A

Comments: None.

State Regulations

California Proposition 65: WARNING: This product can expose you to chemicals including Acrylamide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Special Regulations

Component	States
Components not listed are either non hazardous or in concentration of less than 1%	None.

Compliance Information

NSF: N/A

Food Regulations: N/A

KOSHER: This product has not been evaluated for Kosher approval.

Halal: This product has not been evaluated for Halal approval.

FIFRA: N/A

Other: None

Comments: None.

Section 16. Other Information

HMIS Hazard Rating

Health:	0
Flammability:	0
Physical Hazard:	0
PPE:	X

**Notes:**

The PPE rating depends on circumstances of use. See Section 8 for recommended PPE.

The Hazardous Material Information System (HMIS) is a voluntary, subjective alpha-numeric symbolic system for recommending hazard risk and personal protection equipment information. It is a subjective rating system based on the evaluator's understanding of the chemical associated risks. The end-user must determine if the code is appropriate for their use.

Abbreviations

Abbreviation	Definition
<	Less Than
>	Greater Than
ACGIH	American Conference of Governmental Industrial Hygienists
EHS	Environmental Health and Safety Dept
N/A	Not Applicable
N/D	Not Determined
N/E	Not Established
OSHA	Occupational Health and Safety Dept
PEL	Personal Exposure Limit
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weight Average
UNK	Unknown

Prepared by:

Product Compliance Department; ProductCompliance@chemtreat.com

Revision Date:

October 9, 2019

Disclaimer

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, ChemTreat, Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will ChemTreat, Inc. be responsible for damages of any nature whatsoever resulting from the use or reliance upon information. No representation or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature are made hereunder with respect to information or the product to which information refers.



SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Product Name:	ChemTreat P975L
Product Use:	Water Clarification Agent
Supplier's Name:	ChemTreat, Inc.
Emergency Telephone Number:	(800)424-9300 (Toll Free)
Address (Corporate Headquarters):	5640 Cox Road Glen Allen, VA 23060
Telephone Number for Information:	(800)648-4579
Date of SDS:	March 26, 2019
Revision Date:	March 26, 2019
Revision Number:	19032601AN

Section 2. Hazard(s) Identification

Signal Word:	None
GHS Classification(s):	Non-Hazardous Substance
Hazard Statement(s):	Non-Hazardous Substance
Precautionary Statement(s):	No significant health risks are expected from exposures under normal conditions of use.
Prevention:	None.
Response:	None.
Storage:	None.
Disposal:	None.
System of Classification Used:	Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).
Hazards Not Otherwise Classified:	None.



Section 3. Composition/Hazardous Ingredients

Component	CAS Registry #	Wt. %
Components not listed are either non hazardous or in concentration of less than 1%	N/A	N/A

Comments If chemical identity and/or exact percentage of composition has been withheld, this information is considered to be a trade secret.

Section 4. First Aid Measures

Inhalation: Call a POISON CENTER or doctor/physician if you feel unwell.

Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Skin: Call a poison center or doctor/physician if you feel unwell.

Ingestion: Rinse mouth. Call a poison center or doctor/physician if you feel unwell.

Most Important Symptoms: N/D

Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary: N/A

Section 5. Fire Fighting Measures

Flammability of the Product: Not flammable.

Suitable Extinguishing Media: Use extinguishing media suitable to surrounding fire.

Specific Hazards Arising from the Chemical: None known.

Protective Equipment: If product is involved in a fire, wear full protective clothing including a positive-pressure, NIOSH approved, self-contained breathing apparatus.



Section 6. Accidental Release Measures

Personal Precautions:	Use appropriate Personal Protective Equipment (PPE).
Environmental Precautions:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.
Methods for Cleaning up:	Contain and recover liquid when possible. Flush spill area with water spray.
Other Statements:	None.

Section 7. Handling and Storage

Handling:	Wear appropriate Personal Protective Equipment (PPE) when handling this product. Do not get in eyes, or on skin and clothing. Wash thoroughly after handling. Do not ingest. Avoid breathing vapors, mist or dust. Material is very slippery if spilled.
Storage:	Store away from incompatible materials (see Section 10). Store at ambient temperatures. Keep container securely closed when not in use. Label precautions also apply to empty container. Recondition or dispose of empty containers in accordance with government regulations. For Industrial use only. Do not freeze. Store above Freeze Point. If freezes, then mechanical mixing is required.

Section 8. Exposure Controls/Personal Protection

Exposure Limits

Component	Source	Exposure Limits
Components not listed are either non hazardous or in concentration of less than 1%	N/E	N/E

Engineering Controls:	Use only with adequate ventilation. The use of local ventilation is recommended to control emission near the source.
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Personal Protection

Eyes:	Safety glasses are recommended if risk of eye contact.
Skin:	Wear butyl rubber or neoprene gloves. Wash them after each use and replace as necessary. If conditions warrant, wear protective clothing such as boots, aprons, and coveralls to prevent skin contact.
Respiratory:	If misting occurs, use NIOSH approved organic vapor/acid gas dual cartridge respirator with a dust/mist prefilter in accordance with 29 CFR 1910.134.

Section 9. Physical and Chemical Properties

Physical State and Appearance:	Liquid, Colorless, Clear
Specific Gravity:	1.016 @ 20°C
pH:	6.6 @ 20°C, 100.0%
Freezing Point:	41°F
Flash Point:	N/A
Odor:	Odorless
Melting Point:	N/A
Initial Boiling Point and Boiling Range:	N/D
Solubility in Water:	Complete
Evaporation Rate:	N/D
Vapor Density:	N/D
Molecular Weight:	N/D
Viscosity:	15000 – 25000 CPS @ 20°C
Flammability (solid, gas):	N/D
Flammable Limits:	N/A
Autoignition Temperature:	N/A
Density:	8.47 LB/GA
Vapor Pressure:	N/D
% VOC:	N/D
Odor Threshold	N/D
n-octanol Partition Coefficient	N/D
Decomposition Temperature	N/D

Section 10. Stability and Reactivity

Chemical Stability:	Stable at normal temperatures and pressures.
Incompatibility with Various Substances:	Strong oxidizers.
Hazardous Decomposition Products:	Oxides of carbon, Oxides of nitrogen, Hydrogen chloride, Hydrogen cyanide.
Possibility of Hazardous Reactions:	None known.
Reactivity:	N/D
Conditions To Avoid:	N/D

Section 11. Toxicological Information

Acute Toxicity

Chemical Name	Exposure	Type of Effect	Concentration	Species
ChemTreat P975L	Oral	LD50	>5000 MG/KG	Rat
	Dermal	LD50	>5000 MG/KG	Rat

Carcinogenicity Category

Component	Source	Code	Brief Description
Components not listed are either non hazardous or in concentration of less than 1%	N/E	N/E	N/E

Likely Routes of Exposure: N/D

Symptoms

Inhalation: N/D

Eye Contact: N/D

Skin Contact: N/D

Ingestion: N/D

Skin Corrosion/Irritation: N/D

Serious Eye Damage/Eye Irritation: N/D

Sensitization: N/D

Germ Cell Mutagenicity: N/D

Reproductive/Developmental Toxicity: N/D

Specific Target Organ Toxicity

Single Exposure: N/D

Repeated Exposure: N/D

Aspiration Hazard: N/D

Comments: None.

Section 12. Ecological Information

Ecotoxicity

Species	Duration	Type of Effect	Test Results
Daphnia magna	48h	EC50	>100 mg/l
Fathead Minnow	96h	LC50	>100 mg/l
Mysid Shrimp	7d	IC25	672 mg/l
	7d	NOEC	312.5 mg/l
	7d	LOEC	625 mg/l

Persistence and Biodegradability: N/D

Bioaccumulative Potential: N/D

Mobility In Soil: N/D

Other Adverse Effects: N/D

Comments: None.



Section 13. Disposal Considerations

Dispose of in accordance with local, state and federal regulations.
Not a RCRA-regulated hazardous waste when disposed in the original product form.

Section 14. Transport Information

Controlling Regulation	UN/NA#:	Proper Shipping Name:	Technical Name:	Hazard Class:	Packing Group:
DOT	N/A	COMPOUND, INDUSTRIAL WATER TREATMENT, LIQUID	N/A	N/A	N/A

Note: N/A

Section 15. Regulatory Information

Inventory Status

United States (TSCA):
Canada (DSL/NDL):

All ingredients listed.
All ingredients listed.

Federal Regulations

SARA Title III Rules

Sections 311/312 Hazard Classes

Fire Hazard:	No
Reactive Hazard:	No
Release of Pressure:	No
Acute Health Hazard:	No
Chronic Health Hazard:	No

Other Sections

Component	Section 313 Toxic Chemical	Section 302 EHS TPQ	CERCLA RQ
Components not listed are either non hazardous or in concentration of less than 1%	N/A	N/A	N/A



Comments: None.

State Regulations

California Proposition 65: WARNING: This product can expose you to chemicals including Acrylamide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Special Regulations

Component	States
Components not listed are either non hazardous or in concentration of less than 1%	None.

Compliance Information

NSF: N/A

Food Regulations: N/A

KOSHER: This product has not been evaluated for Kosher approval.

Halal: This product has not been evaluated for Halal approval.

FIFRA: N/A

Other: None

Comments: None.

Section 16. Other Information

HMIS Hazard Rating

Health:	0
Flammability:	0
Physical Hazard:	0
PPE:	X

**Notes:**

The PPE rating depends on circumstances of use. See Section 8 for recommended PPE.

The Hazardous Material Information System (HMIS) is a voluntary, subjective alpha-numeric symbolic system for recommending hazard risk and personal protection equipment information. It is a subjective rating system based on the evaluator's understanding of the chemical associated risks. The end-user must determine if the code is appropriate for their use.

Abbreviations

Abbreviation	Definition
<	Less Than
>	Greater Than
ACGIH	American Conference of Governmental Industrial Hygienists
EHS	Environmental Health and Safety Dept
N/A	Not Applicable
N/D	Not Determined
N/E	Not Established
OSHA	Occupational Health and Safety Dept
PEL	Personal Exposure Limit
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weight Average
UNK	Unknown

Prepared by:

Product Compliance Department; ProductCompliance@chemtreat.com

Revision Date:

March 26, 2019

Disclaimer

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, ChemTreat, Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will ChemTreat, Inc. be responsible for damages of any nature whatsoever resulting from the use or reliance upon information. No representation or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature are made hereunder with respect to information or the product to which information refers.

SECTION 1: Identification**1.1 Product identifier**

Trade name RoClean™ L403
CAS number none

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Water treatment chemical
RO Reverse Osmosis

1.3 Details of the supplier of the safety data sheet

Avista Technologies, Inc.
140 Bosstick Blvd.
92069 San Marcos
United States

Cellular Device: +1 (760) 744 0536
e-mail: regulatory@avistatech.com
Website: AvistaMembraneSolutions.com

1.4 Emergency telephone number

Emergency Number (USA, Canada): 1 (800) 424-9300 (ChemTrec)
Emergency Number (International): 1 (703) 527-3887 (International Collect)

1.5 Registration

This product is designed to be used off-line and is to be flushed out prior to using the system for drinking water, following the manufacturer's use instructions.

SECTION 2: Hazard(s) identification**2.1 Classification of the substance or mixture**

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

<i>Hazard class</i>	<i>Category</i>	<i>Hazard statement</i>
acute toxicity (oral)	4	H302
skin corrosion/irritation	2	H315
serious eye damage/eye irritation	2A	H319
specific target organ toxicity - single exposure	2	H371
specific target organ toxicity - repeated exposure	2	H373
substance or mixture corrosive to metals	1	H290

For full text of abbreviations: see SECTION 16.

2.2 Label elements

Signal word

warning

Pictograms

GHS05, GHS07,
GHS08

Hazard statements

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H371	May cause damage to organs (respiratory system).
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P234	Keep only in original container.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves.
P301+P312	If swallowed: Call a poison center/doctor if you feel unwell.
P302+P352	If on skin: Wash with plenty of water.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311	If exposed or concerned: Call a poison center/doctor.
P314	Get medical advice/attention if you feel unwell.
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash it before reuse.
P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents/container to industrial combustion plant.

2.3 Other hazards

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Mixtures

Hazardous ingredients

Name of substance	Identifier	Wt%	Classification acc. to GHS
Chelate agent F	CAS No Proprietary	10 – < 20	Acute Tox. 4 / H302 Acute Tox. 4 / H332 Eye Dam. 1 / H318 STOT RE 2 / H373

Water	7732-18-5	50 – < 60	Not established
Inorganic phosphorous compound	7664-38-2	20 – < 30	Skin Corr. 1 / H314 Eye Dam. 1 / H318 Met. Corr. 1 / H290
Organic acid B	77-92-9	10 – < 20	Not established

For full text of abbreviations: see SECTION 16.

Specific chemical identity and concentration of some ingredients are protected as Trade Secret information.

Canada HMIRA Registration Number: 03331706 Registration date: 30 May 2019.

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Take off immediately all contaminated clothing. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

In case of respiratory tract irritation, consult a physician.

Following skin contact

Rinse skin with water/shower. Take off contaminated clothing. After contact with skin, wash immediately with plenty of water. In all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact

Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Immediately call a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

No specific antidote is known. Treatment of the symptoms.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Non-combustible. Coordinate firefighting measures to the fire surroundings. Water spray, Alcohol resistant foam, Fire extinguishing powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

None

5.2 Special hazards arising from the substance or mixture

Substance or mixture corrosive to metals.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂), Phosphorus oxides (P_xO_y)

5.3 Advice for firefighters

Keep containers cool with water spray. In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

Chemical protection suit, Use suitable breathing apparatus

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Aqueous solutions or powders that become wet produce extremely slippery conditions.

For non-emergency personnel

Follow emergency procedures such as the need to evacuate the danger area or to consult an expert. Remove persons to safety. Prevent skin contact. Avoid inhaling sprayed product. Aqueous solutions or powders that become wet produce extremely slippery conditions.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases. Wear personal protective equipment/face protection. Aqueous solutions or powders that become wet produce extremely slippery conditions. Special danger of slipping by leaking/spilling product.

Suitable fabric for personal protective clothing

PE: polyethylene, NR: natural rubber, latex, CR: chloroprene (chlorobutadiene) rubber

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority. Disposal considerations: see section 13. Chemicals generally shouldn't reach surface water.

6.3 Methods and material for containment and cleaning up**Advice on how to contain a spill**

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.)

Appropriate containment techniques

Neutralization techniques. Decontamination techniques. Use of adsorbent materials. Vacuuming techniques.

Equipment required for containment/clean-up

Approved industrial vacuum cleaner, Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.), Sweeping compounds (oil absorbing), Shovel, Drain seal, Collecting container, Protective gloves, Eye protection (e.g. protective goggles), Personal protective equipment: see section 8

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Section 7: Handling and storage. See also to sections 8 and 13 of the safety data sheet.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Handling of incompatible substances or mixtures

Do not mix with other chemicals.

Keep away from

Bases, Alkalis, Strong oxidizers, Other chemicals

Measures to protect the environment

Do not empty into drains; dispose of this material and its container at hazardous or special waste collection point.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

Corrosive conditions

Store in corrosive resistant container with a resistant inner liner.

Consideration of other advice

Store between 5°C and 40°C. Avoid freezing.

Specific designs for storage rooms or vessels

No special measures are necessary. Keep container tightly closed.

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

Water treatment chemical. RO Reverse Osmosis.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational Exposure Limits: PELs, TLVs, etc

Occupational exposure limit values (Workplace Exposure Limits)					
Name of substance	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]
Inorganic phosphorous compound	PEL (CA)	Not established	1	Not established	3

Occupational exposure limit values (Workplace Exposure Limits)					
Name of substance	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]
Inorganic phosphorous compound	REL	Not established	1 (10 h)	Not established	3
Inorganic phosphorous compound	TLV®	Not established	1	Not established	3
Inorganic phosphorous compound	PEL	Not established	1	Not established	Not established

Notation

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

8.2 Exposure controls

Appropriate engineering controls

Exhaust ventilation.

Individual protection measures (personal protective equipment)

Guarantee that the eye flushing systems and safety showers are closely located to the working place.

Eye/face protection

Wear eye/face protection.

Skin protection

Chemical resistant protective clothing.

Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. In case of spray contact at least protection index 2 recommended, according to more than 30 min. penetration time (EN 374).

Layer thickness of gloves at least: 0.4 mm

In case of prolonged and intensive contact protection index 6 recommended, according to more than 480 min. penetration time (EN 374).

Layer thickness of gloves at least: 0.7 mm.

Type of material

PVC: polyvinyl chloride, PE: polyethylene, CR: chloroprene (chlorobutadiene) rubber, NBR: acrylonitrile-butadiene rubber, IIR: isobutene-isoprene (butyl) rubber, FKM: fluoro-elastomer

Breakthrough times of the glove material

Breakthrough times and swelling properties of the material must be taken into consideration

Other protection measures

Wash hands thoroughly after handling.

Respiratory protection

Not necessary under normal conditions and provided good general ventilation. In case of inadequate ventilation wear respiratory protection. Type : E (against acidic gases like sulfur dioxide or hydrogen chloride, color code: Yellow).

Environmental exposure controls

Disposal considerations: see section 13.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	clear , amber to yellow liquid
Odor	mild sweet
Odor threshold	no data available

Other safety parameters

pH (value)	ca. 2.5 – 3.5 (in aqueous solution: 2 wt%, 25 °C)
Melting point/freezing point	ca. <0 °C at 1 atm
Initial boiling point and boiling range	ca. >100 °C at 1 atm
Flash point	not applicable
Evaporation rate	not determined
Flammability (solid, gas)	not applicable
Upper/lower flammability or explosive limits	not determined
Vapor pressure	ca. 18 – 20 Pa at 20 °C
Vapor density	this information is not available
Density	not determined
Relative density	1.3 – 1.4 at 20 °C (water = 1)

Solubility(ies)

Water solubility	miscible in any proportion
-------------------------	----------------------------

Partition coefficient

-n-Octanol/water (log KOW)	this information is not available
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Auto-ignition temperature	not determined not applicable
Decomposition temperature	not determined
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none

9.2 Other information

There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

Substance or mixture corrosive to metals.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Incompatible materials.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Acute toxicity

Harmful if swallowed.

Acute toxicity of components of the mixture				
<i>Name of substance</i>	<i>Exposure route</i>	<i>Endpoint</i>	<i>Value</i>	<i>Species</i>
Organic acid B	oral	LD50	5,400 mg/kg	mouse
Organic acid B	dermal	LD50	>2,000 mg/kg	rat

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

May cause damage to organs (respiratory system).

Hazard category	Target organ	Exposure route
2	respiratory system	if exposed

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)							
Endpoint		Value		Species		Exposure time	
LC50		>1,000 mg/l		daphnia magna		48 h	
LC50		>1,000 mg/l		fathead minnow		48 h	
Aquatic toxicity (acute) of components of the mixture							
Name of substance		Endpoint	Exposure time	Value	Species		Source
Inorganic phosphorous compound		EC50	48 h	>100 mg/l	aquatic invertebrates		European Chemicals Agency, http://echa.europa.eu/
Inorganic phosphorous compound		ErC50	72 h	>100 mg/l	algae		European Chemicals Agency, http://echa.europa.eu/

Aquatic toxicity (acute) of components of the mixture					
Name of substance	Endpoint	Exposure time	Value	Species	Source
Organic acid B	LC50	48 h	440 mg/l	fish	European Chemicals Agency, http://echa.europa.eu/

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Not applicable.

12.6 Other adverse effects

Data are not available.

Remarks

Do not empty into drains or surface water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Do not empty into drains; dispose of this material and its container at hazardous or special waste collection point. Dispose of waste according to applicable legislation.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Avoid release to the environment.

SECTION 14: Transport information

14.1 UN number

3264

14.2 UN proper shipping name

Corrosive liquid, acidic, inorganic, n.o.s.

Technical name (hazardous ingredients)

contains: (2-hydroxypropane-1,2,3-tricarboxylic acid) (Phosphoric acid)

14.3 Transport hazard class(es)

Class

8

14.4 Packing group

III

14.5 Environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT)

Index number	3264
Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s.
Particulars in the shipper's declaration	UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (2-hydroxypropane-1,2,3-tricarboxylic acid, Phosphoric acid), 8, III
Class	8
Packing group	III
Danger label(s)	8
	
Special provisions (SP)	IB3, T7, TP1, TP28
ERG No	154

International Maritime Dangerous Goods Code (IMDG)

UN number	3264
Proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Particulars in the shipper's declaration	UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., (2-hydroxypropane-1,2,3-tricarboxylic acid, Phosphoric acid), 8, III
Class	8
Marine pollutant	-
Packing group	III
Danger label(s)	8
	
EmS	F-A, S-B
Segregation group	1 - Acids
Segregation codes	SG36, SG49

International Civil Aviation Organization (ICAO-IATA/DGR)

UN number	3264
Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s.

Particulars in the shipper's declaration

UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (2-hydroxypropane-1,2,3-tricarboxylic acid, Phosphoric acid), 8, III

Class	8
Environmental hazards	no
Packing group	III
Danger label(s)	8



SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)
Toxic Substance Control Act (TSCA) all ingredients are listed or exempt from listing

Superfund Amendment and Reauthorization Act (SARA TITLE III)
The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

Specific Toxic Chemical Listings (EPCRA Section 313)

none of the ingredients are listed

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

<i>Name of substance</i>	<i>Statutory code</i>	<i>Final RQ pounds (Kg)</i>
Inorganic phosphorous compound	1	5000 (2270)

Legend

1 "1" indicates that the statutory source is section 311(b)(2) of the Clean Water Act

Clean Air Act

none of the ingredients are listed

New Jersey Worker and Community Right to Know Act

NJ-RTK List
<i>Name of substance</i>
Inorganic phosphorous compound

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

Industry or sector specific available guidance(s)

NPCA-HMIS® III

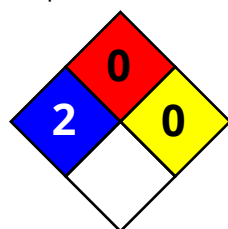
Hazardous Materials Identification System. American Coatings Association.

HEALTH	*	2
FLAMMABILITY		0
PHYSICAL HAZARD		0
PERSONAL PROTECTION		C

A "*" on the health line indicates a chronic health hazard is present.

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).



Additional information

Substance is listed in the following national inventories:

The contained substances are listed in the following national inventories:

AICS (Australia)
 ASIA-PAC (Asia-Pacific Region)
 DSL (Canada)
 NDSL (Canada)
 DSL/NDSL (Canada)
 IECSC (China)
 EINECS/ELINCS/NLP (Europe)
 EINECS (European Union)
 REACH (Europe)
 ENCS, class 1 and 2 (MITI-inventory, Japan)
 CSCL-ENCS (Japan)
 ISHA-ENCS (Japan)
 KECL (Republic of Korea)
 INSQ (Mexico)
 NZIoC (New Zealand)
 PICCS (Philippines)
 CICR (Turkey)
 TCSI (Taiwan)
 TSCA (United States)

15.2 Chemical Safety Assessment

Chemical Safety Assessment: No.

SECTION 16: Other information, including date of preparation or last revision

Abbreviations and acronyms

<i>Abbr.</i>	<i>Descriptions of used abbreviations</i>
49 CFR US DOT	49 CFR U.S. Department of Transportation
Acute Tox.	Acute toxicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DOT	Department of Transportation (USA)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
ERG No	Emergency Response Guidebook - Number
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
Met. Corr.	Substance or mixture corrosive to metals
NJ-RTK List	Hazardous Substance List (NJ-RTK)
NLP	No-Longer Polymer
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic

<i>Abbr.</i>	<i>Descriptions of used abbreviations</i>
PEL	Permissible exposure limit
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
TLV®	Threshold Limit Values
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

ECHA: European Chemicals Agency, <http://echa.europa.eu/>.

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

<i>Code</i>	<i>Text</i>
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H371	May cause damage to organs (respiratory system).
H373	May cause damage to organs through prolonged or repeated exposure.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

SECTION 1: Identification**1.1 Product identifier**

Trade name RoClean™ P111
CAS number none

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Water treatment chemical
RO Reverse Osmosis

1.3 Details of the supplier of the safety data sheet

Avista Technologies, Inc.
140 Bosstick Blvd.
92069 San Marcos
United States

Cellular Device: +1 (760) 744 0536
e-mail: regulatory@avistatech.com
Website: AvistaMembraneSolutions.com

1.4 Emergency telephone number

Emergency Number (USA, Canada): 1 (800) 424-9300 (ChemTrec)
Emergency Number (International): 1 (703) 527-3887 (International Collect)

1.5 Registration

This product is designed to be used off-line and is to be flushed out prior to using the system for drinking water, following the manufacturer's use instructions.

SECTION 2: Hazard(s) identification**2.1 Classification of the substance or mixture**

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

<i>Hazard class</i>	<i>Category</i>	<i>Hazard statement</i>
acute toxicity (oral)	4	H302
acute toxicity (inhal.)	4	H332
skin corrosion/irritation	1B	H314
serious eye damage/eye irritation	2A	H319
specific target organ toxicity - repeated exposure	2	H373

For full text of abbreviations: see SECTION 16.

2.2 Label elements

Signal word danger

Pictograms

GHS05, GHS07,
GHS08



Hazard statements

H302+H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P260 Do not breathe dusts or mists.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear eye protection/face protection.
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a poison center/doctor.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P501 Dispose of contents/container to industrial combustion plant.

2.3 Other hazards

Hazards not otherwise classified

May be harmful in contact with skin (GHS category 5: acutely toxic - dermal).

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Mixtures

Hazardous ingredients

Name of substance	Identifier	Wt%	Classification acc. to GHS
Chelate agent F	CAS No Proprietary	20 – < 30	Acute Tox. 4 / H302 Acute Tox. 4 / H332 Eye Dam. 1 / H318 STOT RE 2 / H373
Polyphosphate salt	CAS No Proprietary EC No Proprietary	20 – < 30	Acute Tox. 2 / H330
Oxygenated inorganic salt	15630-89-4	20 – < 30	Acute Tox. 4 / H302 Eye Dam. 1 / H318 Ox. Sol. 2 / H272
Carbonate salt	497-19-8	20 – < 30	Eye Irrit. 2 / H319

For full text of abbreviations: see SECTION 16.

Specific chemical identity and concentration of some ingredients are protected as Trade Secret information.

HMIRA Registry Number: 3331682 Date filed: 5/30/2019.

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

In case of respiratory tract irritation, consult a physician. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Brush off loose particles from skin. Rinse skin with water/shower. Take off contaminated clothing. After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Immediately call a doctor. In all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact

Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Immediately call a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage. Splashes cause strong tearing, pain, may cause permanent visual impairment. Prolonged contact may cause dryness, redness, burns, blistering and ulceration. Can be partially absorbed by the skin. Ingestion causes pain, burns, abdominal pain, possible general impact (shock).

4.3 Indication of any immediate medical attention and special treatment needed

No specific antidote is known. Treatment of the symptoms.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Non-combustible. Coordinate firefighting measures to the fire surroundings. Water, Foam, Fire extinguishing powder, ABC-powder

Unsuitable extinguishing media

None

5.2 Special hazards arising from the substance or mixture

Deposited combustible dust has considerable explosion potential.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

Keep containers cool with water spray. In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

Chemical protection suit, Use suitable breathing apparatus

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Aqueous solutions or powders that become wet produce extremely slippery conditions.

For non-emergency personnel

Follow emergency procedures such as the need to evacuate the danger area or to consult an expert. Remove persons to safety. Prevent skin contact. Avoid inhaling sprayed product. Aqueous solutions or powders that become wet produce extremely slippery conditions.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases. Wear personal protective equipment/face protection. Do not breathe dust. Aqueous solutions or powders that become wet produce extremely slippery conditions. Special danger of slipping by leaking/spilling product.

Suitable fabric for personal protective clothing

PE: polyethylene, NR: natural rubber, latex, CR: chloroprene (chlorobutadiene) rubber

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority. Disposal considerations: see section 13. Chemicals generally shouldn't reach surface water.

6.3 Methods and material for containment and cleaning up**Advice on how to contain a spill**

Covering of drains, Take up mechanically

Advice on how to clean up a spill

Take up mechanically. Collect spillage: Material for neutralising like diluted acetic acid. Control of dust.

Appropriate containment techniques

Neutralization techniques. Decontamination techniques. Use of adsorbent materials. Vacuuming techniques.

Equipment required for containment/clean-up

Approved industrial vacuum cleaner, Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.), Sweeping compounds (oil absorbing), Shovel, Drain seal, Collecting container, Protective gloves, Eye protection (e.g. protective goggles), Personal protective equipment: see section 8

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Section 7: Handling and storage. See also to sections 8 and 13 of the safety data sheet.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

Avoid dust formation. Avoid breathing dust.

Measures to prevent fire as well as aerosol and dust generation

Take precautionary measures against static discharge. Use local and general ventilation.

Handling of incompatible substances or mixtures

Do not mix with acids. Do not mix with other chemicals.

Keep away from

Strong oxidizers, Other chemicals

Measures to protect the environment

Do not empty into drains; dispose of this material and its container at hazardous or special waste collection point.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Consideration of other advice

Store between 5°C and 40°C. Avoid freezing.

Ventilation requirements

Keep any substance that emits harmful vapors or gases in a place that allows these to be permanently extracted. Use local and general ventilation.

Specific designs for storage rooms or vessels

No special measures are necessary. Keep container tightly closed.

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

Water treatment chemical. RO Reverse Osmosis.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational Exposure Limits: PELs, TLVs, etc

Occupational exposure limit values (Workplace Exposure Limits)					
Name of substance	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]
Dust and particulates	REL	Not established	Not established	Not established	Not established
Dust and particulates	PEL	1,766	15	Not established	Not established

Occupational exposure limit values (Workplace Exposure Limits)					
<i>Name of substance</i>	<i>Identifier</i>	<i>TWA [ppm]</i>	<i>TWA [mg/m³]</i>	<i>STEL [ppm]</i>	<i>STEL [mg/m³]</i>
Dust and particulates	PEL	529.5	5	Not established	Not established
Dust and particulates	PEL (CA)	Not established	10	Not established	Not established
Dust and particulates	PEL (CA)	Not established	5	Not established	Not established

Notation

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

8.2 Exposure controls

Appropriate engineering controls

Exhaust ventilation.

Individual protection measures (personal protective equipment)

Guarantee that the eye flushing systems and safety showers are closely located to the working place.

Eye/face protection

Wear eye/face protection.

Skin protection

Chemical resistant protective clothing.

Hand protection

In case of spray contact at least protection index 2 recommended, according to more than 30 min. penetration time (EN 374).

Layer thickness of gloves at least: 0.4 mm

In case of prolonged and intensive contact protection index 6 recommended, according to more than 480 min. penetration time (EN 374).

Layer thickness of gloves at least: 0.7 mm.

Type of material

PVC: polyvinyl chloride, PE: polyethylene, CR: chloroprene (chlorobutadiene) rubber, NBR: acrylonitrile-butadiene rubber, IIR: isobutene-isoprene (butyl) rubber, FKM: fluoro-elastomer

Breakthrough times of the glove material

Breakthrough times and swelling properties of the material must be taken into consideration

Other protection measures

Wash hands thoroughly after handling.

Respiratory protection

Not necessary under normal conditions and provided good general ventilation. In case of inadequate ventilation wear respiratory protection. Particulate filter device (EN 143). Type : E (against acidic gases like sulfur dioxide or hydrogen chloride, color code: Yellow).

Environmental exposure controls

Disposal considerations: see section 13.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	solid (powder, granular)
Color	white
Odor	odorless
Odor threshold	not applicable

Other safety parameters

pH (value)	ca. 10.5 – 11.5 (in aqueous solution: 2 wt%, 25 °C)
Melting point/freezing point	not determined
Initial boiling point and boiling range	not determined
Flash point	not applicable not applicable
Evaporation rate	not determined
Flammability (solid, gas)	not applicable
Explosion limits of dust clouds	not determined
Vapor pressure	not applicable
Vapor density	this information is not available
Density	not determined
Relative density	information on this property is not available
Solubility(ies)	not determined

Partition coefficient

-n-Octanol/water (log KOW)	this information is not available
Auto-ignition temperature	not determined not applicable
Decomposition temperature	not determined
Viscosity	not relevant (solid matter)
Explosive properties	none

Oxidizing properties	none
----------------------	------

9.2 Other information

There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Dangerous/dangerous reactions with Acids.

10.4 Conditions to avoid

Incompatible materials.

Hints to prevent fire or explosion

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Acute toxicity

Harmful if swallowed. Harmful if inhaled.

Acute toxicity of components of the mixture				
Name of substance	Exposure route	Endpoint	Value	Species
sodium carbonate peroxyhydrate	oral	LD50	1,034 mg/kg	rat
sodium carbonate peroxyhydrate	dermal	LD50	>2,000 mg/kg	rabbit
Carbonate salt	oral	LD50	2,800 mg/kg	rat
Carbonate salt	dermal	LD50	>2,000 mg/kg	rabbit

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes serious eye damage. Causes serious eye irritation.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)					
Endpoint	Value	Species	Exposure time		
LC50	342 mg/l	fathead minnow	96 h		
LC50	41 mg/l	Ceriodaphnia dubia (water flea)	48 h		
LC50	1,342 mg/l	marine fish	96 h		
LC50	17.89 mg/l	Arcatia tonsa	48 h		
Aquatic toxicity (acute) of components of the mixture					
Name of substance	Endpoint	Exposure time	Value	Species	Source
sodium carbonate peroxyhydrate	LC50	48 h	70.7 mg/l	fish	European Chemicals Agency, http://echa.europa.eu/
sodium carbonate peroxyhydrate	EC50	48 h	4.9 mg/l	aquatic invertebrates	European Chemicals Agency, http://echa.europa.eu/

Aquatic toxicity (acute) of components of the mixture					
<i>Name of substance</i>	<i>Endpoint</i>	<i>Exposure time</i>	<i>Value</i>	<i>Species</i>	<i>Source</i>
Carbonate salt	LC50	96 h	300 mg/l	fish	European Chemicals Agency, http://echa.europa.eu/
Carbonate salt	EC50	48 h	227 mg/l	aquatic invertebrates	European Chemicals Agency, http://echa.europa.eu/

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Not applicable.

12.6 Other adverse effects

Data are not available.

Remarks

Do not empty into drains or surface water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Do not empty into drains; dispose of this material and its container at hazardous or special waste collection point. Dispose of waste according to applicable legislation.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Avoid release to the environment.

SECTION 14: Transport information

14.1 UN number	3262
14.2 UN proper shipping name	Corrosive solid, basic, inorganic, n.o.s.
Technical name (hazardous ingredients)	contains: (sodium carbonate peroxyhydrate) (disodium carbonate)
14.3 Transport hazard class(es)	
Class	8
14.4 Packing group	II
14.5 Environmental hazards	non-environmentally hazardous acc. to the dangerous goods regulations
14.6 Special precautions for user	
There is no additional information.	
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	
The cargo is not intended to be carried in bulk.	

Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT)

Index number	3262
Proper shipping name	Corrosive solid, basic, inorganic, n.o.s.
Particulars in the shipper's declaration	UN3262, Corrosive solid, basic, inorganic, n.o.s., (sodium carbonate peroxyhydrate, disodium carbonate), 8, II
Class	8
Packing group	II
Danger label(s)	8
	
Special provisions (SP)	IB8, IP2, IP4, T3, TP33
ERG No	154

International Maritime Dangerous Goods Code (IMDG)

UN number	3262
Proper shipping name	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
Particulars in the shipper's declaration	UN3262, CORROSIVE SOLID, BASIC, INORGANIC, N.O.S., (sodium carbonate peroxyhydrate, disodium carbonate), 8, II
Class	8
Marine pollutant	-
Packing group	II
Danger label(s)	8



EmS	F-A, S-B
Segregation group	18 - Alkalis
Segregation codes	SG35
International Civil Aviation Organization (ICAO-IATA/DGR)	
UN number	3262
Proper shipping name	Corrosive solid, basic, inorganic, n.o.s.
Particulars in the shipper's declaration	UN3262, Corrosive solid, basic, inorganic, n.o.s., (sodium carbonate peroxyhydrate, disodium carbonate), 8, II
Class	8
Environmental hazards	no
Packing group	II
Danger label(s)	8



SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA) all ingredients are listed or exempt from listing

Superfund Amendment and Reauthorization Act (SARA TITLE III)

The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

Specific Toxic Chemical Listings (EPCRA Section 313)

none of the ingredients are listed

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

none of the ingredients are listed

Clean Air Act

none of the ingredients are listed

New Jersey Worker and Community Right to Know Act

none of the ingredients are listed

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

Industry or sector specific available guidance(s)

NPCA-HMIS® III

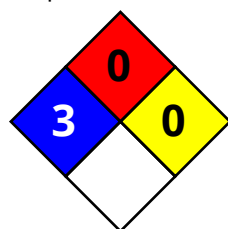
Hazardous Materials Identification System. American Coatings Association.

HEALTH	*	3
FLAMMABILITY		0
PHYSICAL HAZARD		0
PERSONAL PROTECTION		-

A "*" on the health line indicates a chronic health hazard is present.

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).



Additional information

Substance is listed in the following national inventories:

The contained substances are listed in the following national inventories:

AICS (Australia)
 ASIA-PAC (Asia-Pacific Region)
 DSL (Canada)
 NDSL (Canada)
 DSL/NDSL (Canada)
 IECSC (China)
 EINECS/ELINCS/NLP (Europe)
 EINECS (European Union)
 REACH (Europe)
 ENCS, class 1 and 2 (MITI-inventory, Japan)
 CSCL-ENCS (Japan)
 ISHA-ENCS (Japan)
 KECL (Republic of Korea)
 INSQ (Mexico)
 NZIoC (New Zealand)
 PICCS (Philippines)
 CICR (Turkey)
 TCSI (Taiwan)
 TSCA (United States)

15.2 Chemical Safety Assessment

Chemical Safety Assessment: No.

SECTION 16: Other information, including date of preparation or last revision

Abbreviations and acronyms

<i>Abbr.</i>	<i>Descriptions of used abbreviations</i>
49 CFR US DOT	49 CFR U.S. Department of Transportation
Acute Tox.	Acute toxicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DOT	Department of Transportation (USA)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ERG No	Emergency Response Guidebook - Number
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
Ox. Sol.	Oxidizing solid
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals

RoClean™ P111

Date of compilation: 2022-09-28

<i>Abbr.</i>	<i>Descriptions of used abbreviations</i>
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

ECHA: European Chemicals Agency, <http://echa.europa.eu/>.

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

<i>Code</i>	<i>Text</i>
H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.



Univar USA Inc Safety Data Sheet

SDS No:

Version No:

Order No:

3075 Highland Pkwy, Ste 200, Downers Grove, IL 60515
(425) 889 3400

Emergency Assistance

For emergency assistance involving chemicals call
Chemtrec - (800) 424-9300

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COMPANY IDENTITY: Univar
PRODUCT IDENTITY: SODIUM BISULFITE SOLUTION

SDS DATE: 01/09/2015
REPLACES: 07/18/2014

SAFETY DATA SHEET

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements and the International Chemical Safety Cards of the Global Harmonizing System.

THIS SDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)

IMPORTANT: Read this SDS before handling & disposing of this product.

Pass this information on to employees, customers, & users of this product.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

PRODUCT IDENTITY: SODIUM BISULFITE SOLUTION
SDS NUMBER: CDS-2115
COMPANY IDENTITY: Univar
COMPANY ADDRESS: 17425 NE Union Hill Road
COMPANY CITY: Redmond, WA 98052
COMPANY PHONE: 1-425-889-3400
EMERGENCY PHONES: CHEMTREC: 1-800-424-9300 (USA)
CANUTEC: 1-613-996-6666 (CANADA)



SECTION 2. HAZARDS IDENTIFICATION

WARNING!

2.1 HAZARD STATEMENTS:

H100s = General, H200s = Physical, H300s = Health, H400s = Environmental

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

2.2 PRECAUTIONARY STATEMENTS:

P100s = General, P200s = Prevention, P300s = Response, P400s = Storage, P500s = Disposal

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P262 Do not get in eyes, on skin, or on clothing.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	CAS#	EINECS#	WT %
Water	7732-18-5	231-791-2	58-73
Sodium Bisulfite	7631-90-5	-	27-42

Trace components: Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, reproductive toxins, respiratory tract mutagens, and sensitizers). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents, and Canadian Hazardous Materials Identification System Standard (CPR 4).

SEE SECTIONS 8, 11 & 12 FOR TOXICOLOGICAL INFORMATION.

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SECTION 4. FIRST AID MEASURES

4.1 GENERAL ADVICE:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists, refer to Section 8 for specific personal protective equipment.

4.2 EYE CONTACT:

If this product enters the eyes, open eyes while under gently running water. Use sufficient force to open eyelids. "Roll" eyes to expose more surface. Minimum flushing is for 15 minutes. Seek immediate medical attention.

4.3 SKIN CONTACT:

If the product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove contaminated clothing, taking care not to contaminate eyes. If skin becomes irritated and irritation persists, medical attention may be necessary. Wash contaminated clothing before reuse, discard contaminated shoes.

4.4 INHALATION:

After high vapor exposure, remove to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. breathing is difficult, give oxygen. If breathing has stopped, trained personnel should immediately begin artificial respiration. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If the heart has stopped, trained personnel should immediately begin cardiopulmonary resuscitation (CPR). Seek immediate medical attention. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

4.5 SWALLOWING:

If swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, give two glasses of water to drink. DO NOT INDUCE VOMITING. Never induce vomiting or give liquids to someone who is unconscious, having convulsions, or unable to swallow. Seek immediate medical attention.

4.6 NOTES TO PHYSICIAN:

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (such as: Gastric lavage after endotracheal intubation).

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take a copy of label and SDS to physician or health professional with victim.

SECTION 5. FIRE FIGHTING MEASURES

5.1 FIRE & EXPLOSION PREVENTIVE MEASURES

Isolate from oxidizers, acids, and extreme heat.

5.2 EXTINGUISHING MEDIA

Use appropriate extinguishing media for surrounding fire.

5.3 SPECIAL FIRE FIGHTING PROCEDURES

Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used. Do not enter confined fire-space without full bunker gear. (Helmet with face shield, bunker coats, gloves & rubber boots). Use NIOSH approved positive-pressure self-contained breathing apparatus.

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SECTION 5. FIRE FIGHTING MEASURES (CONTINUED)

5.4 UNUSUAL EXPLOSION AND FIRE PROCEDURES

Noncombustible.
Thermal decomposition produces toxic fumes.
Closed containers may explode if exposed to extreme heat.
Applying to hot surfaces requires special precautions.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 SPILL AND LEAK RESPONSE AND ENVIRONMENTAL PRECAUTIONS:

Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel.

6.2 PERSONAL PROTECTIVE EQUIPMENT

The proper personal protective equipment for incidental releases (such as: 1 Liter of the product released in a well-ventilated area), use impermeable gloves (triple-gloves (rubber gloves and nitrile gloves, over latex gloves), goggles, face shield, and appropriate body protection. In the event of a large release, use impermeable gloves, specific for the material handled, chemically resistant suit and boots, and hard hat. Self-Contained Breathing Apparatus or respirator may be required where engineering controls are not adequate or conditions for potential exposure exist. When respirators are required, select NIOSH/MSHA approved based on actual or potential airborne concentrations in accordance with latest OSHA and/or ANSI recommendations.

6.3 ENVIRONMENTAL PRECAUTIONS:

Stop spill at source. Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of the material. Close or cap valves and/or block or plug hole in leaking container and transfer to another container. Keep from entering storm sewers and ditches which lead to waterways, and if necessary, call the local fire or police department for immediate emergency assistance.

6.4 CONTAINMENT AND CLEAN-UP MEASURES:

Absorb spilled liquid with polypads or other suitable absorbent materials. If necessary, neutralize using suitable buffering material, (acid with soda ash or base with phosphoric acid), and test area with litmus paper to confirm neutralization. Clean up with non-combustible absorbent (such as: sand, soil, and so on). Shovel up and place all spill residue in suitable containers. dispose of at an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal (see Section 13 - Disposal Considerations).

SECTION 7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Isolate from oxidizers, heat, & open flame. Use only with adequate ventilation. Avoid breathing of vapor or spray mist. Avoid contact with skin & eyes. Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier. Wear goggles, face shield, gloves, apron & footwear impervious to material. Wash clothing before reuse.
Empty container very hazardous! Continue all label precautions!

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

Isolate from acids, strong oxidants. Do not store above 49 C/120 F.
Keep container tightly closed & upright when not in use to prevent leakage.

7.3 NONBULK: CONTAINERS:

Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or in a diked area, as appropriate. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Empty containers should be handled with care. Never store food, feed, or drinking water in containers which held this product.

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SECTION 7. HANDLING AND STORAGE (CONTINUED)

7.4 BULK CONTAINERS:

All tanks and pipelines which contain this material must be labeled. Perform routine maintenance on tanks or pipelines which contain this product. Report all leaks immediately to the proper personnel.

7.5 TANK CAR SHIPMENTS:

Tank cars carrying this product should be loaded and unloaded in strict accordance with tank-car manufacturer's recommendation and all established on-site safety procedures. Appropriate personal protective equipment must be used (see Section 8, Engineering Controls and Personal Protective Equipment.). All loading and unloading equipment must be inspected, prior to each use. Loading and unloading operations must be attended, at all times. Tank cars must be level, brakes must be set or wheels must be locked or blocked prior to loading or unloading. Tank car (for loading) or storage tanks (for unloading) must be verified to be correct for receiving this product and be properly prepared, prior to starting the transfer operations. Hoses must be verified to be in the correct positions, before starting transfer operations. A sample (if required) must be taken and verified (if required) prior to starting transfer operations. All lines must be blown-down and purged before disconnecting them from the tank car or vessel.

7.6 PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:

Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilation is provided. Collect all rinsates and dispose of according to applicable Federal, State, Provincial, or local procedures.

7.7 EMPTY CONTAINER WARNING:

Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. **DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY BURST AND CAUSE INJURY OR DEATH.**

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

MATERIAL	CAS#	EINECS#	TWA (OSHA)	TLV (ACGIH)
Water	7732-18-5	231-791-2	None Known	None Known
Sodium Bisulfite	7631-90-5	-	None Known	None Known

This product contains no EPA Hazardous Air Pollutants (HAP) in amounts > 0.1%.

8.2 APPROPRIATE ENGINEERING CONTROLS:

RESPIRATORY EXPOSURE CONTROLS

Airborne concentrations should be kept to lowest levels possible. If vapor, dust or mist is generated and the occupational exposure limit of the product, or any component of the product, is exceeded, use appropriate NIOSH or MSHA approved air purifying or air-supplied respirator authorized in 29 CFR 1910.134, European Standard EN 149, or applicable State regulations, after determining the airborne concentration of the contaminant. Air supplied respirators should always be worn when airborne concentration of the contaminant or oxygen content is unknown. Maintain airborne contaminant concentrations below exposure limits. If adequate ventilation is not available or there is potential for airborne exposure above the exposure limits, a respirator may be worn up to the respirator exposure limitations, check with respirator equipment manufacturer's recommendations/limitations. For particulates, a particulate respirator (NIOSH Type N95 or better filters) may be worn. If oil particles (such as: lubricants, cutting fluids, glycerine, and so on) are present, use a NIOSH Type R or P filter. For a higher level of protection, use positive pressure supplied air respiration protection or Self-Contained Breathing Apparatus or if oxygen levels are below 19.5% or are unknown.

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SDS DATE: 01/09/2015
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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS
Positive pressure, full-face piece Self-Contained Breathing Apparatus; or positive pressure, full-face piece Self-Contained Breathing Apparatus with an auxilliary positive pressure Self-Contained Breathing Apparatus.

VENTILATION

LOCAL EXHAUST: Necessary MECHANICAL (GENERAL): Necessary
SPECIAL: None OTHER: None
Please refer to ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

8.3 INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT:

EYE PROTECTION:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, chemical splash goggles should be worn, when a higher degree of protection is necessary, use splash goggles or safety glasses. Face-shields are recommended when the operation can generate splashes, sprays or mists.

HAND PROTECTION:

Use gloves chemically resistant to this material. Preferred examples: Butyl rubber, Chlorinated Polyethylene, Polyethylene, Ethyl vinyl alcohol laminate ("EVAL"), Polyvinyl alcohol ("PVA"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"), Neoprene, Nitrile/butadiene rubber ("nitril") or ("NBR"), Polyvinyl chloride ("PVC") or "vinyl", Viton. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

BODY PROTECTION:

Use body protection appropriate for task. Cover-all, rubber aprons, or chemical protective clothing made from impervious materials are generally acceptable, depending on the task.

WORK & HYGIENIC PRACTICES:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using toilet facilities and at the end of the working period. Provide readily accessible eye wash stations & safety showers. Remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

BODY PROTECTION:

Use body protection appropriate for task. Cover-all, rubber aprons, or chemical protective clothing made from impervious materials are generally acceptable, depending on the task.

WORK & HYGIENIC PRACTICES:

Provide readily accessible eye wash stations & safety showers. Wash at end of each shift & before eating, smoking or using the toilet. Remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

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COMPANY IDENTITY: Univar
PRODUCT IDENTITY: SODIUM BISULFITE SOLUTION

SDS DATE: 01/09/2015
REPLACES: 07/18/2014

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE:	Liquid, Straw Yellow
ODOR:	Sharp, Pungent
ODOR THRESHOLD:	Not Available
pH (Neutrality):	4.1 - 4.6
BOILING RANGE (IBP,50%,Dry Point):	> 100 C / > 212 F
FLASH POINT (TEST METHOD):	Not Applicable
EVAPORATION RATE (n-BUTYL ACETATE=1):	Not Applicable
FLAMMABILITY CLASSIFICATION:	Non-Combustible
LOWER FLAMMABLE LIMIT IN AIR (% by vol):	Not Applicable
UPPER FLAMMABLE LIMIT IN AIR (% by vol):	Not Available
VAPOR PRESSURE (mm of Hg)@20 C	9
VAPOR DENSITY (air=1):	0.670
GRAVITY @ 68/68 F / 20/20 C:	
SPECIFIC GRAVITY (Water=1):	1.320
POUNDS/GALLON:	10.996
WATER SOLUBILITY:	Complete
PARTITION COEFFICIENT (n-Octane/Water):	Not Available
AUTO IGNITION TEMPERATURE:	Not Applicable
DECOMPOSITION TEMPERATURE:	Not Available
VOCs (>0.044 Lbs/Sq In) :	0.0 Vol% /0.0 g/L / 0.000 Lbs/Gal
TOTAL VOC'S (TVOC)*:	0.0 Vol% /0.0 g/L / 0.000 Lbs/Gal
NONEXEMPT VOC'S (CVOC)*:	0.0 Vol% /0.0 g/L / 0.000 Lbs/Gal
HAZARDOUS AIR POLLUTANTS (HAPS):	0.0 Wt% /0.0 g/L / 0.000 Lbs/Gal
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C)	0.0

* Using California Air Resources Board (CARB) Rule 310.

SECTION 10. STABILITY & REACTIVITY

10.1 STABILITY

Stable under normal conditions.

10.2 CONDITIONS TO AVOID

Gradually oxidizes to sodium sulfate on exposure to air. Temperatures at or near boiling point causes evolution of toxic and corrosive sulfur dioxide.

10.3 MATERIALS TO AVOID

Mineral acids, oxidizing agents. Contact with acid liberates irritating sulfur dioxide gas. Corrosive to steel, carbon steel, and other common materials of construction at ambient temperatures.

10.4 HAZARDOUS DECOMPOSITION PRODUCTS

Sodium Oxide & Hydroxide, Sulfur Dioxide from heating.

10.5 HAZARDOUS POLYMERIZATION

Will not occur.

COMPANY IDENTITY: Univar
PRODUCT IDENTITY: SODIUM BISULFITE SOLUTION

SDS DATE: 01/09/2015
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SECTION 11. TOXICOLOGICAL INFORMATION

11.1 ACUTE HAZARDS

11.11 EYE & SKIN CONTACT:
CORROSIVE! Causes severe skin burns.
Causes severe eye damage.
Wash thoroughly after handling.

11.12 INHALATION:
Mist irritating to respiratory tract.

11.13 SWALLOWING:
Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea.

11.2 SUBCHRONIC HAZARDS/CONDITIONS AGGRAVATED

CONDITIONS AGGRAVATED
None Known.

11.3 CHRONIC HAZARDS

11.31 CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:
This product has no carcinogens listed by IARC, NTP, NIOSH,
OSHA or ACGIH, as of this date, greater or equal to 0.1%.

11.32 IRRITANCY OF PRODUCT: This product is irritating to contaminated tissue.

11.33 SENSITIZATION TO THE PRODUCT: No component of this product is known to be a sensitizer.

11.34 MUTAGENICITY: This product is not reported to produce mutagenic effects in humans.

11.35 EMBRYOTOXICITY: This product is not reported to produce embryotoxic effects in humans.

11/36 TERATOGENICITY: This product is not reported to produce teratogenic effects in humans.

11.37REPRODUCTIVE TOXICITY: This product is not reported to cause reproductive effects in humans.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (such as: within the eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

MAMMALIAN TOXICITY INFORMATION

LD50 (Oral): 820 mg/kg (Mouse)

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PRODUCT IDENTITY: SODIUM BISULFITE SOLUTION

SDS DATE: 01/09/2015
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SECTION 12. ECOLOGICAL INFORMATION

12.1 ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

12.2 EFFECT OF MATERIAL ON PLANTS AND ANIMALS:

This product may be harmful or fatal to plant and animal life if released into the environment. Refer to Section 11 (Toxicological Information) for further data on the effects of this product's components on test animals.

12.3 EFFECT OF MATERIAL ON AQUATIC LIFE:

No aquatic environmental information is available on this product.

12.4 MOBILITY IN SOIL

Mobility of this material has not been determined.

12.5 DEGRADABILITY

This product is completely biodegradable.

12.6 ACCUMULATION

Bioaccumulation of this product has not been determined.

SECTION 13. DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers and liners may retain some product residues. Vapor from some product residues may create a highly flammable or explosive atmosphere inside the container. **DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE USED CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY BURST AND CAUSE INJURY OR DEATH.** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Processing, use or contamination may change the waste management options. Recycle / dispose of observing national, regional, state, provincial and local health, safety & pollution laws. If in doubt, contact appropriate agencies. Deactivating Chemicals: Soda Ash, Lime or Limestone. EPA Waste Number: D002.

SECTION 14. TRANSPORT INFORMATION

DOT/TDG SHIP NAME: UN2693, Bisulfites, aqueous solutions, n.o.s.
(contains: Sodium Bisulfite), 8, PG-III
DRUM LABEL: Corrosive (8)
IATA / ICAO: UN2693, Bisulfites, aqueous solutions, n.o.s.
(contains: Sodium Bisulfite), 8, PG-III
IMO / IMDG: UN2693, Bisulfites, aqueous solutions, n.o.s.
(contains: Sodium Bisulfite), 8, PG-III
EMERGENCY RESPONSE GUIDEBOOK NUMBER: 154



SECTION 15. REGULATORY INFORMATION

15.1 EPA REGULATION:

SARA SECTION 311/312 HAZARDS: Acute Health, Chronic Health, Reactivity

All components of this product are on the TSCA list.
SARA Title III Section 313 Supplier Notification
This product contains the indicated <*> toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 & of 40 CFR 372. This information must be

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included in all MSDSs that are copied and distributed for this material.

EPA CLEAN WATER ACT

Sodium Bisulfite is listed as a hazardous substance which, if discharged to the water, may require immediate response to mitigate dangers to human health and the environment.

SARA TITLE III INGREDIENTS	CAS#	EINECS#	WT%	(REG.SECTION)	RQ(LBS)
Sodium Bisulfite	7631-90-5	-	27-42	(311,312)	5000

SECTION 15. REGULATORY INFORMATION (CONTINUED)

15.2 STATE REGULATIONS:

CALIFORNIA SAFE DRINKING WATER & TOXIC ENFORCEMENT ACT (PROPOSITION 65):
This product contains no chemicals known to the State of California to cause cancer or reproductive toxicity.

15.3 INTERNATIONAL REGULATIONS

The components of this product are listed on the chemical inventories of the following countries:
Australia (AICS), Canada (DSL or NDSL), China (IECSC), Europe (EINECS, ELINCS)G
Japan (METI/CSCL, MHLW/ISHL), South Korea (KECI), New Zealand (NZIoC),
Philippines (PICCS), Switzerland (SWISS), Taiwan (NECSI), USA (TSCA).

15.4 CANADA: WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

D2B: Irritating to skin / eyes.
E: Corrosive

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

14.5 SDS DATE: 07/18/2014

SECTION 16. OTHER INFORMATION

16.1 HAZARD RATINGS:

HEALTH (NFPA): 2, HEALTH (HMIS): 2, FLAMMABILITY: 0, PHYSICAL HAZARD: 0
(Personal Protection Rating to be supplied by user based on use conditions.)
This information is intended solely for the use of individuals trained in the NFPA & HMIS hazard rating systems.

Univar USA Inc Safety Data Sheet

For Additional Information contact SDS Coordinator during business hours, Pacific time: (425) 889-3400

Notice

Univar USA Inc. ("Univar") expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this SDS as a product specification. For product specification information refer to a product specification sheet and/or a certificate of analysis. These can be obtained from your local Univar sales office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Univar makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Univar's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein.

This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process



SAFETY DATA SHEET

1. Identification

Other means of identification None known.
 Product identifier **SODIUM HYPOCHLORITE 12.5% NSF**
 Recommended use ALL PROPER AND LEGAL PURPOSES
 Recommended restrictions None known.
 Manufacturer/Importer/Supplier/Distributor information
 Manufacturer
 Company name Brenntag Northeast, LLC
 Address 81 West Huller Lane
 Reading, PA 19605
 Telephone 610-926-4151
 E-mail Not available.
 Emergency phone number 800-424-9300 Chemtrec

2. Hazard(s) identification

Physical hazards Not classified.
 Health hazards Skin corrosion/irritation Category 1
 Serious eye damage/eye irritation Category 1
 Environmental hazards Not classified.
 OSHA defined hazards Not classified.

Label elements



Signal word Danger
 Hazard statement Causes severe skin burns and eye damage. Causes serious eye damage.
 Precautionary statement
 Prevention Do not breathe mist/vapors. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
 Response If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse.
 Storage Store locked up.
 Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.
 Hazard(s) not otherwise classified (HNOC) None known.
 Supplemental information 12.5% of the mixture consists of component(s) of unknown acute dermal toxicity. 100% of the mixture consists of component(s) of unknown acute inhalation toxicity.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
HYPOCHLOROUS ACID, SODIUM SALT (1:1)		7681-52-9	12.5
Other components below reportable levels			87.5

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Foam. Powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Do not breathe mist/vapors. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
HYPOCHLOROUS ACID, SODIUM SALT (1:1) (CAS 7681-52-9)	STEL	2 mg/m3

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

The following are recommendations for Personnel Protective Equipment (PPE). The employer/user of this product must perform a Hazard Assessment of the workplace according to OSHA regulations 29 CFR 1910.132 to determine the appropriate PPE for use while performing any task involving potential exposure to this product.

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.
Form Liquid.
Color CLEAR PALE YELLOW

Odor CHLORINE

Odor threshold Not available.

pH 11.5 - 13.5

Melting point/freezing point -3 °F (-19.44 °C)

Initial boiling point and boiling range 212 °F (100 °C) estimated

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	10.06 lbs/gal 1.21 g/ml
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Percent volatile	87.5 % estimated
Specific gravity	1.21

10. Stability and reactivity

Reactivity	Reacts violently with strong acids. This product may react with oxidizing agents.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Do not mix with other chemicals.
Incompatible materials	Acids. Oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity	Not known.
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Components	Species	Test Results
HYPOCHLOROUS ACID, SODIUM SALT (1:1) (CAS 7681-52-9)		

Acute

Oral

LD50	Rat	8.91 g/kg
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Skin corrosion/irritation	Causes severe skin burns and eye damage.
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Serious eye damage/eye irritation	Causes serious eye damage.
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Respiratory or skin sensitization

Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.
Skin sensitization	Due to partial or complete lack of data the classification is not possible.
Germ cell mutagenicity	Due to partial or complete lack of data the classification is not possible.
Carcinogenicity	Due to partial or complete lack of data the classification is not possible.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US, National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - single exposure	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Due to partial or complete lack of data the classification is not possible.
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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Components		Species	Test Results
HYPOCHLOROUS ACID, SODIUM SALT (1:1) (CAS 7681-52-9)			
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	0.11 - 0.13 mg/l, 24 hours
	LC50	Calanoid copepod (Acartia tonsa)	0.313 - 0.497 mg/l, 24 hours
		Coon stripe shrimp (Pandalus danae)	0.246 - 0.333 mg/l, 96 hours
		Daggerblade grass shrimp (Palaemonetes pugio)	46 - 58.8 mg/l, 96 hours
		Opossum shrimp (Americamysis bahia)	0.229 - 0.321 mg/l, 96 hours
		Rotifer (Brachionus calyciflorus)	0.35 - 0.39 mg/l, 24 hours
		Scud (Hyalella azteca)	0.252 - 0.362 mg/l, 96 hours
		Water flea (Ceriodaphnia dubia)	0.14 mg/l, 24 hours
		Water flea (Daphnia magna)	0.045 - 0.068 mg/l, 48 hours
	Fish	LC50	Bleak (Alburnus alburnus)
Brown trout (Salmo trutta)			0.02 - 0.05 mg/l, 1.5 hours
California grunion (Leuresthes tenuis)			0.139 mg/l, 24 hours
Carp (Cyprinus carpio)			1.75 - 1.89 mg/l, 160 minutes
Channel catfish (Ictalurus punctatus)			0.45 mg/l, 96 hours
Chinook salmon (Oncorhynchus tshawytscha)			0.038 - 0.065 mg/l, 96 hours
Coho salmon,silver salmon (Oncorhynchus kisutch)			0.245 - 0.328 mg/l, 15 minutes
Fathead minnow (Pimephales promelas)			4.4 - 7.1 mg/l, 24 hours
Freshwater drum (Aplodinotus grunniens)			1.67 - 1.83 mg/l, 160 minutes
Rainbow trout,donaldson trout (Oncorhynchus mykiss)			0.05 - 0.071 mg/l, 96 hours
Shiner perch (Cymatogaster aggregata)			0.045 - 0.098 mg/l, 96 hours
Yellow perch (Perca flavescens)			18 - 28.7 mg/l, 15 minutes
Yellowtail flounder (Pleuronectes ferrugineus)			0.1 mg/l, 24 hours

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.

Hazardous waste code	D002: Waste Corrosive material [pH <=2 or >=12.5, or corrosive to steel] The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1791
UN proper shipping name	HYPOCHLORITE SOLUTIONS MARINE POLLUTANT (SODIUM HYPOCHLORITE) RQ
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport information on packaging may be different from that listed. Transportation information on packaging may be different from that listed.	

IMDG

UN number	UN1791
UN proper shipping name	HYPOCHLORITE SOLUTIONS MARINE POLLUTANT (SODIUM HYPOCHLORITE) RQ, MARINE POLLUTANT
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

DOT



IMDG



Marine pollutant



General information

IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

HYPOCHLOROUS ACID, SODIUM SALT (1:1) Listed.
(CAS 7681-52-9)

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	11-11-2016
Revision date	05-21-2022
Version #	65
HMIS® ratings	Health: 3 Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 3 Flammability: 0 Instability: 0
Disclaimer	While Brenntag believes the information contained herein to be accurate, Brenntag makes no representation or warranty, express or implied, regarding, and assumes no liability for, the accuracy or completeness of the information. The Buyer assumes all responsibility for handling, using and/or reselling the Product in accordance with applicable federal, state, and local law. This SDS shall not in any way limit or preclude the operation and effect of any of the provisions of Brenntag's terms and conditions of sale.



MATERIAL SAFETY DATA SHEET

Sulfuric Acid 93% - 98%

Transportation Emergencies CHEMTREC: 800-424-9300

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Sulfuric Acid 93%; Sulfuric Acid 98%

CHEMICAL NAME/ FAMILY: Acids

TRADE NAMES/ SYNONYMS: Sulfuric Acid; Oil of Vitriol

MOLECULAR FORMULA: H₂SO₄

MANUFACTURER OR FORMULATOR: BRENNTAG, 610 Fisher Road, Longview, TX 75604
800-945-4528

SECTION 2: COMPOSITION/ INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NUMBER	% RANGE
Sulfuric Acid*	7664-93-9	93-98%
Water	7732-18-5	2-7%

* Denotes chemical subject to reporting requirements of Section 313 of Title III of the 1986 Superfund Amendments and Reauthorization Act (SARA) and 40 CFR Part 372.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER! Causes severe burns. Do not get in eyes, on skin or on clothing. May be harmful if inhaled, do not breathe mist. May be fatal if swallowed. Reacts violently with water. Flammable and explosive hydrogen gas can be generated inside metal drums and storage tanks. Highly reactive and capable of igniting combustible material on contact.

POTENTIAL HEALTH EFFECTS

EYE

Liquid contact with eyes can cause irritation, corneal burns and blindness. Mist contact may irritate or burn.

SKIN

Fumes or mists may cause severe irritation or burns to skin. Skin contact with liquid sulfuric acid may cause skin corrosion, burns or ulcers.

INGESTION

Oral and gastrointestinal irritation. May cause burns of the mouth, throat, esophagus and stomach resulting in local tissue damage. Nausea, vomiting, diarrhea, and gastrointestinal bleeding, and collapse of blood pressure may follow – damage may appear days after exposure. **Can be fatal if swallowed.**

Updated: 8-22-13

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MATERIAL SAFETY DATA SHEET – Sulfuric Acid 93%-98%

INHALATION

Irritation of the respiratory system. May cause sneezing, sore throat or runny nose; non specific effects such as headache, nausea and weakness.

SIGNS AND SYMPTOMS OF EXPOSURE

Irritation and or burns to exposed tissue, respiratory distress, nausea, vomiting or diarrhea.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Medical conditions generally aggravated are acute and chronic respiratory diseases.

EFFECTS FOLLOWING REPEATED EXPOSURE

Repeated and/ or prolonged exposure to mists may cause irritation with itching, burning, redness, swelling or rash to the skin and irritation with tearing, pain or blurred vision to the eyes. Long term exposure to high levels of acid fumes may cause erosion of teeth followed by jaw necrosis, bronchial irritation, coughing, and bronchial pneumonia, or gastrointestinal disturbances.

SECTION 4: FIRST AID MEASURES

EYES

Hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention for irritation or any other symptom.

SKIN

Take off contaminated clothing and shoes. Rinse skin immediately with plenty of water for 15-20 minutes. Get immediate medical attention for irritation or burns. Wash clothing and thoroughly clean shoes before reuse.

While the patient is being transported to a medical facility, continue to the application of cold, wet compresses. If medical treatment must be delayed, repeat the flushing with cold water or soak the affected area with cold water to help remove the last traces of sulfuric acid. Creams or ointments should not be applied before or during the washing phase of treatment.

INGESTION

Call a poison control center or doctor for immediate advice. Have person drink large quantities of water immediately if able to swallow. **Do not induce vomiting** unless directed to do so by medical personnel. Do not give anything by mouth to an unconscious person.

INHALATION

Remove person from exposure to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration (CPR). If individual is breathing, but with difficulty, get immediate medical attention.

NOTES TO PHYSICIAN

All treatment should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Continued washing of the affected area with cold or iced water will be helpful in removing the last traces of sulfuric acid. Creams or ointments should not be applied before or during the washing phase of treatment.

See Section 11 for Toxicological Information.



MATERIAL SAFETY DATA SHEET – Sulfuric Acid 93%-98%

SECTION 5: FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT

Not Applicable

AUTOIGNITION TEMPERATURE

Not Applicable

FLAMMABLE LIMITS IN AIR (% BY VOLUME)

Not Applicable

FLAMMABLE PROPERTIES

Will not burn

EXTINGUISHING MEDIA

Choose extinguishing media suitable for surrounding materials. Use water spray to cool containers exposed to fire; do not get water inside containers.

HAZARDOUS COMBUSTION PRODUCTS

Flammable and explosive hydrogen gas can be generated inside metal drums and storage tanks. Concentrated acid can ignite combustible materials on contact. Acid plus active metals can form explosive concentrations of hydrogen. At high temperatures, sulfur trioxide mists may release from vented or ruptured containers.

FIRE FIGHTING INSTRUCTIONS

Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing if involved in a fire. Evacuate personnel to a safe area. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Move container from fire area if it can be done without risk. Avoid direct streams of water, product generates heat and may cause splattering. Do not release runoff from fire control methods to sewers or waterways. Dike area to prevent runoff and water source contamination. Neutralize run-off with lime, soda ash etc., to prevent corrosion of metals and formation of hydrogen gas.

SECTION 6: ACCIDENTAL RELEASE MEASURES

WATER SPILL

Prevent additional discharge of material, if possible to do so without hazard.

LAND SPILL

Prevent additional discharge of material, if possible to do so without hazard. For small spills implement cleanup procedures; for large spills implement cleanup procedures and, if in public area, advise authorities.

GENERAL PROCEDURES

Personnel handling this material should be thoroughly trained to handle spills and releases. Review "Fire and Explosion Hazards" and "Safety Precautions" before proceeding with clean up. Do not direct hose streams into an unignited transportation spill (tank truck or tank car).

No smoking in spill areas. Isolate spill area and deny entry to unnecessary or unprotected personnel. Remove all sources of ignition, such as flames, hot glowing surfaces or electric arcs. Stop source of spill as soon as possible and notify appropriate personnel. Cleanup personnel must wear proper protective equipment (refer to Section 8). Decontaminate all clothing. Notify all downstream water users of possible contamination.

Pump any free liquid into an appropriate closed container. Exercise caution during neutralization as considerable heat may be generated. Carefully neutralize spill with lime or soda ash, and transfer to wastewater treatment system. Prevent liquid from entering sewers, waterways, or low areas.

Small spills may also be absorbed using clay, soil or nonflammable commercial absorbents. Scrape up and place in appropriate closed container.

Do not place spill materials back in their original container. Containerize and label all spill materials properly.

Updated: 8-22-13

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MATERIAL SAFETY DATA SHEET – Sulfuric Acid 93%-98%

RELEASE NOTES

Do not flush to drain. Notify the National Response Center (800/424/8802) of uncontained releases to the environment in excess of the Reportable Quantity (RQ). See Section 15, Regulatory Information. Recycle or dispose of recovered material in accordance with all federal, state, and local, regulations.

For all transportation accidents, call CHEMTREC at 800/424-9300.

SECTION 7: HANDLING AND STORAGE

HANDLING

Do not get in eyes, or on skin, or clothing. Do not taste or swallow. Avoid breathing mists or fumes. Do not handle with bare hands. This product reacts violently with bases and water liberating heat and causing splattering.

Carefully monitor handling, use and storage to avoid spills and leaks. Follow protective controls set forth in Section 8 when handling this product. **Do not eat, drink, or smoke in work area.** Wash hands prior to eating, drinking, or using restroom.

STORAGE

STORAGE CONDITIONS

Do not put concentrate or dilutions of concentrate on food or drink containers. Store in closed, properly labeled tanks or containers. Do not remove or deface labels or tags. Store in a cool, well ventilated place away from heat sources, direct sunlight and incompatible materials. DO NOT pressurize, cut, heat, or weld containers. DO NOT drop, roll or skid drums. Keep drums upright. DO NOT reuse empty containers without commercial cleaning or reconditioning.

When diluting, always add acid to water cautiously with agitation.

STORAGE TEMPERATURE

Do not allow product to freeze. Do not store above 36°C (97°F).

SECTION 8: EXPOSURE CONTROLS PERSONAL PROTECTION

ENGINEERING CONTROLS

VENTILATION

Local exhaust ventilation is recommended if vapors, mists or aerosols are generated. Otherwise, use general exhaust ventilation.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

EYE AND FACE PROTECTION

Wear chemical goggles. A face shield should be worn in addition to goggles where splashing or spraying is possible.

SKIN PROTECTION

Wear chemical resistant clothing. Neoprene gloves, boots and apron or slicker suit. In case of emergency or where there is a strong possibility of considerable exposure, wear a complete acid suit with hood, boots, and gloves.

RESPIRATORY PROTECTION

When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations. Under normal conditions, in the absence of other airborne contaminants, the following devices should provide protection from this material up to the conditions specified by the appropriate OSHA, WHMIS or ANSI standard(s): Air-purifying (half-mask/full-face) respirator with cartridges/canister approved for use against acid gases.

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MATERIAL SAFETY DATA SHEET – Sulfuric Acid 93%-98%

GENERAL

Safety shower and eye wash station must be provided in the immediate work area. Protective equipment and clothing should be selected, used, and maintained according to applicable standards and regulations. For further information, contact the clothing or equipment manufacturer.

EXPOSURE GUIDELINES

PEL (OSHA): 1.0mg/m³, 8 Hr. TWA
TLV (ACGIH): 1.0 mg/m³, 8 Hr. TWA A2 (Sulfuric acid contained in strong inorganic acid mists)
IDLH (NIOSH): 15 mg/m³.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

CHEMICAL FORMULA	H ₂ SO ₄
MOLECULAR WEIGHT	98.08
APPEARANCE	Oily, colorless to slightly yellow, clear to turbid liquid
ODOR	Odorless
pH @ 25°C	<1
VAPOR PRESSURE	< 0.3 mm Hg @ 25°C (77°F), < 0.6 mm Hg @ 38°C (100°F)
VOLATILES, % BY VOLUME	Not Established
BOILING POINT	276-281°C
MELTING POINT	Not Established
FREEZING POINT	-29°C (93%); -1°C (98%)
SOLUBILITY IN WATER	Complete
SPECIFIC GRAVITY	1.8347-1.8424 @ 25°C (77°F)
DENSITY	15.3 – 15.4 lbs./gal @ 25°C (77°F)
VISCOSITY	Not Established

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY

Stable

CONDITIONS TO AVOID

Reacts violently with water and organic materials with evolution of heat.

INCOMPATIBILITY WITH OTHER MATERIALS

Vigorous reactions with water; alkaline solutions; metals, metal powder; carbides; chlorates; fuminates; nitrates; picrates; strong oxidizing, reducing, or combustible organic materials. Hazardous gases are evolved on contact with chemicals such as cyanides, sulfides, and carbides.

HAZARDOUS DECOMPOSITION PRODUCTS

Release of sulfur dioxide at extremely high temperatures.

HAZARDOUS POLYMERIZATION

Will not occur.



MATERIAL SAFETY DATA SHEET – Sulfuric Acid 93%-98%

SECTION 11: TOXICOLOGICAL INFORMATION

ANIMAL TOXICOLOGY

EYES

Animal testing indicates this material is corrosive to the eye, when tested undiluted. Animal testing indicates this material is a moderate eye irritant, when tested as 10% solution.

SKIN

The concentrated compound is corrosive. Animal testing indicates this material is a slight skin irritant, when tested as 10% solution.

ACUTE ORAL EFFECTS

LD₅₀ rat: > 2,140 mg/kg

ACUTE INHALATION EFFECTS

8 hour, LC₅₀, guinea pigs: 30 mg/m³.

EFFECTS FOLLOWING PROLONGED OR REPEATED EXPOSURE

Single and repeated exposure caused: Irritation of the respiratory tract. Corrosion of the respiratory tract. Lung damage. Labored breathing. Altered respiratory rate. Pulmonary edema. Repeated exposure caused: Altered red blood cell count.

CARCINOGENICITY

IARC classifies "strong inorganic acid mists containing sulfuric acid" as carcinogenic. This classification does not apply to sulfuric acid or sulfuric acid solutions. No adequate animal data are available to define the carcinogenic potential of this material. Limited studies do not suggest effects.

MUTAGENICITY

Sulfuric acid has no mutagenicity.

REPRODUCTIVE/DEVELOPMENTAL TOXICITY

This material has not produced genetic damage in bacterial cultures. It has not been tested for genetic toxicity in mammalian cell cultures or in animals.

SECTION 12: ECOLOGICAL INFORMATION

AQUATIC TOXICITY

Slightly to moderately toxic.

96 hour LC₅₀ – Bluegill sunfish: 10.5 ppm

48 hour TLm – Flounder: 100-300 ppm



MATERIAL SAFETY DATA SHEET – Sulfuric Acid 93%-98%

SECTION 13: DISPOSAL CONSIDERATIONS

SPILL RESIDUES

Processing, use or contamination of this product may change the waste management options. Cleaned-up material may be a RCRA Hazardous Waste due to the corrosively characteristic, Number D002 (Corrosive). All disposals of this material must be done in accordance with Federal, state and local regulations. Waste characterization and compliance with disposal regulations are the responsibilities of the waste generator.

SECTION 14: TRANSPORT INFORMATION

THIS MATERIAL IS HAZARDOUS AS DEFINED BY 49 CFR 172.01 BY THE U.S DEPARTMENT OF TRANSPORTATION.

DOT IDENTIFICATION NO.: UN 1830

DOT SHIPPING DESCRIPTION (49 CFR 172.101): Sulfuric Acid, II

PLACARD REQUIRED: Corrosive, 1830, Class 8

LABEL REQUIRED: Corrosive, Class 8

Label as required by EPA and by OSHA Hazard Communication Standard, and any applicable state and local regulations.

EMERGENCY RESPONSE GUIDE NUMBER: 137

SECTION 15: REGULATORY INFORMATION

U S FEDERAL REGULATIONS

CERCLA REPORTABLE QUANTITY (RQ)

Sulfuric Acid (7664-93-9) 1,000 lbs.

TSCA (TOXIC SUBSTANCES CONTROL ACT)

All components of this product are listed on the TSCA Inventory or are exempt from TSCA Inventory requirements.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) TITLE III

Components identified with an asterisk (*) in Section 2 are subject to the reporting requirements of Section 313 of Title III of the 1986 Superfund Amendments and Reauthorization Act (SARA) and 40 CFR Part 372.

SARA HAZARD CATEGORIES (40 CFR 370.2)

Fire Hazard	No
Reactivity Hazard	Yes
Release of Pressure	No
Acute Health Hazard	Yes
Chronic Health Hazard	Yes

INTERNATIONAL REGULATIONS

CANADA

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)

This product, or its components, are listed on or are exempt from the Canadian Domestic Substance List (DSL).

Updated: 8-22-13

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MATERIAL SAFETY DATA SHEET – Sulfuric Acid 93%-98%

SECTION 16: OTHER INFORMATION

NFPA RATINGS

HEALTH	3
FLAMMABILITY	0
INSTABILITY	2

HMIS CODES

HEALTH Y	3
FLAMMABILIT	0
INSTABILITY	2

Personal Protection rating to be supplied by user depending on use conditions.

HIMIS RATING NOTES

This information is for people trained in Key the National Paint & Coatings Association's 4 = Severe (NPCA) Hazardous Materials Identification 3 = Serious System (HMIS). 2 = Moderate, 1 = Slight, 0 = Minimal.

8-22-13 Updated to Brenntag

This MSDS conforms to ANSI Standard Z400.1-1998.

Disclaimer of Warranty:

The information provided in this Material Safety Data Sheet has been obtained from sources believed to be reliable. BRENNTAG provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration, and investigation. You should satisfy yourself that you have all current data relevant to your particular use. BRENNTAG knows of no medical condition, other than those noted on this material safety data sheet, which are generally recognized as being aggravated by exposure to this product.

1. Company and Product Identification

- 1.1 Identification – Product Name: **Vitec[®] 3000 NSF**
- 1.2 Other means of identification: Organo-phosphorous compounds
 Synonym: Mixture, none
- 1.3 Recommended Use of the Chemical and Restrictions on Use: Reverse osmosis membrane antiscalant
 Use only as directed on the label.
- 1.4 Name, Address, and Telephone Number of the Manufacturer, or Other Responsible Party: **AVISTA TECHNOLOGIES**
 140 Bosstick Street
 San Marcos, CA 92069
 (760) 744-0536
 Competent Person email address: klindsey@avistatech.com
- 1.5 24 Hour Emergency No.: 1-800-424-9300 (United States)
 1-703 527-3887 (International Collect)



CERTIFIED BY NSF INTERNATIONAL TO NSF/ANSI 60 AS STANDARD DRINKING WATER TREATMENT CHEMICAL FOR USE IN REVERSE OSMOSIS SYSTEMS AT A MAXIMUM LEVEL OF 7 mg/l.

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is a clear, amber liquid. This product may irritate contaminated tissue. This product is neither reactive nor flammable.

Physical Hazards Summary: None

Potential Health Hazards Summary: Skin corrosion/irritation, Category 2

Potential Ecological Effects Summary: None

2.1 Classification Of Product

U.S. OSHA classification: Skin corrosion/irritation, Category 2

Classification as per EC 1272/2008 (CLP/GHS): Skin corrosion/irritation, Category 2

WHMIS classification: Skin corrosion/irritation, Category 2

Hazardous Materials Information System (HMIS) Rating

Health	2
Flammability	0
Physical Hazard	0
Protective Equipment	C

General Warnings	P101	If medical advice is needed, have product container or label at hand.
	P102	Keep out of reach of children.
	P103	Read label before use
Signal Word	WARNING	
Hazard statements	H315	Causes skin irritation
	H 319	Causes serious eye irritation
	H335	May cause respiratory irritation
Precautionary statements	P271	Use only outdoors or in a well-ventilated area.
	P281	Use personal protective equipment as required.
	P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
	P302/P352	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
	P261	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P305 + P351 + P338	
Hazard pictograms		

2.3 Unclassified Hazards None

2.4 Ingredients with unknown acute toxicity None

3. COMPOSITION and INFORMATION ON INGREDIENTS

Chemical name CAS # EINECS #	% w/w	US OSHA	GHS/EU CLP	WHMIS
Deflocculant & Sequestrant Proprietary Proprietary	20-30	Skin corrosion/irritation, Category 2 H315 Causes skin irritation H319 Causes serious eye irritation H335 May cause respiratory irritation P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep out of reach of children.	Skin corrosion/irritation, Category 2 H315 Causes skin irritation H319 Causes serious eye irritation H335 May cause respiratory irritation P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep out of reach of children. Keep away from food, drink and animal feeding stuffs. Avoid contact with skin. Avoid contact with eyes. In case of contact with	Skin corrosion/irritation, Category 2 H315 Causes skin irritation H319 Causes serious eye irritation H335 May cause respiratory irritation P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep out of reach of children. Keep away from food, drink and animal feeding stuffs. Avoid contact with skin. Avoid contact

		Keep away from food, drink and animal feeding stuffs. Avoid contact with skin. Avoid contact with eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing. If swallowed, seek medical advice immediately and show this container or label	eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing. If swallowed, seek medical advice immediately and show this container or label	with eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing. If swallowed, seek medical advice immediately and show this container or label
Chelate Agent Proprietary Proprietary	10-20	Skin corrosion/irritation, Category 2 H319 Causes serious eye irritation P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep out of reach of children. Keep away from food, drink and animal feeding stuffs. Avoid contact with skin. Avoid contact with eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing. If swallowed, seek medical advice immediately and show this container or label	Skin corrosion/irritation, Category 2 H319 Causes serious eye irritation P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep out of reach of children. Keep away from food, drink and animal feeding stuffs. Avoid contact with skin. Avoid contact with eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing. If swallowed, seek medical advice immediately and show this container or label	Skin corrosion/irritation, Category 2 H319 Causes serious eye irritation P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep out of reach of children. Keep away from food, drink and animal feeding stuffs. Avoid contact with skin. Avoid contact with eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing. If swallowed, seek medical advice immediately and show this container or label
Water or other chemicals do not contribute to any additional hazards of this product	balance	N/A	N/A	N/A
PRODUCT	100	Skin corrosion/irritation, Category 2		

NE = Not Established. C = Ceiling Limit. See Section 16 for Definitions of Terms Used.

4. FIRST-AID MEASURES

4.1 Description of Necessary Measures

- Skin exposure:** If this product contaminates the skin, immediately begin decontamination with running water. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victim should seek immediate medical attention if any adverse exposure symptoms develop.
- Eye exposure:** If this product enters the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Victim must seek medical attention.
- Inhalation:** If vapors, mists, or sprays of this product are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers.
- Ingestion:** If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. DO NOT INDUCE VOMITING. Have victim rinse mouth with water, if conscious. Never induce vomiting or give a diluent (e.g., water) to someone who is unconscious, having convulsions, or unable to swallow. If contaminated individual is convulsing, maintain an open airway and obtain immediate medical attention.

4.2 Most Important Symptoms/Effects:

Immediate: Inhalation exposure may cause coughing or sneezing. Symptoms of skin and eye contact may include redness and irritation. Ingestion may cause stomach pains, cramps, and gastritis.

Delayed: Prolonged or repeated skin overexposure to this product may cause dermatitis (dry, red skin). Symptoms may include tingling, redness, and visible injury.

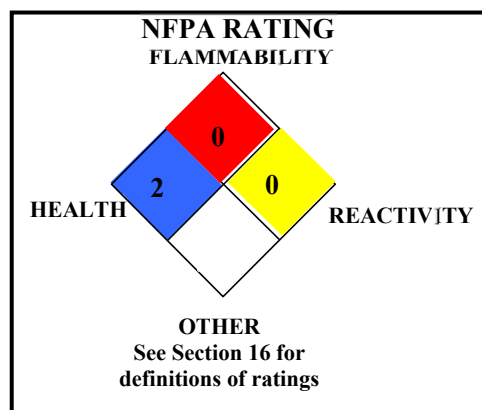
4.3 Indication Of Immediate Medical Attention And Special Treatment Needed, If Necessary:

TARGET ORGANS: Acute: Skin, eyes. Chronic: Skin.

Victims of chemical exposure must be taken for medical attention if any adverse effects occur. Rescuers should be taken for medical attention if necessary. Take a copy of label and MSDS to physician or health professional with victim.

5. FIRE-FIGHTING MEASURES

Flammable properties Non-flammable solution aqueous



Flash Point °C: Not applicable.

Autoignition Temperature °C: Not applicable.

Flammable Limits (in air by volume, %):

Upper: Not applicable.

Lower: Not applicable.

5.1	Suitable and Unsuitable Extinguishing Media:	This material will not contribute to the intensity of a fire. Use extinguishing material suitable to the surrounding fire. <table><tr><td>Water spray</td><td>YES</td><td>Carbon dioxide</td><td>YES</td></tr><tr><td>Foam</td><td>YES</td><td>Dry chemical</td><td>YES</td></tr><tr><td>Halon</td><td>YES</td><td>Other</td><td>YES</td></tr></table>	Water spray	YES	Carbon dioxide	YES	Foam	YES	Dry chemical	YES	Halon	YES	Other	YES
Water spray	YES	Carbon dioxide	YES											
Foam	YES	Dry chemical	YES											
Halon	YES	Other	YES											
5.2	Specific Hazards Arising from Chemical:	When involved in a fire, this material may decompose and produce irritating fumes and toxic gases (e.g., carbon monoxide, carbon dioxide, and phosphorous oxides). <u>Explosion Sensitivity to Mechanical Impact:</u> Not sensitive. <u>Explosion Sensitivity to Static Discharge:</u> Not sensitive.												
5.3	Special Protective Equipment and Precautions For Fire-Fighters:	Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move containers from fire area if it can be done without risk to personnel. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.												

6. ACCIDENTAL RELEASE MEASURES

6.1	Personal Precautions	Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area and protect people.
	Protective equipment	For small releases (< 5 gallons), clean up spilled liquid wearing gloves, goggles, faceshield, and suitable body protection. The minimum Personal Protective Equipment recommended for response to non-incident releases (more than 5 gallons) should be Level C: triple-gloves (neoprene gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard hat, and full-face respirator with HEPA filter.
	Emergency procedures	Monitoring must indicate that exposure levels are below those provided in Section 8 (Exposure Controls-Personal Protection) and that oxygen levels are above 19.5% before anyone is permitted in the area without Self-Contained Breathing Apparatus.
6.2	Methods and Materials for Containment and Cleaning Up	Soak up or wet vacuum spilled liquid. Neutralize residue with sodium bicarbonate or other neutralizing agent for dilute acids. Decontaminate the area thoroughly. Test area with litmus paper to ensure neutralization. Place all spill residues in a suitable container. Dispose of in accordance with applicable U.S. Federal, State, or local procedures, or appropriate local standards (see Section 13, Disposal Considerations).

7. HANDLING and STORAGE

7.1	Precautions for Safe Handling	All employees who handle this material should be trained to handle it safely. Open containers carefully on a stable surface. Empty containers may contain residual liquid; therefore, empty containers should be handled with care. As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat or drink while handling this material. Avoid generating mists and sprays of this product. Remove contaminated clothing immediately. During equipment maintenance follow practices indicated in Section 6 (Accidental Release Measures) to decontaminate equipment or clean-up small spills. Make certain that application equipment is locked and tagged-out safely if necessary. Collect all rinsates and dispose of according to applicable U.S. Federal, State, or local procedures or appropriate local standards.
7.2	Conditions For Safe Storage	Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Store away from incompatible materials. Material should be stored in secondary containers, or in a diked area, as appropriate. Storage and use areas should be covered with impervious materials. Keep container tightly closed when not in

use. If appropriate, post warning signs in storage and use areas. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged.

Incompatibilities Strong bases, strong oxidizers, very strong acids, water reactive materials.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

8.1 Control Parameters

CHEMICAL NAME		CAS #	EXPOSURE LIMITS IN AIR				
			ACGIH-TLV		OSHA-PEL		OTHER
			TWA	STEL	TWA	STEL	
			mg/m ³	mg/m ³	mg/m ³	mg/m ³	
Deflocculant & Sequestrant		Proprietary	NE	NE	NE	NE	NE
Chelate agent		Proprietary	NE	NE	NE	NE	NE
NE = Not Established. C = Ceiling Limit. See Section 16 for Definitions of Terms Used.							

8.2 Appropriate Engineering Controls.

Use with adequate ventilation to ensure exposure levels are maintained below the limits provided in this Section or as low as reasonably practical. Ensure eyewash/safety shower stations are available near areas where this product is used.

8.3 Personal Protective Equipment

Respiratory protection:

None needed under normal conditions of use. Use NIOSH approved respirators if ventilation is inadequate to control mists or vapor. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, or the applicable local standards. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-face piece pressure/demand SCBA or a full-face piece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998).

Eye protection:

Use approved safety goggles or safety glasses, as described in OSHA 29 CFR 1910.133. Splash goggles with a faceshield may be needed if splash hazards exist.

Hand protection:

Wear chemical impervious gloves (e.g., Neoprene or Nitrile).

Body protection:

If needed, use body protection appropriate for task (e.g., Tyvek suit, rubber apron) to protect from splashes and sprays.

9. PHYSICAL and CHEMICAL PROPERTIES

Appearance	This product is a clear, amber liquid.		
Odor	Light disinfectant odor	Odor Threshold	N/A
Melting Point °C	Similar to water	pH	10.7-11.8
Initial Boiling Point °C	100	Boiling Point Range °C	N/A
Flammability	Non-flammable	Evaporation Rate (water = 1)	Similar to water
Vapor Density (air = 1)	Similar to water	Vapor Pressure mm Hg @ 20°C:	18
Solubility (in water)	Soluble	Relative density (water = 1)	1.2– 1.3
Viscosity	Similar to water	Oil-Water Partition Coefficient	N/A
Decomposition Temperature	N/A		
How To Detect This Substance (Warning Properties):	The color and odor may act as warning properties associated with this product.		

10. STABILITY and REACTIVITY

10.1	Reactivity	Not considered reactive.
10.2	Chemical Stability	Stable
10.3	Possibility of hazardous reactions	Hazardous polymerization will not occur.
10.4	Conditions to avoid	Avoid mixing with incompatible materials.
10.5	Incompatible Materials	Strong bases, strong oxidizers, very strong acids, water reactive materials.
10.6	Hazardous Decomposition Products	Thermal decomposition of this product may generate carbon monoxide, carbon dioxide, and phosphorus oxides.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Toxicity data for hazardous ingredients	Oral LD ₅₀ mg/kg	Dermal LD ₅₀ mg/kg	Inhalation LD ₅₀ mg/kg
Deflocculant & Sequestrant	N/A	N/A	N/A
Chelate agent	LD ₅₀ (Oral-Rat) 2100 mg/kg LD ₅₀ (Skin-Rabbit) > 6310 mg/kg LD ₅₀ (Oral-Quail) > 2510 mg/kg LD ₅₀ (Oral-Duck) > 2510 mg/kg TDLo (Oral-Rat) 1302 mg/kg/31 days-intermittent: Kidney, Urethra, Bladder: other changes in urine composition; Nutritional and Gross Metabolic: weight loss or decreased weight gain, changes in sodium.	Standard Draize Test (Skin-Rabbit) 500 mg/24 hours Standard Draize Test (Eye-Rabbit) 100 mg: Moderate	N/A

Potential routes of exposure	Inhalation, skin contact, eye contact				
Potential effects of acute over-exposure	Inhalation exposure may cause tingling, coughing, sneezing, and difficulty breathing. Symptoms of skin and eye contact may include redness and irritation. Ingestion may cause stomach pains, cramps, and gastritis.				
Potential effects of chronic over-exposure	Prolonged or repeated skin overexposure to this product may cause dermatitis (dry, red skin). Symptoms may include tingling, redness, and visible injury.				
Symptoms of over-exposure	Immediate: Inhalation exposure may cause tingling, coughing, sneezing, and difficulty breathing. Symptoms of skin and eye contact may include redness and irritation. Ingestion may cause stomach pains, cramps, and gastritis. Delayed: Prolonged or repeated skin overexposure to this product may cause dermatitis (dry, red skin). Symptoms may include tingling, redness, and visible injury.				
Conditions aggravated by over-exposure	Preexisting dermatitis, other skin conditions, and respiratory conditions may be aggravated by exposures to this product.				
Recommendations to physicians:	Treat symptoms and eliminate exposure.				
Irritation	YES This product can be irritating to contaminated tissue.				
Sensitization	NO				
Carcinogenicity	NTP	IARC	US OSHA	CAL OSHA	67/548 EEC Annex 1
	NO	NO	NO	NO	NO
Mutagenicity	NO				
Reproductive toxicity	NO				
Biological Exposure Index	N/A				
Other potential health effects	Currently, there are no Biological Exposure Indices (BEIs) for any component of this product.				

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

12.1	Ecotoxicity	LC ₅₀ , mg/L	EC ₅₀ , mg/L
	Vitec® 3000 NSF		
	Aquatic	LC ₅₀ (<i>Mysidopsis bahai</i>) > 1000 mg/L 7 days LC ₅₀ (<i>Oncorhynchus mykiss</i> : Rainbow Trout), 96 hours, >1000 mg/L	EC ₅₀ (<i>Daphnia magna</i>) 48 hours = >1000 mg/L NOEC (<i>Daphnia magna</i>) 48 hours = 1000 mg/L
	Terrestrial	N/A	N/A
	Aquatic	Acute Hazard Level: Lethal pH (goldfish) = 10.9 Lethal pH (bluegill) = 10.5 LC ₁₀₀ (<i>Cyprinus carpio</i>) 24 hours = 180 ppm/ 25°C TL _m (mosquito fish) 96 hours = 125 ppm/ fresh water TL _m (bluegill) 48 hours = 99 mg/L/ tap water	N/A
	Terrestrial	N/A	N/A
12.2	Persistence and Degradability	The components of this product decompose in soil and water.	
12.3	Bioaccumulative Potential	The components of this product are not expected to bioaccumulate.	
12.4	Mobility in Soil	Moderately mobile.	
12.5	Other Adverse Ecological Effects	This product may be harmful to aquatic life <u>if large volumes</u> of it are released into an aquatic environment.	

13. DISPOSAL CONSIDERATIONS

Preparing Wastes of this Product for Disposal	Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations or with local regulations. This product, if unaltered by the handling, may be disposed of by treatment at a permitted facility or as advised by your local waste regulatory authority.
Disposal of Contaminated Packaging	Cleaned containers can be recycled or disposed of as non-contaminated waste, if authorized by your local authorities. Dispose of containers as required by local regulations.
U.S. EPA Waste Number	Not applicable.

14. TRANSPORTATION INFORMATION

THIS MATERIAL IS NOT HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

14.1	UN Number	Not applicable
14.2	UN Proper Shipping Name	Not applicable
14.3	Transport Hazard Class(es)	Not applicable
	Transport label(s) required	Not applicable
14.4	Packing Group	Not applicable
14.5	Marine Pollutant	Not applicable
	NA Emergency Response Guide Number (2008)	Not applicable
14.6	Transport in Bulk (Annex II of MARPOL 73/78 and IBC Code)	Not applicable

International Air Transport Association

UN Number	Not applicable
UN Proper Shipping Name	Not applicable
Transport Hazard Class(es)	Not applicable
Transport label(s) required	Not applicable
Packing Group	Not applicable
IATA Emergency Response Code	Not applicable
Excepted Quantity	Not applicable
Packaging Instructions	Not applicable

International Maritime Organization

UN Number	Not applicable
UN Proper Shipping Name	Not applicable
Transport Hazard Class(es)	Not applicable
Transport label(s) required	Not applicable
Packing Group	Not applicable
Marine Pollutant	Not applicable
NA Emergency Response Guide Number (2008)	Not applicable
Transport in Bulk (Annex II of MARPOL 73/78 and IBC Code)	Not applicable

15. SAFETY, HEALTH and ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE PRODUCT

PROGRAM	Deflocculant & Sequestrant	Chelate Agent	
US EPA PROGRAMS			
Clean Air Act Hazardous Air Pollutants	NO	NO	
Safe Drinking Water Act	NO	NO	
RCRA F, K, P, U or D-lists	NO	NO	
SARA 302 RQ	NO	NO	
SARA 302 TPQ	NO	NO	
SARA 313 LISTED	NO	NO	
SARA CHEMICAL CATEGORIES			
SARA 311/312 ACUTE	YES	YES	
SARA 311/312 CHRONIC	NO	NO	
SARA 311/312 FIRE	NO	NO	
SARA 311/312 PRESSURE	NO	NO	
SARA 311/312 REACTIVITY	NO	NO	
EPA EXTREMELY HAZARDOUS SUBSTANCE	NO	NO	
CALIFORNIA SAFE DRINKING WATER ACT (Proposition 65)			
This product does not contain any chemical listed on the California Safe Drinking Water Act list (Proposition 65)			
US OSHA PROGRAMS			
PEL	NO	NO	

PSM	NO	NO
CHEMICAL SECURITY PROGRAMS		
DHS CFATS	NO	NO
CHEMICAL WEAPONS CONVENTION		
	NO	NO
US DRUG ENFORCEMENT ADMINISTRATION		
DEA Controlled Substances	NO	NO
CHEMICAL INVENTORY PROGRAMS		
WHMIS	NO	NO
DSL	YES	YES
REACH Pre-registered List	YES	YES
TSCA	YES	YES
European Inventory of Existing Commercial Chemical Substances (EINECS)	YES	YES
EU No-Longer Polymers List (NLP)	NO	NO
EEC Classification Packaging, and Labeling of Dangerous Substances(Annex 1)	Skin corrosion/irritation, Category	Skin corrosion/irritation, Category 2
Philippines	YES	YES
Japan	YES	YES
Australia	YES	YES
Korea	YES	YES
China	NO	NO
New Zealand Inventory of Chemicals	YES	YES

16. OTHER INFORMATION

16.1	Original Preparation	14 Nov 2005; update 11 April 2011
16.2	Revision History	13 March 2013 Reformatted to GHS Requirements; 16 July13 added aquatic toxicity data for product; 2 August 2016 format update; 12 January 2018 proprietary information format update; 9 April 2018 Section 12 addition.
16.3	Prepared by	ADVANCED CHEMICAL SAFETY, Inc. PO Box 152329 San Diego, CA 92195 (858)-874-5577
16.4	Date of Printing	May 10, 2018

DEFINITIONS OF TERMS

16.5	A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:	
	Section 2	GHS: Global Harmonization System OSHA: U.S. Occupational Safety and Health Administration. CLP: Classification and Packaging WHMIS: Workplace Hazardous Materials Information System STOT: Specific Target Organ Toxicity
	Section 3	CAS #: Chemical Abstract Service index number EINECS #: European Chemical Substances Information System index number
	Section 5	NFPA: Nation Fire Protection Association Health Hazard: 0 (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); 1 (materials that on exposure under fire conditions could cause irritation or minor residual injury); 2 (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); 3 (materials that can on short exposure could cause serious temporary or residual injury); 4 (materials that under very short exposure could cause death or major residual injury). Flammability Hazard Reactivity Hazard: Refer to definitions for "Hazardous Materials Identification System". Flash Point: Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL: The lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL: The highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.
	Section 8	ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits. TLV - Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average (TWA), the 15-minute Short Term Exposure Limit, and the instantaneous Ceiling Level (C). Skin absorption effects must also be considered PEL - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (<i>Federal Register</i> : 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order. IDLH - Immediately Dangerous to Life and Health - This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. The DFG - MAK is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. NIOSH is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (OSHA). NIOSH issues exposure guidelines called Recommended Exposure Levels (RELs) . When no exposure guidelines are established, an entry of NE (Not Established) is made for reference.
	Section 11	LD₅₀ : Lethal Dose (solids & liquids) which kills 50% of the exposed animals; LC₅₀ : Lethal Concentration (gases) which kills 50% of the exposed animals; ppm: Concentration expressed in parts of material per million parts of air or water; mg/m³ : Concentration expressed in weight of substance per volume of air; mg/kg: Quantity of material, by weight, administered to a test subject, based on their body weight in kg IARC - the International Agency for Research on Cancer; NTP - the National Toxicology Program, RTECS - the Registry of Toxic Effects of Chemical Substances, OSHA and CAL/OSHA. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. TDLo, the lowest dose to cause a symptom and TCLo the lowest concentration to cause a symptom; TDo, LDLo, and LDo, or TC, TCo, LCLo, and LCo, the lowest dose (or concentration) to cause lethal or toxic effects. BEI - Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.
	Section 12	LC₅₀: The lowest concentration in water which kills 50% of the test subjects. EC₅₀: The Effect Concentration in water at which 50% of the test species is affected.
	Section 13	US EPA Hazardous Waste Codes: refer to 40 CFR 261.20
	Section 14	DOT: US Department of Transportation IATA: International Air Transport Association IMO: International Maritime Organization MARPOL: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 IBC Code : Merchant Shipping Code
	Section 15	RCRA: US Resource Conservation and Recovery Act SARA: US Superfund Amendments and Reauthorization Act PSM: US OSHA Process Safety Management CFATS: US Department of Homeland Security Chemical Facility Anti-terrorism Standard DSL: Canadian Domestic Substances List NDSL: Canadian Non-Domestic Substances List REACH: European Registration, Evaluation, Authorization and Restriction of Chemicals list TSCA: US Toxic Substances Control Act

Leah Whallon

From: Bayle, Ryan <Ryan.Bayle@luminant.com>
Sent: Friday, June 20, 2025 12:04 PM
To: Leah Whallon
Cc: Manthei, Dustin; Chavers, Eric; Collins, Renee
Subject: RE: Application to Amend Permit No. WQ0002159000; Coletto Creek Power, LLC; Coletto Creek Power Station
Attachments: TCEQ ePay3.pdf; WQ0002159000_Industrial Discharge Amendment Spanish NORI.docx
Follow Up Flag: Follow up
Flag Status: Flagged

Good afternoon Ms. Whallon,

Coletto Creek Power, LLC offers the following responses to your emailed letter originally dated June 10, 2025:

1. Administrative Report 1.1. Please confirm no information is available for landowner list numbers 302-315.

Response: *Site Map LLC was contracted to compile the adjacent landowner information and prepare the landowner maps for the application. The Goliad County Appraisal District was not able to provide any information for the fourteen (14) adjacent parcels of land noted above. According to the district, there are a significant number of "unknown" parcels in the county. The adjacent landowner information provided in this application represents the most complete information available.*

2. The \$50.00 WQ notification fee included in the application fee covers postage for notifying up to 100 affected landowners. An additional \$50.00 water quality notice fee is required for each increment of 100 additional landowners. Please provide the epay voucher number for payment of the additional WQ notification fee of \$100.00 for landowners 100-300.

Response: *The requested epay voucher covering the additional WQ notification fee of \$100.00 for landowners 100-300 is attached to this email.*

3. The following is a portion of the NORI which contains information relevant to your application. Please read it carefully and indicate if it contains any errors or omissions. The complete notice will be sent to you once the application is declared administratively complete.

APPLICATION. Coletto Creek Power, LLC, 6555 Sierra Drive, Irving, Texas 75039, which owns a coal-fired steam electric generating facility, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0002159000 (EPA I.D. No. TX0070068) to authorize the addition of new proposed internal Outfall 401 for the discharge of low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater, addition of a new proposed Retention Pond to the list of impoundments in Other Requirement No. 17, and to change the label for the Secondary Pond. The facility is located at 45 Farm-to-Market Road 2987, near Fannin, in Goliad County, Texas 77960. The discharge route is from the plant site directly to Coletto Creek Reservoir, which is part of Coletto Creek. TCEQ received this application on June 5, 2025. The permit application will be available for viewing and copying at Goliad County Clerk's Office, 127 North Courthouse Square, Goliad, in Goliad County, Texas, and at Victoria County Clerk's Office, 115 North Bridge Street, Victoria, in Victoria 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=-97.214444,28.712777&level=18>

Further information may also be obtained from Coletto Creek Power, LLC at the address stated above or by calling Mr. Ryan Bayle, Environmental Manager, Luminant Generation Company LLC, at 214-875-8294.

Response: *The above NORI language appears correct.*

4. The application indicates that public notices in Spanish are required. After confirming the portion of the NORI above does not contain any errors or omissions, please use the attached template to translate the NORI into Spanish. Only the first and last paragraphs are unique to this application and require translation. Please provide the translated Spanish NORI in a Microsoft Word document.

Response: *A Word document of the requested Spanish language NORI is attached to this email.*

If you need any further information or have any questions about the responses above, please do not hesitate to contact me.

Thank you,

Ryan Bayle, P.G.
Environmental Manager
Ryan.Bayle@vistracorp.com
Vistra

6555 Sierra Drive | Irving, Texas, 75039
M 214.212.2777

From: Leah Whallon <Leah.Whallon@Tceq.Texas.Gov>

Sent: Tuesday, June 10, 2025 4:40 PM

To: Bayle, Ryan <Ryan.Bayle@luminant.com>

Cc: Manthei, Dustin <Dustin.Manthei@luminant.com>

Subject: Application to Amend Permit No. WQ0002159000; Coletto Creek Power, LLC; Coletto Creek Power Station

EXTERNAL EMAIL

Good Afternoon,

Please see the attached Notice of Deficiency letter dated June 10, 2025 requesting additional information needed to declare the application administratively complete. Please send the complete response by June 24, 2025.

Please let me know if you have any questions.

Thank you,



Leah Whallon

Texas Commission on Environmental Quality

Water Quality Division

512-239-0084

leah.whallon@tceq.texas.gov

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

Confidentiality Notice: This email message, including any attachments, contains or may contain confidential information intended only for the addressee. If you are not an intended recipient of this message, be advised that any reading, dissemination, forwarding, printing, copying or other use of this message or its attachments is strictly prohibited. If you have received this message in error, please notify the sender immediately by reply message and delete this email message and any attachments from your system.

Print this voucher for your records. If you are sending the TCEQ hardcopy documents related to this payment, include a copy of this voucher.

Transaction Information

Voucher Number:

769696

Trace Number:

582EA000671159

Date:

06/05/2025 01:22 PM

Payment Method:

CC - Authorization 0000066944

Voucher Amount:

\$100.00

Fee Type:

ADDITIONAL 30 TAC 305.53B WQ NOTIFICATION FEE

ePay Actor:

RYAN BAYLE

Actor Email:

ryan.bayle@luminant.com

IP:

170.85.101.21

Payment Contact Information

Name:

RYAN BAYLE

Company:

LUMINANT GENERATION COMPANY LLC

Address:

6555 SIERRA DRIVE, IRVING, TX 75039

Phone:

214-875-8294

Site Information

Site Name:

COLETO CREEK POWER STATION

Site Address:

45 FARM-TO-MARKET ROAD 2987, FANNIN, TX 77960

Site Location:

45 FARM-TO-MARKET ROAD 2987 NEAR THE TOWN OF FANNIN GOLIAD COUNTY TEXAS 77960

Customer Information

Customer Name:

CN605521988

Other Information

Comments:

Additional notification fee for Coletto Creek TPDES Permit Amendment

Close

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 MODIFICACION

PERMISO NO. WQ000_____

SOLICITUD. SOLICITUD. Coletto Creek Power, LLC, 6555 Sierra Drive, Irving, Texas 75039, propietaria de una planta generadora de electricidad a vapor a carbón, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) la modificación del Permiso n.º WQ0002159000 del Sistema de Eliminación de Descargas Contaminantes de Texas (TPDES) (N.º de identificación de la EPA: TX0070068) para autorizar la adición del nuevo Desagüe Interno 401 propuesto para la descarga de residuos de bajo volumen, residuos de limpieza de metales, escurrimiento de pilas de carbón y aguas pluviales, la adición de un nuevo Estanque de Retención propuesto a la lista de embalses del Requisito n.º 17, y el cambio de la etiqueta del Estanque Secundario. La planta está ubicada en 45 Farm-to-Market Road 2987, cerca de Fannin, en el condado de Goliad, Texas 77960. La ruta de descarga va desde la planta directamente al embalse de Coletto Creek, que forma parte de Coletto Creek. La TCEQ recibió esta solicitud el 5 de junio de 2025. La solicitud de permiso estará disponible para su consulta y copia en la Oficina del Secretario del Condado de Goliad, ubicada en 127 North Courthouse Square, Goliad, Texas, y en la Oficina del Secretario del Condado de Victoria, ubicada en 115 North Bridge Street, Victoria, Texas, antes de la fecha de publicación de este aviso en el periódico. La solicitud, incluyendo sus actualizaciones y los avisos correspondientes, están disponibles 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 instalación se proporciona como cortesía pública y no forma parte de la solicitud ni del aviso. Para conocer la ubicación exacta, consulte la solicitud.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-97.214444,28.712777&level=18>

Include the following non-italicized sentence if the facility is located in the Coastal Management Program boundary and is an application for a major amendment which will increase the pollutant loads to coastal waters or would result in relocation of an outfall to a critical area, or a renewal with such a major amendment. The Coastal Management Program boundary is the area along the Texas Coast of the Gulf of México as depicted on the map in 31 TAC §503.1 and includes part or all of the following counties: Cameron, Willacy, Kenedy, Kleberg, Nueces, San Patricio, Aransas, Refugio, Calhoun, Victoria, Jackson, Matagorda, Brazoria, Galveston, Harris, Chambers, Jefferson y Orange. If the application is for amendment that does not meet the above description or a renewal without such a major amendment, do not include the sentence:

El Director Ejecutivo de la TCEQ ha revisado esta medida para ver si está de acuerdo con los objetivos y las regulaciones del Programa de Administración Costero de Texas (CMP) de

acuerdo con las regulaciones del Consejo Coordinador de la Costa (CCC) y ha determinado que la acción es conforme con las metas y regulaciones pertinentes del CMP.

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

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

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

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

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

cómo y porqué el miembro sería afectado; y explicar cómo los intereses que el grupo desea proteger son pertinentes al propósito del grupo.

Después del cierre de todos los períodos de comentarios y de petición que aplican, el Director Ejecutivo enviará la solicitud y cualquier petición para reconsideración o para una audiencia de caso impugnado a los Comisionados de la TCEQ para su consideración durante una reunión programada de la Comisión.

La Comisión sólo puede conceder una solicitud de una audiencia de caso impugnado sobre los temas que el solicitante haya presentado en sus comentarios oportunos que no fueron retirados posteriormente. **Si se concede una audiencia, el tema de la audiencia estará limitado a cuestiones de hecho en disputa o cuestiones mixtas de hecho y de derecho relacionadas a intereses pertinentes y materiales de calidad del agua que se hayan presentado durante el período de comentarios.**

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

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

CONTACTOS E INFORMACIÓN A LA AGENCIA. Todos los comentarios públicos y solicitudes deben ser presentadas electrónicamente vía <http://www14.tceq.texas.gov/epic/eComment/> o por escrito dirigidos a la Comisión de Texas de Calidad Ambiental, Oficial de la Secretaría (Office of Chief Clerk), MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Tenga en cuenta que cualquier información personal que usted proporcione, incluyendo su nombre, número de teléfono, dirección de correo electrónico y dirección física pasarán a formar parte del registro público de la Agencia. Para obtener más información acerca de esta solicitud de permiso o el proceso de permisos, llame al programa de educación pública de la TCEQ, gratis, al 1-800-687-4040. Si desea información en español, puede llamar al 1-800-687-4040.

También se puede obtener información adicional del Coletto Creek Power, LLC a la dirección indicada arriba o llamando a Sr. Ryan Bayle, P.G., Environmental Manager, al 214-875-8294.

Fecha de emisión: *[Date notice issued]*



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
and 40 CFR Part 423

TPDES PERMIT NO.
WQ0002159000
*[For TCEQ office use only -
EPA I.D. No. TX0070068]*

This major amendment replaces
TPDES Permit No.
WQ0002159000, issued on
November 20, 2023.

Coletto Creek Power, LLC

whose mailing address is

6555 Sierra Drive
Irving, Texas 75039

is authorized to treat and discharge wastes from Coletto Creek Power Station, currently a coal-fired steam electric generating facility with future plans to convert to natural gas-fired (SIC 4911)

located at 45 Farm-to-Market Road 2987, near the Town of Fannin, in Goliad County, Texas 77960

directly to Coletto Creek Reservoir, which is part of Coletto Creek in Segment No. 1807 of the Guadalupe 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, November 20, 2028.

ISSUED DATE:

For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number 001

1. During the period beginning upon the date of permit issuance and lasting through the date of permit expiration, the permittee is authorized to discharge once-through cooling water (condenser cooling water and auxiliary cooling water) from Unit 1 and previously monitored effluent (treated domestic wastewater, bottom ash transport water, low volume waste sources, metal cleaning waste, stormwater runoff, and coal pile runoff) subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 557 million gallons per day (MGD). The daily maximum flow shall not exceed 560 MGD.

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	Sample Type
	lbs/day	mg/L	lbs/day	mg/L	mg/L	Measurement Frequency	
Flow	557 MGD		560 MGD		N/A	Continuous	Record ¹
Temperature	108 ^{2, 3} °F		110 ³ °F		110 °F	Continuous	Record
Temperature	106 ^{3, 4} °F		110 ³ °F		110 °F	Continuous	Record
Free Available Chlorine ⁵	77.4	0.2	193	0.5	0.5	1/week ⁶	Grab
Total Residual Chlorine ⁷	N/A	N/A	77.4	0.2	0.2	1/week ⁶	Grab
Total Copper	N/A	N/A	Report ⁸	Report ⁸	N/A	1/month	Grab
Reservoir Elevation (feet-mean sea level) ⁸	(Report)		(Report)		N/A	1/day	Record

2. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
3. Effluent monitoring samples shall be taken at the following location: At Outfall 001, where once-through cooling water is discharged from the canal that discharges to Coletto Creek Reservoir.

¹ Flow may be calculated from pump curve data.

² Applicable when the reservoir elevation is greater than 94 feet mean sea level.

³ See Other Requirement No. 4.

⁴ Applicable when the reservoir elevation is less than or equal to 94 feet mean sea level.

⁵ See Other Requirement No. 8.

⁶ Samples must be representative of periods of chlorination.

⁷ See Other Requirement No. 9.

⁸ Monitoring and reporting requirements for total copper will expire one month before the permit expiration date.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number 101¹

1. During the period beginning upon the date of permit issuance and lasting through the date of permit expiration, the permittee is authorized to discharge treated domestic wastewater subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 0.010 million gallons per day (MGD). The daily maximum flow shall not exceed 0.012 MGD.

Effluent Characteristics	Discharge Limitations				Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Report Daily Average and Daily Maximum	Measurement Frequency Sample Type
	lbs/day	mg/L	lbs/day	mg/L	mg/L	
Flow	0.010 MGD		0.012 MGD		N/A	1/day Estimate
Biochemical Oxygen Demand, 5-day	0.834	10	2.92	35	35	1/week Grab
Total Suspended Solids	1.25	15	5.01	60	60	1/week Grab
<i>E. coli</i>	126 CFU/100ml		399 CFU/100ml		399 CFU/100ml	1/week Grab

2. The effluent must contain a chlorine residual of at least 1.0 mg/L and a maximum chlorine residual of 4.0 mg/L after a detention time of at least 20 minutes (based on peak flow) and must be monitored once per week by grab sample. An equivalent method of disinfection may be substituted only with prior approval by the Executive Director.
3. The effluent must contain a minimum dissolved oxygen of 4.0 mg/L and must be monitored once per week by grab sample.
4. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week, by grab sample.
5. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
6. Effluent monitoring samples shall be taken at the following location: At Outfall 101, the effluent from the treatment facility prior to mixing with any other wastestreams.

¹ See Other Requirement No. 28.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number 201

1. During the period beginning upon the date of permit issuance and lasting through the date of permit expiration, the permittee is authorized to discharge bottom ash transport water ¹, low volume waste sources ², metal cleaning waste ³, and stormwater runoff subject to the following effluent limitations:

Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day ⁴	Estimate
Total Suspended Solids	30	100	100	1/week ⁴	Grab
Oil and Grease	15	20	20	1/week ⁴	Grab
Total Copper ⁵	0.5	1.0	1.0	1/week ⁴	Grab
Total Iron ⁵	1.0	1.0	1.0	1/week ⁴	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week ⁴ by grab sample.
3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
4. Effluent monitoring samples shall be taken at the following location: At Outfall 201, the effluent from the secondary pond prior to mixing with once-through cooling water and discharge to Coletto Creek Reservoir.

¹ See Other Requirement Nos. 13 and 26. Except for discharges to which 40 CFR §423.13(k)(2) applies or when the bottom ash transport water is used in the FGD scrubber, there shall be no discharge of pollutants in bottom ash transport water on or after December 31, 2028.

² See Other Requirement No. 10.

³ See Other Requirement No. 11.

⁴ When discharging.

⁵ These parameters only apply to metal cleaning waste and samples shall be obtained only when discharging metal cleaning waste.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number 301

1. During the period beginning upon the date of permit issuance and lasting through the date of permit expiration, the permittee is authorized to discharge coal pile runoff ¹ and previously monitored effluent (treated domestic wastewater from internal Outfall 101) subject to the following effluent limitations:

Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day ²	Estimate
Biochemical Oxygen Demand, 5-day ³	N/A	45	65	1/month ²	Grab
Total Suspended Solids	N/A	50	50	1/week ²	Grab
<i>E. coli</i> ³	126 CFU/100ml	399 CFU/100ml	399 CFU/100ml	1/week ²	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week ² by grab sample.
3. The effluent must contain a minimum dissolved oxygen of 4.0 mg/L and must 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: At Outfall 301, the effluent from the coal pile retention pond prior to mixing with once-through cooling water and discharge to Coletto Creek Reservoir.

¹ See Other Requirement No. 15.

² When discharging.

³ These parameters only apply to domestic waste and samples shall be obtained only when discharging domestic waste from internal Outfall 101.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number 401 ¹

1. During the period beginning upon the date of permit issuance and lasting through the date of permit expiration, the permittee is authorized to discharge low volume waste sources ², metal cleaning waste ³, coal pile runoff, and stormwater runoff subject to the following effluent limitations:

Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day ⁴	Estimate
Total Suspended Solids	30	100	100	1/week ⁴	Grab
Oil and Grease	15	20	20	1/week ⁴	Grab
Total Copper ⁵	0.5	1.0	1.0	1/week ⁴	Grab
Total Iron ⁵	1.0	1.0	1.0	1/week ⁴	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week by grab sample.
3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
4. Effluent monitoring samples shall be taken at the following location: At Outfall 401, the effluent from the Retention Pond prior to mixing with once-through cooling water and discharge to Coletto Creek Reservoir.

¹ See Other Requirement No. 28.

² See Other Requirement No. 10.

³ See Other Requirement No. 11.

⁴ When discharging.

⁵ These parameters only apply to metal cleaning waste and samples shall be obtained only when discharging metal cleaning waste.

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 Texas Water Code §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 a 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 (Fecal coliform, *E. coli*, or Enterococci) – the number of colonies 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 n th 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 substitute 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 $(\text{Flow, MGD} \times \text{Concentration, mg/L} \times 8.34)$.
- 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(c).
 - 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 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. 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 that 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; TWC Chapters 26, 27, and 28; and THSC Chapter 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

2. Test Procedures

- a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.
- b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification.

3. Records of Results

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.
- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (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 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 that may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally or by facsimile transmission (FAX) to the regional office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the regional office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. For Publicly Owned Treatment Works (POTWs), effective September 1, 2020, 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 that 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 that 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) that 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 that would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant that 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 that 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 that 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 Texas Water Code §§7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) 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 Chapter 361.
- b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit, or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in 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 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 that are not described in the permit application or that 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 that 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 Texas Water Code 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(15)) controlling the permittee or listing the permit or permittee as property of the estate; or
 - iii. an affiliate (as that term is defined in 11 USC, §101(2)) of the permittee.
- b. This notification must indicate:
 - i. the name of the permittee;
 - ii. the permit number(s);
 - iii. the bankruptcy court in which the petition for bankruptcy was filed; and
 - iv. the date of filing of the petition.

OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.
2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge use and disposal and 30 TAC §§319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
 - a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.
 - b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment 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, 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 or upgrading of the domestic wastewater treatment 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 or collection facilities. In the case of a domestic wastewater treatment facility that 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 Remediation Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC §335.5.
 - e. The term “industrial solid waste management unit” means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.
 - f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC Chapter 335 and must include the following, as it pertains to wastewater treatment and discharge:
 - i. volume of waste and date(s) generated from treatment process;
 - ii. volume of waste disposed of on-site or shipped off-site;
 - iii. date(s) of disposal;
 - iv. identity of hauler or transporter;
 - v. location of disposal site; and
 - vi. method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.
12. For industrial facilities to which the requirements of 30 TAC Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC Code Chapter 361.

OTHER REQUIREMENTS

- Violations of daily maximum limitations for the following pollutants shall be reported orally or by facsimile to TCEQ Region 14 within 24 hours from the time the permittee becomes aware of the violation, followed by a written report within five working days to TCEQ Region 14 and Compliance Monitoring Team (MC 224):

PollutantCopper (Total)

Test methods used must be sensitive enough to demonstrate compliance with the permit effluent limitations. If an effluent limit for a pollutant is less than the MAL, then the test method for that pollutant must be sensitive enough to demonstrate compliance at the MAL. Permit compliance/noncompliance determinations will be based on the effluent limitations contained in this permit, with consideration given to the MAL for the pollutants specified above.

<u>Pollutant</u>	<u>MAL¹ (mg/L)</u>
Copper (Total)	0.002
Iron (Total)	0.007

When an analysis of an effluent sample for a pollutant listed above indicates no detectable levels above the MAL and the test method detection level is as sensitive as the specified MAL, a value of zero shall be used for that measurement when making calculations for the self-reporting form. This applies to determinations of daily maximum concentration, calculations of loading and daily averages, and other reportable results.

When a reported value is zero based on this MAL provision, the permittee shall submit the following statement with the self-reporting form either as a separate attachment to the form or as a statement in the comments section of the form:

“The reported value(s) of zero for [list pollutant(s)] on the self-reporting form for [monitoring period date range] is based on the following conditions: (1) the analytical method used had a method detection level as sensitive as the MAL specified in the permit, and (2) the analytical results contained no detectable levels above the specified MAL.”

When an analysis of an effluent sample for a pollutant indicates no detectable levels and the test method detection level is not as sensitive as the MAL specified in the permit, or an MAL is not specified in the permit for that pollutant, the level of detection achieved shall be used for that measurement when making calculations for the self-reporting form. A zero may not be used.

- Reservoir elevation in the vicinity of the discharge must be recorded on a daily basis to the nearest 0.1 foot (ft) mean sea level (msl). The permittee must report the maximum, minimum, and average elevation for each month on the NetDMR reporting system available through the TCEQ website.
- There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

¹ Minimum analytical level.

4. The flow weighted average temperature (FWAT) must be computed and recorded on a daily basis. FWAT must be computed at equal time intervals not greater than two hours. The method of calculating FWAT is as follows:

$$\text{FWAT} = \frac{\sum (\text{INSTANTANEOUS FLOW} \times \text{INSTANTANEOUS TEMPERATURE})}{\sum (\text{INSTANTANEOUS FLOW})}$$

The *daily average temperature* must be calculated as the arithmetic average of all FWATs calculated during the calendar month.

The *daily maximum temperature* must be established as the highest FWAT calculated during the calendar month.

5. For continuous temperature measurements taken in accordance with page 2 of this permit, the reporting requirements in MONITORING AND REPORTING REQUIREMENT, Item 7 may be omitted if the continuously recorded temperature does not exceed the Daily Maximum temperature for more than 30 minutes for any single exceedance and not more than a total of 7 hours and 26 minutes in any calendar month.
6. The thermal component of this discharge is subject to review for compliance with the Texas Surface Water Quality Standards or qualification to alternative standards under PL 92-500 316(a).
7. The term *once-through cooling water* means water passed through the main cooling condensers in one or two passes for the purpose of removing heat.
8. FREE AVAILABLE CHLORINE

- A. The term *free available chlorine* (FAC) means the value obtained using any of the *chlorine-free available* methods in Table IB in 40 CFR §136.3(a) where the method has the capability of measuring free available chlorine, or other methods approved by the TCEQ.
- B. Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day, and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the permittee can demonstrate to the TCEQ that the units in a particular location cannot operate at or below this level of chlorination.
- C. Daily mass loading of FAC must be calculated using the following equation:

$$\text{FAC (lbs/day)} = \text{FAC (mg/L)} \times \text{flow (MGD)} \times 8.345 \times (2 \text{ hours}/24 \text{ hours})$$

where: FAC (mg/L) = concentration of FAC measured in the effluent during representative period of chlorination.

flow (MGD) = total actual flow of discharge via outfall during sampling day

9. The term *total residual chlorine* (or total residual oxidants for intake water with bromides) means the value obtained using any of the *chlorine-total residual* methods in Table IB in 40 CFR §136.3(a), or other methods approved by the TCEQ.

Total residual chlorine may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the TCEQ that discharge for more than two hours is required for macroinvertebrate control.

10. The term *low volume waste sources* means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations or standards are otherwise established in this part. Low volume waste sources include, but are not limited to, the following: Wastewaters from ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, recirculating house service water systems, and wet scrubber air pollution control systems whose primary purpose is particulate removal. Sanitary wastes, air conditioning wastes, and wastewater from carbon capture or sequestration systems are not included in this definition.
11. The term *metal cleaning waste* means any wastewater resulting from cleaning [with or without chemical cleaning compounds] any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.
12. The term *fly ash* means the ash that is carried out of the furnace by a gas stream and collected by a capture device such as a mechanical precipitator, electrostatic precipitator, or fabric filter. Economizer ash is included in this definition when it is collected with fly ash. Ash is not included in this definition when it is collected in wet scrubber air pollution control systems whose primary purpose is particulate removal.
13. The term *bottom ash* means the ash, including boiler slag, which settles in the furnace or is dislodged from furnace walls. Economizer ash is included in this definition when it is collected with bottom ash.
14. The term *transport water* means any wastewater that is used to convey fly ash, bottom ash, or economizer ash from the ash collection or storage equipment, or boiler, and has direct contact with the ash. Transport water does not include low volume, short duration discharges of wastewater from minor leaks (*e.g.*, leaks from valve packing, pipe flanges, or piping), minor maintenance events (*e.g.*, replacement of valves or pipe sections), FGD paste equipment cleaning water, or bottom ash purge water.
15. The term *coal pile runoff* means the rainfall from or through any coal storage pile.

Any untreated overflow from facilities designed, constructed and operated to treat the volume of *coal pile runoff* which is associated with a 10-year, 24-hour rainfall event is not subject to the total suspended solids limitations specified at Page 2c of this permit.

The term *10 year, 24/hour rainfall event* means a rainfall event with a probable recurrence interval of once in ten years as defined by the National Weather Service in Technical Paper No. 40. *Rainfall Frequency Atlas of the United States*, May 1961 or equivalent regional rainfall probability information developed therefrom.

16. The term *flue gas desulfurization (FGD) wastewater* means any wastewater generated specifically from the wet flue gas desulfurization scrubber system that comes in contact with the flue gas or the FGD solids, including but not limited to, the blowdown from the FGD scrubber system, overflow or underflow from the solids separation process, FGD solids wash water, and the filtrate from the solids dewatering process. Wastewater generated from cleaning the FGD scrubber, cleaning FGD

solids separation equipment, cleaning FGD solids dewatering equipment, or that is collected in floor drains in the FGD process area is not considered FGD wastewater.

This permit does not authorize the discharge of FGD wastewater.

17. The following table describes the ponds currently used and proposed at the Coletto Creek Power Station:

Pond	Wastewater	Storage Capacity (acre-feet)	Type of Liner	Leak Detection System	Associated Outfall Number
Primary Ash Pond (Pond No. 1)	ATW, LVW, MCW	2701	Clay	MW	N/A (Pond No. 2)
Secondary Pond (Pond No. 2)	ATW, LVW, MCW	304	Clay	MW	201
Coal Pile Retention Pond (Pond No. 3)	CPR, treated domestic wastewater	135	Clay	MW	301
Evaporation Pond (Pond No. 4, inactive)	MCW, LVW and wastewater from Pond Nos. 2 and 3.	250	Clay	MW	N/A (Evaporation Pond)
Retention Pond (Pond No. 5)	LVW, MCW, CPR	1.38	Clay	No	401

Legend:

ATW = Ash Transport Water (bottom ash)
 LVW = Low Volume Waste Source
 MCW = Metal Cleaning Waste
 CPR = Coal Pile Runoff
 MW = Monitoring Well

18. There shall be no discharge from the Evaporation Pond to surface water or routed to any other pond.
19. A wastewater pond must comply with the following requirements. A wastewater pond (or lagoon) is an earthen structure used to evaporate, hold, store, or treat water that contains a *waste* or *pollutant* or that would cause *pollution* upon *discharge* as those terms are defined in Texas Water Code § 26.001, but does not include a pond that contains only stormwater.
- A. A wastewater pond **subject to 40 CFR Part 257, Subpart D** (related to coal combustion residuals) must comply with those requirements in lieu of the requirements in B through G of POND REQUIREMENTS.

- B. An **existing** wastewater pond must be maintained to meet or exceed the original approved design and liner requirements; or, in the absence of original approved requirements, must be maintained to prevent unauthorized discharges of wastewater into or adjacent to water in the state. The permittee shall maintain copies of all liner construction and testing documents at the facility or in a reasonably accessible location and make the information available to the executive director upon request.
- C. A **new** wastewater pond constructed after the issuance date of this permit must be lined in compliance with one of the following requirements if it will contain process wastewater as defined in 40 CFR § 122.2. The executive director will review ponds that will contain only non-process wastewater on a case-by-case basis to determine whether the pond must be lined. If a pond will contain only non-process wastewater, the owner shall notify the Industrial Permits Team (MC 148) to obtain a written determination at least 90 days before the pond is placed into service and copy the TCEQ Compliance Monitoring Team (MC 224) and regional office. The permittee must submit all information about the proposed pond contents that is reasonably necessary for the executive director to make a determination. If the executive director determines that a pond does not need to be lined, then the pond is exempt from C(1) through C(3) and D through G of POND REQUIREMENTS.

A wastewater pond that only contains domestic wastewater must comply with the design requirements in 30 TAC Chapter 217 and 30 TAC § 309.13(d) in lieu of items C(1) through C(3) of this subparagraph.

- (1) Soil liner: The soil liner must contain clay-rich soil material (at least 30% of the liner material passing through a #200 mesh sieve, liquid limit greater than or equal to 30, and plasticity index greater than or equal to 15) that completely covers the sides and bottom of the pond. The liner must be at least 3.0 feet thick. The liner material must be compacted in lifts of no more than 8 inches to 95% standard proctor density at the optimum moisture content in accordance with ASTM D698 to achieve a permeability less than or equal to 1×10^{-7} (≤ 0.0000001) cm/sec. For in-situ soil material that meets the permeability requirement, the material must be scarified at least 8 inches deep and then re-compacted to finished grade.
 - (2) Synthetic membrane: The liner must be a synthetic membrane liner at least 40 mils in thickness that completely covers the sides and the bottom of the pond. The liner material used must be compatible with the wastewater and be resistant to degradation (e.g., from ultraviolet light, chemical reactions, wave action, erosion, etc.). The liner material must be installed and maintained in accordance with the manufacturer's guidelines. A wastewater pond with a synthetic membrane liner must include an underdrain with a leak detection and collection system.
 - (3) Alternate liner: The permittee shall submit plans signed and sealed by a Texas-licensed professional engineer for any other equivalently protective pond lining method to the TCEQ Industrial Permits Team (MC 148) and copy the regional office.
- D. For a pond that must be lined according to subparagraph C (including ponds with in-situ soil liners), the permittee shall provide certification, signed and sealed by a Texas-licensed professional engineer, stating that the completed pond lining and any required underdrain with leak detection and collection system for the pond meet the requirements in subparagraph C(1) – C(3) before using the pond. The certification shall include the following minimum details about

the pond lining system: (1) pond liner type (in-situ soil, amended in-situ soil, imported soil, synthetic membrane, or alternative), (2) materials used, (3) thickness of materials, and (4) either permeability test results or a leak detection and collection system description, as applicable.

The certification must be provided to the TCEQ Water Quality Assessment Team (MC 150), Industrial Permits Team (MC 148), and regional office. A copy of the liner certification and construction details (i.e., as-built drawings, construction QA/QC documentation, and post construction testing) must be kept on-site or in a reasonably accessible location (in either hardcopy or digital format) until the pond is closed.

- E. Protection and maintenance requirements for a pond subject to subparagraph B or C (including ponds with in-situ soil liners).
- (1) The permittee shall maintain a liner to prevent the unauthorized discharge of wastewater into or adjacent to water in the state.
 - (2) A liner must be protected from damage caused by animals. Fences or other protective devices or measures may be used to satisfy this requirement.
 - (3) The permittee shall maintain the structural integrity of the liner and shall keep the liner and embankment free of woody vegetation, animal burrows, and excessive erosion.
 - (4) The permittee shall inspect each pond liner and each leak detection system at least once per month. Evidence of damage or unauthorized discharge must be evaluated by a Texas-licensed professional engineer or Texas-licensed professional geoscientist within 30 days. The permittee is not required to drain an operating pond or to inspect below the waterline during these routine inspections.
 - a. A Texas-licensed professional engineer or Texas-licensed professional geoscientist must evaluate damage to a pond liner, including evidence of an unauthorized discharge without visible damage.
 - b. Pond liner damage must be repaired at the recommendation of a Texas-licensed professional engineer or Texas-licensed professional geoscientist. If the damage is significant or could result in an unauthorized discharge, then the repair must be documented and certified by a Texas-licensed professional engineer. Within 60 days after a repair is completed, the liner certification must be provided to the TCEQ Water Quality Assessments Team (MC 150) and regional office. A copy of the liner certification must be maintained at the facility or in a reasonably accessible location and made available to the executive director upon request.
 - c. A release determination and subsequent corrective action will be based on 40 CFR Part 257 or the Texas Risk Reduction Program (30 TAC Chapter 350), as applicable. If evidence indicates that an unauthorized discharge occurred, including evidence that the actual permeability exceeds the design permeability, the matter may also be referred to the TCEQ Enforcement Division to ensure the protection of the public and the environment.
- F. For a pond subject to subparagraph B or C (including ponds with in-situ soil liners), the permittee shall have a Texas-licensed professional engineer perform an evaluation of each pond

that requires a liner at least once every five years. The evaluation must include: (1) a physical inspection of the pond liner to check for structural integrity, damage, and evidence of leaking; (2) a review of the liner documentation for the pond; and (3) a review of all documentation related to liner repair and maintenance performed since the last evaluation. For the purposes of this evaluation, evidence of leaking also includes evidence that the actual permeability exceeds the design permeability. The permittee is not required to drain an operating pond or to inspect below the waterline during the evaluation. A copy of the engineer's evaluation report must be maintained at the facility or in a reasonably accessible location and made available to the executive director upon request.

G. For a pond subject to subparagraph B or C (including ponds with in-situ soil liners), the permittee shall maintain at least 2.0 feet of freeboard in the pond except when:

- (1) the freeboard requirement temporarily cannot be maintained due to a large storm event that requires the additional retention capacity to be used for a limited period of time;
- (2) the freeboard requirement temporarily cannot be maintained due to upset plant conditions that require the additional retention capacity to be used for treatment for a limited period of time; or
- (3) the pond was not required to have at least 2.0 feet of freeboard according to the requirements at the time of construction.

20. The permittee must notify the Corrective Action Section (MC 127) of the Remediation Division, in writing, at least 90 days prior to discontinuing use of any surface impoundment, pit, or basin authorized by this permit. The permittee must, at the request of the Executive Director, submit such information as is necessary to evaluate closure of the waste management unit(s) including, but not limited to, chemical analyses of bottom sediments, soils, and groundwater samples.

21. The permittee must implement the Groundwater Quality Assessment Plan "*the Plan*" dated November 2009, and any modifications that are approved by the TCEQ.

The permittee must submit, in writing, any request to modify the Plan to the Water Quality Assessment Team (MC 150) for review and approval. The request must include appropriate data and justification supporting the modification, as appropriate. The Executive Director may modify the Plan to ensure protection of groundwater quality.

Permittee must compile the results of the groundwater monitoring in a report to be submitted to the Water Quality Assessment Team (MC 150) and TCEQ Corpus Christi Region (MC Region 14) by September 30th of each year. The annual report must include laboratory reports, a summary of the groundwater data with trend analysis, annual potentiometric surface maps and a discussion of the results.

22. The chronic aquatic life mixing zone is defined as a volume within a radius of 100 feet from the point of discharge. Chronic toxic criteria apply at the edge of the chronic aquatic life mixing zone.

23. This provision supersedes and replaces Provision 1, Paragraph 1 of Monitoring and Reporting Requirements found on Page 4 of this permit.

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 TCEQ Compliance Monitoring Team (MC-224), by the 25th day of the following month for each discharge that 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.

24. COOLING WATER INTAKE STRUCTURE REQUIREMENTS

A. Specialized Definitions

- (1) Actual Intake Flow (AIF), as defined at 40 CFR § 125.92(a), means the average volume of water withdrawn on an annual basis by the cooling water intake structures over the past three years. After October 14, 2019, AIF means the average volume of water withdrawn on an annual basis by the cooling water intake structures over the previous five years. Actual intake flow is measured at a location within the *cooling water intake structure* that the Director deems appropriate. The calculation of actual intake flow includes days of zero flow. AIF does not include flows associated with emergency and fire suppression capacity.
- (2) Closed Cycle Recirculating System (CCRS), as defined as 40 CFR § 125.92(c), means a system designed and properly operated using minimized make-up and blowdown flows withdrawn from a water of the United States to support contact or non-contact cooling uses within a facility, or a system designed to include certain impoundments. A closed-cycle recirculating system passes cooling water through the condenser and other components of the cooling system and reuses the water for cooling multiple times.

CCRS also includes a system with impoundments of waters of the United States (WOTUS). where the impoundment was constructed prior to October 14, 2014 and created for the purpose of serving as part of the cooling water system as documented in the project purpose statement for any required Clean Water Act section 404 permit obtained to construct the impoundment. In the case of an impoundment whose construction pre-dated the CWA requirement to obtain a section 404 permit, documentation of the project's purpose must be demonstrated to the satisfaction of the Director. This documentation could be some other license or permit obtained to lawfully construct the impoundment for the purposes of a cooling water system, or other such evidence as the Director finds necessary. For impoundments constructed in uplands or not in WOTUS, no documentation of a section 404 or other permit is required. If WOTUS are withdrawn for purposes of replenishing losses to a CCRS other than those due to blowdown, drift, and evaporation from the cooling system, the Director may determine a cooling system is a CCRS if the facility demonstrates to the satisfaction of the Director that make-up water withdrawals attributed specifically to the cooling portion of the cooling system have been minimized.

B. Monitoring Requirements

The permittee shall adhere to the requirements of 40 CFR § 125.96 when the CWIS is in operation. Specifically, the facility shall:

- (1) monitor actual intake flow, as defined at 40 CFR § 125.92(a), withdrawn by CWIS for cooling purposes, including cooling water withdrawals and make-up water withdrawals, on a daily basis; and
- (2) conduct visual or remote inspections on a weekly basis, as required by 40 CFR § 125.96(e).

Alternatives to the procedures described at 40 CFR § 125.96(e) have not been approved by the TCEQ. Requests for alternative procedures must be submitted in writing to the TCEQ Industrial Permits Team (MC 148) for review and approval.

Results of monitoring activities conducted during the term of this permit must be submitted to the TCEQ with the subsequent renewal permit application, as required by 40 CFR § 122.21(r).

C. Record-Keeping Requirements

Records (e.g. electronic logs, data acquisition system records, operating procedures, operator logs, etc.) documenting the operation and maintenance described above shall be kept on site until the subsequent permit is issued, per the requirements of 40 CFR § 125.97(d), and made available to TCEQ personnel upon request.

D. Changes to the Cooling Water Intake Structure

The facility must notify the TCEQ Industrial Permits Team (MC 148) and Region 14 Office in writing at least 30 days prior to any changes or modifications of the design or in the operation of the cooling water system or in the method by which cooling water is obtained.

If it is determined that the proposed CWIS configuration does not meet best technology available standards for impingement mortality and entrainment, the permit may be reopened to incorporate additional requirements.

25. Wastewater discharged via Outfall 001 must be sampled and analyzed as directed below for those parameters listed in Tables 1, 2, and 3 of Attachment A of this permit. Analytical testing for Outfall 001 must be completed within 60 days of discharge. Results of the analytical testing must be submitted within 90 days of discharge to the TCEQ Industrial Permits Team (MC 148) and Region 14 Office. Based on a technical review of the submitted analytical results, an amendment may be initiated by TCEQ staff to include additional effluent limitations, monitoring requirements, or both.

Table 1: Analysis is required for all pollutants in Table 1. Wastewater must be sampled and analyzed for those parameters listed in Table 1 for a minimum of four sampling events that are each at least one week apart.

Table 2: Analysis is required for those pollutants in Table 2 that are used at the facility that could in any way contribute to contamination in the Outfall 001 discharge. Sampling and analysis must be conducted for a minimum of four sampling events that are each at least one week apart.

Table 3: For all pollutants listed in Table 3, the permittee shall indicate whether each pollutant is believed to be present or absent in the discharge. Sampling and analysis

must be conducted for each pollutant believed present for a minimum of one sampling event.

The permittee shall report the flow at Outfall 001 in MGD in the attachment. The permittee shall indicate on each table whether the samples are composite (C) or grab (G) by checking the appropriate box.

26. The permittee has submitted on October 1, 2021 a Notice of Planned Participation (NOPP) as required in 40 CFR §423.19(f)(2) demonstrating that Unit 1 at the Coletto Creek Power Plant qualifies as an electric generating unit that will achieve permanent cessation of coal combustion (see 40 CFR §423.18) by December 31, 2028; therefore, requesting authorization to continue the discharge of bottom ash transport waters pursuant to 40 CFR §423.13(k)(2)(ii). The permittee stated in the NOPP that the boiler is scheduled to cease coal-fired operations no later than July 17, 2027; therefore, there must be no discharge of bottom ash transport water after December 31, 2028. The permittee must submit an annual progress report, where it will identify completed milestones, and update remaining milestones to be completed in accordance with 40 CFR §423.19(f)(3) and 40 CFR §423.19(f)(4). The annual progress report must be submitted to the TCEQ Industrial Permits Team (MC 148), Region 14 Office, and Compliance Monitoring Team (MC 224) by the end of September of each year, until the project has been completed, but no later than 180 days after December 31, 2028.
27. The permittee may submit an amendment request to reflect updated effluent limitation guidelines following any revision of 40 CFR Part 423. The request must be in accordance with 40 CFR §122.62(a)(3).
28. Reporting requirements according to 30 TAC §§ 319.1-319.12 and any additional effluent reporting requirements contained in internal Outfalls 101 and 401 of the permit are suspended from the effective date of the permit until resumption of discharge via internal Outfalls 101 and/or 401. The permittee shall provide written notice to the TCEQ Applications Review and Processing Team (MC 148), Compliance Monitoring Team (MC 224), and Region 14 Office, at least forty-five days prior to anticipated discharge via internal Outfall 101 and/or 401 (except for storm driven discharges) on Notification of Completion Form 20007.

ATTACHMENT A

Table 1 -Conventional and Non-Conventional

Outfall No.:	☐ C ☐ G	Effluent Concentration (mg/L)				
Pollutant		Sample 1.	Sample 2.	Sample 3.	Sample 4	Average
Flow (MGD)						
BOD (5-day)						
CBOD (5-day)						
Chemical Oxygen Demand						
Total Organic Carbon						
Dissolved Oxygen						
Ammonia Nitrogen						
Total Suspended Solids						
Nitrate Nitrogen						
Total Organic Nitrogen						
Total Phosphorus						
Oil and Grease						
Total Residual Chlorine						
Total Dissolved Solids						
Sulfate						
Chloride						
Fluoride						
Total Alkalinity (mg/L as CaCO ₃)						
Temperature (°F)						
pH (Standard Units; min/max)						

Pollutant	Effluent Concentration (µg/L) ¹					MAL ² (µg/L)
	Sample 1	Sample 2	Sample 3	Sample 4	Average	
Aluminum, Total						2.5
Antimony, Total						5
Arsenic, Total						0.5
Barium, Total						3
Beryllium, Total						0.5
Cadmium, Total						1
Chromium, Total						3
Chromium, Hexavalent						3
Chromium, Trivalent						N/A

¹ Indicate units if different than µg/L.

² Minimum Analytical Level

Pollutant	Effluent Concentration (µg/L) ¹					MAL ² (µg/L)
	Sample 1	Sample 2	Sample 3	Sample 4	Average	
Copper, Total						2
Cyanide, Free						10
Lead, Total						0.5
Mercury, Total						0.005
Nickel, Total						2
Selenium, Total						5
Silver, Total						0.5
Thallium, Total						0.5
Zinc, Total						5.0

Table 2

Outfall No.:	☐ C ☐ G	Samp. 1 (µg/L)	Samp. 2 (µg/L)	Samp. 3 (µg/L)	Samp. 4 (µg/L)	Avg. (µg/L)	MAL (µg/L)
Pollutant							
Acrolein							0.7
Acrylonitrile							50
Anthracene							10
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
Carbon Tetrachloride							2
Chlorobenzene							10
Chlorodibromomethane							10
Chloroform							10
Chrysene							5
Cresols							10
1,2-Dibromoethane							10
<i>m</i> -Dichlorobenzene							10
<i>o</i> -Dichlorobenzene							10
<i>p</i> -Dichlorobenzene							10
3,3'-Dichlorobenzidine							5
1,2-Dichloroethane							10
1,1-Dichloroethylene							10
Dichloromethane							20
1,2-Dichloropropane							10
1,3-Dichloropropylene							10

Outfall No.:	☐ C ☐ G	Samp. 1 (µg/L)	Samp. 2 (µg/L)	Samp. 3 (µg/L)	Samp. 4 (µg/L)	Avg. (µg/L)	MAL (µg/L)
Pollutant							
2,4-Dimethylphenol							10
Di- <i>n</i> -Butyl Phthalate							10
Epichlorohydrin							1,000
Ethylbenzene							10
Ethylene Glycol							—
Fluoride							500
Hexachlorobenzene							5
Hexachlorobutadiene							10
Hexachlorocyclopentadiene							10
Hexachloroethane							20
4,4'-Isopropylidenediphenol [bisphenol A]							—
Methyl Ethyl Ketone							50
Methyl <i>tert</i> -butyl ether [MTBE]							—
Nitrobenzene							10
<i>N</i> -Nitrosodiethylamine							20
<i>N</i> -Nitroso-di- <i>n</i> -Butylamine							20
Nonylphenol							333
Pentachlorobenzene							20
Pentachlorophenol							5
Phenanthrene							10
Polychlorinated Biphenyls (PCBs) ¹							0.2
Pyridine							20
1,2,4,5-Tetrachlorobenzene							20
1,1,2,2-Tetrachloroethane							10
Tetrachloroethylene							10
Toluene							10
1,1,1-Trichloroethane							10
1,1,2-Trichloroethane							10
Trichloroethylene							10
2,4,5-Trichlorophenol							50
TTHM (Total Trihalomethanes)							10
Vinyl Chloride							10

¹ Total of detects for PCB-1242, PCB-1254, PCB-1221, PCB-1232, PCB-1248, PCB-1260, PCB-1016. If all values are non-detects, enter the highest non-detect preceded by a "<" symbol.

Table 3

Outfall No.	☐ C ☐ G	Believed Present	Believed Absent	Avg. Conc. (mg/L)	Max. Conc. (mg/L)	No. of Samples	MAL (mg/L)
Pollutant							
Bromide							0.400
Color (PCU)							—
Nitrate-Nitrite (as N)							—
Sulfide (as S)							—
Sulfite (as SO ₃)							—
Surfactants							—
Boron, total							0.020
Cobalt, total							0.0003
Iron, total							0.007
Magnesium, total							0.020
Manganese, total							0.0005
Molybdenum, total							0.001
Tin, total							0.005
Titanium, total							0.030

CHRONIC 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, reproduction, or growth of the test organisms.
- b. 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 "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," fourth edition (EPA-821-R-02-013) or its most recent update:
 - 1) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*) (Method 1002.0). This test should be terminated when 60% of the surviving adults in the control produce three broods or at the end of eight days, whichever occurs first. This test shall be conducted once per six months.
 - 2) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*) (Method 1000.0). 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 year.

The permittee should 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, unless the test was invalid due to the intake water (i.e., the control) being toxic (i.e., failing to meet acceptability criteria). In such case, the requirement to perform a valid test is waived for that reporting period only. 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 effluent 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.

2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fail to meet the following criteria:
 - 1) a control mean survival of 80% or greater;

- 2) a control mean number of water flea neonates per surviving adult of 15 or greater;
- 3) a control mean dry weight of surviving fathead minnow larvae of 0.25 mg or greater;
- 4) a control coefficient of variation percent (CV%) of 40 or less between replicates for the young of surviving females in the water flea test; and the growth and survival endpoints in the fathead minnow test;
- 5) a critical dilution CV% of 40 or less for the young of surviving females in the water flea test; and the growth and survival endpoints for the fathead minnow test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV% greater than 40 shall not invalidate the test;
- 6) a percent minimum significant difference of 47 or less for water flea reproduction; and
- 7) a percent minimum significant difference of 30 or less for fathead minnow growth.

b. Statistical Interpretation

- 1) For the water flea survival test, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be the Fisher's exact test as described in the manual referenced in Part 1.b.
- 2) For the water flea reproduction test and the fathead minnow larval survival and growth 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.
- 3) 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.
- 4) 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 80% 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.
- 5) The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which a significant effect is demonstrated. A significant effect is herein defined as a statistically significant difference between the survival, reproduction, or growth of the test organism in a specified effluent dilution when compared to the survival, reproduction, or growth of the test organism in the control.
- 6) 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 3.

- 7) Pursuant to the responsibility assigned to the permittee in Part 2.b.3), 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 3 will be used when making a determination of test acceptability.
- 8) 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 lake water collected as close to the point of intake as possible and concurrently with the effluent sample.
- 2) Total dissolved solids (TDS) shall be measured and reported for each sample collected for the testing, both intake water and effluent.

d. Samples and Composites

- 1) The permittee shall collect a minimum of three composite samples from Outfall 001. The second and third composite samples 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 any 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.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required 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 TLP3B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - 2) For the water flea, Parameter TOP3B, report the NOEC for survival.
 - 3) For the water flea, Parameter TXP3B, report the LOEC for survival.
 - 4) For the water flea, Parameter TWP3B, enter a "1" if the NOEC for reproduction is less than the critical dilution; otherwise, enter a "0."
 - 5) For the water flea, Parameter TPP3B, report the NOEC for reproduction.
 - 6) For the water flea, Parameter TYP3B, report the LOEC for reproduction.
 - 7) For the fathead minnow, Parameter TLP6C, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - 8) For the fathead minnow, Parameter TOP6C, report the NOEC for survival.
 - 9) For the fathead minnow, Parameter TXP6C, report the LOEC for survival.
 - 10) For the fathead minnow, Parameter TWP6C, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."
 - 11) For the fathead minnow, Parameter TPP6C, report the NOEC for growth.
 - 12) For the fathead minnow, Parameter TYP6C, report the LOEC for growth.

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 test demonstrates a significant effect at the critical dilution. Significant effect and significant lethality were defined in Part 2.b. Significant sublethality is defined as a statistically significant difference in growth/reproduction at the critical dilution when compared to the growth/reproduction of the test organism in the control.

- a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates a significant effect (lethal or sublethal) at the critical dilution. 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 the retests are performed due to a demonstration of significant lethality, and 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. 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.

If neither test demonstrates significant lethality and the permittee is testing under the reduced testing frequency provision of Part 1.e., the permittee shall return to a quarterly testing frequency for that species.

- c. If the two retests are performed due to a demonstration of significant sublethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in Part 4.a.
- d. If the two retests are performed due to a demonstration of significant sublethality, and neither test demonstrates significant lethality, the permittee shall continue testing at the quarterly frequency.
- e. Regardless of whether retesting for lethal or sublethal effects or a combination of the two, no more than one retest per month is required for a species.

5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, or within 45 days of being so instructed due to multiple toxic events, 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, or within 90 days of being so instructed due to multiple toxic events, 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 "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA/600/6-91/005F) 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 and source of effluent toxicity;
 - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
 - 5) any data which 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 herein 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 evaluation/TRE. The report shall provide information pertaining to the

specific control mechanism selected that will, when implemented, result in 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 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 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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For draft Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0002159000, U.S. Environmental Protection Agency (EPA) ID No. TX0070068, to discharge to water in the state

Issuing Office: Texas Commission on Environmental Quality (TCEQ)
P.O. Box 13087
Austin, Texas 78711-3087

Applicant: Coletto Creek Power, LLC
6555 Sierra Drive
Irving, Texas 75039

Prepared By: **Thomas E. Starr**
Wastewater Permitting Section
Water Quality Division
(512) 239-4570

Date: **July 24, 2025**

Permit Action: **Major amendment without renewal to add a new internal Outfall 401 for the discharge of low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater; add a new Retention Pond to the list of impoundments in Other Requirement No. 17; and change the label of the Secondary Pond**

This is a major amendment without renewal. The Fact Sheet and Executive Director's Preliminary Decision (Fact Sheet) for the existing permit issued on November 20, 2023 is still applicable. Only those sections affected by the major amendment request are updated herein and are in bold.

I. 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 retains the current expiration date of November 20, 2028.**

II. APPLICANT ACTIVITY

The applicant currently operates Coletto Creek Power Station, currently a coal-fired steam electric generating facility with future plans to convert to natural gas-fired. The generating capacity from Unit 1 is 632 megawatts (MW).

III. DISCHARGE LOCATION

As described in the application, the facility is located at 45 Farm-to-Market Road 2987, near the City of Fannin, Goliad County, Texas 77960. Discharge is directly to Coletto Creek Reservoir, thence to Coletto Creek in Segment No. 1807 of the Guadalupe River Basin.

IV. RECEIVING STREAM USES

The designated uses for Segment No. 1807 are primary contact recreation, public water supply, and high aquatic life use.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

V. STREAM STANDARDS

The general criteria and numerical criteria that make up the stream standards are provided in 30 TAC §§ 307.1 - 307.10.

VI. DISCHARGE DESCRIPTION

The following is a quantitative description of the discharge described in the monthly effluent report data for the period **December 2023** through **April 2025**. The “average of daily average” values presented in the following table are the average of all daily average values for the reporting period for each pollutant. The “maximum of daily maximum” values presented in the following table are the individual maximum values for the reporting period for each pollutant. Flows are expressed in million gallons per day (MGD). All pH values are expressed in standard units (SU). A parameter not required by the existing permit is, therefore, not applicable (N/A). **Bacteria levels are expressed in colony forming units (cfu) or most probable number (MPN) per 100 mL.**

A. Flow

Outfall	Frequency	Average of Daily Average, MGD	Maximum of Daily Maximum, MGD
001	Continuous	435	556
101	Intermittent	No discharge	No discharge
201	Intermittent	2.10	2.62
301	Intermittent	No discharge	No discharge

B. Temperature

Outfall	Average of Daily Average, °F	Maximum of Daily Maximum, °F
001	79.4	102

C. Effluent Characteristics

Outfall	Pollutant	Average of Daily Average		Maximum of Daily Maximum	
		lbs/day	mg/L	lbs/day	mg/L
001	Free Available Chlorine (FAC)	1.54	0.01	3.73	0.01
	Total Residual Chlorine (TRC)	N/A	N/A	22.4	0.16
	Total Copper	7.64	0.003	16.3	0.004
	Depth of reservoir in feet	94.9 FT, minimum		N/A	N/A

C. Effluent Characteristics

Outfall	Pollutant	Average of Daily Average, mg/L	Maximum of Daily Maximum, mg/L
101	Biochemical Oxygen Demand, 5-day (BOD ₅)	No discharge	No discharge
	Total Suspended Solids	No discharge	No discharge
	E. coli	No discharge	No discharge
	Chlorine Residual	N/A	No discharge

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C. Effluent Characteristics

Outfall	Pollutant	Average of Daily Average,	Maximum of Daily Maximum,
		mg/L	mg/L
101	pH	No discharge	No discharge
201	Total Copper	0.004	0.036
	Total Iron	0.040	0.179
	Total Suspended Solids (TSS)	5.88	22.7
	pH, SU	7.2 SU, minimum	9 SU
301	TSS	No discharge	No discharge
	E. coli, CFU/100ml	No discharge	No discharge
301	pH	No discharge	No discharge

No effluent limit violations were documented in the monthly effluent reports.

VII. DRAFT EFFLUENT LIMITATIONS

See Appendix C for a comparison of technology-based effluent limitations, water quality-based effluent limitations, existing effluent limitations, and effluent limitations established in the draft permit.

OUTFALL LOCATIONS

Outfall	Latitude	Longitude
001	28.726033 N	97.203758 W

VIII. SUMMARY OF CHANGES FROM APPLICATION

No changes were made from the application.

IX. SUMMARY OF CHANGES FROM EXISTING PERMIT

The permittee requested the following amendments that the Executive Director recommends granting:

- 1. Add a new internal Outfall 401 for the discharge of low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater.**
- 2. Add a new Retention Pond to the list of impoundments in Other Requirement No. 17.**
- 3. Change the label of the Secondary Pond.**

The following additional changes have been made to the draft permit:

- 1. Pages 3-13 were updated (May 2021 version).**
- 2. The one-year compliance period for *E. coli* has expired and has been removed from the draft permit.**
- 3. The daily average for total copper has been removed.**
- 4. Fly ash transport water has been removed from the draft permit language.**

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5. **Simultaneous chlorination was removed from Other Requirement No. 9 as there is only one unit.**
6. **Other Requirement No. 24 related to the cooling water intake structure was reformatted.**
7. **Other Requirement No. 28 has been updated to include internal Outfall 401.**
8. **Biomonitoring frequency has been changed,**

X. DRAFT PERMIT RATIONALE

The following section sets forth the statutory and regulatory requirements considered in preparing the draft permit. Also set forth are any calculations or other necessary explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guidelines and water quality standards.

A. REASON FOR PERMIT ISSUANCE

The applicant applied to the TCEQ for a major amendment without renewal to TPDES Permit No. WQ0002159000 to authorize **adding a new internal Outfall 401 for the discharge of low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater; adding a new Retention Pond to the list of impoundments in Other Requirement No. 17; and changing the label of the Secondary Pond.**

The existing permit authorizes the discharge of once-through cooling water (condenser cooling water and auxiliary cooling water) from Unit **1 and previously monitored effluent (treated domestic wastewater, fly ash and bottom ash transport water, low volume waste sources, metal cleaning waste, stormwater runoff, and coal pile runoff) at a daily average flow not to exceed 557,000,000 gallons per day via Outfall 001.**

B. WATER QUALITY SUMMARY

Discharge Route

The discharge route is directly to Coletto Creek Reservoir, which is part of Coletto Creek in Segment No. 1807 of the Guadalupe River Basin. The designated uses for Segment No. 1807 are primary contact recreation, public water supply, and high aquatic life use. Effluent limitations and conditions established in the draft permit comply with state water quality standards and the applicable water quality management plan. The effluent limits in the draft permit will maintain and protect the existing instream uses. Additional discussion of the water quality aspects of the draft permit can be found at Section X.D. of this fact sheet.

Antidegradation Review

In accordance with 30 TAC § 307.5 and 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. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in Coletto Creek, which has been identified as having high aquatic life use.

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Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

Endangered Species Review

The discharge from this permit 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 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's 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.

Impaired Water Bodies

Segment No. 1807 is not currently listed on the state's inventory of impaired and threatened waters, the 2014 Clean Water Act Section 303(d) list.

Completed Total Maximum Daily Loads (TMDLs)

There are no completed TMDLs for Segment No. 1807.

C. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS1. GENERAL COMMENTS

Regulations in Title 40 of the Code of Federal Regulations (40 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.

The draft permit authorizes the discharge of once-through cooling water (condenser cooling water and auxiliary cooling water) from Unit 1 and previously monitored effluents (PMEs) (treated domestic wastewater, bottom ash transport water, low volume waste sources, metal cleaning waste, stormwater runoff, and coal pile runoff) at a daily average flow not to exceed 557 MGD via Outfall 001; treated domestic wastewater at a daily average flow not to exceed 0.010 MGD via internal Outfall 101; bottom ash transport water commingled with low volume waste sources, metal cleaning waste, and stormwater runoff on an intermittent and flow-variable basis via internal Outfall 201; coal pile runoff and treated domestic wastewater from internal Outfall 101 on an intermittent and flow-variable basis via internal Outfall 301; **and low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater on an intermittent and flow-variable basis via internal Outfall 401.**

The discharge of once-through cooling water (condenser cooling water and auxiliary cooling water) via Outfall 001, bottom ash transport water, low volume waste sources, metal cleaning waste via internal Outfall 201, coal pile runoff via internal Outfall 301, **and low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater via internal Outfall 401** from this facility is subject to federal effluent limitation guidelines at 40 CFR Part 423. A new source determination was performed, and the discharge of once-through cooling water,

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bottom ash transport water, low volume waste sources, metal cleaning waste, coal pile runoff are not a new source as defined at 40 CFR §122.2. Therefore, new source performance standards (NSPS) are not required for this discharge.

The discharge of domestic wastewater via internal Outfall 101 and 301 is subject to federal effluent limitation guidelines at 40 CFR Part 133 Secondary Treatment Regulation and 30 TAC Chapter 309.

The discharge of stormwater runoff via internal Outfall **201 and internal Outfall 401** are not subject to federal effluent limitation guidelines and any technology-based effluent limitations are based on best professional judgment.

Make-up cooling water for the Coletto Creek Power Plant is from the Coletto Creek Reservoir. Make-up water for potable water and boiler water treatment system originate from two onsite wells. The wastewater system at this facility consists of once-through cooling water (condenser cooling water and auxiliary cooling water), treated domestic wastewater, bottom ash transport water, low volume waste sources, metal cleaning waste, stormwater runoff, and coal pile runoff.

Once-through cooling water is used to cool and condense waste streams for reuse and circulates continuously when the plant is generating electricity. Water is pumped from the Perdido Creek arm of the Reservoir into the condensers after passing through traveling intake screens. Once-through cooling water is not treated before discharge via Outfall 001; however, the water cools through a series of flumes before reaching the main part of the Reservoir. The circulating flow is periodically chlorinated upstream of the condensers to control biofouling.

Domestic wastewater is treated in an onsite **aerobic septic system with surface spray. Domestic wastewater may also either be** discharged via internal Outfall 101 or routed to the coal pile runoff pond for use in dust suppression. **Currently, internal Outfall 101 and the package plant are inactive and being maintained for future use.**

Coletto Creek has four impoundments: Pond No. 1 (Primary Ash Pond) **(scheduled for closure by October 2028)** receives low volume waste sources (water fraction from the oil water separators located through the plant, boiler blowdown, lab wastewater, plant drain wastewater, sump wastewater, air preheater wash wastewater, plant drain wastewater, boiler wash wastewater, electrostatic precipitator wash wastewater, condenser polishing regenerate, molybdate wash wastewater, and demineralizer wastewater), metal cleaning waste, bottom ash transport water, and stormwater runoff; Pond 2 (Secondary Pond) receives clarified water from Pond No. 1 and either discharges via internal Outfall 201, or is recirculated to the ash handling system as make-up for sluice. Pond No. 3 collects coal pile runoff where coal dust settles out, is also authorized to receive treated domestic wastewater from internal Outfall 101, and either discharges via internal Outfall 301 or routed to Pond No. 4. Pond No. 4 receives low volume waste sources, metal cleaning waste, and effluent from Pond No. 3. There is no discharge from Pond No. 4 to surface waters or any other pond **(currently inactive with no wastewater routed to it).**

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2. CALCULATIONS

See Appendix A of this fact sheet for calculations and further discussion of technology-based effluent limitations proposed in the draft permit.

9. 316(B) COOLING WATER INTAKE STRUCTURES

Section 316(b) of the Clean Water Act (CWA) requires facilities to use the Best Technology Available (BTA) for minimizing Impingement Mortality and Entrainment (IM & E). Revised regulations in 40 CFR Part 125, Subpart J, published in the Federal Register on August 15, 2014, outline BTA for minimizing IM & E and establish standards for compliance with Section 316(b). The revised regulations apply to existing point source facilities that use a CWIS designed to withdraw 2.0 MGD or more from waters of the United States (WOTUS) and use 25 percent or more of the water withdrawn exclusively for cooling purposes.

a. SCREENING

Coletto Creek Power (owner) owns and Guadalupe-Blanco River Authority (GBRA)(Operator), operates the cooling water intake structure (CWIS) located on the Coletto Creek Reservoir, in Victoria and Goliad Counties, to obtain water for cooling purposes. The facility is subject to the requirements of Section 316(b) of the CWA because the CWIS withdraws more than 2 MGD of water from waters of the United States and more than 25% of the water withdrawn (actual intake flow) is used for cooling purposes within the facility.

Coletto Creek Reservoir is a cooling water impoundment and the facility's CWIS is operated in a manner consistent with a closed-cycle recirculating system (CCRS), as defined at 40 CFR § 125.92(c), withdrawing surface water for make-up purposes only.

The operation of a CCRS (i.e., cooling water impoundment) reduces withdrawals from surface waters effectively, thereby reducing the impingement and entrainment of aquatic organisms. The facility meets Best Technology Available standards. The executive director will review this determination upon receipt of additional information in accordance with 40 CFR § 122.21(r); 40 CFR Part 125, Subpart J; or both; as applicable.

b. PERMIT ACTION

Existing Other Requirement No. 25 (now No. 24) has been revised to include definitions for CCRS and actual intake flow, monitoring requirements, and record-keeping requirements. Additionally, the draft permit requires the permittee to notify the TCEQ of any changes in the method cooling water is obtained. Upon receipt of such notification, the TCEQ may reopen the permit to include additional terms and conditions as necessary

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

D. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS1. GENERAL COMMENTS

The *Texas Surface Water Quality Standards* found at 30 TAC Chapter 307 state that surface waters will not be toxic to man from ingestion of water, consumption of aquatic organisms, or contact with the skin, or to terrestrial or aquatic life. The methodology outlined in the TCEQ guidance document *Procedures to Implement the Texas Surface Water Quality Standards* (IPs) 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. Calculated water quality-based effluent limits can be found in Appendix B of this fact sheet.

TPDES permits contain technology-based effluent limits reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations or conditions are included. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other toxicity databases to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls. A comparison of technology-based effluent limits and calculated water quality-based effluent limits can be found in Appendix C of this fact sheet.

2. AQUATIC LIFE CRITERIAa. 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).

Acute freshwater criteria are applied at the edge of the zone of initial dilution (ZID), and chronic freshwater criteria are applied at the edge of the aquatic life mixing zone. The ZID for this discharge is defined as volume within a radius of 25 feet from the point where the discharge enters Coletto Creek Reservoir. The aquatic life mixing zone for this discharge is defined as volume within a radius of 200 feet from the point where the discharge enters Coletto Creek Reservoir.

TCEQ uses the EPA horizontal jet plume model to estimate dilution at the edges of the ZID and aquatic life mixing zone for discharges greater than 10 MGD into lakes or reservoirs. General assumptions used in the horizontal jet plume model are a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis, the following critical effluent percentages are calculated based on the two-year maximum monthly average flow of >100 MGD:

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Acute Effluent % 100%

Chronic Effluent % 100%

General Screening Procedures

Wasteload 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, the instream numerical criteria will not be exceeded.

From the WLA, a long-term average (LTA) is calculated using a lognormal probability distribution, a given coefficient of variation (0.6), and a 99th percentile confidence level. The LTA is the long-term average effluent concentration for which the WLA will never be exceeded using a selected percentile confidence level.

The lower of the two LTAs (acute and chronic) 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-specific values for TSS, pH, hardness, and chloride according to the *IPs*. The segment values are 3.9 mg/L for TSS, 7.8 standard units for pH, 108 mg/L for hardness (as calcium carbonate, CaCO₃), and 75 mg/L for chloride. For additional details on the calculation of water quality-based effluent limitations, refer to the *IPs*.

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 equals or exceeds 85 percent of the calculated daily average water quality-based effluent limitation. Monitoring and reporting is required when analytical data reported in the application equals or exceeds 70 percent of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

Analytical data reported for Outfall 001 in the application (**2023 application**) was screened against calculated water quality-based effluent limitations for the protection of aquatic life. Reported analytical data does not exceed 70 percent of the calculated daily average water quality-based effluent limitation for aquatic life protection. However, monitoring and reporting requirements for total copper have been added to the draft permit.

The permittee has requested a major amendment to change Outfalls 002 and 003 to internal Outfalls 101 and 201. Existing Outfall 003 (now internal Outfall 201) has effluent limits for total copper based on water quality criteria; TCEQ typically does not include water quality effluent limits at internal outfalls. Therefore, a monitoring and reporting

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

requirement has been included at Outfall 001 which will self-expire a month before the permit expiration date. In addition, Other Requirement No. 25, has been included in the draft permit for analytical data be submitted within 90 days of discharge via Outfall 001. **This requirement has not expired and is retained in the draft permit.**

3. WHOLE EFFLUENT TOXICITY (BIOMONITORING) CRITERIA (7-DAY CHRONIC)

a. SCREENING AND REASONABLE POTENTIAL ANALYSIS

The existing permit includes chronic freshwater biomonitoring requirements at Outfall 001.

In the past three years, the permittee has performed **ten** chronic tests, with zero demonstrations of significant toxicity (i.e., zero failures).

A reasonable potential 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 reasonable potential determination is based on representative data from the previous three years of chronic whole effluent toxicity (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 zero failures, a determination of no reasonable potential was made. WET limits are not required, and both test species may be eligible for the testing frequency reduction after one year of quarterly testing.

b. PERMIT ACTION

The provisions of this section apply to Outfall 001.

Based on information contained in the permit application, the TCEQ has determined that there may be pollutants present in the effluent(s) that may have the potential to cause toxic conditions in the receiving stream.

Whole effluent toxicity testing (biomonitoring) is the most direct measure of potential toxicity, which 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. The biomonitoring procedures stipulated as a condition of this permit are as follows:

- i) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*). The frequency of the testing shall be once per **six months**

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- ii) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*). The frequency of testing shall be once per **year**

Toxicity tests shall be performed in accordance with protocols described in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition (EPA-821-R-02-013) or the latest revision. The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the state water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge.

This permit may be reopened to require effluent limits, additional testing, or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body.

- c. DILUTION SERIES

The permit requires five (5) 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 dilution series outlined above was calculated using a 0.75 factor applied to the critical dilution. The critical dilution is the estimated effluent dilution at the edge of the aquatic life mixing zone, which is discussed in Section X.D.2.a. of this fact sheet.

- 4. AQUATIC ORGANISM TOXICITY CRITERIA (24-HOUR ACUTE)

- a. SCREENING

The existing permit includes 24-hour acute freshwater biomonitoring requirements for Outfall 001. In the past three years, the permittee has performed **twelve** 24-hour acute tests, with zero demonstrations of significant mortality (i.e., zero failures). Minimum 24-hour acute freshwater biomonitoring requirements are proposed in the draft permit as outlined below.

- b. PERMIT ACTION

Twenty-four-hour 100% acute biomonitoring tests are required at Outfall 001 at a frequency of once per six months for the life of the permit.

The biomonitoring procedures stipulated as a condition of this permit are as follows:

- i) Acute 24-hour static toxicity test using the water flea (*Ceriodaphnia dubia* or *Daphnia pulex*). A minimum of five (5)

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replicates with eight (8) organisms per replicate shall be used for this test.

- ii) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

Toxicity tests shall be performed in accordance with protocols described in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition (EPA-821-R-02-012) or the latest revision.

5. AQUATIC ORGANISM BIOACCUMULATION CRITERIA

a. SCREENING

Water quality-based effluent limitations for the protection of human health are calculated using criteria for the consumption of fish tissue found in Table 2 of the *Texas Surface Water Quality Standards* (30 TAC Chapter 307).

Fish tissue bioaccumulation criteria are applied at the edge of the human health mixing zone for discharges into lakes and reservoirs. The human health mixing zone for this discharge is defined as a volume within a radius of 200 feet from the point where the discharge enters Coletto Creek Reservoir. TCEQ uses the EPA horizontal jet plume model to estimate dilution at the edge of the human health mixing zone for discharges greater than 10 MGD into lakes or reservoirs. General assumptions used in the horizontal jet plume model are a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis, the following critical effluent percentage is calculated based on the two-year average monthly average flow of >100 MGD:

Human health Effluent %: 100%

Water quality-based effluent limitations for human health protection against the consumption of fish tissue are calculated using the same procedure as outlined for calculation of water quality-based effluent limitations for aquatic life protection. A 99th percentile confidence level in the long-term average calculation is used, with only one long-term average value being calculated.

Significant potential is again determined by comparing reported analytical data against 70 percent and 85 percent of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

Analytical data reported for Outfall 001 in the application (**2023 application**) was screened against calculated water quality-based effluent limitations for the protection of human health. Reported analytical data does not exceed 70 percent of the calculated daily average water quality-based effluent limitation for human health protection. No

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additional limits or monitoring and reporting requirements have been added to the draft permit.

6. DRINKING WATER SUPPLY PROTECTIONa. SCREENING

Segment No. 1807, which receives the discharge(s) from this facility, is designated as a public water supply source. The screening procedure used to calculate water quality-based effluent limitations and determine the need for effluent limitations or monitoring requirements is identical to the procedure outlined in Section X.D.5.a of this fact sheet. Criteria in the "Water and Fish" section of Table 2 are based on either the drinking water standard or the combined effects of ingestion of drinking water and fish tissue. Effluent limitations or monitoring requirements to protect the drinking water supply (and other human health effects) were previously calculated and outlined in section X.D.5.b of this fact sheet.

b. PERMIT ACTION

Criteria in the "Water and Fish" section of Table 2 do not distinguish if the criteria are based on drinking water standard or the combined effects of ingestion of drinking water and fish tissue. Effluent limitations or monitoring requirements to protect the drinking water supply (and other human health effects) were previously calculated and outlined in section X.D.5.b of this fact sheet.

7. TOTAL DISSOLVED SOLIDS, CHLORIDE, AND SULFATE STANDARDS PROTECTIONa. SCREENING

Average concentrations of TDS, chloride, and sulfate reported in the application (**2023 application**) are all less than the respective criteria for Segment No. 1807; therefore, no further screening is necessary.

b. PERMIT ACTION

None.

8. PROTECTION OF pH STANDARDSa. SCREENING

Outfall 001

Once-through cooling water is discharged via Outfall 001. There are no pH technology-based effluent limits requirements for the discharge of once-through cooling water, therefore, no pH screening was performed for this outfall.

Internal Outfall 101, 201, 301, and **401**

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

No screening was performed for these internal outfalls. However, pH technology-based effluent limits between 6.0 and 9.0 standards units are included in the draft permit at internal Outfalls 101, 201, 301, and **401**.

b. PERMIT ACTION

Outfall 001
None.

Internal Outfalls 101, 201, 301, and **401**
pH limits between 6.0 and 9.0 standard units are included in the draft permit at internal Outfalls 101, 201, 301, and 401.

9. DISSOLVED OXYGEN PROTECTIONa. SCREENING

Due to the low levels of oxygen-demanding constituents indicated for Outfall 001 and the proposed internal Outfall 401, the significant dilution expected of the waste streams discharged via internal Outfalls 101, 201, and 301, no significant DO impacts are anticipated in the receiving waters as a result of this discharge. However, due to the applicability of the statewide lake rule, the existing internal Outfalls 101 and 301 are subject to effluent limits of 10 mg/L BOD₅ and 4.0 mg/L minimum DO, as prescribed by the rule's requirements relating to treated domestic wastewater discharges.

b. PERMIT ACTION

The following effluent limits at internal Outfalls 101 and 301 have been included:

Outfall	BOD ₅				DO
	Daily Avg		Daily Max		Daily Avg
	lbs/day	mg/L	lbs/day	mg/L	mg/L
101	0.834	10	2.92	35	4.0, minimum
301	N/A	10	N/A	60	4.0, minimum

10. BACTERIA STANDARDS PROTECTIONa. SCREENING

Treated domestic wastewater is authorized for discharge via internal Outfall 101 and 301. Based on 30 TAC Chapter 307 and 309, protection from human pathogens is required.

b. PERMIT ACTION

Effluent limits for *E. coli* have been established at internal Outfall 101 and 301. A one-year compliance period is being established for *E. coli* in

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accordance with 30 TAC §307.2(f). **This one-year compliance period has expired and is removed in the draft permit.**

11. THERMAL STANDARDS PROTECTIONa. SCREENING

The temperature criteria for Segment No. 1807 is 93 °F. The existing permit and draft permit have the following sets of temperature limits at Outfall 001, based on the reservoir elevation.

Reservoir Elevation	Daily Avg	Daily Max
≥94 feet mean sea level	108 °F	110 °F
≤94 feet mean sea level	106 °F	110 °F

These temperature limitations were approved on previous permits based on an antidegradation review of the receiving waters performed by the Water Quality Standards Team, which stated that existing uses will be maintained and protected.

b. PERMIT ACTION

Existing temperature limits have been continued in the draft permit. Temperature limits may be revised at a future date.

XI. PRETREATMENT REQUIREMENTS

This facility is not defined as a publicly owned treatment works. Pretreatment requirements are not proposed in the draft permit.

XII. VARIANCE REQUESTS

No variance requests have been received.

XIII. 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 reviewing 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.

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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 Thomas E. Starr at (512) 239-4570.

XIV. ADMINISTRATIVE RECORD

The following section is a list of the fact sheet citations to applicable statutory or regulatory provisions and appropriate supporting references.

A. PERMIT(S)

TPDES Permit No. WQ0002159000 issued on **November 20, 2023**.

B. APPLICATION

TPDES wastewater permit application received on **June 5, 2025 and additional information received on June 20, 2025**.

C. 40 CFR CITATION(S)

40 CFR Part 423 (BPT, BCT, and BAT).

D. LETTERS/MEMORANDA/RECORDS OF COMMUNICATION

Letter dated April 29, 2014, from L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ, to Bill Honker, Director, Water Quality Protection Division, EPA (TCEQ proposed development strategy for thermal evaluation procedures).

Letter dated May 12, 2014, from William K. Honker, P.E., Director, Water Quality Protection Division, EPA, to L'Oreal W. Stepney, P.E., Deputy Director, Office of Water,

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

TCEQ (Approval of TCEQ proposed development strategy for thermal evaluation procedures).

Letter dated May 28, 2014, from L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ, to Bill Honker, Director, Water Quality Protection Division, EPA (TCEQ proposed development strategy for pH evaluation procedures).

Letter dated June 2, 2014, from William K. Honker, P.E., Director, Water Quality Protection Division, EPA, to L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ (Approval of TCEQ proposed development strategy for pH evaluation procedures).

Letter dated December 28, 2015, from L'Oreal Stepney, P.E., Deputy Director, Office of Water, TCEQ, to Bill Honker, Director, Water Quality Protection Division, EPA (TCEQ proposed development strategy for procedures to determine reasonable potential for whole effluent toxicity limitations).

Letter dated December 28, 2015, from William K. Honker, P.E., Director, Water Quality Protection Division, EPA, to L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ (Approval of TCEQ proposed development strategy for procedures to determine reasonable potential for whole effluent toxicity limitations).

TCEQ Interoffice Memorandum dated **June 30, 2025**, from **M.A. Wallace, PhD** of the Standards Implementation Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Standards Memo).

TCEQ Interoffice Memorandum dated **July 1, 2025**, from **Sarah Musgrove** of the Water Quality Assessment Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Critical Conditions Memo).

TCEQ Interoffice Memorandum dated **September 9, 2025**, from **Orlando M. Vasquez, Jr., P.E.** of the Water Quality Assessment Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Modeling Memo).

TCEQ Interoffice Memorandum dated **July 2, 2025**, from **Michael B. Pfiel** of the Standards Implementation Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Biomonitoring Memo).

E. MISCELLANEOUS

The State of Texas 2022 Integrated Report – Texas 303(d) List (Category 5), TCEQ, July 7, 2022.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective March 1, 2018, as approved by EPA Region 6.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective March 6, 2014, as approved by EPA Region 6, for portions of the 2018 standards not approved by EPA Region 6.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective July 22, 2010, as approved by EPA Region 6, for portions of the 2014 standards not yet approved by EPA Region 6.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective August 17, 2000, and Appendix E, effective February 27, 2002, for portions of the 2010 standards not yet approved by EPA Region 6.

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Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition (EPA-821-R-02-013).

Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition (EPA-821-R-02-012).

Procedures to Implement the Texas Surface Water Quality Standards, TCEQ, June 2010, as approved by EPA Region 6.

Procedures to Implement the Texas Surface Water Quality Standards, TCEQ, January 2003, for portions of the 2010 IPs not approved by EPA Region 6.

Guidance Document for Establishing Monitoring Frequencies for Domestic and Industrial Wastewater Discharge Permits, TCEQ Document No. 98-001.000-OWR-WQ, May 1998.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Appendix A Calculated Technology-Based Effluent Limits

Coletto Creek Power, LLC operates the Coletto Creek Power Station, currently a coal-fired electric generating facility with future plans to convert to natural gas-fired. The facility has one unit with a net 632-megawatt capacity. This facility is subject to 40 CFR Part 423 – Steam Electric Power Generating Point Source Category. The facility commenced operations in 1978, therefore, the facility is not subject to New Source Performance Standards (NSPS).

Outfall 001

The draft permit authorizes the discharge of once-through cooling water (condenser cooling water and auxiliary cooling water) and previously monitored effluent (treated domestic wastewater, bottom ash transport water, low volume waste sources, metal cleaning waste, stormwater runoff, and coal pile runoff) at a daily average flow not to exceed 557 million gallons per day (MGD).

- a. Once-Through Cooling Water (condenser cooling water and auxiliary cooling water) – Effluent limitations for free available chlorine (FAC) are required according to best practicable control technology (BPT) - 40 CFR §423.12(b)(6), and effluent limitations for total residual chlorine (TRC) are required according to best available technology (BAT) - 40 CFR §423.13(b)(1) – For a plant with a total rated electric generating capacity of 25 or more megawatts.

FAC: Daily Average = 0.2 mg/L
 Daily Maximum = 0.5 mg/L

The permitted flow is used to calculate the mass limits as follows [see 40 CFR §423.12(b)(6)]:

Loadings, lbs/day = (limit, mg/L) x (daily average flow, MGD) x (8.345) x (2 hrs/24 hrs)

Daily Average (lbs/day) = (0.2 mg/L) x (557 MGD) x (8.345)/12 = 77.5 lbs/day
 Daily Maximum (lbs/day) = (0.5 mg/L) x (557 MGD) x (8.345)/12 = 194 lbs/day

TRC: Daily Average = N/A
 Daily Maximum = 0.2 mg/L

The permittee flow is used to calculate the mass limits as follows [see 40 CFR §423.13(b)(1)]:

Loadings, lbs/day = (limit, mg/L) x (daily average flow, MGD) x (8.345) x (2 hrs/24 hrs) x (Units)

Daily Maximum (lbs/day) = (0.2 mg/L) x (557 MGD) x (8.345) x (1)/12 = 77.5 lbs/day

pH – The pH of all discharges, except once-through cooling water, shall be within the range of 6.0 to 9.0 in accordance with 40 CFR §423.12 (b)(1).

The calculated technology-based limitations for Outfall 001 are less stringent than the effluent limitations in the existing permit. Therefore, the existing effluent limitations at Outfall 001 for FAC and TRC are continued in the draft permit from the existing permit as follow:

Outfall	Parameter	Daily Average	Daily Maximum
001	FAC	0.2 mg/L	0.5 mg/L
		77.4 lbs/day	193 lbs/day
	TRC	N/A	0.2 mg/L
			77.4 lbs/day

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Internal Outfall 101

The draft permit authorizes the discharge of treated domestic wastewater at a daily average flow not to exceed 0.010 MGD. Technology-based effluent limits are based on 40 CFR Part 133 and 30 TAC §§ 309.3-4. The following effluent limits are continued from existing permit at internal Outfall 101:

Outfall	Parameter	Daily Average		Daily Maximum	
		lbs/day	mg/L	lbs/day	mg/L
101	BOD ₅	0.834	10	2.92	35
	TSS	1.25	15	5.01	60
	DO	4.0 (minimum)		N/A	
	Chlorine Residual	1.0 mg/L (minimum)		4.0 mg/L (maximum)	
	pH	Between 6.0 and 9.0 SU			

Internal Outfall 201

The draft permit authorizes the discharge of bottom ash transport water commingled with low volume waste sources, metal cleaning waste, and stormwater runoff on an intermittent and flow-variable basis.

The discharge of stormwater runoff is not subject to 40 CFR Part 423.

- a. Bottom ash transport water – Effluent limitations for TSS and oil and grease are required according to 40 CFR §423.12(b)(4)[BPT], and effluent limitations for pH are required according to 40 CFR §423.12(b)(1) [BPT]:

TSS: Daily Average = 30 mg/L
TSS: Daily Maximum = 100 mg/L

Oil and Grease: Daily Average = 15 mg/L
Oil and Grease: Daily Maximum = 20 mg/L

pH: Between 6.0 and 9.0 SU

BAT effluent limit guidelines in 40 CFR § 423.13(h)(1)(i) states that except for discharges to which 40 CFR §423.13(h)(2) applies or when the fly ash transport water is used in the FGD scrubber, there shall be no discharge of pollutant in fly ash transport water on or after December 31, 2023. **Fly ash transport water is no longer generated and has been removed for authorization to discharge under this draft permit.**

BAT effluent limit guidelines in 40 CFR § 423.13(k)(1)(i) states that except for discharges to which 40 CFR §423.13(k)(2) applies or when the bottom ash transport water is used in the FGD scrubber, there shall be no discharge of pollutants in bottom ash transport water on or after December 31, 2028.

- b. Low Volume Waste Sources – Effluent limitations for TSS and oil and grease are required according to 40 CFR §423.12(b)(3) [BPT], an effluent limitations for pH are required according to 40 CFR §423.12(b)(1) [BPT]:

TSS: Daily Average = 30 mg/L
TSS: Daily Maximum = 100 mg/L

Oil and grease: Daily Average = 15 mg/L
Oil and grease: Daily Maximum = 20 mg/L

pH: Between 6.0 and 9.0 SU

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- c. Metal Cleaning Wastes – Effluent limitations for TSS, oil and grease, total copper, and total iron are required according to 40 CFR §423.12(b)(5) [BPT], and effluent limitations for pH are required according to 40 CFR §423.12(b)(1) [BPT]:

TSS:	Daily Average = 30 mg/L Daily Maximum = 100 mg/L
Oil and grease:	Daily Average = 15 mg/L Daily Maximum = 20 mg/L
Copper, Total:	Daily Average = 1.0 mg/L Daily Maximum = 1.0 mg/L ¹
Iron, Total:	Daily Average = 1.0 mg/L Daily Maximum = 1.0 mg/L
pH:	Between 6.0 and 9.0 SU

The daily average of 0.5 mg/L total copper in 30 TAC §319.22 Quality Levels-Inland Waters for total copper is more protective and is placed in the draft permit instead of daily average of 1.0 mg/L.

The following effluent limits are proposed at internal Outfall 201:

Outfall	Parameter	Daily Average	Daily Maximum
201	TSS	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	Total Copper	0.5 mg/L	1.0 mg/L
	Total Iron	1.0 mg/L	1.0 mg/L
	pH	Between 6.0 and 9.0 SU	

Internal Outfall 301

The draft permit authorizes the discharge of coal pile runoff and treated domestic wastewater from internal Outfall 301 on an intermittent and flow-variable basis. Technology-based effluent limits for BOD₅, and pH are based on 40 CFR Part 133 and 30 TAC §§309.3-4. Daily maximum effluent limit for TSS are required according to best practicable control technology (BPT) - 40 CFR §423.12(b)(9), and effluent limitations for pH are required according to 40 CFR §423.12(b)(1) [BPT]:

TSS:	Daily Average = N/A Daily Maximum = 50 mg/L
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The following effluent limits are proposed at internal Outfall 301

Outfall	Parameter	Daily Average	Daily Maximum
301	BOD ₅	N/A	45 mg/L
	TSS	N/A	50 mg/L
	pH	Between 6.0 and 9.0 SU	

Internal Outfall 401

The draft permit authorizes the discharge of low volume wastes, metal cleaning wastes, coal pile runoff, and stormwater runoff on an intermittent and flow-variable basis. Effluent limitations for TSS, oil and grease, total copper, total iron, and pH are required

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as described for internal Outfall 201 above.

Outfall	Parameter	Daily Average	Daily Maximum
401	TSS	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	Total Copper	0.5 mg/L	1.0 mg/L
	Total Iron	1.0 mg/L	1.0 mg/L
	pH	Between 6.0 and 9.0 SU	

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Appendix B
Calculated Water Quality-Based Effluent Limits

TEXTOX MENU #4 - LAKE OR RESERVOIR

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
Table 2, 2018 Texas Surface Water Quality Standards for Human Health
"Procedures to Implement the Texas Surface Water Quality Standards," TCEQ, June 2010

PERMIT INFORMATION

Permittee Name:	Coleto Creek Power, LLC
TPDES Permit No:	WQ0002159000
Outfall No:	001
Prepared by:	Thomas Starr
Date:	July 23, 2025

DISCHARGE INFORMATION

Receiving Waterbody:	Coleto Creek Reservoir
Segment No.:	1804
TSS (mg/L):	3.9
pH (Standard Units):	7.8
Hardness (mg/L as CaCO ₃):	108
Chloride (mg/L):	75
Effluent Flow for Aquatic Life (MGD):	100
% Effluent for Chronic Aquatic Life (Mixing Zone):	100
% Effluent for Acute Aquatic Life (ZID):	100
Effluent Flow for Human Health (MGD):	100
% Effluent for Human Health:	100
Human Health Criterion (select: PWS, FISH, or INC):	PWS

CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE):

<i>Lake/Reservoir Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>	<i>Source</i>	<i>Water Effect Ratio</i>	<i>Source</i>
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	177224.12	0.591		1.00	Assumed
Cadmium	6.55	-0.92	1014426.44	0.202		1.00	Assumed
Chromium (total)	6.34	-0.27	1514999.73	0.145		1.00	Assumed
Chromium (trivalent)	6.34	-0.27	1514999.73	0.145		1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.45	-0.90	828021.96	0.236		1.00	Assumed
Lead	6.31	-0.53	992511.98	0.205		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	6.34	-0.76	777662.04	0.248		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	590477.64	0.303		1.00	Assumed
Zinc	6.52	-0.68	1312429.75	0.163		1.00	Assumed

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AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

<i>Parameter</i>	<i>FW Acute Criterion (µg/L)</i>	<i>Chronic Criterion (µg/L)</i>	<i>WLAa (µg/L)</i>	<i>WLAc (µg/L)</i>	<i>LTAa (µg/L)</i>	<i>LTAc (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Aldrin	3.0	N/A	3.00	N/A	0.960	N/A	1.41	2.98
Aluminum	991	N/A	991	N/A	317	N/A	466	986
Arsenic	340	150	575	254	184	155	227	481
Cadmium	9.25	0.260	45.8	1.29	14.7	0.785	1.15	2.44
Carbaryl	2.0	N/A	2.00	N/A	0.640	N/A	0.940	1.99
Chlordane	2.4	0.004	2.40	0.00400	0.768	0.00244	0.00358	0.00758
Chlorpyrifos	0.083	0.041	0.0830	0.0410	0.0266	0.0250	0.0367	0.0777
Chromium (trivalent)	607	78.9	4192	545	1342	333	488	1034
Chromium (hexavalent)	15.7	10.6	15.7	10.6	5.02	6.47	7.38	15.6
Copper	15.27	10.11	64.6	42.8	20.7	26.1	30.3	64.2
Cyanide (free)	45.8	10.7	45.8	10.7	14.7	6.53	9.59	20.2
4,4'-DDT	1.1	0.001	1.10	0.00100	0.352	0.000610	0.000896	0.00189
Demeton	N/A	0.1	N/A	0.100	N/A	0.0610	0.0896	0.189
Diazinon	0.17	0.17	0.170	0.170	0.0544	0.104	0.0799	0.169
Dicofol [Kelthane]	59.3	19.8	59.3	19.8	19.0	12.1	17.7	37.5
Dieldrin	0.24	0.002	0.240	0.00200	0.0768	0.00122	0.00179	0.00379
Diuron	210	70	210	70.0	67.2	42.7	62.7	132
Endosulfan I (<i>alpha</i>)	0.22	0.056	0.220	0.0560	0.0704	0.0342	0.0502	0.106
Endosulfan II (<i>beta</i>)	0.22	0.056	0.220	0.0560	0.0704	0.0342	0.0502	0.106
Endosulfan sulfate	0.22	0.056	0.220	0.0560	0.0704	0.0342	0.0502	0.106
Endrin	0.086	0.002	0.0860	0.00200	0.0275	0.00122	0.00179	0.00379
Guthion [Azinphos Methyl]	N/A	0.01	N/A	0.0100	N/A	0.00610	0.00896	0.0189
Heptachlor	0.52	0.004	0.520	0.00400	0.166	0.00244	0.00358	0.00758
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	1.126	0.08	1.13	0.0800	0.360	0.0488	0.0717	0.151
Lead	70.2	2.74	342	13.3	109	8.13	11.9	25.2
Malathion	N/A	0.01	N/A	0.0100	N/A	0.00610	0.00896	0.0189
Mercury	2.4	1.3	2.40	1.30	0.768	0.793	1.12	2.38
Methoxychlor	N/A	0.03	N/A	0.0300	N/A	0.0183	0.0269	0.0569
Mirex	N/A	0.001	N/A	0.00100	N/A	0.000610	0.000896	0.00189
Nickel	500	55.5	2015	224	645	137	200	424
Nonylphenol	28	6.6	28.0	6.60	8.96	4.03	5.91	12.5
Parathion (ethyl)	0.065	0.013	0.0650	0.0130	0.0208	0.00793	0.0116	0.0246
Pentachlorophenol	19.5	14.95	19.5	15.0	6.24	9.12	9.16	19.3
Phenanthrene	30	30	30.0	30.0	9.60	18.3	14.1	29.8
Polychlorinated Biphenyls [PCBs]	2.0	0.014	2.00	0.0140	0.640	0.00854	0.0125	0.0265
Selenium	20	5	20.0	5.00	6.40	3.05	4.48	9.48
Silver	0.8	N/A	16.8	N/A	5.37	N/A	7.88	16.6
Toxaphene	0.78	0.0002	0.780	0.000200	0.250	0.000122	0.000179	0.000379
Tributyltin [TBT]	0.13	0.024	0.130	0.0240	0.0416	0.0146	0.0215	0.0455
2,4,5 Trichlorophenol	136	64	136	64.0	43.5	39.0	57.3	121
Zinc	125.1	126.1	765	772	245	471	359	761

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

<i>Parameter</i>	<i>Fish Criterion (µg/L)</i>	<i>Fish Only Criterion (µg/L)</i>	<i>Fish Criterion (µg/L)</i>	<i>WLAh (µg/L)</i>	<i>LTAh (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Acrylonitrile	1.0	115	1150	1.00	0.930	1.36	2.89
Aldrin	1.146E-05	1.147E-05	1.147E-04	0.0000115	0.0000107	0.0000156	0.0000331
Anthracene	1109	1317	13170	1109	1031	1516	3207
Antimony	6	1071	10710	6.00	5.58	8.20	17.3
Arsenic	10	N/A	N/A	16.9	15.7	23.1	48.9
Barium	2000	N/A	N/A	2000	1860	2734	5784
Benzene	5	581	5810	5.00	4.65	6.83	14.4
Benzidine	0.0015	0.107	1.07	0.00150	0.00140	0.00205	0.00433
Benzo(a)anthracene	0.024	0.025	0.25	0.0240	0.0223	0.0328	0.0694
Benzo(a)pyrene	0.0025	0.0025	0.025	0.00250	0.00233	0.00341	0.00723
Bis(chloromethyl)ether	0.0024	0.2745	2.745	0.00240	0.00223	0.00328	0.00694
Bis(2-chloroethyl)ether	0.60	42.83	428.3	0.600	0.558	0.820	1.73
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phth:	6	7.55	75.5	6.00	5.58	8.20	17.3
Bromodichloromethane [Dichlorobromomethane	10.2	275	2750	10.2	9.49	13.9	29.5
Bromoform [Tribromomethane]	66.9	1060	10600	66.9	62.2	91.4	193
Cadmium	5	N/A	N/A	24.8	23.0	33.8	71.6
Carbon Tetrachloride	4.5	46	460	4.50	4.19	6.15	13.0
Chlordane	0.0025	0.0025	0.025	0.00250	0.00233	0.00341	0.00723
Chlorobenzene	100	2737	27370	100	93.0	136	289
Chlorodibromomethane [Dibromochloromethane	7.5	183	1830	7.50	6.98	10.2	21.6
Chloroform [Trichloromethane]	70	7697	76970	70.0	65.1	95.6	202
Chromium (hexavalent)	62	502	5020	62.0	57.7	84.7	179
Chrysene	2.45	2.52	25.2	2.45	2.28	3.34	7.08
Cresols [Methylphenols]	1041	9301	93010	1041	968	1423	3010
Cyanide (free)	200	N/A	N/A	200	186	273	578
4,4'-DDD	0.002	0.002	0.02	0.00200	0.00186	0.00273	0.00578
4,4'-DDE	0.00013	0.00013	0.0013	0.000130	0.000121	0.000177	0.000375
4,4'-DDT	0.0004	0.0004	0.004	0.000400	0.000372	0.000546	0.00115
2,4'-D	70	N/A	N/A	70.0	65.1	95.6	202
Danitrol [Fenpropathrin]	262	473	4730	262	244	358	757
1,2-Dibromoethane [Ethylene Dibromide]	0.17	4.24	42.4	0.170	0.158	0.232	0.491
m-Dichlorobenzene [1,3-Dichlorobenzene]	322	595	5950	322	299	440	931
o-Dichlorobenzene [1,2-Dichlorobenzene]	600	3299	32990	600	558	820	1735
p-Dichlorobenzene [1,4-Dichlorobenzene]	75	N/A	N/A	75.0	69.8	102	216
3,3'-Dichlorobenzidine	0.79	2.24	22.4	0.790	0.735	1.08	2.28
1,2-Dichloroethane	5	364	3640	5.00	4.65	6.83	14.4
1,1-Dichloroethylene [1,1-Dichloroethene]	7	55114	551140	7.00	6.51	9.56	20.2
Dichloromethane [Methylene Chloride]	5	13333	133330	5.00	4.65	6.83	14.4
1,2-Dichloropropane	5	259	2590	5.00	4.65	6.83	14.4
1,3-Dichloropropene [1,3-Dichloropropylene]	2.8	119	1190	2.80	2.60	3.82	8.09
Dicofol [Kelthane]	0.30	0.30	3	0.300	0.279	0.410	0.867
Dieldrin	2.0E-05	2.0E-05	2.0E-04	0.0000200	0.0000186	0.0000273	0.0000578
2,4-Dimethylphenol	444	8436	84360	444	413	606	1284
Di-n-Butyl Phthalate	88.9	92.4	924	88.9	82.7	121	257
Dioxins/Furans [TCDD Equivalents]	7.80E-08	7.97E-08	7.97E-07	7.80E-08	7.25E-08	1.06E-07	2.25E-07
Endrin	0.02	0.02	0.2	0.0200	0.0186	0.0273	0.0578
Epichlorohydrin	53.5	2013	20130	53.5	49.8	73.1	154
Ethylbenzene	700	1867	18670	700	651	956	2024
Ethylene Glycol	46744	1.68E+07	1.68E+08	46744	43472	63903	135197
Fluoride	4000	N/A	N/A	4000	3720	5468	11569
Heptachlor	8.0E-05	0.0001	0.001	0.0000800	0.0000744	0.000109	0.000231
Heptachlor Epoxide	0.00029	0.00029	0.0029	0.000290	0.000270	0.000396	0.000838
Hexachlorobenzene	0.00068	0.00068	0.0068	0.000680	0.000632	0.000929	0.00196
Hexachlorobutadiene	0.21	0.22	2.2	0.210	0.195	0.287	0.607

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

<i>Parameter</i>	<i>Fish Criterion (µg/L)</i>	<i>Fish Only Criterion (µg/L)</i>	<i>Fish Criterion (µg/L)</i>	<i>WLAh (µg/L)</i>	<i>LTAh (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Hexachlorocyclohexane (<i>alpha</i>)	0.0078	0.0084	0.084	0.00780	0.00725	0.0106	0.0225
Hexachlorocyclohexane (<i>beta</i>)	0.15	0.26	2.6	0.150	0.140	0.205	0.433
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	0.2	0.341	3.41	0.200	0.186	0.273	0.578
Hexachlorocyclopentadiene	10.7	11.6	116	10.7	9.95	14.6	30.9
Hexachloroethane	1.84	2.33	23.3	1.84	1.71	2.51	5.32
Hexachlorophene	2.05	2.90	29	2.05	1.91	2.80	5.92
4,4'-Isopropylidenediphenol [Bisphenol A]	1092	15982	159820	1092	1016	1492	3158
Lead	1.15	3.83	38.3	5.60	5.21	7.65	16.2
Mercury	0.0122	0.0122	0.122	0.0122	0.0113	0.0166	0.0352
Methoxychlor	2.92	3.0	30	2.92	2.72	3.99	8.44
Methyl Ethyl Ketone	13865	9.92E+05	9.92E+06	13865	12894	18954	40101
Methyl <i>tert</i> -butyl ether [MTBE]	15	10482	104820	15.0	14.0	20.5	43.3
Nickel	332	1140	11400	1339	1245	1830	3872
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	N/A	10000	9300	13671	28923
Nitrobenzene	45.7	1873	18730	45.7	42.5	62.4	132
N-Nitrosodiethylamine	0.0037	2.1	21	0.00370	0.00344	0.00505	0.0107
N-Nitroso-di- <i>n</i> -Butylamine	0.119	4.2	42	0.119	0.111	0.162	0.344
Pentachlorobenzene	0.348	0.355	3.55	0.348	0.324	0.475	1.00
Pentachlorophenol	0.22	0.29	2.9	0.220	0.205	0.300	0.636
Polychlorinated Biphenyls [PCBs]	6.4E-04	6.4E-04	6.40E-03	0.000640	0.000595	0.000874	0.00185
Pyridine	23	947	9470	23.0	21.4	31.4	66.5
Selenium	50	N/A	N/A	50.0	46.5	68.3	144
1,2,4,5-Tetrachlorobenzene	0.23	0.24	2.4	0.230	0.214	0.314	0.665
1,1,2,2-Tetrachloroethane	1.64	26.35	263.5	1.64	1.53	2.24	4.74
Tetrachloroethylene [Tetrachloroethylene]	5	280	2800	5.00	4.65	6.83	14.4
Thallium	0.12	0.23	2.3	0.120	0.112	0.164	0.347
Toluene	1000	N/A	N/A	1000	930	1367	2892
Toxaphene	0.011	0.011	0.11	0.0110	0.0102	0.0150	0.0318
2,4,5-TP [Silvex]	50	369	3690	50.0	46.5	68.3	144
1,1,1-Trichloroethane	200	784354	7843540	200	186	273	578
1,1,2-Trichloroethane	5	166	1660	5.00	4.65	6.83	14.4
Trichloroethylene [Trichloroethene]	5	71.9	719	5.00	4.65	6.83	14.4
2,4,5-Trichlorophenol	1039	1867	18670	1039	966	1420	3005
TTHM [Sum of Total Trihalomethanes]	80	N/A	N/A	80.0	74.4	109	231
Vinyl Chloride	0.23	16.5	165	0.230	0.214	0.314	0.665

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Aquatic Life	70% of	85% of
Parameter	Daily Avg.	Daily Avg.
	(µg/L)	(µg/L)
Aldrin	0.987	1.19
Aluminum	326	396
Arsenic	159	193
Cadmium	0.807	0.980
Carbaryl	0.658	0.799
Chlordane	0.00251	0.00304
Chlorpyrifos	0.0257	0.0312
Chromium (trivalent)	342	415
Chromium (hexavalent)	5.16	6.27
Copper	21.2	25.8
Cyanide (free)	6.71	8.15
4,4'-DDT	0.000627	0.000762
Demeton	0.0627	0.0762
Diazinon	0.0559	0.0679
Dicofol [Kelthane]	12.4	15.0
Dieldrin	0.00125	0.00152
Diuron	43.9	53.3
Endosulfan I (<i>alpha</i>)	0.0351	0.0426
Endosulfan II (<i>beta</i>)	0.0351	0.0426
Endosulfan sulfate	0.0351	0.0426
Endrin	0.00125	0.00152
Guthion [Azinphos Methyl]	0.00627	0.00762
Heptachlor	0.00251	0.00304
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	0.0502	0.0609
Lead	8.36	10.1
Malathion	0.00627	0.00762
Mercury	0.790	0.959
Methoxychlor	0.0188	0.0228
Mirex	0.000627	0.000762
Nickel	140	170
Nonylphenol	4.14	5.03
Parathion (ethyl)	0.00815	0.00990
Pentachlorophenol	6.41	7.79
Phenanthrene	9.87	11.9
Polychlorinated Biphenyls [PCBs]	0.00878	0.0106
Selenium	3.13	3.81
Silver	5.52	6.70
Toxaphene	0.000125	0.000152
Tributyltin [TBT]	0.0150	0.0182
2,4,5 Trichlorophenol	40.1	48.7
Zinc	251	305

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Human Health	70% of Daily Avg.	85% of Daily Avg.
Parameter	(µg/L)	(µg/L)
Acrylonitrile	0.956	1.16
Aldrin	0.0000109	0.0000133
Anthracene	1061	1288
Antimony	5.74	6.97
Arsenic	16.1	19.6
Barium	1913	2324
Benzene	4.78	5.81
Benzidine	0.00143	0.00174
Benzo(a)anthracene	0.0229	0.0278
Benzo(a)pyrene	0.00239	0.00290
Bis(chloromethyl)ether	0.00229	0.00278
Bis(2-chloroethyl)ether	0.574	0.697
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phth:	5.74	6.97
Bromodichloromethane [Dichlorobromomethane	9.76	11.8
Bromoform [Tribromomethane]	64.0	77.7
Cadmium	23.7	28.7
Carbon Tetrachloride	4.30	5.22
Chlordane	0.00239	0.00290
Chlorobenzene	95.6	116
Chlorodibromomethane [Dibromochloromethane	7.17	8.71
Chloroform [Trichloromethane]	66.9	81.3
Chromium (hexavalent)	59.3	72.0
Chrysene	2.34	2.84
Cresols [Methylphenols]	996	1209
Cyanide (free)	191	232
4,4'-DDD	0.00191	0.00232
4,4'-DDE	0.000124	0.000151
4,4'-DDT	0.000382	0.000464
2,4'-D	66.9	81.3
Danitol [Fenpropathrin]	250	304
1,2-Dibromoethane [Ethylene Dibromide]	0.162	0.197
<i>m</i> -Dichlorobenzene [1,3-Dichlorobenzene]	308	374
<i>o</i> -Dichlorobenzene [1,2-Dichlorobenzene]	574	697
<i>p</i> -Dichlorobenzene [1,4-Dichlorobenzene]	71.7	87.1
3,3'-Dichlorobenzidine	0.756	0.918
1,2-Dichloroethane	4.78	5.81
1,1-Dichloroethylene [1,1-Dichloroethene]	6.69	8.13
Dichloromethane [Methylene Chloride]	4.78	5.81
1,2-Dichloropropane	4.78	5.81
1,3-Dichloropropene [1,3-Dichloropropylene]	2.67	3.25
Dicofol [Kelthane]	0.287	0.348
Dieldrin	0.0000191	0.0000232
2,4-Dimethylphenol	424	515
Di- <i>n</i> -Butyl Phthalate	85.0	103
Dioxins/Furans [TCDD Equivalents]	7.46E-08	9.06E-08
Endrin	0.0191	0.0232
Epichlorohydrin	51.1	62.1
Ethylbenzene	669	813
Ethylene Glycol	44732	54318
Fluoride	3827	4648
Heptachlor	0.0000765	0.0000929
Heptachlor Epoxide	0.000277	0.000336
Hexachlorobenzene	0.000650	0.000790
Hexachlorobutadiene	0.200	0.244

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Human Health	70% of	85% of
Parameter	Daily Avg.	Daily Avg.
	(µg/L)	(µg/L)
Hexachlorocyclohexane (<i>alpha</i>)	0.00746	0.00906
Hexachlorocyclohexane (<i>beta</i>)	0.143	0.174
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	0.191	0.232
Hexachlorocyclopentadiene	10.2	12.4
Hexachloroethane	1.76	2.13
Hexachlorophene	1.96	2.38
4,4'-Isopropylidenediphenol [Bisphenol A]	1045	1268
Lead	5.36	6.50
Mercury	0.0116	0.0141
Methoxychlor	2.79	3.39
Methyl Ethyl Ketone	13268	16111
Methyl <i>tert</i> -butyl ether [MTBE]	14.3	17.4
Nickel	1281	1555
Nitrate-Nitrogen (as Total Nitrogen)	9569	11620
Nitrobenzene	43.7	53.1
N-Nitrosodiethylamine	0.00354	0.00429
N-Nitroso-di- <i>n</i> -Butylamine	0.113	0.138
Pentachlorobenzene	0.333	0.404
Pentachlorophenol	0.210	0.255
Polychlorinated Biphenyls [PCBs]	0.000612	0.000743
Pyridine	22.0	26.7
Selenium	47.8	58.1
1,2,4,5-Tetrachlorobenzene	0.220	0.267
1,1,2,2-Tetrachloroethane	1.56	1.90
Tetrachloroethylene [Tetrachloroethylene]	4.78	5.81
Thallium	0.114	0.139
Toluene	956	1162
Toxaphene	0.0105	0.0127
2,4,5-TP [Silvex]	47.8	58.1
1,1,1-Trichloroethane	191	232
1,1,2-Trichloroethane	4.78	5.81
Trichloroethylene [Trichloroethene]	4.78	5.81
2,4,5-Trichlorophenol	994	1207
TTHM [Sum of Total Trihalomethanes]	76.5	92.9
Vinyl Chloride	0.220	0.267

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Appendix C

Comparison of Effluent Limits

The following table is a summary of technology-based effluent limitations calculated/assessed in the draft permit (Technology-Based), calculated/assessed water quality-based effluent limitations (Water Quality-Based), and effluent limitations in the existing permit (Existing Permit). Effluent limitations appearing in bold are the most stringent of the three and are included in the draft permit.

Outfall	Pollutant	Technology-Based				Water Quality-Based				Existing Permit			
		Daily Avg		Daily Max		Daily Avg		Daily Max		Daily Avg		Daily Max	
		lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L
001	Flow	557 MGD		560 MGD		---		---		557 MGD		560 MGD	
	Temperature	---		---		---		---		108¹ °F		110 °F	
	Temperature	---		---		---		---		106² °F		110 °F	
	Free Available Chlorine	77.4	0.2	---	---	---	---	---	---	77.4	0.2	193	0.5
	Total Residual Chlorine	N/A	N/A	77.4	0.2	---	---	---	---	N/A	N/A	77.4	0.2
	Total Copper	---	---	---	---	---	---	---	---	---	Report³	---	Report³
	Reservoir Elevation (feet-mean Mean Level)	---		---		---		---		(Report)		(Report)	
101	Flow	0.010 MGD		0.012 MGD		---		---		0.010 MGD		0.012 MGD	
	Biochemical Oxygen Demand, 5-day (BOD ₅)	0.834	10	2.92	35	---	10	---	---	0.834	10	2.92	35
	Total Suspended Solids	1.25	15	5.01	60	---	---	---	---	1.25	15	5.01	60
	<i>E. coli</i>	---		---		126 ⁵		399 ⁵		126³		399³	
	Chlorine Residual	N/A	1.0	N/A	4.0	---	---	---	---	N/A	1.0, min	N/A	4.0
	Dissolved Oxygen	---	4.0, min	---	---	---	4.0, min	---	---	---	4.0, min	---	---
	pH	6.0 SU (min)		9.0 SU (max)		---		---		6.0 SU (min)		9.0 SU (max)	
201	Flow	Report, MGD		Report, MGD		---		---		Report, MGD		Report, MGD	
	Total Suspended Solids	---	30	---	100	---	---	---	---	---	30	---	100
	Oil and Grease	---	15	---	20	---	---	---	---	---	15	---	20

¹ Applicable when the reservoir elevation is greater than 94 feet mean sea level.

² Applicable when the reservoir elevation is less than or equal to 94 feet mean sea level.

³ Monitoring and reporting requirements for total copper, will expire one month before the permit expiration date.

Outfall	Pollutant	Technology-Based				Water Quality-Based				Existing Permit			
		Daily Avg		Daily Max		Daily Avg		Daily Max		Daily Avg		Daily Max	
		lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L
201	Total Copper	---	0.5 ⁴	---	1.0	---	---	---	---	---	0.5 ⁵	---	1.0
	Total Iron	---	1.0	---	1.0	---	---	---	---	---	1.0		1.0
	pH	6.0 SU (min)		9.0 SU (max)		---		---		6.0 SU (min)		9.0 SU (max)	

Outfall	Pollutant	Technology-Based		Water Quality-Based		Existing Permit	
		Daily Avg	Daily Max	Daily Avg	Daily Max	Daily Avg	Daily Max
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
301	Flow	Report, MGD	Report, MGD	---	---	Report, MGD	Report, MGD
	BOD ₅	N/A	45	---	---	N/A	45
	Total Suspended Solids	N/A	50	---	---	N/A	50
	<i>E. coli</i>	---	---	126 ³	399 ³	126 ³	399 ³
	pH	6.0 SU (min)	9.0 SU (max)	---	---	6.0 SU (min)	9.0 SU (max)
401	Flow	Report, MGD	Report, MGD	---	---	-	-
	Total Suspended Solids	30	100	-	-	-	-
	Oil and Grease	15	20	-	-	-	-
	Total Copper	0.5	1.0	-	-	-	-
	Total Iron	1.0	1.0	-	-	-	-
	pH	6.0 SU (min)	9.0 SU (max)	----	----	-	-

⁴ 30 TAC §319.22

⁵ 30 TAC §319.22