4411 S Interstate 35, Ste 100
Georgetown, Texas 78626
www.reuseinn.com
TBPELS F-21880

March 13, 2025

Ms. Ellie Guerra
TCEQ – MC 105
P. O. Box 13087
Austin, Texas 78711-3087

Re: SOAH Referral: The Village at Grape Creek, LLC (2024-1985-MWD)

Permittee:	The Village at Grape Creek
TPDES Permit Number:	WQ0016363001
Project Name:	The Village at Grape Creek WWTP
County(s):	Gillespie County

Engineer(s): reUse Engineering, Inc. / TBPE# F-21880
Ms. Kendall Longbotham, PE
4411 S Interstate 35, Ste 100
Georgetown, TX 78626
(512) 755-9943 / kendall@reuseeng.com

Dear Ms. Guerra:

As required by the Texas Commission on Environmental Quality (TCEQ), the following information is provided for the above referenced project.

The original Texas Pollutant Discharge Elimination System (TPDES) application, including all revisions to the application.

Should you have any questions, please do not hesitate to reach out to me via phone or email.

Sincerely,

Kendall Longbotham

Kendall S. Longbotham, PE

reUse Engineering, Inc.

TCEQ DOMESTIC WASTEWATER DISCHARGE PERMIT APPLICATION (TPDES)

THE VILLAGE AT GRAPE CREEK

DOMESTIC WASTEWATER ADMINISTRATIVE AND TECHNICAL REPORTS WITH ATTACHMENTS

THE VILLAGE AT GRAPE CREEK

US Highway 290, approximately 10 miles east of Fredericksburg, Texas

Gillespie County, TX



PREPARED BY:
Lauren B. Wahl, PE
reUse Innovations, Inc.

June 27, 2023

4411 S Interstate 35, Ste 100
Georgetown, Texas 78626

reUse ENGINEERING
TX Firm No. 21880

TCEQ DOMESTIC WASTEWATER DISCHARGE PERMIT APPLICATION (TPDES)

THE VILLAGE AT GRAPE CREEK

DOMESTIC WASTEWATER ADMINISTRATIVE AND TECHNICAL REPORTS WITH ATTACHMENTS

THE VILLAGE AT GRAPE CREEK

US Highway 290, approximately 10 miles east of Fredericksburg, Texas

Gillespie County, TX



27 JUN 2023

Rev 1: 25 OCT 2023

Rev 2: 18 JAN 2024

Rev 3: 05 MAR 2024

PREPARED BY:
Lauren B. Wahl, PE
reUse Innovations, Inc.

June 27, 2023

4411 S Interstate 35, Ste 100
Georgetown, Texas 78626

reUse ENGINEERING
TX Firm No. 21880

reUse ENGINEERING
4411 S Interstate 35, Ste 100
Georgetown, Texas 78626
www.reuseinn.com

THE VILLAGE AT GRAPE CREEK

DOMESTIC WASTEWATER PERMIT APPLICATION

TABLE OF CONTENTS

DOMESTIC ADMINISTRATIVE REPORT 1.0 AND 1.1		Required by Section
Attachment A.	Core Data Form	Admin 1.0 § 3.C
Attachment B.	Public Involvement Plan	Admin 1.0 § 7
Attachment C.	U.S. Topographic Map	Admin 1.0 § 13
Attachment D.	Affected Landowner Information	Admin 1.1 § 1
	Landowners Map	
	Landowners Cross Reference List	
Attachment E.	Original Photographs	Admin 1.1 § 2
Attachment F.	Buffer Zone Map	Admin 1.1 § 3

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)		Required by Section
Attachment G.	U.S. Topographic Map II	SPIF Item # 5

DOMESTIC TECHNICAL REPORT 1.0 AND 1.1		Required by Section
Attachment 1.	Process Flow Diagram	Tech 1.0 § 2.C
Attachment 2.	Site Drawing	Tech 1.0 § 3
Attachment 3.	Justification of Permit Need (LUEs)	Tech 1.1 § 1.A
Attachment 4.	*Not Included*	Tech 1.1 § 1.B.2
Attachment 5.	Design Calculations	Tech 1.1 § 4
Attachment 6.	Wind Rose	Tech 1.1 § 5.B
Attachment 7.	Solids Management Plan	Tech 1.1 § 7

4411 S Interstate 35, Ste 100
Georgetown, Texas 78626
www.reuseinn.com

THE VILLAGE AT GRAPE CREEK
DOMESTIC WASTEWATER PERMIT APPLICATION

TABLE OF CONTENTS

DOMESTIC ADMINISTRATIVE REPORT 1.0 AND 1.1		**Required by Section**
Attachment A.	Core Data Form	Admin 1.0 § 3.C
Attachment B.	Public Involvement Plan	Admin 1.0 § 7
Attachment C.	U.S. Topographic Map	Admin 1.0 § 13
Attachment D.	Affected Landowner Information	Admin 1.1 § 1
	Landowners Map	
	Landowners Cross Reference List	
Attachment E.	Original Photographs	Admin 1.1 § 2
Attachment F.	Buffer Zone Map	Admin 1.1 § 3

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)		**Required by Section**
Attachment G.	U.S. Topographic Map II	SPIF Item # 5

DOMESTIC TECHNICAL REPORT 1.0 AND 1.1		**Required by Section**
Attachment 1.	*Process Flow Diagram (Rev 1)*	*Tech 1.0 § 2.C*
Attachment 2.	Site Drawing	Tech 1.0 § 3
Attachment 3.	Justification of Permit Need (LUEs)	Tech 1.1 § 1.A
Attachment 4.	*Not Included*	Tech 1.1 § 1.B.2
Attachment 5.	Design Calculations	Tech 1.1 § 4
Attachment 6.	Wind Rose	Tech 1.1 § 5.B
Attachment 7.	Solids Management Plan	Tech 1.1 § 7

NOTICE OF DEFICIENCY REPLY		***Date Submitted***
Exhibit A.	*FEMA Floodway Map*	*10/25/2023*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the application.

APPLICANT: The Village at Grape Creek

PERMIT NUMBER: Click here to enter text.

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

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

For TCEQ Use Only

Segment Number _____County _____
Expiration Date _____Region _____
Permit Number _____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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 ☒	$315.00 ☐
≥0.05 but <0.10 MGD	$550.00 ☐	$515.00 ☐
≥0.10 but <0.25 MGD	$850.00 ☐	$815.00 ☐
≥0.25 but <0.50 MGD	$1,250.00 ☐	$1,215.00 ☐
≥0.50 but <1.0 MGD	$1,650.00 ☐	$1,615.00 ☐
≥1.0 MGD	$2,050.00 ☐	$2,015.00 ☐

Minor Amendment (for any flow) $150.00 ☐

Payment Information:

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

Check/Money Order Amount: Click here to enter text.

Name Printed on Check: Click here to enter text.

EPAY Voucher Number: 650232, 650233

Copy of Payment Voucher enclosed? Yes ☒

Section 2. Type of Application (Instructions Page 29)

☒ New TPDES

☐ Major Amendment *with* Renewal

☐ Major Amendment *without* Renewal

☐ Renewal without changes

☐ New TLAP

☐ Minor Amendment *with* Renewal

☐ Minor Amendment *without* Renewal

☐ Minor Modification of permit

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

For existing permits:

Permit Number: WQ00Click here to enter text.

EPA I.D. (TPDES only): TXClick here to enter text.

Expiration Date: Click here to enter text.

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?

The Village at Grape Creek

(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: Click here to enter text.

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

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

First and Last Name: Ronnie Manning

Credential (P.E, P.G., Ph.D., etc.): Click here to enter text.

Title: Partner

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

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

N/A

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

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

CN: Click here to enter text.

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

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

First and Last Name: Click here to enter text.

Credential (P.E, P.G., Ph.D., etc.): Click here to enter text.

Title: Click here to enter text.

Provide a brief description of the need for a co-permittee: N/A

C. Core Data Form

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

Attachment: A. Core Data Form

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): Ms.

First and Last Name: Lauren Wahl

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

Title: Water Resources Engineer

Organization Name: reUse Engineering, Inc.

Mailing Address: 4411 S Interstate 35, Ste 100

City, State, Zip Code: Georgetown, TX 78626

Phone No.: 512-755-9962 Ext.: Click here to enter text. Fax No.: Click here to enter text.

E-mail Address: lauren@reuseeng.com

Check one or both: ☒ Administrative Contact ☒ Technical Contact

B. Prefix (Mr., Ms., Miss): N/A

First and Last Name: N/A

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

Title: N/A

Organization Name: N/A

Mailing Address: N/A

City, State, Zip Code: N/A

Phone No.: N/A Ext.: N/A Fax No.: N/A

E-mail Address: N/A

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: Ronnie Manning

Credential (P.E, P.G., Ph.D., etc.): Click here to enter text.

Title: Partner

Organization Name: The Village at Grape Creek

Mailing Address: 414 Hickory Post Lane

City, State, Zip Code: Houston, TX 77079

Phone No.: 512-627-0449 Ext.: Click here to enter text. Fax No.: Click here to enter text.

E-mail Address: rmanning@wellstarproperties.com

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

First and Last Name: Lauren Wahl

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

Title: Water Resources Engineer

Organization Name: reUse Engineering, Inc.

Mailing Address: 4411 S Interstate 35, Ste 100

City, State, Zip Code: Georgetown, TX 78626

Phone No.: 512-755-9962 Ext.: Click here to enter text. Fax No.: Click here to enter text.

E-mail Address: lauren@reuseeng.com

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: Ronnie Manning

Credential (P.E, P.G., Ph.D., etc.): Click here to enter text.

Title: Partner

Organization Name: The Village at Grape Creek

Mailing Address: 414 Hickory Post Lane

City, State, Zip Code: Houston, TX 77079

Phone No.: 512-627-0449 Ext.: Click here to enter text. Fax No.: Click here to enter text.

E-mail Address: rmanning@wellstarproperties.com

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: Ronnie Manning

Credential (P.E, P.G., Ph.D., etc.): Click here to enter text.

Title: Partner

Organization Name: The Village at Grape Creek

Mailing Address: 414 Hickory Post Lane

City, State, Zip Code: Houston, TX 77079

Phone No.: 512-627-0449 Ext.: Click here to enter text. Fax No.: Click here to enter text.

E-mail Address: rmanning@wellstarproperties.com

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): Ms.

First and Last Name: Lauren Wahl

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

Title: Water Resources Engineer

Organization Name: reUse Engineering, Inc.

Mailing Address: 4411 S Interstate 35, Ste 100

City, State, Zip Code: Georgetown, TX 78626

Phone No.: 512-755-9962 Ext.: Click here to enter text. Fax No.: Click here to enter text.

E-mail Address: lauren@reuseeng.com

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

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

☒ E-mail Address

☐ Fax

☐ Regular Mail

C. Contact person to be listed in the Notices

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

First and Last Name: Lauren Wahl

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

Title: Water Resources Engineer

Organization Name: reUse Engineering, Inc.

Phone No.: 512-755-9962 Ext.: Click here to enter text.

E-mail: lauren@reuseeng.com

D. Public Viewing Information

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

Public building name: Pioneer Memorial Library

Location within the building: Reference Desk

Physical Address of Building: 115 W Main St, Fredericksburg, TX 78624

City: Fredericksburg County: Gillespie

Contact Name: Click here to enter text.

Phone No.: 830-997-6513 Ext.: Click here to enter text.

E. Bilingual Notice Requirements:

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

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

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

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

   ☒ Yes ☐ No

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

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

   ☒ Yes ☐ No

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

   ☐ Yes ☒ No

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

   ☐ Yes ☒ No

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

F. Public Involvement Plan Form

Complete the Public Involvement Plan Form (TCEQ Form 20960) for each application for a **new permit or major amendment to a permit** and include as an attachment.

Attachment: B. Public Involvement Plan

Section 9. Regulated Entity and Permitted Site Information (Instructions Page 33)

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

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

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

The Village at Grape Creek

C. Owner of treatment facility: The Village at Grape Creek

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

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

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

First and Last Name: The Village at Grape Creek

Mailing Address: 15119 Memorial Drive Ste 201

City, State, Zip Code: Houston, TX 77079

Phone No.: 713-897-1580 E-mail Address: cdelamora@wellstarproperties.com

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

Attachment: N/A

E. Owner of effluent disposal site:

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

First and Last Name: N/A

Mailing Address: N/A

City, State, Zip Code: N/A

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

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

Attachment: Click here to enter text.

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): N/A

First and Last Name: N/A

Mailing Address: N/A

City, State, Zip Code: N/A

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

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

Attachment: Click here to enter text.

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:

WWTF 30.214561, -98.709985. The facility is located in the southwest portion of the property, approx. 0.65 mi southwest of the intersection of US-290 and Jenschke Ln in zip code 78624.

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 flows via force main from the WWTF to the Discharge Point (Outfall) in an unnamed intermittent stream on the property, thence to the Pedernales River classified segment no. 1414.

City nearest the outfall(s): Stonewall (downstr); Fredericksburg (upstr)

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

Outfall Latitude: 30.21314 Longitude: -98.7094

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

☐ Yes ☒ No

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

☐ Authorization granted ☐ Authorization pending

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

Attachment: Click here to enter text.

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

Click here to enter text.

Section 11. TLAP Disposal Information (Instructions Page 36)

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

☐ Yes ☐ No

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

Click here to enter text.

B. City nearest the disposal site: Click here to enter text.

C. County in which the disposal site is located: Click here to enter text.

D. Disposal Site Latitude: Click here to enter text. Longitude: Click here to enter text.

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

Click here to enter text.

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

Click here to enter text.

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.

Click here to enter text.

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

☐ Yes ☒ No

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

Click here to enter text.

D. Do you owe any fees to the TCEQ?

☐ Yes ☒ No

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

Account number: Click here to enter text. Amount past due: Click here to enter text.

E. Do you owe any penalties to the TCEQ?

☐ Yes ☒ No

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

Enforcement order number: Click here to enter text. Amount past due: Click here to enter text.

Section 13. Attachments (Instructions Page 38)

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

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

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

- Applicant's property boundary

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

☐ Attachment 1 for Individuals as co-applicants

☒ Other Attachments. Please specify: Please see Table of Contents provided

Section 14. Signature Page (Instructions Page 39)

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

Permit Number:

Applicant: The Village at Grape Creek

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): Ronnie C. Manning

Signatory title: Vice President

Signature: _____ Date: 3/21/2023

(Use blue ink)

Subscribed and Sworn to before me by the said Ronnie C. Manning

on this 21 day of March, 2023.

My commission expires on the 30 day of April, 2023.

Patricia Huerta

Notary Public

PATRICIA HUERTA
10638633
NOTARY PUBLIC, STATE OF TEXAS
MY COMMISSION EXPIRES
APRIL 30, 2023

[SEAL]

Harris

County, Texas

Section 15. Plain Language Summary (Instructions Page 40)

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

ENGLISH TEMPLATE FOR TPDES or TLAP NEW/RENEWAL/AMENDMENT APPLICATIONS

DOMESTIC WASTEWATER

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

The Village at Grape Creek (2. Enter Customer Number here (i.e., CN6########).) proposes to operate The Village at Grape Creek 5. Enter Regulated Entity Number here (i.e., RN1########). a domestic wastewater treatment facility. The facility will be located 0.65 mi southwest of the intersection of US-290 and Jenschke Ln, in Fredericksburg, Gillespie County, Texas 78624.

The applicant is currently applying to the Texas Commission on Environmental Quality for a Texas Pollutant Discharge Elimination System (TPDES) Permit in order to discharge a maximum of 20,000 gallons per day of treated domestic wastewater from the proposed Wastewater Treatment Facility that is to be installed on the site.

Discharges from the facility are expected to contain no pollutants. Domestic wastewater will be treated by MBR (membrane bio-reactor) treatment technology. The facility includes an influent pump station, equalization, fine screen, anoxic, oxic, and membrane cells with ultraviolet disinfection and a sludge press.

PLANTILLA EN ESPAÑOL PARA SOLICITUDES NUEVAS/RENOVACIONES/ENMIENDAS TPDES o TLAP

AGUAS RESIDUALES DOMÉSTICAS

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

The Village at Grape Creek (es decir, CN6 ######) propone operar The Village at Grape Creek (es decir, RN1 ######), una instalación de tratamiento de aguas residuales domésticas. La instalación estará ubicada aproximadamente a 0.65 millas al suroeste de la intersección de US-290 y Jenschke Ln, en Fredericksburg, Condado de Gillespie, Texas 78624.

El solicitante actualmente está solicitando a la Comisión de Calidad Ambiental de Texas un Permiso del Sistema de Eliminación de Descargas de Contaminantes de Texas (TPDES) para descargar un máximo de 20,000 galones por día de aguas residuales domésticas tratadas de la Instalación de Tratamiento de Aguas Residuales propuesta que se instalará en el sitio.

Se espera que las descargas de la instalación no contengan contaminantes. Las aguas residuales domésticas serán tratadas por la tecnología de tratamiento MBR (biorreactor de membrana). La instalación incluye una estación de bombeo de afluente, ecualización, cribado fino, células anóxicas, óxicas y de membrana con desinfección ultravioleta y una prensa de lodos.

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:

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

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

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

☒ USB Drive ☐ Four sets of labels

D. Provide the source of the landowners' names and mailing addresses:
https://gis.bisclient.com/gillespiecad/

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

☐ Yes ☒ No

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

Click here to enter text.

Section 2. Original Photographs (Instructions Page 44)

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

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

Section 3. Buffer Zone Map (Instructions Page 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.

- 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: The Village at Grape Creek

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

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

   Approx. 9 miles west of Fredericksburg, TX on US-290 near the intersection with Jenschke Ln in Gillespie County, Texas.

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): Ms.

First and Last Name: Lauren Wahl

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

Title: Water Resources Engineer

Mailing Address: 4411 S Interstate 35, Ste 100

City, State, Zip Code: Georgetown, TX 78626

Phone No.: 512-755-9962 Ext.: Click here to enter text. Fax No.: Click here to enter text.

E-mail Address: Lauren@reuseeng.com

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

   Click here to enter text.

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 flows via force main from the WWTF to the Discharge Point (Outfall) in an unnamed intermittent stream on the property, thence to the Pedernales River classified segment no. 1414.

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

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

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

   ☐ Proposed access roads, utility lines, construction easements

   ☐ Visual effects that could damage or detract from a historic property's integrity

   ☐ Vibration effects during construction or as a result of project design

   ☐ Additional phases of development that are planned for the future

   ☐ Sealing caves, fractures, sinkholes, other karst features

☐ Disturbance of vegetation or wetlands

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

N/A

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

The property is currently undeveloped.

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:

There are no existing buildings or structures on the property. A residential development is proposed to be constructed on the property, completion date unknown.

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

The property is currently undeveloped. No architect/builder. Property will be a development of small or modular homes that may sell/rent individual homes to separate/private homeowners/renters.

WATER QUALITY PERMIT

PAYMENT SUBMITTAL FORM

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

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

Mail this form and the check or money order to:

BY REGULAR U.S. MAIL

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

BY OVERNIGHT/EXPRESS MAIL

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

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

1. Check or Money Order Number: N/A, Payment submitted through TCEQ ePay online portal
2. Check or Money Order Amount: N/A
3. Date of Check or Money Order: N/A
4. Name on Check or Money Order: N/A
5. APPLICATION INFORMATION

   Name of Project or Site: Click here to enter text.

   Physical Address of Project or Site: Click here to enter text.

   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

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

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

Transaction Information

Trace Number:	582EA000558052
Date:	06/27/2023 04:20 PM
Payment Method:	CC - Authorization 0000017432
ePay Actor:	LAUREN WAHL
Actor Email:	lauren@reuseeng.com
IP:	98.198.5.69
TCEQ Amount:	$350.00
Texas.gov Price:	$358.13*

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

Payment Contact Information

Name:	RANDALL NELSON
Company:	REUSE ENGINEERING INC
Address:	4411 S IH-35 STE 100, GEORGETOWN, TX 78626
Phone:	512-755-9962

Cart Items

Click on the voucher number to see the voucher details.

Voucher	Fee Description	AR Number	Amount
650232	WW PERMIT - FACILITY WITH FLOW < .05 MGD - NEW AND MAJOR AMENDMENTS		$300.00
650233	30 TAC 305.53B WQ NOTIFICATION FEE		$50.00
		TCEQ Amount:	$350.00

ePay Again | Exit ePay

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

© 2002-2023 Texas Commission on Environmental Quality

Print this voucher for your records. If you are sending the TCEQ hardcopy documents related to this payment, include a copy of this voucher.

Transaction Information

Voucher Number:	650232
Trace Number:	582EA000558052
Date:	06/27/2023 04:20 PM
Payment Method:	CC - Authorization 0000017432
Voucher Amount:	$300.00
Fee Type:	WW PERMIT - FACILITY WITH FLOW < .05 MGD - NEW AND MAJOR AMENDMENTS
ePay Actor:	LAUREN WAHL
Actor Email:	lauren@reuseeng.com
IP:	98.198.5.69

Payment Contact Information

Name:	RANDALL NELSON
Company:	REUSE ENGINEERING INC
Address:	4411 S IH-35 STE 100, GEORGETOWN, TX 78626
Phone:	512-755-9962

Site Information

Site Name:	THE VILLAGE AT GRAPE CREEK
Site Location:	0.65 MI SOUTHWEST OF US-290 AND JENSCHKE LN INTERSECTION IN ZIP CODE 78624

Customer Information

Customer Name:	THE VILLAGE AT GRAPE CREEK
Customer Address:	15119 MEMORIAL DR STE 113, HOUSTON, TX 77079

Close

© 2002-2023 Texas Commission on Environmental Quality

Print this voucher for your records. If you are sending the TCEQ hardcopy documents related to this payment, include a copy of this voucher.

Transaction Information

Voucher Number:	650233
Trace Number:	582EA000558052
Date:	06/27/2023 04:20 PM
Payment Method:	CC - Authorization 0000017432
Voucher Amount:	$50.00
Fee Type:	30 TAC 305.53B WQ NOTIFICATION FEE
ePay Actor:	LAUREN WAHL
Actor Email:	lauren@reuseeng.com
IP:	98.198.5.69

Payment Contact Information

Name:	RANDALL NELSON
Company:	REUSE ENGINEERING INC
Address:	4411 S IH-35 STE 100, GEORGETOWN, TX 78626
Phone:	512-755-9962

Close

© 2002-2023 Texas Commission on Environmental Quality

THIS PAGE INTENTIONALLY LEFT BLANK

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): N/A

Full legal name (first, middle, last): N/A

Driver's License or State Identification Number: N/A

Date of Birth: N/A

Mailing Address: N/A

City, State, and Zip Code: N/A

Phone Number: N/A Fax Number: N/A

E-mail Address: N/A

CN: N/A

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

CHECKLIST OF COMMON DEFICIENCIES

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

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

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

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

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

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

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

Things to Know:

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

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

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

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

ATTACHMENT A

CORE DATA FORM

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

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

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy): 03/20/2023

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

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

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

The Village at Grape Creek

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
0804836503	32087489889	92-1360688	

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

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

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

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

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

15. Mailing Address:	15119 Memorial Drive,						
	Suite 113						
	City	Houston	**State**	TX	**ZIP**	77079	**ZIP + 4**

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

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

1(713) 897-1580		( ) -

SECTION III: Regulated Entity Information

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

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

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

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

The Village at Grape Creek

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

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

25. Description to Physical Location:	0.65 mi southwest of the Intersection of US-290 and Jenschke Ln. in zip code 78624				
26. Nearest City			**State**	**Nearest ZIP Code**	
Fredericksburg			TX	78624	

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

27. Latitude (N) In Decimal:	30.214561°		**28. Longitude (W) In Decimal:**	-98.709985°	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

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

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

Residential (lots/homes subject to individual buyers/renters)

34. Mailing Address:	15119 Memorial Drive						
	Suite 113						
City	Houston	**State**	TX	**ZIP**	77079	**ZIP + 4**	
35. E-Mail Address:	cdelamora@wellstarproperties.com						

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
1(713) 897-1580		( ) -

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

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

SECTION IV: Preparer Information

40. Name:	Lauren Wahl, P.E.	41. Title:	Water Resources Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
1(512)755-9962		( ) -	lauren@reuseeng.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:	The Village at Grape Creek	Job Title:	Partner	
Name *(In Print):*	Ronnie Manning		Phone:	(512) 627-0449
Signature:	ronnie manning ronnie manning (Mar 16, 2023 16:07 CDT)		Date:	03/16/2023

TCEQ Core Data Form (bl)

Final Audit Report 2023-03-16

Created:	2023-03-16
By:	Brenna Potts (bpotts@wellstarproperties.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAnnpgIsVW49wbRP8xDcPYBuxSPp5S9iYj

"TCEQ Core Data Form (bl)" History

Document created by Brenna Potts (bpotts@wellstarproperties.com)
2023-03-16 - 4:46:16 PM GMT

Document emailed to rmanning@wellstarproperties.com for signature
2023-03-16 - 4:46:31 PM GMT

Email viewed by rmanning@wellstarproperties.com
2023-03-16 - 9:06:46 PM GMT

Signer rmanning@wellstarproperties.com entered name at signing as ronnie manning
2023-03-16 - 9:07:15 PM GMT

Document e-signed by ronnie manning (rmanning@wellstarproperties.com)
Signature Date: 2023-03-16 - 9:07:17 PM GMT - Time Source: server

Agreement completed.
2023-03-16 - 9:07:17 PM GMT

Names and email addresses are entered into the Acrobat Sign service by Acrobat Sign users and are unverified unless otherwise noted.

ATTACHMENT B

PUBLIC INVOLVEMENT PLAN

Texas Commission on Environmental Quality

Public Involvement Plan Form for Permit and Registration Applications

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

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

Section 1. Preliminary Screening

☒ New Permit or Registration Application

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

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

Section 2. Secondary Screening

☒ Requires public notice,

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

☒ Located within any of the following geographical locations:

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

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

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

Section 3. Application Information

Type of Application (check all that apply):

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

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

Water Quality

☒ Texas Pollutant Discharge Elimination System (TPDES)

☐ Texas Land Application Permit (TLAP)

☐ State Only Concentrated Animal Feeding Operation (CAFO)

☐ Water Treatment Plant Residuals Disposal Permit

☐ Class B Biosolids Land Application Permit

☐ Domestic Septage Land Application Registration

Water Rights New Permit

☐ New Appropriation of Water

☐ New or existing reservoir

Amendment to an Existing Water Right

☐ Add a New Appropriation of Water

☐ Add a New or Existing Reservoir

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

Section 4. Plain Language Summary

Provide a brief description of planned activities.

The Village at Grape Creek proposes to operate The Village at Grape Creek, a domestic wastewater treatment facility. The facility will be located 0.65 mi southwest of the intersection of US-290 and Jenschke Ln, in Fredericksburg, Gillespie County, Texas 78624. The applicant is currently applying to the Texas Commission on Environmental Quality for a Texas Pollutant Discharge Elimination System (TPDES) Permit in order to discharge treated effluent from the proposed Wastewater Treatment Plant that is to be installed on the site. Discharges from the facility are expected to contain no pollutants. Domestic wastewater will be treated by MBR (membrane bio-reactor) treatment technology. The facility includes an influent pump station, equalization, fine screen, anoxic, aerobic, and membrane cells with ultraviolet disinfection and a sludge press.

Section 5. Community and Demographic Information

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

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

Stonewall

(City)

Gillespie

(County)

Gillespie county

(Census Tract)

Please indicate which of these three is the level used for gathering the following information.

☐ City ☒ County ☐ Census Tract

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

89.6%

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

$39,012

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

27.1% minority
African American = 0.8% / Hispanic = 24.8% / Native American = 1.2% / other = .3%

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

18.3%

(e) Languages commonly spoken in area by percentage

Spanish = 15.3%
Asian = 1.53% / Other = 1.53%

(f) Community and/or Stakeholder Groups

socio-economic: affordable housing / fire department / utilities / construction

(g) Historic public interest or involvement

information unavailable

Section 6. Planned Public Outreach Activities

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

☒ Yes ☐ No

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

☐ Yes ☒ No

If Yes, please describe.

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

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

☒ Yes ☐ No

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

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

☑ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☑ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

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

☒ Yes ☐ No

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

☒ Yes ☐ No

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

☐ TCEQ Regional Office ☑ TCEQ Central Office

☑ Public Place (specify)

Section 7. Voluntary Submittal

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

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

☐ Yes ☐ No

What types of notice will be provided?

☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

ATTACHMENT C

U.S. TOPOGRAPHIC MAPS

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

The National Map US Topo

STONEWALL QUADRANGLE
TEXAS
7.5-MINUTE SERIES

1.8 mi to confluence with Pedernales River

3.00 mi

3 Mile Downstream Discharge Route

WWTF Facility Boundary

1.00 mi

Applicant Property Boundary

Point of Discharge

1 Mile Site Radius

LYNDON B JOHNSON NATIONAL HISTORICAL PARK

Stonewall

Blumenthal

Pedernales River

Sink Br

Frantzen Cem

Our Lady Of Guadalupe Cem

Stonewall Community Cem

Burg Lake Aero Airport

Luckenbach cem

Brodbeck Family Cem

GILLESPIE CO
KENDALL CO

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 lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, September 2016 - November 2016
Roads..... U.S. Census Bureau, 2015 - 2021
Names.....GNIS, 1979 - 2022
Hydrography.....National Hydrography Dataset, 2002 - 2018
Contours.....National Elevation Dataset, 2021
Boundaries.....Multiple sources; see metadata file 2019 - 2021

Wetlands.....FWS National Wetlands Inventory Not Available

REUSE ENGINEERING TBPE F-21880
STATE OF TEXAS
LAUREN B. WAHL
141050
LICENSED
PROFESSIONAL ENGINEER
27 JUN 2023

UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET
MN
GN
0°9′ 3 MILS
4°14′ 75 MILS

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

SCALE 1:24 000
1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET
1,000.00 ft

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard.

TEXAS
QUADRANGLE LOCATION

1 Fredericksburg East
2 Cave Creek School
3 Rocky Creek
4 Cain City
5 Hye
6 Rafter Hollow
7 Whitworth Ranch
8 Crabapple Creek
ADJOINING QUADRANGLES

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

reUse ENGINEERING
4411 SH 35, Suite 100
Georgetown, TX 78626
TX Firm No. 21880

THE VILLAGE AT GRAPE CREEK
TPDES PERMIT APPLICATION
GILLESPIE COUNTY, TEXAS
U.S. TOPOGRAPHIC MAP
Attachment C

STONEWALL, TX
2022

00042

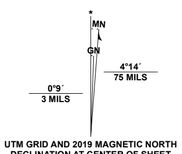
NSN, 7643016398479
NGA REF NO. USGSX24K43330

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

The National Map US Topo

STONEWALL QUADRANGLE
TEXAS
7.5-MINUTE SERIES





UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

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

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET
1,000.00 ft

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard.



QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES

1 Fredericksburg East
2 Cave Creek School
3 Rocky Creek
4 Cain City
5 Hye
6 Rafter Hollow
7 Whitworth Ranch
8 Crabapple Creek

ROAD CLASSIFICATION

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

REUSE ENGINEERING TBPE F-21880
STATE OF TEXAS
LAUREN B. WAHL
141050
LICENSED
PROFESSIONAL ENGINEER
27 JUN 2023

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 lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, September 2016 - November 2016
Roads..... U.S. Census Bureau, 2015 - 2021
Names.....GNIS, 1979 - 2022
Hydrography.....National Hydrography Dataset, 2002 - 2018
Contours.....National Elevation Dataset, 2021
Boundaries.....Multiple sources; see metadata file 2019 - 2021

Wetlands.....FWS National Wetlands Inventory Not Available

reUse ENGINEERING
4411 SH 35, Suite 100
Georgetown, TX 78626
TX Firm No. 21880

THE VILLAGE AT GRAPE CREEK
TPDES PERMIT APPLICATION
GILLESPIE COUNTY, TEXAS

U.S. TOPOGRAPHIC MAP II
Attachment G

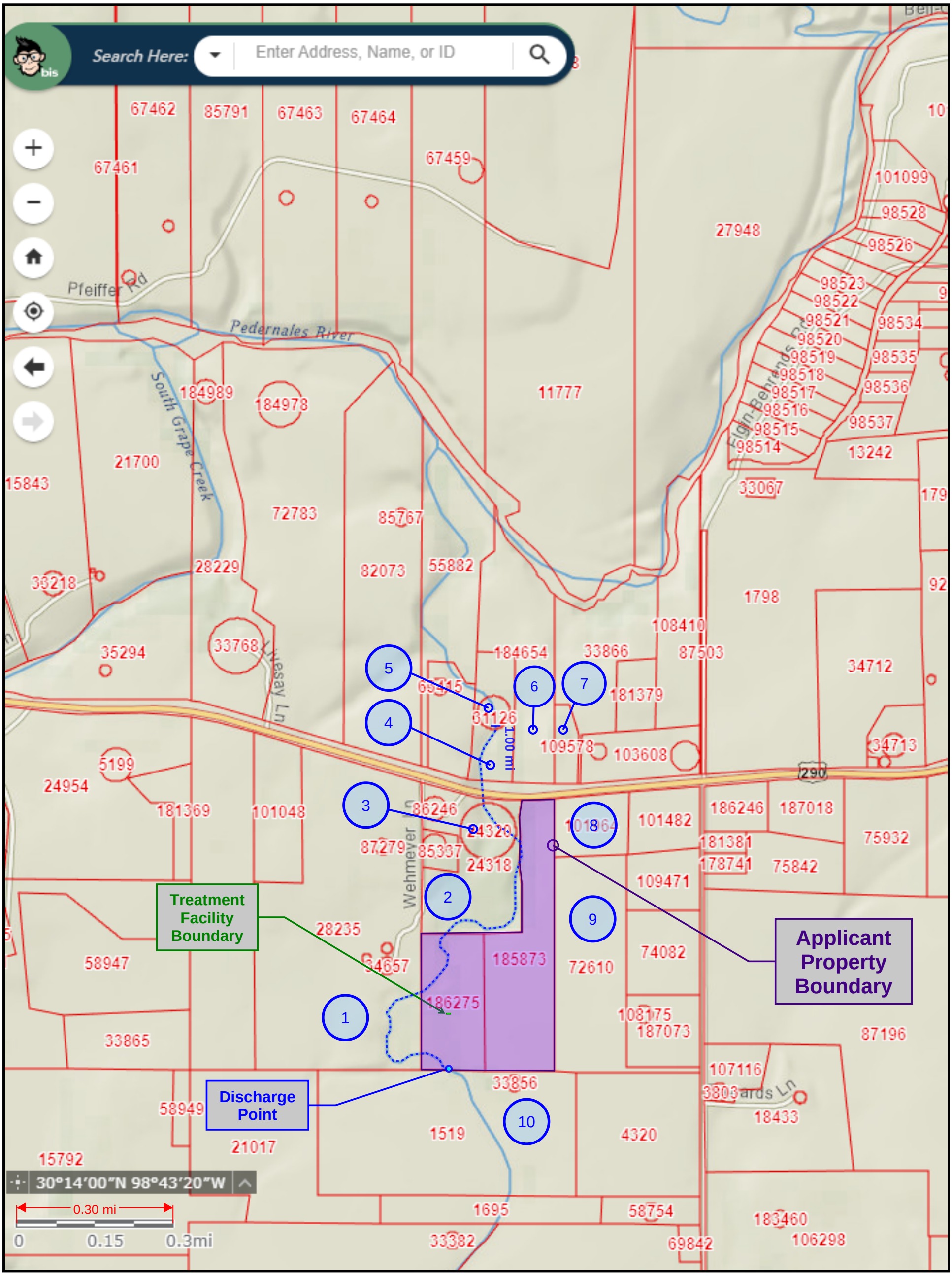
00043

NSN, 7643016399847 9
NGA REF NO. USGSX24K43330

STONEWALL, TX
2022

ATTACHMENT D

AFFECTED LANDOWNER INFORMATION



https://gis.bisclient.com/gillespiecad/

THE VILLAGE AT GRAPE CREEK
TPDES PERMIT APPLICATION
GILLESPIE COUNTY, TEXAS

LANDOWNERS MAP

Attachment D

reUse ENGINEERING
4411 SIH 35, Suite 100
Georgetown, TX 78626
TX Firm No. 21880

Landowner's Cross Reference
List provided on next page

Information compiled on
06 MAR 2023

REUSE ENGINEERING TBPE F-21880
STATE OF TEXAS
LAUREN B. WAHL
141050
LICENSED PROFESSIONAL ENGINEER
27 JUN 2023

00045

Landowner's Cross Reference List

1. WEHMEYER, DOUGLAS & JOREEN O
   28 WEHMEYER LN
   FREDERICKSBURG TX 78624

2. BOLTON, TIM
   301 S LINCOLN
   FREDERICKSBURG TX 78624

3. BOLTON, TIM
   301 S LINCOLN
   FREDERICKSBURG TX 78624

4. WILCOX, RHONDA G PAINTER
   PO BOX 341
   STONEWALL TX 78671

5. WILCOX, RHONDA G PAINTER
   PO BOX 341
   STONEWALL TX 78671

6. HIGHWAY 290 VINEYARD LLC
   8910 ADELAIDA RD
   PASO ROBLES CA 93446

7. HAVEN EXPERIENCES LLC
   C/O TANSOR, DONALD III & MELISSA
   900 LINDEN LP
   DRIFTWOOD TX 78619

8. WEIDENFELLER, KRIS
   89 S RANCH ROAD 1623
   STONEWALL TX 78671

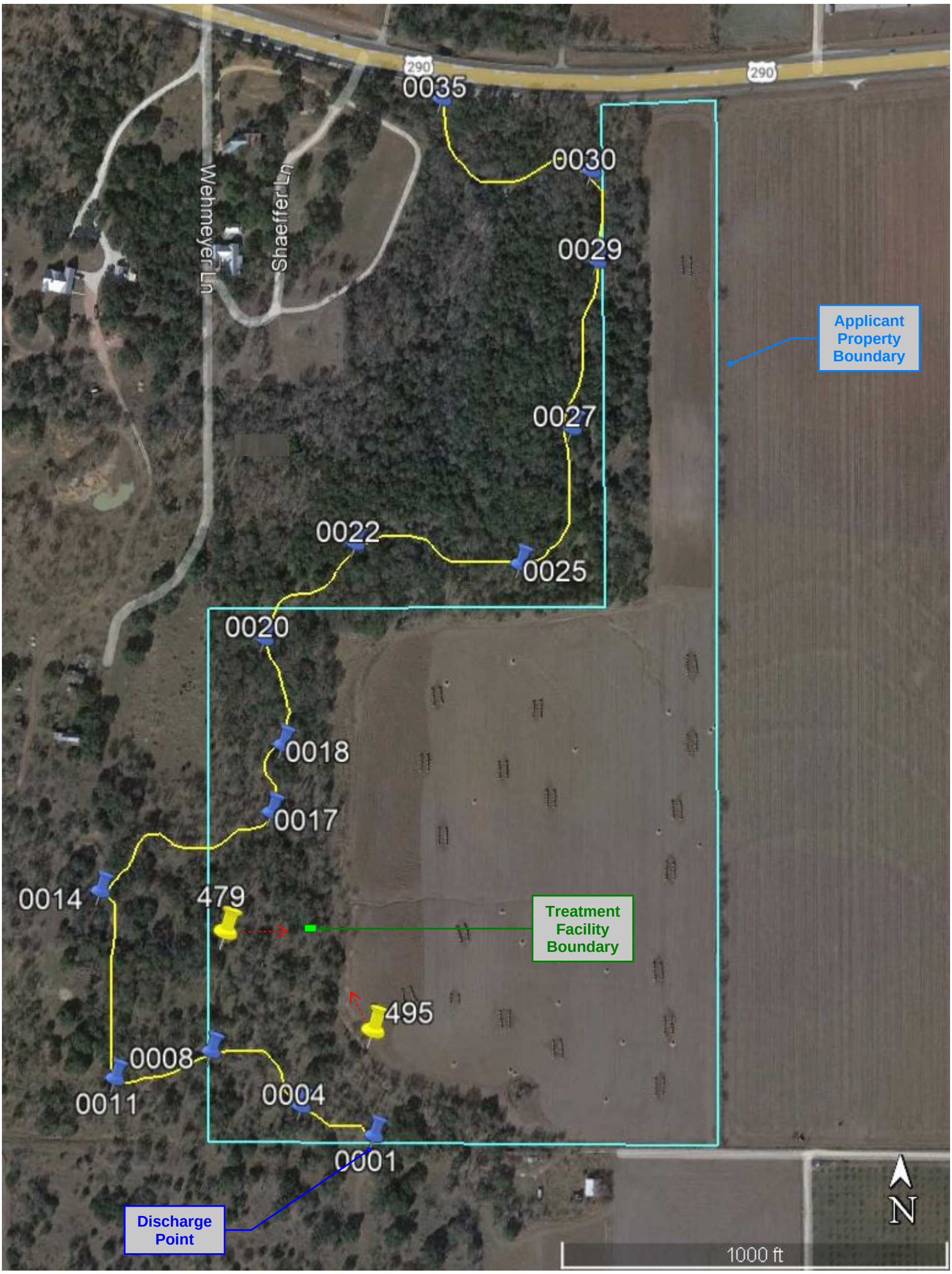
9. WEIDENFELLER, KRIS
   89 S RANCH ROAD 1623
   STONEWALL TX 78671

10. BLUE MESA FREDERICKSBURG LP
    C/O MANOHAR, VINYL MANAGER
    3711 S MOPAC BUILDING 1 SUITE 550
    AUSTIN TX 78746

Compiled on 06 March 2023

ATTACHMENT E

ORIGINAL PHOTOGRAPHS



THE VILLAGE AT GRAPE CREEK
TPDES PERMIT APPLICATION
GILLESPIE COUNTY, TEXAS

ORIGINAL PHOTOS

Attachment E

reUse ENGINEERING
4411 SH 35, Suite 100
Georgetown, TX 78626
TX Firm No. 21880

- Photo Direction
- Discharge Route
- Applicant Property Boundary

REUSE ENGINEERING TBPE F-21880
STATE OF TEXAS
LAUREN B. WAHL
141050
LICENSED PROFESSIONAL ENGINEER
27 JUN 2023
00048

Location 001

Discharge Point

Upstream



Downstream



Location 004





Location 008

Upstream

Downstream



Location 011





reUse ENGINEERING
4411 SIH 35, Suite 100
Georgetown, TX 78626
TBPE Firm No. 21880

Location 014

Upstream



Downstream



Location 017





Location 018

Upstream



Downstream



Location 020





reUse ENGINEERING
4411 SIH 35, Suite 100
Georgetown, TX 78626
TX Firm No. 21880

Location 022

Upstream



Downstream

Location 025





Location 027

Upstream



Downstream



Location 029





reUse ENGINEERING
4411 SIH 35, Suite 100
Georgetown, TX 78626
TX Firm No. 21880

Location 030

Upstream



Downstream



Location 035





Location 479

WWTP Location



Location 495

WWTP Location

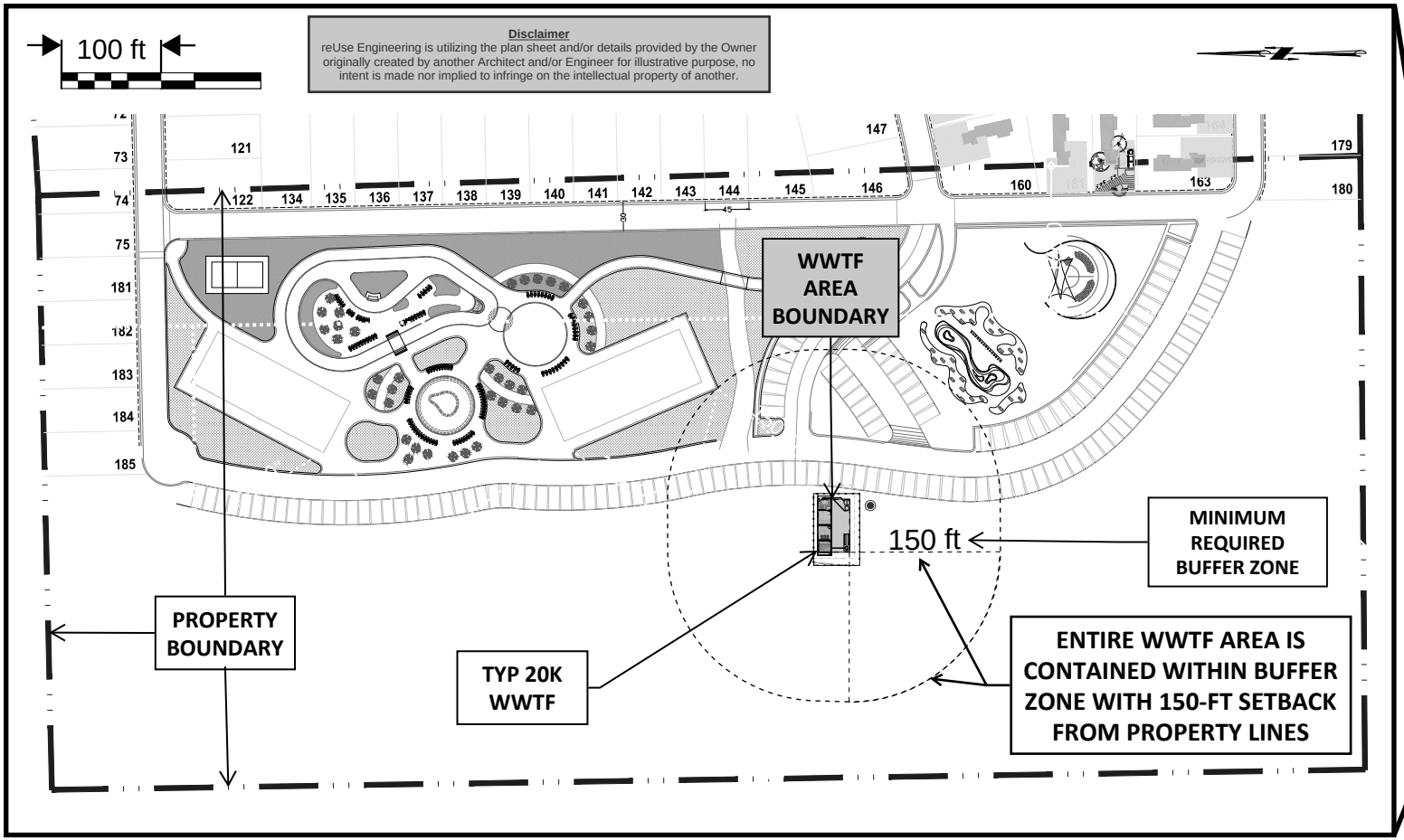


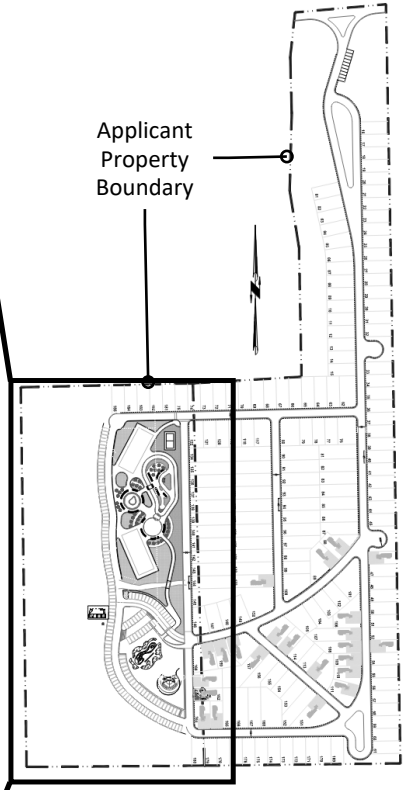


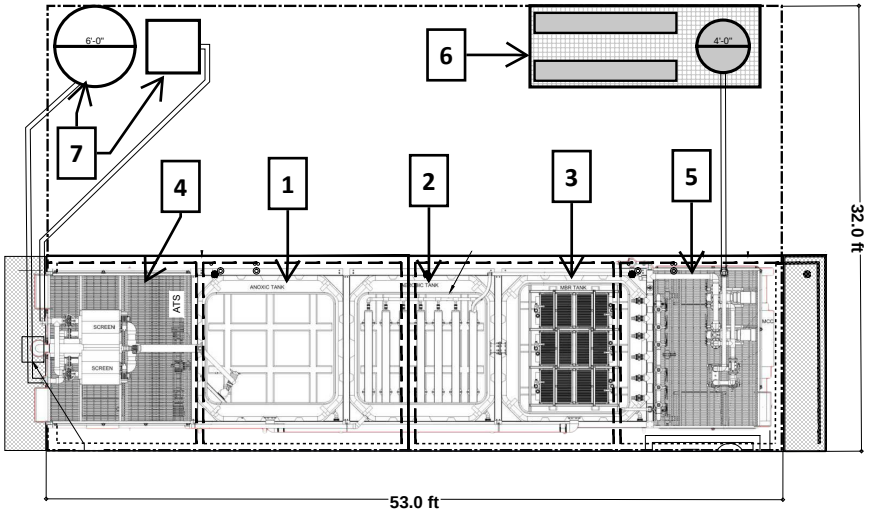
reUse ENGINEERING
4411 SIH 35, Suite 100
Georgetown, TX 78626
TX Firm No. 21880

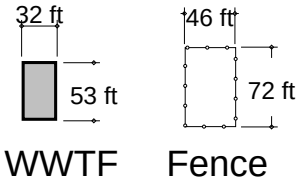
ATTACHMENT F

BUFFER ZONE MAP

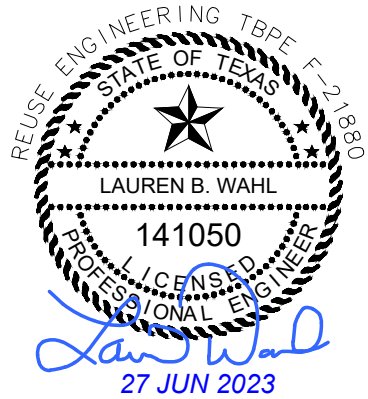








1.Anoxic Tank
2.Aerobic Tank
3.Membranes Tank
4.Fine Screens/Sludge Press Skid
5.Permeate & Blower Skid
6.R.O. Skid
7.Influent Lift Station & Valve Pit



THE VILLAGE AT GRAPE CREEK
TPDES PERMIT APPLICATION
GILLESPIE COUNTY, TEXAS

BUFFER ZONE MAP

Attachment F

ATTACHMENT G

U.S. TOPOGRAPHIC MAPS

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): Click here to enter text.

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

Estimated construction start date: Click here to enter text.

Estimated waste disposal start date: Click here to enter text.

B. Interim II Phase

Design Flow (MGD): Click here to enter text.

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

Estimated construction start date: Click here to enter text.

Estimated waste disposal start date: Click here to enter text.

C. Final Phase

Design Flow (MGD): 20K gpd = 0.02 MGD

2-Hr Peak Flow (MGD): 0.08 MGD

Estimated construction start date: Calendar Year 2023

Estimated waste disposal start date: Calendar Year 2024

D. Current operating phase: Not Yet Constructed

Provide the startup date of the facility: Calendar Year 2024

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 plant is an MBR (membrane bio-reactor) facility, including influent pump station, equalization, fine screen, anoxic, aerobic, and membrane cells with ultraviolet disinfection and a sludge press.

Port or pipe diameter at the discharge point, in inches: 4

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)
Fine Screen	3	N/A
Anoxic Tank	1	10' x 7.3' x 9'
Aerobic Tank	1	12' x 7.3' x 9'
Membranes Cell	1	10' x 7.3' x 9'
Ultraviolet Disinfection	1	N/A
Sludge Press	1	N/A

C. Process flow diagrams

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

Attachment: 1. Process Flow Diagram

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: 2. Site Drawing

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

The Village at Grape Creek will serve a residential development with proposed 185 lots.

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.

Click here to enter text.

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.

Click here to enter text.

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: Click here to enter text.

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

Click here to enter text.

B. Buffer zones

Have the buffer zone requirements been met?

Yes ☒ No ☐

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

relevant to maintaining the buffer zones.

See Attachment F of the 10053 Administrative Report. The wastewater treatment plant is located 150-ft or more from the nearest property line.

C. Other actions required by the current permit

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

Yes ☐ No ☒

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

Click here to enter text.

D. Grit and grease treatment

1. Acceptance of grit and grease waste

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

Yes ☐ No ☒

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

2. Grit and grease processing

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

Click here to enter text.

3. Grit disposal

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

Yes ☐ No ☐

If No, contact the TCEQ Municipal Solid Waste team at 512-239-0000. 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.

Click here to enter text.

4. Grease and decanted liquid disposal

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

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

Click here to enter text.

E. Stormwater management

1. Applicability

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

Yes ☐ No ☒

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

Yes ☐ No ☒

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

2. MSGP coverage

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

Yes ☐ No ☐

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

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

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

Yes ☐ No ☐

3. Conditional exclusion

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

Yes ☐ No ☐

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

Click here to enter text.

4. Existing coverage in individual permit

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

Yes ☐ No ☐

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

Click here to enter text.

5. Zero stormwater discharge

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

Yes ☐ No ☐

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

Click here to enter text.

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

6. Request for coverage in individual permit

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

Yes ☐ No ☐

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

Click here to enter text.

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

F. Discharges to the Lake Houston Watershed

Does the facility discharge in the Lake Houston watershed?
Yes ☐ No ☒

If yes, 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 BOD_5 concentration of the sludge, and the design BOD_5 concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

Click here to enter text.

Note: Permits that accept sludge from other wastewater treatment plants

may be required to have influent flow and organic loading monitoring.

2. Acceptance of septic waste

Is the facility accepting or will it accept septic waste?

Yes ☐ No ☒

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

Yes ☐ No ☐

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

Yes ☐ No ☐

If yes to any of the above, provide 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 BOD_5 concentration of the septic waste, and the design BOD_5 concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

Click here to enter text.

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

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

Is 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.

Click here to enter text.

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). **W*ater 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

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

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
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

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: Not yet contracted

Facility Operator's License Classification and Level: Click here to enter text.

Facility Operator's License Number: Click here to enter text.

Section 9. Sewage Sludge Management and Disposal (Instructions Page 60)

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: Click here to enter text.

B. Sludge disposal site

Disposal site name: City of Fredericksburg Landfill

TCEQ permit or registration number: 1995

County where disposal site is located: Gillespie

C. Sludge transportation method

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

Name of the hauler: Hill Country Pump Service

Hauler registration number: RN102960796, Sludge ID 21402

Sludge is transported as a:

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

Section 10. Permit Authorization for Sewage Sludge Disposal (Instructions Page 60)

A. Beneficial use authorization

Does the existing permit include authorization for land application of sewage

sludge for beneficial use?

Yes ☐ No ☒

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

Yes ☐ No ☐

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

Yes ☐ No ☐

B. Sludge processing authorization

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

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

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

Yes ☐ No ☐

Section 11. Sewage Sludge Lagoons (Instructions Page 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

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

- Original General Highway (County) Map:

  Attachment: Click here to enter text.

- USDA Natural Resources Conservation Service Soil Map:

  Attachment: Click here to enter text.

- Federal Emergency Management Map:

  Attachment: Click here to enter text.
- Site map:

  Attachment: Click here to enter text.

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

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

Attachment: Click here to enter text.

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

Click here to enter text.

B. Temporary storage information

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

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

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

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

Phosphorus, mg/kg: Click here to enter text.

Potassium, mg/kg: Click here to enter text.

pH, standard units: Click here to enter text.

Ammonia Nitrogen mg/kg: Click here to enter text.

Arsenic: Click here to enter text.

Cadmium: Click here to enter text.

Chromium: Click here to enter text.

Copper: Click here to enter text.

Lead: Click here to enter text.

Mercury: Click here to enter text.

Molybdenum: Click here to enter text.

Nickel: Click here to enter text.

Selenium: Click here to enter text.

Zinc: Click here to enter text.

Total PCBs: Click here to enter text.

Provide the following information:

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

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

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

C. Liner information

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

Yes ☐ No ☐

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

Click here to enter text.

D. Site development plan

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

Click here to enter text.

Attach the following documents to the application.

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

  Attachment: Click here to enter text.

- Copy of the closure plan

  Attachment: Click here to enter text.

- Copy of deed recordation for the site

  Attachment: Click here to enter text.

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

  Attachment: Click here to enter text.

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

  Attachment: Click here to enter text.

- Procedures to prevent the occurrence of nuisance conditions

  Attachment: Click here to enter text.

E. Groundwater monitoring

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

Yes ☐ No ☐

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

Attachment: Click here to enter text.

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:

Click here to enter text.

B. Permittee enforcement status

Is the permittee currently under enforcement for this facility?

Yes ☐ No ☒

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

Yes ☐ No ☒

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

Click here to enter text.

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: Click here to enter text.

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: N/A – No laboratory tests submitted with New Application

Title: Click here to enter text.

Signature: _____

Date: _____

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.

There is not currently a central wastewater service that provides for this area. Sewer treatment per individual lot is not practical and connection to nearby systems is not a viable option. See Attachment 3 for the Projection of LUEs & Wastewater Flow to WWTF Capacity Over Time of Development. The plot shows that the WWTF capacity will increase prior to development and occupation of LUEs (Living Unit Equivalents). Year 0 represents the start of operation, when LUEs are occupied and wastewater flow begins.

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: Click here to enter text.

If yes, attach correspondence from the city.

Attachment: Click here to enter text.

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

Attachment: Click here to enter text.

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: Click here to enter text.

3. Nearby WWTPs or collection systems

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

Yes ☐ No ☒

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

Attachment: Click here to enter text.

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

Attachment: Click here to enter text.

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: Click here to enter text.

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): Click here to enter text.

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

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

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

Click here to enter text.

B. Proposed organic loading

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

Table 1.1(1) – Design Organic Loading

Source	Total Average Flow (MGD)	Influent BOD_5 Concentration (mg/l)
Municipality		
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	0.02	350
Restaurant		
Hospital		
Nursing home		
Other		
TOTAL FLOW from all sources	0.02	
AVERAGE BOD_5 from all sources		350

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: Click here to enter text.

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

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

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

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

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	0.02	350
Restaurant		
Hospital		
Nursing home		
Other		
TOTAL FLOW from all sources	0.02	
AVERAGE BOD_5 from all sources		350

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: Click here to enter text

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

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

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

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

Other: Click here to enter text.

B. Interim II Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: Click here to enter text.

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

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

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

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

Other: Click here to enter text.

C. Final Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: 10.0

Total Suspended Solids, mg/l: 10.0

Ammonia Nitrogen, mg/l: 5.0

Total Phosphorus, mg/l: 1.0

Dissolved Oxygen, mg/l: 5.0

Other: Click here to enter text.

D. Disinfection Method

Identify the proposed method of disinfection.

☐ Chlorine: Click here to enter text. mg/l after Click here to enter text. minutes detention time at peak flow

Dechlorination process: Click here to enter text.

☒ Ultraviolet Light: 1.0 seconds contact time at peak flow

☒ Other: Membrane

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: 5. Design Calculations

Other: Click here to enter text.

B. Interim II Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: Click here to enter text.

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

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

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

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

Other: Click here to enter text.

C. Final Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: 5.0

Total Suspended Solids, mg/l: 5.0

Ammonia Nitrogen, mg/l: 2.0

Total Phosphorus, mg/l: 1.0

Dissolved Oxygen, mg/l: 5.0

Other: Click here to enter text.

D. Disinfection Method

Identify the proposed method of disinfection.

☐ Chlorine: Click here to enter text. mg/l after Click here to enter text. minutes detention time at peak flow

Dechlorination process: Click here to enter text.

☒ Ultraviolet Light: 1.0 seconds contact time at peak flow

☒ Other: Membrane

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: 5. Design Calculations

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.

Click here to enter text.

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

FEMA Flood Map Service Center (https://msc.fema.gov/portal/home)

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

Yes ☐ No ☒

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

Yes ☐ No ☐

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

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

B. Wind rose

Attach a wind rose. **Attachment**: 6. Wind Rose

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: Click here to enter text.

B. Sludge processing authorization

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

☐ Sludge Composting

☐ Marketing and Distribution of sludge

☐ Sludge Surface Disposal or Sludge Monofill

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

Attachment: Click here to enter text.

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

Attach a solids management plan to the application.

Attachment: 7. Solids Management Plan

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: Click here to enter text.

Distance and direction to the intake: Click here to enter text.

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

Attachment: Click here to enter text.

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: Click here to enter text.

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).

Click here to enter text.

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).

Click here to enter text.

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: Unnamed intermittent stream

A. Receiving water type

Identify the appropriate description of the receiving waters.

☒ Stream

☐ Freshwater Swamp or Marsh

☐ Lake or Pond

Surface area, in acres: Click here to enter text.

Average depth of the entire water body, in feet: Click here to enter text.

Average depth of water body within a 500-foot radius of discharge point, in feet: Click here to enter text.

☐ Man-made Channel or Ditch

☐ Open Bay

☐ Tidal Stream, Bayou, or Marsh

☐ Other, specify: Click here to enter text.

B. Flow characteristics

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

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

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

☐ Perennial - normally flowing

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

☐ USGS flow records

☐ Historical observation by adjacent landowners

☒ Personal observation

☐ Other, specify: Click here to enter text.

C. Downstream perennial confluences

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

Pedernales 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.

Effluent is discharged to intermittent stream that feeds into Pedernales River approx. 1.8 mi downstream of the discharge point. No changes for 3 mi. as per personal observation.

E. Normal dry weather characteristics

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

Predominately dry creek bed with a few small pools. Brushy and rocky in some areas. No significant aquatic life uses noted. No recreational use.

Date and time of observation: 15 February 2023

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
- ☐ Upstream discharges
- ☐ Septic tanks
- ☐ Urban runoff
- ☐ Agricultural runoff
- ☐ Other(s), specify Click here to enter text.

B. Waterbody uses

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

- ☐ Livestock watering
- ☐ Irrigation withdrawal
- ☐ Fishing
- ☐ Contact recreation
- ☐ Non-contact recreation
- ☐ Navigation

☐ Domestic water supply ☐ Industrial water supply

☐ Park activities ☐ Other(s), specify Click here to enter text.

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

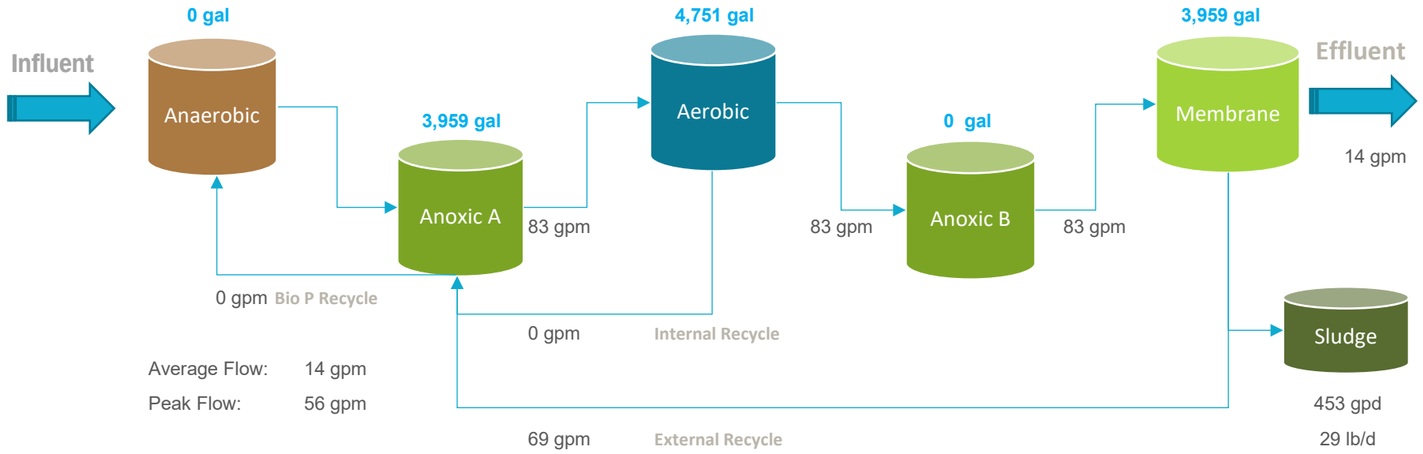
Remainder of 10054 Sections not relevant to this application

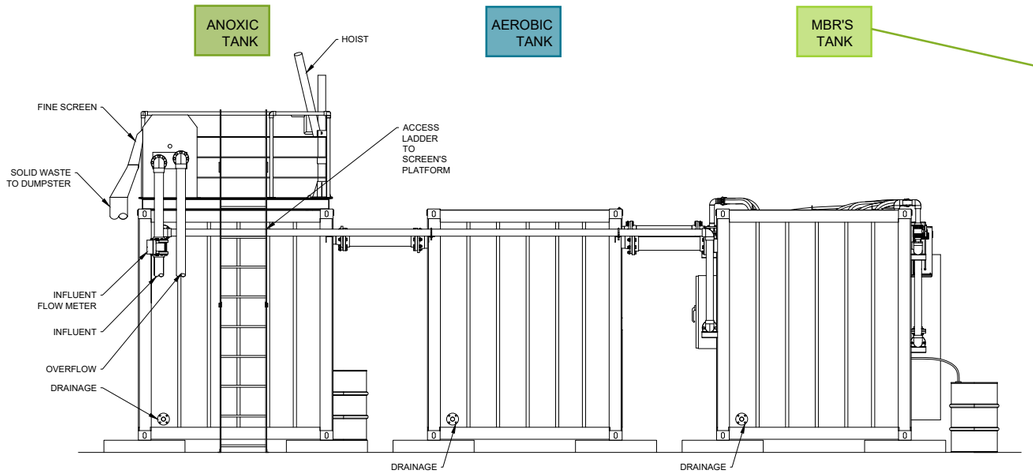
ATTACHMENT 1

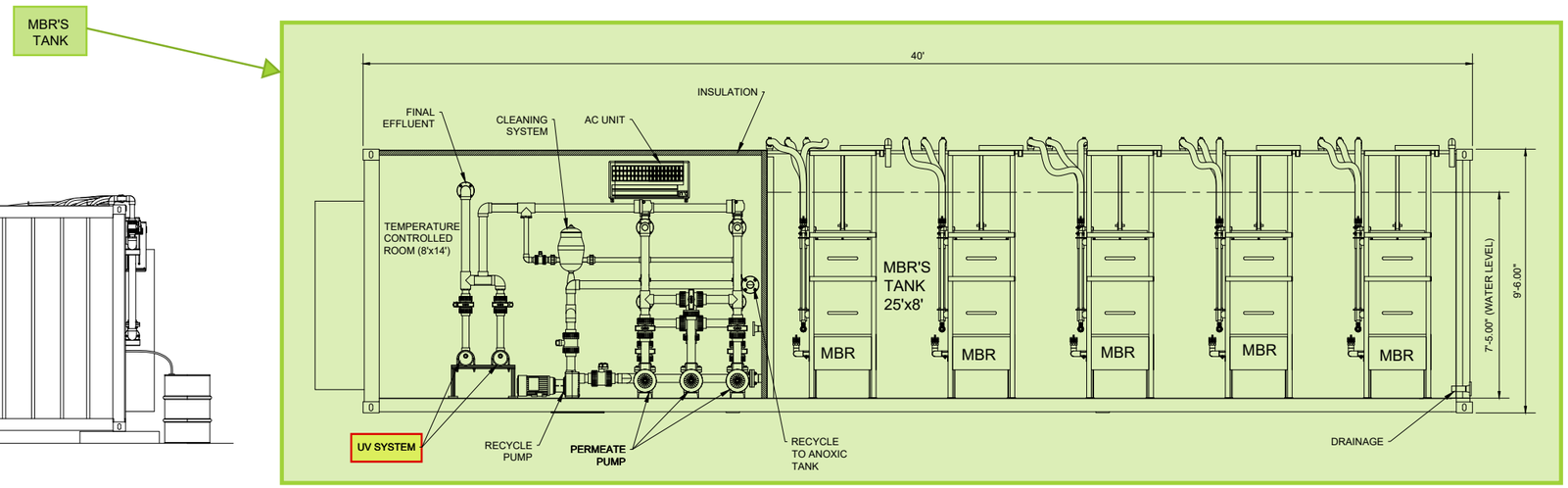
PROCESS FLOW DIAGRAM

The Wastewater Treatment Facility will be comprised of one (1) 20,000 GPD treatment train

See Technical Report Attachment 5 Design Calculations







Example of Process Flow/Treatment Process (provided from design for 80,000 gpd Treatment Plant)

Disclaimer

This drawing was created by A3-USA for a separate project. It is presented here for illustrative purposes only. Sizes and dimensions will vary.

REUSE ENGINEERING TBPE F-21880
STATE OF TEXAS
LAUREN B. WAHL
141050
LICENSED PROFESSIONAL ENGINEER
27 JUN 2023

reUse ENGINEERING
4411 SIH 35, Suite 100
Georgetown, TX 78626
TX Firm No. 21880

THE VILLAGE AT GRAPE CREEK
TPDES PERMIT APPLICATION
GILLESPIE COUNTY, TEXAS

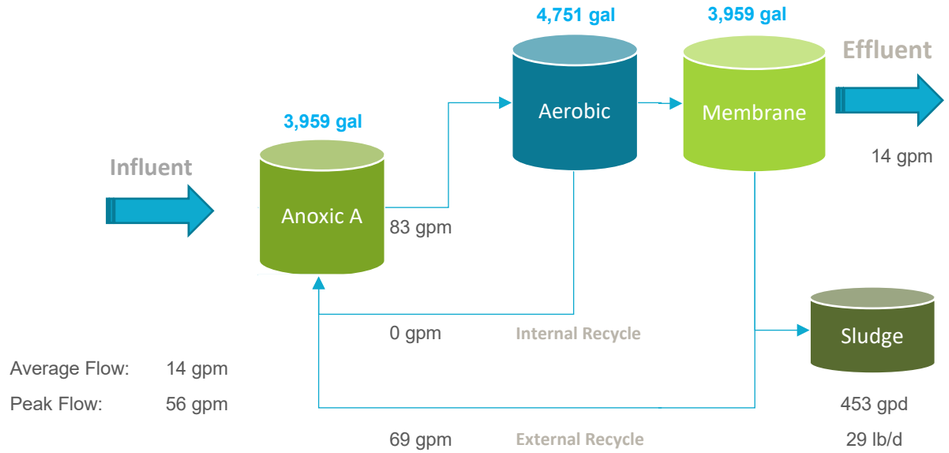
PROCESS FLOW DIAGRAM

Attachment 1

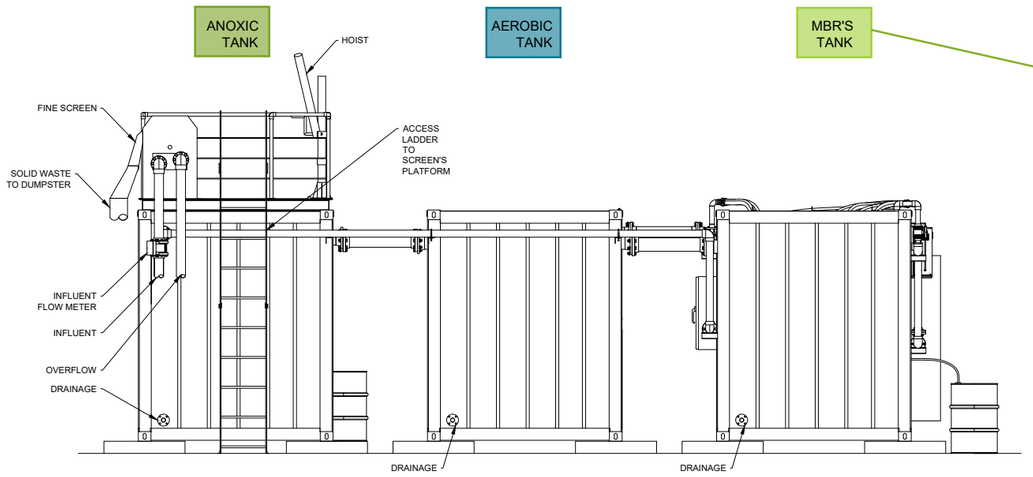
00088

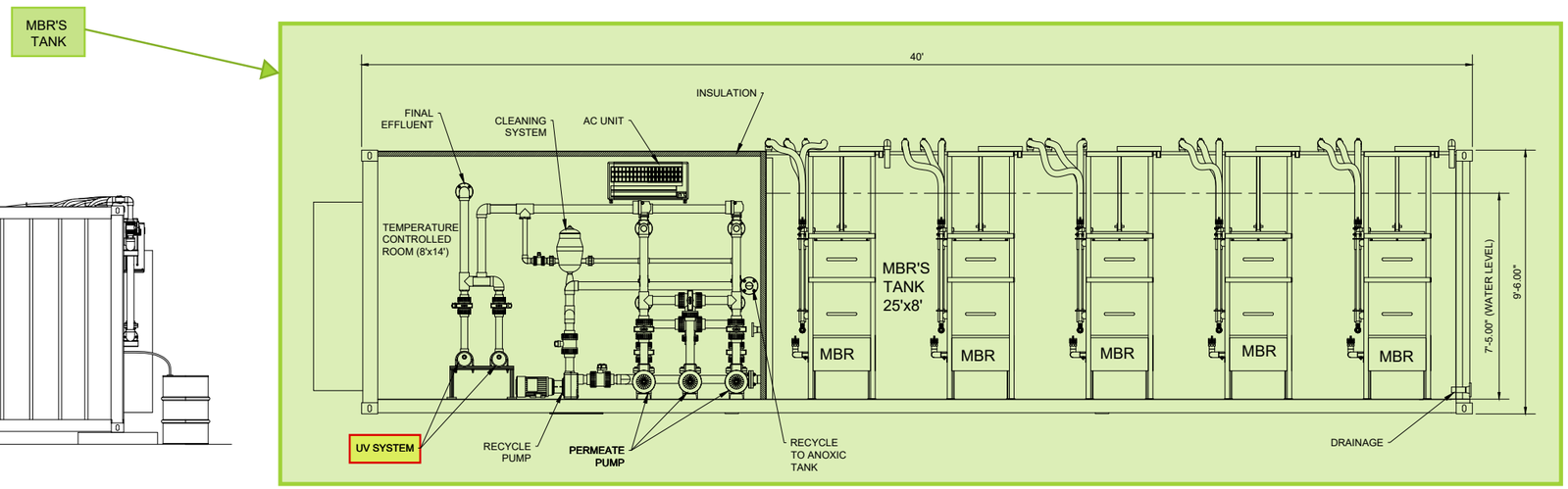
The Wastewater Treatment Facility will be comprised of one (1) 20,000 GPD treatment train

See Technical Report Attachment 5 Design Calculations



1





Example of Process Flow/Treatment Process (provided from design for 80,000 gpd Treatment Plant)

Disclaimer

This drawing was created by A3-USA for a separate project. It is presented here for illustrative purposes only. Sizes and dimensions will vary.

REUSE ENGINEERING TBPE F-21880
STATE OF TEXAS
LAUREN B. WAHL
141050
LICENSED PROFESSIONAL ENGINEER

27 JUN 2023
Rev 1: 25 OCT 2023

REVISIONS

No.	NOTES	DATE
1	Remove extraneous equipment from schematic	10/25/23

reUse ENGINEERING
4411 SH 35, Suite 100
Georgetown, TX 78626
TX Firm No. 21880

THE VILLAGE AT GRAPE CREEK
TPDES PERMIT APPLICATION
GILLESPIE COUNTY, TEXAS

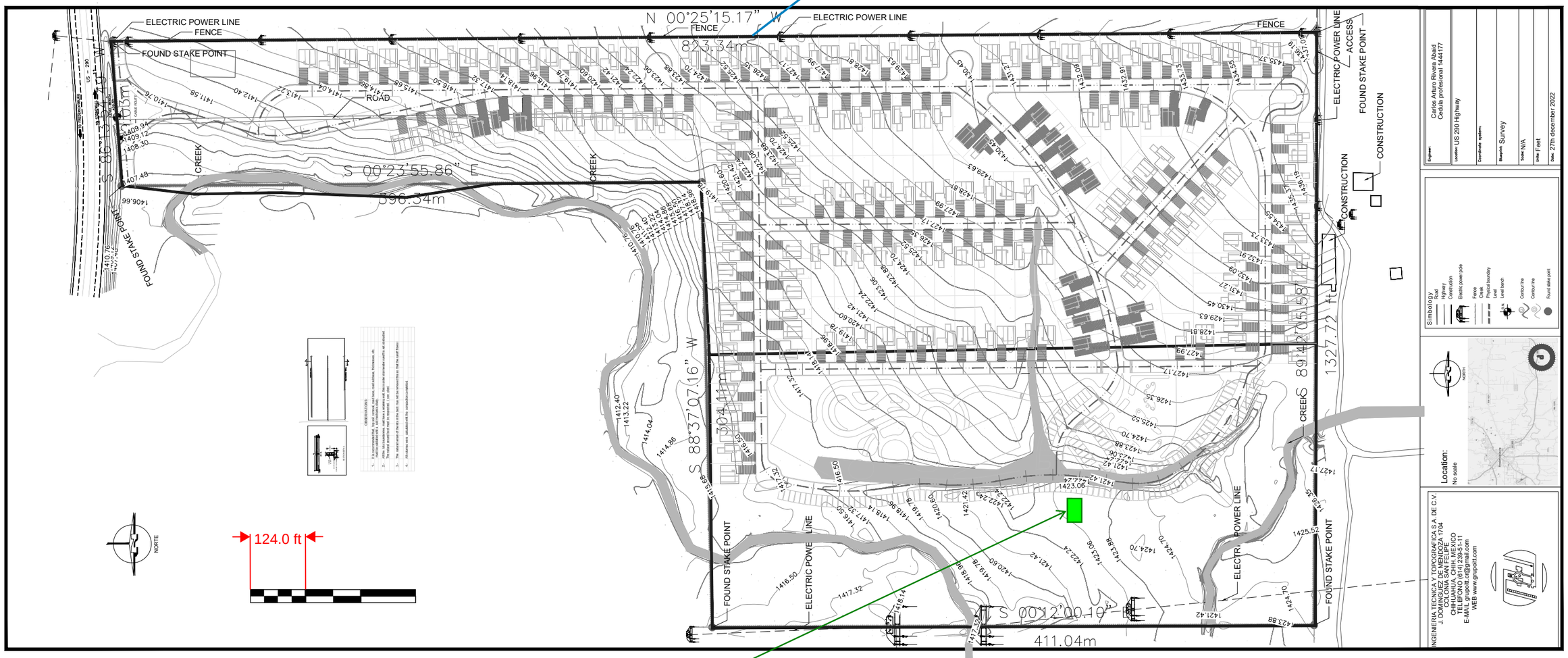
PROCESS FLOW DIAGRAM

Attachment 1

ATTACHMENT 2

SITE DRAWING

APPLICANT PROPERTY BOUNDARY (AREA SERVED BY WWTF)



WWTF BOUNDARIES

Disclaimer

reUse Engineering is utilizing the plan sheet and/or details provided by the Owner originally created by another Architect and/or Engineer for illustrative purpose, no intent is made nor implied to infringe on the intellectual property of another.

reUse ENGINEERING
4411 SIH 35, Suite 100
Georgetown, TX 78626
TX Firm No. 21880

REUSE ENGINEERING TBPE F-21880
STATE OF TEXAS
LAUREN B. WAHL
141050
LICENSED
PROFESSIONAL ENGINEER
27 JUN 2023

THE VILLAGE AT GRAPE CREEK
TPDES PERMIT APPLICATION
GILLESPIE COUNTY, TEXAS

SITE DRAWING/MAP

Attachment 2

ATTACHMENT 3

JUSTIFICATION OF PERMIT NEED

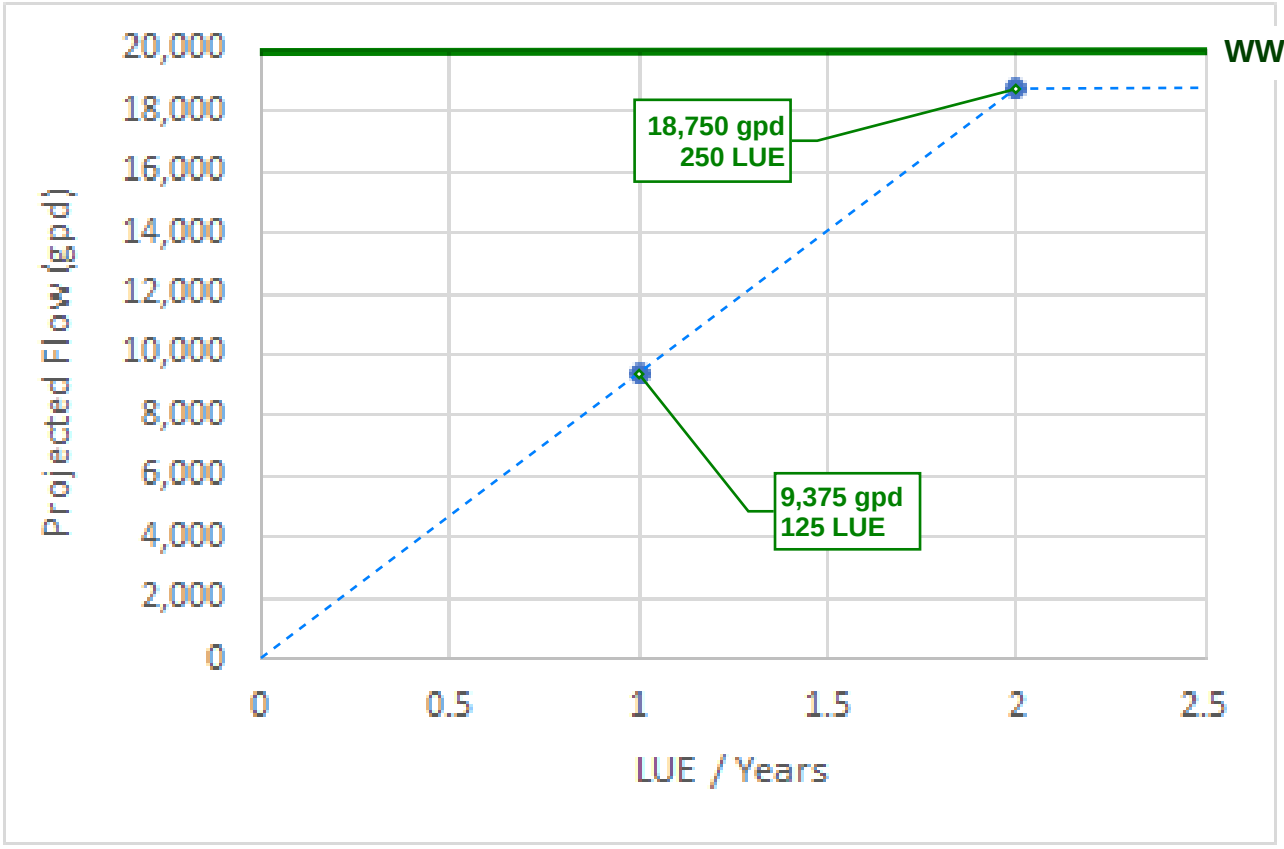
		Design Flow gpd	Cumulative Flow gpd
WWTF	1	20,000	20,000

		Development per Year LUE	Cumulative Development LUE	Projected Flow gpd
Year	1	125	125	9,375
Year	2	125	250	18,750
LUE (Living Unit Equivalents)			75	gpd/LUE

30 TAC §217.32 Table B.1. Design Organic Loadings and Flows for New WWTF

Mobile Home Park; Hotel/Motel: 50-75 gpd/person

Tiny Homes designed as single-bed hotel rooms



REUSE ENGINEERING TBPE F-21880
STATE OF TEXAS
LAUREN B. WAHL
141050
LICENSED PROFESSIONAL ENGINEER

27 JUN 2023

THE VILLAGE AT GRAPE CREEK
TPDES PERMIT APPLICATION
GILLESPIE COUNTY, TEXAS

PROJECTION OF LUES & WASTEWATER FLOW

Attachment 3

		Design Flow gpd	Cumulative Flow gpd
WWTF	1	20,000	20,000

		Development per Year LUE	Cumulative Development LUE		Projected Flow gpd	
Year	1	125	125		10,250	
Year	2	125	241	1	19,762	1
LUE (Living Unit Equivalents)			82	*1	gpd/LUE	

REVISIONS

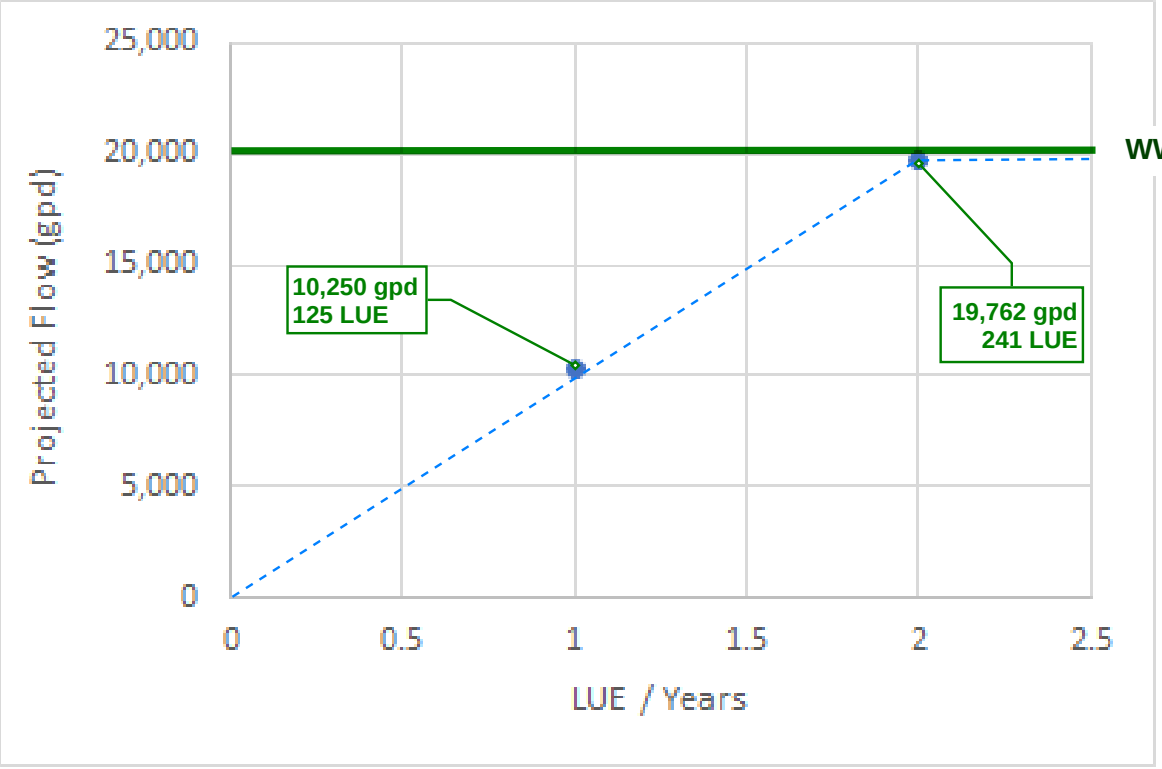
No.	NOTES	DATE
1	Design flow updated based on discussion with TCEQ WW Group; total LUEs updated	01/18/24

30 TAC §217.32 Table B.1. Design Organic Loadings and Flows for New WWTF

Mobile Home Park; Hotel/Motel: 50-75 gpd/person

Tiny Homes designed as single-bed hotel rooms, not occupied 24/7/365

1 *Local WCD has restricted water supply permits to 41 gal per day per person. Assuming each LUE may be occupied by 2 persons, max.



REUSE ENGINEERING TBPE F-21880
STATE OF TEXAS
LAUREN B. WAHL
141050
LICENSED PROFESSIONAL ENGINEER

27 JUN 2023

Rev 1: 18 JAN 2024

THE VILLAGE AT GRAPE CREEK
TPDES PERMIT APPLICATION
GILLESPIE COUNTY, TEXAS

PROJECTION OF LUES & WASTEWATER FLOW

Attachment 3

00092a

ATTACHMENT 5

DESIGN CALCULATIONS

MODERN WASTEWATER SOLUTIONS

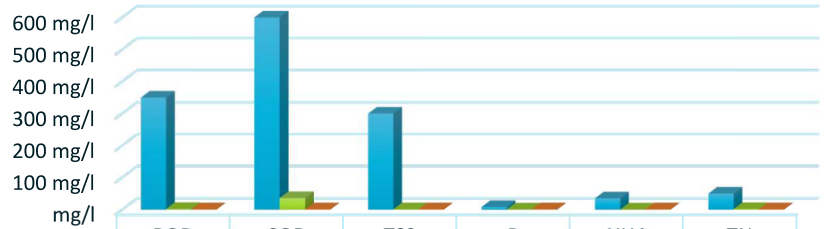
Budget Proposal # 948

00094



Process Summary

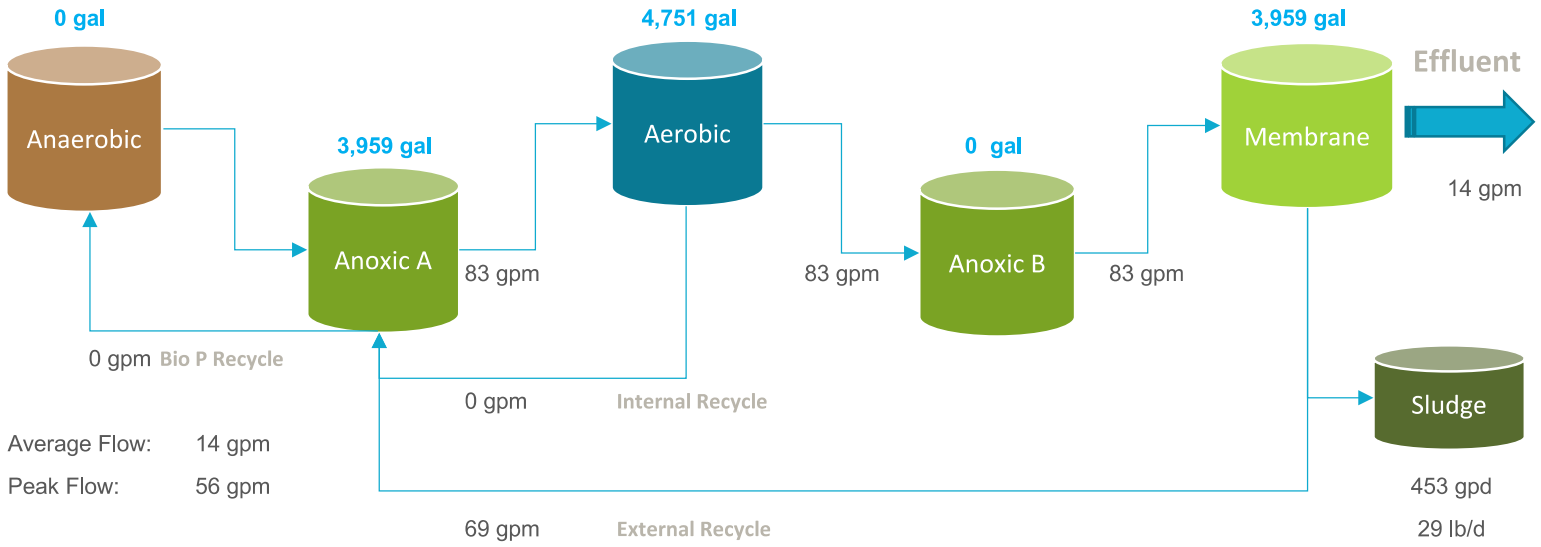
Influent & Effluent Parameters



	BOD	COD	TSS	P	NH4	TN
Influent	350 mg/l	600 mg/l	300 mg/l	8 mg/l	35 mg/l	50 mg/l
Effluent	2.0 mg/l	36.0 mg/l	1.0 mg/l	0.4 mg/l	0.3 mg/l	1.8 mg/l
Removal	99.4%	94.0%	99.7%	95.0%	99.1%	96.4%

PROCESS PARAMETERS

Sludge Age	25 d
Total Reactor Volume	12,668 gal
Total SOR	85 kgO2/d
MLSS in Anoxic / Aerobic Tank	7,641 mg/l
MLSS in Membrane Tank	9,258 mg/l
HRT	15 h
F/M RATIO (BOD)	0.080
F/M RATIO (COD)	0.137
Total Membrane Surface	5,667 sf



Aeration	Flow	Pressure
EQ	0 scfm	0.0 psi
Sludge	0 scfm	0.0 psi
Aerobic	59 scfm	4.5 psi
Membrane	190 scfm	4.5 psi

Applied Options:



5/23/2023

560000

Biological Process Calculation

Influent Charateristics	Symbol	Value	Units
Type of wastewater		municipal	
Temperature	T	15	°C
pH	-	7.0	-
H_2CO_3 alkalinity	Alk_i	300	mg/l as $CaCO_3$
Site pressure / elevation	$p_{a,i}$	14.5	psi
Average daily flow	Q_i	20,000	gpd
Peak daily flow	$Q_{i,\ max,d}$	50,000	gpd
Hourly peak flow	$Q_{i,\ max,p}$	56	gpm
Peak factor	-	4.0	-
Average daily flow	Q_i	76	m^3/d
Max. monthly average daily flow	$Q_{i,\ max,d}$	189	m^3/d
Hourly peak flow	$Q_{i,\ max,h}$	12.6	m^3/h
Total BOD	$S_{BOD,i}$	350	mgBOD/l
Total COD	$S_{COD,i}$	600	mgCOD/l
COD/BOD ratio	-	1.71	-
Rapidly biodegradable COD	$S_{s,i}$	150	mgCOD/l
Volitale fatty acids (VFA)	$S_{VFA,i}$	23	mgCOD/l
Fermentable COD	$S_{F,i}$	127	mgCOD/l
Slowly biodegradable COD	$S_{ss,i}$	324	mgCOD/l
Biodegradable COD	$S_{bio,i}$	474	mgCOD/l
Soluble inert COD	$S_{SIN,i}$	36	mgCOD/l
Particulate inert COD	$S_{PIN,i}$	90	mgCOD/l

Influent Charateristics	Symbol	Value	Units
NO_3	$N_{NO3,i}$	0.0	mg/l
NH_4	$N_{a,i}$	35.0	mg/l
TKN	$N_{TKN,i}$	50.0	mg/l
TP	P_i	8.0	mg/l
Dissolved Oxygen	$S_{O2,i}$	0.0	mg/l
FSA fraction	$f_{a/TKN,i}$	0.7	-
Fixed (inorganic) suspended solids	$X_{FSS,i}$	47.5	mgISS/l
TSS concentration	$S_{TSS,i}$	300.0	mgTSS/l
Total BOD mass	$FS_{BOD,i}$	26.5	kgBOD/d
Total COD mass	$FS_{COD,i}$	45.4	kgCOD/d
Total NH_4 mass	$FS_{a,i}$	2.6	$kgNH_4/d$
Total TKN mass	$FS_{TKN,i}$	3.8	kgTKN/d
Total P mass	$FS_{P,i}$	0.6	kgP/d

Effluent Characteristics	Symbol	Value	Units
Waste Sludge	FX_t	29	lb/d
Waste Sludge	Q_w	453	gpd
Effluent BOD	$S_{BOD,e}$	< 3	mgBOD/l
Effluent COD	$S_{COD,e}$	36	mgCOD/l
Effluent TSS	$S_{TSS,e}$	1.0	mgTSS/l
Effluent P	P_e	0.4	mgP/l
Effluent NH_4	$N_{a,e}$	0.3	mgN/l
Effluent NO_3	$N_{NO3,e}$	0.0	mgN/l
Effluent TN (N_{ne} + N_{te})	$N_{t,e}$	1.8	mgN/l

Bioreactor Characteristics	Symbol	Value	Units
Temperature	T_{bio}	15	°C
Sludge retention time / Sludge age	SRT	25	d
Reactor volume	$V_{P,chosen}$	12,668	gallons
Reactor volume	$V_{P,chosen}$	48	m^3
Reactor volume	$V_{P,calc}$	11,334	gallons
Average MLSS concentration	X_{TSS}	7,750	mgTSS/l
Food to microorganism ratio	$F/M_{BOD,used}$	0.080	kgBOD/kgMLSS
Food to microorganism ratio	$F/M_{COD,used}$	0.137	kgCOD/kgMLSS
Membrane tank MLSS concentration	X_M	9,258	mgTSS/l
Aerobic/Anoxic tank MLSS concentration	X_{Bio}	7,641	mgTSS/l
Number of anaerobic zones	$\#_{AN}$	0	-
Number of anoxic zones	$\#_{AO}$	1	-
Number of aerobic zones	$\#_{AE}$	1	-
External recycle ratio	m	5	-
Internal recycle ratio	a	0	-
DO in m recycle	O_m	2	mgO_2/l
DO in a recycle	O_a	0	mgO_2/l
Recycle ratio to anaerobic tank (PAO)	s	0	-
DO in s recycle	$S_{O2,s}$	0	mgO_2/l
Nitrate on s recycle	$S_{NO3,s}$	0	mg/l
TKN/COD ratio	$f_{TKN/COD}$	0.083	mgTKN/mgCOD
Carbon source addition (Micro C)	B_{MicroC}	0.0	lb/d
Carbon source addition (Micro C)	S_{MicroC}	0.00	gpd
Nominal hydraulic retention time	HRT_n	15.2	h
Actual hydraulic retention time	HRT_a	2.5	h

Biological Oxygen Demand	Symbol	Value	Units
OD for synth & endo respiration (PAO)	FO_{PAO}	0	kgO_2/d
OD for synth & endo respiration (OHO)	FO_{OHO}	29	kgO_2/d
Mass carbonaceous oxygen demand	FO_C	29	kgO_2/d
Carbonaceous oxygen utilization rate	O_c	60%	-
Nitrification oxygen demand	FO_n	12	kgO_2/d
Total oxygen demand	FO_t	40	kgO_2/d
Oxygen recovered by denitrification	FO_d	7	kgO_2/d
Net total oxygen demand (AOR)	FO_{td}	33	kgO_2/d
Oxygen saturation @ operating temp.	c_s	10.2	mg/l
Desired oxygen level	c_x	2.0	mg/l
Transfer coefficient	α	0.50	-
Diffuser water depth	DWD	6.5	feet
Oxygen transfer efficiency	OTE	2	%
Standard total oxygen demand (SOR)	SOR	85	kgO_2/d
Required air flow	Q_{air}	**57**	scfm
Oxygen requir. per volume & depth	OS	18.3	$gO_2/(Nm_3*m_D)$

86000

Membrane Module Design	Symbol	Value	Units
Permeate on cycle	T_o	8	minute
Permeate off cycle (relaxation)	T_s	2	minute
Effective membrane module surface	$A_{m,eff}$	87.8	m^2
Effective membrane module surface	$A_{m,eff}$	945	ft^2
Total number of membrane modules	N_M	6	-
Total membrane module surface	A_{total}	527	m^2
Total membrane module surface	A_{total}	5,667	ft^2
Nominal average daily flux	$Q_{ave,n}$	7.5	lmh
Nominal max. daily flux	$Q_{ave,n,max,mo}$	18.7	lmh
Nominal peak hourly flux	$Q_{peak,n}$	30.0	lmh
Average daily flux (excluding rest cycle)	$Q_{ave,n}$	**3.5**	gfd
Max. Daily flux (ex. rest cycle)	$Q_{ave,n,max,mo}$	**8.8**	gfd
Peak hourly flux (ex. rest cycle)	$Q_{peak,n}$	**14.1**	gfd
Total membrane module displacement vol	$V_{modules}$	66	ft^3
Total membrane module displacement vol	$V_{modules}$	494	gallons
Aeration modules	A#	6	-
Membrane module aeration requirement	Q_{am}	28.5	acfm
Total membrane modules aeration	$Q_{am,total}$	171	acfm
Membrane diffuser water depth	DWD_m	6.0	feet
Oxygen requirement per volume & depth	OS	14	$gO_2/(Nm_3*m_D)$
Standard oxygen rate, membrane aeration	SOR_m	381	lbO_2/d
Standard oxygen rate, membrane aeration	SOR_m	175	kgO_2/d



- ✓ Patented, innovative A3's MaxFlow™ membrane filtration modules manufactured in USA.
- ✓ The MaxFlow™ module "open channel design" provides optimal biofilm control, minimizes the quantity of chemical cleaning procedures and avoids module clogging.
- ✓ The compact module design enables dual-stack and triple-stack installations. It allows for a high membrane packing density resulting in a small footprint and high energy efficiency.
- ✓ Most existing conventional treatment plants can be retrofitted with MaxFlow™ membranes due to the flexible and compact nature of our membrane

Kinetic Constants	Symbol	Value	Units
Yield coefficient OHO	Y_{OHO}	0.40	mgVSS/mgCOD
Yield coefficient OHO,OBS	$Y_{OHO,obs}$	0.06	mgVSS/mgCOD
Fermentation rate at 20°C	$k_{F,20}$	0.06	m3/gVSSd
Temperature coefficient for $k_{F,T}$	Θ_{kF}	1.029	-
Fermentation rate at T	$k_{F,T}$	0.05	m3/gVSSd
Endogenous respiration rate (decay)	$b_{OHO,20}$	0.24	gVSS/gVSSd
Endogenous respiration rate T	$b_{OHO,T}$	0.21	gVSS/gVSSd
Yield coefficient FSA	Y_A	0.10	mgVSS/mgFSA
Nitri. pH sensitivity coefficient	K_I	1.13	-
Nitri. pH sensitivity coefficient	K_{max}	9.50	-
Nitri. pH sensitivity coefficient	K_{II}	0.30	-
Max. specific growth rate at 20°C	μ_{Am}	0.45	1/d
Max. spec. growth rate - Temp/pH	μ_{AmTpH}	0.21	1/d
Half saturation coefficient	K_n	0.75	mgFSA/l
Half saturation coefficient - Temp	K_{nT}	0.42	mgFSA/l
Endogenous respiration rate (decay)	b_A	0.04	1/d
Temperature coefficient for $k_{F,T}$	θ_n	1.123	-
Endogenous respiration rate T	b_{AT}	0.022	1/d
Temperature sensitivity coefficient	Θ_{nk1}	1.20	-
Temperature sensitivity coefficient	Θ_{nk2}	1.05	-
Temperature sensitivity coefficient	Θ_{nk3}	1.03	-
Denitrification rates at 20°C	k_1	0.70	-
Denitrification rates at 20°C	k_2	0.10	-
Denitrification rates at 20°C	k_3	0.08	-
Denitrification rates	k_{1T}	0.281	-
Denitrification rates	k_{2T}	0.079	-
Denitrification rates	k_{3T}	0.069	-
Yield coefficient PAO	Y_{PAO}	0.45	gAVSS/gCOD
Yield coefficient PAO	$Y_{PAO,obs}$	0.22	gAVSS/gCOD
Endogenous respiration rate (decay)	b_{PAO_20}	0.04	gEVSS/gCOD
Temperature coefficient for $k_{F,T}$	$\Theta_{b,PAO}$	1.029	-
Endogenous respiration rate T	$b_{PAO,T}$	0.03	gEVSS/gVSSd

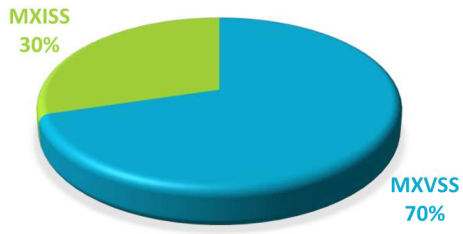
Stoichiometric Constants	Symbol	Value	Units
COD/BOD ratio	-	1.71	-
Readily biodeg. org. fraction (RBCOD)	$f_{s,COD}$	0.25	g/gTCOD
Non-biodegradable particulate COD	$f_{PNb,COD}$	0.15	g/gTCOD
Non-biodegradable soluble COD	$f_{SNb,COD}$	0.06	g/gTCOD
SVFA fraction of RBCOD	$f_{SVFA,SSi}$	0.15	$g/gCOD_{SS}$
VSS/TSS of activated sludge	f_{VT}	0.70	mgVSS/mgTSS
COD/VSS of activated sludge	f_{cv}	1.48	kgCOD/kgVSS
True synthesis fraction	f_s^0	0.57	-
Endogenous residue fraction	$f_{H/E,OHO}$	0.2	-
ISS content of OHOs	$f_{ISS,OHO}$	0.15	-
Active fraction - VSS	f_{avOHO}	25%	-
Active fraction - TSS	f_{at}	18%	-
Influent FSA fraction	$f_{FSA,i}$	0.70	-
Non-bio. soluble orgN fraction (inerts)	$f_{SNb,N}$	0.03	-
Non-bio. particulate orgN fraction	f_n	0.12	-
Permissible unaer. sludge mass fraction	f_{xm}	0.65	-
Design unaerated sludge mass fraction	f_{xt}	0.31	-
Minimum primary anoxic mass fraction	f_{x1min}	0.08	-
Primary anoxic mass fraction	f_{x1}	0.31	-
Secondary anoxic mass fraction	f_{x2}	0.00	-
Anaerobic mass fraction	f_{AN}	0.00	-
Non-bio. particulate orgP fraction	$f_{P,XE,OHO}$	0.05	mgP/mgVSS
Endogenous residue fraction	$f_{XE,PAO}$	0.25	gEVSS/gAVSS
P fraction in active PAO mass	$f_{P,PAO}$	0.38	gP/gAVSS
VSS/TSS ratio for PAO active mass	$f_{VT,PAO}$	0.46	gVSS/gTSS
Ratio of P release /VFA uptake	$f_{PO4,REL}$	0.5	gP/gCOD
Frac. of fixed inorganic s. solids of PAO	$f_{FSS,PAO}$	1.3	gFSS/gAVSS
P content of TSS	$f_{P,TSS}$	0.041	gP/gTSS
P content of VSS	$f_{P,FSS,i}$	0.02	gP/gVSS
TKN/COD ratio	f_{ns}	0.08	mgTKN/mgCOD
Nitrogen content of active biomass	$f_{N,VSS}$	0.10	gN/gAVSS

66000

00100

Biological Mass Balance	Symbol	Value	Units
Sludge age	SRT	25	d
Mixed liquor suspended solids	X_{TSS}	7,750	mgTSS/l
Readiable biodegradabe COD flux	$FS_{S,i}$	11	kgCOD/d
Daily flux of VFAs	$FS_{VFA,i}$	2	kgCOD/d
Daily flux of fermentable COD	$FS_{F,i}$	10	kgCOD/d
Daily flux of biodegradable COD	$FS_{bio,i}$	36	kgCOD/d
Daily flux of particulate inert COD	$FS_{PIN,i}$	7	kgCOD/d
Daily flux of fixed inorganic sus. solids	$FS_{ISS,i}$	4	kgISS/d
Influent particulate non-bio. COD	$FX_{VSS,i}$	5	kgVSS/d
Mass nitrogen into sludge prod.	FN_{Sludge}	1	kgN/d
Mass of nitrate generated per day	FN_{NO3}	3	kgN/d
VFAs stored by PAOs	$FS_{S,PAO}$	0	kgCOD/d
Remaining biodegradable COD	$FCOD_{b,OHO}$	36	kgCOD/d
Mass nitrifiers	MX_A	4	kgVSS
Active biomass PAO	MX_{PAO}	0	KgAVSS
Endogenous active biomass PAO	$MX_{E,PAO}$	0	kgEVSS
Bio mass	MX_{bio}	58	kgVSS
Active organism mass	MX_{OHO}	58	kgVSS
Endogenous residue mass	$MX_{E,OHO}$	61	kgVSS
Non-biodegradable particulate mass	MX_{Iv}	115	kgVSS
Volatile suspended solids mass	MX_{VSS}	234	kgVSS
Inorganic suspended solid mass	MX_{ISS}	99	kgISS
Total suspended solids mass	MX_{TSS}	332	kgTSS
Mass/Sludge TSS wasted	FX_t	13	KgTSS/d
Mass/Sludge VSS wasted	FX_V	9	kgVSS/d
Effluent COD	$S_{COD,e}$	36	mgCOD/l
COD mass out (effluent and waste)	$FS_{COD,e}$	3	kgCOD/d
Mass/Sludge COD wasted	$FX_{COD,s}$	14	kgCOD/d

Alkalinity	Symbol	Value	Units
Alkalinity $_{\text{Nitrification as CaCO3 (consumed)}}$	Alk_{Nitri}	238	mg/l as $CaCO_3$
Alkalinity $_{\text{Denitrification as CaCO3 (recovered)}}$	$Alk_{Denitri}$	120	mg/l as $CaCO_3$
Alkalinity $_{ef}$	Alk_e	100	mg/l as $CaCO_3$
Alkalinity $_{inf}$	Alk_i	300	mg/l as $CaCO_3$
Alkalinity $_{\text{Alum (consumed)}}$	Alk_{Alum}	0.0	mg/l as $CaCO_3$
Alkalinity $_{Total}$	Alk_{total}	182	mg/l as $CaCO_3$
Alkalinity $_{Added}$	Alk_{added}	-82	mg/l as $CaCO_3$
Alkalinity $_{Added}$	$XAlk_{added}$	0	lb/d
Density caustic solution $_{(50\%)}$	-	12.76	lb/gal
Alkalinity $_{recovered}$	$Alk_{recovered}$	0.4	lb$CaCO_3$/lb
Caustic $_{needed}$	-	0.0	lb/d
Caustic $_{needed}$	-	0.0	gpd



$$V_P = \frac{MX_{TSS}}{X_{TSS}}$$

$$FX_t = \frac{MX_{TSS}}{SRT}$$

$$MX_{TSS} = MX_{ISS} + MX_{VSS}$$

00101

N Removal	Symbol	Value	Units
Factor of safety	S_f	1.2	-
Nitrogen requirements	FN_{synth}	1	kgN/d
Nitrogen requirements	$TKN_{i,synth}$	12.36	gN/m3
Influent non-bio. soluble organic N	$N_{nbios,i}$	1.5	mgN/l
Influent non-bio. particulate org. N	$N_{nbiop,i}$	7.3	mgN/l
Influent biodegradable organic N	$N_{bio,i}$	13.5	mgN/l
Effluent non-bio. soluble organic N	$N_{nbios,e}$	1.5	mgN/l
NH4 concentration avail. for nitri.	N_{an}	33.7	mgN/l
Effluent ammonia	$N_{a,e}$	0.3	mgN/l
Effluent TKN	$N_{TKN,e}$	1.8	mgN/l
N concentration into sludge prod.	N_s	14.8	mgN/l
Nitrification capacity	N_c	33.4	mgN/l
Denitrification potential RBCOD	$D_{p1RBCOD}$	21.2	$mgNO_3$-N/l
Denitrification potential SBCOD	$D_{p1SBCOD}$	19.0	$mgNO_3$-N/l
Denitrification potential RBCOD	$D_{p3RBCOD}$	0.0	$mgNO_3$-N/l
Denitrification potential SBCOD	$D_{p3SBCOD}$	0.0	$mgNO_3$-N/l
Minimum sludge age for nitri.	SRT_m	8.1	d
Denitrification potential primary tank	D_{p1}	40.2	mgN/l
Denitrification potential secondary tank	D_{p3}	0.0	mgN/l
Denitri. potential recycle rate (f_{xm} = f_{xdm})	D_{p*}	31.3	mgN/l
Effluent nitrate	$N_{NO3,e}$	0.0	mgN/l
Effluent nitrate @ f_{xdm} & recycle rate	$N_{NO3,e*}$	5.6	mgN/l

P Removal	Symbol	Value	Units
COD lost in anaerobic reatcor	$S_{F,ANn}$	0.0	$gCOD/m^3$
COD lost in anaerobic reatcor	$S_{F,ANn*}$	0.0	$gCOD/m^3$
Fermentable COD for AN reactor	$S_{F,I,conv}$	0.0	$gCOD/m^3$
DO in influent	$S_{O2,i}$	0.0	mgO_2/l
PO_4 release AN reactor	$S_{PO4,rel}$	0.0	gP/m^3
P removal by PAOs	ΔP_{PAO}	0.0	gP/m^3
P removal by OHOs	ΔP_{OHO}	0.9	gP/m^3
P removal by endgeneous biomass	ΔP_{XE}	1.6	gP/m^3
P removal by influent inert mass	ΔP_{XI}	3.0	gP/m^3
P into sludge production	P_s	5.1	gP/m^3
Potential P removal by system	$\Delta P_{SYS,POT}$	10.6	gP/m^3
Actual P removal by system	$\Delta P_{SYS,ACT}$	8.0	gP/m^3
Effluent particulate P from TSS	$X_{P,e}$	0.0	gP/m^3
Influent total P	P_i	8.0	gP/m^3
Effluent total P	P_{e*}	0.0	gP/m^3
P precipitated	P_{prec}	0.0	mgP/l
Precipitation chemical	B_{Alum}	0.0	lb/d
Precipitation chemical	Solution	0.0	gal/d
Density Alum	z_{AL}^{3+}	0.100	lb_{AL}/lb_{prec}
Density Iron	z_{FE}^{3+}	0.077	lb_{FE}/lb_{prec}
Alum efficiency	-	40.0	g/kg
Chemical precipitation sludge	-	0.0	lb/d

Mechanical Process Calculation

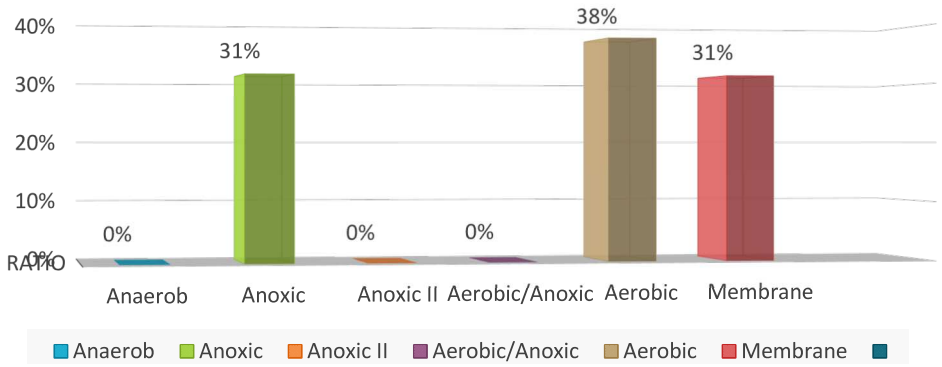
00102

Tank Dimensions	Trains	Length	Width	Dia.	Degree	Height	Liquid level	Volume per train	Volume Total	Volume Total
Anaerobic	0	.00 ft	.00 ft	.00 ft	0.0	.00 ft	.00 ft	gal	gal	0.0 m3
Anoxic I	1	10.00 ft	7.30 ft	.00 ft	0.0	9.00 ft	7.25 ft	3,959 gal	3,959 gal	15.0 m3
Aerobic	1	12.00 ft	7.30 ft	.00 ft	0.0	9.00 ft	7.25 ft	4,751 gal	4,751 gal	18.0 m3
Anoxic II	0	.00 ft	.00 ft	.00 ft	0.0	.00 ft	.00 ft	gal	gal	0.0 m3
Anoxic Buffer	0	.00 ft	.00 ft	.00 ft	0.0	.00 ft	.00 ft	gal	gal	0.0 m3
Membrane	1	10.00 ft	7.30 ft	.00 ft	0.0	9.00 ft	7.25 ft	3,959 gal	3,959 gal	15.0 m3
Sludge	0	.00 ft	.00 ft	.00 ft	0.0	.00 ft	.00 ft	gal	gal	0.0 m3
EQ	0	.00 ft	.00 ft	.00 ft	0.0	.00 ft	.00 ft	gal	gal	0.0 m3

32.0

Tank Design	Symbol	Value	Units
Total process tank volume		12,668	gallons
Total process tank volume$_{calc}$		**11,334**	gallons
Unaerated tank percentage		31	%
Total tank volume		**12,668**	gallons
Membrane modules volume		494	gallons
F/M$_{used,BOD}$		0.080	kgBOD/kgMLSS
F/M$_{used,COD}$		0.137	kgCOD/kgMLSS

Weir level	0.6 inches
Weir length	4.0 ft
Velocity	0.75 fps
Vertical tank	0
Horz. Tank	0
Diameter	0 ft



Process Volume Distribution

00103

Air Flow Design	Symbol	Membrane per train	Aerobic per train	Sludge	EQ	Unit
Minimum air flow	$Q_{A,re}$	171	57	0	0	acfm / scfm
Chosen air flow - actual	$Q_{A,\ chosen}$	171	54	0	0	acfm
Chosen air flow - inlet	$Q_{A,chosen}$	323	100	0	0	m^3/h
Chosen air flow - inlet	$Q_{A,chosen}$	**190**	**59**	**0**	**0**	scfm
Chosen air flow - piping	$Q_{A,chosen}$	145	45	0	0	acfm
Pipe pressure	p_b	4.5	4.5	0.0	0.0	psi
Pipe losses	H	0.40	0.36	0.00	0.00	psi
Equivalent length in pipe looses	L_p	400	400	400	400	feet
Pipe diameter	d	3.0	2.0	2.0	2.0	inches
Internal pipe diameter	d_i	3.26	2.16	2.16	2.16	inches
Standard temperature	T_1	293	293	293	293	K
Pipe temperature	T_2	316	316	293	293	K
Constant	f	0.02	0.03	0.06	0.06	-
Air velocity	v	**41.7**	**29.6**	**0.1**	**0.1**	fps
Atmospheric pressure	$p_{a,l}$	14.5	14.5	14.5	14.5	psi
Absolute pressure	p_2	19.0	19.0	14.5	14.5	psi
Pressure due to tank liquid level	$p_{DWD,m}$	2.6	2.9	0.0	0.0	psi
Pressure due to aeration device	p_{DWD}	0.7	0.5	0.5	0.5	psi
Pressure due to pipe losses & elev.	$p_{DWD,S}$	0.8	0.8	0.4	0.4	psi
Total pipe losses	p_t	4.1	4.2	0.9	0.9	psi
Total pipe losses	p_t	283.9	289.6	62.1	62.1	mbar

$$H = 9.82 \cdot 10^{-8} \cdot \frac{\left(f \cdot L_p T_2 Q_{A,chosen}\right)}{\left(p_2 d_i\right)^5}$$

$$f = \frac{\left(0.029 \cdot d_i^{0.027}\right)}{Q_{A,chosen}^{0.148}} \qquad T_2 = T_1 \left(\frac{p_2}{p_{a,1}}\right)^{0.283}$$

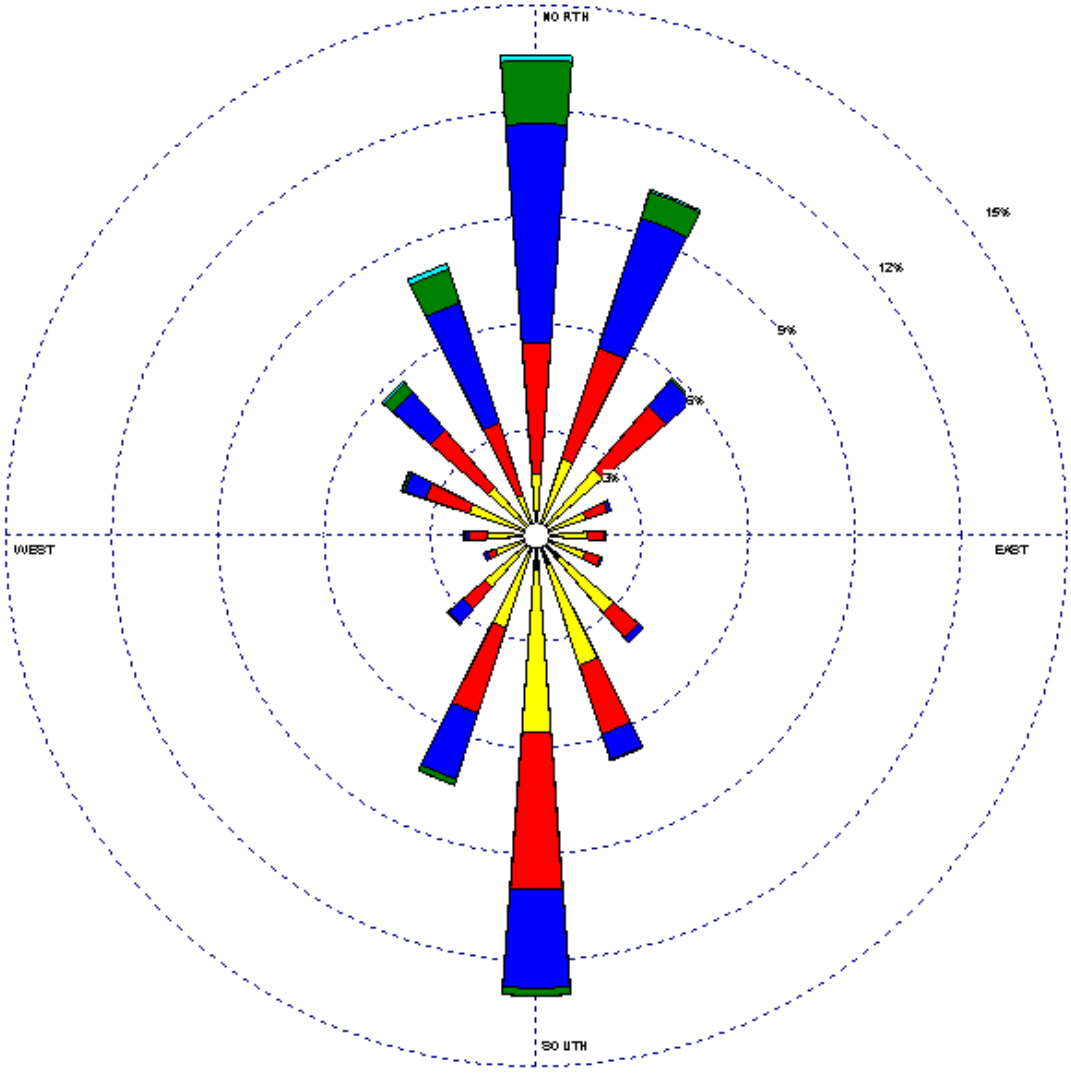


ATTACHMENT 6

WIND ROSE

WIND ROSE PLOT

Station #13958 - AUSTIN/MUNICIPAL ARPT, TX



Wind Speed (m/s) > 11.06 8.49 - 11.06 5.40 - 8.49 3.34 - 5.40 1.80 - 3.34 0.51 - 1.80	MODELER Sara West	DATE 8/29/2002	COMPANY NAME USDA-ARS
	DISPLAY Wind Speed	UNIT m/s	COMMENTS
	AVG. WIND SPEED 4.47 m/s	CALM WINDS 8.07%	
	ORIENTATION Direction (blowing from)	PLOT YEAR-DATE-TIME 1961 Dec 1 - Dec 31 Midnight - 11 PM	

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

NRCS Natural Resources Conservation Service

https://www.wcc.nrcs.usda.gov/ftpref/downloads/climate/windrose/texas/

reUse ENGINEERING

4411 SIH 35, Suite 100
Georgetown, TX 78626
TX Firm No. 21880

THE VILLAGE AT GRAPE CREEK
TPDES PERMIT APPLICATION
GILLESPIE COUNTY, TEXAS

WIND ROSE - AUSTIN, TX

Attachment 6

ATTACHMENT 7

SOLIDS MANAGEMENT PLAN

reUse ENGINEERING
4411 S Interstate 35, Ste 100
Georgetown, Texas 78626
www.reuseinn.com

SOLIDS MANAGEMENT PLAN

Influent Design Flow: 20,000 gpd = 0.02 MGD, Total
Influent BOD Concentration: 350 mg/L
MBR Basin MLVSS: 9,550 mg/L

See **Attachment 1 - Process Flow Diagram** and **Attachment 5 - Design Calculations**. This site will include one 20,000 gpd (0.02 MGD) treatment train. Treatment unit dimensions and capacities are provided on page 2 (Process Summary) and page 9 (Process Calculation) of **Attachment 5 - Design Calculations**.

Table 1 – Sludge Production for 0.02 MGD Design Flow

Solids Generated	100%	75%	50%	25%
Lbs/d Influent BOD_5	58.4	43.8	29.2	14.6
Lbs/d Dry Sludge Produced	29.0	21.8	14.5	7.3

Sludge will be sent from the Recycled Activated Sludge flow stream to the Sludge Screw Press. Calculations are based on 453 gpd of waste sludge, which equates to 29 lbs/d (Table 1). The sludge will be pressed in the Sludge Screw Press to remove liquids and produce a dry sludge cake. All liquid will be decanted from the Screw Press and returned to the headworks for treatment. No wet solids will be produced through the treatment process. Dry sludge will be removed from the screw press and deposited into 2 cubic yard (CY) roll-off containers for disposal on a regular basis (Table 2).

Table 2 – Sludge Removal Schedule

Removal Schedule	100%	75%	50%	25%	Unit
Dry Waste Sludge	29.0	21.8	14.5	7.3	**lb/d**
Wet Waste Sludge	453	340	227	113	**gpd**
Wet Sludge	2.2	1.7	1.1	0.6	**CF/d**
Wet Sludge	11.1	8.3	5.6	2.8	**CY/d**
Reduction Factor	18.0	(provided by MBR WWTP manufacturer)			
Dry Sludge	0.1	0.1	0.1	0.0	**CY/d**
Dumpster Volume	2.0	2.0	2.0	2.0	**CY**
Req Days - Sludge Removal	16	21	32	64	days
Design Days - Sludge Removal	**7**	**10**	**14**	**18**	**days**

The Sludge Age (Solids Retention Time) for a Total Reactor Volume of approximately 12,668 gal is 25 days, with an annual average sludge production of 10,585 lbs dry sludge produced at 100% capacity. The dewatered sludge will be transported by a registered hauler, Hill Country Pump Service (TCEQ Sludge Registration ID #21402) to City of Fredericksburg Landfill (TCEQ Registration ID #1995) in Gillespie County, Texas.