**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**
**DOMESTIC WASTEWATER PERMIT APPLICATION**
**FOR A**
**TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT**

**FOR**

# RATTLER RIDGE WASTEWATER TREATMENT FACILITY

**OCTOBER 2021**

**PREPARED FOR**

**RATTLER RIDGE, LLC**
**1067 FM 306, UNIT #106**
**NEW BRAUNFELS, TX 78130**

**PREPARED BY**

**LJA ENGINEERING, INC.**
**7500 RIALTO BLVD**
**BUILDING II, SUITE 100**
**AUSTIN, TEXAS 78735**
**(512) 439-4700**

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# EXHIBIT 1

## ADMINISTRATIVE REPORTS 1.0 AND 1.1

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

# DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

**Complete and submit this checklist with the application.**

APPLICANT: Rattler Ridge, LLC

PERMIT NUMBER:

**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 | ☒ | ☐ |
| Technical Report 1.0 | ☒ | ☐ | Flow Diagram | ☒ | ☐ |
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| Worksheet 2.0 | ☒ | ☐ | Original Photographs | ☒ | ☐ |
| Worksheet 2.1 | ☐ | ☒ | Design Calculations | ☒ | ☐ |
| Worksheet 3.0 | ☐ | ☒ | Solids Management Plan | ☒ | ☐ |
| Worksheet 3.1 | ☐ | ☒ | Water Balance | ☐ | ☒ |
| 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:

Check/Money Order Amount: $1,250

Name Printed on Check: TCEQ

EPAY — Voucher Number:

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:

**For existing permits:**

Permit Number: WQ00

EPA I.D. (TPDES only): TX

Expiration Date:

## 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?

Rattler Ridge, LLC

*(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: 605087188

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: Clint Jones

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

Title: President

**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?

*(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:

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):

First and Last Name:

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

Title:

Provide a brief description of the need for a co-permittee: Click here to enter text.

**C. Core Data Form**

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

**Attachment:** Appendix A

## Section 4. Application Contact Information (Instructions Page 30)

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

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

First and Last Name: Daniel Ryan

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

Title: Vice President

Organization Name: LJA Engineering

Mailing Address: 7500 Rialto Blvd. Building II. Suite 100

City, State, Zip Code: Austin, TX 78735

Phone No.: 512-439-4700 Ext.: Click here to enter text. Fax No.: Click here to enter text.

E-mail Address: dryan@lja.com

Check one or both: ☒ Administrative Contact ☒ Technical Contact

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

First and Last Name: Lauren Crone

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

Title: Project Manager

Organization Name: LJA Engineering

Mailing Address: 7500 Rialto Blvd. Building II, Suite 100

City, State, Zip Code: Austin, TX 78735

Phone No.: 512-439-4700 Ext.: Click here to enter text. Fax No.: Click here to enter text.

E-mail Address: lcrone@lja.com

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.

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

First and Last Name: Daniel Ryan

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

Title: Vice President

Organization Name: LJA Engineering

Mailing Address: 7500 Rialto Blvd. Building II. Suite 100

City, State, Zip Code: Austin, TX 78735

Phone No.: 512-439-4700 Ext.: Fax No.:

E-mail Address: drayn@lja.com

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

First and Last Name:

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

Title:

Organization Name:

Mailing Address:

City, State, Zip Code:

Phone No.: Ext.: Fax No.:

E-mail Address:

## 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: Clint Jones

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

Title: President

Organization Name: Rattler Ridge, LLC

Mailing Address: 1067 FM 306, Unit #106

City, State, Zip Code: New Braunfels, TX 78130

Phone No.: 512-466-6695 Ext.: Fax No.:

E-mail Address: clint@regallanddevelopment.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: Clint Jones

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

Title: President

Organization Name: Rattler Ridge, LLC

Mailing Address: 1067 FM 306, Unit #106

City, State, Zip Code: New Braunfels, TX 78130

Phone No.: 512-466-6695 Ext.: Fax No.:

E-mail Address: clint@regallanddevelopment.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): Mr.

First and Last Name: Daniel Ryan

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

Title: Vice President

Organization Name: LJA Engineering

Mailing Address: 7500 Rialto Blvd. Building II, Suite 100

City, State, Zip Code: Austin, TX 78735

Phone No.: 512-439-4700 Ext.: Fax No.:

E-mail Address: dryan@lja.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): Mr.

First and Last Name: Daniel Ryan

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

Title: Vice President

Organization Name: LJA Engineering

Phone No.: 512-439-4700 Ext.:

E-mail: dryan@lja.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: Seguin Public Library

Location within the building: Public Viewing table

Physical Address of Building: 313 W Nolte Street

City: Seguin County: Guadalupe County

Contact Name: Erica Reyes

Phone No.: 830-386-2200 Ext.:

**E. Bilingual Notice Requirements:**

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

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

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

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

   ☒ Yes ☐ No

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

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

   ☒ Yes ☐ No

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

   ☐ Yes ☒ No

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

## 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**

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):

Rattler Ridge Wastewater Treatment Plant

**C.** Owner of treatment facility: Rattler Ridge, LLC

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

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

Prefix (Mr., Ms., Miss):

First and Last Name: Rattler Ridge, LLC

Mailing Address: 1067 FM 306, Unit #106

City, State, Zip Code: New Braunfels, TX 78310

Phone No.: E-mail Address:

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

**Attachment:** 1

**E.** Owner of effluent disposal site:

Prefix (Mr., Ms., Miss):

First and Last Name:

Mailing Address:

City, State, Zip Code:

Phone No.: E-mail Address:

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

**Attachment:**

**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):

First and Last Name:

Mailing Address:

City, State, Zip Code:

Phone No.: E-mail Address:

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

**Attachment:**

## 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:

New Permit: The proposed WWTP is located 1 mi East of the intersection of Hwy 123 and FM 1978. The property is North of FM 1979 and South of 1978. It is East of Old Seguin Rd. and West of Redwood Dr. The plant will be built approximatley 1 mi into the proprety.

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

☐ Yes ☐ No

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

New Permit: From the proposed treatment plant, effluent will be discharged into an onsite pond which is conveyed to Long Creek. Long Creek then flows to the South to a junction with York Creek, which then connects to segment 1808 of the San Marcos River.

City nearest the outfall(s): Redwood

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

Outfall Latitude: 29.78729 Longitude: -97.92334

**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:**

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

N/A

## Section 11. TLAP Disposal Information (Instructions Page 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:

**B.** City nearest the disposal site:

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

**D.** Disposal Site Latitude: Longitude:

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

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

## Section 12. Miscellaneous Information (Instructions Page 37)

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

☐ Yes ☒ No

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

- 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:

## Section 14. Signature Page (Instructions Page 39)

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

Permit Number:

Applicant: Rattler Ridge, LLC

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): Clint Jones

Signatory title: President

Signature: _____ Date: 9/28/21

(Use blue ink)

Subscribed and Sworn to before me by the said Clint Jones

on this 28th day of September, 2021.

My commission expires on the _____ day of _____, 20____.

Carolyn Sebbert

Notary Public

CAROLYN E SEBBERT
Notary Public, State of Texas
Comm. Expires 03-25-2023
Notary ID 827617-1

*[SEAL]*

Guadalupe

County, Texas

# DOMESTIC ADMINISTRATIVE REPORT 1.1

The following information is required for new and amendment applications.

## Section 1. Affected Landowner Information (Instructions Page 41)

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

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

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

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

☐ Readable/Writeable CD ☒ Four sets of labels

**D.** Provide the source of the landowners' names and mailing addresses: Guadalupe Central Appraisal District

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

☐ Yes ☒ No

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

## 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: Rattler Ridge, LLC

   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):

   The proposed WWTP is located approximately 7,656 feet southeast of the intersection of Farm-to-Market Road 1978 and State Highway 123, in Guadalupe County, Texas 78666.

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

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

First and Last Name: Daniel Ryan

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

Title: Vice President

Mailing Address: 7500 Rialto Blvd. Building II, Suite 100

City, State, Zip Code: Austin, TX 78735

Phone No.: 512-439-4700 Ext.: Fax No.:

E-mail Address: dryan@lja.com

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

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.

New Permit: From the proposed treatment plant, effluent will be discharged into an onsite pond which is conveyed to Long Creek. Long Creek then flows to the South to a junction with York Creek, which then connects to segment 1808 of the San Marcos River.

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):

Approximately 343 acres to be impacted through construction of subdivision improvements. No planned sealing of caves or other features.

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

Farming Land

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:

Unknown - Existing residences built in the mid 50's.

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

Property is undeveloped and has been used for farming. No builder has been identified however, the proposed single family development will include one or more production builders.

**EXHIBIT 2**

DOMESTIC TECHNICAL REPORT 1.0 AND 1.1

DOMESTIC WORKSHEETS 2.0 AND 2.1

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): 0.10

2-Hr Peak Flow (MGD): 0.40

Estimated construction start date: 1/1/2023

Estimated waste disposal start date: 6/1/2023

**B. Interim II Phase**

Design Flow (MGD): 0.20

2-Hr Peak Flow (MGD): 0.80

Estimated construction start date: 1/1/2024

Estimated waste disposal start date: 6/1/2024

**C. Final Phase**

Design Flow (MGD): 0.40

2-Hr Peak Flow (MGD): 1.60

Estimated construction start date: 1/1/2025

Estimated waste disposal start date: 6/1/2025

**D. Current operating phase:** N/A New WWTP

Provide the startup date of the facility:

## 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 facility is to be constructed in three phases with a total design flow of 400,000 gpd. The first two phases will each treat 100,000 gpd and the final phase will treat an additional 200,000 gpd. Each phase will operate as a suspended-growth activated sludge process in the extended aeration mode. The treatment units include a bar screen, aeration basin, clarifier, chlorine contact basin and an aerobic digester. Wastewater will be pumped into the plant where it will enter the aeration basin through a bar screen. The influent will then pass through the aeration zone and flow into a clarifier. From the clarifier, the effluent will flow to a chlorine contact basin for disinfection. This facility will also utilize a digester for sludge holding, prior to haul off.

Port or pipe diameter at the discharge point, in inches: 8 inches

### 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) |
|---|---|---|
| AERATION BASIN | 3 (1 per phase) | PHASE 1 & 2: 10' DEEP x 2,667 $FT^2$ SURFACE AREA<br>PHASE 3: 10' DEEP X 5,334 $FT^2$ SURFACE AREA |
| CLARIFIER | 3 (1 per phase) | PHASE 1 & 2 – 17' DIA x 10' H<br>PHASE 3 – 24' DIA X 10' H |
| AEROBIC DIGESTER | 3 (1 per phase) | PHASE 1 & 2: 10' DEEP x 854 $FT^2$ SURFACE AREA<br>PHASE 3: 10' DEEP x 1,708 $FT^2$ SURFACE AREA |
| CHLORINE CONTACT CHAMBER | 3 (1 per phase) | PHASE 1 & 2 -10' DEEP x 68 $FT^2$ SURFACE AREA<br>PHASE 3 – 10' DEEP X 128 $FT^2$ SURFACE AREA |
| | | |
| | | |
| | | |

**Attachment:** APPENDIX G

## 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:** APPENDIX H

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

Rattler Ridge: A 1575 lot single-family residential subdivision.

## 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.

## 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.

## Section 6. Permit Specific Requirements (Instructions Page 53)

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

**A. Summary transmittal**

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

Yes ☐ No ☒

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

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

**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.

150' Buffer around the treatment plant.

**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.*

**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.

## *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.

## *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.

**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 or TXRNE

**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:

## *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.

## *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.

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.

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.

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.

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.

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

Is the facility in operation?

Yes ☐ No ☒

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

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

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

***Table 1.0(2) – Pollutant Analysis for Wastewater Treatment Facilities***

| 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 | | | | | |

| Pollutant | Average Conc. | Max Conc. | No. of Samples | Sample Type | Sample Date/Time |
|---|---|---|---|---|---|
| Entercocci (CFU/100ml) saltwater | | | | | |
| Total Dissolved Solids, mg/l | | | | | |
| Electrical Conductivity, µmohs/cm, † | | | | | |
| Oil & Grease, mg/l | | | | | |
| Alkalinity ($CaCO_3$)*, mg/l | | | | | |

*TPDES permits only

†TLAP permits only

***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:

Facility Operator's License Classification and Level:

Facility Operator's License Number:

## 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:

### B. Sludge disposal site

Disposal site name:

TCEQ permit or registration number:

County where disposal site is located:

### C. Sludge transportation method

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

Name of the hauler: Captex

Hauler registration number: 20745

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:**

- USDA Natural Resources Conservation Service Soil Map:

  **Attachment:**

- Federal Emergency Management Map:

  **Attachment:**

- Site map:

  **Attachment:**

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

Check all that apply.

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

**Attachment:**

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

### 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:

Total Kjeldahl Nitrogen, mg/kg:

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

Phosphorus, mg/kg:

Potassium, mg/kg:

pH, standard units:

Ammonia Nitrogen mg/kg:

Arsenic:

Cadmium:

Chromium:

Copper:

Lead:

Mercury:

Molybdenum:

Nickel:

Selenium:

Zinc:

Total PCBs:

Provide the following information:

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

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

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

### C. Liner information

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

Yes ☐ No ☐

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

### D. Site development plan

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

Attach the following documents to the application.

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

  **Attachment:**

- Copy of the closure plan

  **Attachment:**

- Copy of deed recordation for the site

  **Attachment:**

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

  **Attachment:**

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

  **Attachment:**

- Procedures to prevent the occurrence of nuisance conditions

  **Attachment:**

### E. Groundwater monitoring

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

Yes ☐ No ☐

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

Attachment:

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

### A. Additional authorizations

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

Yes ☐ No ☒

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

### 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:

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

### A. RCRA hazardous wastes

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

Yes ☐ No ☒

### B. Remediation activity wastewater

Has the facility received in the past three years, does it currently receive, or will

it receive CERCLA wastewater, RCRA remediation/corrective action wastewater or other remediation activity wastewater?

Yes ☐ No ☒

### C. Details about wastes received

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

Attachment:

## Section 14. Laboratory Accreditation (Instructions Page 64)

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

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

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

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

**CERTIFICATION:**

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

Printed Name: Clint Jones

Title: President

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.

The wastewater treatment plant will serve the proposed residential development. Based on easement and right of way limitations, no route exists from this site to an organized wastewater treatment facility. The use of a central collection treatment and disposal system is being preferred to an equivalent number of private residential septic tank/drain field units. Design flows are based on Living Unit Equivalents (LUEs) or connections associated with the service area. A basis of 245 gallons of wastewater per day per connection (maximum 30-day wet weather average) was assumed for flow projections. The ultimate flow is based on the total number of houses to be built (1575 houses) and an additional 55 LUEs for other uses. The total flow needed at full build out would be 1630 connections x 245 gal/day/connection = 400,000 gal/day assumed.

### 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:

**If yes**, attach correspondence from the city.

Attachment:

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:

#### *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:**

### *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**: City of San Marcos; WQ0010273002

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

**Attachment:**

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: Explanation: Route constraints, including the inability to secure easements with adjacent lots and within TxDOT right-of-way, indicate onsite wastewater treatment to be the only feasible option for this property. (see Appendix M)

## 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):

Average Influent Organic Strength or $BOD_5$ Concentration in mg/l:

Average Influent Loading (lbs/day = total average flow X average $BOD_5$ conc. X 8.34):

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

**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 | 0.40 | 400 |
| Trailer park – transient | | |
| Mobile home park | | |
| School with cafeteria | | |

| Source | Total Average Flow (MGD) | Influent $BOD_5$ Concentration (mg/l) |
|---|---|---|
| and showers | | |
| School with cafeteria, no showers | | |
| Recreational park, overnight use | | |
| Recreational park, day use | | |
| Office building or factory | | |
| Motel | | |
| Restaurant | | |
| Hospital | | |
| Nursing home | | |
| Other | | |
| TOTAL FLOW from all sources | 0.40 | 400 |
| AVERAGE $BOD_5$ from all sources | | |

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

### A. Existing/Interim I Phase Design Effluent Quality

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

Total Suspended Solids, mg/l: 15

Ammonia Nitrogen, mg/l: 2

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: 5.0

Other:

**B. Interim II Phase Design Effluent Quality**

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

Total Suspended Solids, mg/l: 15

Ammonia Nitrogen, mg/l: 2

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: 5.0

Other:

**C. Final Phase Design Effluent Quality**

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

Total Suspended Solids, mg/l: 15

Ammonia Nitrogen, mg/l: 2

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: 5.0

Other:

**D. Disinfection Method**

Identify the proposed method of disinfection.

☒ Chlorine: 1 mg/l after 20 minutes detention time at peak flow

Dechlorination process:

☐ Ultraviolet Light: seconds contact time at peak flow

☐ Other:

## Section 4. Design Calculations (Instructions Page 68)

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

**Attachment:** APPENDIX I

## 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.

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

FEMA MAP: 48187C0045F (APPENDIX J)

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:

**If no**, provide the approximate date you anticipate submitting your application to the Corps:

### B. Wind rose

Attach a wind rose. **Attachment:** APPENDIX K

## 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:**

**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:**

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

Attach a solids management plan to the application.

Attachment: APPENDIX L

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

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

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

# DOMESTIC TECHNICAL REPORT WORKSHEET 2.0

## RECEIVING WATERS

**The following is required for all TPDES permit applications**

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

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

Yes ☐ No ☒

**If yes**, provide the following:
Owner of the drinking water supply:

Distance and direction to the intake:

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

**Attachment:**

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

Does the facility discharge into tidally affected waters?

**Yes ☐ No ☒**

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

### A. Receiving water outfall

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

### B. Oyster waters

Are there oyster waters in the vicinity of the discharge?

Yes ☐ No ☐

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

### 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).

## 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: Long Creek

### A. Receiving water type

Identify the appropriate description of the receiving waters.

☒ Stream

☐ Freshwater Swamp or Marsh

☐ Lake or Pond

Surface area, in acres:

Average depth of the entire water body, in feet:

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

☐ Man-made Channel or Ditch

☐ Open Bay

☐ Tidal Stream, Bayou, or Marsh

☐ Other, specify:

### B. Flow characteristics

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

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

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

☐ Perennial - normally flowing

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

☐ USGS flow records

☐ Historical observation by adjacent landowners

☒ Personal observation

☐ Other, specify:

### C. Downstream perennial confluences

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

N/A – None within 3 miles of discharge point.

### 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.

There is an existing reservoir which has a surface area of 5.5 acres. There is an embankment on the South side of the reservoir. Ultimately flow leads from Long Creek to York Creek, then finally the San Marcos River.

### E. Normal dry weather characteristics

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

This is an intermittent stream that is frequently dry with some stock tanks that remain full year round.

Date and time of observation: 08/11/2021

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

### 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

### 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

# APPENDIX A

CORE DATA FORM

TCEQ Use Only

# TCEQ Core Data Form

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

## SECTION I: General Information

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

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

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

| 2. Customer Reference Number *(if issued)* | Follow this link to search for CN or RN numbers in Central Registry** | 3. Regulated Entity Reference Number *(if issued)* |
|---|---|---|
| CN 605087188 | | RN |

## SECTION II: Customer Information

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

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

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

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

Rattler Ridge, LLC

| 7. TX SOS/CPA Filing Number | 8. TX State Tax ID (11 digits) | 9. Federal Tax ID (9 digits) | 10. DUNS Number *(if applicable)* |
|---|---|---|---|
| 0804007013 | 32078518449 | | |

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

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

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

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

☒ Owner ☐ Operator ☐ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

**15. Mailing Address:** 1067 FM 306, Unit #106

| City | New Braunfels | State | TX | ZIP | 78130 | ZIP + 4 | |
|---|---|---|---|---|---|---|---|

| 16. Country Mailing Information *(if outside USA)* | 17. E-Mail Address *(if applicable)* |
|---|---|
| | clint@regallanddevelopment.com |

| 18. Telephone Number | 19. Extension or Code | 20. Fax Number *(if applicable)* |
|---|---|---|
| ( 512 ) 466-6695 | | ( ) - |

## SECTION III: Regulated Entity Information

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

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

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

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

Rattler Ridge Wastewater Treatment Plant

000056

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

**Enter Physical Location Description if no street address is provided.**

| | |
|---|---|
| 25. Description to Physical Location: | The facility is located approximately 7,656 feet southeast of the intersection of Farm-to-Market Road 1978 and State Highway 123, in Guadalupe County, Texas 78666. |

| 26. Nearest City | State | Nearest ZIP Code |
|---|---|---|
| Redwood | TX | 78666 |

| 27. Latitude (N) In Decimal: | 29.78729 | 28. Longitude (W) In Decimal: | -97.92334 |
|---|---|---|---|

| Degrees | Minutes | Seconds | Degrees | Minutes | Seconds |
|---|---|---|---|---|---|
| 29 | 47 | 14.24 | -97 | 55 | 24.02 |

| 29. Primary SIC Code (4 digits) | 30. Secondary SIC Code (4 digits) | 31. Primary NAICS Code (5 or 6 digits) | 32. Secondary NAICS Code (5 or 6 digits) |
|---|---|---|---|
| 4952 | | 22132 | |

| 33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)* |
|---|
| To treat and dispose of domestic wastewater from the proposed subdivision. |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 34. Mailing Address: | 1067 FM 306, Unit #106 | | | | | | | |
| | City | New Braunfels | State | TX | ZIP | 78130 | ZIP + 4 | |

| 35. E-Mail Address: | clint@regallanddevelopment.com |
|---|---|

| 36. Telephone Number | 37. Extension or Code | 38. Fax Number *(if applicable)* |
|---|---|---|
| ( 512 ) 466-6695 | | ( ) - |

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

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

## SECTION IV: Preparer Information

| 40. Name: | Daniel Ryan, P.E. | 41. Title: | Vice President |
|---|---|---|---|

| 42. Telephone Number | 43. Ext./Code | 44. Fax Number | 45. E-Mail Address |
|---|---|---|---|
| ( 512 ) 439-4700 | | ( ) - | dryan@lja.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: | Rattler Ridge, LLC | Job Title: | President | |
|---|---|---|---|---|
| Name *(In Print)*: | Clint Jones | | Phone: | ( 512 ) 466- 6695 |
| Signature: |  | | Date: | |

# APPENDIX B

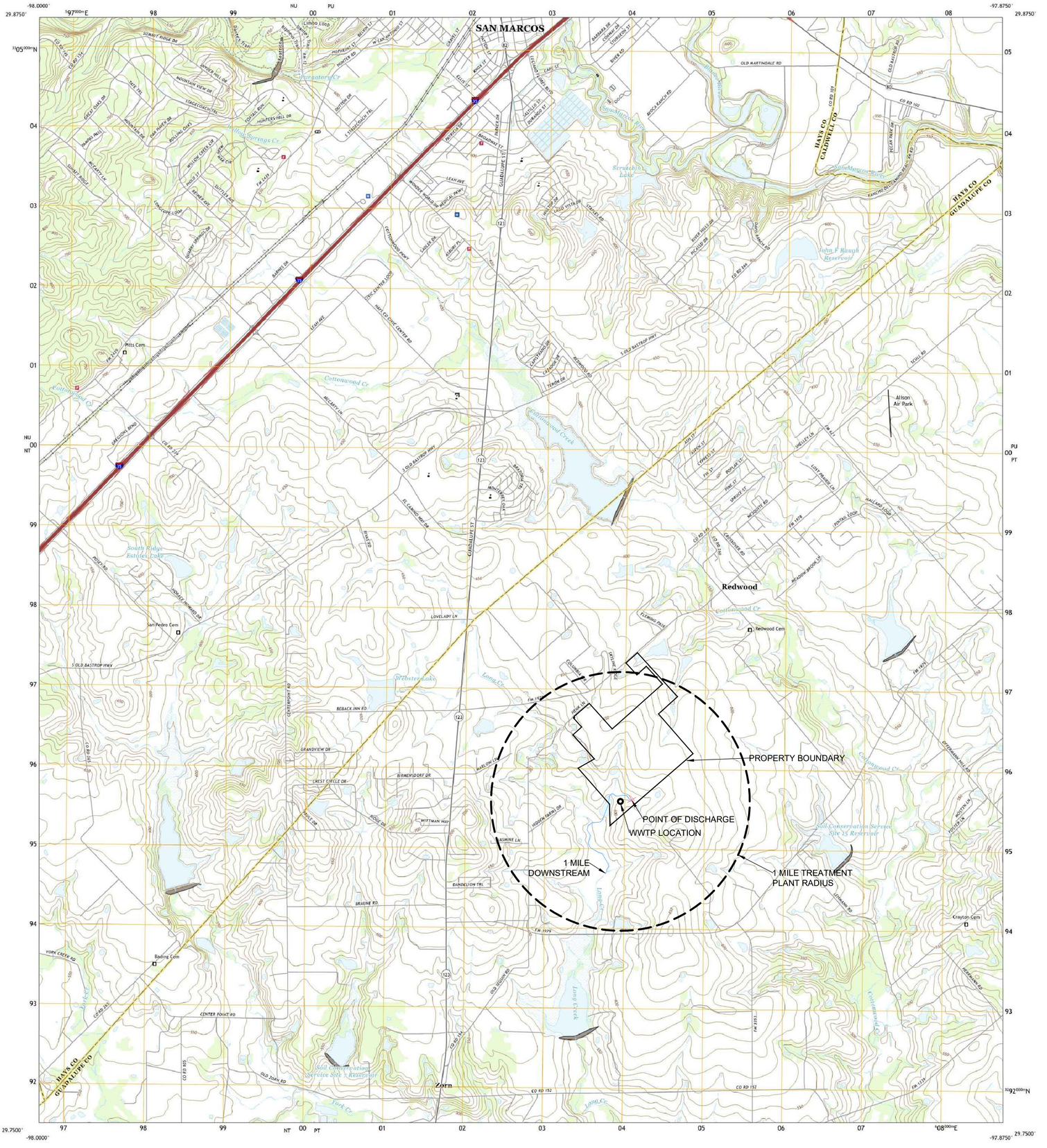
USGS MAP

USGS science for a changing world

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

The National Map US Topo

SAN MARCOS SOUTH QUADRANGLE
TEXAS
7.5-MINUTE SERIES




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

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, October 2016 - November 2016
Roads.....U.S. Census Bureau, 2015
Names.....GNIS, 1979 - 2016
Hydrography.....National Hydrography Dataset, 2002
Contours.....National Elevation Dataset, 2004
Boundaries.....Multiple sources; see metadata file 2016 - 2017

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

UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

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

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011. A metadata file associated with this product is draft version 0.6.18

TEXAS
QUADRANGLE LOCATION

| | | |
|---|---|---|
| 1 | 2 | 3 |
| 4 | | 5 |
| 6 | 7 | 8 |

ADJOINING QUADRANGLES
1 Wimberley
2 San Marcos North
3 Uhland
4 Hunter
5 Martindale
6 New Braunfels East
7 Gonzales
8 Kingsbury

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

SAN MARCOS SOUTH, TX
2019

| | | | | | |
|---|---|---|---|---|---|
| SHEET NO. | JOB NUMBER | LJA Engineering, Inc. | THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF DANIEL RYAN, P.E. 89458, ON 9/29/2021. IT IS NOT TO BE USED FOR CONSTRUCTION PURPOSES. | DATE: | REVISIONS |
| OF | A202-0305 | 7500 Rialto Boulevard<br>Building II, Suite 100<br>Austin, Texas 78735 | | DESIGNED BY: | NO. / DESCRIPTION / BY / DATE |
| SHEET/S. | | Phone 512.439.4700<br>Fax 512.439.4716<br>FRN - F-1386 | | DRAWN BY: | |
| | | | | CHECKED BY: | |
| | | | | DRAWING NAME: | |

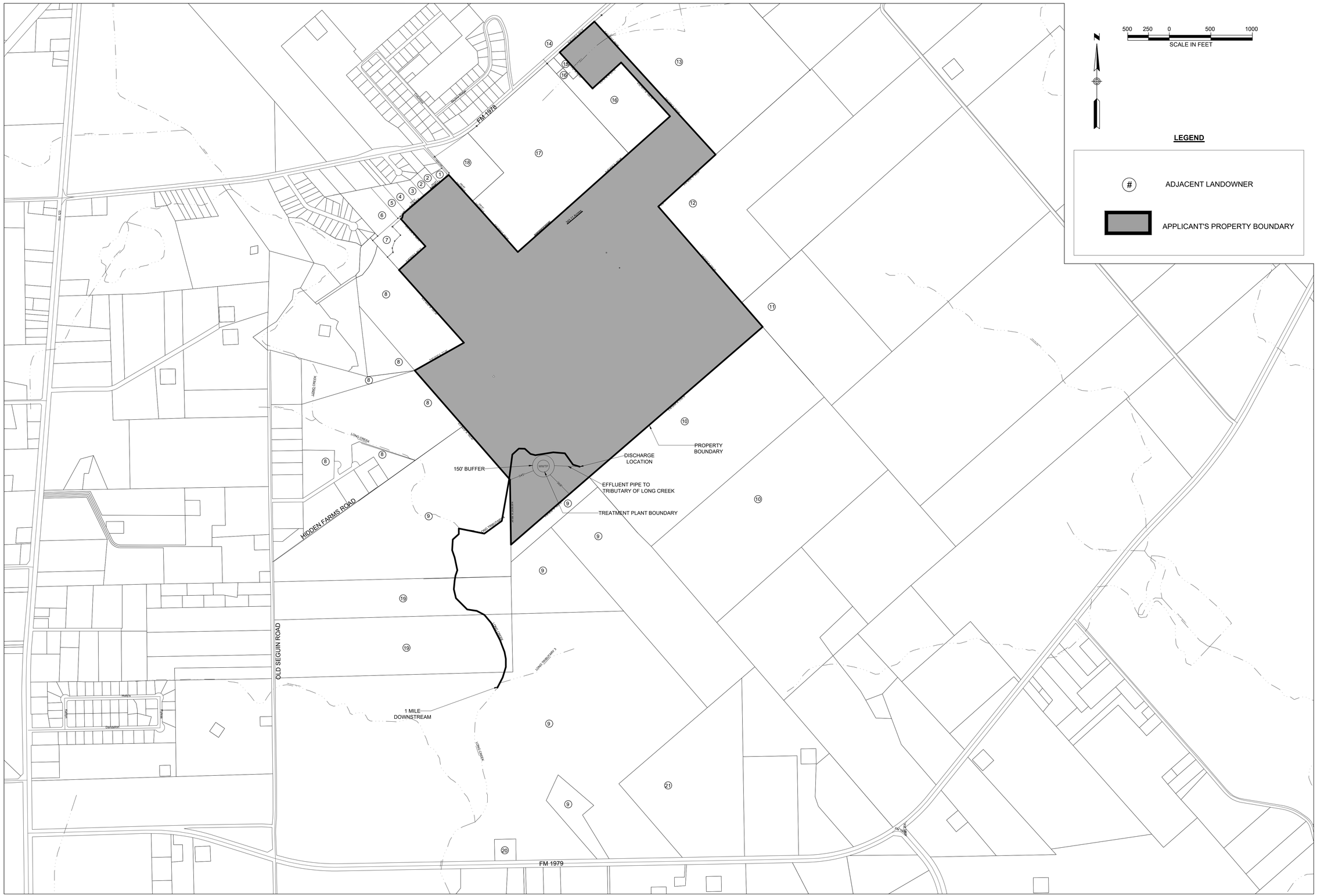
RATTLER RIDGE

USGS MAP

000099

# APPENDIX C

## AFFECTED LANDOWNERS MAP AND LIST




RATTLER RIDGE

USGS MAP

ADJACENT LANDOWNER MAP

| REVISIONS | | | |
|---|---|---|---|
| NO. | DESCRIPTION | BY | DATE |

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
DRAWING NAME:

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF CHRISTINA FAE FINKS ON 9/29/2021. IT IS NOT TO BE USED FOR CONSTRUCTION PURPOSES.


**LJA Engineering, Inc.**
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716
FRN - F-1386


JOB NUMBER: A292-0405

SHEET NO.

OF SHEETS

000061

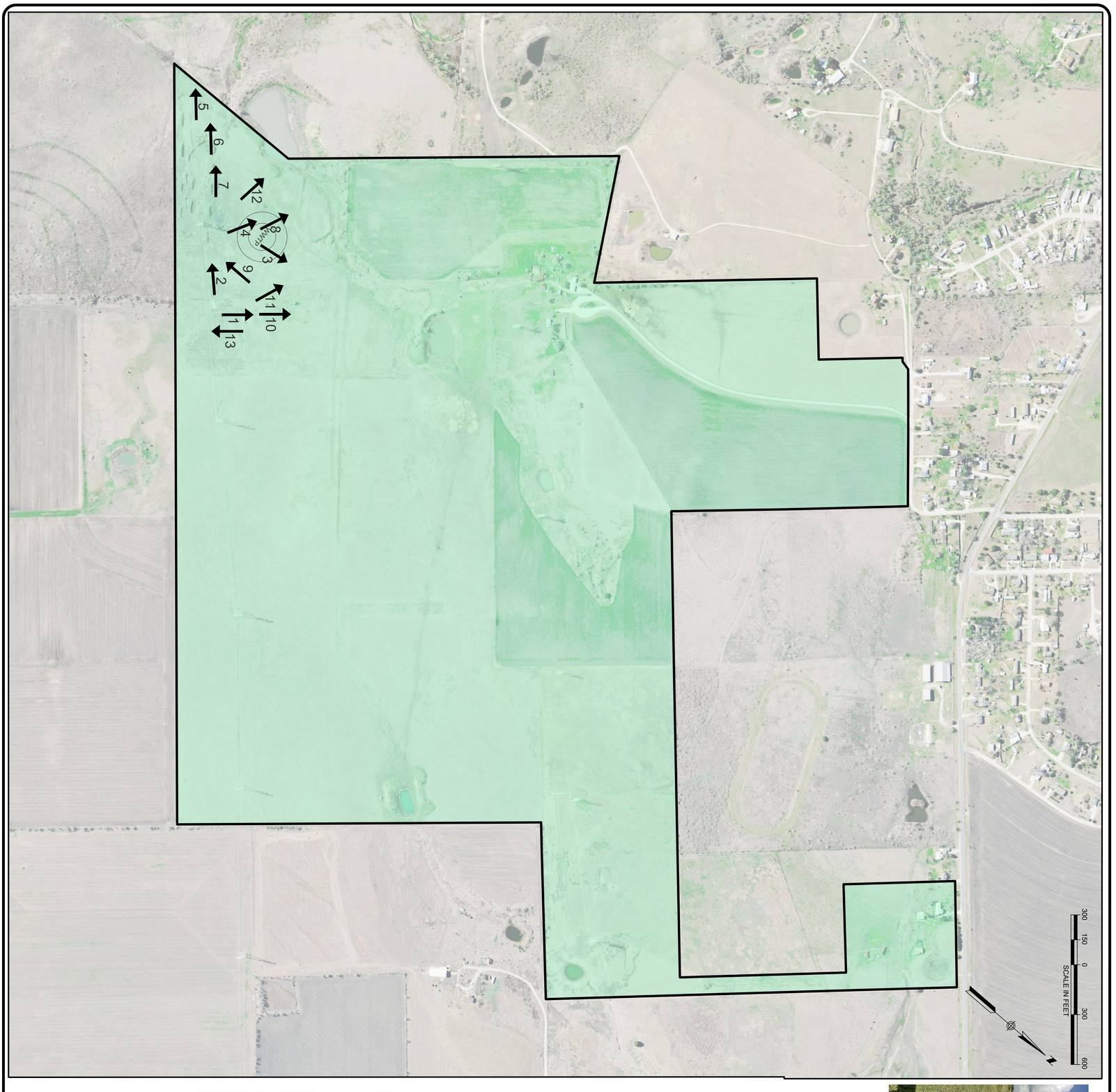
User: rcorte
Last Modified: Sep. 29, 21 - 07:17
Plot Date/Time: Sep. 29, 21 - 15:41:41

| Map Number | Property ID Number | Landowner Name | Landowner Address (1) | Landowner Address (2) |
|---|---|---|---|---|
| 1 | 26376 | PINA JOSIE VELASQUEZ | 182 HENK LN | SAN MARCOS, TX 78666 |
| 2 | 26379, 26378 | MORENO MARTIN OBILIO | 240 HENK LANE | SAN MARCOS, TX 78666 |
| 3 | 26380 | SAUCEDA F M & I V | 300 HENK LN | SAN MARCOS, TX 78666 |
| 4 | 26381 | GARCIA ROMUALDO ET UX | 320 HENK LN | SAN MARCOS, TX 78666 |
| 5 | 26382 | ALVAREZ JOSE & ROCIO | 356 HENK LN | SAN MARCOS, TX 78666 |
| 6 | 26383 | TAMEZ ANTONIO | 414 HENK LANE | SAN MARCOS, TX 78666 |
| 7 | 70729 | HENK JOHN CHARLES & ANGELA KAY | 481 HENK LN | SAN MARCOS, TX 78666 |
| 8 | 70728, 65860, 65859, 65865, 65864 | BRAUN RICHARD W & MARY B | 400 HIDDEN FARMS DR | SAN MARCOS, TX 78666 |
| 9 | 65868, 65869, 72406, 68942, 68945 | POWERS GARLAND A III & DEBBRA | 2741 FM 1979 | SAN MARCOS, TX 78666 |
| 10 | 67342 | POTTER CAROL ANN HARRISON | 3782 FM 1979 | SAN MARCOS, TX 78666 |
| 11 | 67398 | LIMEROCK FARMS LTD | 6325 REDWOOD RD | SAN MARCOS, TX 78666 |
| 12 | 67239 | MCFADDEN KEVIN L & NATALIE KIRKPATRICK | 5740 REDWOOD RD | SAN MARCOS, TX 78666-1571 |
| 13 | 67281 | HOLTERMANN JOE DONALD & KAREN M HOLTERMANN STUMP | 9518 PORTOLA BLVD | SAN ANTONIO, TX 78251 |
| 14 | 67225 | JONES CLINT E | 1848 PEBBLE BROOK DR | NEW BRAUNFELS, TX 78130 |
| 15 | 67289 | FOSTER MELISSA | 3863 FM 1978 | SAN MARCOS, TX 78666 |
| 16 | 67286, 67288 | HOSCH PAUL TERRANCE | 3891 FM 1978 | SAN MARCOS, TX 78666 |
| 17 | 157055 | TMT SOLUTIONS INC | 4041 FM 1978 | SAN MARCOS, TX 78666 |
| 18 | 67216 | NELSON BARRY | PO BOX 2240 | SAN MARCOS, TX 78667 |
| 19 | 65870, 68946 | VOSS MILTON F H JR | 225 E LANGLEY BLVD | UNIVERSAL CITY, TX 78148 |
| 20 | 137328 | CRYSTAL CLEAR SPECIAL UTILITY DISTRICT | 2370 FM 1979 | SAN MARCOS, TX 78666 |
| 21 | 68934 | HENK FLOYD HENRY JR & KAREN HENK TONREY & ROBERT HENK | 6511 SABROSA CT. W. | FORTH WORTH, TX 76133 |

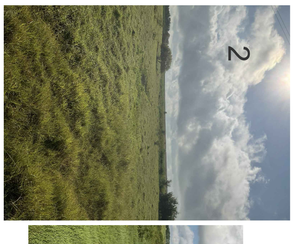
# APPENDIX D

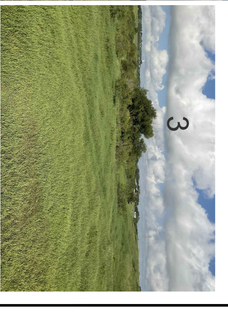
ORIGINAL PHOTOGRAPHS

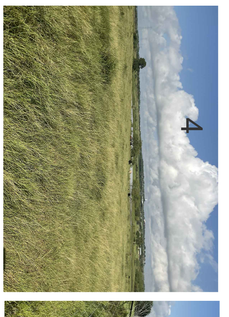
User: ccrone
Last Modified: Sep. 28, 21 – 07:45
Plot Date/Time: Sep. 29, 21 – 15:40:54

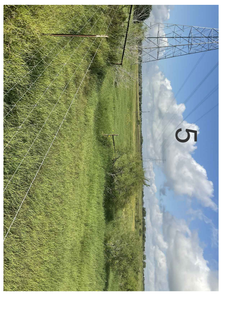




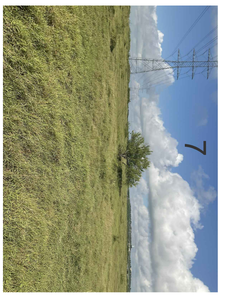


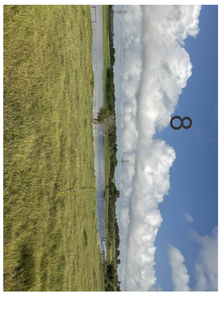



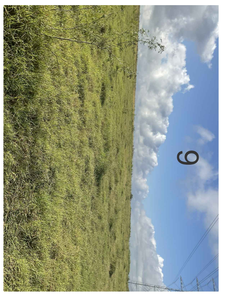



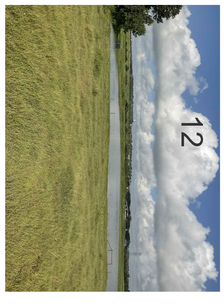








| | | | |
|---|---|---|---|
| OF SHEETS | SHEET NO. | JOB NUMBER: A292-0405 | **LJA Engineering, Inc.** 7500 Rialto Boulevard, Building II, Suite 100, Austin, Texas 78735 — Phone 512.439.4700, Fax 512.439.4716, FRN - F-1386 |

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF DANIEL RYAN, P.E. 89458, ON 9/29/2021. IT IS NOT TO BE USED FOR CONSTRUCTION PURPOSES.

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
DRAWING NAME:

REVISIONS

| NO. | DESCRIPTION | BY | DATE |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

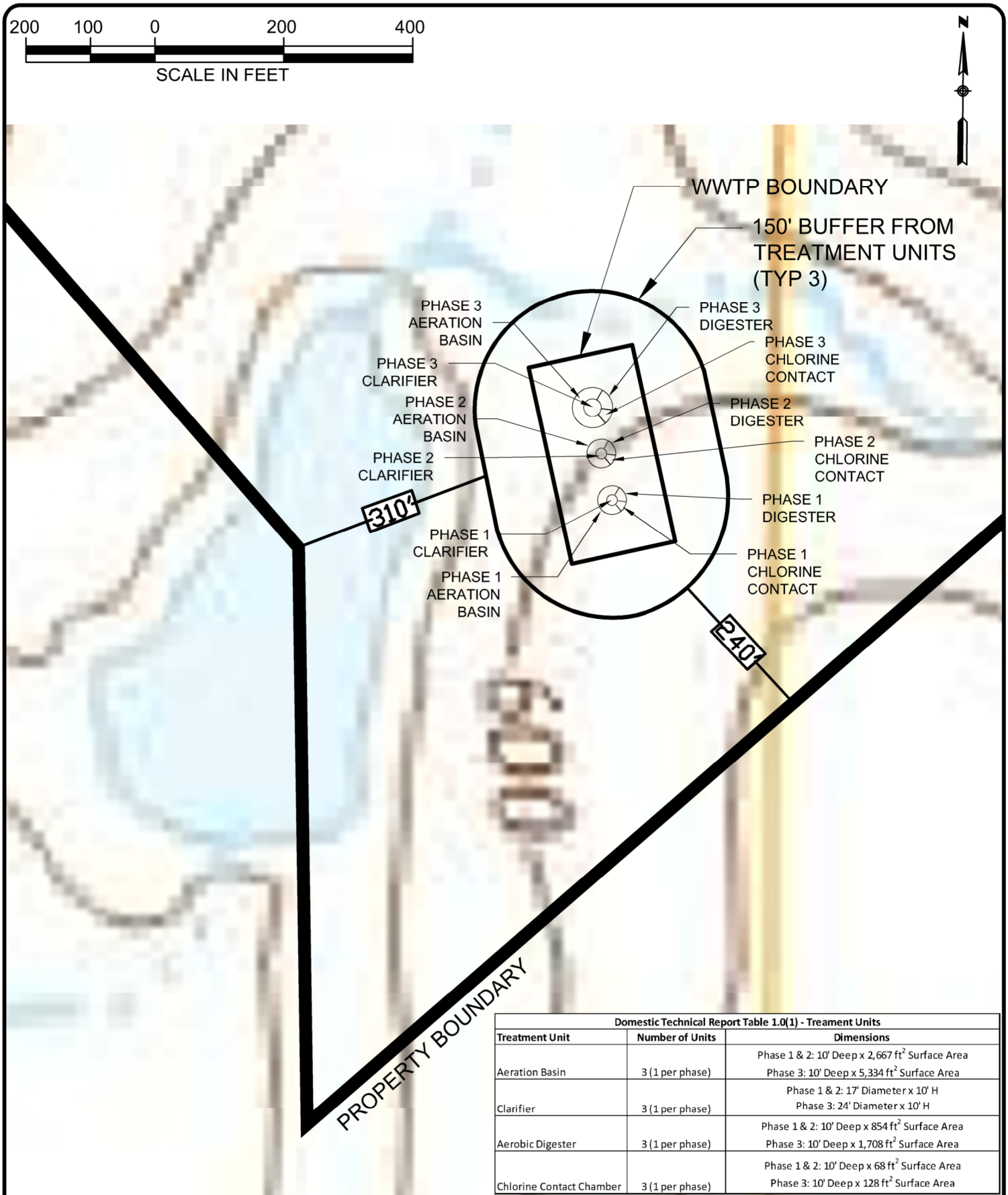
# RATTLER RIDGE

## PHOTO LOCATION MAP

000064

# APPENDIX E

BUFFER ZONE MAP




| Domestic Technical Report Table 1.0(1) - Treament Units | | |
|---|---|---|
| **Treatment Unit** | **Number of Units** | **Dimensions** |
| Aeration Basin | 3 (1 per phase) | Phase 1 & 2: 10' Deep x 2,667 $ft^2$ Surface Area<br>Phase 3: 10' Deep x 5,334 $ft^2$ Surface Area |
| Clarifier | 3 (1 per phase) | Phase 1 & 2: 17' Diameter x 10' H<br>Phase 3: 24' Diameter x 10' H |
| Aerobic Digester | 3 (1 per phase) | Phase 1 & 2: 10' Deep x 854 $ft^2$ Surface Area<br>Phase 3: 10' Deep x 1,708 $ft^2$ Surface Area |
| Chlorine Contact Chamber | 3 (1 per phase) | Phase 1 & 2: 10' Deep x 68 $ft^2$ Surface Area<br>Phase 3: 10' Deep x 128 $ft^2$ Surface Area |

**LJA Engineering, Inc.**
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716

# RATTLER RIDGE W.W.T.P.

## TCEQ TPDES APPLICATION

### 150' BUFFER ZONE MAP

# APPENDIX F

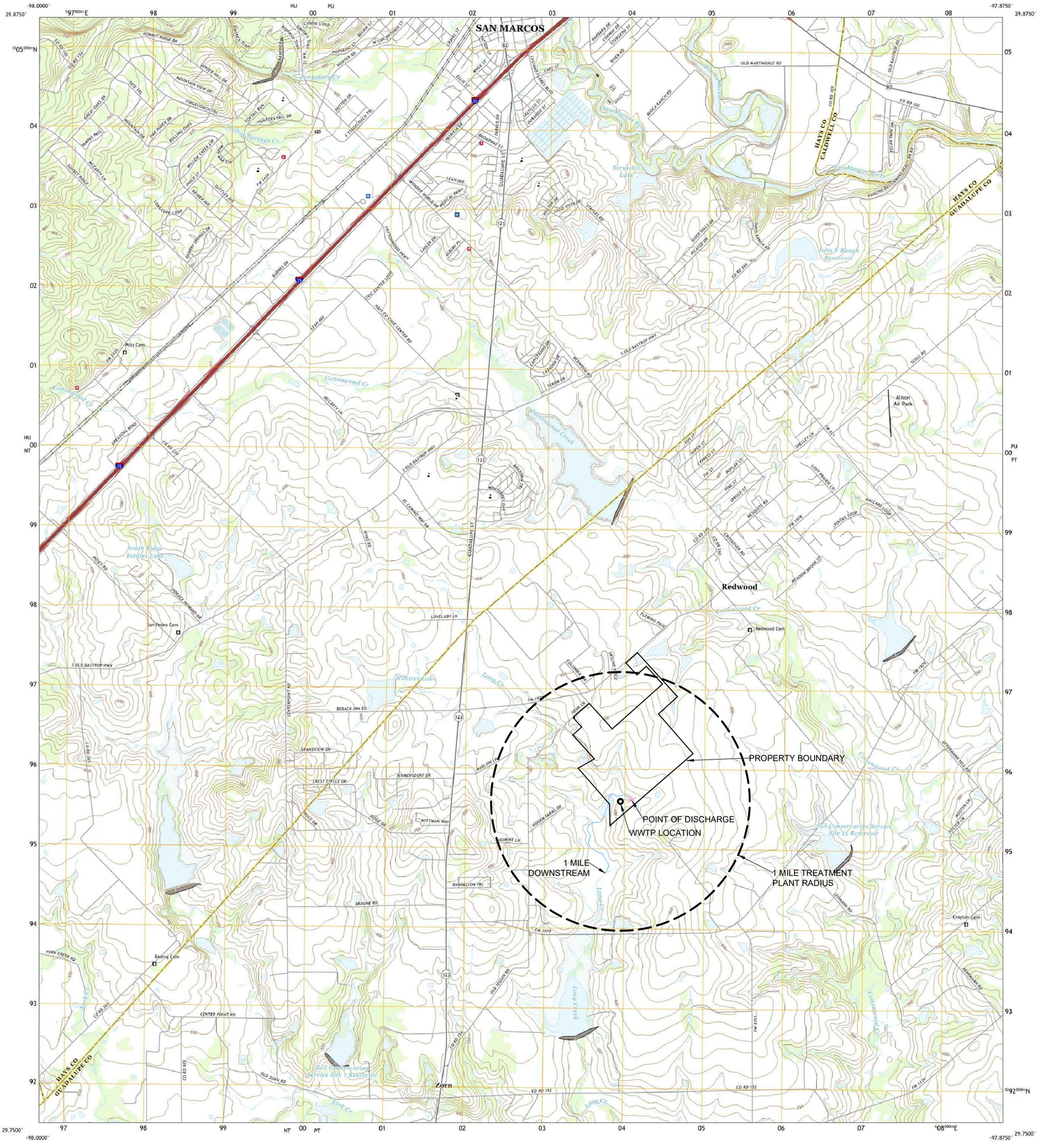
SPIF USGS MAP

USGS science for a changing world

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

The National Map US Topo

SAN MARCOS SOUTH QUADRANGLE
TEXAS
7.5-MINUTE SERIES




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

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

Imagery ..... NAIP, October 2016 - November 2016
Roads ..... U.S. Census Bureau, 2015
Names ..... GNIS, 1979 - 2015
Hydrography ..... National Hydrography Dataset, 2002
Contours ..... National Elevation Dataset, 2004
Boundaries ..... Multiple sources; see metadata file 2016 - 2017

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

UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

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

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011. A metadata file associated with this product is draft version 0.6.18

TEXAS
QUADRANGLE LOCATION

| | | |
|---|---|---|
| 1 | 2 | 3 |
| 4 | | 5 |
| 6 | 7 | 8 |

ADJOINING QUADRANGLES
1 Wimberley
2 San Marcos North
3 Uhland
4 Hunter
5 Martindale
6 New Braunfels East
7 Gonzales
8 Kingsbury

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

SAN MARCOS SOUTH, TX
2019

| | | | | | |
|---|---|---|---|---|---|
| SHEET NO. OF SHEETS | JOB NUMBER A202-0305 | LJA Engineering, Inc.<br>7500 Rialto Boulevard<br>Building II, Suite 100<br>Austin, Texas 78735<br>Phone 512.439.4700<br>Fax 512.439.4716<br>FRN - F-1386 | THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF DANIEL RYAN, P.E. 89458, ON 9/29/2021. IT IS NOT TO BE USED FOR CONSTRUCTION PURPOSES. | DATE:<br>DESIGNED BY:<br>DRAWN BY:<br>CHECKED BY:<br>DRAWING NAME: | REVISIONS<br>NO. / DESCRIPTION / BY / DATE | RATTLER RIDGE<br>USGS MAP |

000808

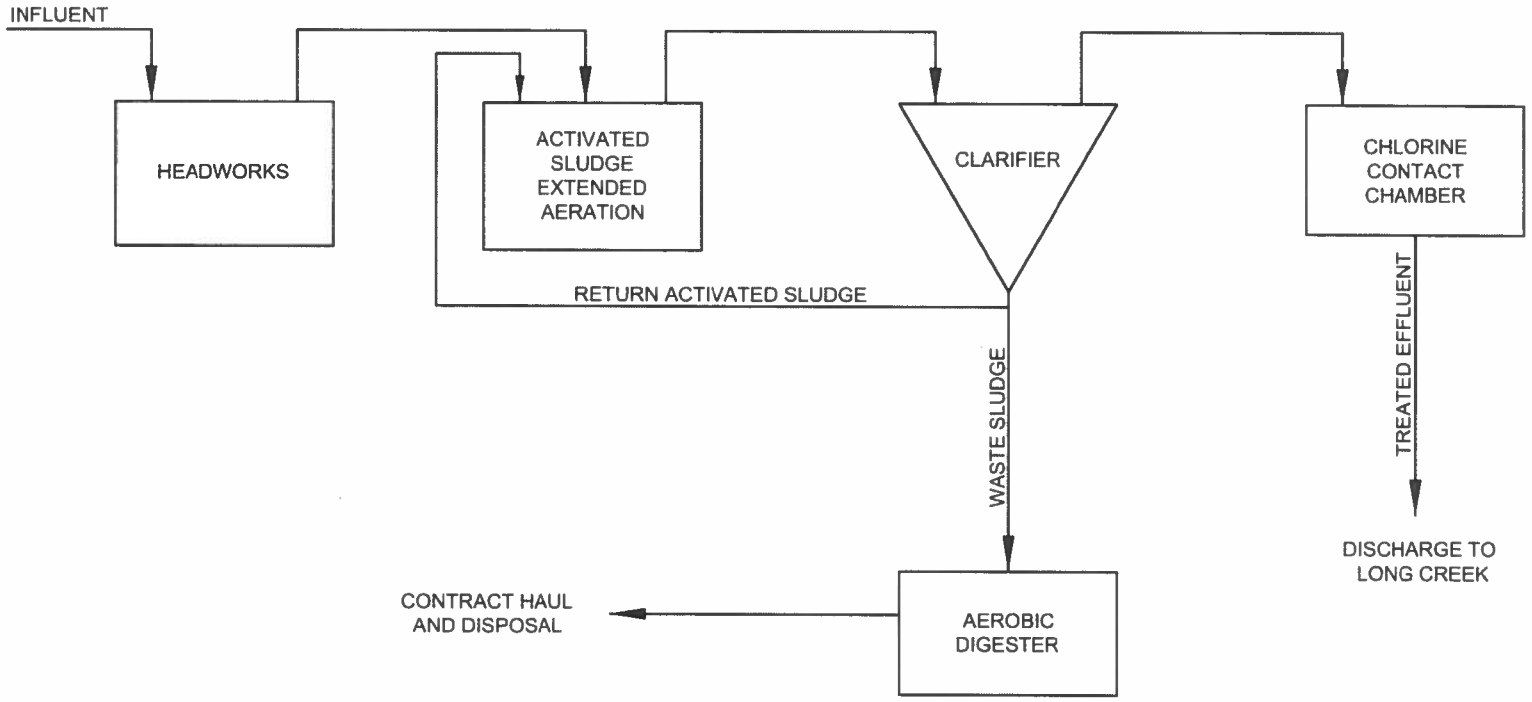
# APPENDIX G

PROCESS FLOW DIAGRAM

LJA Engineering, Inc.
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716

# RATTLER RIDGE WWTP

## FLOW DIAGRAM

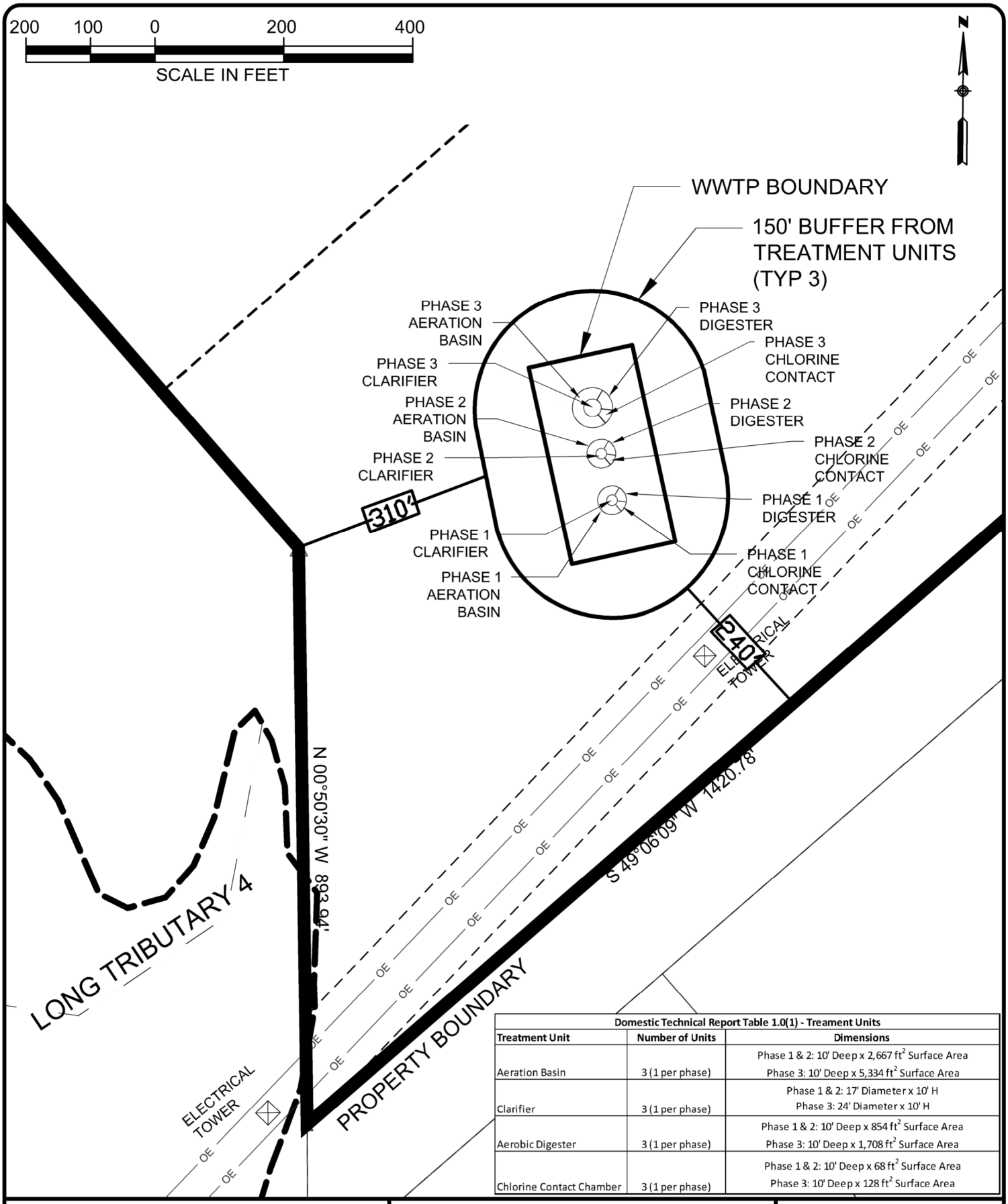



FIRST AND FINAL PHASES

FOR PLANNING PURPOSES ONLY

# APPENDIX H

SITE DRAWING




| Domestic Technical Report Table 1.0(1) - Treament Units | | |
|---|---|---|
| **Treatment Unit** | **Number of Units** | **Dimensions** |
| Aeration Basin | 3 (1 per phase) | Phase 1 & 2: 10' Deep x 2,667 ft$^2$ Surface Area<br>Phase 3: 10' Deep x 5,334 ft$^2$ Surface Area |
| Clarifier | 3 (1 per phase) | Phase 1 & 2: 17' Diameter x 10' H<br>Phase 3: 24' Diameter x 10' H |
| Aerobic Digester | 3 (1 per phase) | Phase 1 & 2: 10' Deep x 854 ft$^2$ Surface Area<br>Phase 3: 10' Deep x 1,708 ft$^2$ Surface Area |
| Chlorine Contact Chamber | 3 (1 per phase) | Phase 1 & 2: 10' Deep x 68 ft$^2$ Surface Area<br>Phase 3: 10' Deep x 128 ft$^2$ Surface Area |

**LJA Engineering, Inc.**
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716

# RATTLER RIDGE W.W.T.P.

## TCEQ TPDES APPLICATION

### 150' BUFFER ZONE MAP

# APPENDIX I

## DESIGN CALCULATIONS

# Rattler Ridge - WWTP FLOW PHASES

| Phase 1 | | | Phase 2 | | | Phase 3 | | |
|---|---|---|---|---|---|---|---|---|
| **Assumptions** | | | **Assumptions** | | | **Assumptions** | | |
| Average Flow per LUE = | 245 | gpd | Average Flow per LUE = | 245 | gpd | Average Flow per LUE = | 245 | gpd |
| Average Density | 3 | LUEs/Ac | Average Density | 3 | LUEs/Ac | Average Density | 3 | LUEs/Ac |
| I/I for Wet Peak | 750 | gpd/Ac | I/I for Wet Peak | 750 | gpd/Ac | I/I for Wet Peak | 750 | gpd/Ac |
| | | | | | | | | |
| LUEs | 408 | | LUEs | 408 | | LUEs | 814 | |
| Average Daily Flow | **99,960** | gpd | Average Daily Flow | **99,960** | gpd | Average Daily Flow | **199,430** | gpd |
| | 69 | gpm | Average Daily Flow | 69 | gpm | Average Daily Flow | 138 | gpm |
| Dry Peaking Factor | 3.69 | | Dry Peaking Factor | 3.69 | | Dry Peaking Factor | 3.46 | |
| Peak Dry Flow | 256 | gpm | Peak Dry Flow | 256 | gpm | Peak Dry Flow | 479 | gpm |
| Service Area | 170 | acres | Service Area | 170 | acres | Service Area | 65 | acres |
| I/I for Peak Wet | 127,500 | gpd | I/I for Peak Wet | 127,500 | gpd | I/I for Peak Wet | 48,750 | gpd |
| | 89 | gpm | | 89 | gpm | | 34 | gpm |
| Total Peak Wet Flow | 345 | gpm | Total Peak Wet Flow | 345 | gpm | Total Peak Wet Flow | 513 | gpm |
| | | | | | | | | |
| Minimum Flow Factor | 0.20 | | Minimum Flow Factor | 0.20 | | Minimum Flow Factor | 0.23 | |
| Minimum Flow | 14 | gpm | Minimum Flow | 14 | gpm | Minimum Flow | 32 | gpm |

# Rattler Ridge Extended Air Process Design (TCEQ Checklist)

| | | |
|---|---|---|
| Design Flow (from Summary Sheet) | 0.100 | mgd |
| Peak Flow (from Summary Sheet) | 0.369 | mgd |
| Design Organic Load | 400 | lb BOD / day |

**Clarifier Design**

*(Criteria)*

| | | |
|---|---|---|
| Maximum Surface Loading @ Peak Flow | 900 | gpd/ft$^2$ |
| Minimum Detention Time @ Peak Flow | 2 | hrs |
| Maximum Surface Loading @ Design Flow | 450 | gpd/ft$^2$ |
| Minimum Detention Time @ Design Flow | 4 | hrs |
| Surface Area Required (Peak Flow) | 409.6 | ft$^2$ |
| Surface Area Required (Design Flow) | 222.2 | ft$^2$ |
| Volume Required (Peak Flow) | 4,107 | ft$^3$ |
| Volume Required (Design Flow) | 2,228 | ft$^3$ |
| Depth Required (Peak Flow) | 10.0 | ft |
| Depth Required (Design Flow) | 10.0 | ft |
| Maximum Return Sludge Underflow Rate | 400.0 | gpd/ft$^2$ |
| Minimum Return Sludge Underflow Rate | 200.0 | gpd/ft$^2$ |

*(Calculations)*

| | | |
|---|---|---|
| Proposed Sidewater Depth | 10 | ft |
| Proposed Clarifier Diameter | 17 | ft |
| Clarifier Surface Area | 227 | ft$^2$ |
| Clarifier Volume | 2,270 | ft$^3$ |

*Note - Min SWD is 8 ft, 10 ft if area > 1250 ft$^2$*

| | | |
|---|---|---|
| Maximum Return Sludge Underflow Rate | 63 | gpm |
| Minimum Return Sludge Underflow Rate | 32 | gpm |
| RAS Line Size (min 3 ft/sec velocity) | 4 | inches |

**Aeration System Design**

*(Criteria)*

| | | |
|---|---|---|
| Organic Loading | 15 | lb BOD/day/1000 $ft^3$ |
| Actual Design Load | 400 | lb BOD/day |
| Required Volume | 26667 | $ft^3$ |
| Required Air Flow | 3200 | scf / lb BOD (assumes 4.0% transfer efficiency) |

*(Calculations)*

| | | |
|---|---|---|
| Proposed Sidewater Depth | 10 | ft |
| Surface Area | 2,667 | $ft^2$ |
| Air Flow | 889 | scfm |

*Note - Min SWD is 8 ft*

**Aerobic Digester Design**

*(Criteria)*

| | | |
|---|---|---|
| Volume Required | 20 | $ft^3$ / lb BOD |
| or | 15 | days SRT |
| Air Required | 30 | scfm/ 1000 $ft^3$ volume |

*(Calculations)*

| | | |
|---|---|---|
| Proposed Volume | 8,000 | $ft^3$ |
| Proposed Sidewater Depth | 10 | ft |
| Surface Area | 800 | $ft^2$ |
| Required Air Flow | 240 | scfm |

**Chlorine Contact Design**

*(Criteria)*

| | | |
|---|---|---|
| Minimum Contact Time | 20 | minutes @ Peak Flow |

*(Calculations)*

| | | |
|---|---|---|
| Proposed Volume | 684 | $ft^3$ |
| Proposed Sidewater Depth | 10 | ft |
| Surface Area | 68 | $ft^2$ |

| **Bullseye Type Plant Summary** | Depth | Area | Degrees of Arc | Actual Area |
|---|---|---|---|---|
| **Aeration Basin** | 10 | 2,667 | 265 | 668 |
| **Clarifier** | 10 | 227 | N/A | 227 |
| **Chlorine Contact** | 10 | 68 | 15 | 38 |
| **Digester** | 10 | 800 | 80 | 202 |
| **Total** | | 3,762 | 360 | 1,134 |

# Rattler Ridge Extended Air Process Design (TCEQ Checklist)

| | | |
|---|---|---|
| Design Flow (from Summary Sheet) | 0.200 | mgd |
| Peak Flow (from Summary Sheet) | 0.690 | mgd |
| Design Organic Load | 400 | lb BOD / day |

**Clarifier Design**

*(Criteria)*

| | | |
|---|---|---|
| Maximum Surface Loading @ Peak Flow | 900 | gpd/ft$^2$ |
| Minimum Detention Time @ Peak Flow | 2 | hrs |
| Maximum Surface Loading @ Design Flow | 450 | gpd/ft$^2$ |
| Minimum Detention Time @ Design Flow | 4 | hrs |
| Surface Area Required (Peak Flow) | 766.4 | ft$^2$ |
| Surface Area Required (Design Flow) | 444.44 | ft$^2$ |
| Volume Required (Peak Flow) | 7,684 | ft$^3$ |
| Volume Required (Design Flow) | 4,456 | ft$^3$ |
| Depth Required (Peak Flow) | 10.0 | ft |
| Depth Required (Design Flow) | 10.0 | ft |
| Maximum Return Sludge Underflow Rate | 400.0 | gpd/ft$^2$ |
| Minimum Return Sludge Underflow Rate | 200.0 | gpd/ft$^2$ |

*(Calculations)*

| | | |
|---|---|---|
| Proposed Sidewater Depth | 10 | ft |
| Proposed Clarifier Diameter | 24 | ft |
| Clarifier Surface Area | 452 | ft$^2$ |
| Clarifier Volume | 4,524 | ft$^3$ |

*Note - Min SWD is 8 ft, 10 ft if area > 1250 ft$^2$*

| | | |
|---|---|---|
| Maximum Return Sludge Underflow Rate | 126 | gpm |
| Minimum Return Sludge Underflow Rate | 63 | gpm |
| RAS Line Size (min 3 ft/sec velocity) | 4 | inches |

**Aeration System Design**

*(Criteria)*

| | | |
|---|---|---|
| Organic Loading | 15 | lb BOD/day/1000 ft$^3$ |
| Actual Design Load | 400 | lb BOD/day |
| Required Volume | 26667 | ft$^3$ |
| Required Air Flow | 3200 | scf / lb BOD (assumes 4.0% transfer efficiency) |

*(Calculations)*

| | | | |
|---|---|---|---|
| Proposed Sidewater Depth | 10 | ft | *Note - Min SWD is 8 ft* |
| Surface Area | 2,667 | $ft^2$ | |
| Air Flow | 889 | scfm | |

**Aerobic Digester Design**

*(Criteria)*

| | | |
|---|---|---|
| Volume Required | 20 | $ft^3$ / lb BOD |
| or | 15 | days SRT |
| Air Required | 30 | scfm/ 1000 $ft^3$ volume |

*(Calculations)*

| | | |
|---|---|---|
| Proposed Volume | 8,000 | $ft^3$ |
| Proposed Sidewater Depth | 10 | ft |
| Surface Area | 800 | $ft^2$ |
| Required Air Flow | 240 | scfm |

**Chlorine Contact Design**

*(Criteria)*

| | | |
|---|---|---|
| Minimum Contact Time | 20 | minutes @ Peak Flow |

*(Calculations)*

| | | |
|---|---|---|
| Proposed Volume | 1,281 | $ft^3$ |
| Proposed Sidewater Depth | 10 | ft |
| Surface Area | 128 | $ft^2$ |

| **Bullseye Type Plant Summary** | Depth | Area | Degrees of Arc | Actual Area |
|---|---|---|---|---|
| **Aeration Basin** | 10 | 2,667 | 265 | 2,185 |
| **Clarifier** | 10 | 452 | N/A | 452 |
| **Chlorine Contact** | 10 | 128 | 15 | 124 |
| **Digester** | 10 | 800 | 80 | 660 |
| **Total** | | 4,047 | 360 | 3,421 |

# APPENDIX J

FEMA FLOOD MAPS

# NOTES TO USERS

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

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

**Coastal Base Flood Elevations** shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

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

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

The **projection** used in the preparation of this map was Texas State Plane south central zone (FIPSZONE 4204). The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

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

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC–3, #9202
1315 East–West Highway
Silver Spring, MD 20910–3282

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

**Base map** information shown on this FIRM was provided in digital format by Bexar Metro 911. This information was photogrammetrically compiled at a scale of at least 1:24,000 from aerial photography dated September 2004.

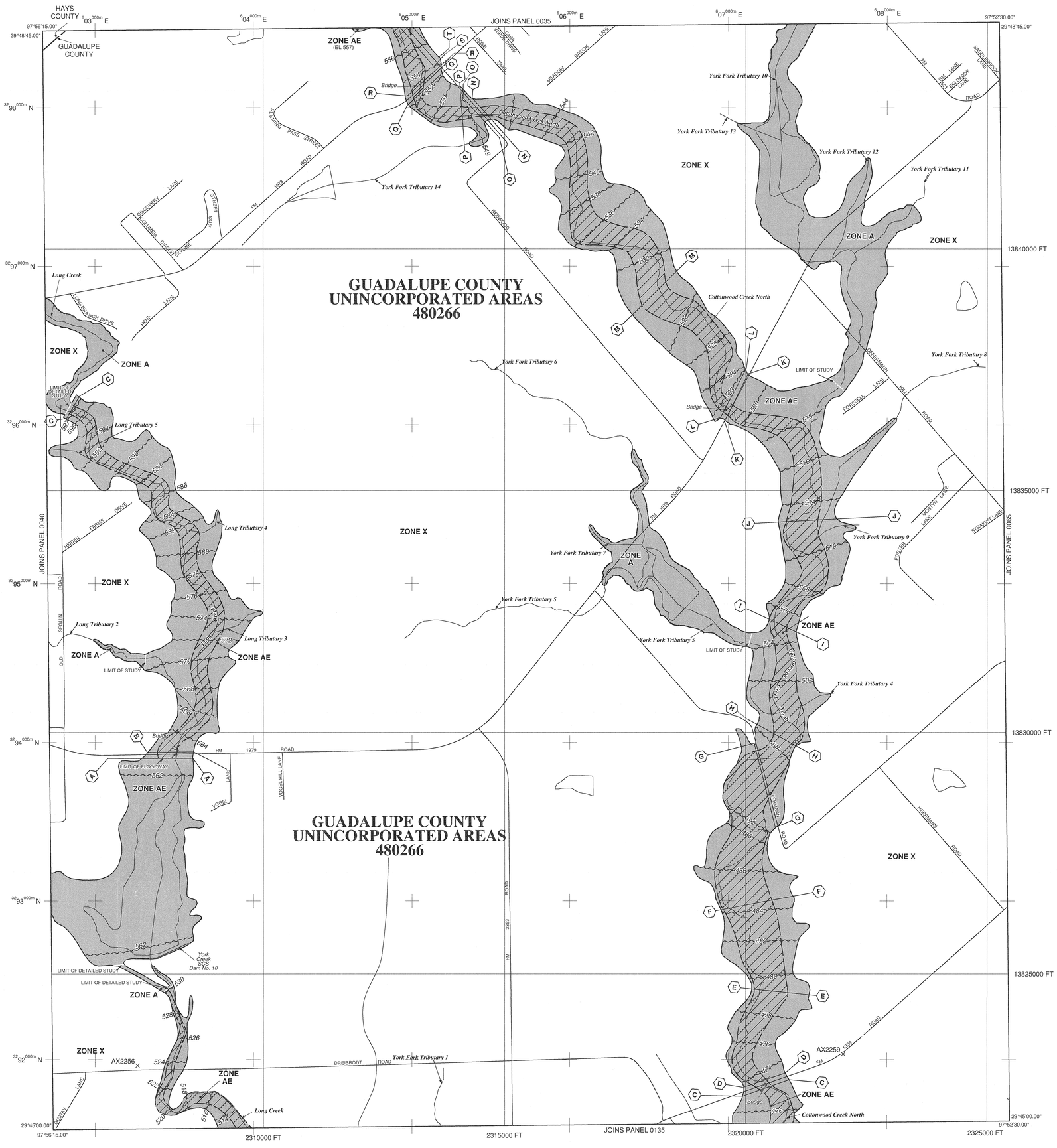
This map reflects more detailed and up–to–date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result,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

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

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

Contact the **FEMA Map Service Center** at 1–800–358–9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, *a Flood Insurance Study report,* and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1–800–358–9620 and its website at http://www.msc.fema.gov/.

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




# LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

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

**ZONE A** No Base Flood Elevations determined.

**ZONE AE** Base Flood Elevations determined.

**ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

**ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

**ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

**ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

**ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

**ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

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

OTHER FLOOD AREAS

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

OTHER AREAS

**ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.

**ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

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

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

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- A–A — Cross section line
- 23–23 — Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4275000mN — 1000-meter Universal Transverse Mercator grid ticks, zone 14
- 6000000 FT — 5000-foot grid values: Texas State Plane coordinate system, south central zone (FIPSZONE 4204), Lambert Conformal Conic
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
November 2, 2007
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1–800–638–6620.

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

NATIONAL FLOOD INSURANCE PROGRAM

**PANEL 0045F**

# FIRM
## FLOOD INSURANCE RATE MAP
## GUADALUPE COUNTY, TEXAS
## AND INCORPORATED AREAS

**PANEL 45 OF 480**
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|---|---|---|---|
| GUADALUPE COUNTY | 480266 | 0045 | F |

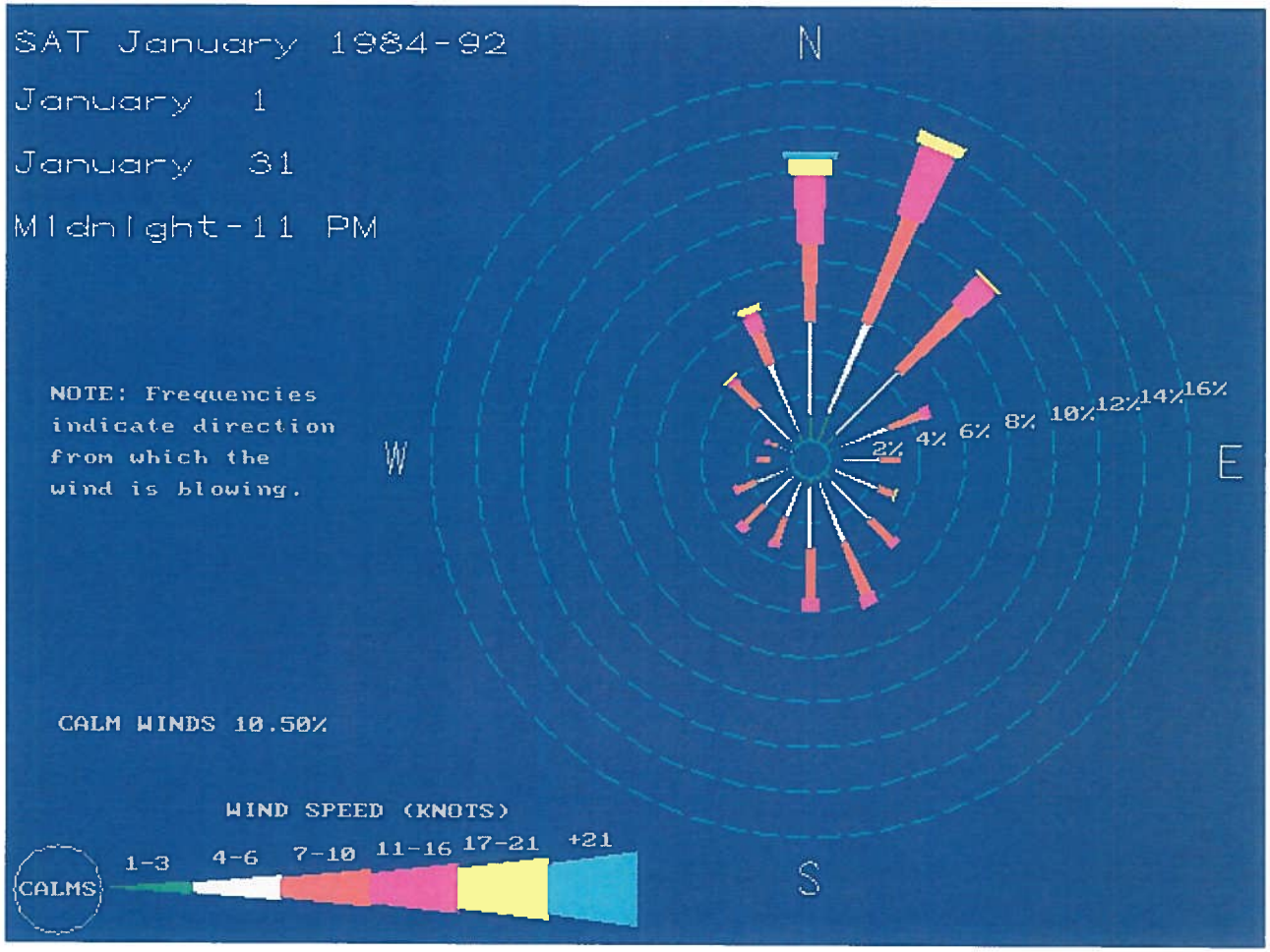
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

**MAP NUMBER**
**48187C0045F**
**EFFECTIVE DATE**
**NOVEMBER 2, 2007**

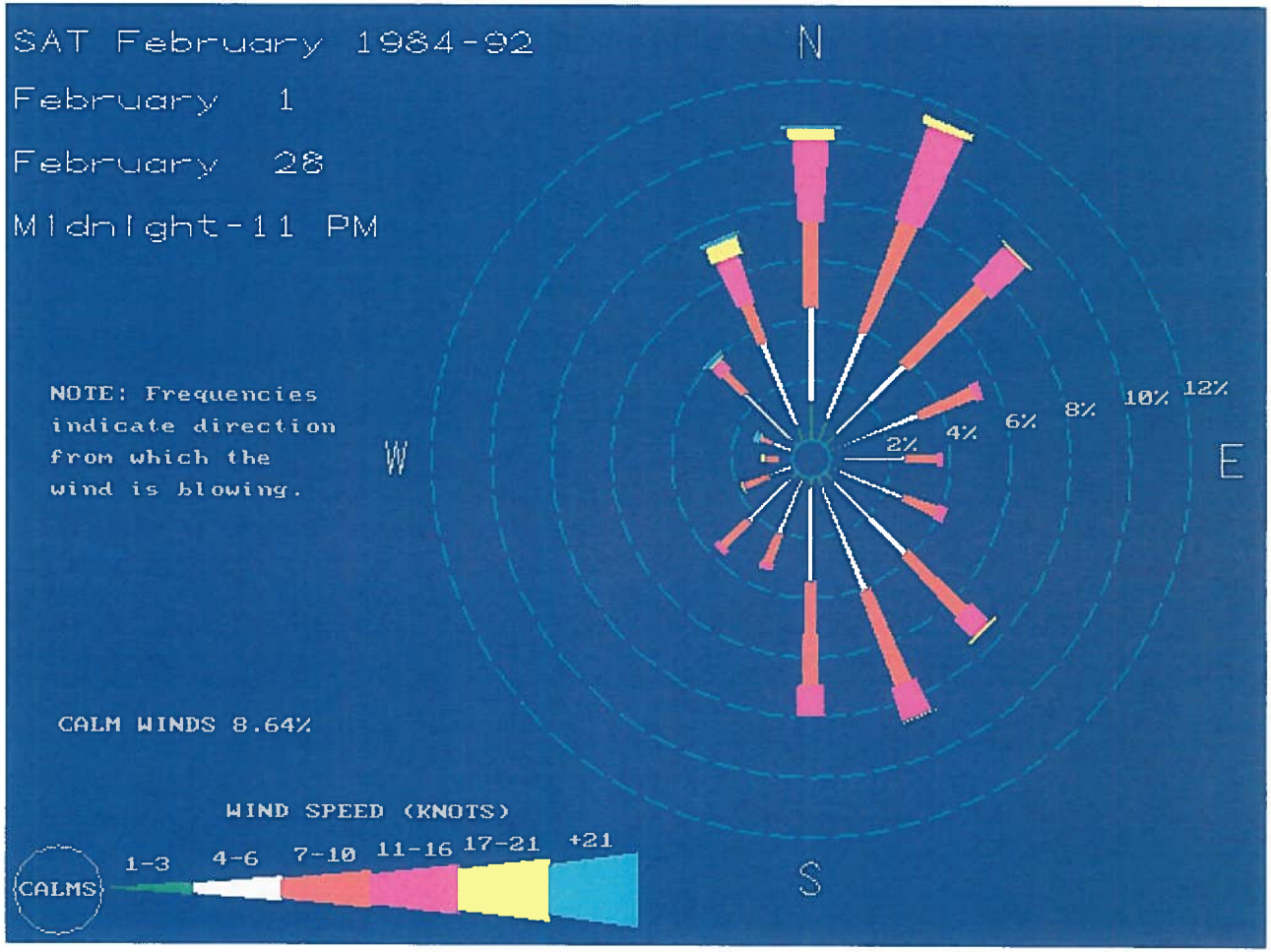
Federal Emergency Management Agency

# APPENDIX K

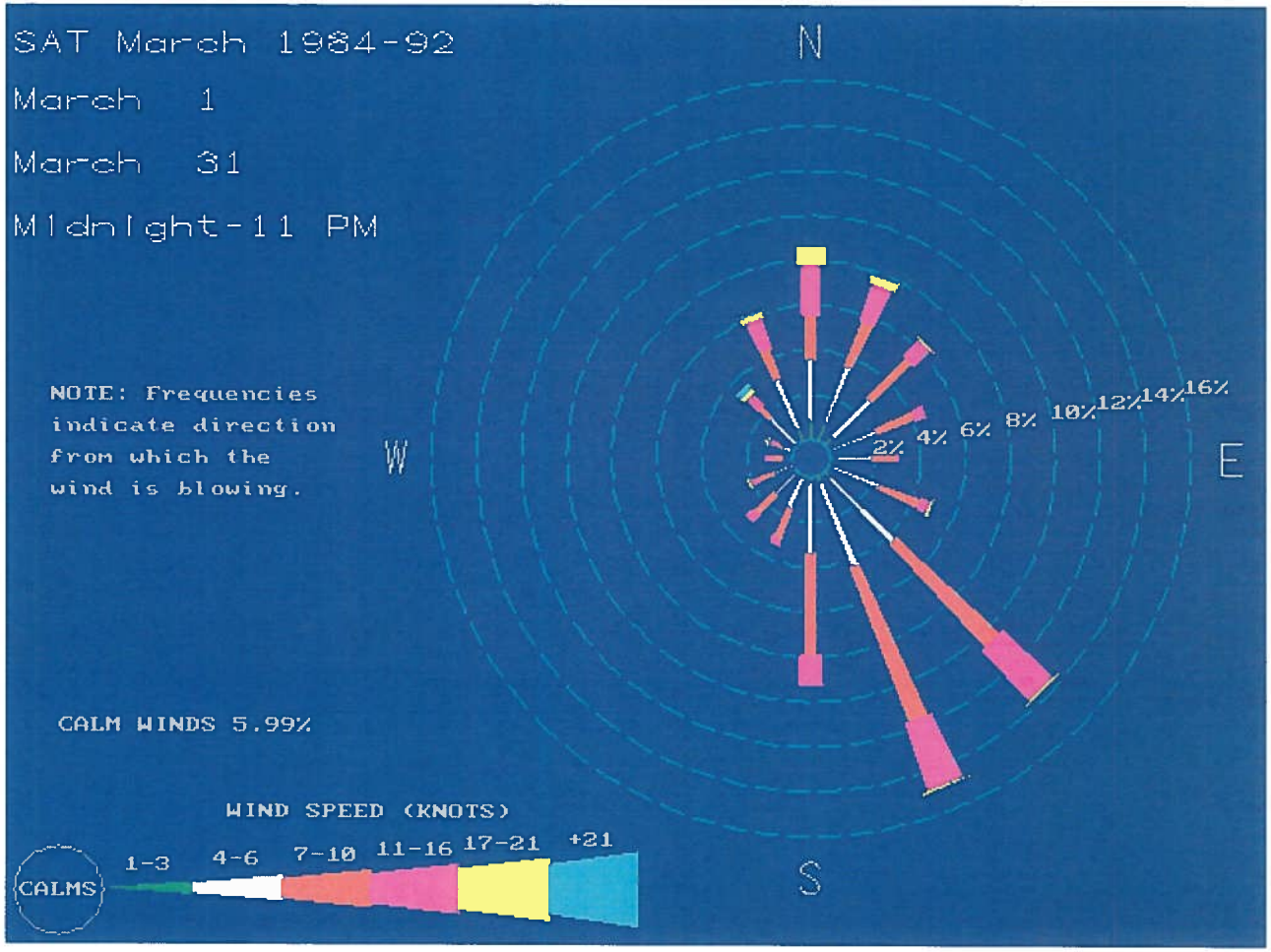
WIND ROSE


SAT January 1984-92
January 1
January 31
Midnight-11 PM
NOTE: Frequencies indicate direction from which the wind is blowing.
N
W
E
S
2%
4%
6%
8%
10%
12%
14%
16%
CALM WINDS 10.50%
WIND SPEED (KNOTS)
CALMS
1-3
4-6
7-10
11-16
17-21
+21

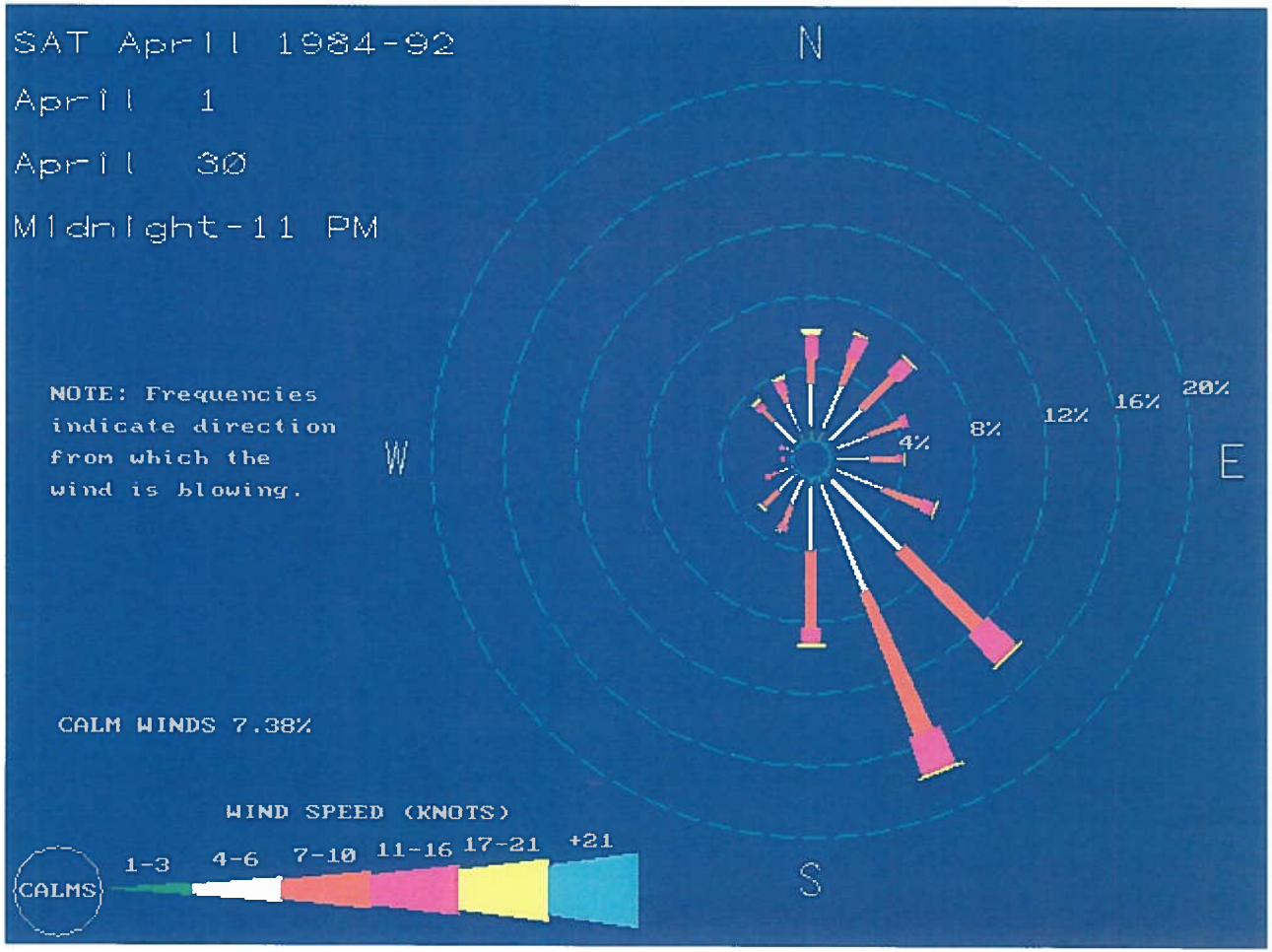
000082


SAT February 1984-92
February 1
February 28
Midnight-11 PM
NOTE: Frequencies indicate direction from which the wind is blowing.
N
W
E
S
2%
4%
6%
8%
10%
12%
CALM WINDS 8.64%
WIND SPEED (KNOTS)
CALMS
1-3
4-6
7-10
11-16
17-21
+21

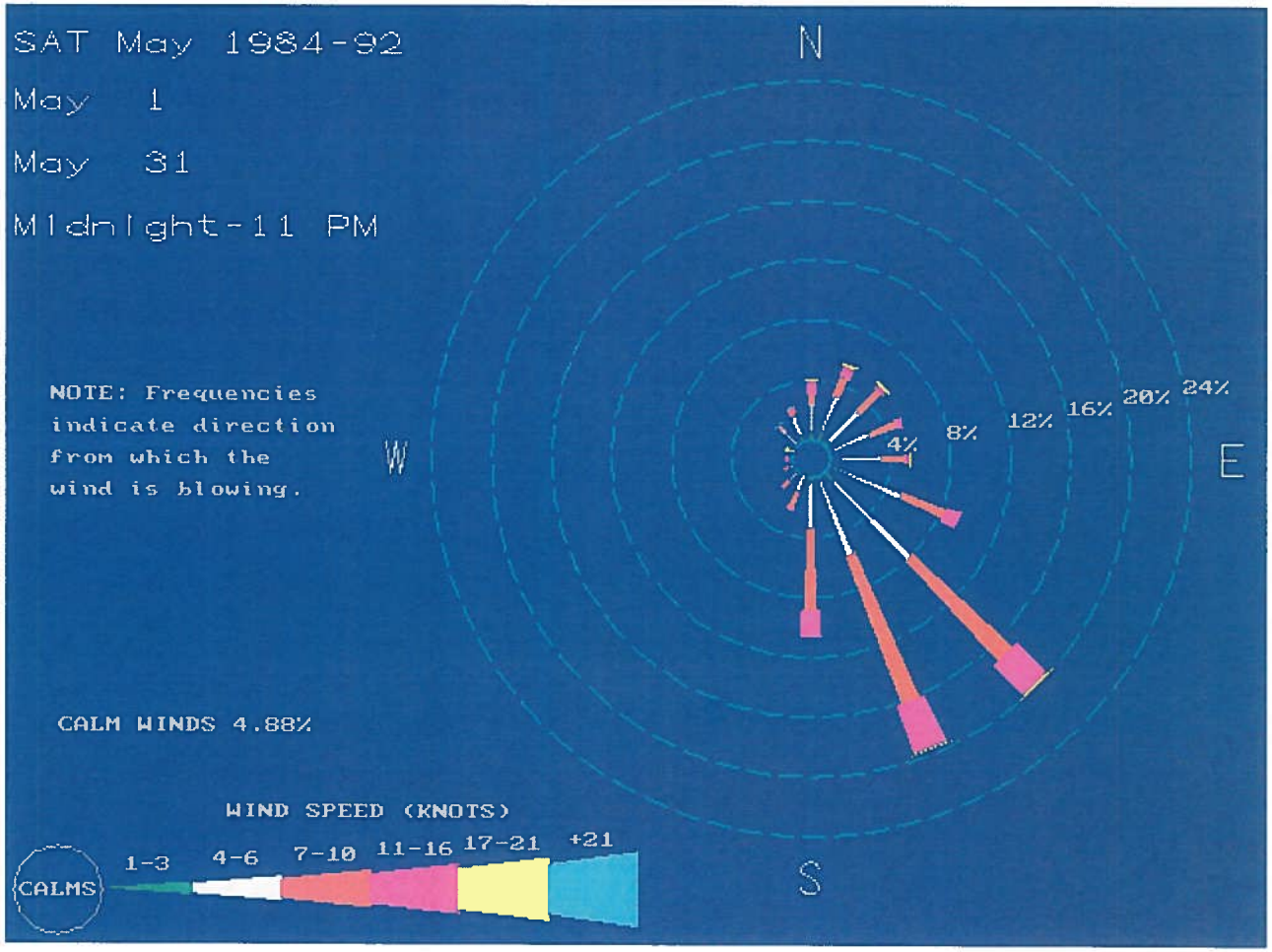
000083


SAT March 1984-92
March 1
March 31
Midnight-11 PM
NOTE: Frequencies indicate direction from which the wind is blowing.
N
W
E
S
2%
4%
6%
8%
10%
12%
14%
16%
CALM WINDS 5.99%
WIND SPEED (KNOTS)
CALMS
1-3
4-6
7-10
11-16
17-21
+21

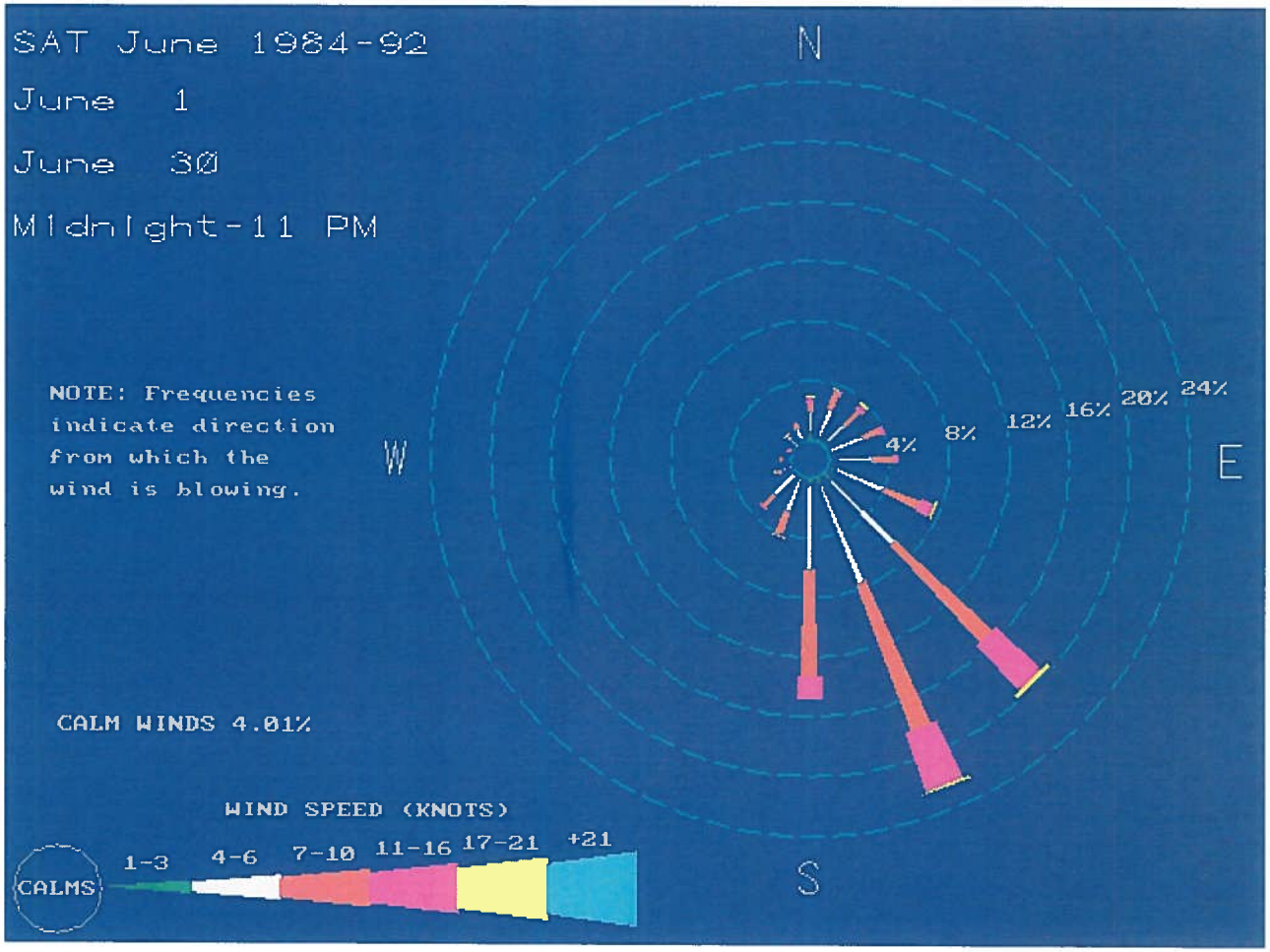
000084


SAT April 1984-92
April 1
April 30
Midnight-11 PM
NOTE: Frequencies indicate direction from which the wind is blowing.
N
W
E
S
4%
8%
12%
16%
20%
CALM WINDS 7.38%
WIND SPEED (KNOTS)
CALMS
1-3
4-6
7-10
11-16
17-21
+21

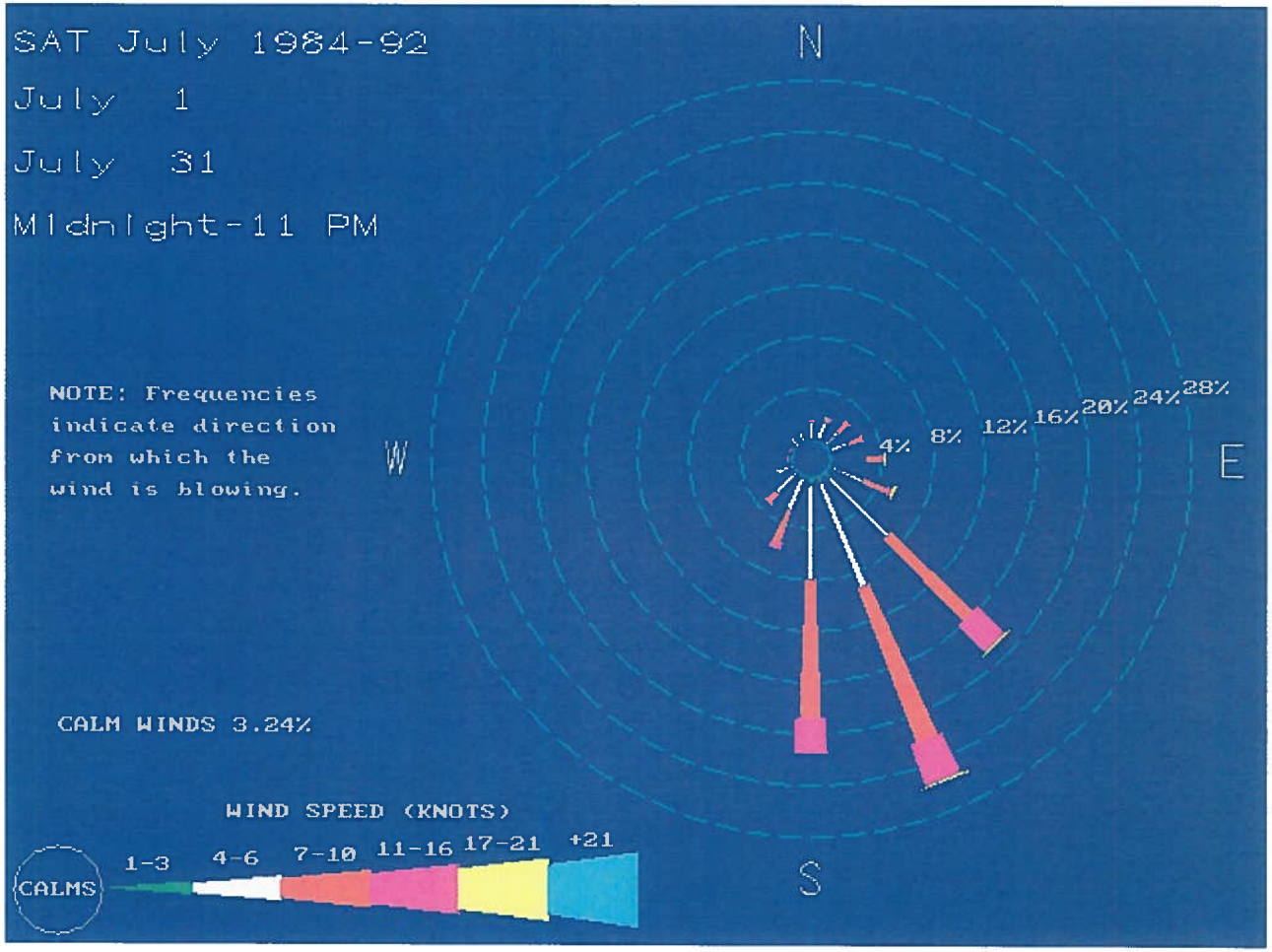
000085


SAT May 1984-92
May 1
May 31
Midnight-11 PM
NOTE: Frequencies indicate direction from which the wind is blowing.
N
W
E
S
4%
8%
12%
16%
20%
24%
CALM WINDS 4.88%
WIND SPEED (KNOTS)
CALMS
1-3
4-6
7-10
11-16
17-21
+21

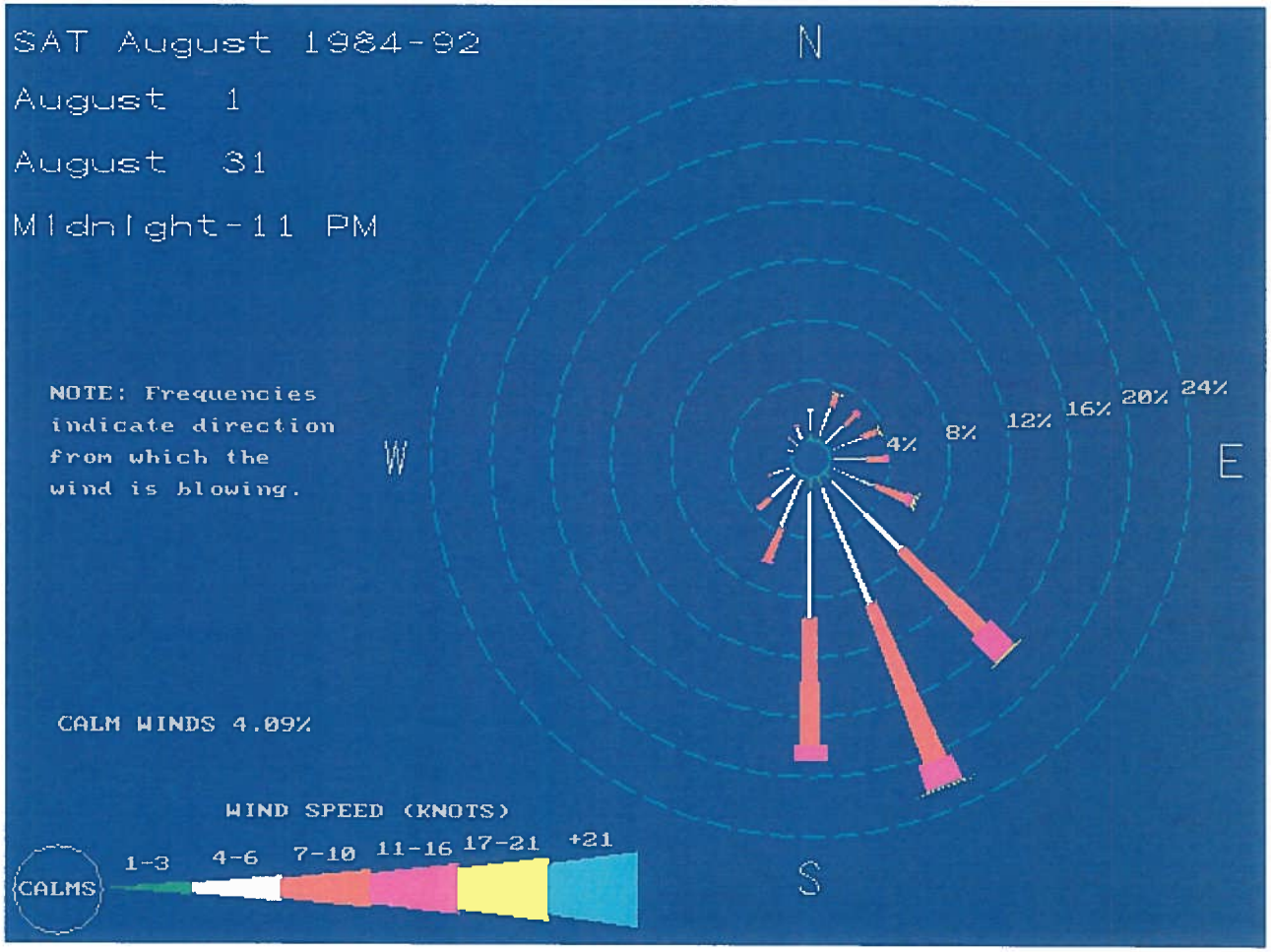
980000


SAT June 1984-92
June 1
June 30
Midnight-11 PM
NOTE: Frequencies indicate direction from which the wind is blowing.
N
W
E
S
4%
8%
12%
16%
20%
24%
CALM WINDS 4.01%
WIND SPEED (KNOTS)
CALMS
1-3
4-6
7-10
11-16
17-21
+21

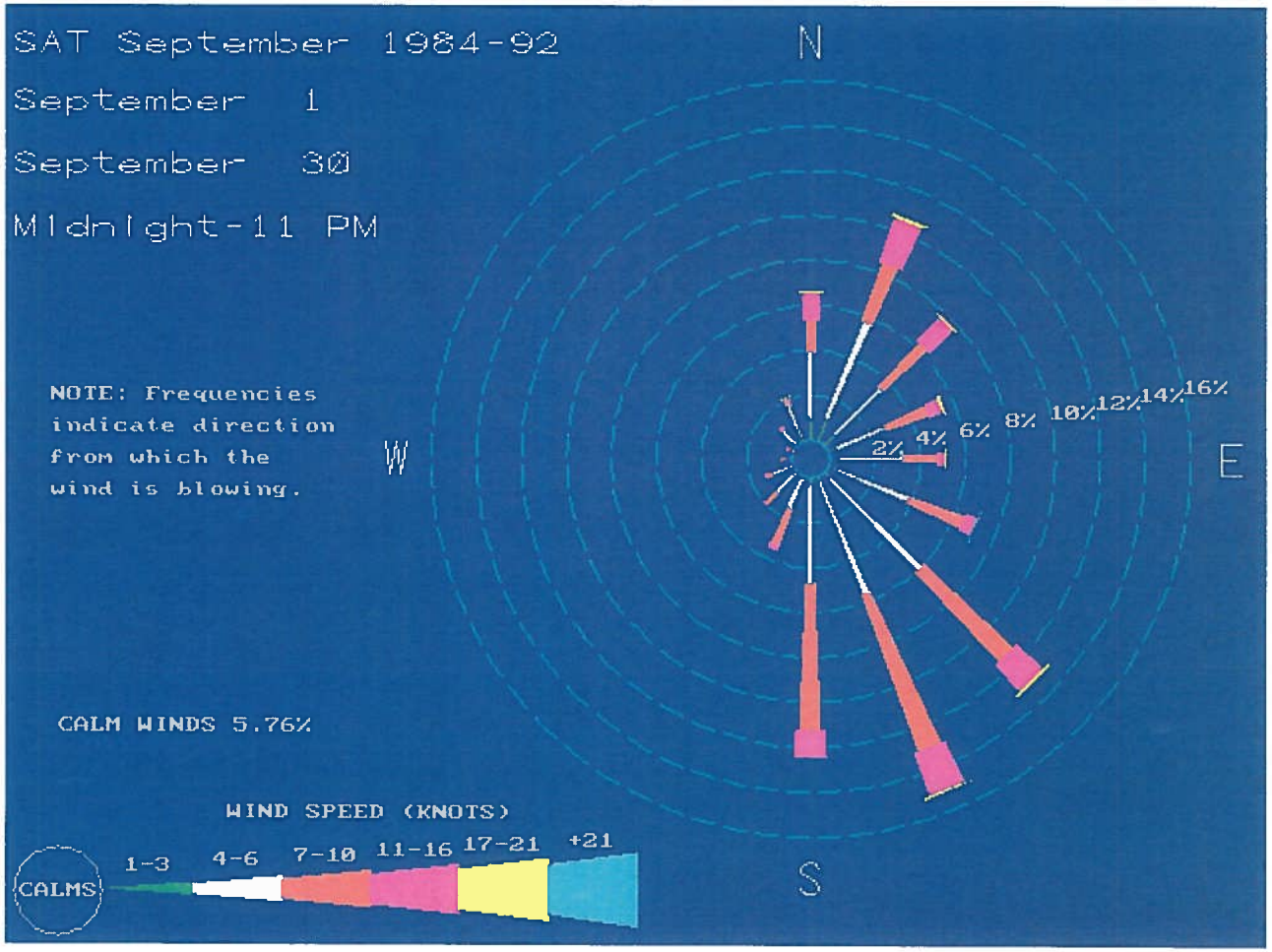
000087


SAT July 1984-92
July 1
July 31
Midnight-11 PM
NOTE: Frequencies indicate direction from which the wind is blowing.
N
W
E
S
4%
8%
12%
16%
20%
24%
28%
CALM WINDS 3.24%
WIND SPEED (KNOTS)
CALMS
1-3
4-6
7-10
11-16
17-21
+21

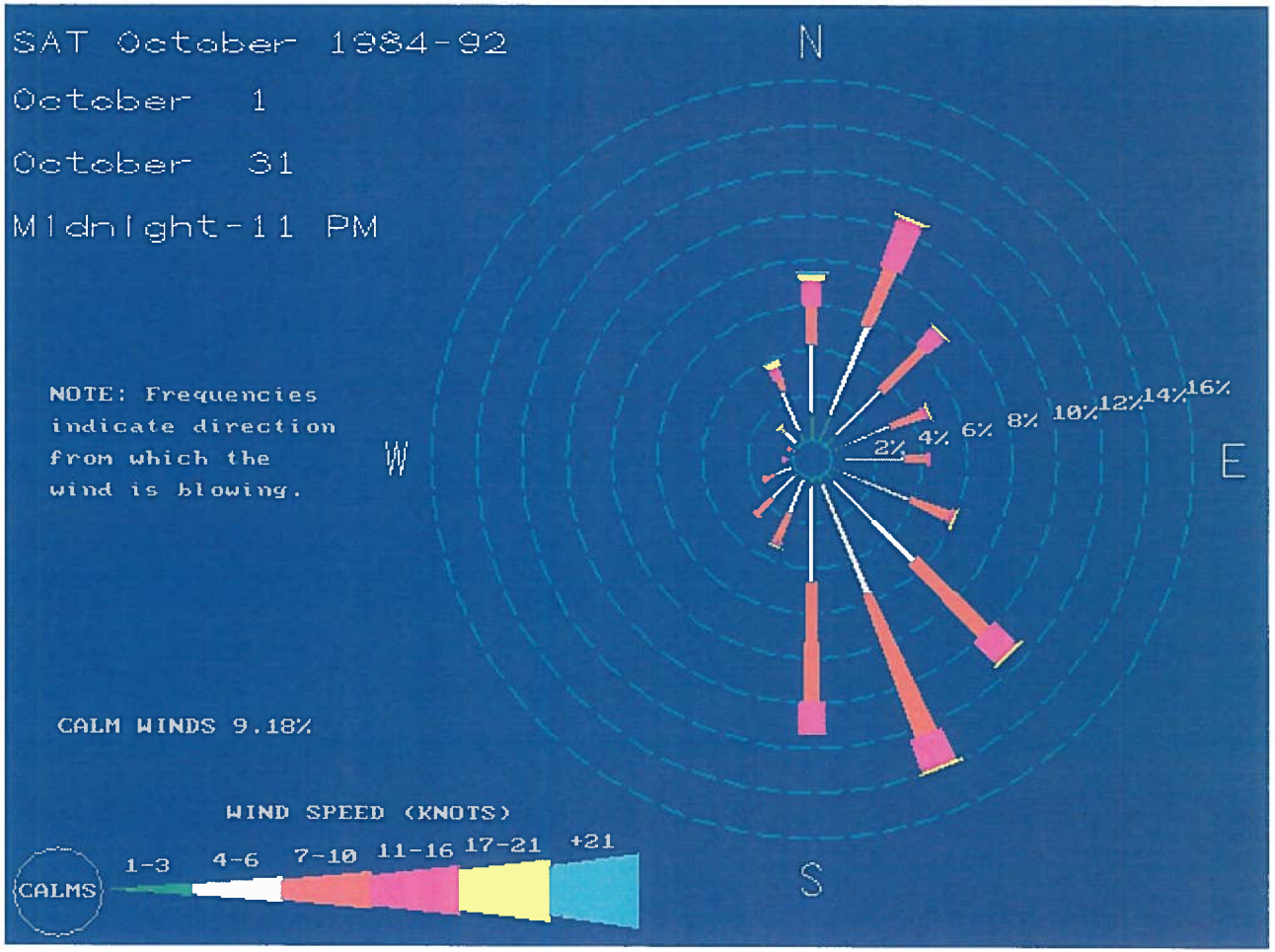
880000


SAT August 1984-92
August 1
August 31
Midnight-11 PM
NOTE: Frequencies indicate direction from which the wind is blowing.
N
W
E
S
4%
8%
12%
16%
20%
24%
CALM WINDS 4.09%
WIND SPEED (KNOTS)
CALMS
1-3
4-6
7-10
11-16
17-21
+21

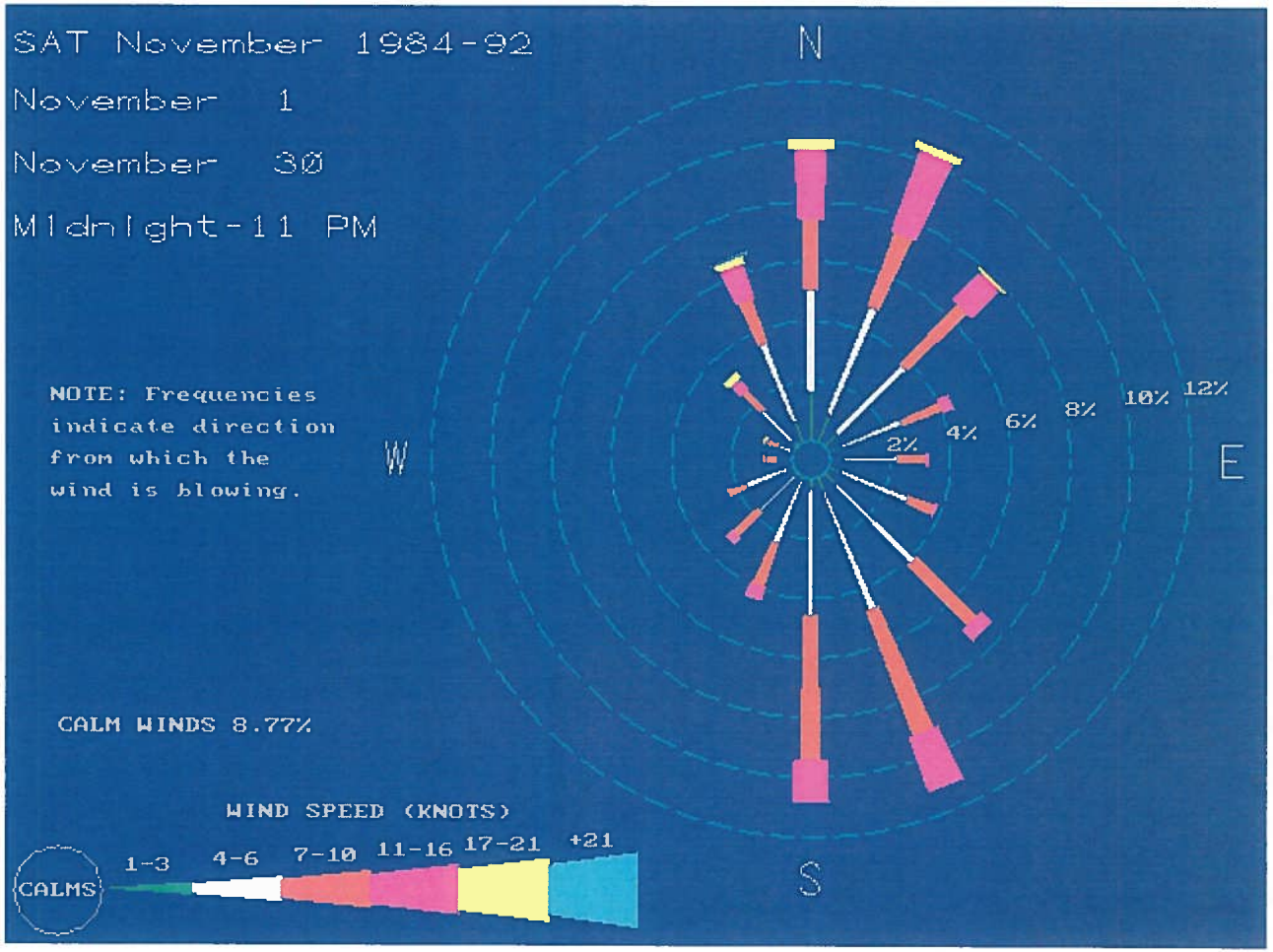
680000


SAT September 1984-92
September 1
September 30
Midnight-11 PM
NOTE: Frequencies indicate direction from which the wind is blowing.
N
W
E
S
2%
4%
6%
8%
10%
12%
14%
16%
CALM WINDS 5.76%
WIND SPEED (KNOTS)
CALMS
1-3
4-6
7-10
11-16
17-21
+21

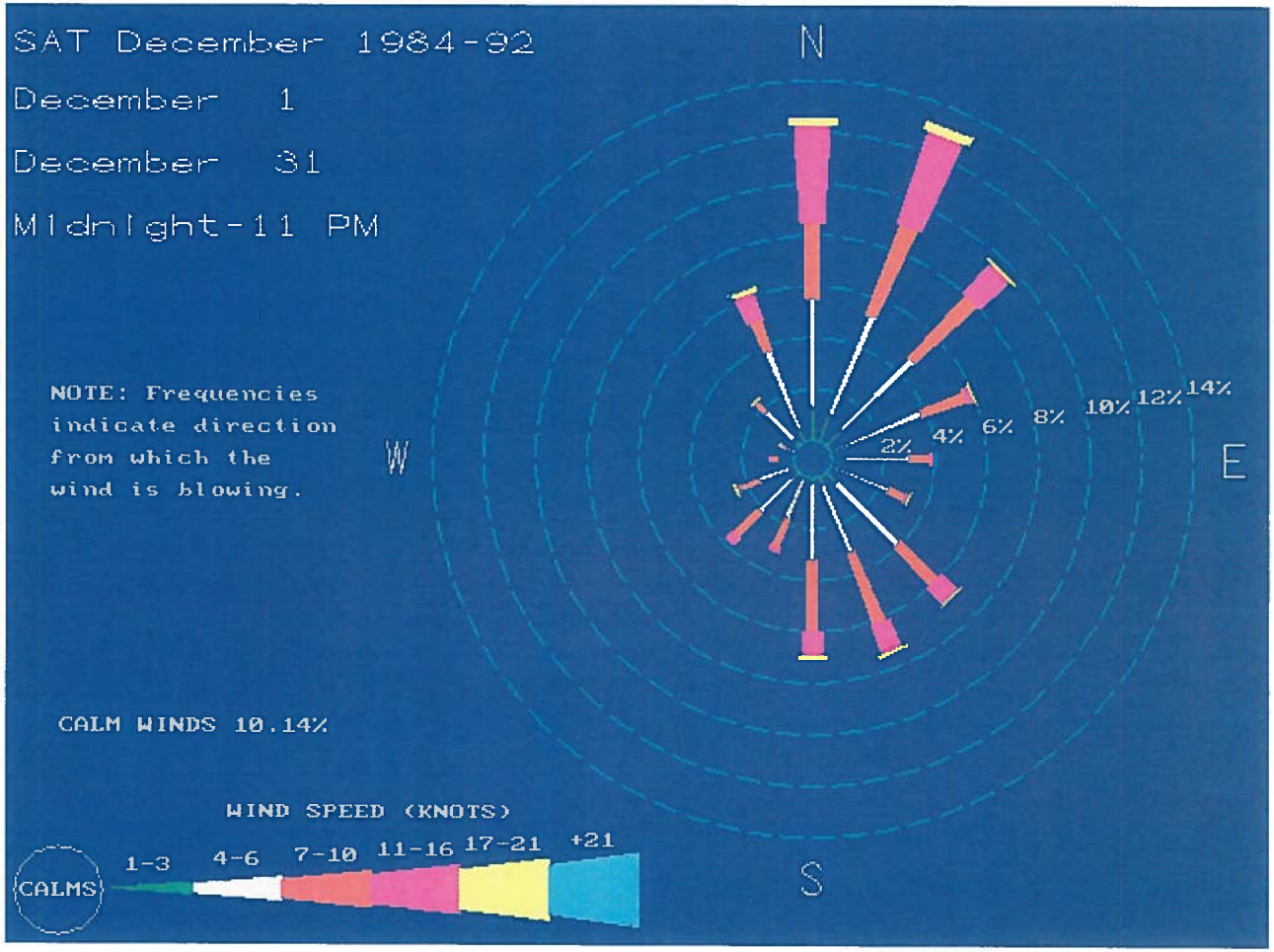
060000


SAT October 1984-92
October 1
October 31
Midnight-11 PM
NOTE: Frequencies indicate direction from which the wind is blowing.
N
W
E
S
2%
4%
6%
8%
10%
12%
14%
16%
CALM WINDS 9.18%
WIND SPEED (KNOTS)
CALMS
1-3
4-6
7-10
11-16
17-21
+21

000091


SAT November 1984-92
November 1
November 30
Midnight-11 PM
NOTE: Frequencies indicate direction from which the wind is blowing.
N
W
E
S
2%
4%
6%
8%
10%
12%
CALM WINDS 8.77%
WIND SPEED (KNOTS)
CALMS
1-3
4-6
7-10
11-16
17-21
+21

000092


SAT December 1984-92
December 1
December 31
Midnight-11 PM
NOTE: Frequencies indicate direction from which the wind is blowing.
N
W
E
S
2%
4%
6%
8%
10%
12%
14%
CALM WINDS 10.14%
WIND SPEED (KNOTS)
CALMS
1-3
4-6
7-10
11-16
17-21
+21

000093

# APPENDIX L

## SEWAGE SOLIDS MANAGEMENT PLAN

First Phase

| **Design Flow** *gpd* | **Vol Dig** *ft³ (gal)* | **Percentage** | **Flow** *gpd* | **$P_x$** *lbs VSS/day* | **$P_{x\ (ss)}$** *lbs SS/day* | **$Q_{Sldg}$** *gpd* | **$HRT_{Sldg}$** *days* |
|---|---|---|---|---|---|---|---|
| 100,000 | 8,000 | 25% | 25,000 | 29 | 37 | 548 | 109 |
| | | 50% | 50,000 | 58 | 73 | 1,095 | 55 |
| | 59,840 | 75% | 75,000 | 88 | 110 | 1,643 | 36 |
| | | 100% | 100,000 | 117 | 146 | 2,190 | 27 |

Interim Phase

| **Design Flow** *gpd* | **Vol Dig** *ft³ (gal)* | **Percentage** | **Flow** *gpd* | **$P_x$** *lbs VSS/day* | **$P_{x\ (ss)}$** *lbs SS/day* | **$Q_{Sldg}$** *gpd* | **$HRT_{Sldg}$** *days* |
|---|---|---|---|---|---|---|---|
| 200,000 | 16,000 | 25% | 50,000 | 58 | 73 | 1,095 | 55 |
| | | 50% | 100,000 | 117 | 146 | 2,190 | 27 |
| | 119,680 | 75% | 150,000 | 175 | 219 | 3,285 | 18 |
| | | 100% | 200,000 | 234 | 292 | 4,381 | 14 |

Final Phase

| **Design Flow** *gpd* | **Vol Dig** *ft³ (gal)* | **Percentage** | **Flow** *gpd* | **$P_x$** *lbs VSS/day* | **$P_{x\ (ss)}$** *lbs SS/day* | **$Q_{Sldg}$** *gpd* | **$HRT_{Sldg}$** *days* |
|---|---|---|---|---|---|---|---|
| 400,000 | 32,000 | 25% | 100,000 | 117 | 146 | 2,190 | 27 |
| | | 50% | 200,000 | 234 | 292 | 4,381 | 14 |
| | 239,360 | 75% | 300,000 | 351 | 438 | 6,571 | 9 |
| | | 100% | 400,000 | 468 | 585 | 8,761 | 7 |

Sludge will be wasted from the clarifier underflow to the digester. Sludge will stay in the digester with the decant returned to the headworks of the plant. Sludge will be removed from the digester on a schedule approximate to the HRT of the digester. The liquid sludge will be hauled by truck to the City of Austin's Walnut Creek Wastewater Treatment Plant for further treatment.

**APPENDIX M**

ATTACHMENT TO DOMESTIC TECHNICAL REPORT 1.1
SECTION 1.B.3

**Rattler Ridge WWTP – Domestic Technical Report 1.1, Section 1.B. 3 Response**

The proposed Rattler Ridge Subdivision lies within Guadalupe County. The subdivision will have approximately 1,575 single family homes, along with area for greenspace. While the property is located within 3 miles of the City of San Marcos Wastewater Treatment Plant facilities (Permit WQ0010273002), the property is located outside of the San Marcos' CCN. Under the Legislature's authorization in TWC Sec. 13.254, the landowner has chosen another utility to provide service. San Marcos' provision of service is not feasible as described below. No cost analysis has been undertaken to justify a new system due to the lack of feasibility of service. It is important to note that during a pre-development meeting with City of San Marcos staff, it was indicated that the City acknowledged the City does not presently have the facilities to serve this property and that, as a result, the City does not presently intend to oppose the application.

The subdivision lies immediately south of FM 1978, approximately 2 miles as the crow flies from any existing City facilities. There are private property owners located between the property and the City system who have previously refused to grant easements for wastewater facilities to traverse their lands, and the applicant has no means to compel private property owners to grant such easements.

Furthermore, the only alignment that does not require private easements would be located in State of Texas right of way for SH 123 and FM 1978; it would be over three miles long, but most importantly, the Texas Department of Transportation has stated it will not approve the use of this right of way for utility facilities.

Construction of an on-site wastewater system is not only the only feasible alternative, but it is also a cost-effective way of providing wastewater service to the proposed subdivision.

In summary, the proposed permit is both necessary and justified for the development of the property.

# APPENDIX N

CORRESPONDENCE WITH TCEQ

LJA ENGINEERING

7500 Rialto Boulevard, Building II, Suite 100, Austin, Texas 78735
t 512.439.4700 LJA.com TBPE F-1386

November 30, 2021

Hanne Lehman Nielsen
Municipal Permits Team
Water Quality Division – TCEQ, MC 148
12100 Park 35 Circle
Austin, Texas 78753

Re: Rattler Ridge WWTP, Application No. WQ0016049001, LJA Project No. A292-0405.501

Dear Ms. Nielsen:

Please find enclosed followup correspondence related to the permit application for Rattler Ridge WWTP. This correspondence is provided to supplement the original submittal for Domestic Technical Report 1.1, Section 1.B.

As stated in the application, the City of San Marcos has a collection system within 3 miles. In response to a request by the applicant on November 4, 2021, the City responded via email on November 12, 2021 that it had "capacity in the City of San Marcos Wastewater Treatment".

The reason Appendix M stated the City doesn't have current facilities to serve the project is that the City indicated during a pre-development meeting that the existing lift station at Cottonwood Creek and the lines leading to it did not have sufficient carrying capacity. This information was not included in the email response but the City did state that all upgrades to those facilities would be the responsibility of the developer.

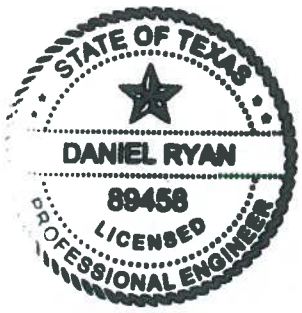
A cost comparison of connecting to the City system to building an on-site system has been developed and is attached. It demonstrates that connecting to the City would be more costly than developing a new wastewater treatment plant on site, by approximately $5.5 million.

The applicant does not intend to connect to the City of San Marcos system due to the difference in cost, the economic disadvantages associated with forced annexation, and the costs to be incurred and the amount of time needed to acquire easements and construct off-site improvements.

Should you have any questions or need any additional information, please do not hesitate to call.

Sincerely,

Daniel Ryan, P.E.



LJA Engineering, Inc.

# Rattler Ridge (City of San Marcos Connection)

Project: Rattler Ridge
Client: Regal, LLC

Date: 11/19/2021
By: D. Ryan

| | WASTEWATER IMPROVEMENTS | Unit | Cost/Unit | Connection to San Marcos WWTP | |
|---|---|---|---|---|---|
| | | | | Quantity | Cost |
| WW-1 | Rattler Ridge Lift Station | EA. | $1,500,000.00 | 1 | $1,500,000.00 |
| WW-2 | 12" Force Main | LF | $250.00 | 22,500 | $5,625,000.00 |
| WW-3 | Extend 3-Phase Power | LF | $100.00 | 4,500 | $450,000.00 |
| WW-4 | Bore & Encased Crossing of FM 1978 | LF | $600.00 | 200 | $120,000.00 |
| WW-5 | Improve Cottonwood Creek Lift Station | LS | $500,000.00 | 1 | $500,000.00 |
| WW-6 | Pavement Repairs to Cottonwood Creek Subdivision | SY | $25.00 | 8000 | $200,000.00 |
| | | | | | |
| | | | | SUBTOTAL | $8,195,000.00 |

| | | |
|---|---|---|
| SUBTOTAL | | $8,195,000.00 |
| 10% Contingency | | $819,500.00 |
| 12% Engineering and Surveying | | $983,400.00 |
| Impact Fees | | $4,026,000.00 |
| Grand Total | | $14,023,900.00 |

| | | |
|---|---|---|
| Cost of Service Difference (On-site vs COSM) | | ($5,544,900.00) |

STATE OF TEXAS
DANIEL RYAN
89458
LICENSED
PROFESSIONAL ENGINEER
11/19/2024

000100

Engineering, Inc.

# Rattler Ridge (On-Site WWTP)

Project: Rattler Ridge
Client: Regal, LLC

Date: 11/19/2021
By: D. Ryan

| | | | | On-Site Wastewater System | |
|---|---|---|---|---|---|
| | **WASTEWATER IMPROVEMENTS** | Unit | Cost/Unit | | Cost |
| WW-1 | Influent Lift Station | EA. | $400,000.00 | 1 | $400,000.00 |
| WW-2 | 400,000 gal/day WWTP | EA. | $6,000,000.00 | 1 | $6,000,000.00 |
| WW-3 | WWTP Access Drive | EA. | $100,000.00 | 1 | $100,000.00 |
| WW-4 | Extend 3-Phase Power | LF | $100.00 | 4,500 | $450,000.00 |
| | | | | | |
| | | | | **SUBTOTAL** | **$6,950,000.00** |

| | | |
|---|---|---|
| **SUBTOTAL** | | **$6,950,000.00** |
| **10% Contingency** | | **$695,000.00** |
| **12% Engineering and Surveying** | | **$834,000.00** |
| **Grand Total** | | **$8,479,000.00** |

STATE OF TEXAS
DANIEL RYAN
89458
LICENSED
PROFESSIONAL ENGINEER
11/19/2021

000101

Rattler Ridge, LLC
1067 FM 306, Ste. 106
New Braunfels, Texas 78130
clint@regallanddevelopment.com

November 4, 2021

**VIA Certified Mail, RRR**
Mr. Richard Reynosa, PE
Planning & Development Services
The City of San Marcos
630 East Hopkins
San Marcos, TX 78666

RE: Out-Of-City Utility Extension for Rattler Ridge.

Dear Mr. Reynosa:

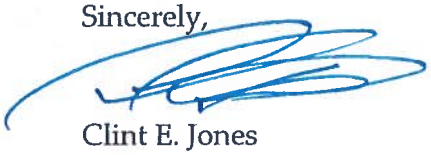
The purpose of this certified letter is to obtain confirmation that the City of San Marcos does not currently have the capacity or infrastructure to serve the proposed Rattler Ridge development consisting of approximately 1,500 single family homes off FM 1978 and Henk Lane as we have previously been advised by City staff.

We are requesting wastewater service from the City of San Marcos for this development to comply with the TCEQ Application Requirements for Domestic Technical Report 1.1, B. 3. We have not enclosed an Out-Of-City Utility Extension or Connection Application for wastewater service to the Rattler Ridge subdivision due to the understanding that capacity and the infrastructure is not available and that there is presently no way to connect to the City's system.

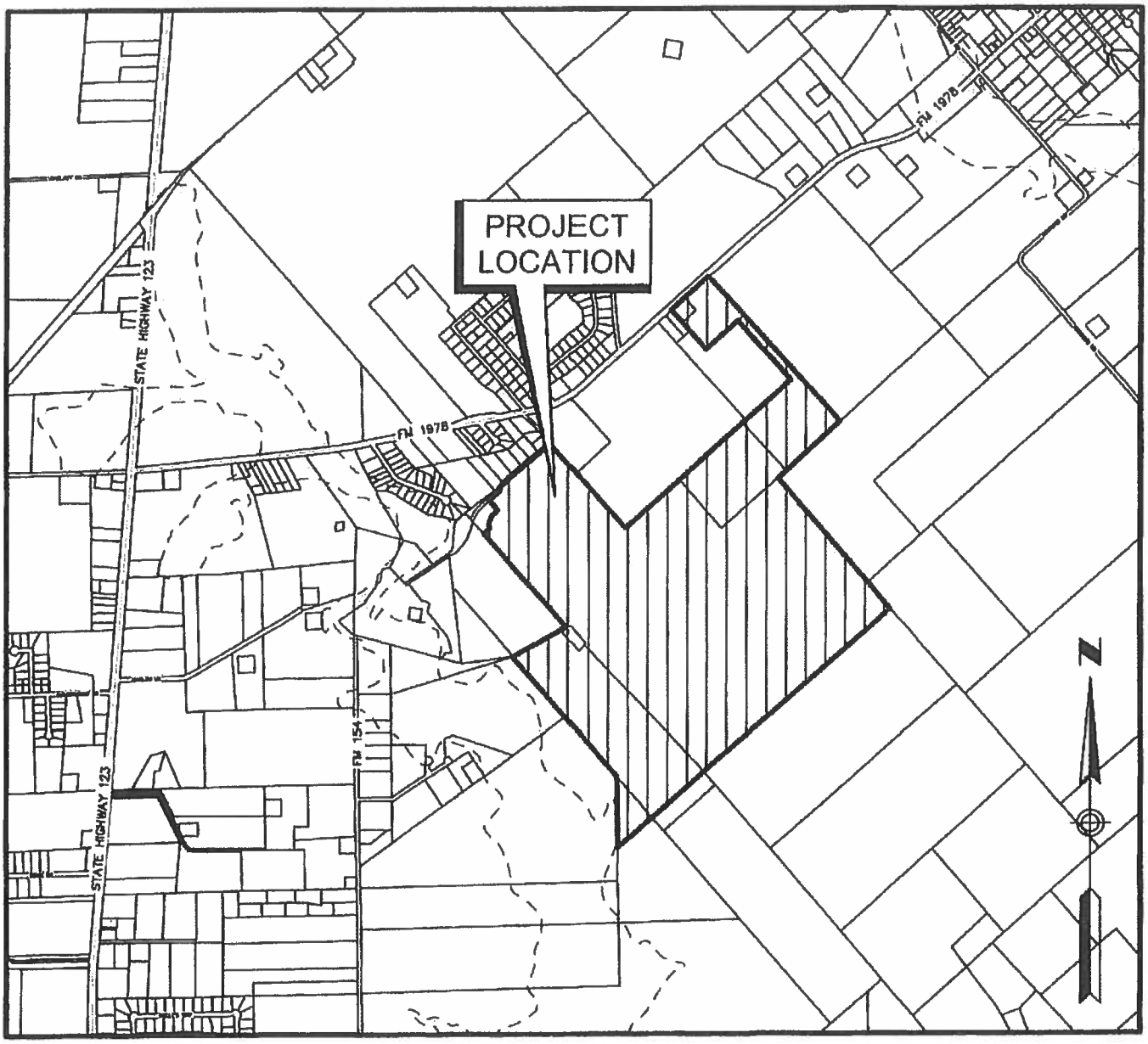
We are aware that Section 86.003 of the City of San Marcos' Code of Ordinances provides that applications for service connections to existing city water or wastewater lines to serve a property located outside the city limits "must be accompanied by a written request for annexation of the applicant's property." Please confirm in writing that despite this Ordinance, the City will not require a written request for annexation as a condition for providing wastewater service to the Ratter Ridge subdivision if such service is available.

Upon receipt of written correspondence from you that you will accept and process our application without requiring consent to annexation, and a written description of how the City proposes to have Rattler Ridge connect to the City's wastewater system, we will then pay the applicable filing fees. If the City is not able to serve Rattler Ridge subdivision, we ask that you confirm that with a written response. If we have not received a response from you within five (5) business days following your receipt of this certified letter advising otherwise, we will assume that the previous acknowledgments from City staff that wastewater service is not available to serve Rattler Ridge remain true.

Sincerely,



Clint E. Jones




LOCATION MAP
1" = 2000'

ADDRESS
FM 1978
SAN MARCOS, TX 78666
ZONING : ETJ
SITE AREA : 347.60 ACRES

## Daniel Ryan

**From:** Clint Jones <clint@regallanddevelopment.com>
**Sent:** Friday, November 19, 2021 12:56 PM
**To:** Daniel Ryan
**Subject:** Fwd: Out-Of-City Utility Extension for Rattler Ridge
**Attachments:** image001.jpg; 20211113021148102.pdf

**[EXTERNAL EMAIL]**

Sent from my iPhone

Begin forwarded message:

> **From:** Clint Jones <clint@regallanddevelopment.com>
> **Date:** November 12, 2021 at 2:32:36 PM CST
> **To:** Daniel Ryan <dryan@ljaengineering.com>
> **Subject: FW: Out-Of-City Utility Extension for Rattler Ridge**

> **From:** Reynosa, Richard <RReynosa@sanmarcostx.gov>
> **Sent:** Friday, November 12, 2021 2:31 PM
> **To:** Clint Jones <clint@regallanddevelopment.com>
> **Cc:** Moyer, Laurie <lmoyer@sanmarcostx.gov>; Hjorth, Tyler <THjorth@sanmarcostx.gov>; Kite, Paul <PKite@sanmarcostx.gov>
> **Subject:** RE: Out-Of-City Utility Extension for Rattler Ridge
>
> Mr. Jones,
>
> In response to your attached letter please accept this as confirmation of the City of San Marcos' capability to serve the Rattler Ridge development. Capacity in the City of San Marcos Wastewater Treatment does exist and is available to serve this 1,500 single family home subdivision. The infrastructure requirements beyond what is existing to serve the development would be the responsibility of the development. Regarding annexation, the terms in which wastewater service is provided to a development currently outside of the city limits can be negotiated through a Development Agreement. This agreement may include terms of annexation or a deferral of annexation.
>
> Please let me know if you would like to schedule a meeting to discuss further options for wastewater service.
>
> Thank you,
>
> **Richard Reynosa, PE, CFM**
> Assistant Director of Engineering | Capital Improvements/Engineering

630 E Hopkins, San Marcos, TX 78666
512.393.8235