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Austin, Texas 78759
tel: 512-346-1100

September 17, 2020

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

**Subject: Brushy Creek WWTP TPDES Permit Application Package
City of Bryan (CN600373310)**

To Whom it May Concern:

Enclosed you will find three copies of the completed application for the TPDES permit for the proposed Brushy Creek Wastewater Treatment Plant (WWTP), to be owned and operated by the City of Bryan. A check for the permit application fee of \$2,050.00 is included with the application documentation.

Please do not hesitate to contact me with any question at (512) 652-5331 or via email at WoelkeAD@cdmsmith.com

Sincerely,

A handwritten signature in blue ink, appearing to read "Allen D. Woelke".

Allen D. Woelke, P.E.
Vice President
CDM Smith Inc., TBPE F-3043

cc: Jason Barfknecht, City of Bryan
Mark Jurica, City of Bryan
Brian Bennett, CDM Smith





TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
**DOMESTIC WASTEWATER PERMIT APPLICATION
 CHECKLIST**



Complete and submit this checklist with the application.

APPLICANT: City of Bryan

PERMIT NUMBER: New Application

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

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

For TCEQ Use Only

Segment Number _____ County _____
 Expiration Date _____ Region _____
 Permit Number _____



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
**APPLICATION FOR A DOMESTIC WASTEWATER PERMIT
 ADMINISTRATIVE REPORT 1.0**

If you have questions about completing this form please contact the Applications Review and Processing Team at 512-239-4671.

Section 1. Application Fees (Instructions Page 29)

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

Flow	New/Major Amendment	Renewal
<0.05 MGD	\$350.00 <input type="checkbox"/>	\$315.00 <input type="checkbox"/>
≥0.05 but <0.10 MGD	\$550.00 <input type="checkbox"/>	\$515.00 <input type="checkbox"/>
≥0.10 but <0.25 MGD	\$850.00 <input type="checkbox"/>	\$815.00 <input type="checkbox"/>
≥0.25 but <0.50 MGD	\$1,250.00 <input type="checkbox"/>	\$1,215.00 <input type="checkbox"/>
≥0.50 but <1.0 MGD	\$1,650.00 <input type="checkbox"/>	\$1,615.00 <input type="checkbox"/>
≥1.0 MGD	\$2,050.00 <input checked="" type="checkbox"/>	\$2,015.00 <input type="checkbox"/>

Minor Amendment (for any flow) \$150.00

Payment Information:

Mailed Check/Money Order Number: [REDACTED]
 Check/Money Order Amount: \$2,050.00
 Name Printed on Check: CDM Smith

EPAY Voucher Number: [REDACTED]

Copy of Payment Voucher enclosed? Yes

Section 2. Type of Application (Instructions Page 29)

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

For amendments or modifications, describe the proposed changes: [REDACTED]

For existing permits: **N/A**

Permit Number: WQ00 [REDACTED]

EPA I.D. (TPDES only): TX [REDACTED]

Expiration Date: [REDACTED]

Section 3. Facility Owner (Applicant) and Co-Applicant Information (Instructions Page 29)

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

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

City of Bryan, Texas

(The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal documents forming the entity.)

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

CN: CN600373310

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

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

First and Last Name: Kean Register

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

Title: City Manager

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

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

NA

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

If the co-applicant is currently a customer with the TCEQ, what is the Customer Number (CN)? You may search for your CN on the TCEQ website at:

<http://www15.tceq.texas.gov/crpub/>

CN: [REDACTED]

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

Prefix (Mr., Ms., Miss): [REDACTED]

First and Last Name:

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

Title: [REDACTED]

Provide a brief description of the need for a co-permittee: [REDACTED]

C. Core Data Form

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

Attachment: B

Section 4. Application Contact Information (Instructions Page 30)

This is the person(s) TCEQ will contact if additional information is needed about this application. Provide a contact for administrative questions and technical questions.

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

First and Last Name: Allen Woelke

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

Title: Vice President

Organization Name: CDM Smith

Mailing Address: 9430 Research Blvd, Suite 1-200

City, State, Zip Code: Austin, TX, 78759

Phone No.: 512-265-5331 Ext.: [REDACTED] Fax No.: [REDACTED]

E-mail Address: woelkead@cdmsmith.com

Check one or both: Administrative Contact Technical Contact

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

First and Last Name: Jayson Barfknecht

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

Title: Director of Public Works

Organization Name: City of Bryan Public Works Department

Mailing Address: 1111 Waco street

City, State, Zip Code: City of Bryan, TX, 78717

Phone No.: 979-209-5900 Ext.: [REDACTED] Fax No.: [REDACTED]

E-mail Address: jbarfknecht@bryantx.gov

Check one or both: Administrative Contact Technical Contact

Section 5. Permit Contact Information (Instructions Page 30)

Provide two names of individuals that can be contacted throughout the permit term.

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

First and Last Name: Allen Woelke

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

Title: Vice President

Organization Name: CDM Smith

Mailing Address: 9430 Research Blvd, Suite 1-200

City, State, Zip Code: Austin, TX, 78759

Phone No.: 512-265-5331 Ext.: [REDACTED]

Fax No.: [REDACTED]

E-mail Address: woelkead@cdmsmith.com

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

First and Last Name: Jayson Barfknecht

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

Title: Director of Public Works

Organization Name: City of Bryan Public Works Department

Mailing Address: 1111 Waco street

City, State, Zip Code: City of Bryan, TX, 78717

Phone No.: 979-209-5900 Ext.: [REDACTED]

Fax No.: [REDACTED]

E-mail Address: jbarfknecht@bryantx.gov

Section 6. Billing Information (Instructions Page 30)

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

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

First and Last Name: Jayson Barfknecht

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

Title: Director of Public Works

Organization Name: City of Bryan Public Works Department

Mailing Address: 1111 Waco street

City, State, Zip Code: City of Bryan, TX, 78717

Phone No.: 979-209-5900 Ext.: [REDACTED]

Fax No.: [REDACTED]

E-mail Address: jbarfknecht@bryantx.gov

Section 7. DMR/MER Contact Information (Instructions Page 31)

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

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

First and Last Name: Mark Jurica

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

Title: Treatment and Compliance Manager

Organization Name: City of Bryan

Mailing Address: P.O. Box 1000

City, State, Zip Code: Bryan, TX 77805

Phone No.: 979-209-5932 Ext.: [REDACTED] Fax No.: [REDACTED]

E-mail Address: mjurica@bryantx.gov

DMR data is required to be submitted electronically. Create an account at:

<https://www.tceq.texas.gov/permitting/netdmr/netdmr.html>.

Section 8. Public Notice Information (Instructions Page 31)

A. Individual Publishing the Notices

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

First and Last Name: Jayson Barfknecht

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

Title: Director of Public Works

Organization Name: City of Bryan Public Works Department

Mailing Address: 1111 Waco street

City, State, Zip Code: City of Bryan, TX, 78717

Phone No.: 979-209-5900 Ext.: [REDACTED] Fax No.: [REDACTED]

E-mail Address: jbarfknecht@bryantx.gov

B. Method for Receiving Notice of Receipt and Intent to Obtain a Water Quality Permit Package

Indicate by a check mark the preferred method for receiving the first notice and instructions:

E-mail Address

Fax

Regular Mail

C. Contact person to be listed in the Notices

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

First and Last Name: Jayson Barfknecht

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

Title: Director of Public Works

Organization Name: City of Bryan Public Works Department

Phone No.: 979-209-5900 Ext.: [REDACTED]

E-mail: jbarfknecht@bryantx.gov

D. Public Viewing Information

If the facility or outfall is located in more than one county, a public viewing place for each county must be provided.

Public building name: City of Bryan

Location within the building: Clara B. Mounce Public Library

Physical Address of Building: 201 E 26th St, Bryan, TX 77803

City: Bryan

County: Brazos

Contact Name: Jayson Barfknecht

Phone No.: 979-209-5900 Ext.: [REDACTED]

E. Bilingual Notice Requirements:

This information **is required** for **new, major amendment, and renewal applications**. It is not required for minor amendment or minor modification applications.

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

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

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

Yes No

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

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

Yes No

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

Yes No

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

Prefix (Mr., Ms., Miss): [REDACTED]

First and Last Name: [REDACTED]

Mailing Address: [REDACTED]

City, State, Zip Code: [REDACTED]

Phone No.: [REDACTED] E-mail Address: [REDACTED]

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

Attachment: [REDACTED]

Section 10. TPDES Discharge Information (Instructions Page 34)

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

Yes No

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

The new wastewater treatment facility is located to the east of the City of Bryan, to the southeast of the intersection of Cole Lane and Enchanted Oaks Drive. The site is located at an approximate latitude of 30.649667 and an approximate longitude of -96.231472.

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

Yes No

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

Effluent will be discharged into Brushy Creek at the northeast corner of the treatment facility property. Effluent will flow from Brushy Creek to Wickson Creek (1209E) to Navasota River (1209), which is the nearest classified segment.

City nearest the outfall(s): Bryan, Tx

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

Outfall Latitude: 30.649038

Longitude: -96.226515

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

Yes No

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

Authorization granted Authorization pending

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

Attachment: [REDACTED]

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

Brazos County, Grimes County, Washington County, Waller County, Austin County, Fort Bend County

Section 11. TLAP Disposal Information (Instructions Page 36)

N/A

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

Yes No

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

N/A

- B. City nearest the disposal site: [REDACTED]

- C. County in which the disposal site is located: [REDACTED]

- D. Disposal Site Latitude: [REDACTED] Longitude: [REDACTED]

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

N/A

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

N/A

Section 12. Miscellaneous Information (Instructions Page 37)

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

Yes No

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

Yes No Not Applicable

If No, or if a new onsite sludge disposal authorization is being requested in this permit

application, provide an accurate location description of the sewage sludge disposal site.

N/A

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

- Yes No

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

N/A

D. Do you owe any fees to the TCEQ?

- Yes No

If yes, provide the following information:

Account number: [redacted]

Amount past due: [redacted]

E. Do you owe any penalties to the TCEQ?

- Yes No

If yes, please provide the following information:

Enforcement order number: [redacted]

Amount past due: [redacted]

Section 13. Attachments (Instructions Page 38)

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

- Lease agreement or deed recorded easement, if the land where the treatment facility is located or the effluent disposal site are not owned by the applicant or co-applicant.
- Original full-size USGS Topographic Map with the following information:
 - Applicant's property boundary
 - Treatment facility boundary
 - Labeled point of discharge for each discharge point (TPDES only)
 - Highlighted discharge route for each discharge point (TPDES only)
 - Onsite sewage sludge disposal site (if applicable)
 - Effluent disposal site boundaries (TLAP only)
 - New and future construction (if applicable)
 - 1 mile radius information

- 3 miles downstream information (TPDES only)
- All ponds.
- Attachment 1 for Individuals as co-applicants
- Other Attachments. Please specify: click here to enter text

Section 14. Signature Page (Instructions Page 39)

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

Permit Number: New Application

Applicant: City of Bryan

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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

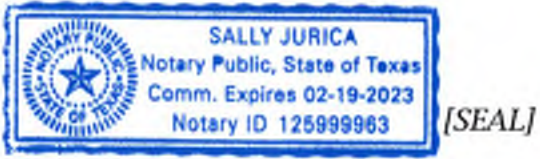
Signatory name (typed or printed): Kean Register

Signatory title: City Manager

Signature: *Kean Register* Date: 9/17/2020
(Use blue ink)

Subscribed and Sworn to before me by the said Kean Register, City Manager
on this 17th day of September, 2020.
My commission expires on the 19th day of February, 2023.

[Signature]
Notary Public



Brazos
County, Texas

DOMESTIC ADMINISTRATIVE REPORT 1.1

The following information is required for new and amendment applications.

Section 1. Affected Landowner Information (Instructions Page 41)

- A. Indicate by a check mark that the landowners map or drawing, with scale, includes the following information, as applicable: Attachment G
- The applicant's property boundaries
 - The facility site boundaries within the applicant's property boundaries
 - The distance the buffer zone falls into adjacent properties and the property boundaries of the landowners located within the buffer zone
 - The property boundaries of all landowners surrounding the applicant's property (Note: if the application is a major amendment for a lignite mine, the map must include the property boundaries of all landowners adjacent to the new facility (ponds).)
 - The point(s) of discharge and highlighted discharge route(s) clearly shown for one mile downstream
 - The property boundaries of the landowners located on both sides of the discharge route for one full stream mile downstream of the point of discharge
 - The property boundaries of the landowners along the watercourse for a one-half mile radius from the point of discharge if the point of discharge is into a lake, bay, estuary, or affected by tides
 - The boundaries of the effluent disposal site (for example, irrigation area or subsurface drainfield site) and all evaporation/holding ponds within the applicant's property
 - The property boundaries of all landowners surrounding the effluent disposal site
 - The boundaries of the sludge land application site (for land application of sewage sludge for beneficial use) and the property boundaries of landowners surrounding the applicant's property boundaries where the sewage sludge land application site is located
 - The property boundaries of landowners within one-half mile in all directions from the applicant's property boundaries where the sewage sludge disposal site (for example, sludge surface disposal site or sludge monofill) is located
- B. Indicate by a check mark that a separate list with the landowners' names and mailing addresses cross-referenced to the landowner's map has been provided.
- C. Indicate by a check mark in which format the landowners list is submitted:
- Readable/Writeable CD
 - Four sets of labels
- D. Provide the source of the landowners' names and mailing addresses: Brazos Central Appraisal District (<https://www.brazoscad.org/gis/>)
- 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

Section 2. Original Photographs (Instructions Page 44)

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

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

Section 3. Buffer Zone Map (Instructions Page 44)

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

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

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

- Ownership
- Restrictive easement
- Nuisance odor control
- Variance

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

- Yes No

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)**

**FOR AGENCIES REVIEWING DOMESTIC
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)

The SPIF must be completed as a separate document. The TCEQ will mail a copy of the SPIF to each agency as required by the TCEQ agreement with EPA. If any of the items are not completely addressed or further information is needed, you will be contacted to provide the information before the permit is issued. Each item must be completely addressed.

Do not refer to a response of any item in the permit application form. Each attachment must be provided with this form separately from the administrative report of the application. The application will not be declared administratively complete without this form being completed in its entirety including all attachments.

The following applies to all applications:

1. Permittee: City of Bryan

Permit No. WQ00 _____

EPA ID No. TX _____

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

The new wastewater treatment facility is located within Brazos County, to the east of the City of Bryan, to the southeast of the intersection of Cole Lane and Enchanted Oaks Drive. The site is located at an approximate latitude of 30.647314 and an approximate longitude of -96.231628.

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: Jayson Barfknecht

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

Title: Director of Public Works

Mailing Address: 1111 Waco Street

City, State, Zip Code: City of Bryan, TX, 78717

Phone No.: 979-209-5900 Ext.: [REDACTED]

Fax No.: [REDACTED]

E-mail Address: jbarfknecht@brantx.gov

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

N/A

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

Effluent will be discharged into Brushy Creek at the northeast corner of the treatment facility property. Effluent will flow from Brushy Creek to Wickson Creek (1209E) to Navasota River (1209), which is the nearest classified segment.

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

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

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

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

Disturbance of vegetation or wetlands

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

1. the construction of overhead power lines creates threats of avian collision and electrocution: To prevent and minimize this impact City will install underground rather than overhead power lines whenever possible. 2. Soil erosion and compaction: City plan to minimize this impact by avoiding any unnecessary clearing of vegetation and follow established rights of way whenever possible. 3. Soil and water contamination: All machinery and petroleum products will be stored outside the floodplain or wetland area during construction to prevent possible contamination of water and soils.

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

The land use is currently undeveloped and is generally characterized as improved pasture and wooded rangeland. Four distinct vegetative communities exist on the property, including Mesquite/Elm woodland, Post Oak/Elm woodland, Elm/Water Oak bottom woodland, and Bottomland slough. Existing disturbances on the property include power lines running through the northern portion of the property.

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

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

Construction off all facilities will start in 2025.

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

The property has been pasture since prior to 1995.

WATER QUALITY PERMIT

PAYMENT SUBMITTAL FORM

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

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

Mail this form and the check or money order to:

BY REGULAR U.S. MAIL

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

BY OVERNIGHT/EXPRESS MAIL

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

Fee Code: WQP **Waste Permit No:**

1. Check or Money Order Number: 1852669
2. Check or Money Order Amount: \$2,050.00
3. Date of Check or Money Order: 8/27/2020
4. Name on Check or Money Order: TCEQ

5. APPLICATION INFORMATION

Name of Project or Site: Brushy Creek WWTP

Physical Address of Project or Site: City of Bryan, P.O. Box 1000, Bryan, TX 77805

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

Staple Check or Money Order in This Space

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INDIVIDUAL INFORMATION

Section 1. Individual Information (Instructions Page 50)

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

Prefix (Mr., Ms., Miss):

Full legal name (first, middle, last):

Driver's License or State Identification Number:

Date of Birth:

Mailing Address:

City, State, and Zip Code:

Phone Number: Fax Number:

E-mail Address:

CN:

For Commission Use Only:

Customer Number:

Regulated Entity Number:

Permit Number:



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
DOMESTIC WASTEWATER PERMIT APPLICATION

DOMESTIC TECHNICAL REPORT 1.0

The Following Is Required For All Applications
Renewal, New, And Amendment

Section 1. Permitted or Proposed Flows (Instructions Page 51)

A. Existing/Interim I Phase

Design Flow (MGD): 6

2-Hr Peak Flow (MGD): 24

Estimated construction start date: 2025

Estimated waste disposal start date: N/A

B. Interim II Phase

Design Flow (MGD): N/A

2-Hr Peak Flow (MGD): [REDACTED]

Estimated construction start date: [REDACTED]

Estimated waste disposal start date: [REDACTED]

C. Final Phase

Design Flow (MGD): 12

2-Hr Peak Flow (MGD): 48

Estimated construction start date: 2030

Estimated waste disposal start date: N/A

D. Current operating phase: NA

Provide the startup date of the facility: 2028

Section 2. Treatment Process (Instructions Page 51)

A. Treatment process description

Provide a detailed description of the treatment process. **Include the type of**

treatment plant, mode of operation, and all treatment units. Start with the plant's head works and finish with the point of discharge. Include all sludge processing and drying units. **If more than one phase exists or is proposed in the permit, a description of each phase must be provided.** Process description:

The proposed Brushy Creek WWTP will be designed as an activated sludge package. The package plant process units include Headworks (Bar Screen and Grit Removal), Aeration Basins, Waste Sludge Holding Tanks, Belt Press Sludge Dewatering, Final Clarifiers, and Tertiary Treatment Facility (UV Disinfection and Cascade Aeration). The overall plant (final interim) would have average daily flow capacity of 12 mgd with 2- hr peak flow of 48 mgd. Plant will construct a subset interim of 6 mgd with 2-hr peak flow of 24 mgd. Two creeks exist in the area, Brushy Creek and Wickson Creek, and Brushy Creek will be the discharge location. Sludge will be transferred to Brazos Valley Solid Waste Management Authority (BVSWMA).

Port or pipe diameter at the discharge point, in inches: 48

B. Treatment Units

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

Table 1.0(1) - Treatment Units

Treatment Unit Type	Number of Units	Dimensions (L x W x D)
Bar screen and Grit Removal	1	100' X 30'
Aeration Basins	3	175' X 37'
Clarifiers	3	Diameter 105 ft
Waste Sludge Holding Tank	1	Diameter 85 ft
Belt Press Sludge Dewatering	1	60' x 60'
UV Disinfection	1	45' X 60'

C. Process flow diagrams

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

Attachment: C

Section 3. Site Drawing (Instructions Page 52)

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

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

Attachment: D

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

The treatment facility serves City of Bryan limits in Carters Creek and Burton Creek Watersheds.

Section 4. Unbuilt Phases (Instructions Page 52)

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

Yes

No

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

Yes

No

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

N/A

Section 5. Closure Plans (Instructions Page 53)

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

Yes No

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

Yes No

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

N/A

Section 6. Permit Specific Requirements (Instructions Page 53)

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

A. Summary transmittal

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

Yes No

If yes, provide the date(s) of approval for each phase:

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

N/A

B. Buffer zones

Have the buffer zone requirements been met?

Yes No

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

According to attachment I, maintaining the buffer zone by owning the surround property (150ft boundary around treatment units).

C. Other actions required by the current permit N/A

Does the *Other Requirements* or *Special Provisions* section in the existing permit require submission of any other information or other required actions? Examples include Notification of Completion, progress reports, soil monitoring data, etc.

Yes No

If yes, provide information below on the status of any actions taken to meet the conditions of an *Other Requirement* or *Special Provision*.

N/A

D. Grit and grease treatment

1. Acceptance of grit and grease waste

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

Yes No

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

2. Grit and grease processing N/A

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

N/A

3. Grit disposal **N/A**

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

Yes No

If No, contact the TCEQ Municipal Solid Waste team at 512-239-0000. Note: A registration or permit is required for grit disposal. Grit shall not be combined with treatment plant sludge. See the instruction booklet for additional information on grit disposal requirements and restrictions.

Describe the method of grit disposal.

N/A

4. Grease and decanted liquid disposal

Note: A registration or permit is required for grease disposal. Grease shall not be combined with treatment plant sludge. For more information, contact the TCEQ Municipal Solid Waste team at 512-239-0000.

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

N/A

E. Stormwater management

1. Applicability

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

Yes No

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

Yes No

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

2. MSGP coverage

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

Yes No

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

TXR05 [REDACTED] or TXRNE [REDACTED]

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

Yes No

3. Conditional exclusion

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

Yes No

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

N/A

4. Existing coverage in individual permit

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

Yes No

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

N/A

5. Zero stormwater discharge

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

Yes No

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

N/A

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

6. Request for coverage in individual permit

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

Yes No

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

N/A

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

F. Discharges to the Lake Houston Watershed

Does the facility discharge in the Lake Houston watershed?

Yes No

If yes, a Sewage Sludge Solids Management Plan is required. See Example 5 in the instructions.

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

1. Acceptance of sludge from other WWTPs

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

Yes No

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

In addition, provide the date that the plant started accepting sludge or is anticipated to start accepting sludge, an estimate of monthly sludge acceptance (gallons or millions of gallons), an estimate of the BOD₅ concentration of the sludge, and the design BOD₅ concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

N/A

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

2. Acceptance of septic waste

Is the facility accepting or will it accept septic waste?

Yes No

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

Yes No

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

Yes No

If yes to any of the above, provide a the date that the plant started accepting septic waste, or is anticipated to start accepting septic waste, an estimate of monthly septic waste acceptance (gallons or millions of gallons), an estimate of the BOD₅ concentration of the septic waste, and the design BOD₅ concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

N/A

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

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

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

Yes No

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

N/A

Section 7. Pollutant Analysis of Treated Effluent (Instructions Page 58)

Is the facility in operation?

Yes No

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

If yes, provide effluent analysis data for the listed pollutants. **Wastewater treatment facilities** complete Table 1.0(2). **Water treatment facilities** discharging filter backwash water, complete Table 1.0(3).

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

Table 1.0(2) - Pollutant Analysis for Wastewater Treatment Facilities N/A

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
CBOD ₅ , mg/l					
Total Suspended Solids, mg/l					
Ammonia Nitrogen, mg/l					
Nitrate Nitrogen, mg/l					
Total Kjeldahl Nitrogen, mg/l					
Sulfate, mg/l					
Chloride, mg/l					
Total Phosphorus, mg/l					
pH, standard units					
Dissolved Oxygen*, mg/l					
Chlorine Residual, mg/l					
<i>E.coli</i> (CFU/100ml) freshwater					
Enterococci (CFU/100ml)					

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
saltwater					
Total Dissolved Solids, mg/l					
Electrical Conductivity, μ mohs/cm, †					
Oil & Grease, mg/l					
Alkalinity (CaCO ₃)*, mg/l					

*TPDES permits only

†TLAP permits only

Table 1.0(3) - Pollutant Analysis for Water Treatment Facilities N/A

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
Total Suspended Solids, mg/l					
Total Dissolved Solids, mg/l					
pH, standard units					
Fluoride, mg/l					
Aluminum, mg/l					
Alkalinity (CaCO ₃), mg/l					

Section 8. Facility Operator (Instructions Page 60)

Facility Operator Name: Victor Harris

Facility Operator's License Classification and Level: Wastewater Treatment Operator Class A

Facility Operator's License Number: WW0028599

Section 9. Sewage Sludge Management and Disposal (Instructions

A. Sludge disposal method

Identify the current or anticipated sludge disposal method or methods from the following list. Check all that apply.

- Permitted landfill
- Permitted or Registered land application site for beneficial use
- Land application for beneficial use authorized in the wastewater permit
- Permitted sludge processing facility
- Marketing and distribution as authorized in the wastewater permit
- Composting as authorized in the wastewater permit
- Permitted surface disposal site (sludge monofill)
- Surface disposal site (sludge monofill) authorized in the wastewater permit
- Transported to another permitted wastewater treatment plant or permitted sludge processing facility. If you selected this method, a written statement or contractual agreement from the wastewater treatment plant or permitted sludge processing facility accepting the sludge must be included with this application.
- Other: Dewatered on site and transported to either a composting facility for further treatment or a Type I landfill for disposal.

B. Sludge disposal site

Disposal site name: Brazos Valley Solid Waste Management Authority (BVSWMA)

TCEQ permit or registration number: BVSWMA Twin Oaks Landfill MSW 2292/
BVSWMA Compost MSW 42003

County where disposal site is located: Brazos

Section 11. Sewage Sludge Lagoons (Instructions Page 61)

Does this facility include sewage sludge lagoons?

Yes No

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

A. Location information **N/A**

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

- Original General Highway (County) Map:

Attachment:

- USDA Natural Resources Conservation Service Soil Map:

Attachment:

- Federal Emergency Management Map:

Attachment:

- Site map:

Attachment:

Discuss in a description if any of the following exist within the lagoon area.

Check all that apply.

- Overlap a designated 100-year frequency flood plain
- Soils with flooding classification
- Overlap an unstable area
- Wetlands
- Located less than 60 meters from a fault
- None of the above

Attachment:

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

N/A

B. Temporary storage information N/A

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

Nitrate Nitrogen, mg/kg:

Total Kjeldahl Nitrogen, mg/kg:

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

Phosphorus, mg/kg:

Potassium, mg/kg:

pH, standard units:

Ammonia Nitrogen mg/kg:

Arsenic:

Cadmium:

Chromium:

Copper:

Lead:

Mercury:

Molybdenum:

Nickel:

Selenium:

Zinc:

Total PCBs:

Provide the following information:

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

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

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

C. Liner information

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

Yes No

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

N/A

D. Site development plan

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

N/A

Attach the following documents to the application.

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

E. Groundwater monitoring

Is groundwater monitoring currently conducted at this site, or are any wells

available for groundwater monitoring, or are groundwater monitoring data otherwise available for the sludge lagoon(s)?

Yes No

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

Attachment:

Section 12. Authorizations/Compliance/Enforcement (Instructions Page 63)

A. Additional authorizations

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

Yes No

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

N/A

B. Permittee enforcement status

Is the permittee currently under enforcement for this facility?

Yes No

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

Yes No

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

N/A

Section 13. RCRA/CERCLA Wastes (Instructions Page 63)

A. RCRA hazardous wastes

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

Yes No

B. Remediation activity wastewater

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

Yes No

C. Details about wastes received

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

Attachment:

Section 14. Laboratory Accreditation (Instructions Page 64)

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

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

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

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

CERTIFICATION:

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

Printed Name: Kean Register

Title: City Manager

Signature: 

Date: 9/17/2020

DOMESTIC TECHNICAL REPORT 1.1

The following is required for new and amendment applications

Section 1. Justification for Permit (Instructions Page 66)

A. Justification of permit need

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

The City of Bryan, Texas is in need of an additional WWTP because it's existing WWTP experiences peak wet weather flows in excess of the plant's peak 2-hour discharge capacity of 19.2 mgd. Furthermore, growth in Bryan, Texas is moving eastward, increasing the need for expanding treatment capacity on the City's east side.

B. Regionalization of facilities

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

1. Municipally incorporated areas

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

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

Yes No Not Applicable

If yes, within the city limits of: [REDACTED]

If yes, attach correspondence from the city.

Attachment: [REDACTED]

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

Attachment: [REDACTED]

2. Utility CCN areas

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

Yes No

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

Attachment: [REDACTED]

3. Nearby WWTPs or collection systems

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

Yes No

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

Attachment: J-1 & J-2

If yes, attach copies of your certified letters to these facilities **and** their response letters concerning connection with their system.

Attachment: J-1

Does a permitted domestic wastewater treatment facility or a collection system located within three (3) miles of the proposed facility currently have the capacity to accept or is willing to expand to accept the volume of wastewater proposed in this application?

Yes No

If yes, attach an analysis of expenditures required to connect to a permitted wastewater treatment facility or collection system located within 3 miles versus the cost of the proposed facility or expansion.

Attachment: [REDACTED]

Section 2. Organic Loading (Instructions Page 67)

Is this facility in operation?

Yes No

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

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

A. Current organic loading

Facility Design Flow (flow being requested in application): [redacted]
[redacted]

Average Influent Organic Strength or BOD₅ Concentration in mg/l: [redacted]
[redacted]

Average Influent Loading (lbs/day = total average flow X average BOD₅ conc. X 8.34): [redacted]

Provide the source of the average organic strength or BOD₅ concentration.

N/A

B. Proposed organic loading

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

Table 1.1(1) - Design Organic Loading

Source	Total Average Flow (MGD)	Influent BOD ₅ Concentration (mg/l)
Municipality	12	286.5
Subdivision		
Trailer park - transient		
Mobile home park		
School with cafeteria and showers		
School with cafeteria,		

Source	Total Average Flow (MGD)	Influent BOD ₅ Concentration (mg/l)
no showers		
Recreational park, overnight use		
Recreational park, day use		
Office building or factory		
Motel		
Restaurant		
Hospital		
Nursing home		
Other		
TOTAL FLOW from all sources	12	
AVERAGE BOD ₅ from all sources		286.5

Section 3. Proposed Effluent Quality and Disinfection (Instructions Page 68)

A. Existing/Interim I Phase Design Effluent Quality

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

Total Suspended Solids, mg/l: 15

Ammonia Nitrogen, mg/l: 2

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: 6

Other:

B. Interim II Phase Design Effluent Quality N/A

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

Total Suspended Solids, mg/l:

Ammonia Nitrogen, mg/l:

Total Phosphorus, mg/l:

Dissolved Oxygen, mg/l:

Other:

C. Final Phase Design Effluent Quality

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

Total Suspended Solids, mg/l: 15

Ammonia Nitrogen, mg/l: 2

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: 6

Other:

D. Disinfection Method

Identify the proposed method of disinfection.

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

Dechlorination process:

Ultraviolet Light: 5/Five seconds contact time at peak flow

Other:

Section 4. Design Calculations (Instructions Page 68)

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

Attachment: K

Section 5. Facility Site (Instructions Page 68)

A. 100-year floodplain

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

Yes No

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

N/A

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

FEMA FIRM PANEL 48041CO250E

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

Yes No

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

Yes No

If yes, provide the permit number: [REDACTED]

If no, provide the approximate date you anticipate submitting your application to the Corps: [REDACTED]

B. Wind rose

Attach a wind rose. **Attachment:** L

Section 6. Permit Authorization for Sewage Sludge Disposal (Instructions Page 69)

A. Beneficial use authorization

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

Yes No

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

Attachment: [REDACTED]

B. Sludge processing authorization N/A

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

- Sludge Composting
- Marketing and Distribution of sludge
- Sludge Surface Disposal or Sludge Monofill

If **any of the above** sludge options are selected, attach a completed DOMESTIC WASTEWATER PERMIT APPLICATION: SEWAGE SLUDGE TECHNICAL REPORT (TCEQ Form No. 10056).

Attachment: [REDACTED]

Section 7. Sewage Sludge Solids Management Plan (Instructions Page 69)

Attach a solids management plan to the application.

Attachment: M

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

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

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

DOMESTIC TECHNICAL REPORT WORKSHEET 2.0

RECEIVING WATERS

The following is required for all TPDES permit applications

Section 1. Domestic Drinking Water Supply (Instructions Page 73)

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

Yes No

If yes, provide the following:

Owner of the drinking water supply: _____

Distance and direction to the intake: _____

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

Attachment: _____

Section 2. Discharge into Tidally Affected Waters (Instructions Page 73)

Does the facility discharge into tidally affected waters?

Yes No

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

A. Receiving water outfall

Width of the receiving water at the outfall, in feet: _____

B. Oyster waters

Are there oyster waters in the vicinity of the discharge?

Yes No

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

N/A

C. Sea grasses

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

Yes No

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

N/A

Section 3. Classified Segments (Instructions Page 73)

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

Yes No

If yes, this Worksheet is complete.

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

Section 4. Description of Immediate Receiving Waters (Instructions Page 75)

Name of the immediate receiving waters: Brushy Creek - Tributary-5

A. Receiving water type

Identify the appropriate description of the receiving waters.

- Stream
- Freshwater Swamp or Marsh
- Lake or Pond

Surface area, in acres:

Average depth of the entire water body, in feet:

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

- Man-made Channel or Ditch

- Open Bay
- Tidal Stream, Bayou, or Marsh
- Other, specify:

B. Flow characteristics

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

- Intermittent - dry for at least one week during most years
- Intermittent with Perennial Pools - enduring pools with sufficient habitat to maintain significant aquatic life uses
- Perennial - normally flowing

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

- USGS flow records
- Historical observation by adjacent landowners
- Personal observation
- Other, specify: Stream Evaluation Report, performed by JBS Engineering & Environmental, 10/05/2016 - (The report is available electronically by request).

C. Downstream perennial confluences

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

Brushy Creek, Wickson Creek, Navasota River, and Brazos River

D. Downstream characteristics

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

- Yes No

If yes, discuss how.

N/A

E. Normal dry weather characteristics

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

According to Stream Evaluation Report, performed by JBS Engineering & Environmental, the evaluation of Brushy Creek extended from the headwaters located just east of the Copperfield subdivision to the confluence with Wickson Creek to the east. However, readily accessible survey points were limited to those along Elmo Weedon Road and Hardy Weedon Road.: 1. BC-1 at a culvert crossing located along Elmo Weedon Road: The stream channel was dry at the time of the field study with no obvious pools of water. The upstream and downstream portions of the channel contained moderate canopy cover with adequate clearings to allow sunlight to reach the bottom of the channel. 2. BC-2 at a culvert crossing located along Hardy Weedon Road: The upstream side of the box culverts contained ponded water. However, the downstream side of the crossing was dry at the time of the field study. This portion of Wickson Creek contained light to moderate canopy cover with adequate clearings to allow sunlight to reach the water surface (The report is available electronically by request).

Date and time of observation: 10-5-2016

Was the water body influenced by stormwater runoff during observations?

Yes No

Section 5. General Characteristics of the Waterbody (Instructions Page 74)

A. Upstream influences

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

- Oil field activities
- Urban runoff
- Upstream discharges
- Agricultural runoff
- Septic tanks
- Other(s), specify There is a Small

Agricultural pond (0.25 Acre) located within the upland area of the property. Ecological Evaluation Report, performed by JBS Engineering & Environmental - (The report is available electronically by request).

B. Waterbody uses

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

- | | |
|--|--|
| <input checked="" type="checkbox"/> Livestock watering | <input type="checkbox"/> Contact recreation |
| <input type="checkbox"/> Irrigation withdrawal | <input type="checkbox"/> Non-contact recreation |
| <input type="checkbox"/> Fishing | <input type="checkbox"/> Navigation |
| <input type="checkbox"/> Domestic water supply | <input type="checkbox"/> Industrial water supply |
| <input checked="" type="checkbox"/> Park activities | <input checked="" type="checkbox"/> Other(s), specify <u>Fishing can be possible but not likely, there are only small pools in the area.</u> |

C. Waterbody aesthetics

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

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

DOMESTIC WORKSHEET 2.1 N/A

STREAM PHYSICAL CHARACTERISTICS

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

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

Section 1. General Information (Instructions Page 75)

Date of study: Time of study:

Stream name:

Location:

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

Perennial Intermittent with perennial pools

Section 2. Data Collection (Instructions Page 75)

Number of stream bends that are well defined:

Number of stream bends that are moderately defined:

Number of stream bends that are poorly defined:

Number of riffles:

Evidence of flow fluctuations (check one):

Minor moderate severe

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

Stream transects

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

Table 2.1(1) - Stream Transect Records

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

Section 3. Summarize Measurements (Instructions Page 76)

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

[Redacted]

Approximate drainage area above the most downstream transect (from USGS map or county highway map, in square miles): [Redacted]

Length of stream evaluated, in feet: [Redacted]

Number of lateral transects made: [Redacted]

Average stream width, in feet: [Redacted]

Average stream depth, in feet: [Redacted]

Average stream velocity, in feet/second: [Redacted]

Instantaneous stream flow, in cubic feet/second: [Redacted]

Indicate flow measurement method (type of meter, floating chip timed over a fixed distance, etc.): [Redacted]

Size of pools (large, small, moderate, none): [Redacted]

Maximum pool depth, in feet: [Redacted]

DOMESTIC WORKSHEET 3.0 N/A

LAND DISPOSAL OF EFFLUENT

The following is required for all permit applications

Renewal, New, and Amendments

Section 1. Type of Disposal System (Instructions Page 77)

Identify the method of land disposal:

- | | |
|--|--|
| <input type="checkbox"/> Surface application | <input type="checkbox"/> Subsurface application |
| <input type="checkbox"/> Irrigation | <input type="checkbox"/> Subsurface soils absorption |
| <input type="checkbox"/> Drip irrigation system | <input type="checkbox"/> Subsurface area drip dispersal system |
| <input type="checkbox"/> Evaporation | |
| <input type="checkbox"/> Evapotranspiration beds | |
| <input type="checkbox"/> Other (describe in detail): | <input type="text"/> |

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

For existing authorizations, provide Registration Number:

Section 2. Land Application Site(s) (Instructions Page 77)

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

Table 3.0(1) - Land Application Site Crops

Crop Type & Land Use	Irrigation Area (acres)	Effluent Application (GPD)	Public Access? Y/N

Crop Type & Land Use	Irrigation Area (acres)	Effluent Application (GPD)	Public Access? Y/N

Section 3. Storage and Evaporation Lagoons/Ponds (Instructions Page 77)

Table 3.0(2) - Storage and Evaporation Ponds

Pond Number	Surface Area (acres)	Storage Volume (acre-feet)	Dimensions	Liner Type

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

Attachment: [Redacted]

Section 4. Flood and Runoff Protection (Instructions Page 77)

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

Yes No

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

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

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

Section 5. Annual Cropping Plan (Instructions Page 77)

Attach an Annual Cropping Plan which includes a discussion of each of the following items. If not applicable, provide a detailed explanation indicating why.

Attachment: [REDACTED]

- Soils map with crops
- Cool and warm season plant species
- Crop yield goals
- Crop growing season
- Crop nutrient requirements
- Additional fertilizer requirements
- Minimum/maximum harvest height (for grass crops)
- Supplemental watering requirements
- Crop salt tolerances
- Harvesting method/number of harvests
- Justification for not removing existing vegetation to be irrigated

Section 6. Well and Map Information (Instructions Page 78)

Attach a USGS map with the following information shown and labeled. If not applicable, provide a detailed explanation (on a separate page) indicating why.

Attachment: [REDACTED]

- The boundaries of the land application site(s)
- Waste disposal or treatment facility site(s)

- On-site buildings
- Buffer zones
- Effluent storage and tailwater control facilities
- All water wells within 1 mile of the disposal site or property boundaries
- All springs and seeps onsite and within 500 feet of the property boundaries
- All surface waters in the state onsite and within 500 feet of the property boundaries
- All faults and sinkholes onsite and within 500 feet of the property

List and cross reference all water wells shown on the USGS map in the following table. Attach additional pages as necessary to include all of the wells.

Table 3.0(3) - Water Well Data

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

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

Attachment: [REDACTED]

Section 7. Groundwater Quality (Instructions Page 79)

Attach a Groundwater Quality Technical Report which assesses the impact of the wastewater disposal system on groundwater. This report shall include an evaluation of the water wells (including the information in the well table provided in Item 6. above), the wastewater application rate, and pond liners.

Indicate by a check mark that this report is provided.

Attachment: [REDACTED]

Are groundwater monitoring wells available onsite? Yes No

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

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

Attachment: [REDACTED]

Section 8. Soil Map and Soil Analyses (Instructions Page 79)

A. Soil map

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

Attachment: [REDACTED]

B. Soil analyses

Attach the laboratory results sheets from the soil analyses. **Note:** for renewal applications, the current annual soil analyses required by the permit are acceptable as long as the test date is less than one year prior to the submission of the application.

Attachment: [REDACTED]

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

Table 3.0(4) - Soil Data

Soil Series	Depth from Surface	Permeability	Available Water Capacity	Curve Number

Soil Series	Depth from Surface	Permeability	Available Water Capacity	Curve Number

Section 9. Effluent Monitoring Data (Instructions Page 80)

Is the facility in operation?

Yes No

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

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

Table 3.0(5) - Effluent Monitoring Data

Date	30 Day Avg Flow MGD	BOD ₅ mg/l	TSS mg/l	pH	Chlorine Residual mg/l	Acres irrigated

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

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

DOMESTIC WORKSHEET 3.1 N/A

SURFACE LAND DISPOSAL OF EFFLUENT

The following is required for new and major amendment applications.

Renewal and minor amendments applicants may be asked for the worksheet on a case by case basis.

Section 1. Surface Disposal (Instructions Page 81)

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

A. Irrigation

Area under irrigation, in acres:

Design application frequency:

hours/day And days/week

Land grade (slope):

average percent (%):

maximum percent (%):

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

Design total nitrogen loading rate, in lbs N/acre/year:

Soil conductivity (mmhos/cm):

Method of application:

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

Attachment:

B. Evaporation ponds

Daily average effluent flow into ponds, in gallons per day:

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

Attachment:

C. Evapotranspiration beds

Number of beds:

Area of bed(s), in acres:

Depth of bed(s), in feet:

Void ratio of soil in the beds:

Storage volume within the beds, in acre-feet:

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

Attachment:

D. Overland flow

Area used for application, in acres:

Slopes for application area, percent (%):

Design application rate, in gpm/foot of slope width:

Slope length, in feet:

Design BOD₅ loading rate, in lbs BOD₅/acre/day:

Design application frequency:

hours/day: **And** days/week:

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

Attachment:

Section 2. Edwards Aquifer (Instructions Page 82)

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

Yes No

If yes, attach a report concerning the recharge zone.

Attachment: [click here to enter text](#)

DOMESTIC WORKSHEET 3.2 N/A

SUBSURFACE LAND DISPOSAL OF EFFLUENT

The following is required for new and major amendment applications. Renewal and minor amendments may require the worksheet on a case by case basis.

NOTE: All applicants proposing new/amended subsurface disposal MUST complete and submit Worksheet 7.0. This worksheet applies to any subsurface disposal system that does not meet the definition of a subsurface area drip dispersal system as defined in 30 TAC Chapter 222, *Subsurface Area Drip Dispersal System*.

Section 1. Subsurface Application (Instructions Page 83)

Identify the type of system:

- Conventional Gravity Drainfield, Beds, or Trenches (new systems must be less than 5,000 GPD)
- Low Pressure Dosing
- Other, specify:

Application area, in acres:

Area of drainfield, in square feet:

Application rate, in gal/square foot/day:

Depth to groundwater, in feet:

Area of trench, in square feet:

Dosing duration per area, in hours:

Number of beds:

Dosing amount per area, in inches/day:

Infiltration rate, in inches/hour:

Storage volume, in gallons:

Area of bed(s), in square feet:

Soil Classification:

Attach a separate engineering report with the information required in 30 TAC § 309.20, excluding the requirements of § 309.20 b(3)(A) and (B) design analysis which may be asked for on a case by case basis. Include a description of the schedule of dosing basin rotation.

Attachment:

Section 2. Edwards Aquifer (Instructions Page 83)

Is the subsurface system located on the Edwards Aquifer Recharge Zone as mapped by the TCEQ?

Yes No

Is the subsurface system located on the Edwards Aquifer Transition Zone as mapped by the TCEQ?

Yes No

If yes to either question, the subsurface system may be prohibited by 30 TAC §213.8. Please call the Municipal Permits Team, at 512-239-4671, to schedule a pre-application meeting.

DOMESTIC WORKSHEET 3.3 N/A

SUBSURFACE AREA DRIP DISPERSAL SYSTEM (SADDS) LAND DISPOSAL OF EFFLUENT

The following is required for new and major amendment subsurface area drip dispersal system applications. Renewal and minor amendments may require the worksheet on a case by case basis.

NOTE: All applicants proposing new or amended subsurface disposal MUST complete and submit Worksheet 7.0. This worksheet applies to any subsurface disposal system that meets the definition of a subsurface area drip dispersal system as defined in 30 TAC Chapter 222, *Subsurface Area Drip Dispersal System*.

Section 1. Administrative Information (Instructions Page 84)

- A. Provide the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the owner of the treatment facility.

- B. Is the owner of the land where the treatment facility is located the same as the owner of the treatment facility?

Yes No

If **no**, provide the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the owner of the land where the treatment facility is located.

- C. Owner of the subsurface area drip dispersal system:

- D. Is the owner of the subsurface area drip dispersal system the same as the owner of the wastewater treatment facility or the site where the wastewater treatment facility is located?

Yes No

If **no**, identify the names of all corporations or other business entities managed, owned, or otherwise closely related to the entity identified in Item 1.C.

E. Owner of the land where the subsurface area drip dispersal system is located:

[Redacted]

F. Is the owner of the land where the subsurface area drip dispersal system is located the same as owner of the wastewater treatment facility, the site where the wastewater treatment facility is located, or the owner of the subsurface area drip dispersal system?

Yes No

If **no**, identify the name of all corporations or other business entities managed, owned, or otherwise closely related to the entity identified in item 1.E.

[Redacted]

Section 2. Subsurface Area Drip Dispersal System (Instructions Page 84)

A. Type of system

Subsurface Drip Irrigation

Surface Drip Irrigation

Other, specify: [Redacted]

B. Irrigation operations

Application area, in acres: [Redacted]

Infiltration Rate, in inches/hour: [Redacted]

Average slope of the application area, percent (%): [Redacted]

Maximum slope of the application area, percent (%): [Redacted]

Storage volume, in gallons: [Redacted]

Major soil series: [Redacted]

Depth to groundwater, in feet: [Redacted]

C. Application rate

Is the facility located **west** of the boundary shown in *30 TAC § 222.83* and also using a vegetative cover of non-native grasses over seeded with cool

season grasses during the winter months (October-March)?

Yes No

If **yes**, then the facility may propose a hydraulic application rate not to exceed 0.1 gal/square foot/day.

Is the facility located **east** of the boundary shown in *30 TAC § 222.83* or in any part of the state when the vegetative cover is any crop other than non-native grasses?

Yes No

If **yes**, the facility must use the formula in *30 TAC §222.83* to calculate the maximum hydraulic application rate.

Do you plan to submit an alternative method to calculate the hydraulic application rate for approval by the executive director?

Yes No

Hydraulic application rate, in gal/square foot/day:

Nitrogen application rate, in lbs/gal/day:

D. Dosing information

Number of doses per day:

Dosing duration per area, in hours:

Rest period between doses, in hours:

Dosing amount per area, in inches/day:

Number of zones:

Does the proposed subsurface drip irrigation system use tree vegetative cover as a crop?

Yes No

If **yes**, provide a vegetation survey by a certified arborist. Please call the Water Quality Assessment Team at (512) 239-4671 to schedule a pre-application meeting.

Attachment:

Section 3. Required Plans (Instructions Page 84)

A. Recharge feature plan

Attach a Recharge Feature Plan with all information required in *30 TAC §222.79*.

Attachment:

B. Soil evaluation

Attach a Soil Evaluation with all information required in *30 TAC §222.73*.

Attachment:

C. Site preparation plan

Attach a Site Preparation Plan with all information required in *30 TAC §222.75*.

Attachment:

D. Soil sampling/testing

Attach soil sampling and testing that includes all information required in *30 TAC §222.157*.

Attachment:

Section 4. Floodway Designation (Instructions Page 85)

A. Site location

Is the existing/proposed land application site within a designated floodway?

Yes No

B. Flood map

Attach either the FEMA flood map or alternate information used to determine the floodway.

Attachment:

Section 5. Surface Waters in the State (Instructions Page 85)

A. Buffer Map

Attach a map showing appropriate buffers on surface waters in the state, water wells, and springs/seeps.

Attachment: [click here to enter text](#)

B. Buffer variance request

Do you plan to request a buffer variance from water wells or waters in the state?

Yes No

If yes, then attach the additional information required in *30 TAC § 222.81(c)*.

Attachment: [click here to enter text](#)

Section 6. Edwards Aquifer (Instructions Page 85)

A. Is the SADDs located on the Edwards Aquifer Recharge Zone as mapped by the TCEQ?

Yes No

B. Is the SADDs located on the Edwards Aquifer Transition Zone as mapped by the TCEQ?

Yes No

If yes to either question, then the SADDs may be prohibited by *30 TAC §213.8*. Please call the Municipal Permits Team at 512-239-4671 to schedule a pre-application meeting.

DOMESTIC WORKSHEET 4.0 New Facility

POLLUTANT ANALYSES REQUIREMENTS*

The following is required for facilities with a permitted or proposed flow of 1.0 MGD or greater, facilities with an approved pretreatment program, or facilities classified as a major facility. See instructions for further details.

This worksheet is not required for minor amendments without renewal

Section 1. Toxic Pollutants (Instructions Page 87)

For pollutants identified in Table 4.0(1), indicate the type of sample.

Grab Composite

Date and time sample(s) collected:

Table 4.0(1) - Toxics Analysis

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acrylonitrile				50
Aldrin				0.01
Aluminum				2.5
Anthracene				10
Antimony				5
Arsenic				0.5
Barium				3
Benzene				10
Benzidine				50
Benzo(a)anthracene				5

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Benzo(a)pyrene				5
Bis(2-chloroethyl)ether				10
Bis(2-ethylhexyl)phthalate				10
Bromodichloromethane				10
Bromoform				10
Cadmium				1
Carbon Tetrachloride				2
Carbaryl				5
Chlordane*				0.2
Chlorobenzene				10
Chlorodibromomethane				10
Chloroform				10
Chlorpyrifos				0.05
Chromium (Total)				3
Chromium (Tri) (*1)				N/A
Chromium (Hex)				3
Copper				2
Chrysene				5
p-Chloro-m-Cresol				10
4,6-Dinitro-o-Cresol				50
p-Cresol				10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Cyanide (*2)				10
4,4'- DDD				0.1
4,4'- DDE				0.1
4,4'- DDT				0.02
2,4-D				0.7
Demeton (O and S)				0.20
Diazinon				0.5/0.1
1,2-Dibromoethane				10
m-Dichlorobenzene				10
o-Dichlorobenzene				10
p-Dichlorobenzene				10
3,3'-Dichlorobenzidine				5
1,2-Dichloroethane				10
1,1-Dichloroethylene				10
Dichloromethane				20
1,2-Dichloropropane				10
1,3-Dichloropropene				10
Dicofol				1
Dieldrin				0.02
2,4-Dimethylphenol				10
Di-n-Butyl Phthalate				10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Diuron				0.09
Endosulfan I (alpha)				0.01
Endosulfan II (beta)				0.02
Endosulfan Sulfate				0.1
Endrin				0.02
Ethylbenzene				10
Fluoride				500
Guthion				0.1
Heptachlor				0.01
Heptachlor Epoxide				0.01
Hexachlorobenzene				5
Hexachlorobutadiene				10
Hexachlorocyclohexane (alpha)				0.05
Hexachlorocyclohexane (beta)				0.05
gamma-Hexachlorocyclohexane (Lindane)				0.05
Hexachlorocyclopentadiene				10
Hexachloroethane				20
Hexachlorophene				10
Lead				0.5
Malathion				0.1

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Mercury				0.005
Methoxychlor				2
Methyl Ethyl Ketone				50
Mirex				0.02
Nickel				2
Nitrate-Nitrogen				100
Nitrobenzene				10
N-Nitrosodiethylamine				20
N-Nitroso-di-n-Butylamine				20
Nonylphenol				333
Parathion (ethyl)				0.1
Pentachlorobenzene				20
Pentachlorophenol				5
Phenanthrene				10
Polychlorinated Biphenyls (PCB's) (*3)				0.2
Pyridine				20
Selenium				5
Silver				0.5
1,2,4,5-Tetrachlorobenzene				20
1,1,2,2-Tetrachloroethane				10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Tetrachloroethylene				10
Thallium				0.5
Toluene				10
Toxaphene				0.3
2,4,5-TP (Silvex)				0.3
Tributyltin (see instructions for explanation)				0.01
1,1,1-Trichloroethane				10
1,1,2-Trichloroethane				10
Trichloroethylene				10
2,4,5-Trichlorophenol				50
TTHM (Total Trihalomethanes)				10
Vinyl Chloride				10
Zinc				5

(*1) Determined by subtracting hexavalent Cr from total Cr.

(*2) Cyanide, amenable to chlorination or weak-acid dissociable.

(*3) The sum of seven PCB congeners 1242, 1254, 1221, 1232, 1248, 1260, and 1016.

Section 2. Priority Pollutants

For pollutants identified in Tables 4.0(2)A-E, indicate type of sample.

Grab Composite

Date and time sample(s) collected:

Table 4.0(2)A - Metals, Cyanide, Phenols

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Antimony				5
Arsenic				0.5
Beryllium				0.5
Cadmium				1
Chromium (Total)				3
Chromium (Hex)				3
Chromium (Tri) (*1)				N/A
Copper				2
Lead				0.5
Mercury				0.005
Nickel				2
Selenium				5
Silver				0.5
Thallium				0.5
Zinc				5
Cyanide (*2)				10
Phenols, Total				10

(*1) Determined by subtracting hexavalent Cr from total Cr.

(*2) Cyanide, amenable to chlorination or weak-acid dissociable

Table 4.0(2)B - Volatile Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acrolein				50
Acrylonitrile				50
Benzene				10
Bromoform				10
Carbon Tetrachloride				2
Chlorobenzene				10
Chlorodibromomethane				10
Chloroethane				50
2-Chloroethylvinyl Ether				10
Chloroform				10
Dichlorobromomethane [Bromodichloromethane]				10
1,1-Dichloroethane				10
1,2-Dichloroethane				10
1,1-Dichloroethylene				10
1,2-Dichloropropane				10
1,3-Dichloropropylene [1,3-Dichloropropene]				10
1,2-Trans-Dichloroethylene				10
Ethylbenzene				10
Methyl Bromide				50
Methyl Chloride				50
Methylene Chloride				20
1,1,2,2-Tetrachloroethane				10
Tetrachloroethylene				10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Toluene				10
1,1,1-Trichloroethane				10
1,1,2-Trichloroethane				10
Trichloroethylene				10
Vinyl Chloride				10

Table 4.0(2)C - Acid Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
2-Chlorophenol				10
2,4-Dichlorophenol				10
2,4-Dimethylphenol				10
4,6-Dinitro-o-Cresol				50
2,4-Dinitrophenol				50
2-Nitrophenol				20
4-Nitrophenol				50
P-Chloro-m-Cresol				10
Pentalchlorophenol				5
Phenol				10
2,4,6-Trichlorophenol				10

Table 4.0(2)D - Base/Neutral Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acenaphthene				10
Acenaphthylene				10
Anthracene				10
Benzidine				50
Benzo(a)Anthracene				5
Benzo(a)Pyrene				5
3,4-Benzofluoranthene				10
Benzo(ghi)Perylene				20
Benzo(k)Fluoranthene				5
Bis(2-Chloroethoxy)Methane				10
Bis(2-Chloroethyl)Ether				10
Bis(2-Chloroisopropyl)Ether				10
Bis(2-Ethylhexyl)Phthalate				10
4-Bromophenyl Phenyl Ether				10
Butyl benzyl Phthalate				10
2-Chloronaphthalene				10
4-Chlorophenyl phenyl ether				10
Chrysene				5
Dibenzo(a,h)Anthracene				5
1,2-(o)Dichlorobenzene				10
1,3-(m)Dichlorobenzene				10
1,4-(p)Dichlorobenzene				10
3,3-Dichlorobenzidine				5
Diethyl Phthalate				10
Dimethyl Phthalate				10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Di-n-Butyl Phthalate				10
2,4-Dinitrotoluene				10
2,6-Dinitrotoluene				10
Di-n-Octyl Phthalate				10
1,2-Diphenylhydrazine (as Azo- benzene)				20
Fluoranthene				10
Fluorene				10
Hexachlorobenzene				5
Hexachlorobutadiene				10
Hexachlorocyclo-pentadiene				10
Hexachloroethane				20
Indeno(1,2,3-cd)pyrene				5
Isophorone				10
Naphthalene				10
Nitrobenzene				10
N-Nitrosodimethylamine				50
N-Nitrosodi-n-Propylamine				20
N-Nitrosodiphenylamine				20
Phenanthrene				10
Pyrene				10
1,2,4-Trichlorobenzene				10

Table 4.0(2)E - Pesticides

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Aldrin				0.01
alpha-BHC (Hexachlorocyclohexane)				0.05
beta-BHC (Hexachlorocyclohexane)				0.05
gamma-BHC (Hexachlorocyclohexane)				0.05
delta-BHC (Hexachlorocyclohexane)				0.05
Chlordane				0.2
4,4-DDT				0.02
4,4-DDE				0.1
4,4,-DDD				0.1
Dieldrin				0.02
Endosulfan I (alpha)				0.01
Endosulfan II (beta)				0.02
Endosulfan Sulfate				0.1
Endrin				0.02
Endrin Aldehyde				0.1
Heptachlor				0.01
Heptachlor Epoxide				0.01
PCB-1242				0.2
PCB-1254				0.2
PCB-1221				0.2
PCB-1232				0.2

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
PCB-1248				0.2
PCB-1260				0.2
PCB-1016				0.2
Toxaphene				0.3

* For PCBs, if all are non-detects, enter the highest non-detect preceded by a "<".

Section 3. Dioxin/Furan Compounds

A. Indicate which of the following compounds from may be present in the influent from a contributing industrial user or significant industrial user. Check all that apply.

- 2,4,5-trichlorophenoxy acetic acid
Common Name 2,4,5-T, CASRN 93-76-5
- 2-(2,4,5-trichlorophenoxy) propanoic acid
Common Name Silvex or 2,4,5-TP, CASRN 93-72-1
- 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate
Common Name Erbon, CASRN 136-25-4
- 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate
Common Name Ronnel, CASRN 299-84-3
- 2,4,5-trichlorophenol
Common Name TCP, CASRN 95-95-4
- hexachlorophene
Common Name HCP, CASRN 70-30-4

For each compound identified, provide a brief description of the conditions of its/their presence at the facility.

B. Do you know or have any reason to believe that 2,3,7,8 Tetrachlorodibenzo-P-Dioxin (TCDD) or any congeners of TCDD may be present in your effluent?

Yes No

If **yes**, provide a brief description of the conditions for its presence.

If any of the compounds in Subsection A **or** B are present, complete Table 4.0(2)F.

For pollutants identified in Table 4.0(2)F, indicate the type of sample.

Grab Composite

Date and time sample(s) collected:

TABLE 4.0(2)F - DIOXIN/FURAN COMPOUNDS

Compound	Toxic Equivalency Factors	Wastewater Concentration (ppq)	Wastewater Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Equivalents (ppt)	MAL (ppq)
2,3,7,8 TCDD	1					10
1,2,3,7,8	0.5					50
2,3,7,8 HxCDDs	0.1					50
1,2,3,4,6,7,8 HpCDD	0.01					50
2,3,7,8 TCDF	0.1					10
1,2,3,7,8 PeCDF	0.05					50
2,3,4,7,8 PeCDF	0.5					50
2,3,7,8 HxCDFs	0.1					50
2,3,4,7,8	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					0.5
PCB 81	0.0003					0.5

Compound	Toxic Equivalency Factors	Wastewater Concentration (ppq)	Wastewater Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Equivalents (ppt)	MAL (ppq)
PCB 126	0.1					0.5
PCB 169	0.03					0.5
Total						

DOMESTIC WORKSHEET 5.0 New Facility

TOXICITY TESTING REQUIREMENTS

The following is required for facilities with a currently-operating design flow greater than or equal to 1.0 MGD, with an EPA-approved pretreatment program (or those that are required to have one under 40 CFR Part 403), or are required by the TCEQ to perform Whole Effluent Toxicity testing. This worksheet is not required for minor amendments without renewal.

Section 1. Required Tests (Instructions Page 97)

Indicate the number of 7-day chronic or 48-hour acute Whole Effluent Toxicity (WET) tests performed in the four and one-half years prior to submission of the application.

7-day Chronic:

48-hour Acute:

Section 2. Toxicity Reduction Evaluations (TREs)

Has this facility completed a TRE in the past four and a half years? Or is the facility currently performing a TRE?

Yes No

If yes, describe the progress to date, if applicable, in identifying and confirming the toxicant.

Section 3. Summary of WET Tests

If the required biomonitoring test information has not been previously submitted via both the Discharge Monitoring Reports (DMRs) and the Table 1 (as found in the permit), provide a summary of the testing results for all valid and invalid tests performed over the past four and one-half years. Make additional copies of this table as needed.

Table 5.0(1) - Summary of WET Tests

Test Date	Test Species	NOEC Survival	NOEC Sub-lethal

DOMESTIC WORKSHEET 6.0

INDUSTRIAL WASTE CONTRIBUTION

The following is required for all publicly owned treatment works (POTWs)

Section 1. All POTWs (Instructions Page 99)

A. Industrial users

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

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

Categorical IUs:

Number of IUs: Zero

Average Daily Flows, in MGD: N/A

Significant IUs - non-categorical:

Number of IUs: One

Average Daily Flows, in MGD: CHI St. Joseph Regional Health Care

Laundry Service (0.014952 MGD)

Other IUs:

Number of IUs: One

Average Daily Flows, in MGD: Ruffino Meats & Food Service (0.0005269 MGD).

B. Treatment plant interference

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

Yes No

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

N/A

C. Treatment plant pass through

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

Yes No

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

N/A

D. Pretreatment program

Does your POTW have an approved pretreatment program?

Yes No

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

Is your POTW required to develop an approved pretreatment program?

Yes No

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

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

Section 2. POTWs with Approved Programs or Those Required to Develop a Program (Instructions Page 100)

A. Substantial modifications

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

Yes No

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

N/A

B. Non-substantial modifications

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

Yes No

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

A non-substantial modification will be submitted prior to October 31, 2020. The suggested changes aim to strengthen and improve program administration. Many provisions adopted into Bryan's program are very old and result in unnecessary redundancy for the City and permittee. This request builds on and further expands development opportunities in the Bryan program identified in the Pretreatment Program Audit and Municipal Pollution Prevention Assessment completed June 19-21, 2018

C. Effluent parameters above the MAL

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

Table 6.0(1) - Parameters Above the MAL

Pollutant	Concentration	MAL	Units	Date

D. Industrial user interruptions

Has any SIU, CIU, or other IU caused or contributed to any problems (excluding

interferences or pass throughs) at your POTW in the past three years?

Yes No

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

N/A

Section 3. Significant Industrial User (SIU) Information and Categorical Industrial User (CIU) (Instructions Page 100)

A. General information First IUs

Company Name: Ruffino Meats and Food Services

SIC Code: 2013

Telephone number: 979-776-5685 Fax number: 979-774-7713

Contact name: Terry Wiese

Address: 2130 E. William J. Bryan Parkway

City, State, and Zip Code: Bryan, TX 77802

B. Process information

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

<u>Ruffino's is a manufacturer and distributor of sausages, cured meats, smoked meats, and other prepared meats from carcasses and other materials secured from meat packaging plants. They are also a distributor of wholesale food service products [NAIC 311612] [SIC 2013]. They employ 53 people. Business hours are from 7:00 a.m. to 5:00 p.m. Monday through Friday and 7:00 a.m. to 12:00 p.m. Saturday's.</u>

C. Product and service information

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

Warehousing and cured meat manufacture

D. Flow rate information

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

Process Wastewater:

Discharge, in gallons/day: 4,297

Discharge Type: Continuous Batch Intermittent

Non-Process Wastewater:

Discharge, in gallons/day: 975

Discharge Type: Continuous Batch Intermittent

E. Pretreatment standards

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

Yes No

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

Yes No

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

Category:
Subcategories:

Category:
Subcategories:

Category:
Subcategories:

Category:
Subcategories:

Category:
Subcategories:

F. Industrial user interruptions

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

Yes No

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

<u>N/A</u>

A. Industrial user interruptions

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

Yes No

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

N/A

Section 3. Significant Industrial User (SIU) Information and Categorical Industrial User (CIU) (Instructions Page 100)

A. General information **Second IUs**

Company Name: CHI St. Joseph Laundry

SIC Code: 7211

Telephone number: 979-821-7470 Fax number:

Contact name: Mark Riggins

Address: 1351 N. Earl Rudder Freeway

City, State, and Zip Code: Bryan, TX 77803

B. Process information

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

CHI St. Joseph's Laundry Service provides a soiled laundry cleaning service [NAIC 812 & 812332] [SIC 7211]. Soiled laundry arrives daily from numerous health care facilities owned and operated by CHI St. Joseph Regional Health Care. The soiled laundry is separated and weighed prior to cleaning. Upon completion of this task the soiled laundry is transferred into four (4) Industrial Washing Machines [2-450 lbs., 1-200lbs., and 1-55 lbs.]. These machines go through an eight-stage process in cleaning the linen.

C. Product and service information

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

Commercial laundry services

D. Flow rate information

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

Process Wastewater:

Discharge, in gallons/day: 14,437

Discharge Type: Continuous Batch Intermittent

Non-Process Wastewater:

Discharge, in gallons/day: 515

Discharge Type: Continuous Batch Intermittent

E. Pretreatment standards

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

Yes No

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

Yes No

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

Category:
Subcategories:

Category:
Subcategories:

Category:
Subcategories:

Category:
Subcategories:

F. Industrial user interruptions

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

Yes

No

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

N/A

WORKSHEET 7.0 N/A

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY CLASS V INJECTION WELL INVENTORY/AUTHORIZATION FORM

Submit to:
TCEQ
IUC Permits Team
Radioactive Materials Division
MC-233
PO Box 13087
Austin, Texas 78711-3087
512-239-6466

For TCEQ Use Only
Reg. No. _____
Date Received _____
Date Authorized _____

Section 1. General Information (Instructions Page 102)

1. TCEQ Program Area

Program Area (PST, VCP, IHW, etc.):

Program ID:

Contact Name:

Phone Number:

2. Agent/Consultant Contact Information

Contact Name:

Address:

City, State, and Zip Code:

Phone Number:

3. Owner/Operator Contact Information

Owner Operator

Owner/Operator Name:

Contact Name:

Address:

City, State, and Zip Code:

Phone Number:

4. Facility Contact Information

Facility Name:

Address:

City, State, and Zip Code:

Location description (if no address is available):

Facility Contact Person:

Phone Number:

5. Latitude and Longitude, in degrees-minutes-seconds

Latitude: Longitude:

Method of determination (GPS, TOPO, etc.):

Attach topographic quadrangle map as attachment A.

6. Well Information

Type of Well Construction, select one:

- Vertical Injection
- Subsurface Fluid Distribution System
- Infiltration Gallery
- Temporary Injection Points
- Other, Specify:

Number of Injection Wells:

7. Purpose

Detailed Description regarding purpose of Injection System:

Attach a Site Map as Attachment B (Attach the Approved Remediation Plan, if appropriate.)

8. Water Well Driller/Installer

Water Well Driller/Installer Name:

City, State, and Zip Code:

Phone Number:

License Number: [REDACTED]

Section 2. Proposed Down Hole Design

Attach a diagram signed and sealed by a licensed engineer as Attachment C.

Table 7.0(1) -Down Hole Design Table

Name of String	Size	Setting Depth	Sacks Cement/Grout - Slurry Volume - Top of Cement	Hole Size	Weight (lbs/ft) PVC/Steel
Casing					
Tubing					
Screen					

Section 3. Proposed Trench System, Subsurface Fluid Distribution System, or Infiltration Gallery

Attach a diagram signed and sealed by a licensed engineer as Attachment D.

System(s) Dimensions: [REDACTED]

System(s) Construction: [REDACTED]

Section 4. Site Hydrogeological and Injection Zone Data

1. Name of Contaminated Aquifer: [REDACTED]
2. Receiving Formation Name of Injection Zone: [REDACTED]
3. Well/Trench Total Depth: [REDACTED]
4. Surface Elevation: [REDACTED]
5. Depth to Ground Water: [REDACTED]
6. Injection Zone Depth: [REDACTED]
7. Injection Zone vertically isolated geologically? Yes No

Impervious Strata between Injection Zone and nearest Underground

Source of Drinking Water:

Name: [REDACTED]

Thickness: [REDACTED]

8. Provide a list of contaminants and the levels (ppm) in contaminated aquifer
Attach as Attachment E.
9. Horizontal and Vertical extent of contamination and injection plume
Attach as Attachment F.
10. Formation (Injection Zone) Water Chemistry (Background levels) TDS, etc.
Attach as Attachment G.
11. Injection Fluid Chemistry in PPM at point of injection
Attach as Attachment H.
12. Lowest Known Depth of Ground Water with < 10,000 PPM TDS: [REDACTED]
[REDACTED]
13. Maximum injection Rate/Volume/Pressure: [REDACTED]
14. Water wells within 1/4 mile radius (attach map as Attachment I): [REDACTED]
[REDACTED]
15. Injection wells within 1/4 mile radius (attach map as Attachment J): [REDACTED]
[REDACTED]
16. Monitor wells within 1/4 mile radius (attach drillers logs and map as Attachment K): [REDACTED]
17. Sampling frequency: [REDACTED]
18. Known hazardous components in injection fluid: [REDACTED]

Section 5. Site History

1. Type of Facility: [REDACTED]
2. Contamination Dates: [REDACTED]
3. Original Contamination (VOCs, TPH, BTEX, etc.) and Concentrations (attach as Attachment L): [REDACTED]
4. Previous Remediation: [REDACTED]

Attach results of any previous remediation as attachment M

NOTE: Authorization Form should be completed in detail and authorization given by the TCEQ before construction, operation, and/or conversion can

begin. Attach additional pages as necessary.

Class V Injection Well Designations

- 5A07 Heat Pump/AC return (IW used for groundwater to heat and/or cool buildings)
- 5A19 Industrial Cooling Water Return Flow (IW used to cool industrial process equipment)
- 5B22 Salt Water Intrusion Barrier (IW used to inject fluids to prevent the intrusion of salt water into an aquifer)
- 5D02 Storm Water Drainage (IW designed for the disposal of rain water)
- 5D04 Industrial Stormwater Drainage Wells (IW designed for the disposal of rain water associated with industrial facilities)
- 5F01 Agricultural Drainage (IW that receive agricultural runoff)
- 5R21 Aquifer Recharge (IW used to inject fluids to recharge an aquifer)
- 5S23 Subsidence Control Wells (IW used to control land subsidence caused by ground water withdrawal)
- 5W09 Untreated Sewage
- 5W10 Large Capacity Cesspools (Cesspools that are designed for 5,000 gpd or greater)
- 5W11 Large Capacity Septic systems (Septic systems designed for 5,000 gpd or greater)
- 5W12 WTPP disposal
- 5W20 Industrial Process Waste Disposal Wells
- 5W31 Septic System (Well Disposal method)
- 5W32 Septic System Drainfield Disposal
- 5X13 Mine Backfill (IW used to control subsidence, dispose of mining byproducts, and/or fill sections of a mine)
- 5X25 Experimental Wells (Pilot Test) (IW used to test new technologies or tracer dye studies)
- 5X26 Aquifer Remediation (IW used to clean up, treat, or prevent contamination of a USDW)
- 5X27 Other Wells
- 5X28 Motor Vehicle Waste Disposal Wells (IW used to dispose of waste from a motor vehicle site - These are currently banned)
- 5X29 Abandoned Drinking Water Wells (waste disposal)

Attachment A

Copy of Application Fee Check

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, FINANCIAL ADMINISTRATION DIVISION, AUSTIN, TX 78711-

Vendor No. 56533

Invoice	Description	Date	Gross Amount	Discount	Net Amount Paid
CHKRQ 081920	PERMIT FEE - CITY OF BRYAN EAST SIDE WASTE	08/19/2020	\$2,050.00	\$0.00	\$2,050.00
Grand Totals			\$2,050.00	\$0.00	\$2,050.00

Detach at Perforation Before Depositing Check

THE FACE OF THIS DOCUMENT HAS A COLORED BACKGROUND ON WHITE PAPER, A VOID PANTOGRAPH AND MICROPRINTING. THE BACK OF THIS DOCUMENT HAS AN ARTIFICIAL WATERMARK - HOLD AT AN ANGLE TO VIEW.

CDM Smith
 75 State Street, Suite 701
 Boston, Massachusetts 02109

Bank of America
 61-44/119

Check No. 1852669

Check Date
 08/27/2020

Check Amount
 \$ *****2,050.00

PAY *Two Thousand Fifty AND 00/100*

TO THE ORDER OF
**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
 FINANCIAL ADMINISTRATION DIVISION
 CASHIER'S OFFICE, MC-214PO BOX 13088
 AUSTIN, TX 78711-3088 United States**

Chris Cantor

⑈0 185 2669⑈ ⑆0 1 1900445⑆ 0000000 19466⑈

Bryan 000107

Attachment B

TCEQ Core Data Form

23. Street Address of the Regulated Entity: (No PO Boxes)	City of Bryan							
	300 S Texas Avenue							
	City	Bryan	State	TX	ZIP	77803	ZIP + 4	3937
24. County	Brazos							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	The facility is located approximately 1,400 linear feet along Cole Lane north east of the intersection of Australia Lane and Cole Lane.								
26. Nearest City	Bryan				State	Tx		Nearest ZIP Code	77805
27. Latitude (N) In Decimal:	Degrees			Minutes			Seconds		
	30	38	58.8	28. Longitude (W) In Decimal:			Degrees		
				96	Minutes		Seconds		
					13	53.3			
29. Primary SIC Code (4 digits)	30. Secondary SIC Code (4 digits)		31. Primary NAICS Code (5 or 6 digits)			32. Secondary NAICS Code (5 or 6 digits)			
			221320						
33. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.)									
Municipal Government									
34. Mailing Address:	City of Bryan								
	P.O. Box 1000								
	City	Bryan	State	TX	ZIP	77805	ZIP + 4	1000	
35. E-Mail Address:		kregister@bryantx.gov							
36. Telephone Number			37. Extension or Code			38. Fax Number (if applicable)			
(979) 209-5100						() -			

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


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

SECTION IV: Preparer Information

40. Name:	Allen Woelke		41. Title:	Vice President	
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address		
(512) 652-5331		(512) 345-1483	WoelkeAD@cdmsmith.com		

SECTION V: Authorized Signature

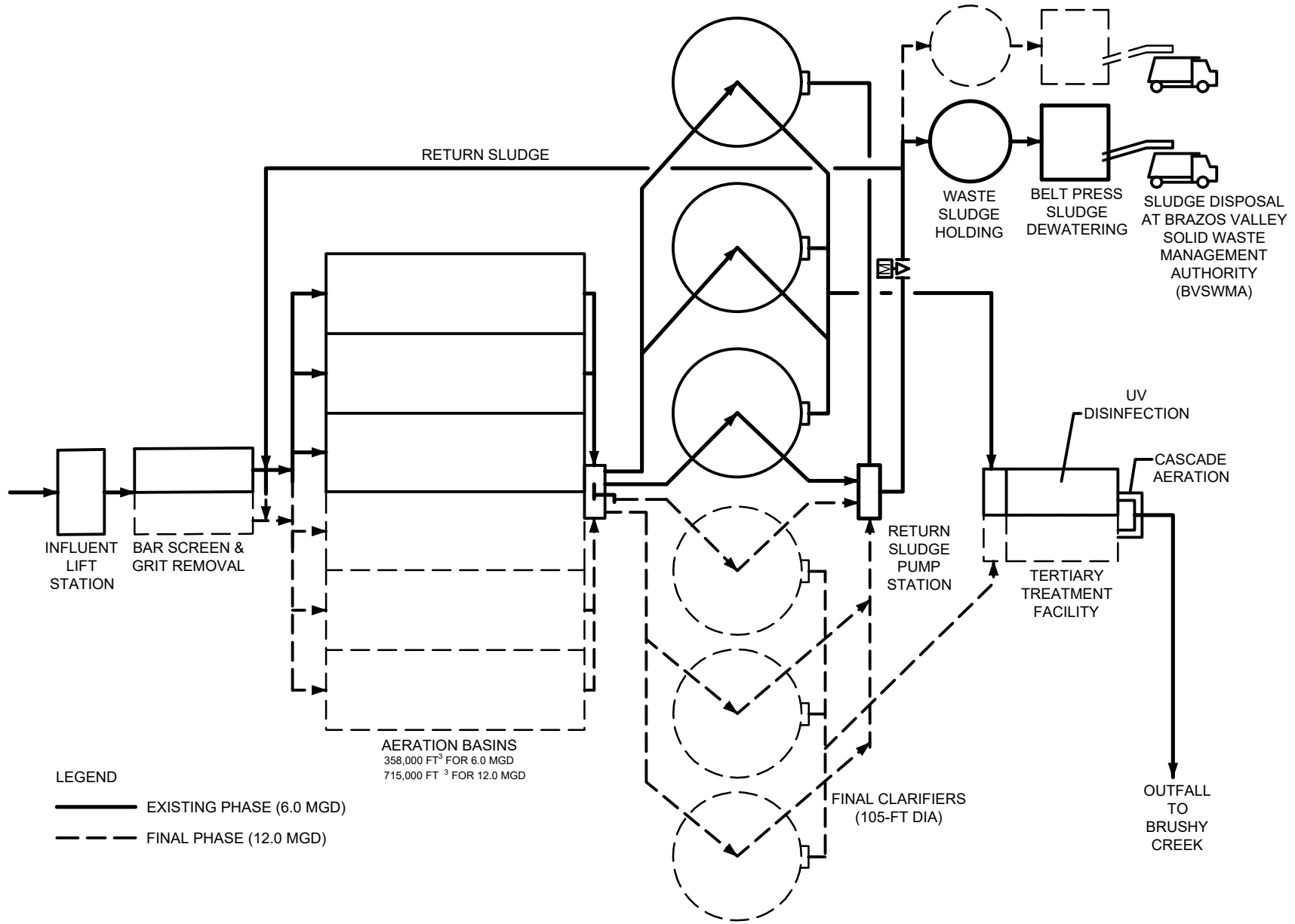
46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	City of Bryan		Job Title:	City Manager	
Name (In Print):	Kean Register			Phone:	(979) 209- 5100
Signature:				Date:	9/17/2020

Bryan 000109

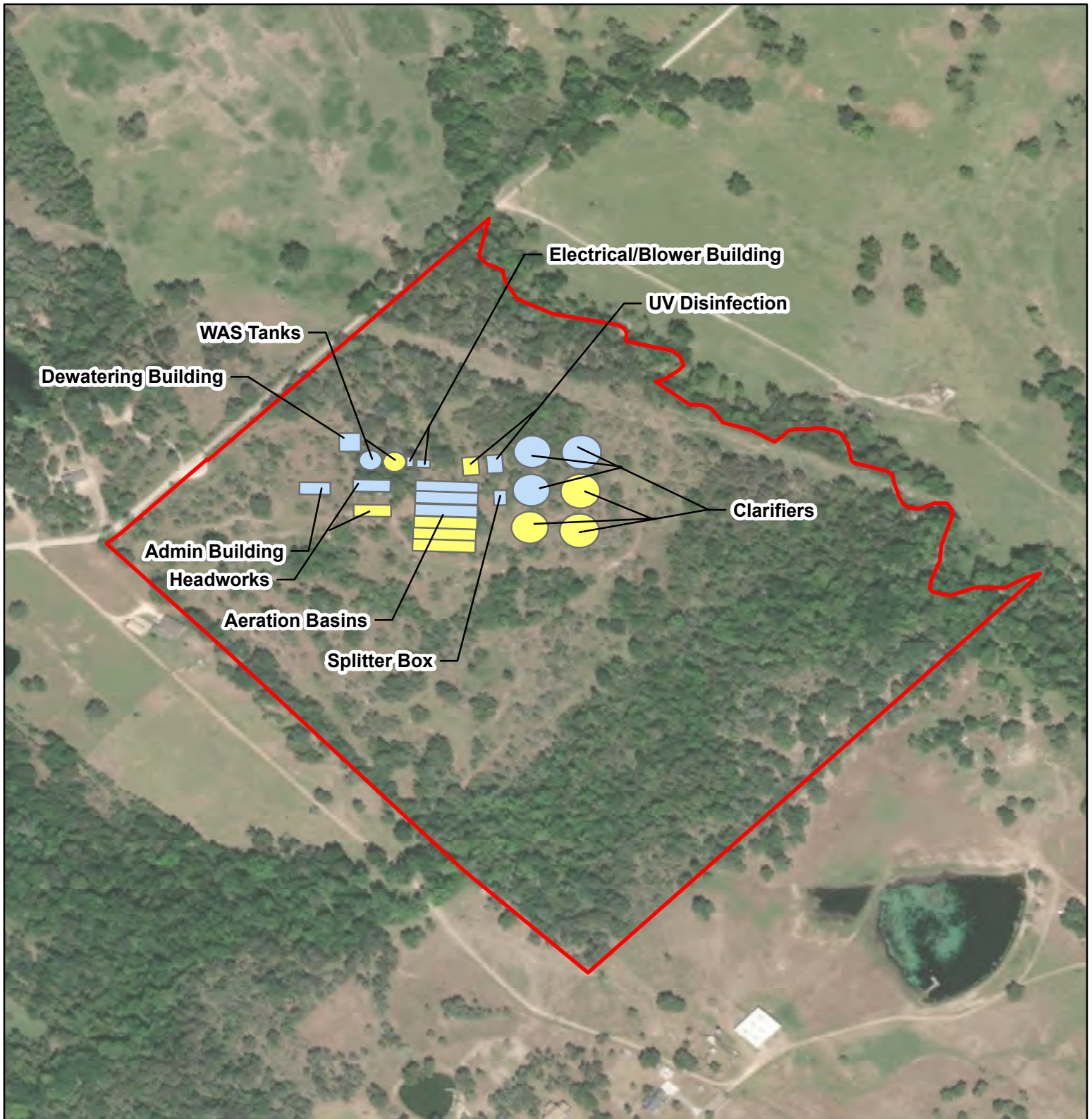
Attachment C

Schematic of Wastewater Flow



Attachment D

WWTP Site Layout and Service Area



Legend

- Existing Treatment Units
- Future Treatment Units
- Property Boundary



**FIGURE D-1
WWTP Site Layout**





Bryan 000113

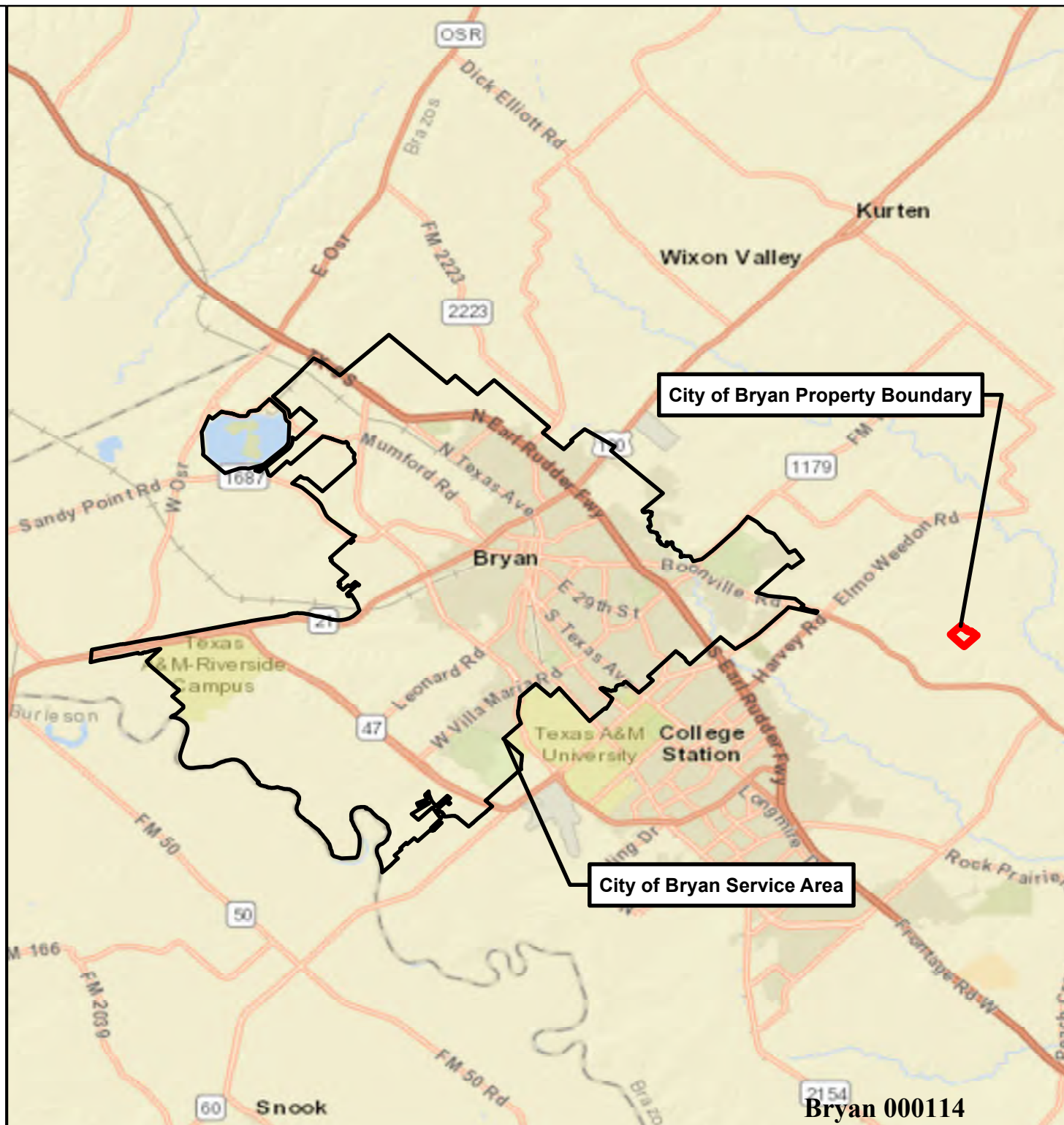
FIGURE D-2
Service Area



0 1 2 4
Miles

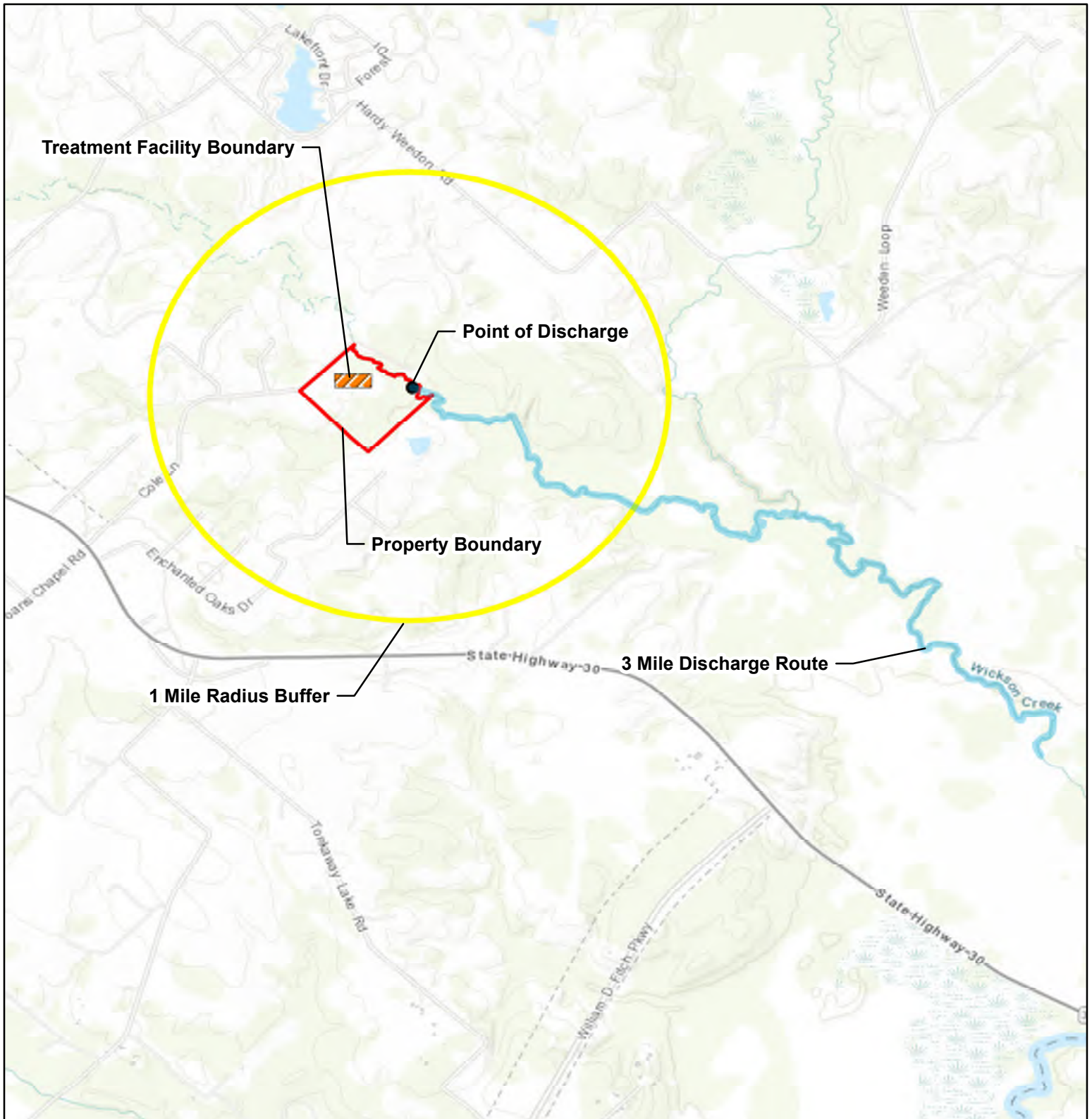
Legend

-  City of Bryan Service Area
-  City of Bryan Property Boundary








Attachment E

USGS Topographic Map



Legend

-  3 Mile Discharge Route
-  Point of Discharge
-  1 Mile Radius Buffer
-  Treatment Facility Boundary
-  Property Boundary

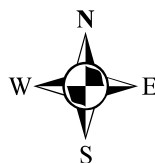


FIGURE E
USGS Topographic Map

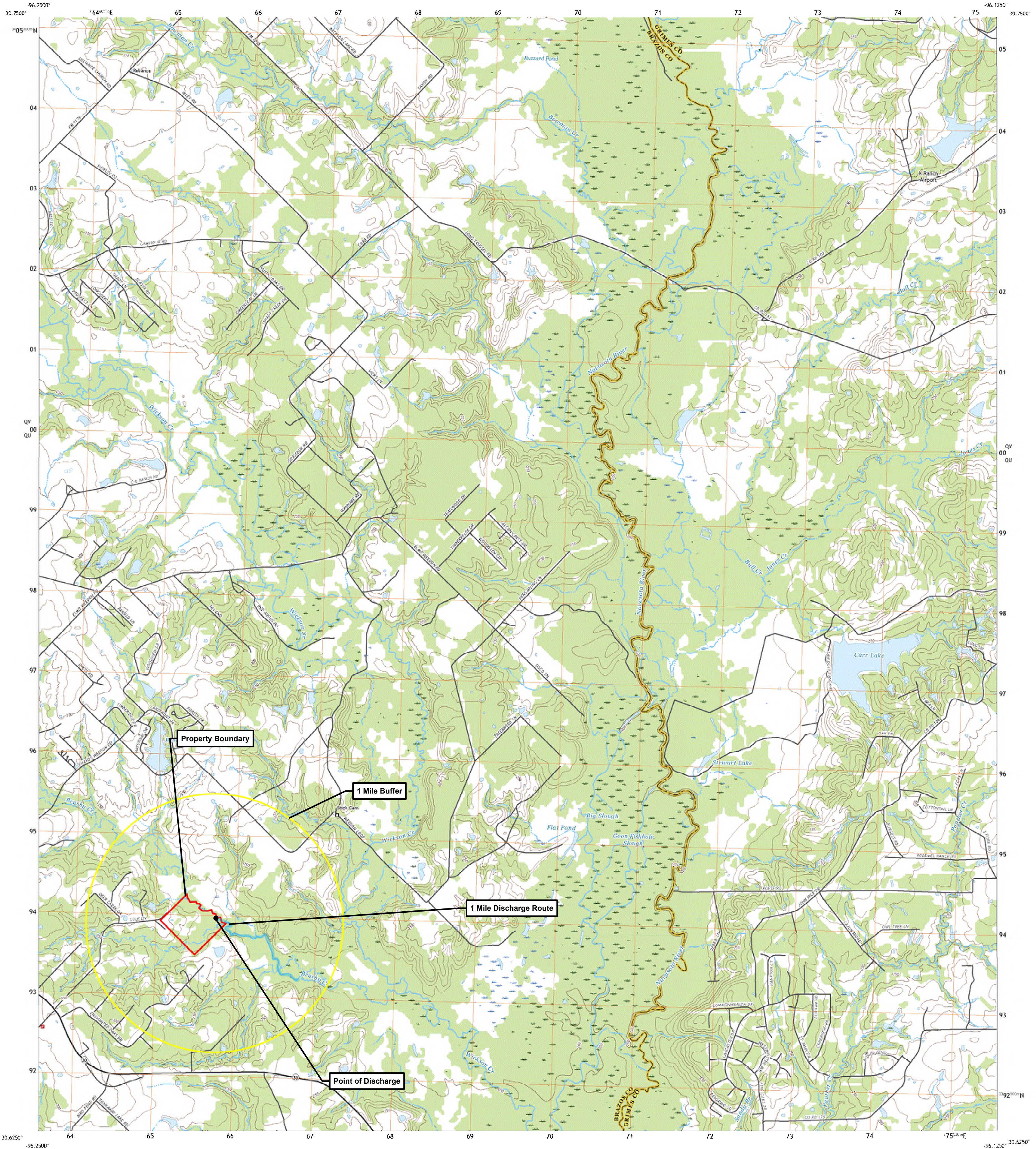


Bryan 000116

Attachment F

USGS 7.5 Minute Quadrangle Map

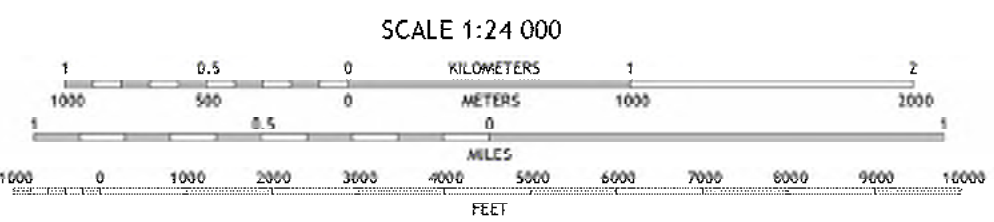
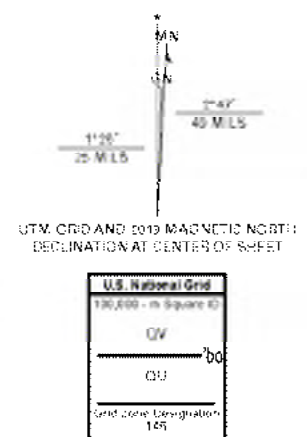
Note: This is a 22"x28" map.



Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84) Projection and
1 000-meter grid/Universal Transverse Mercator, Zone 14R
This map is not a legal document. Boundaries may be
generalized for this map scale. Private land-use government
reservations may not be shown. Obtain permission before
entering private lands.

Imagery:NAIP, September 2016 - November 2016
Roads:U.S. Census Bureau, 2015
Names:GNS, 1979 - 2018
Hydrography:National Hydrography Dataset, 2002 - 2018
Contours:National Elevation Dataset, 2004
Boundaries:Multiple sources; see metadata file 2016 - 2017
Wetlands:FWS National Wetlands Inventory 1981 - 1982



CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988
This map was produced to conform with the
National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18

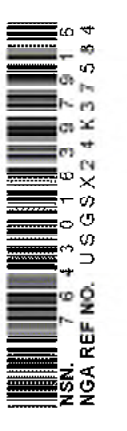
ROAD CLASSIFICATION

- Expressway (thick red line)
- Secondary Hwy (red line)
- Ramp (red line with arrow)
- Interstate Route (blue shield)
- Local Connector (thin black line)
- Local Road (black line)
- AWD (black line with cross-ticks)
- US Route (black line with shield)
- State Route (black line with shield)

QUADRANGLE LOCATION

1	2	3	1 Kirtan
4	5	5	2 Clear Lake
6	7	8	3 Iola
			4 Bryan East
			5 March
			6 Wetborn
			7 Ferguson Crossing
			8 Carlos

RELiance, TX
2019



Attachment G







Affected Landowner Map and Affected Landowner List

FIGURE G-1
Affected Landowner Map

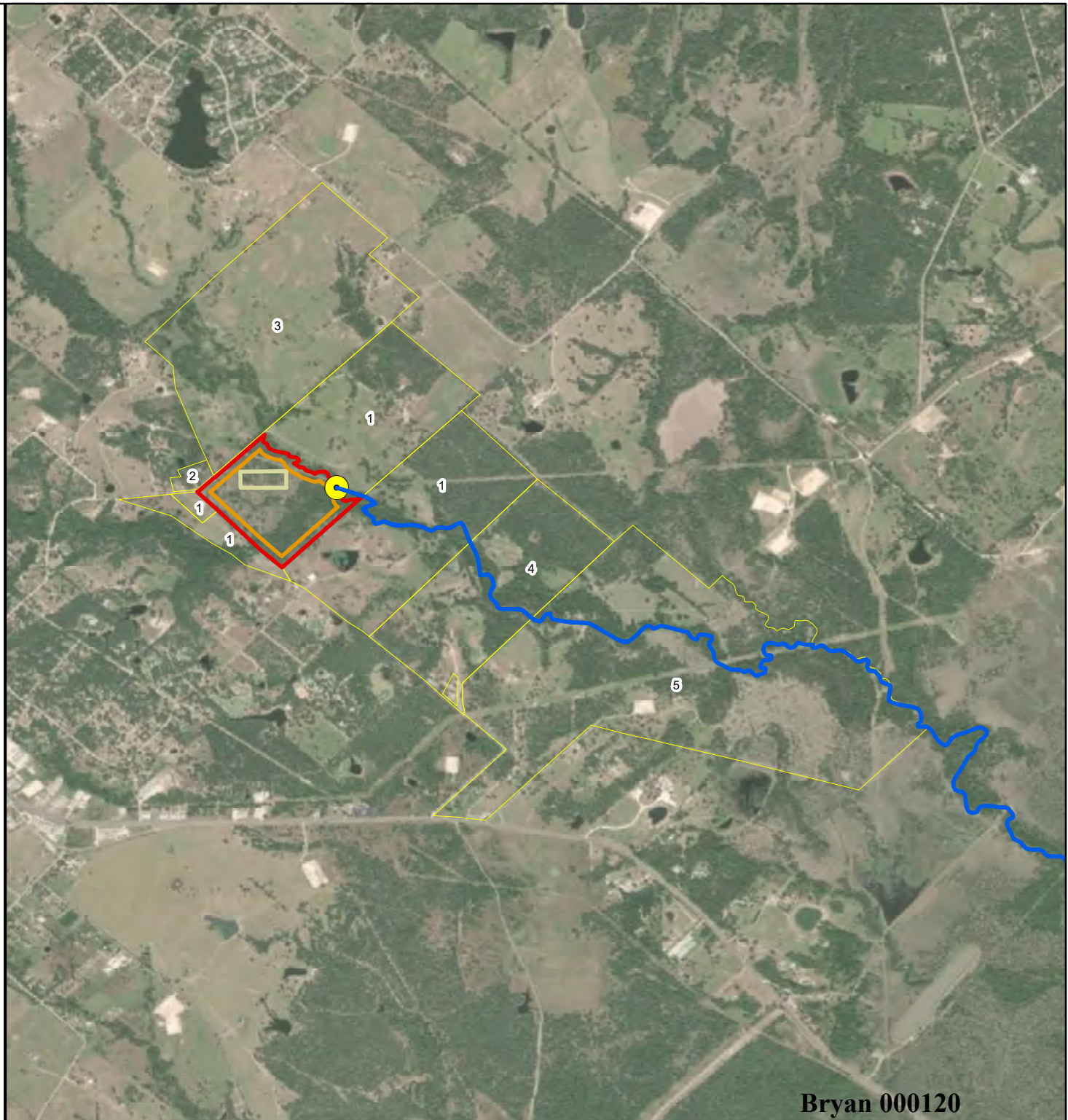


0 0.25 0.5
Miles

Legend

-  Discharge Route
-  Point of Discharge
-  City of Bryan WWTP Boundary
-  City of Bryan Property Boundary
-  150 ft. Buffer Zone
-  Surrounding Land Owner

See Figure G-2 For Addresses



Bryan 000120

LANDOWNER LIST

1. DAVID JAMES HYDEN & MARGARET GAIL
6300 COLE LN
COLLEGE STATION, TX 77845

2. GARY N & MARY LOUISE SIMS
5565 COLE LN
COLLEGE STATION, TX 77845

3. TAWS PROPERTIES LLC
7754 HARDY WEEDON RD
COLLEGE STATION, TX 77845

4. STEVEN T WRIGHT
2805 EARL RUDDER FWY S
COLLEGE STATION, TX 77845

5. GLEN MOLITOR
13333 STATE HIGHWAY 30
COLLEGE STATION, TX 77845

Landowner Data Source: Brazos Central
Appraisal District
(<https://www.brazoscad.org/gis/>),
downloaded March 2, 2020

DAVID JAMES HYDEN & MARGARET GAIL
6300 COLE LN
COLLEGE STATION TX 77845

DAVID JAMES HYDEN & MARGARET GAIL
6300 COLE LN
COLLEGE STATION TX 77845

DAVID JAMES HYDEN & MARGARET GAIL
6300 COLE LN
COLLEGE STATION TX 77845

DAVID JAMES HYDEN & MARGARET GAIL
6300 COLE LN
COLLEGE STATION TX 77845

GARY N & MARY LOUISE SIMS
5565 COLE LN
COLLEGE STATION TX 77845

GARY N & MARY LOUISE SIMS
5565 COLE LN
COLLEGE STATION TX 77845

GARY N & MARY LOUISE SIMS
5565 COLE LN
COLLEGE STATION TX 77845

GARY N & MARY LOUISE SIMS
5565 COLE LN
COLLEGE STATION TX 77845

TAWS PROPERTIES LLC
7754 HARDY WEEDON RD
COLLEGE STATION TX 77845

TAWS PROPERTIES LLC
7754 HARDY WEEDON RD
COLLEGE STATION TX 77845

TAWS PROPERTIES LLC
7754 HARDY WEEDON RD
COLLEGE STATION TX 77845

TAWS PROPERTIES LLC
7754 HARDY WEEDON RD
COLLEGE STATION TX 77845

STEVEN T WRIGHT
2805 EARL RUDDER FWY S
COLLEGE STATION TX 77845

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COLLEGE STATION TX 77845

STEVEN T WRIGHT
2805 EARL RUDDER FWY S
COLLEGE STATION TX 77845

STEVEN T WRIGHT
2805 EARL RUDDER FWY S
COLLEGE STATION TX 77845

GLEN MOLITOR
13333 STATE HIGHWAY 30
COLLEGE STATION TX 77845

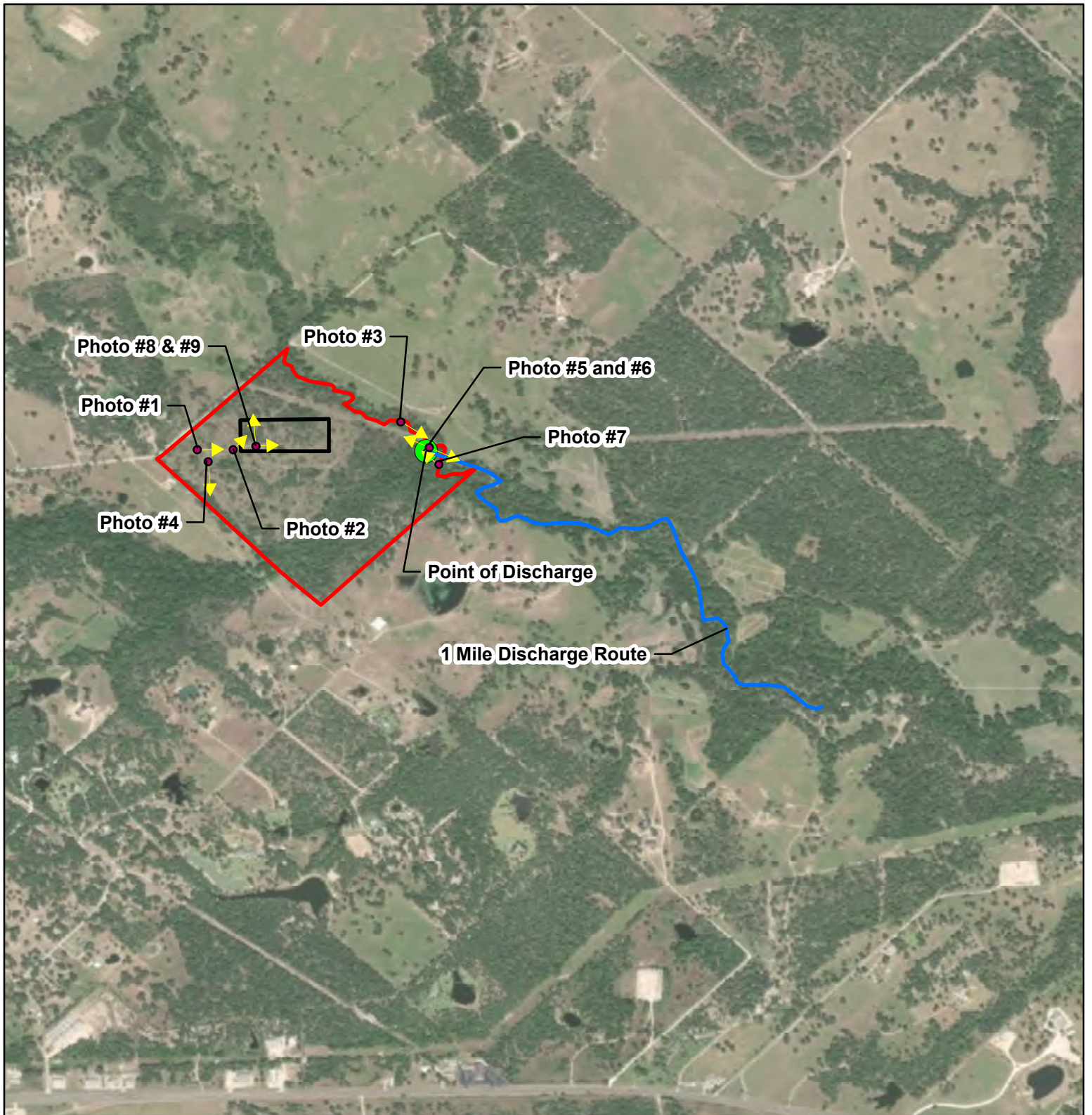
GLEN MOLITOR
13333 STATE HIGHWAY 30
COLLEGE STATION TX 77845

GLEN MOLITOR
13333 STATE HIGHWAY 30
COLLEGE STATION TX 77845

GLEN MOLITOR
13333 STATE HIGHWAY 30
COLLEGE STATION TX 77845

Attachment H

Photo Locations and Original Photographs



Legend

- Photo Locations
- Directions of Photo
- Discharge Route
- Point of Discharge
- ▭ Treatment Facility Boundary
- ▭ Property Boundary

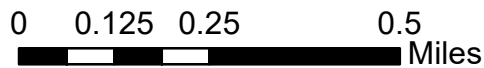
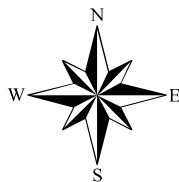


FIGURE H
Photo Locations



Bryan 000124



Photo 1_ View of the proposed treatment unit location looking east.



Photo 2_ View of the proposed treatment unit location looking north east.

Attachment H-2
Original Photograph

**CDM
Smith**

Bryan 000125



Photo 3_ View of looking down power line ROW looking southeast.



Photo 4_ Overall view of the pond on the property looking south.

Attachment H-2
Original Photograph

**CDM
Smith**

Bryan 000126



Photo 5_ Proposed point of discharge looking upstream.



Photo 6_ Proposed point of discharge looking downstream.



Photo 7_ Downstream of the discharge point looking upstream.



Photo 8_ View of the cabin located on the property looking north.



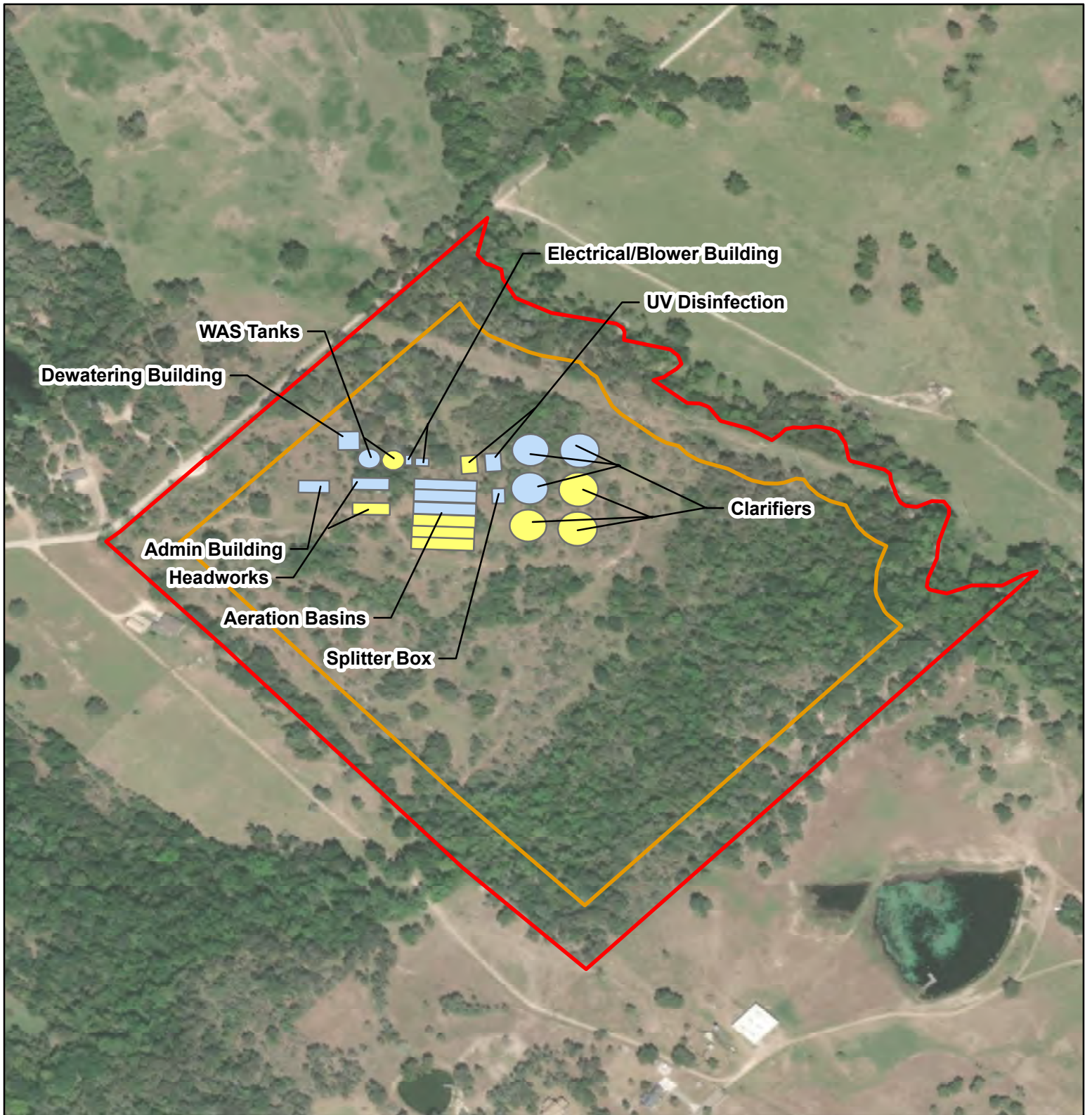
Photo 9 _ View of the cabin located on the property looking east.

Attachment H-2
Original Photograph

**CDM
Smith**

Bryan 000129

Attachment I
Buffer Zone Map



Legend

- Existing Treatment Units
- Future Treatment Units
- Property Boundary
- 150 ft. Buffer Zone, as established

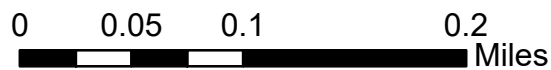


FIGURE I
Buffer Zone Map

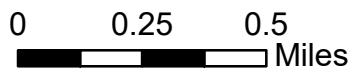
Attachment J

Updated Map of Nearby WWTP and Certified Letter



Legend

- Brushy Creek WWTP
- Glen Oaks MHP WWTP



**Figure J-2
Nearby WWTPs**



Bryan 000133

December 4, 2020

ILP College Station LLC
PO Box 540264
Orlando, FL 32854



Subject: Notice of Proposed Wastewater Treatment Plant

To whom it may concern:

The City of Bryan is in need of an additional wastewater treatment plant (WWTP). Growth in Bryan is moving eastward, increasing the need for expanded treatment capacity on the City's east side. Furthermore, the City's existing WWTP that provides service to the east side is nearing capacity.

The proposed treatment plant has an interim design flow of 6 million gallons per day (mgd) and a final design flow of 12 mgd. Because the proposed treatment plant location is within three miles of your registered treatment facility (WQ0012296001), we are required by the Texas Commission on Environmental Quality (TCEQ) to notify you and to determine if your plant is able or willing to expand to accept the volume of the wastewater proposed in our application.

Because the Glen Oaks Mobile Home Park Wastewater Treatment Facility has a permitted flow of 0.013 mgd, it is assumed that your plant would not be able to scale to the capacity needed for the expected wastewater flows. Therefore, a new wastewater treatment plant is necessary in addition to your permitted facility to support the future wastewater flows in the area. Please confirm if our assumptions are correct in a notarized written response no later than December 23, 2020, per TCEQ requirements.

If you have any questions on this matter, please contact Allen Woelke at 512.346.1100 or WoelkeAD@cdmsmith.com. Thank you for your time.

Sincerely,

A handwritten signature in blue ink that reads "Jayson Barfknecht".

Jayson Barfknecht, Ph.D., P.E.
Director of Public Works
City of Bryan

cc: Allen Woelke, P.E., BCEE – CDM Smith

Bryan 000134

From: [Ngan, Christine](#)
To: velma.fuller@tceq.texas.gov; Gordon.Cooper@tceq.texas.gov
Cc: [Woelke, Allen](#)
Subject: FW: City of Bryan WWTP
Date: Tuesday, December 15, 2020 4:54:00 PM

Hello Velma and Gordon,

I am forwarding this email as a part of the NOD Response for proposed East Side WWTP (WQ0015930001) under the City of Byran (CN600373310, RN101881910). In the NOD response, we had sent the certified letter to the Glenn Oaks MHP. They have since responded that they are not able to scale to the capacity needed for the expected wastewater flows that the proposed East Side WWTP will serve.

Is this email sufficient to meet the criteria, or do we need to receive a notarized letter from Deucie Bies?

Thank you,
Christine Ngan

From: Deucie Bies <deucie@ivielane.us>
Sent: Monday, December 14, 2020 7:55 PM
To: Woelke, Allen <WoelkeAD@cdmsmith.com>
Subject: City of Bryan WWTP

Allen, thank you for taking my call earlier today. We received a letter from City of Bryan dated December 4, 2020 regarding their proposed wwtp. Our wwtp has a capacity of 0.025 gpd and we would not be able to scale to the capacity needed for the expected wastewater flows. Thanks.

Deucie Bies, President

PO Box 540264

Orlando, FL 32854-0264

Voice: (407) 517-4811 | Text: (407) 337-3858 | Fax: (407) 337-8003

deucie@IvieLane.us | www.IvieLane.us

The logo for IVIE LANE features a stylized leaf icon to the left of the text "IVIE LANE" in a bold, serif font.

Bryan 000135

Attachment K

Updated Design Calculations

Brushy Creek WWTP (Phase 1) Design Calculations
DESIGN CALCULATIONS



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

<u>Flow</u>	<u>Gallons Per Day</u>	<u>Gallons Per Minute</u>	
Average Daily Flow (Qave)	6,000,000	4,167	
Peak 2-Hour Flow (Qpk)	24,000,000	16,667	
<u>Loading</u>	<u>Pounds Per Day</u>	<u>Concentration***</u> (based on ADF flow)	
Average BOD ₅	14,336	287	ADF Peaking Factor
Max Month BOD ₅ *	17,490	350	1.22
Max Day BOD ₅ **	23,512	470	1.64
Average NH ₃ -N	1,486	29.7	
Max Day NH ₃ -N**	2,690	54	1.81

*Basis of design for aeration basin volume

**Basis of design for aeration blowers

***Data from Burton Creek WWTP Influent Data from Jan 2012 thru March 2015. BOD estimated as 120% of cBOD.

Process Design – The treatment plant has been designed to produce an effluent quality in compliance with the proposed permitted Daily Avg parameters of: CBOD₅ = 10 mg/l; TSS = 15 mg/l; NH₃-N = 2 mg/l. The minimum reactor temperature is 18°. The anticipated operating ranges for MLSS and RAS in mg/l are 3,500 mg/l and 10,000 mg/l, respectively. Other assumptions include 0.23 lb O₂/lb air, 0.075 lb air/cubic foot, and fine bubble oxygen transfer efficiency of 2%/ft.

Aeration Basins Sizing using Volumetric Flux Design

Parameter	Value	Unit	Comment
Temperature	18	°C	
SRT	4.76	days	Based on Figure 30 TAC 217.164 (c) (3) and (4); eq. F.5
Yield	0.90		Based on Figure 30 TAC 217.164 (c) (3), Table F.8
F/M Ratio	0.23	lbsBOD5/lbs Suspended Solids	Based on Figure 30 TAC 217.164 (c) (3)
MLSS	3500	mg/L	

Equation F.6.

Required Aeration Basin Volume

V_a = 344,075 ft³

$$V_a = \frac{1,000,000(BODL)(Y)(SRT)}{62.4MLSS}$$

Actual Combined Volume of Aeration Basins 1 thru 3

179' x 37' x 18' SWD = 357,642 ft³
6,623 ft²

Where:

V_a = Volume of aeration basin, cubic feet
 BODL = Design biochemical oxygen demand (BOD) load per day, pounds
 Y = yield of solids per unit BOD removed
 SRT = required solids retention time, days
 MLSS = mixed liquor suspended solids, milligrams per liter

Figure: 30 TAC §217.164(c)(3)

Table F.8. - Effect of Temperature on SRT, Net Solids Production, and Food to Mass Ratio

Temperature, (degrees C)	SRT, days	Net Solids Production, Y = .965-0.013(SRT)	Food/Mass Ratio, lbsBOD ₅ /lbs Suspend Solids/day = 1/(Y*SRT)
18	4.76	0.90	0.233
17	5.25	0.90	0.212
16	5.79	0.89	0.194
15	6.38	0.88	0.178
14	7.04	0.87	0.163
13	7.77	0.86	0.150
12	8.56	0.85	0.137
11	9.45	0.84	0.126
10	10.42	0.83	0.116

This table uses the maximum growth rate of *Nitrosomonas* calculated using Equations 3-14 from EPA Manual, *Nitrogen Control*, EPA/625/R-93/010, 9/93, p. 90, shown in Figure: 30 TAC §217.164(c)(4), Equation F.5.

Conclusion:

1. The combined volume of Package 1 aeration basins is adequate to handle the BOD5 loading for the Phase 1 ADF.

Air Requirements (217.155.F.2)

Average O ₂ R	1.65	lbs O ₂ / lbs BOD ₅
Design O ₂ R	1.69	lbs O ₂ / lbs BOD ₅

$$O_2R = \frac{1.2(BOD_5) + 4.3(NH_3 - N)}{BOD_5}$$

Aeration Blower Sizing

TCEQ minimum oxygen requirements	1.65 lb O ₂ /lb BOD ₅	
TCEQ mixing requirements	20 SCFM/1000 cubic feet	per 30 TAC 217(b)(2)(3)(B)

Required Airflowrate (RAF) - Package 1 [From Figure 30 TAC 217.155(b)(2)(C)]

$$\begin{aligned}
 WOTE &= CWOTE \times 0.65 \quad \text{[for fine bubble diffusers]} \\
 CWOTE &= 2\%/\text{ft submergence} \quad \text{[Estimate for fine bubble diffusers]} \\
 CWOTE &= 34.20\% \quad \text{Depth of diffuser assumed 0.9ft from floor} \\
 RAF &= (\text{PPD BOD}_5) \times (\text{O}_2/\text{lb BOD}_5) / (WOTE \times 0.23 \times 0.075 \times 1440) \\
 RAF &= (23,512 \text{ lb/Day BOD}_5) \times (1.65 \text{ lb O}_2/\text{lb BOD}_5) / (0.3420 \times 0.65 \times 0.23 \times 0.075 \times 1440) \\
 RAF &= 7,007 \text{ SCFM (Package 1)}
 \end{aligned}$$

Aeration Basins

Required Aeration Air per TCEQ Sizing	7,007 SCFM
Max Day air, scfm	16,345 Max Month Air * (Max Day O ₂ /Max Month O ₂)
Total Capacity of Blower in Blower Building No. 1	8,172 SCFM, 2D+1S
Total Capacity of All Duty Blowers	16,345 SCFM, 2D+1S

Conclusion:

1. The proposed blower design provides sufficient air to meet TCEQ requirements.

Clarifier Sizing using Volumetric Flux Design

<u>Parameter</u>	<u>Value</u>	<u>Unit</u>	<u>Comment</u>
ORT9 (@ selected MLSS 3500 mg/L and underflow rate 300 gpd/sf)	637	gpd/sf	Based on Figure F.1 30 TAC 217.164 (e) (2)(I) (Table F.9)
ORT10 (@ selected MLSS 3500 mg/L)	971	gpd/sf	Based on Figure 2 30 TAC 217.164 (e) (2)(I) (Table F.10)
min DT	1.8	hours	Based on Figure 30 TAC 217.154 (c) (1) (Table F.2)

<https://artifacts.casetext.com/artifacts/2020201504817-5>
<https://artifacts.casetext.com/artifacts/2020201504817-9>

$$A_c = \frac{Q_d}{OR_{15}}$$

Where:
 A_c = clarifier area (square feet(sf)) based on max 30 day flow
 Q_d = design flow (gallons per day)
 OR₁₅ = weir overflow rate for selected underflow rate and mixed liquor suspended solids (MLSS) (gallons per day per square foot (gpd/sf)) from Table F.5, in Figure 1: 30 TAC §217.164(e)(2)(I)

Required Clarifier Area at Design Flow

Clarifiers area 9,419 ft²

Required Clarifier Area at Peak Flow at 3500 mg/L MLSS

Clarifiers area 24,717 ft²

Design total clarifier area 25,977 ft² total for 105ft Clarifiers 1 thru 3

$$A_c = \frac{Q_p}{OR_{MLSS}}$$

Where:
 A_c = clarifier area (sf), based on peak flow
 Q_p = peak flow, million gallons per day
 OR_{MLSS} = weir overflow rate for selected MLSS (gpd/sf) from Table F.10, in Figure 2: 30 TAC §217.154(c)(2)(I)

Conclusion:

1. The proposed clarifiers are adequately sized to handle the solids loading
2. The clarifiers could sustain a significantly higher MLSS at design flow

Volume required for Clarifiers based on Minimum detention time

V_c 240,642 ft³

Proposed Volume for Clarifiers (Phase 1)

Diameter of Clarifier 1 thru 3 105 ft

SWD of Clarifier 1 thru 3 15.5 ft, 30 TAC 217.152 (g) (2) (A) requires 10ft min for SA > 300sf

Total Available Volume 402,644 ft³

$$V_c = \frac{(Q_p / 24)(minDT)}{(7.48)}$$

Where:
 V_c = volume of the clarifier(s), cubic feet, based on minDT
 Q_p = peak flow, gallons per day
 minDT = minimum detention time (hours) from Table F.2, in Figure: 30 TAC §217.154(c)(1) of this title (relating to Aeration Basin and Clarifier Sizing--Traditional Design)

Conclusion:

1. The proposed clarifiers are adequately sized to handle the minimum detention time required

UV Contactor Disinfection

Mfr required contact time (min 5 sec for UV dose of 30 mJ/cm²)

5 seconds, assuming 126 e-coli and 24 mgd peak flow

Notes:

1. Will be consistent with the specific bioassay.

Aerated Sludge Holding Tanks

The aerated sludge holding tanks are not being designed to meet Class B sludge requirements in accordance with TCEQ Chapter 312 rules. The City intends to dispose of dewatered sludge to a landfill, so the digesters will function as aerated holding tanks for the dewatering process. A design of 5 days HRT was used for storage to provide flexibility with dewatering operations.

Air Requirements

TCEQ minimum digester requirements 20 SCFM/1000 cubic feet of digester volume

Aerobic Digesters

Pounds of dry sludge / day	12,473	
Pounds of wet sludge / day, assume 1% solids	1,247,300	
Produced gal of wet sludge / day	149,556	
Digester volume, gal for 5 day HRT	747,782	
Digester volume, ft ³	99,971	
Digester area, ft ² w/ 18 ft SWD	5,554	
Digester diameter, ft	84	Rounded up to 85ft
Digester air required (20 SCFM/1000 ft ³) per TCEQ	1,999	
Total Digester air provided (SCFM)	2,000	1D/1S; each at 2000 SCFM

Notes:

Sludge data pulled from Sewage Sludge Solids Management Plan.

Brushy Creek WWTP (Phase 2) Design Calculations
DESIGN CALCULATIONS

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

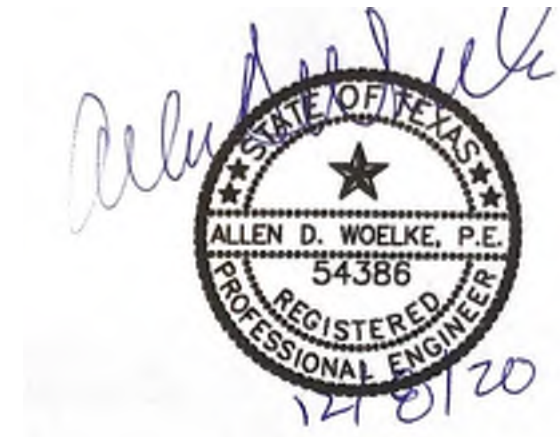
<u>Flow</u>	<u>Gallons Per Day</u>	<u>Gallons Per Minute</u>	
Average Daily Flow (Qave)	12,000,000	8,333	
Peak 2-Hour Flow (Qpk)	48,000,000	33,333	
<u>Loading</u>	<u>Pounds Per Day</u>	<u>Concentration***</u> (based on ADF flow)	
Average BOD ₅	28,673	287	ADF Peaking Factor
Max Month BOD ₅ *	34,981	350	1.22
Max Day BOD ₅ **	47,024	470	1.64
Average NH ₃ -N	2,972	29.7	
Max Day NH ₃ -N**	5,380	54	1.81

*Basis of design for aeration basin volume

**Basis of design for aeration blowers

***Data from Burton Creek WWTP Influent Data from Jan 2012 thru March 2015. BOD estimated as 120% of cBOD.

Process Design - The treatment plant has been designed to produce an effluent quality in compliance with the proposed permitted Daily Avg parameters of: CBOD₅ = 10 mg/l; TSS = 15 mg/l; NH₃-N = 2 mg/l. The minimum reactor temperature is 18°. The anticipated operating ranges for MLSS and RAS in mg/l are 3,500 mg/l and 10,000 mg/l, respectively. Other assumptions include 0.23 lb O₂/lb air, 0.075 lb air/cubic foot, and fine bubble oxygen transfer efficiency of 2%/ft.



Aeration Basins Sizing using Volumetric Flux Design

Parameter	Value	Unit	Comment
Temperature	18	°C	
SRT	4.76	days	Based on Figure 30 TAC 217.164 (c) (3) and (4); eq. F.5
Yield	0.90	lbsBOD ₅ /lbs Suspended	Based on Figure 30 TAC 217.164 (c) (3), Table F.8
F/M Ratio	0.23	Solids	Based on Figure 30 TAC 217.164 (c) (3)
MLSS	3500	mg/L	

Equation F.6.

$$V_a = \frac{1,000,000(BODL)(Y)(SRT)}{62.4MLSS}$$

Required Aeration Basin Volume

V_a 688,151 ft³, Max Month

Actual Combined Volume of Aeration Basins 1 thru 6

179' x 37' x 18' SWD 715,284 ft³, 18ft SWD
7,240 ft²

Where:

- V_a = Volume of aeration basin, cubic feet
- BODL = Design biochemical oxygen demand (BOD) load per day, pounds
- Y = yield of solids per unit BOD removed
- SRT = required solids retention time, days
- MLSS = mixed liquor suspended solids, milligrams per liter

Figure: 30 TAC §217.164(c)(3)

Table F.8. - Effect of Temperature on SRT, Net Solids Production, and Food to Mass Ratio

Temperature, (degrees C)	SRT, days	Net Solids Production, Y = .965-0.013(SRT)	Food/Mass Ratio, lbsBOD ₅ /lbs Suspend Solids/day = 1/(Y*SRT)
18	4.76	0.90	0.233
17	5.25	0.90	0.212
16	5.79	0.89	0.194
15	6.38	0.88	0.178
14	7.04	0.87	0.163
13	7.77	0.86	0.150
12	8.56	0.85	0.137
11	9.45	0.84	0.126
10	10.42	0.83	0.116

This table uses the maximum growth rate of *Nitrosomonas* calculated using Equations 3-14 from EPA Manual, *Nitrogen Control*, EPA/625/R-93/010, 9/93, p. 90, shown in Figure: 30 TAC §217.164(c)(4), Equation F.5.

Conclusion:

1. The combined volume of Package 1 aeration basins is adequate to handle the BOD5 loading for the Phase 1 ADF.

Air Requirements (217.155.F.2)

Average O ₂ R	1.65	lbs O ₂ / lbs BOD ₅
Design O ₂ R	1.69	lbs O ₂ / lbs BOD ₅

$$O_2R = \frac{1.2(BOD_5) + 4.3(NH_3 - N)}{BOD_5}$$

Aeration Blower Sizing

TCEQ minimum oxygen requirements	1.65 lb O ₂ /lb BOD ₅
TCEQ mixing requirements	20 SCFM/1000 cubic feet

Required Airflowrate (RAF) - Package 1 [From Figure 30 TAC 217.155(b)(2)(C)]

WOTE = CWOTE x 0.65 [for fine bubble diffusers]
 CWOTE = 2%/ft submergence [Estimate for fine bubble diffusers]
 CWOTE = 34.20% Depth of diffuser assumed 0.9ft from floor
 RAF = (PPD BOD₅) x (O₂ /lb BOD₅) / (WOTE x 0.23 x 0.075 x 1440)
 RAF = (47,024 lb/Day BOD₅) x (1.65 lb O₂/lb BOD₅) / (0.3420 x 0.65 x 0.23 x 0.075 x 1440)
 RAF = 14,015 SCFM (Package 1)

Aeration Basins

Required Aeration Air per TCEQ Sizing	14,015 SCFM
Max Day air, scfm	24,517 Max Month Air * (Max Day O ₂ /Max Month O ₂)
Total Capacity of Blower in Blower Building No. 1	8,172 SCFM, 3D+1S
Total Capacity of All Duty Blowers	24,517 SCFM, 3D+1S

Conclusion:

1. The proposed blower design provides sufficient air to meet TCEQ requirements.

Clarifier Sizing using Volumetric Flux Design

<u>Parameter</u>	<u>Value</u>	<u>Unit</u>	<u>Comment</u>
ORT9 (@ selected MLSS 3500 mg/L and underflow rate 300 gpd/sf)	725	gpd/sf	Based on Figure F.1 30 TAC 217.164 (e) (2)(I) (Table F.9)
ORT10 (@ selected MLSS 3500 mg/L)	1154	gpd/sf	Based on Figure 2 30 TAC 217.164 (e) (2)(I) (Table F.10)
min DT	1.8	hours	Based on Figure 30 TAC 217.154 (c) (1) (Table F.2)

$$A = \frac{Q_u}{OR_{10}}$$

Where:
 A = clarifier area (square feet(sf)) based on max 30 day flow
 Q_u = design flow (gallons per day)
 OR₁₀ = weir overflow rate for selected underflow rate and mixed liquor suspended solids (MLSS) (gallons per day per square foot (gpd/sf)) from Table F.9. in Figure 1: 30 TAC §217.164(e)(2)(I)

Required Clarifier Area at Design Flow

Clarifiers area 16,552 ft²

Required Clarifier Area at Peak Flow at 3500 mg/L MLSS

Clarifiers area 41,594 ft²

Design total clarifier area 51,954 ft² for 105ft Clarifiers 1 thru 6

Conclusion:

1. The proposed clarifiers are adequately sized to handle the solids loading
2. The clarifiers could sustain a significantly higher MLSS at design flow

Volume required for Clarifiers based on Minimum detention time

V_c 481,283 ft³

Proposed Volume for Clarifiers (Phase 2)

Diameter of Clarifier 1 thru 6

105 ft

SWD of Clarifier 1 thru 6

15.5 ft, 30 TAC 217.152 (g) (2) (A) requires 10ft min for SA > 300sf

Total Available Volume

805,288 ft³

Conclusion:

1. The proposed clarifiers are adequately sized to handle the minimum detention time required

UV Contactors Disinfection

Mfr required contact time (min 5 sec for UV dose of 30 mJ/cm²)

10 seconds, assuming 126 e-coli and 48 mgd peak flow

Notes:

1. Will be consistent with the specific bioassay.

$$A_c = \frac{Q_p}{OR_{710}}$$

Where:
 A_c = clarifier area (sf), based on peak flow
 Q_p = peak flow, million gallons per day
 OR₇₁₀ = weir overflow rate for selected MLSS (gpd/sf) from Table F.10. in Figure 2: 30 TAC §217.164(e)(2)(I)

$$V_c = \frac{(Q_p / 24)(minDT)}{(7.48)}$$

Where:

V_c = volume of the clarifier(s), cubic feet, based on minDT

Q_p = peak flow, gallons per day

minDT = minimum detention time (hours) from Table F.2. in Figure: 30 TAC

§217.154(e)(1) of this title (relating to Aeration Basin and Clarifier Sizing--Traditional Design)

Aerated Sludge Holding Tanks

The aerated sludge holding tanks are not being designed to meet Class B sludge requirements in accordance with TCEQ Chapter 312 rules. The City intends to dispose of dewatered sludge to a landfill, so the digesters will function as aerated holding tanks for the dewatering process. A design of 5 days HRT was used to for storage to provide flexibility with dewatering operations.

Air Requirements

TCEQ minimum digester requirements 20 SCFM/1000 cubic feet of digester volume

Aerobic Digesters

Pounds of dry sludge / day	24,945	
Pounds of wet sludge / day, assume 1% solids	2,494,500	
Produced gal of wet sludge / day	299,101	
Digester volume, gal for 5 day HRT	1,495,504	total volume for 2 digesters, 85ft dia, 18ft SWD
Digester volume, ft ³	199,934	
No. of 85ft dia digesters required Phase 2	2	
Digester air required (20 SCFM/1000 ft ³) per TCEQ	3,999	
Total Digester air provided (SCFM)	4,000	2D/1S; each at 2000 SCFM

Notes:

Sludge data pulled from Sewage Sludge Solids Management Plan.

Attachment L

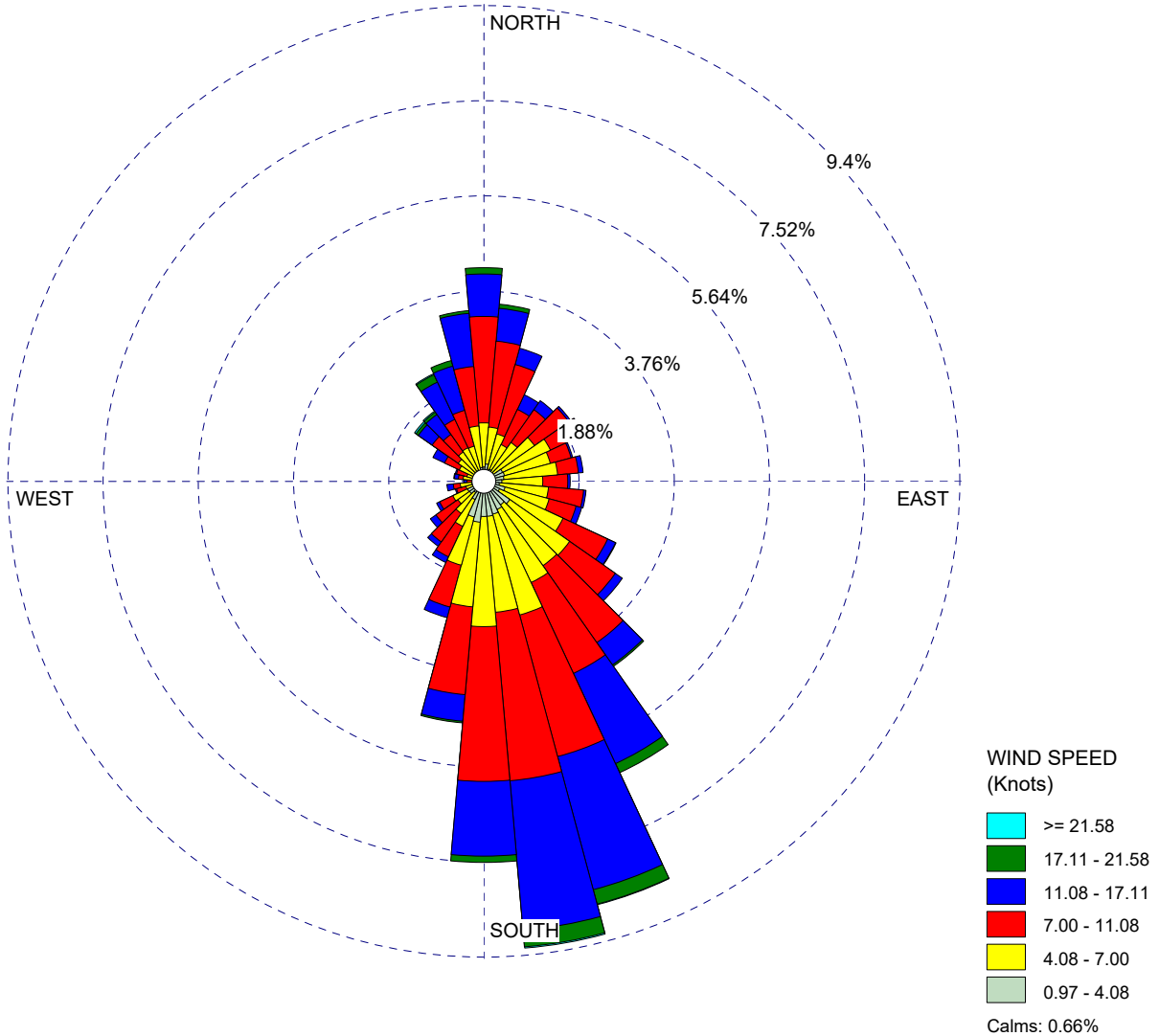
Wind Rose


WIND ROSE PLOT:

2018 Brazos County Meterological Data

DISPLAY:

**Wind Speed
Direction (blowing from)**



Station Details: Name: College Station Easterwood Field, TX US	Data Period: Start Date: 1/1/2018-00:00 End Date: 12/31/2018-23:59	Date: 06/17/2020	Figure L - Wind Rose East Side WWTP Bryan, TX 
Network ID: GHCND:USW00003904	Data Coverage: 100%	Total Count: 8744 hrs	
Latitude/Longitude: 30.58917°, -96.36472°	Model: WRPLOT View- Lake Enviromental Software	Calm Winds: 0.66%	
Elevation: 93m	Modeler: Christopher Campbell	AVG Wind Speed: 7.99 Knots	

Attachment M

Sewage Sludge Solids Management Plan

**Brushy Creek WWTP
Sewage Sludge Solids Management Plan**

Final Phase

Flow	12	MGD
Influent BOD	286.77	mg/L
Effluent BOD	10	mg/L
Net removal	276.77	mg/L
Average MLSS	3500	mg/L

	100% Flow	75% Flow	50% Flow	25% Flow
Pounds BOD ₅ / day removed	27,717	20,788	13,858	6,929
Pounds of dry sludge produced per day ¹	24,945	18,709	12,473	6,236
Pounds of wet sludge produced per day ²	124,725	93,544	62,363	31,181
Volume of wet sludge produced per day (gal)	14,955	11,216	7,478	3,739
Pounds of dewatered sludge produced per week ³	1,091,346	818,509	545,673	272,836
	100% Flow	75% Flow	50% Flow	25% Flow
Belt press operating hours / week ⁴	116.4	87.3	58.2	29.1
Sludge removal trucks / week ⁵	24.8	18.6	12.4	6.2

¹ Assuming 0.90 lbs of dry sludge produced per pound of CBOD₅ removed and no destruction in aerated sludge holding tanks

² Assuming .20% solids

³ Assuming 16.0% solids

⁴ Assuming 1500 lbs dry sludge / hour; hours are cumulative for two presses

⁵ Assuming removal trucks have 22 wet ton capacity trailers

Sludge Disposal

The sludge from the WAS aerated sludge storage tank will pumped to a belt filter press for dewatering and then will be transferred to Brazos Valley Solid Waste Management Authority (BVSWMA).

Note:

CBOD₅ Removal - Raw Sewage Characteristics for Design Purposes