Control Number: 47730

Item Number: 1

Addendum StartPage: 0

Trihydro CORPORATION

47730

2017 OCT 25 AM 11:46

transmittal sheet

To:	Central Records	**From:**	Patrick A. Lackey, P.E.
Company:	Public Utility Commission of Texas	**Date:**	10/12/2017
Address:	1701 N. Congress	**Job Number:**	703-307-000
City, State, Zip:	Austin, Texas 78711-3326	**Project Name:**	GBRA CCN Application
Fax:		**Re:**	Amend GBRA Sewer CCN #20892
Telephone:	512-936-7000		

Copies:

-1-	Application to Obtain or Amend a Certificate of Convenience & Necessity (CCN) – Amend GBRA Sewer CCN #20892

Remarks:

Signature. _____

If enclosures are not as noted, please notify us at 307/745 7474

New Braunfels Office | 1011 West County Line Road | New Braunfels, TX 78130 | phone 830/626 3588 | fax 830/626.3601

Home Office | 1252 Commerce Drive | Laramie, WY 82070 | phone 307/745.7474 | fax 307/745.7729 | www.trihydro.com

APPLICATION TO OBTAIN OR AMEND A CERTIFICATE OF CONVENIENCE AND NECESSITY (CCN)

AMEND GUADALUPE-BLANCO RIVER AUTHORITY'S SEWER CCN #20892

Prepared for:

Guadalupe-Blanco River Authority
933 East Court Street
Seguin, Texas 78155

September 2017

PREPARED BY:

TRIHYDRO CORPORATION
FIRM #131

Trihydro CORPORATION

Austin Office | 3801 South 1st Street | Austin, TX 78704 | phone 512/442 3088 | fax 512/442 6522
Home Office | 1252 Commerce Drive | Laramie, WY 82070 | phone 307/745.7474 | fax 307/745 7729 | www trihydro com

Trihydro
CORPORATION

September 4, 2017

Filing Clerk
Public Utility Commission of Texas
1701 N. Congress Avenue
Austin, TX 78711-3326

RE: Application to Amend Guadalupe-Blanco River Authority's (GBRA) Sewer CCN #20892

Dear Filing Clerk:

The attached application represents the proposed amendment to Guadalupe-Blanco River Authority's (GBRA) Sewer CCN #20892. Attached are one original and six copies of the application, and a CD containing the required GIS data.

If you have any questions or concerns, please do not hesitate to contact us.

Sincerely,

Patrick A. Lackey, P.E.
Trihydro Corporation
Firm #131

Cc: Teresa Van Booven – GBRA

PURSUANT TO PUC CHAPTER 24, SUBSTANTIVE RULES APPLICABLE TO WATER AND SEWER SERVICE PROVIDERS, SUBCHAPTER G: CERTIFICATES OF CONVENIENCE AND NECESSITY

Application to Obtain or Amend a Water or Sewer Certificate of Convenience and Necessity (CCN)

Docket Number: _____

(this number will be assigned by the Public Utility Commission after your application is filed)

7 copies of the application, including the original, shall be filed with

Public Utility Commission of Texas
Attention: Filing Clerk
1701 N. Congress Avenue
P.O. Box 13326
Austin, Texas 78711-3326

If submitting digital map data, two copies of the portable electronic storage medium (such as CD or DVD) are required.

Table of Contents

Application to Obtain or Amend a Water or Sewer Certificate of Convenience and Necessity (CCN)

Purpose of Application		
☐ **Obtain**	☐ **New Water CCN**	☐ **New Sewer CCN**
☐ **Amend**	☐ **Water CCN# (s)**	_____
☒ **Amend**	☒ **Sewer CCN#(s)**	20892

1. Applicant Information

Applicant	
Utility name: Guadalupe-Blanco River Authority	
Certificate number: 601180565 (TCEQ CN #)	
Street address (City/ST/ZIP/Code): 933 East Court Street, Seguin, Texas, 78155	
Mailing address(City/ST/ZIP/Code): Shown Above	
Utility Phone Number and Fax: (830) 379-5822	
Contact information	
Please provide information about the person(s) to be contacted regarding this application. Indicate if this person is the owner, operator, engineer, attorney, accountant manager, or other title related to the applicant.	
Name: Patrick A. Lackey	**Title:** Senior Project Manager
Mailing address: 1011 W. County Line Road, New Braunfels, TX 78130	
Email: plackey@trihydro.com	**Phone and Fax:** (830) 626-3601
List all counties in which service is proposed: Guadalupe County	

A. Check the appropriate box and provide information regarding the legal status of the applicant:

☐ Investor Owned Utility ☐ Individual ☐ Partnership

☐ Home or Property Owners Association ☐ For-profit Corporation

☐ Non-profit, member-owned, member-controlled cooperative corporation
(Water Code Chapter 67, Water Supply or Sewer Service Corporation)

☐ Municipality ☒ District ☐ Other - Please explain:

B. If the applicant is a For-Profit business or corporation, please include the following information:
   i. A copy of the corporation's "Certification of Account Status" from the Texas State Comptroller of Public Accounts.
   ii. The corporation's charter number as recorded with the Office of the Texas Secretary of State:_____
   iii. A listing of all stockholders and their respective percentages of ownership.
   iv. A copy of the company's organizational chart, if available.
   v. A list of all directors and disclose the tile of each individual.
   vi. A list of all affiliated organizations (if any) and explain the affiliate's business relationship with the applicant.

C. If the applicant is a Texas Water Code (TWC) Chapter 67 water supply or sewer service corporation please provide:
   i. A copy of the Articles of Incorporation and By-Laws.
   ii. The corporation's charter number as recorded with the Office of the Texas Secretary of State.
   iii. Identification of all board members including name, address, title, and telephone number.
   iv. A copy of the corporation's *Certificate of Account Status* from the Texas Comptroller of Public Accounts.

2. Location Information

A. Are there people already living in the proposed area? ☒ Yes ☐ No
If YES, are any currently receiving utility service? ☐ Yes ☐ No
If YES, from WHOM? No Sewer Service Currently Provided

B. Demonstrate the Need for Service by providing the following:

Have you received any requests for service in the requested service area?

☐Yes ☒No SEE ATTACHMENT 'B'

If YES, provide the following:

i. Describe the service area and circumstances driving the need for service in the requested area. Indicate the name(s) and address(es) of landowner(s), prospective landowner(s), tenant(s), or resident(s) that have requested service; and/or

ii. Describe the economic need(s) for service in the requested area (i.e. plat approvals, recent annexation(s) or annexation request(s), building permits, septic tank permits, hospitals, etc.); and/or

iii. Discuss in detail the environmental need(s) for service in the requested area (i.e. failing septic tanks in the requested area, fueling wells, etc.); and/or

iv. Provide copies of any written application(s) or request(s) for service in the requested area; and/or

v. Provide copies of any reports and/or market studies demonstrating existing or anticipated growth in the requested area.

vi. If none of these items exist or are available, please justify the need for service in the proposed area in writing.

Note: Failure to demonstrate a need for additional service in the proposed service area may result in the delay and /or possible denial of the application.

C. Is any portion of the proposed service area inside an incorporated city or district?

☒ Yes ☐ No

If YES, within the corporate limits of: City of New Braunfels, City of Segin ETJ

Provide a copy of any franchise, permit, or consent granted by the city or district. If not available please explain:

SEE ATTACHMENT 'C'

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

☐ Yes ☒ No

If YES, has the current CCN holder agreed to decertify the proposed area?

If NO, are you seeking dual or single certification of the area? Explain why decertification of the area is in the public interest:

Single Certification

3. Map Requirements

Attach the following hard copy maps with each copy of the application: SEE ATTACHMENTS E, F, G, & H

A. A location map delineating the proposed service area with enough detail to accurately locate the proposed area within the county.

B. A map showing only the proposed area by:
   i. metes and bounds survey certified by a licensed state or register professional land surveyor; or
   ii. projectable digital data with metadata (proposed areas should be in a single record and clearly labeled). Also, a data disk labeled with the applicant's name must be provided; or
   iii. following verifiable natural and man-made landmarks; or
   iv. a copy of recorded plat map with metes and bounds.

C. A written description of the proposed service area.

D. Provide separate and additional maps of the proposed area(s) to show the following:
   i. all facilities, illustrating separately facilities for production, transmission, and distribution of the applicant's service(s); and
   ii. any facilities, customers or area currently being served outside the applicant's certificated area(s).

Note: Failure to provide adequate mapping information may result in the delay or possible denial of your application.

Digital data submitted in a format other than ArcView shape file or Arc/Info E00 file may result in the delay or inability to review applicant's mapping information. SEE ATTACHMENT 'L'

For information on obtaining a CCN base map or questions about sending digital map data, please visit the Water Utilities section of the PUC website for assistance.

4. New System Information or Utilities Requesting a CCN for the First Time

A. Please provide the following information:
   i. a list of public drinking water supply system(s) or sewer system(s) within a 2 mile radius of the proposed system;
   ii. copies of written requests seeking to obtain service from each of the public drinking water systems or sewer systems listed in a. 1 above or documentation that it is not economically feasible to obtain service from each entity;
   iii. copies of written responses from each system or evidence that they did not reply; and
   iv. for sewer utilities, documentation showing that you have obtained or applied for a wastewater discharge permit.

B. Were your requests for service denied? ☐ Yes ☐ No

i. If yes, please provide documentation of the denial of service and go to c.

ii. If no, please provide a detailed analysis which justifies your reasons for not accepting service. A separate analysis must be prepared and submitted for each utility that granted your request for service.

C. Please summarize how the proposed utility system will be constructed and describe each projected construction phase, if any:

D. Date of plat approval, if required: _____
Approved by: _____

E. Date Plans & Specifications submitted to the TCEQ for approval:
_____ Attach copy of approval letter, if available. If the letter is not available by the time your CCN application is submitted, please supplement your application with a copy of the letter once you receive it from the TCEQ.

F. Date construction is scheduled to commence: _____

G. Date service is scheduled to commence: _____

5. Existing System Information

A. Please provide the following information for <u>each</u> water and/or sewer system, attach additional sheets if necessary.

i. Water system(s): TCEQ Public Water System identification number(s):

ii. Sewer system(s): TCEQ Discharge Permit number(s)

W	Q	1	1	3	7	8	-	0	0	1	;	W	Q						-			
W	Q						-				;	W	Q						-			
W	Q						-				;	W	Q						-			

iii. Date of last TCEQ water and/or sewer system inspection(s): 5/10/2016

iv. Attach a copy of the most recent TCEQ water and/or sewer inspection report letter(s). SEE ATTACHMENT 'I'

v. For each system deficiency listed in the TCEQ inspection report letter; attach a brief explanation listing the actions taken or being taken by the utility to correct the listed deficiencies, including the proposed completion dates.

B. Provide the following information about the utility's certified water and/or sewer operators

Name	Classes	License Number
Joel Heideke	A	WW0045223

- Attach additional sheet(s) if necessary –

C. Using the current number of customers, is any facility component in systems named in #5A above operating at 85% or greater of minimum standard capacity?

☐ Yes

☒ No

Attach a copy of the 85% rule compliance document filed with the TCEQ if the system is operating at 85% or greater of the TCEQ's minimum standard capacity requirements.

D. In the table below, the number of existing and/or proposed metered and non-metered connections (by size). The proposed number should reflect the information presented in the business plan or financial **documentation** and reflect the number of service requests identified in Question 2.b in the application.

TCEQ Water System			**TCEQ Sewer System**		
Connection	**Existing**	**Proposed**	**Connection**	**Existing**	**Proposed**
5/8" or 3/4" meter			**Residential**	1,164	1,165
1" meter or larger			**Commercial**		
Non-Metered			**Industrial**		

TCEQ Water System			TCEQ Sewer System		
Other:			Other:	53	388
Total Water			Total Sewer	1,217	1,553

E. If this application is for a water CCN only, please explain how sewer service is or will be provided:

N/A

F. If this application is for a sewer CCN only, please explain how water service is or will be provided:

Water Service is provided by Spring Hill Water Supply Corporation (WSC) under CCN No. 10666. for the 7345.2 acre tract. Water service is provided by New Braunfels Utilities for the 77.96 acre tract.

G. Effect of Granting a Certificate Amendment. SEE ATTACHMENT 'A' & 'B'

Explain in detail the effect of granting of a certificate or an amendment, including, but not limited to regionalization, compliance and economic effects on the following:

i. the applicant,

ii. any retail public utility of the same kind already serving the proximate area; and

iii. any landowner(s) in the requested area.

H. Do you currently purchase or plan to purchase water or sewer treatment capacity from another source?

i. ☐ No, (skip the rest of this question and go to #6)

ii. Yes, Water

Purchased on a ☐ Regular ☐ Seasonal ☐ Emergency basis?

Water Source	% of Total Treatment
	0.00%

Water Source	% of Total Treatment
	0.00%
	0.00%

iii. ☒ Yes, Sewer treatment capacity
Purchased on a ☒ Regular ☐ Seasonal ☐ Emergency basis?

Sewer Source	% of Total Treatment
New Braunfels Utility	100.00%
City of Seguin (Possible future source)	0.00%
	0.00%

iv. Provide a signed and dated copy of the most current water or sewer treatment capacity purchase agreement or contract. SEE ATTACHMENT 'J'

I. Ability to Provide Adequate Service.

Describe the ability of the applicant to provide adequate service, including meeting the standards of the commission, taking both of the following items into consideration: SEE ATTACHMENT 'A'

i. the current and projected density; and

ii. the land use of the requested area.

J. Effect on the Land. Explain the effect on the land to be included in the certificated area.

The amended CCN will have a beneficial impact on waterways in the proposed area. GBRA is tasked with protecting the water resources of the Guadalupe River basin. With this CCN amendment, GBRA will be able to provide centralized wastewater treatment which will serve as a tool to manage water quality within reaches and watersheds of the basins.

6. Financial Information

A. For new water and/or sewer systems and for applicants with existing CCNs who are constructing a new stand-alone water and/or sewer system: SEE ATTACHMENT 'K'

i. the applicant must provide an analysis of all necessary costs for constructing, operating, and maintaining the system, and the source of that capital (such as a financial statement for the developing entity) for which the CCN is requested for at least the first five years. In addition, if service has been offered by an existing retail water service provider as stated in #4.A., but the applicant has determined that the cost of service as finally offered renders the project not economically feasible, the applicant must provide a comparison analysis of all necessary costs for acquiring and continuing to receive service from the existing system for the same period.

ii. Attach projected profit and loss statements, cash flow worksheets, and balance sheets (projected five year financial plan worksheet is attached) for each of the first five years of operation. Income from rates

should correlate to the projected growth in connections, shown on the projected profit and loss statement.

iii. Attach a proposed rate schedule or tariff. Describe the procedure for determining the rates and fees and indicate the date of last change, if applicable. Attach copies of any cost of service studies or rate analysis worksheets.

B. For existing water and/or sewer systems:

i. Attach a profit and loss statement and current balance sheet for existing businesses (end of last fiscal year is acceptable). Describe sources and terms for borrowed capital such as loans, bonds, or notes (profit and loss and balance sheet worksheets are attached, if needed).

ii. Attach a proposed rate schedule or tariff.

❖ **Note: An existing water and/or sewer system may be required to provide the information in 6.A.i. above during the technical review phase if necessary for staff to completely evaluate the application**

C. Identify any funds you are required to accumulate and restrict by lenders or capital providers.

D. In lieu of the information in #6.A. thru #6.C., you may provide information concerning loan approvals within the last three (3) years from lending institutions or agencies including the most recent financial audit of the applicant.

❖ **Note: Failure to provide adequate financial information may result in the delay or possible denial of your application.**

7. Notice Requirements

A. All proposed notice forms must be completed and submitted with the application. Do not mail or publish the notices until you receive written approval from the commission to do so.

B. The commission cannot grant a CCN until proper notice of the application has been given. Commission rules do not allow a waiver of notice requirements for CCN applicants.

C. It is the applicant's responsibility to ensure that proper notice is given to all entities that are required to receive notice.

D. Recommended notice forms for publication, neighboring cities and systems, landowners with 25 acres or more, and customers are included with this application for use in preparing proposed notices. (Notice forms are available in Spanish upon request.)

E. After reviewing and, if necessary, modifying the proposed notice, the commission will send the notice to the applicant after the application is accepted for filing along with instructions for publication and/or mailing. Please review the notice carefully before providing the notice.

F. Notice For Publication:

The applicant shall publish the notice in a newspaper with general circulation in the county(ies) where a CCN is being requested. The notice must be published once each week for two consecutive weeks beginning with the week after the notice is received from the commission. Proof of publication in the form of a publisher's affidavit shall be submitted to the commission within 30 days of the last publication date. The affidavit shall state with specificity each county in which the newspaper is of general circulation.

G. Notice To Neighboring Utilities:

i. List all neighboring retail public utilities and cities providing the same utility service within the following vicinities of the applicant's proposed certificate area.

ii. For applications for the issuance of a NEW CCN, the applicant must mail the notice with a copy of the proposed CCN map to all cities and neighboring retail public utilities providing the same utility service within five (5) miles of the requested service area.

iii. For applications for the AMENDMENT of a CCN, the applicant must mail the notice with a copy of the proposed CCN map to all cities and neighboring retail public utilities providing the same utility service within two (2) miles of the requested service area.

H. Notice to Customers:

Investor Owned Utilities (IOUs) that are currently providing service without a CCN must provide individual mailed notice to all current customers. The notice must contain the current rates, the date those rates were instituted and any other information required in the application.

I. The commission may require the applicant to deliver notice to other affected persons or agencies.

Do not publish or send copies of the proposed notices to anyone at the time you submit the application to the commission. Wait until you receive written authorization to do so. Authorization occurs after the commission has reviewed the notices for completeness, and your application has been accepted for filing. Once the application is accepted for filing, you will receive written authorization to provide notice. Please check the notices for accuracy before providing them to the public. It is the applicant's burden to ensure that correct and accurate notice is provided.

OATH

STATE OF Texas
COUNTY OF Guadalupe

I, Kevin Patteson, being duly sworn, file this application as General Manager/CEO (indicate relationship to Applicant, that is, owner, member of partnership, title as officer of corporation, or other authorized representative of Applicant); that, in such capacity, I am qualified and authorized to file and verify such application, am personally familiar with the maps and financial information filed with this application, and have complied with all the requirements contained in this application; and, that all such statements made and matters set forth therein are true and correct. I further state that the application is made in good faith and that this application does not duplicate any filing presently before the Public Utility Commission of Texas.

I further represent that the application form has not been changed, altered or amended from its original form.
I further represent that the Applicant will provide continuous and adequate service to all customers and qualified applicants for service within its certificated service area.

AFFIANT
(Utility's Authorized Representative)

If the Affiant to this form is any person other than the sole owner, partner, officer of the Applicant, or its attorney, a properly verified Power of Attorney must be enclosed.

SUBSCRIBED AND SWORN TO BEFORE ME, a Notary Public in and for the State of Texas, This day 10th of October 20 17

SEAL

TRICIA L RAMIREZ
Notary Public, State of Texas
Comm Expires 12 20-2020
Notary ID 13093864-5

Tricia L. Ramirez
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

Tricia L. Ramirez
PRINT OR TYPE NAME OF NOTARY

MY COMMISSION EXPIRES 12-20-2020

Notice for Publication

NOTICE OF APPLICATION FOR CERTIFICATE OF CONVENIENCE AND NECESSITY (CCN) TO PROVIDE WATER/SEWER UTILITY SERVICE IN

Guadalupe COUNTY(IES), TEXAS

Name of Applicant Guadalupe-Blanco River Authority has filed an application for a CCN to obtain or amend CCN No. (s) 20892 and to decertify a portion(s) of Not Applicabe (Name of Decertified Utility) with the Public Utility commission of Texas to provide 2) Sewer (specify 1) water or 2) sewer or 3) water & sewer)

utility service in Guadalupe County (ies).

The proposed utility service area is located approximately 7 miles Southeast [direction] of downtown New Braunfels ,[City or Town] Texas, and is generally bounded on the north by Comal/Guadalupe County Lines ;on the east by City of Seguin Sewer CCN ;on the south by City of Seguin Sewer CCN ;and on the west by Guadalupe River

The total area being requested includes approximately 7,345 acres and _____ current customers.

A copy of the proposed service area map is available at (Utility Address and Phone Number): 933 E. Court St., Seguin, Texas 78155 (830)-379-5822

A request for a public hearing must be in writing. You must state (1) your name, mailing address, and daytime telephone number; (2) the applicant's name, application number or another recognizable reference to this application; (3) the statement, "I/we request a public hearing"; (4) a brief description of how you or the persons you represent, would be adversely affected by the granting of the application for a CCN; and (5) your proposed adjustment to the application or CCN which would satisfy your concerns and cause you to withdraw your request for a hearing.

Persons who wish to intervene or comment should file with the PUC at the following address:

Filing Clerk
Public Utility Commission of Texas
1701 North Congress Avenue
P.O. Box 13326
Austin, Texas 78711-3326

within thirty (30) days from the date of this publication or notice. A public hearing will be held only if a legally sufficient hearing request is received or if the commission on its own motion requests a hearing. Only those individuals who submit a written hearing request or a written request to be notified if a hearing is set will receive notice if a hearing is scheduled.

If a public hearing is requested, the commission will not issue the CCN and will forward the application to the State Office of Administrative Hearings (SOAH) for a hearing. If no settlement is reached and an evidentiary hearing is held, the SOAH will submit a recommendation to the commission for final decision. If an evidentiary hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If you are a landowner with a tract of land at least 25 acres or more, that is partially or wholly located within the proposed area, you may request to be excluded from the proposed area (or "opt out") by providing written notice to the commission within (30) days from the date that notice was provided by the applicant. All requests to opt out of the requested service area must include a scaled, general location map and a metes and bounds description of the tract of land.

Persons who meet the requirements to opt out, and wish to request this option should file the required documents with the:

Filing Clerk
Public Utility Commission of Texas
1701 North Congress Avenue
P.O. Box 13326
Austin, Texas 78711-3326

A copy of the request to opt out of the proposed area must also be sent to the applicant. Staff may request additional information regarding your request.

Si desea informacion en Espanol, puede llamar al 1-888-782-8477

Notice to Neighboring Systems, Landowners and Cities

NOTICE OF APPLICATION FOR CERTIFICATE OF CONVENIENCE AND NECESSITY (CCN) TO PROVIDE WATER/SEWER UTILITY SERVICE IN

_____ COUNTY(IES), TEXAS

To: _____ Date Notice Mailed _____ 20 ____
(Neighboring System, Landowner or City)

_____
(Address)

_____
City State Zip

Name of Applicant _____ has filed an application for a CCN to obtain or amend CCN No. (s) _____ and to decertify a portion(s) of _____ with the
*(*Name of Decertified Utility*)*

Public Utility Commission of Texas to provide _____
(specify 1) water or 2) sewer or 3) water & sewer)
utility service in _____ County(ies).

The proposed utility service area is located approximately _____ miles _____ [direction] of downtown _____ ,[City or Town] Texas, and is generally bounded on the north by _____ ;on the east by _____ ;on the south by _____ ;and on the west by _____

See enclosed map of the proposed service area.

The total area being requested includes approximately _____ acres and _____ current customers.

A request for a public hearing must be in writing. You must state (1) your name, mailing address, and daytime telephone number; (2) the applicant's name, application number or another recognizable reference to this application; (3) the statement, "I/we request a public hearing"; (4) a brief description of how you or the persons you represent, would be adversely affected by the granting of the application for a CCN; and (5) your proposed adjustment to the application or CCN which would satisfy your concerns and cause you to withdraw your request for a hearing.

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Si desea informacion en Espanol, puede llamar al 1-888-782-8477

Notice to Customers of IOUs in Proposed Area

NOTICE OF APPLICATION FOR CERTIFICATE OF CONVENIENCE AND NECESSITY (CCN) TO PROVIDE WATER/SEWER UTILITY SERVICE IN

_____ COUNTY(IES), TEXAS

Dear Customer: _____ Date Notice Mailed _____ 20 ____

Name of Applicant _____ has filed an application for a CCN to obtain or amend CCN No. (s) _____ and to decertify a portion(s) of _____ with the
(Name of Decertified Utility)

Public Utility commission of Texas to provide _____
(specify 1) water or 2) sewer or 3) water & sewer)
utility service in _____ County(ies).

The proposed utility service area is located approximately _____ miles _____ [direction] of downtown _____ ,[City or Town] Texas.

A copy of the proposed service area map is available at (Utility Address and Phone Number): _____

The current utility rates which were first effective on _____ 20 _____

Monthly Flat Rate of $ _____ Per connection

-OR-

Monthly Base Rate Including per _____ gallons connection for:

5/8" meter $ _____
1" meter $ _____
1 1/2" meter $ _____
2" meter $ _____
Other$ _____

Gallonage charge of $ _____ Per 1,000 Gallons above minimum (same for all meters sizes)

Miscellaneous Fees	
Regulatory Assessment	1%
Tap Fee (Average Actual Cost)	$
Reconnecting fee:	$
- Non Payment ($25.00 max)	$
- Transfer	$
- Customer's request	$
Late fee	$5.00 or 10%
Returned Check charge	$
Customer Deposit ($50.00 max)	$
Meter test fee	
(Actual Cost not Exceed $25.00)	$
Other Fees	$

Your utility service rates and fees cannot be changed by this application. If you are currently paying rates, those rates must remain in effect unchanged. Rates may only be increased if the utility files and gives notice of a separate rate change application.

A request for a public hearing must be in writing. You must state (1) your name, mailing address, and daytime telephone number; (2) the applicant's name, application number or another recognizable reference to this application; (3) the statement, "I/we request a public hearing"; (4) a brief description of how you or the persons you represent, would be adversely affected by the granting of the application for a CCN; and (5) your proposed adjustment to the application or CCN which would satisfy your concerns and cause you to withdraw your request for a hearing.

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Austin, Texas 78711-3326

within thirty (30) days from the date of this publication or notice. A public hearing will be held only if a legally sufficient hearing request is received or if the commission on its own motion requests a hearing. Only those individuals who submit a written hearing request or a written request to be notified if a hearing is set will receive notice if a hearing is scheduled.

If a public hearing is requested, the Commission will not issue the CCN and will forward the application to the State Office of Administrative Hearings (SOAH) for a hearing. If no settlement is reached and an evidentiary hearing is held, the SOAH will submit a recommendation to the commission for final decision. If an evidentiary hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

IF A HEARING IS HELD, it is important that you or your representative attend to present your concerns. Your request serves only to cause a hearing to be held and is not used during the hearing.

If you are a landowner with a tract of land at least 25 acres or more, and is partially or wholly located within the proposed area, you may request to be excluded from the proposed area (or "opt out") by providing written notice to the commission within (30) days from the date that notice was provided by the applicant. All requests to opt out of the requested service area must include a scaled, general location map and a metes and bounds description of the tract of land.

Persons who meet the requirements to opt out, and wish to request this option should file the required documents with the:

Filing Clerk
Public Utility Commission of Texas
1701 North Congress Avenue
P.O. Box 13326
Austin, Texas 78711-3326

A copy of the request to opt out of the proposed area must also be sent to the applicant. Staff may request additional information regarding your request.

Si desea informacion en Espanol, puede llamar al 1-888-782-8477

HISTORICAL BALANCE SHEETS

	CURRENT YEAR (A)	A-1 YEAR	A-2 YEAR	A-3 YEAR	A-4 YEAR	A-5 YEAR
CURRENT ASSETS						
Cash						
Accounts Receivable						
Inventories						
Income Tax Receivable						
Other						
Total						
FIXED ASSETS						
Land						
Collection/Distribution System						
Buildings						
Equipment						
Other						
Less: Accum. Depreciation or Reserves						
Total						
TOTAL ASSETS						
CURRENT LIABILITIES						
Accounts Payable						
Notes Payable, Current						
Accrued Expenses						
Other						
Total						
LONGTERM LIABILITIES						
Notes Payable, Long-term						
Other						
TOTAL LIABILITIES						
OWNER'S EQUITY						
Paid in Capital						
Retained Equity						
Other						
Current Period Profit or Loss						
TOTAL OWNER'S EQUITY						
TOTAL LIABILITIES AND EQUITY						
WORKING CAPITAL						
CURRENT RATIO						
DEBT TO EQUITY RATIO						
EQUITY TO TOTAL ASSETS						

HISTORICAL INCOME STATEMENT

	CURRENT YEAR (A)	A-1 YEAR	A-2 YEAR	A-3 YEAR	A-4 YEAR	A-5 YEAR
METER NUMBER						
Existing Number of Taps						
New Taps per Year						
Total Meters at Year End						
METER REVENUE						
Fees Per Meter						
Cost Per Meter						
Operating Revenue Per Meter						
GROSS WATER REVENUE						
Fees						
Other						
Gross Income						
OPERATING EXPENSES						
General & Administrative						
Interest						
Other						
NET INCOME						

HISTORICAL EXPENSES STATEMENT

	CURRENT YEAR (A)	A-1 YEAR	A-2 YEAR	A-3 YEAR	A-4 YEAR	A-5 YEAR
GENERAL/ADMINISTRATIVE EXPENSES						
Salaries						
Office Expense						
Computer Expense						
Auto Expense						
Insurance Expense						
Telephone Expense						
Utilities Expense						
Depreciation Expense						
Property Taxes						
Professional Fees						
Other						
Total						
% Increase Per Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
OPERATIONAL EXPENSES						
Salaries						
Auto Expense						
Utilities Expense						
Depreciation Expense						
Repair & Maintenance						
Supplies						
Other						
Total						
% Increase Per Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
ASSUMPTIONS						
Interest Rate/Terms						
Utility Cost/gal.						
Depreciation Schedule						
Other						

PROJECTED BALANCE SHEETS

	START UP	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
CURRENT ASSETS						
Cash						
Accounts Receivable						
Inventories						
Income Tax Receivable						
Other						
Total						
FIXED ASSETS						
Land						
Collection/Distribution System						
Buildings						
Equipment						
Other						
Less: Accum. Depreciation or Reserves						
Total						
TOTAL ASSETS						
CURRENT LIABILITIES						
Accounts Payable						
Notes Payable, Current						
Accrued Expenses						
Other						
Total						
LONGTERM LIABILITIES						
Notes Payable, Long-term						
Other						
TOTAL LIABILITIES						
OWNER'S EQUITY						
Paid in Capital						
Retained Equity						
Other						
Current Period Profit or Loss						
TOTAL OWNER'S EQUITY						
TOTAL LIABILITIES AND EQUITY						
WORKING CAPITAL						
CURRENT RATIO						
DEBT TO EQUITY RATIO						
EQUITY TO TOTAL ASSETS						

PROJECTED INCOME STATEMENT

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS
METER NUMBER						
Existing Number of Taps						
New Taps per Year						
Total Meters at Year End						
METER REVENUE						
Fees Per Meter						
Cost Per Meter						
Operating Revenue Per Meter						
GROSS WATER REVENUE						
Fees						
Other						
Gross Income						
OPERATING EXPENSES						
General & Administrative						
Interest						
Other						
NET INCOME						

PROJECTED EXPENSES STATEMENT

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS
GENERAL/ADMINISTRATIVE EXPENSES						
Salaries						
Office Expense						
Computer Expense						
Auto Expense						
Insurance Expense						
Telephone Expense						
Utilities Expense						
Depreciation Expense						
Property Taxes						
Professional Fees						
Other						
Total						
% Increase Per Year						
OPERATIONAL EXPENSES						
Salaries						
Auto Expense						
Utilities Expense						
Depreciation Expense						
Repair & Maintenance						
Supplies						
Other						
Total						
% Increase Per Year						
ASSUMPTIONS						
Interest Rate/Terms						
Utility Cost/gal.						
Depreciation Schedule						
Other						

PROJECTED SOURCES AND USES OF CASH STATEMENTS

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS
SOURCES OF CASH						
Net Income						
Depreciation (if Funded)						
Loan Proceeds						
Other						
Total Sources						
USES OF CASH						
Net Loss						
Principle Portion of Pmts.						
Fixed Asset Purchase						
Reserve						
Other						
TOTAL USES						
NET CASH FLOW						
DEBT SERVICE COVERAGE						
Cash Available for Debt						
Service (CADS)						
Net Income (Loss)						
Depreciation , or Reserve Interest						
TOTAL						
REQUIRED DEBT SERVICE (RDS)						
Principle Plus Interest						
DEBT SERVICE COVERAGE RATIO						
CADS Divided by RDS						

Guadalupe-Blanco River Authority

LIST OF ATTACHMENTS

Application to Amend Sewer CCN #20892

Attachment 'A' – GBRA 2017 Wastewater Master Plan

Attachment 'B' – Need for Service Summary

Attachment 'C' – Letters of Support

Attachment 'D' – Written Descriptions of Service Areas

Attachment 'E' – Location Map – Large Scale

Attachment 'F' – Location Map – Small Scale 7345.2 Acre Tract

Attachment 'G' – Location Map – Small Scale 77.96 Acre Tract

Attachment 'H' – Proposed Short Term Sewer Facilities Exhibit

Attachment 'I' – Proposed Long Term Sewer Facilities Exhibit

Attachment 'J' – TCEQ Inspection Report

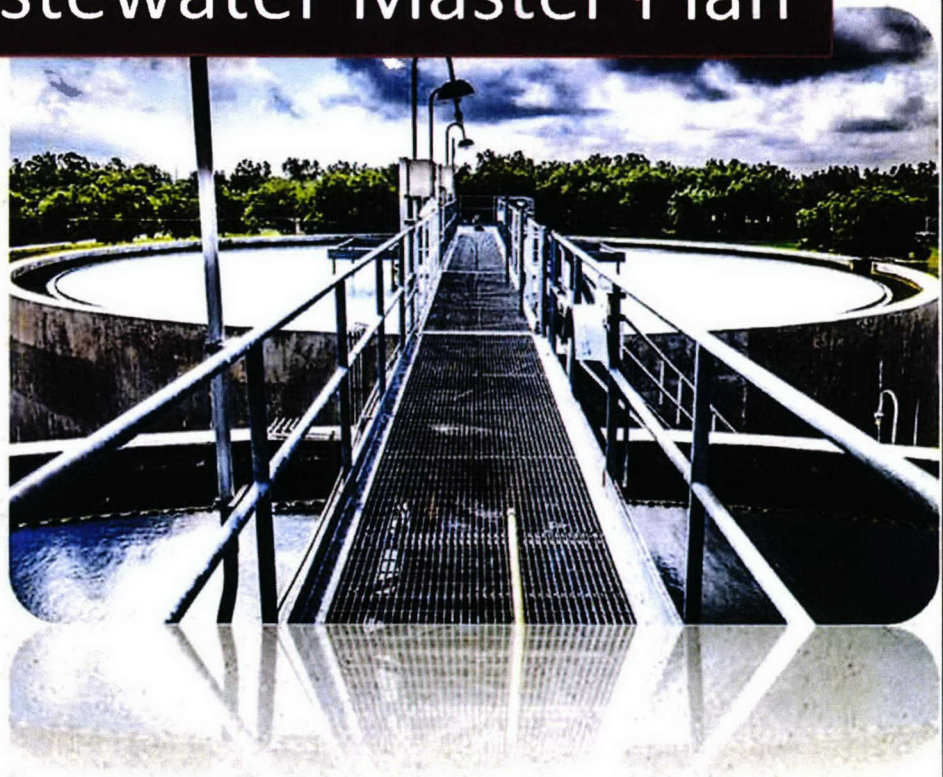
Attachment 'K' – GBRA/NBU Wholesale Agreements

Attachment 'L' – GBRA Financial Information

Attachment 'M' – Digital Data

ATTACHMENT 'A'
GBRA 2017 Wastewater Master Plan

Northern Guadalupe County Wastewater Master Plan



GBRA
933 East Court Street
Seguin, Texas 78155
(830) 379-5822

STATE OF TEXAS
02/14/2017
GARRY D. MONTGOMERY, JR.
114438
LICENSED
PROFESSIONAL ENGINEER

RIVER CITY ENGINEERING
Civil, Environmental and Surveying
Texas Engineering Firm F-1546 Texas Survey Firm 10193949
1011 W. County Line Rd
New Braunfels, Texas 78130
(830) 626-3588
7033-05

TABLE OF CONTENTS

1 GENERAL

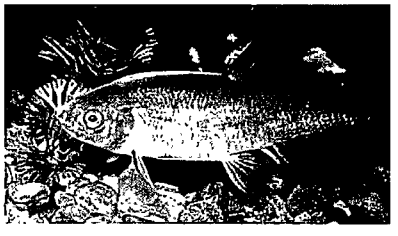
1.1 BACKGROUND AND INTRODUCTION

The Guadalupe - Blanco River Authority (GBRA) is a water conservation and reclamation district as well as a public corporation that was reauthorized by an act of the Texas Legislature in 1935. Prior to that, it operated as the Guadalupe River Authority established by a previous act of the Texas Legislature. The purpose of GBRA is to provide stewardship of the water resources in the 10-county statutory district, which begins at the Guadalupe and Blanco Rivers headwaters and ends at the San Antonio Bay in the Gulf of Mexico. This includes Caldwell, Comal, DeWitt, Gonzales, Guadalupe, Calhoun, Victoria, Refugio, Kendall and Hays Counties.

The Authority is involved and tasked with protecting the water resources of the Guadalupe River Basin. GBRA desires to provide centralized wastewater treatment service as a tool to manage water quality within the reaches and watersheds of the basin. GBRA maintains a Certificate of Convenience and Necessity (CCN) in Guadalupe County in the area of FM 725 within the City of New Braunfels City Limits and Extraterritorial Jurisdiction in addition to multiple other facilities either owned or operated by GBRA that provides authority to collect and treat wastewater within the service area and river basin. Existing Water and Wastewater CCN Maps are available for review in Appendix A. Treated wastewater is then disposed of by land application, reuse or discharged into existing streams after meeting strict TCEQ criteria on discharge standards to produce environmentally-responsible effluent flows. GBRA's mission statement, provided below, provides further clarity:

The Mission of the Guadalupe-Blanco River Authority is to protect, conserve, reclaim and steward the resources of the District, and provide leadership in regional cooperation in order to enhance quality of life for those we serve.

GBRA has a history of environmental stewardship with its numerous wastewater treatment facilities, where continuous biomonitoring of two aquatic species – such as the fathead minnow shown aside - ensure the environment will not be harmed by the treated effluent to Guadalupe River Basin. Such activities have won both wastewater treatment plants in the Lockhart Wastewater Reclamation Division recognition by the Water Environment Association of Texas as "Municipal Wastewater Treatment Plant of the Year" recently for outstanding performance of daily activities beyond the normal call of duty.



Fathead minnow (Pimephales promelas).
Photo courtesy of Wikipedia.org

1.2 PURPOSE AND SCOPE

GBRA has recently identified an unserved area of northern Guadalupe County, bounded by the City of Seguin's Sewer CCN to the east, the New Braunfels Utilities (NBU) Water CCN to the northwest and the Crystal Clear Special Utility District (CCSUD) to the north. This area was identified to be approximately 7,329.5 acres that falls within the City of New Braunfels and Seguin City Limits and Extraterritorial Jurisdiction, and is shown in Exhibit 1 in this report. The area was divided into two drainage basins, of which this report will address the northwestern areas A1 and A2 as the initial service area. This proposed service area is bound by the service areas of NBU, Seguin and Crystal Clear SUD. The proposed wastewater service area will be served by Springs Hill Water Supply Corporation for water service. Further explanation of the service area will be discussed later in this report.

The purpose of this planning effort is to provide an environmentally friendly, yet economical, centralized wastewater service option to this area, that is currently not served. This effort can eliminate the need for developments to install on-site septic systems, which are burdensome to maintain and are a culprit of potential contamination of surface and groundwater. The heavy clay soils found in this area are particularly problematic and undesirable for the installation of onsite systems due to the low percolation rates of the soils and subgrades. GBRA has taken the responsibility and initiative to begin this planning effort to quantify the cost and availability of service alternatives, for these areas to complete its mission statement of basin stewardship and protection of the environment.

The service area's approximate 7,329.5 acres will require planning and alternative evaluation, in order to adequately meet the anticipated demand and growth in the area. Of the service area, only 375.08 acres lies within the 100-year flood plain and since it constitutes for roughly 5% of the total area, is included for the purpose of planning as a conservative measure of safety. Topographically, the area has a ridge line passing near Dauer Ranch Rd that effectively divides the service in half. The service area is relatively flat over the majority of the area which lends itself to multiple collection options and calculation points. Planning develops service alternatives to collect and treat wastewater generated by current and future residential, commercial and industrial development. From these sub-basin collection points, downstream treatment facilities can be evaluated on an interim condition. Proposed treatment or conveyance options can be evaluated for the most economically feasible wastewater system options to manage the anticipated flows as an ultimate solution.

1.3 GENERAL STAKEHOLDER PARTICIPATION

The first phase of this planning effort was to identify stakeholders in the proposed service area and hold a series of meetings to scope the focus area for the study. River City Engineering (RCE) worked closely with Darrell Nichols, Sr. Deputy General Manager, David Welsch, Executive Manager of Business Development and Resource Management, Teresa Van Booven, Project and Community Representative, and Jeff McKee, Assistant District Manager for the Hydroelectric and Rural Utilities Division at GBRA. Their knowledge, insight and understanding of the environmental concerns, GBRA Mission and the Guadalupe River Basin has been a critical component in this planning effort.

Over the past four months, RCE and GBRA staff have identified and met with the following stakeholders:

The purpose of the meetings was to determine proposed wastewater service plan for the study area. Existing plans, projections and teaming options were discussed and continue to be developed.

New Braunfels Utilities

Ian Taylor, P.E.,

Chief Engineer of Water Systems

City of New Braunfels

Melissa Reynolds, P.E.,

Assistant City Engineer

Bryan Ruiz, Planning Department

Guadalupe County

County Judge Kyle Kutscher

Commissioner Greg Seidenberger, Precinct 1

Commissioner Jack Shanafelt, Precinct 2

Green Valley Special Utility District

Pat Allen, General Manager

City of Seguin

Doug Faseler, City Manager

Rick Cortes, Assistant City Manager

Joe Ramos, P.E., City Engineer

David Rabago, P.E.,

Utility Engineer

Emery Gallagher,

Water and Wastewater

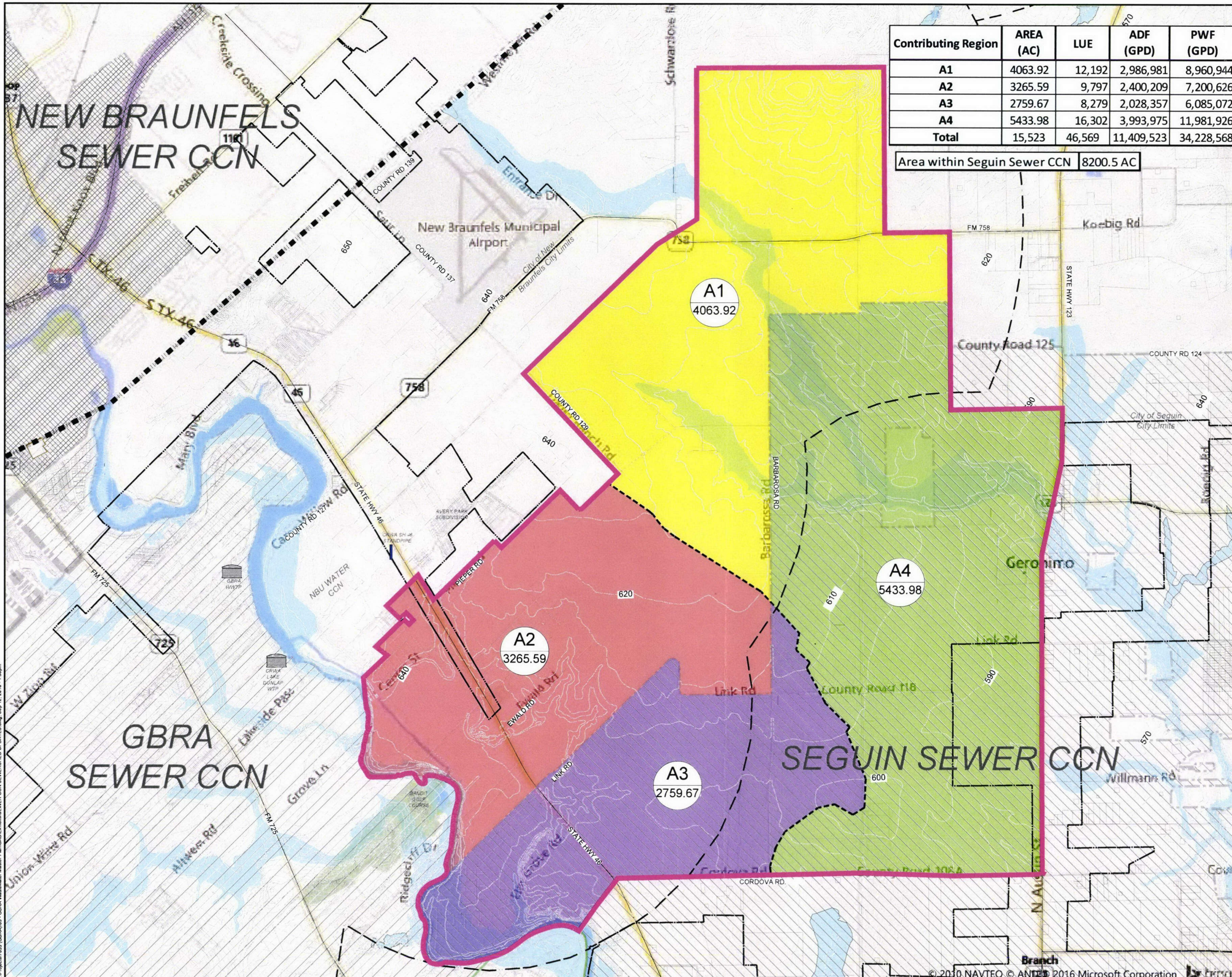
Michael Sharp, P.E., Engineering

Crystal Clear Special Utility District

Mike Taylor, General Manager

Springs Hill Water Supply Corporation

Jeanne Schnuringer, General Manager



Contributing Region	AREA (AC)	LUE	ADF (GPD)	PWF (GPD)
A1	4063.92	12,192	2,986,981	8,960,944
A2	3265.59	9,797	2,400,209	7,200,626
A3	2759.67	8,279	2,028,357	6,085,072
A4	5433.98	16,302	3,993,975	11,981,926
Total	15,523	46,569	11,409,523	34,228,568

Area within Seguin Sewer CCN	8200.5 AC

LINE LEGEND

- COUNTY BOUNDARIES
- NEW BRAUNFELS CITY LIMITS
- NEW BRAUNFELS ETJ
- SEGUIN CITY LIMITS
- SEGUIN ETJ
- WATERSHED BOUNDARY
- NBU WATER CCN

SEWER CCN LEGEND

- NEW BRAUNFELS SEWER CCN
- SEGUIN SEWER CCN
- GBRA SEWER CCN

SCALE: 1" = 2,000'

0 2,000 4,000

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF GARRY D. MONTGOMERY, JR., LICENSED P.E. 114438 AND IS NOT TO BE USED FOR FINAL BIDDING, PERMIT AQUISITION(S) AND/OR CONSTRUCTION PURPOSES.

NO.	REVISIONS	APPD.	DATE

DESIGNED BY: GM
DRAWN BY: CY
CHECKED BY: PAL

SCALE:
DATE: 12 September, 2016
PROJECT NO: 7033-05

RIVER CITY ENGINEERING
Texas Registered Engineering Firm F-0001546
CIVIL, ENVIRONMENTAL & CONSULTING
3801 SOUTH 1ST STREET, AUSTIN, TEXAS 78704-7047, PH (512) 442-3008 FAX (512) 442-6522
1011 W. COUNTY LINE RD. SUITE C, NEW BRAUNFELS, TEXAS 78130, PH (830) 626-3588 FAX (830) 626-3601

GUADALUPE-BLANCO RIVER AUTHORITY

GUADALUPE COUNTY SEWER CCNS

SHEET NO. 1 OF 1 SHEETS

Planning Basin	Area	LUEs	ADF	PDWF	PWF
PB 1	666.40	2332.4	571,438	1,857,174	2,523,574
PB 2	274.02	959.1	234,972	763,659	1,037,679
PB 3	437.32	1530.6	375,002	1,218,756	1,656,076
PB 4	456.67	1598.3	391,595	1,272,682	1,729,352
PB 5	562.82	1969.9	482,618	1,568,509	2,131,329
PB 6	286.11	1001.4	245,339	797,353	1,083,463
PB 7	304.99	1067.5	261,529	849,969	1,154,959
PB 8	278.46	974.6	238,779	776,033	1,054,493
PB 9	691.12	2418.9	592,635	1,926,065	2,617,185
PB 10	795.68	2784.9	682,296	2,217,461	3,013,141
PB 11	247.16	865.1	211,940	688,804	935,964
PB 12	478.26	1673.9	410,108	1,332,851	1,811,111
PB 13	336.62	1178.2	288,652	938,118	1,274,738
PB 14	188.50	659.8	161,639	525,326	713,826
PB 15	1189.78	4164.2	1,020,236	3,315,768	4,505,548
PB 16	135.60	474.6	116,277	377,900	513,500
Totals	7329.51	25653.29	6,285,055	20,426,428	27,755,938

RIVER CITY ENGINEERING
Civil, Environmental and Surveying
Texas Engineering Firm F-1546 Texas Survey Firm 10193949

SERVICE AREA PLANNING BASIN SUBDIVISIONS

LEGEND

- SERVICE AREA BOUNDARY
- BASIN SUBDIVIDE BOUNDARY
- AREA 123.45 — BASIN DESIGNATION AND AREA IN ACRES
- 100 YR FLOODPLAIN EXTENTS

SCALE: 1" = 2,000'
0 2,000 4,000

2 FEASIBILITY ANALYSIS

2.1 POPULATION GROWTH AND GROWTH TREND

Population growth and trends are a planning tool utilized to determine anticipated development as well as demands for public utilities and infrastructure as connection growth correlates directly to population growth. The proposed CCN area is an unincorporated portion of the Guadalupe County, and as such will be heavily influenced by the population growth in the surrounding cities of New Braunfels and Seguin. US Census Bureau has historical data from the 2000 and 2010 Census', and provides estimated population projections from the 2015 Population Estimate program. Table 1 shows a comparison of the populations for Seguin, New Braunfels and Guadalupe County as a whole. It should be noted that GBRA will not have any influence or regulation on what types of developments occur is this service area. All platting, zoning and density criteria will be under the authority and direction of the City of New Braunfels and City of Seguin. This data was then analyzed to show average population growth per area for the 15-year period.

Year	Seguin, TX	Percent Growth	New Braunfels, TX	Percent Growth	Guadalupe County, TX	Percent Growth
2000	22,011	-	36,494	-	89,023	-
2010	25,175	1.34%	57,740	4.59%	131,533	3.90%
2011	25,170	-0.02%	59,414	2.90%	135,857	3.29%
2012	25,477	1.22%	61,006	2.68%	139,733	2.85%
2013	25,848	1.46%	63,200	3.60%	143,189	2.47%
2014	26,237	1.50%	66,204	4.75%	147,272	2.85%
2015	27,864	6.20%	70,543	6.55%	151,249	2.70%
Avg		**1.95%**		**4.18%**		**3.01%**

Table 1: Population Growth using US Census Bureau. Data collected from Quickfacts and historical US Census data

Population growth for the cities average 3.06%, which is consistent to the average growth rate for the county. Most notable is the percent growth for the 2015 census estimate, which is 6.2% and 6.55% for the cities and is more than double the average percent growth rate for the county. New Braunfels Utilities (NBU) has seen significant growth in its service area, which is monitored in the form of historical wastewater connection growth shown below in Table 2 from the years 1992 through 2014 and 2016.

Year	Wastewater Connections	Annual Growth Rate (%)	Year	Wastewater Connections	Annual Growth Rate (%)
1992	9,999	-	**2004**	15,660	5.5
1993	10,196	2.0	**2005**	16,740	6.9
1994	10,418	2.2	**2006**	17,818	6.4
1995	10,732	3.0	**2007**	18,585	4.3
1996	11,098	3.4	**2008**	19,139	3.0
1997	11,489	3.5	**2009**	19,631	2.6
1998	11,748	2.3	**2010**	20,109	2.4
1999	12,270	4.4	**2011**	20,652	2.7
2000	12,756	4.0	**2012**	21,337	3.3
2001	13,316	4.4	**2013**	22,304	4.5
2002	14,103	5.9	**2014**	23,435	5.1
2003	14,846	5.3	**2016**	27,203	7.7

Table 2: Wastewater Connection Growth provided by NBU.

NBU has seen population percent growth rates from an average 4.1% and peak rates of 7.7%.

The City of Seguin has had a water and wastewater rate study completed in Fiscal Year 2015 and included a forecast of projected increase from 6,635 in Fiscal Year 2015 to 8,196 in Fiscal Year 2024. An average growth rate of 2.375% was used to calculate the increase in wastewater connections per year based upon these constraints. Table 3 is provided below to detail this:

Year	Connections	Growth	Year	Connections	Growth
2015	6635	-	2020	7461	2.375%
2016	6793	2.375%	2021	7638	2.375%
2017	6954	2.375%	2022	7820	2.375%
2018	7119	2.375%	2023	8006	2.375%
2019	7288	2.375%	2024	8196	2.375%

Table 3: City of Seguin 10-Year Wastewater Growth Projections from *Water and Wastewater Rate Study – September 2015 - FINAL*

Springs Hill WSC provides water to the service area, and has experienced a growth in connections from 2011 to 2015 system wide, shown below:

Year	*No. of Water Connections*	*% Growth*
2011	7,040	-
2012	7,199	2.26%
2013	7,314	1.60%
2014	7,589	3.76%
2015	7,763	2.29%

Table 4: Spring Hills WSC 5-Year Growth

Growth projections are drastically different in areas of the County and Cities that have both water and wastewater service available or nearby. The growth corridor along IH 35 from San Antonio to Austin is one of the fastest growing areas in the nation, and all indications show no sign of growth subsiding in the near future. With consideration to all growth data collected in relation to the service area, a conservative **4.5%** growth has been assumed for the service area. The growth rates for all influencing data has been graphed below:

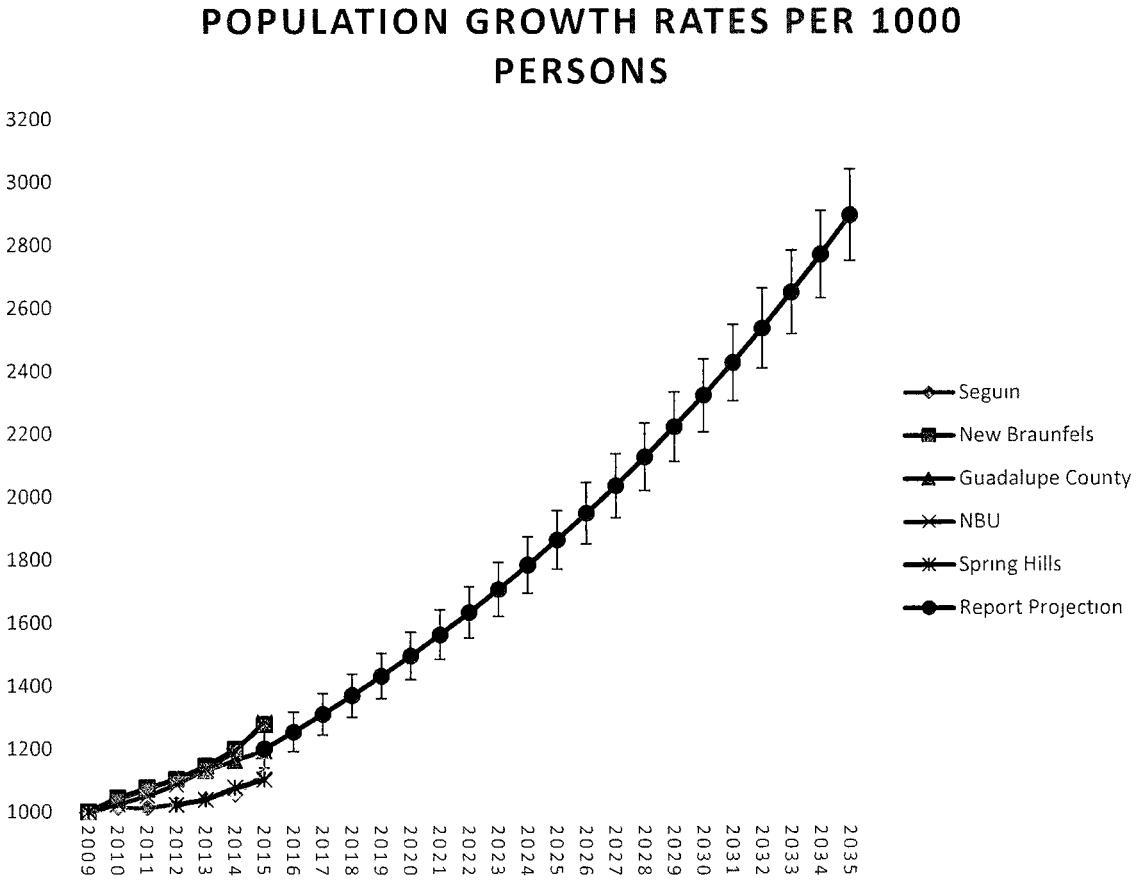


Figure 2.1: Percent Growth in Population/Connections Comparison

2.2 LAND USE ANALYSIS AND ANTICIPATED SYSTEM REQUIREMENTS

The service area is anticipated to be comprised of primarily residential units, with minor commercial anticipated to develop along the roadway corridors. Living Unit Equivalents (LUE's) are the typical daily sewer flows for an average household measured in gallons per day (gpd). The value for this ranges based upon location, but Table 5 has been compiled below to show typical values:

Municipality Authority	GPD/LUE
San Antonio Water System	240
City of Austin	245
New Braunfels Utility	210
City of Seguin	240

Table 5: Typical Area Living Unit Equivalent Values of Sewer Flow

	3.5 Capita/LUE
x	70 GPD/Capita
	245 GPD/LUE

A conservative 245 gpd/LUE is used for the planning purposes of this report, and a conservative value of 3.5 LUEs per acre has been utilized to predict the level of service that would be required within the limits of the service area. As a reference, the Avery Park subdivision just north and west of this proposed service area, within NBU's service area has a density of 3.7 LUE's per acre. Although we do not anticipate the

entire area will buildout with the proposed density of 3.5 LUE's per acre, we do anticipate pockets of higher density development that will likely approach this level of service. The proposed service area also has some existing developments that utilize on-site septic systems. We have not removed those subdivisions from the planning area due to the possibility of them requesting service or redeveloping in the future. The developed area within this planning area totals less than 5% of the overall service projection. The service area was also divided into 16 planning drainage basins in a schematic layout to size gravity trunk mains and determine design requirements for lift stations, collection systems, and treatment options as shown in Exhibit 2. Table 6 below shows each planning basin with its respectively area in acres (AC), projected LUE count, average daily flow (ADF), peak dry weather flow (PDWF) and peak wet weather flow (PWWF) in gallons per day. Peak weather flow uses a peaking factor of 3.25 and the peak wet weather flow includes an allowance of 1,000 gpd per acre for inflow and infiltration of the collection system.

The peaking factor is based upon the research shown in the textbook "Water Supply and Waste-Water Disposal", 1st Edition (Wiley, 1954) which allowed for the use of the following equations for deciding a peaking factor.

$$Peak\ Factor = \frac{18 + \sqrt{P}}{4 + \sqrt{P}}$$

Where the population (P) is in thousands.

Planning Basin	Area (AC)	LUEs	ADF (gpd)	PDWF (gpd)	PWWF (gpd)
PB 1	**666.40**	**2332.4**	**571,438**	**1,857,174**	**2,523,574**
PB 2	274.02	959.1	234,972	763,659	1,037,679
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PB 8	278.46	974.6	238,779	776,033	1,054,493
PB 9	**691.12**	**2418.9**	**592,635**	**1,926,065**	**2,617,185**
PB 10	795.68	2784.9	682,296	2,217,461	3,013,141
PB 11	**247.16**	**865.1**	**211,940**	**688,804**	**935,964**
PB 12	478.26	1673.9	410,108	1,332,851	1,811,111
PB 13	**336.62**	**1178.2**	**288,652**	**938,118**	**1,274,738**
PB 14	188.50	659.8	161,639	525,326	713,826
PB 15	**1189.78**	**4164.2**	**1,020,236**	**3,315,768**	**4,505,548**
PB 16	135.60	474.6	116,277	377,900	513,500
Totals	**7329.51**	**25653.29**	**6,285,055**	**20,426,428**	**27,755,938**

Table 6: Full Buildout Sewer Flow Projections per Basin

Growth and flow projections in the first few years of a new service area can be difficult to predict. Based on our experience with several utility providers in Guadalupe County and this growth corridor, we would recommend beginning the projected flows based on two to three new developments spurring growth in the area for the initial projection. Typically master planned communities will generate 50 – 100 new homes per year. GBRA and surrounding utility providers have received several inquiries about service within the target area of this study along Hwy 46 between New Braunfels and Seguin. Our preliminary projections for a startup utility with water and wastewater available are indicated in Table 7 as follows:

Year	Initial Connection Growth (1)	4.5% Growth	Cumulative Connections	Average Daily Flow (gpd)
2018	100		100	24500
2019	100		200	49000
2020	100		300	73500
2021	100		400	98000
2022	100		500	122500
2023	100		600	147000
2024	100		700	171500
2025	100		800	196000
2026	100		900	220500
2027	100		1000	245000
2028		45	1045	256025
2029		47	1092	267546
2030		49	1141	279586
2031		51	1193	292167
2032		54	1246	305315
2033		56	1302	319054
2034		59	1361	333411
2035		61	1422	348415
2036		64	1486	364093
2037		67	1553	380478

(1) Initial Connection Growth is projected as two developments generating 50 connections per year.

Table 7: Preliminary Projections of a Startup Utility

3 REGULATORY REQUIREMENTS

3.1 DESIGN REQUIREMENTS

Design requirements from the Texas Commission on Environmental Quality (TCEQ) Chapter 217 Subchapter C pertain to collection system characteristics such as odor control and utility crossings. Infrastructure requirements include maximum manhole spacing and minimum/maximum pipe slopes determined by pipe diameter. Maximum manhole spacing is dependent upon the size of gravity main connecting into the manhole, for sizes 6 - 15 inches in diameter a spacing of 500 feet is allowed between manholes and for sizes 18 – 30 inches in diameter a spacing of 800 feet is allowed. The service area infrastructure would consist of trunk mains, lift stations and water treatment facilities that would need to meet all regulations and requirements as well as being sized for ultimate development anticipated peak wet weather flows and permit limits.

Wastewater treatment facilities are governed by the TCEQ Chapter 217 Subchapter B and include rules and regulations concerning organic loadings, flow measurement, requirements inside the 100-year flood plain, emergency power requirements, buffer zones and odor abatement, and disinfection system power reliability that will need to be addressed in final design in order to construct new facilities to treat the ultimate development anticipated average daily flows.

3.2 PERMIT REQUIREMENTS

Wastewater treatment plants (WWTP) require an approved permit from TCEQ to discharge treated domestic wastewater into or adjacent to water in the state called a Texas Pollutant Discharge Elimination System (TPDES) permit. Land application disposal and beneficial reuse facilities are also permitted and regulated through TCEQ. Domestic facilities that wish to dispose treated wastewater effluent by land application, such as surface irrigation, evaporation or subsurface land application, would be required to obtain a Texas Land Application Permit (TLAP) permit. Permits required should have similar permit limits as other plants in the area, notably NBU's North and South Kuehler Plants and the McKenzie Plant as well as GBRA's Lake Dunlap plant and Seguin's Walnut Branch and Geronimo Creek Plants. These wastewater treatment plants are located near the service area and are shown in Exhibit 3 for clarity.

The McKenzie Plant permit limits the average flow of effluent to 2.5 MGD, the 2-hour peak to 6,944 gpm, and the approved disinfection method utilized is ultraviolet light system. The measurement frequency is set to two per week reporting of 5 -day Carbonaceous Biochemical Oxygen Demand (CBOD), Total Suspended Solids (TSS), Ammonia Nitrogen (NH_3 -N), and Total Phosphorous (Tot. P). For the North and South Kuehler Plants, the average flow of effluent is limited to 3.1 and 4.2 MGD and 2- hour peak to 7,986 and 8,750 gpm respectively. The method for disinfection is chlorine, so additional monitoring is required for the chlorine residual and dechlorinating of the chlorinated effluent. Monitoring of the discharge limitations is at a frequency of twice a week for both plants. The permits have been attached to this report in the Appendix for the NBU McKenzie, GBRA Lake Dunlap, NBU North and South Kuehler Plants, City of Seguin Walnut Branch and Geronimo Creek Plants as reference. Anticipated requirements for the service area shall be similar in scope as these reference plants, with the ability to get an alternative method of disinfection approved by the TCEQ Executive Director.

COMAL COUNTY

New Braunfels

N KUEHLER WWTP

S KUEHLER WWTP

LAKE DUNLAP WWTP

McKENZIE WWTP

GUADALUPE COUNTY

Santa Clara

Marion

Seguin

WALNUT BRANCH WWTP

GERONIMO CREEK WWTP

0 0.5 1 1.5 3 Miles

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LEGEND

PROPOSED SERVICE AREA BOUNDARY

P:\Projects\7033 (GBRA)\05 - GBRA Wastewater Master Plan\CAD\Exhibits\GBRA AREA WWTP LOCATIONS.mxd

3.3 WATER QUALITY REQUIREMENTS

TCEQ has explicit water quality requirements that the service area wastewater treatment facilities would need to meet in order to gain TCEQ approval. Effluent will not be allowed to discharge floating solids or visible foams in other than trace amounts and no discharge of visible oil will be permitted. The pH of the water directly downstream of the effluent discharge will be required to be between 6.0 and 9.0 standard units and will be monitored once a week by grab sample. All effluent monitoring samples shall be taken following the final treatment unit, and residuals from the disinfection process will need to be closely monitored to prevent degradation of the water quality in the body of water being discharged into. A table of the water quality requirements for NBU's North and South Kuehler Plants, the GBRA Lake Dunlap Plant, the NBU McKenzie Plant, and the City of Seguin's Walnut Branch and Geronimo Creek Plants is shown in Table 8 below:

Effluent Characteristic Discharge Limitations	*South Kuehler Plant*	*North Kuehler Plant*	*Lake Dunlap Plant*	*Sam McKenzie Plant*	*Walnut Branch Plant*	*Geronimo Creek Plant*
Flow (MGD)	4.2	3.1	0.95	2.5	4.9	2.13
			Biochemical Oxygen Demand(5-Day)			
Daily Avg (mg/l)	10	10	10	10	10	20
7-Day Avg (mg/l)	15	15	15	15	15	30
Daily Max (mg/l)	25	25	25	25	25	45
Single Grab (mg/l)	35	35	35	35	35	65
			Total Suspended Solids			
Daily Avg (mg/l)	15	15	15	15	15	20
7-Day Avg (mg/l)	25	25	25	25	25	30
Daily Max (mg/l)	40	40	40	40	40	45
Single Grab (mg/l)	60	60	60	60	60	65
			Total Phosphorus			
Daily Avg (mg/l)	3	3	1	1	N/A	N/A
7-Day Avg (mg/l)	6	6	2	2	N/A	N/A
Daily Max (mg/l)	8	8	3	4	N/A	N/A
Single Grab (mg/l)	8	10	4	6	N/A	N/A
			E. Coli, CFU or MPN/100 ml			
Daily Avg (mg/l)	126	126	126	126	126	126
7-Day Avg (mg/l)	N/A	N/A	N/A	N/A	N/A	N/A
Daily Max (mg/l)	399	399	399	399	399	399
Single Grab (mg/l)	N/A	N/A	N/A	N/A	N/A	N/A
Additional Requirements	Free Cyanide			Ammonia Nitrogen		
Daily Avg (mg/l)	N/A	0.018	2	3	3	N/A
7-Day Avg (mg/l)	N/A	N/A	5	6	6	N/A
Daily Max (mg/l)	N/A	0.038	10	10	10	N/A
Single Grab (mg/l)	N/A	0.048	15	15	15	N/A

Table 8: TCEQ Water Quality Requirements for Area Water Treatment Facilities

3.4 CERTIFICATE OF CONVENIENCE AND NECESSITY

Once the service area is defined and a feasible treatment option or options are selected, GBRA would need to file an application with the Public Utility Commission of Texas to secure the Certificate of Convenience and Necessity (CCN) for the service area. GBRA has obtained CCN's for service areas in the past and through the planning and coordination effort of this study and consensus from area providers, we anticipate no opposition to developing the CCN of the identified unserved area from the identified stakeholders.

4 TREATMENT OPTIONS

4.1 INTERIM SERVICE OPTIONS

Prior to the establishment of permanent treatment facilities for the service area, wastewater flows produced by the new service area could be treated using an interim option. During the discussion and negotiation of the interim options there is a possibility that these options could become permanent treatment options or partnerships for future capacities. Local treatment options exist near the service area and are broken out and discussed in further detail in the subsequent options, and are given in no particular order.

4.1.1 Option A: Interim Service with New Braunfels Utility

NBU owns and operates a wastewater treatment facility near the service area that has the capability to treat additional flows for an interim period utilizing the existing NBU manhole located along SH 46 near the McKenzie Plant that is scheduled for completion in the coming months. GBRA would be required to bring interim flows to the manhole, so that NBU can use its existing system to convey the wastewater to its nearby wastewater treatment facility. This option is a short term solution with a possibility of being a long-term, permanent solution if approved by both entities. This option also is economically viable for the southernmost area A1 along SH 46, but would face considerable costs to bring the flows from the northernmost areas in A2. Discussions between NBU and GBRA during this planning effort indicate that an interim option would be beneficial for both entities, depending on final cost and timing of the service. The new McKenzie plant will be underutilized for a period of five to ten years based on flows provided by NBU. If GBRA were to contract for interim or permanent capacity, NBU would receive revenue for a potentially underutilized facility until capacity is needed for their service area buildout. With this potential agreement GBRA could obtain an economical service option for a period of time, while delaying the large capital outlay of a permanent standalone service option. We recommend the GBRA negotiate a contract and cost with NBU so that this option can be evaluated among the other options. We have provided cost estimates for the required collection system to the NBU delivery point, however, the cost and time period for this interim option is unknown at this time. The key items to evaluating this option include: upfront costs, the duration of the agreement and availability of the treatment service. Initial discussions with NBU indicate that this agreement could be extended to possibly 10 years or more, which allows GBRA to develop a number of connections without the upfront capital outlay. In discussion with NBU, one concern on their behalf was how to account for the growth within the GBRA CCN and the timing of exiting the interim option. RCE recommended that the contract between NBU and GBRA stipulate and annual report of connections from GBRA to NBU and a projection for the coming year. This would allow both entities adequate time to plan for future expansions, permit renewals and discuss any potential issues on an annual basis.

At this time, we have not requested costs or a draft agreement from NBU. RCE recommends making this request to NBU so that all options can be evaluated and a detailed recommendation can be made on service options for this area.

4.1.2 Option B: Interim Service with City of Seguin

The City of Seguin owns and operates wastewater treatment facilities to serve their City and are currently working on a Master Plan and Capital Improvement Plan to expand service within their CCN, City Limits

and ETJ. RCE and GBRA have discussed the option of interim or contracted wholesale treatment service from the City of Seguin. At the time of this report we have not requested costs, draft wholesale agreements or the amount of service that may be available. Once this preliminary master plan has been reviewed by GBRA staff and projected flows are agreed upon, we will request a level of service from Seguin so that costs and commitments can be evaluated. City of Seguin has wastewater treatment facilities located at the Walnut Branch Treatment Plant and at the Geronimo Creek Treatment Plant, which can be accessed utilizing the City of Seguin's existing sewer infrastructure. A manhole is currently located along Cordova Rd near the South Plant and could be a delivery point for wholesale service, however, existing infrastructure may need to be improved to convey flow to its respective treatment facility. The utilization ratio of the existing treatment facilities for the City of Seguin is unknown at this time. RCE recommends that GBRA request a draft contract and cost with City of Seguin so that this option can be evaluated among other options. We have provided a cost estimate including the required collection system to the City of Seguin delivery point, however, the cost and time period for such an option is unknown at this time. We also recommend evaluating the downstream collection system of the City to see what improvements, if any, are required to make this a feasible and cost effective solution.

4.2 Ultimate Service Options

Interim service options are intended to be on a short term basis unless determined otherwise with wholesale agreements. Ultimate service treatment options will need to be in place prior to the discontinuation of interim service and can be summarized into several long term treatment options. Discussed in depth within this report are the option to construct centralized treatment plants in the service area or to utilize the existing plant operated by GBRA located at Lake Dunlap.

4.2.1 Long Term Agreement with City of Seguin or New Braunfels Utility

Wholesale agreements could be put in place for either the City of Seguin or New Braunfels Utility that expand upon the interim service options. The service area can be divided along the topographic ridge line near Dauer Ranch Rd to allow for the southern portion near SH 46 to be collected and pumped to either the NBU McKenzie Treatment Plant via a gravity line located at SH 46 or can be sent to the City of Seguin's existing manhole on Cordova Rd. The northern portion of the service area can be pumped to a NBU manhole located near FM 758 and Airport Rd or to a City of Seguin manhole located near Geronimo High School.

Long term agreements can be made with either City of Seguin, New Braunfels Utility, or a combination of service agreements with City of Seguin and New Braunfels Utility. An optimal solution of service agreement(s) can be obtained by comparing the cost of improvements required for each agreement from each topographic portion of the service area, treatment costs, and permitting requirements at each facility.

4.2.2 Option A: New Centralized Treatment Plants

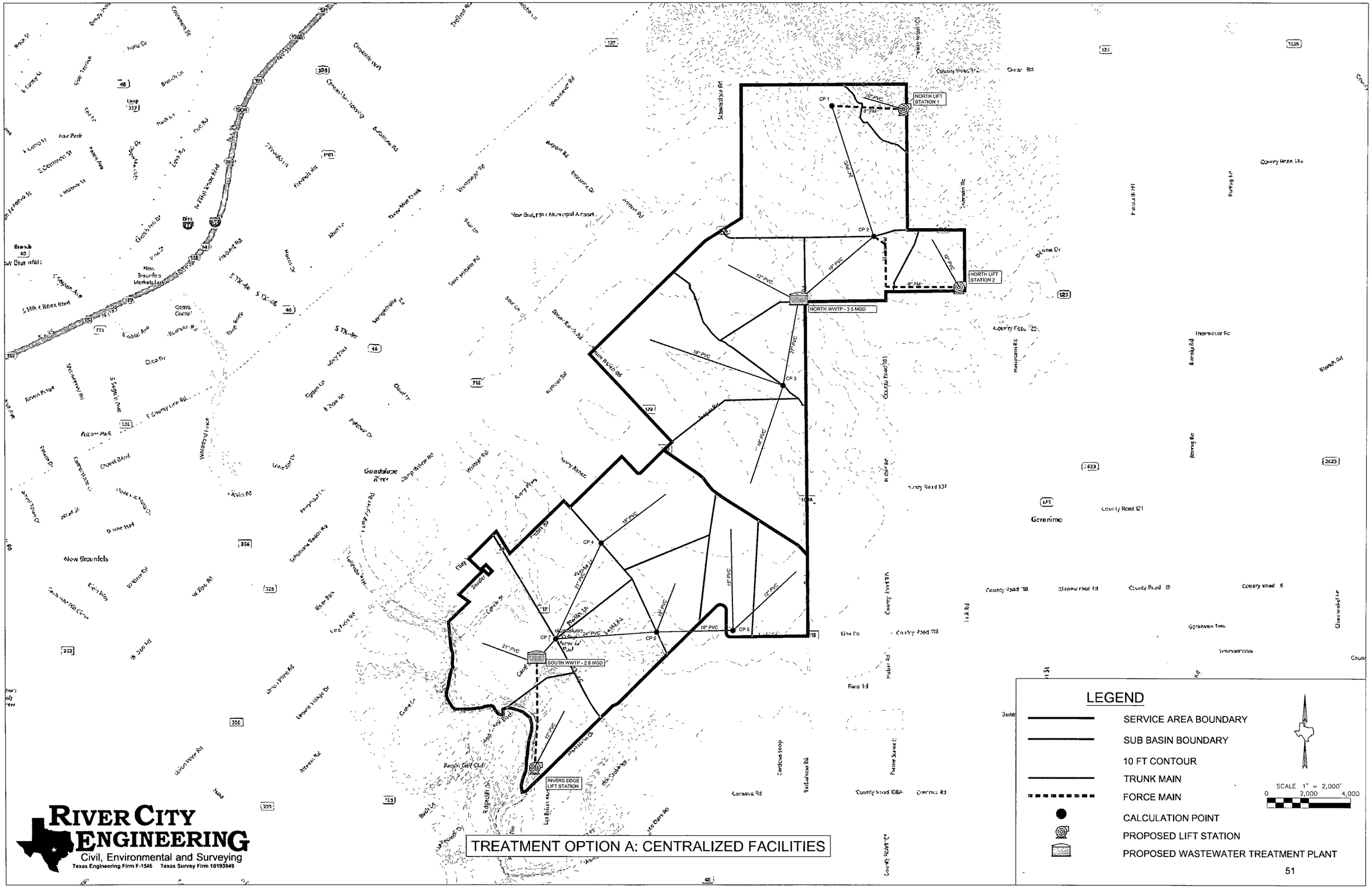
Treatment Option A proposes for the service area to be divided along the topographic ridge line near Dauer Ranch Rd to allow for gravity collection lines to bring the anticipated ultimate flows to new centralized treatment facilities. These treatment facilities are referenced as North WWTP and South WWTP and would treat the ultimate anticipated average daily flows of 3.5 MGD and 2.8 MGD for the

North and South Plants respectively. The collection system infrastructure is assumed to be a combination of gravity mains, precast concrete manholes within maximum permitted spacing, force mains and lift stations to convey the anticipated ultimate peak wet weather flows to the treatment facilities. Alternatives exist in the centralized treatment option to provide ultimate treatment. One such option would be to replace the North WWTP with a large lift station, which would pump the flows from the north collection system to the south collection system via a force main connecting to PB 5 to utilize the gravity system to the South WWTP. The South WWTP would need to be sized to treat the entire 6.3 MGD anticipated flow from the service area at full build out or a proportionate share during the permitting phase. Another option would be to enter into a wholesale agreement at the location of the North WWTP to convey flow to the City of Seguin as previously discussed as an interim option. This option would still require the South WWTP to be constructed, but the facility would only need to be sized for the original 2.8 MGD anticipated at ultimate build out.

Costs associated with Treatment Option A have been assumed with approximate quantities and are subject to change in the design portion of the proposed collection and treatment system when more information is known within the service area. Factors influencing the design would be optimal routing of the gravity lines, additional manholes required, and availability of materials proposed in this report. A summary table has been prepared for the Treatment Option A alternatives below:

Option A Alternatives	Cost
North WWTP and South WWTP	$ 87,045,000
North LS & FM and Increased Capacity South WWTP	$ 87,204,000

A schematic layout is provided in Exhibit 5 for clarity, and detailed cost estimates for Treatment Option A Alternatives are included in the appendix for review.



TREATMENT OPTION A: CENTRALIZED FACILITIES

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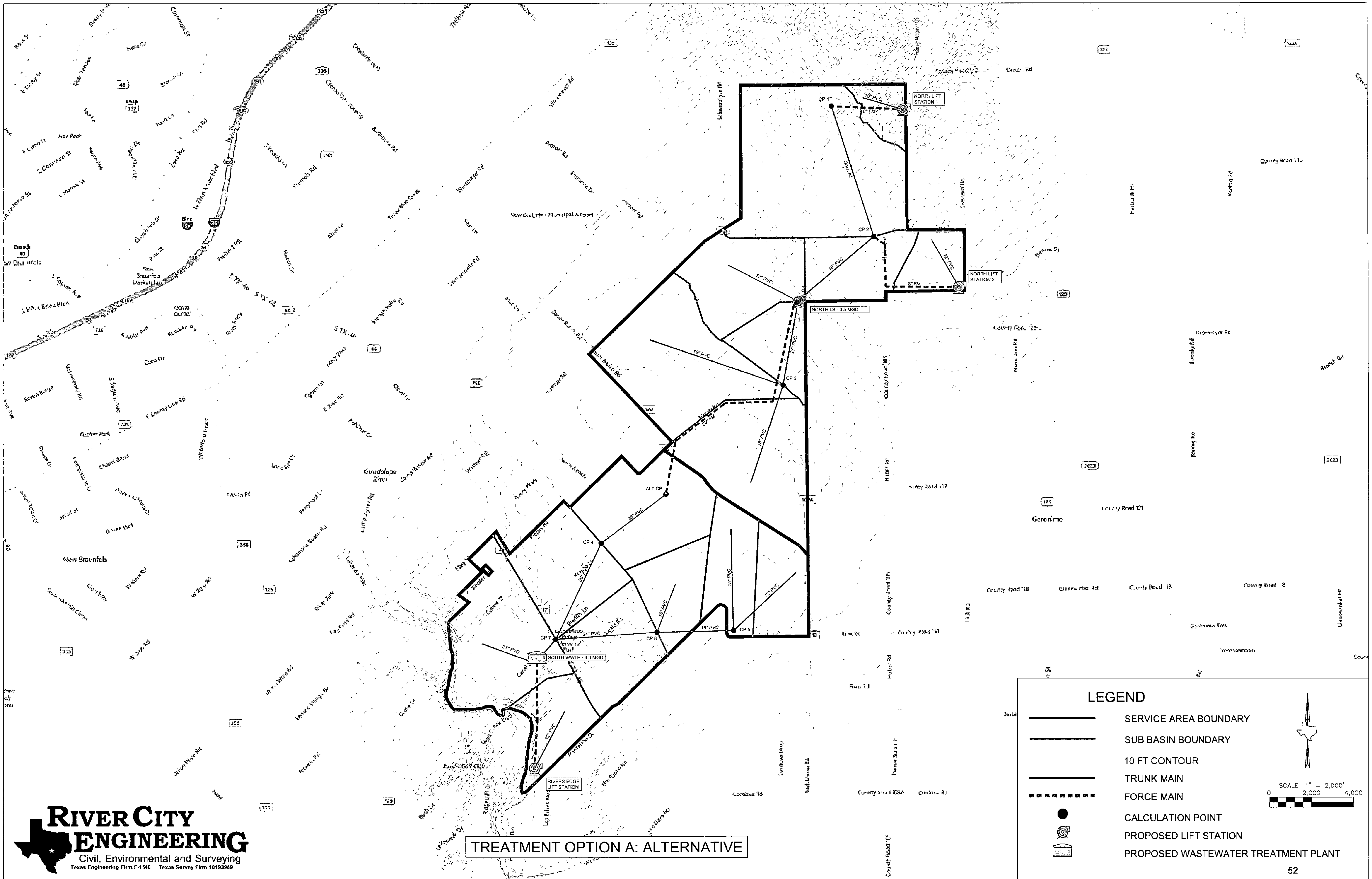


TREATMENT OPTION A: ALTERNATIVE

4.2.3 Option B: Utilize Existing Plant at Lake Dunlap

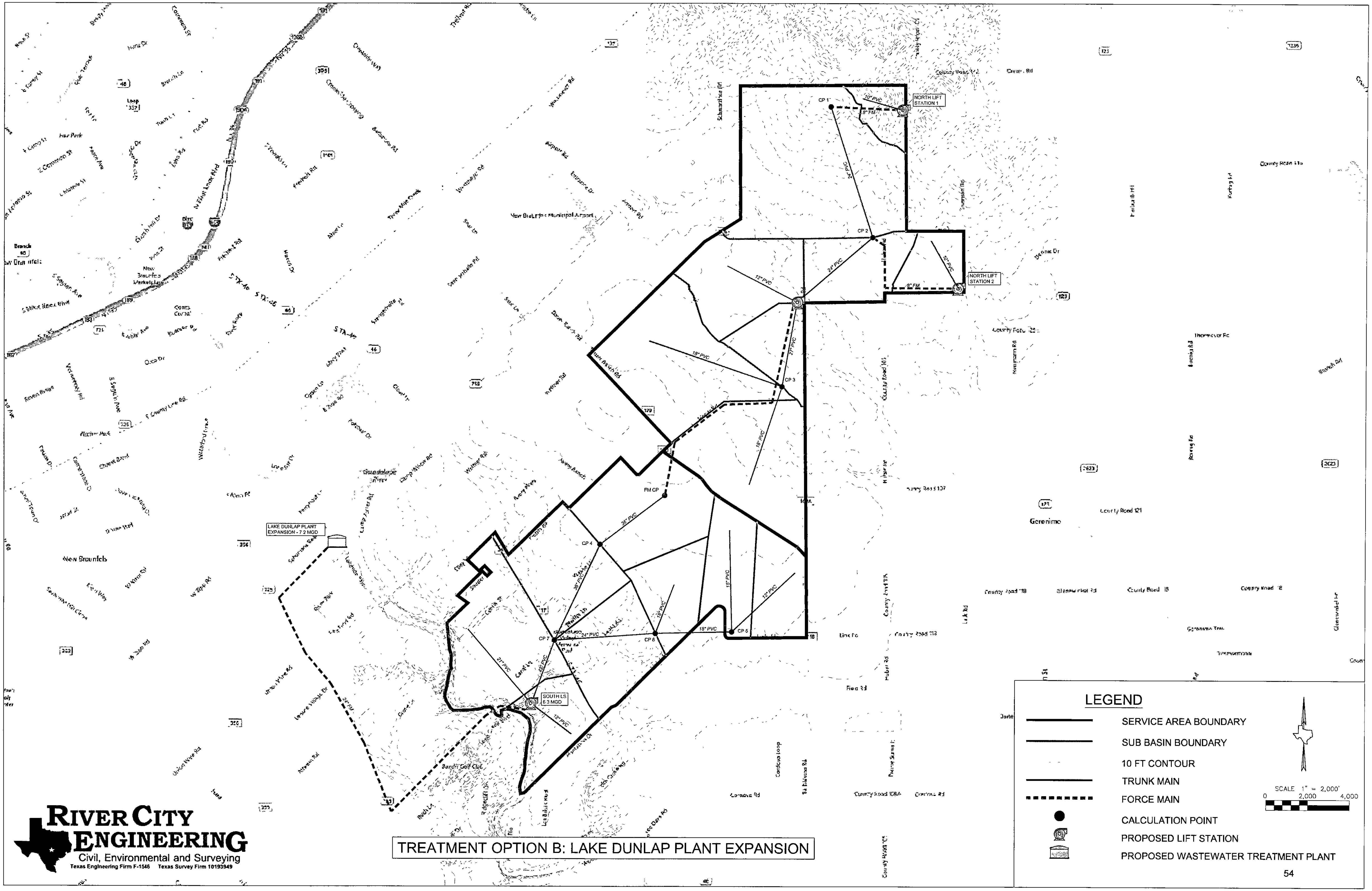
Treatment Option B proposes that the entire service area be conveyed to the existing GBRA Lake Dunlap WWTP to treat the ultimate anticipated flows. The service area would be divided yet again along topographic ridge line located near Dauer Ranch Rd and would collect the Northern area flows to a single, large lift station via gravity lines, regional lift stations and force mains where it would then be pumped to PB 5 to utilize the gravity collection system south of the ridge line. The southern portion of the service area would be collected via a gravity system, regional lift stations and force mains to a single, large lift station where it would then be pumped across the lake to the existing Lake Dunlap Plant. The Lake Dunlap plant is currently permitted to treat 950,000 gpd and would need to be expanded to treat the proposed 6.3 MGD from the service area, totaling to an approximate 7.24 MGD. Alternatives exist within Treatment Option B as well; in case the expansion of the Lake Dunlap Plant is either infeasible or undesired. An alternative would be to construct a new wastewater treatment facility south of the Lake Dunlap Plant on property owned by GBRA near the Bandit Golf Course, and have the service area flow of 6.3 MGD be treated there. An additional alternative would be to enter into a wholesale agreement with the City of Seguin to treat a portion of the service area flows from any of the proposed lift stations to reduce the amount of flows to be treated by the expanded Lake Dunlap Plant or a combination of wholesale service, expanded Lake Dunlap Plant and a smaller new wastewater treatment facility near the Bandit Golf Course and McQueeny.

Costs associated with Treatment Option B have been assumed with approximate quantities and are subject to change in the design portion of the proposed collection and treatment system when more information is known within the service area. Factors influencing the design would be optimal routing of the gravity lines, additional manholes required, and availability of materials proposed in this report. A summary table has been prepared for the Treatment Option B alternatives below:

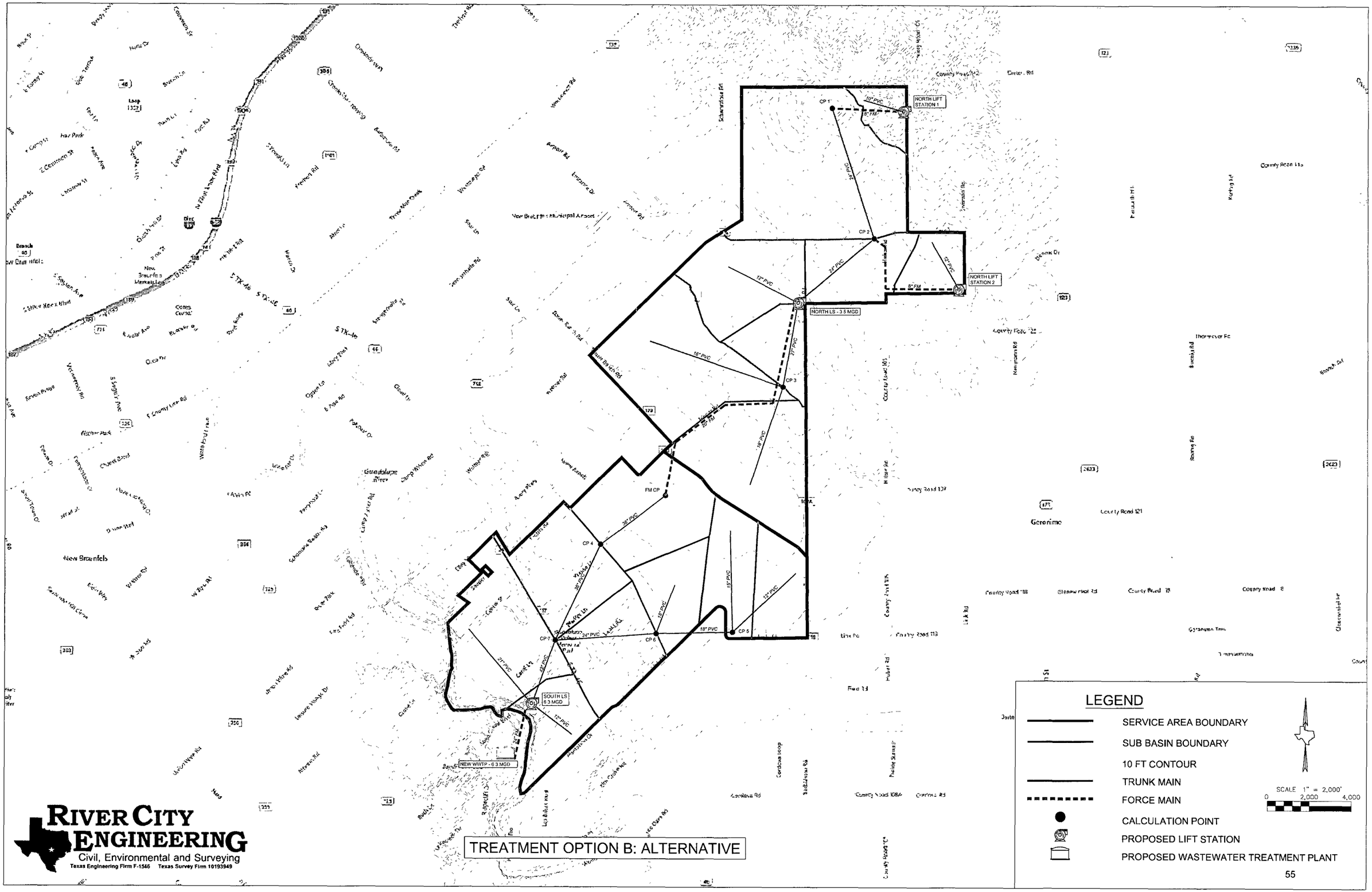
Option B Alternatives	Cost
North and South LS & Lake Dunlap Plant Expansion	$ 90,990,100
North and South LS & New WWTP near Bandit Golf Course	$ 88,030,700

A schematic layout is provided in Exhibit 6 for clarity, and detailed cost estimates for Treatment Option B Alternatives are included in the appendix for review.

All cost estimates are based on the full buildout of the planning area. RCE understands that the collection and treatment facilities will be designed and constructed based on the growth of the area, however, at this time we do not know where the first growth corridor will be located within the service area. Detailed cost estimates and infrastructure requirements can be developed on a case by case basis as development begins in the planning area.



TREATMENT OPTION B: LAKE DUNLAP PLANT EXPANSION



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TREATMENT OPTION B: ALTERNATIVE

5 CONCLUSIONS AND RECOMMENDATIONS

Over the course of the last several months and multiple meetings with various stakeholders it has become evident that the identified service area would benefit from the installation of a centralized wastewater treatment facility. Many options have been discussed in this report and will continue to be explored to finalize costs and draft agreements with willing parties. Our conclusions and recommendations are as follows:

- RCE anticipates that, without a regional or centralized wastewater management option, there is a high likelihood that there will be Onsite Sanitary Sewerage Facilities (OSSFs) utilized for development as the corporate limits of both cities become built-out and higher density developments are no longer feasible. This service area consists mostly of farmland which is high in impermeable clay. The soils found in this region of Guadalupe County are not ideal for OSSFs, increasing the likelihood of water quality related concerns downstream.
- Water service is available through Springs Hill WSC. Currently this area is not covered by a Wastewater CCN and the adjacent utilities (NBU, Seguin, Crystal Clear SUD) do not foresee extending their service into this area.
- Pursue a wholesale treatment agreement for interim or permanent capacity at the NBU McKenzie WWTP near Hwy 46 and the City of New Braunfels City Limits. The cost, timing, duration and conditions of the agreement are critical to evaluating the feasibility of this alternative.
- Pursue a wholesale treatment agreement for interim or permanent capacity with the Geronimo Creek WWTP or the Walnut Branch WWTP owned by the City of Seguin. The cost, timing, duration and conditions of the agreement are critical to evaluate the feasibility of this alternative.
- Once costs are acquired for the wholesale options, RCE can evaluate the location and costs of standalone GBRA facilities. If interim options are feasible, a hybrid option of several alternatives may be the most economical approach to serving this area.
- Use of package treatment plants is not recommended for providing long-term wastewater treatment service due to the high recurring cost of replacing the packaged treatment units, but may be an appropriate near-term approach for currently unserved developing areas that will be connected to a centralized or regional wastewater treatment plant collection system within 5-10 years.
- The identified service area falls within the City of New Braunfels ETJ and City of Seguin ETJ. Since GBRA has no authority over platting and zoning, the Cities and County will be instrumental in regulating the density of new developments. The anticipated growth will be outside corporate limits of the cities and there is less control that the governing entities have in order to protect the environment. Without a regional service provider obtaining a CCN for this area, wastewater management and water quality decisions will be left to individual developers and state regulatory agencies. With GBRA as the CCN holder water quality protection and conservation can be at the forefront of the treatment designs and decisions.

6 APPENDIX

6.1 WATER & WASTEWATER CCN BOUNDARIES

6.2 INTERIM OPTIONS

6.2.1 Seguin Interim Service

6.2.2 NBU Interim Service

6.3 DETAILED COST ESTIMATES

6.3.1 Northern Guadalupe County Wastewater Master Plan Cost Estimate Summary

6.3.2 Interim Seguin Service Option

6.3.3 Interim NBU Service Option

6.3.4 Option A North WWTP 3.5 MGD

6.3.5 Option A South WWTP 2.8 MGD

6.3.6 Option A Regional WWTP 6.3 MGD

6.3.7 Option A Collection System Full Buildout with North & South Plants

6.3.8 Option A Collection System Full Buildout with Regional Plant

6.3.9 Option B Lake Dunlap Plant Expansion 7.2 MGD

6.3.10 Option B New Lake McQueeny WWTP 6.3 MGD

6.3.11 Option B Collection System Full Buildout with Forcemain to Lake Dunlap Plant

6.3.12 Option B Collection System Full Buildout with Forcemain to Lake McQueeny Plant

6.4 REFERENCE TCEQ PERMITS

6.4.1 Lake Dunlap Plant Permit

6.4.2 North Kuehler Plant Permit

6.4.3 South Kuehler Plant Permit

6.4.4 Sam McKenzie Plant Permit

6.4.5 Geronimo Creek Plant Permit

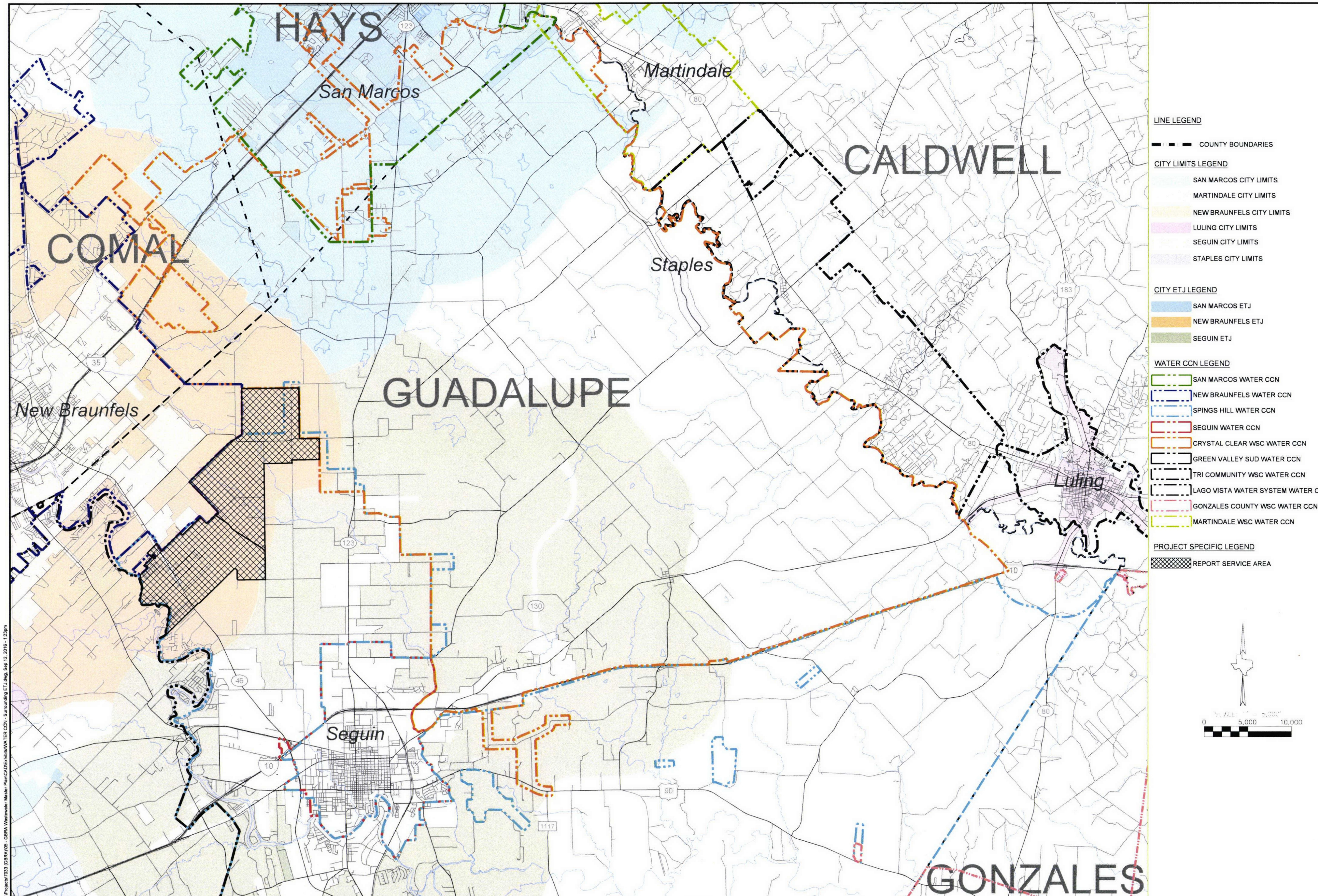
6.4.6 Walnut Branch Plant Permit

6.5 REPORT CALCULATIONS

6.6 REGIONAL MAJOR THOROUGHFARE MAPS

6.6.1 Guadalupe County

6.6.2 City of Seguin



NO.	REVISIONS	APPD.	DATE

DESIGNED BY: GM
DRAWN BY: CY
CHECKED BY: PAL

SCALE:
DATE: 12 September, 2016
PROJECT NO: 6096-91

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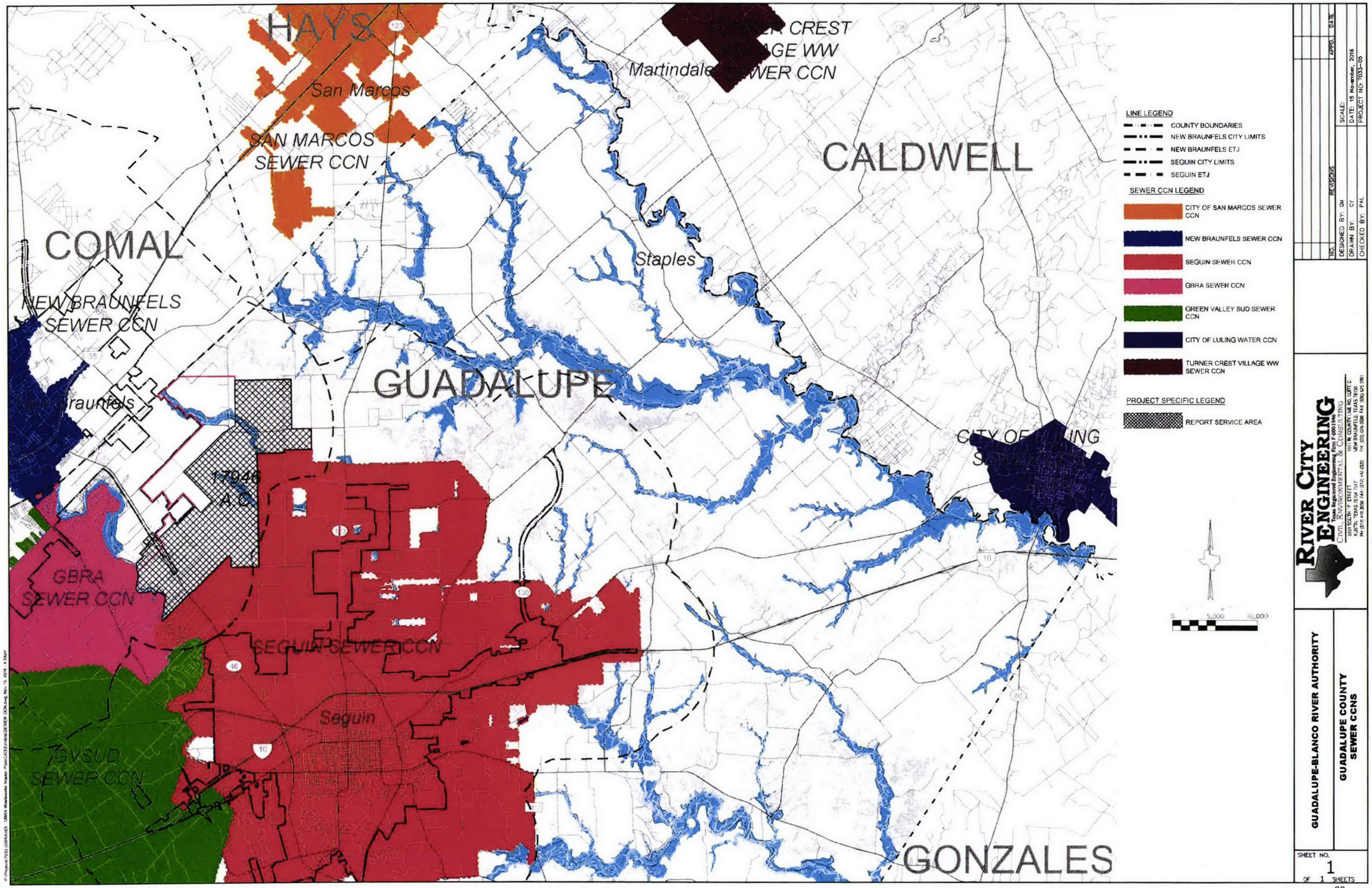
GUADALUPE-BLANCO RIVER AUTHORITY

APPENDIX A: GUADALUPE COUNTY CITY LIMITS AND WATER CCNS

SHEET NO. 1 OF 1 SHEETS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San Marcos
SAN MARCOS SEWER CCN
Martindale
SEWER CCN
CALDWELL
COMAL
NEW BRAUNFELS SEWER CCN
Staples
GUADALUPE
17046 A.C.
GBRA SEWER CCN
SEGUIN SEWER CCN
Seguin
GVSUD SEWER CCN
GONZALES
LINE LEGEND
COUNTY BOUNDARIES
NEW BRAUNFELS CITY LIMITS
NEW BRAUNFELS ETJ
SEGUIN CITY LIMITS
SEGUIN ETJ
SEWER CCN LEGEND
CITY OF SAN MARCOS SEWER CCN
NEW BRAUNFELS SEWER CCN
SEGUIN SEWER CCN
GBRA SEWER CCN
GREEN VALLEY SUD SEWER CCN
CITY OF LULING WATER CCN
TURNER CREST VILLAGE WW SEWER CCN
PROJECT SPECIFIC LEGEND
REPORT SERVICE AREA
0
5,000
10,000
REVISIONS
NO.
APPD.
DATE
DESIGNED BY: GM
DRAWN BY: CY
CHECKED BY: PAL
SCALE:
DATE: 15 November, 2016
PROJECT NO: 7033-05
RIVER CITY ENGINEERING
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GUADALUPE-BLANCO RIVER AUTHORITY
GUADALUPE COUNTY SEWER CCNS
SHEET NO.
1
OF 1 SHEETS

Appendix 6.3.1
NORTHER GUADALUPE COUNTY WASTEWATER MASTER PLAN
COST ESTIMATE SUMMARY

OPTION NO.	ITEM DESCRIPTION	TREATMENT COST	COLLECTION COST	TOTAL COST
INTERIM SERVICE WITH NBU	TREATMENT COST AT MCKENZIE WWTP	TBD		#VALUE!
	COLLECTION SYSTEM AND FORCEMAIN TO NBU MCKENZIE WWTP		$ 32,879,700.00	$ 32,879,700.00
	TOTAL - INTERIM SERVICE WITH NBU			**#VALUE!**
INTERIM SERVICE WITH	TREATMENT COST AT SEGUIN WWTP	TBD		#VALUE!
	COLLECTION SYSTEM TO SEGUIN INFRASTRUCTURE		$ 26,251,100.00	$ 26,251,100.00
	TOTAL - INTERIM SERVICE WITH SEGUIN			**#VALUE!**
OPTION A - NORTH & SOUTH WWTP	NORTH 3.5 MGD PLANT	$ 36,300,000.00		$ 36,300,000.00
	SOUTH 2.8 MGD PLANT	$ 28,380,000.00		$ 28,380,000.00
	COLLECTION SYSTEM TO BOTH PLANTS		$ 22,365,000.00	$ 22,365,000.00
	TOTAL OPTION A - NORTH & SOUTH PLANT			**$ 87,045,000.00**
OPTION A ALT - REGIONAL PLANT	REGIONAL PLANT - 6.3 MGD	$ 59,505,000.00		$ 59,505,000.00
	REGIONAL PLANT COLLECTION SYSTEM		$ 27,699,600.00	$ 27,699,600.00
	TOTAL OPTION A ALT - REGIONAL 6.3 MGD PLANT			**$ 87,204,600.00**
OPTION B - LAKE DUNLAP PLANT	EXPAND LAKE DUNLAP PLANT BY 6.3 MGD	$ 59,505,000.00		$ 59,505,000.00
	COLLECTION SYSTEM AND FORCEMAIN TO LAKE DUNLAP PLANT		$ 31,485,100.00	$ 31,485,100.00
	TOTAL OPTION B - EXPAND LAKE DUNLAP PLANT			**$ 90,990,100.00**
OPTION B ALT - LAKE MCQUEENEY REGIONAL PLANT	LAKE MCQUEENEY REGIONAL WWTP 6.3 MGD	$ 59,505,000.00		$ 59,505,000.00
	COLLECTION SYSTEM AND FORCEMAIN TO LAKE MCQUEENEY REGIONAL WWTP		$ 28,525,700.00	$ 28,525,700.00
	TOTAL OPTION B - LAKE MCQUEENEY REGIONAL WWTP			**$ 88,030,700.00**

NOTE: The options presented for new WWTP locations do not include cost for property acquistion since the exact location is unknown The interim option with NBU and Seguin assumes an approximate location for delivery to their collection system. Infrastructure improvements that would be required within their systems or available plant capacities are unknown at this time. The costs provided for the interim options include infrastructure throughout the planning area It is likely that a small portion of the area and not the entire area would be served by an interim option Life cycle, operation and maintenance costs for Option A with the North and South WWTP's was not quantified, however we caution that the life cycle costs overtime will make this a more expensive alternative due to the O&M costs of operating two plants versus the other options

This Construction Cost Estimate is based on River City Engineering's experience and qualifications, and represents River City Engineering's best judgment However, since River City Engineering has no control over the cost of labor, materials, equipment or services furnished by others, River City Engineering does not guarantee that the actual construction cost will not vary from the Construction Cost Estimate.

Appendix 6.3.2
PROPOSED WASTEWATER COLLECTION SYSTEM - INTERIM SEGUIN SERVICE-ENTIRE PLANNING AREA
COST ESTIMATE

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
General					
1	Bonding, Mobilization, & Insurance (5% of Construction Budget)	1	LS	$ 976,240.00	$ 976,240.00
2	Construction Materials Testing	1	LS	$ 50,000.00	$ 50,000.00
3	Trench & Excavation Safety	1	LS	$ 250,000.00	$ 250,000.00
4	Erosion & Environmental Controls	1	LS	$ 50,000.00	$ 50,000.00
				Subtotal General	***$ 1,326,200.00***
Gravity Collection System					
1	10" Wastewater Pipe	2,000	LF	$ 115.00	$ 230,000.00
2	12" Wastewater Pipe	13,600	LF	$ 120.00	$ 1,632,000.00
3	15" Wastewater Pipe	4,850	LF	$ 125.00	$ 606,250.00
4	18" Wastewater Pipe	28,200	LF	$ 130.00	$ 3,666,000.00
5	21" Wastewater Pipe	7,900	LF	$ 150.00	$ 1,185,000.00
6	24" Wastewater Pipe	16,100	LF	$ 160.00	$ 2,576,000.00
7	27" Wastewater Pipe	4,200	LF	$ 170.00	$ 714,000.00
8	36" Wastewater Pipe	15,500	LF	$ 195.00	$ 3,022,500.00
9	5' Dia Manhole	166	EA	$ 6,500.00	$ 1,079,000.00
10	6' Dia Manhole	38	EA	$ 7,500.00	$ 285,000.00
				Subtotal Gravity Collection System	***$ 14,995,800.00***
Forcemain System					
1	10" Forcemain Pipe	9,600	LF	$ 115.00	$ 1,104,000.00
2	12" Forcemain Pipe	5,000	LF	$ 120.00	$ 600,000.00
				Subtotal Forcemain System	***$ 1,704,000.00***
Minor Lift Stations					
1	Minor Lift Station	3	LS	$ 825,000.00	$ 2,475,000.00
				Subtotal Lift Station Improvements	***$ 2,475,000.00***
TOTAL CONSTRUCTION COST ESTIMATE					**$ 20,501,000.00**
Engineering & Contingency					
1	Design, Surveying, Permitting, Construction Phase Services, Etc.	1	LS	$ 1,640,080.00	$ 1,640,080.00
2	Construction Contingency (20%)	1	LS	$ 4,110,000.00	$ 4,110,000.00
				Subtotal Contingency	***$ 5,750,100.00***
TOTAL PROJECT COST ESTIMATE					**$ 26,251,100.00**

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Appendix 6.3.3
PROPOSED WASTEWATER COLLECTION SYSTEM - INTERIM NBU SERVICE OPTION - ENTIRE PLANNING AREA
COST ESTIMATE

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
General					
1	Bonding, Mobilization, & Insurance (5% of Construction Budget)	1	LS	$ 1,223,090.00	$ 1,223,090.00
2	Construction Materials Testing	1	LS	$ 50,000.00	$ 50,000.00
3	Trench & Excavation Safety	1	LS	$ 250,000.00	$ 250,000.00
4	Erosion & Environmental Controls	1	LS	$ 50,000.00	$ 50,000.00
				Subtotal General	***$ 1,573,100.00***
Gravity Collection System					
1	10" Wastewater Pipe	2,000	LF	$ 115.00	$ 230,000.00
2	12" Wastewater Pipe	13,600	LF	$ 120.00	$ 1,632,000.00
3	15" Wastewater Pipe	4,850	LF	$ 125.00	$ 606,250.00
4	18" Wastewater Pipe	17,850	LF	$ 130.00	$ 2,320,500.00
5	21" Wastewater Pipe	2,800	LF	$ 150.00	$ 420,000.00
6	24" Wastewater Pipe	16,100	LF	$ 160.00	$ 2,576,000.00
7	27" Wastewater Pipe	4,200	LF	$ 170.00	$ 714,000.00
8	36" Wastewater Pipe	9,000	LF	$ 195.00	$ 1,755,000.00
9	42" Wastewater Pipe	1,300	LF	$ 220.00	$ 286,000.00
10	5' Dia Manhole	133	EA	$ 6,500.00	$ 864,500.00
11	6' Dia Manhole	22	EA	$ 7,500.00	$ 165,000.00
		Subtotal Gravity Collection System			***$ 11,569,300.00***
Forcemain System					
1	10" Forcemain Pipe	9,600	LF	$ 100.00	$ 960,000.00
2	12" Forcemain Pipe	5,000	LF	$ 115.00	$ 575,000.00
3	20" Forcemain Pipe	20,500	LF	$ 165.00	$ 3,382,500.00
		Subtotal Forcemain System			***$ 4,917,500.00***
Minor Lift Stations					
1	Minor Lift Station	3	LS	$ 825,000.00	$ 2,475,000.00
2	Major Lift Station	2	LS	$ 2,575,000.00	$ 5,150,000.00
		Subtotal Lift Station Improvements			***$ 7,625,000.00***
TOTAL CONSTRUCTION COST ESTIMATE					**$ 25,684,900.00**
Engineering & Contingency					
1	Design, Surveying, Permitting, Construction Phase Services, Etc.	1	LS	$ 2,054,792.00	$ 2,054,792.00
2	Construction Contingency (20%)	1	LS	$ 5,140,000.00	$ 5,140,000.00
				Subtotal Contingency	***$ 7,194,800.00***
TOTAL PROJECT COST ESTIMATE					**$ 32,879,700.00**

This Construction Cost Estimate is based on River City Engineering's experience and qualifications, and represents River City Engineering's best judgment. However, since River City Engineering has no control over the cost of labor, materials, equipment or services furnished by others, River City Engineering does not guarantee that the actual construction cost will not vary from the Construction Cost Estimate

Appendix 6.3.4
PROPOSED WASTEWATER PLANT - OPTION A - NORTH WWTP 3.5 MGD
COST ESTIMATE

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
General					
1	Bonding, Mobilization, & Insurance (5% of Construction Budget)	1	LS	$ 860,000.00	$ 860,000.00
2	Construction Materials Testing	1	LS	$ 50,000.00	$ 50,000.00
3	Trench & Excavation Safety	1	LS	$ 25,000.00	$ 25,000.00
4	Erosion & Environmental Controls	1	LS	$ 25,000.00	$ 25,000.00
				Subtotal General	***$ 960,000.00***
Treatment Expansion					
1	SBR, EFF EQ, & Equipment Room	1	LS	$ 16,250,000.00	$ 16,250,000.00
2	Headworks	1	LS	$ 950,000.00	$ 950,000.00
3	Disk Filters	1	LS	$ 750,000.00	$ 750,000.00
4	Belt Press	1	LS	$ 405,000.00	$ 405,000.00
5	UV Facility	1	LS	$ 1,215,000.00	$ 1,215,000.00
6	Blowers	1	LS	$ 750,000.00	$ 750,000.00
7	Electrical, Instrumentation & Controls	1	LS	$ 3,000,000.00	$ 3,000,000.00
				Subtotal Treatment Expansion	***$ 23,320,000.00***
Lift Station Improvements					
1	Wet-Well & Access Hatch	1	LS	$ 500,000.00	$ 500,000.00
2	Valve-Vault	1	LS	$ 50,000.00	$ 50,000.00
3	Pumps	1	LS	$ 200,000.00	$ 200,000.00
4	Piping & Appurtenances	1	LS	$ 195,000.00	$ 195,000.00
5	Concrete Pavement	1	LS	$ 380,000.00	$ 380,000.00
6	Site Work	1	LS	$ 475,000.00	$ 475,000.00
7	Electrical, Instrumentation & Controls	1	LS	$ 350,000.00	$ 350,000.00
				Subtotal Lift Station Improvements	***$ 2,150,000.00***
Site Improvements					
1	Office Building/Lab	1	LS	$ 750,000 00	$ 750,000.00
2	Pavement	1	LS	$ 650,000.00	$ 650,000.00
3	Site Work	1	LS	$ 475,000.00	$ 475,000.00
4	Revegetation	1	LS	$ 25,000.00	$ 25,000.00
				Subtotal Site Improvements	***$ 1,900,000.00***
TOTAL CONSTRUCTION COST ESTIMATE FOR WWTP					**$ 28,330,000.00**
Engineering & Contingency					
1	Design, Surveying, Permitting, Construction Phase Services, Etc.	1	LS	$ 2,300,000.00	$ 2,300,000.00
2	Construction Contingency (20%)	1	LS	$ 5,670,000.00	$ 5,670,000.00
				Subtotal Contingency	***$ 7,970,000.00***
TOTAL PROJECT COST ESTIMATE					**$ 36,300,000.00**

This Construction Cost Estimate is based on River City Engineering's experience and qualifications, and represents River City Engineering's best judgment. However, since River City Engineering has no control over the cost of labor, materials, equipment or services furnished by others, River City Engineering does not guarantee that the actual construction cost will not vary from the Construction Cost Estimate.

Appendix 6.3.5
PROPOSED WASTEWATER PLANT - OPTION A - NORTH WWTP 2.8 MGD
COST ESTIMATE

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
General					
1	Bonding, Mobilization, & Insurance (5% of Construction Budget)	1	LS	$ 800,000.00	$ 800,000.00
2	Construction Materials Testing	1	LS	$ 50,000.00	$ 50,000.00
3	Trench & Excavation Safety	1	LS	$ 25,000.00	$ 25,000.00
4	Erosion & Environmental Controls	1	LS	$ 25,000.00	$ 25,000.00
				Subtotal General	***$ 900,000.00***
Treatment Expansion					
1	SBR, EFF EQ, & Equipment Room	1	LS	$ 11,150,000.00	$ 11,150,000.00
2	Headworks	1	LS	$ 870,000.00	$ 870,000.00
3	Disk Filters	1	LS	$ 700,000.00	$ 700,000.00
4	Belt Press	1	LS	$ 405,000.00	$ 405,000.00
5	UV Facility	1	LS	$ 1,100,000.00	$ 1,100,000.00
6	Blowers	1	LS	$ 750,000.00	$ 750,000.00
7	Electrical, Instrumentation & Controls	1	LS	$ 2,600,000.00	$ 2,600,000.00
				Subtotal Treatment Expansion	***$ 17,575,000.00***
Lift Station Improvements					
1	Wet-Well & Access Hatch	1	LS	$ 425,000.00	$ 425,000.00
2	Valve-Vault	1	LS	$ 50,000.00	$ 50,000.00
3	Pumps	1	LS	$ 200,000.00	$ 200,000.00
4	Piping & Appurtenances	1	LS	$ 195,000.00	$ 195,000.00
5	Concrete Pavement	1	LS	$ 270,000.00	$ 270,000.00
6	Site Work	1	LS	$ 375,000.00	$ 375,000.00
7	Electrical, Instrumentation & Controls	1	LS	$ 350,000.00	$ 350,000.00
				Subtotal Lift Station Improvements	***$ 1,865,000.00***
Site Improvements					
1	Office Building/Lab	1	LS	$ 675,000.00	$ 675,000.00
2	Pavement	1	LS	$ 650,000.00	$ 650,000.00
3	Site Work	1	LS	$ 475,000.00	$ 475,000.00
4	Revegetation	1	LS	$ 25,000.00	$ 25,000.00
				Subtotal Site Improvements	***$ 1,825,000.00***
TOTAL CONSTRUCTION COST ESTIMATE FOR WWTP					**$ 22,165,000.00**
Engineering & Contingency					
1	Design, Surveying, Permitting, Construction Phase Services, Etc.	1	LS	$ 1,775,000.00	$ 1,775,000.00
2	Construction Contingency (20%)	1	LS	$ 4,440,000.00	$ 4,440,000.00
				Subtotal Contingency	***$ 6,215,000.00***
TOTAL PROJECT COST ESTIMATE					**$ 28,380,000.00**

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Appendix 6.3.6
PROPOSED WASTEWATER PLANT - OPTION A - REGIONAL 6.3 MGD WWTP
COST ESTIMATE

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
General					
1	Bonding, Mobilization, & Insurance (5% of Construction Budget)	1	LS	$ 1,200,000.00	$ 1,200,000.00
2	Construction Materials Testing	1	LS	$ 100,000.00	$ 100,000.00
3	Trench & Excavation Safety	1	LS	$ 75,000 00	$ 75,000.00
4	Erosion & Environmental Controls	1	LS	$ 50,000.00	$ 50,000.00
				Subtotal General	***$ 1,425,000.00***
Treatment Expansion					
1	SBR, EFF EQ, & Equipment Room	1	LS	$ 29,250,000.00	$ 29,250,000.00
2	Headworks	1	LS	$ 1,650,000.00	$ 1,650,000.00
3	Disk Filters	1	LS	$ 1,200,000.00	$ 1,200,000.00
4	Belt Press	1	LS	$ 550,000.00	$ 550,000.00
5	UV Facility	1	LS	$ 2,125,000.00	$ 2,125,000.00
6	Blowers	1	LS	$ 1,500,000.00	$ 1,500,000.00
7	Electrical, Instrumentation & Controls	1	LS	$ 4,500,000.00	$ 4,500,000.00
				Subtotal Treatment Expansion	***$ 40,775,000.00***
Lift Station Improvements					
1	Wet-Well & Access Hatch	1	LS	$ 650,000.00	$ 650,000.00
2	Valve-Vault	1	LS	$ 75,000.00	$ 75,000.00
3	Pumps	1	LS	$ 350,000.00	$ 350,000.00
4	Piping & Appurtenances	1	LS	$ 195,000.00	$ 195,000.00
5	Concrete Pavement	1	LS	$ 270,000.00	$ 270,000.00
6	Site Work	1	LS	$ 375,000.00	$ 375,000.00
7	Electrical, Instrumentation & Controls	1	LS	$ 450,000.00	$ 450,000.00
				Subtotal Lift Station Improvements	***$ 2,365,000.00***
Site Improvements					
1	Office Building/Lab	1	LS	$ 800,000.00	$ 800,000.00
2	Pavement	1	LS	$ 650,000.00	$ 650,000.00
3	Site Work	1	LS	$ 475,000.00	$ 475,000.00
4	Revegetation	1	LS	$ 25,000.00	$ 25,000.00
				Subtotal Site Improvements	***$ 1,950,000.00***
TOTAL CONSTRUCTION COST ESTIMATE FOR WWTP					**$ 46,515,000.00**
Engineering & Contingency					
1	Design, Surveying, Permitting, Construction Phase Services, Etc.	1	LS	$ 3,680,000.00	$ 3,680,000.00
2	Construction Contingency (20%)	1	LS	$ 9,310,000.00	$ 9,310,000.00
				Subtotal Contingency	***$ 12,990,000.00***
TOTAL PROJECT COST ESTIMATE					**$ 59,505,000.00**

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Appendix 6.3.7
PROPOSED WASTEWATER COLLECTION SYSTEM - OPTION A - NORTH SOUTH WWTP
COST ESTIMATE

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
General					
1	Bonding, Mobilization, & Insurance (5% of Construction Budget)	1	LS	$ 831,790.00	$ 831,790.00
2	Construction Materials Testing	1	LS	$ 50,000.00	$ 50,000.00
3	Trench & Excavation Safety	1	LS	$ 250,000.00	$ 250,000.00
4	Erosion & Environmental Controls	1	LS	$ 50,000.00	$ 50,000.00
				Subtotal General	***$ 1,181,800.00***
Gravity Collection System					
1	10" Wastewater Pipe	2,000	LF	$ 115.00	$ 230,000.00
2	12" Wastewater Pipe	13,600	LF	$ 120.00	$ 1,632,000.00
3	15" Wastewater Pipe	4,850	LF	$ 125.00	$ 606,250.00
4	18" Wastewater Pipe	28,200	LF	$ 130.00	$ 3,666,000.00
5	21" Wastewater Pipe	7,900	LF	$ 150.00	$ 1,185,000.00
6	24" Wastewater Pipe	16,100	LF	$ 160.00	$ 2,576,000.00
7	27" Wastewater Pipe	4,200	LF	$ 170.00	$ 714,000.00
8	36" Wastewater Pipe	1,300	LF	$ 195.00	$ 253,500.00
9	5' Dia Manhole	166	EA	$ 6,500.00	$ 1,079,000.00
10	6' Dia Manhole	22	EA	$ 7,500.00	$ 165,000.00
		Subtotal Gravity Collection System			***$ 12,106,800.00***
Forcemain System					
1	10" Forcemain Pipe	9,600	LF	$ 115.00	$ 1,104,000.00
2	12" Forcemain Pipe	5,000	LF	$ 120.00	$ 600,000.00
		Subtotal Forcemain System			***$ 1,704,000.00***
Minor Lift Stations					
1	Minor Lift Station	3	LS	$ 825,000.00	$ 2,475,000.00
		Subtotal Lift Station Improvements			***$ 2,475,000.00***
TOTAL CONSTRUCTION COST ESTIMATE					**$ 17,467,600.00**
Engineering & Contingency					
1	Design, Surveying, Permitting, Construction Phase Services, Etc.	1	LS	$ 1,397,408.00	$ 1,397,408.00
2	Construction Contingency (20%)	1	LS	$ 3,500,000.00	$ 3,500,000.00
				Subtotal Contingency	***$ 4,897,400.00***
TOTAL PROJECT COST ESTIMATE					**$ 22,365,000.00**

This Construction Cost Estimate is based on River City Engineering's experience and qualifications, and represents River City Engineering's best judgment. However, since River City Engineering has no control over the cost of labor, materials, equipment or services furnished by others, River City Engineering does not guarantee that the actual construction cost will not vary from the Construction Cost Estimate.

Appendix 6.3.8
PROPOSED WASTEWATER COLLECTION SYSTEM - OPTION A ALT - SOUTH REGIONAL WWTP
COST ESTIMATE

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
General					
1	Bonding, Mobilization, & Insurance (5% of Construction Budget)	1	LS	$ 1,030,405.00	$ 1,030,405.00
2	Construction Materials Testing	1	LS	$ 50,000.00	$ 50,000.00
3	Trench & Excavation Safety	1	LS	$ 250,000.00	$ 250,000.00
4	Erosion & Environmental Controls	1	LS	$ 50,000.00	$ 50,000.00
				Subtotal General	***$ 1,380,400.00***
Gravity Collection System					
1	10" Wastewater Pipe	2,000	LF	$ 115.00	$ 230,000.00
2	12" Wastewater Pipe	13,600	LF	$ 120.00	$ 1,632,000.00
3	15" Wastewater Pipe	4,850	LF	$ 125.00	$ 606,250.00
4	18" Wastewater Pipe	17,850	LF	$ 130.00	$ 2,320,500.00
5	21" Wastewater Pipe	2,800	LF	$ 150.00	$ 420,000.00
6	24" Wastewater Pipe	16,100	LF	$ 160.00	$ 2,576,000.00
7	27" Wastewater Pipe	4,200	LF	$ 170.00	$ 714,000.00
8	36" Wastewater Pipe	9,000	LF	$ 195.00	$ 1,755,000.00
9	42" Wastewater Pipe	1,300	LF	$ 220.00	$ 286,000.00
10	5' Dia Manhole	133	EA	$ 6,500.00	$ 864,500.00
11	6' Dia Manhole	22	EA	$ 7,500.00	$ 165,000.00
		Subtotal Gravity Collection System			***$ 11,569,300.00***
Forcemain System					
1	10" Forcemain Pipe	9,600	LF	$ 100.00	$ 960,000 00
2	12" Forcemain Pipe	5,000	LF	$ 115.00	$ 575,000.00
3	20" Forcemain Pipe	12,750	LF	$ 165.00	$ 2,103,750.00
				Subtotal Forcemain System	***$ 3,638,800.00***
Minor Lift Stations					
1	Minor Lift Station	3	LS	$ 825,000.00	$ 2,475,000.00
2	Major Lift Station	1	LS	$ 2,575,000.00	$ 2,575,000.00
		Subtotal Lift Station Improvements			***$ 5,050,000.00***
TOTAL CONSTRUCTION COST ESTIMATE					**$ 21,638,500.00**
Engineering & Contingency					
1	Design, Surveying, Permitting, Construction Phase Services, Etc.	1	LS	$ 1,731,080.00	$ 1,731,080.00
2	Construction Contingency (20%)	1	LS	$ 4,330,000.00	$ 4,330,000.00
				Subtotal Contingency	***$ 6,061,100.00***
TOTAL PROJECT COST ESTIMATE					**$ 27,699,600.00**

This Construction Cost Estimate is based on River City Engineering's experience and qualifications, and represents River City Engineering's best judgment However, since River City Engineering has no control over the cost of labor, materials, equipment or services furnished by others, River City Engineering does not guarantee that the actual construction cost will not vary from the Construction Cost Estimate.

Appendix 6.3.9
PROPOSED WASTEWATER PLANT - OPTION B - DUNLAP 7.2 MGD WWTP EXPANSION
COST ESTIMATE

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
General					
1	Bonding, Mobilization, & Insurance (5% of Construction Budget)	1	LS	$ 1,200,000.00	$ 1,200,000.00
2	Construction Materials Testing	1	LS	$ 100,000.00	$ 100,000.00
3	Trench & Excavation Safety	1	LS	$ 75,000.00	$ 75,000.00
4	Erosion & Environmental Controls	1	LS	$ 50,000.00	$ 50,000.00
				Subtotal General	***$ 1,425,000.00***
Treatment Expansion					
1	SBR, EFF EQ, & Equipment Room	1	LS	$ 29,250,000.00	$ 29,250,000.00
2	Headworks	1	LS	$ 1,650,000.00	$ 1,650,000.00
3	Disk Filters	1	LS	$ 1,200,000.00	$ 1,200,000.00
4	Belt Press	1	LS	$ 550,000.00	$ 550,000.00
5	UV Facility	1	LS	$ 2,125,000.00	$ 2,125,000.00
6	Blowers	1	LS	$ 1,500,000.00	$ 1,500,000.00
7	Electrical, Instrumentation & Controls	1	LS	$ 4,500,000.00	$ 4,500,000.00
				Subtotal Treatment Expansion	***$ 40,775,000.00***
Lift Station Improvements					
1	Wet-Well & Access Hatch	1	LS	$ 650,000.00	$ 650,000.00
2	Valve-Vault	1	LS	$ 75,000.00	$ 75,000.00
3	Pumps	1	LS	$ 350,000.00	$ 350,000.00
4	Piping & Appurtenances	1	LS	$ 195,000.00	$ 195,000.00
5	Concrete Pavement	1	LS	$ 270,000.00	$ 270,000.00
6	Site Work	1	LS	$ 375,000.00	$ 375,000.00
7	Electrical, Instrumentation & Controls	1	LS	$ 450,000.00	$ 450,000.00
				Subtotal Lift Station Improvements	***$ 2,365,000.00***
Site Improvements					
1	Office Building/Lab	1	LS	$ 800,000.00	$ 800,000.00
2	Pavement	1	LS	$ 650,000.00	$ 650,000.00
3	Site Work	1	LS	$ 475,000.00	$ 475,000.00
4	Revegetation	1	LS	$ 25,000.00	$ 25,000.00
				Subtotal Site Improvements	***$ 1,950,000.00***
TOTAL CONSTRUCTION COST ESTIMATE FOR WWTP					**$ 46,515,000.00**
Engineering & Contingency					
1	Design, Surveying, Permitting, Construction Phase Services, Etc.	1	LS	$ 3,680,000.00	$ 3,680,000.00
2	Construction Contingency (20%)	1	LS	$ 9,310,000.00	$ 9,310,000.00
				Subtotal Contingency	***$ 12,990,000.00***
TOTAL PROJECT COST ESTIMATE					**$ 59,505,000.00**

This Construction Cost Estimate is based on River City Engineering's experience and qualifications, and represents River City Engineering's best judgment. However, since River City Engineering has no control over the cost of labor, materials, equipment or services furnished by others, River City Engineering does not guarantee that the actual construction cost will not vary from the Construction Cost Estimate.

Appendix 6.3.10
PROPOSED WASTEWATER PLANT - OPTION B ALT - LAKE MCQUEENEY
6.3 MGD REGIONAL WWTP
COST ESTIMATE

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
General					
1	Bonding, Mobilization, & Insurance (5% of Construction Budget)	1	LS	$ 1,200,000.00	$ 1,200,000.00
2	Construction Materials Testing	1	LS	$ 100,000.00	$ 100,000.00
3	Trench & Excavation Safety	1	LS	$ 75,000.00	$ 75,000.00
4	Erosion & Environmental Controls	1	LS	$ 50,000.00	$ 50,000.00
				Subtotal General	***$ 1,425,000.00***
Treatment Expansion					
1	SBR, EFF EQ, & Equipment Room	1	LS	$ 29,250,000.00	$ 29,250,000.00
2	Headworks	1	LS	$ 1,650,000.00	$ 1,650,000.00
3	Disk Filters	1	LS	$ 1,200,000.00	$ 1,200,000.00
4	Belt Press	1	LS	$ 550,000.00	$ 550,000.00
5	UV Facility	1	LS	$ 2,125,000.00	$ 2,125,000.00
6	Blowers	1	LS	$ 1,500,000.00	$ 1,500,000.00
7	Electrical, Instrumentation & Controls	1	LS	$ 4,500,000.00	$ 4,500,000.00
				Subtotal Treatment Expansion	***$ 40,775,000.00***
Lift Station Improvements					
1	Wet-Well & Access Hatch	1	LS	$ 650,000.00	$ 650,000.00
2	Valve-Vault	1	LS	$ 75,000.00	$ 75,000.00
3	Pumps	1	LS	$ 350,000.00	$ 350,000.00
4	Piping & Appurtenances	1	LS	$ 195,000.00	$ 195,000.00
5	Concrete Pavement	1	LS	$ 270,000.00	$ 270,000.00
6	Site Work	1	LS	$ 375,000.00	$ 375,000.00
7	Electrical, Instrumentation & Controls	1	LS	$ 450,000.00	$ 450,000.00
				Subtotal Lift Station Improvements	***$ 2,365,000.00***
Site Improvements					
1	Office Building/Lab	1	LS	$ 800,000.00	$ 800,000.00
2	Pavement	1	LS	$ 650,000.00	$ 650,000.00
3	Site Work	1	LS	$ 475,000.00	$ 475,000.00
4	Revegetation	1	LS	$ 25,000.00	$ 25,000.00
				Subtotal Site Improvements	***$ 1,950,000.00***
TOTAL CONSTRUCTION COST ESTIMATE FOR WWTP					**$ 46,515,000.00**
Engineering & Contingency					
1	Design, Surveying, Permitting, Construction Phase Services, Etc.	1	LS	$ 3,680,000.00	$ 3,680,000.00
2	Construction Contingency (20%)	1	LS	$ 9,310,000.00	$ 9,310,000.00
				Subtotal Contingency	***$ 12,990,000.00***
TOTAL PROJECT COST ESTIMATE					**$ 59,505,000.00**

This Construction Cost Estimate is based on River City Engineering's experience and qualifications, and represents River City Engineering's best judgment. However, since River City Engineering has no control over the cost of labor, materials, equipment or services furnished by others, River City Engineering does not guarantee that the actual construction cost will not vary from the Construction Cost Estimate

Appendix 6.3.11
PROPOSED WASTEWATER COLLECTION SYSTEM - OPTION B - FORCEMAIN TO DUNLAP WWTP
COST ESTIMATE

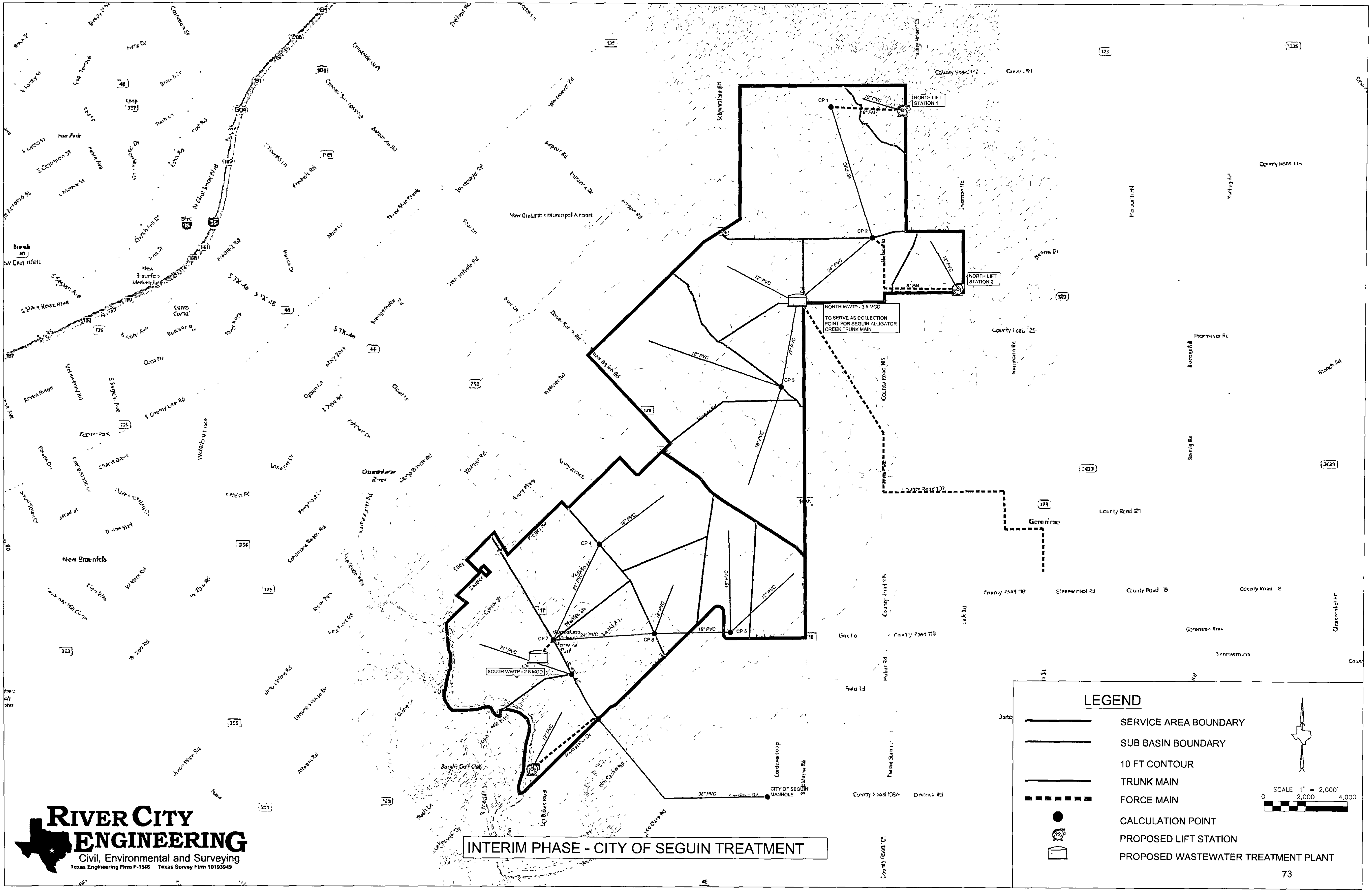
ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
General					
1	Bonding, Mobilization, & Insurance (5% of Construction Budget)	1	LS	$ 1,171,300.00	$ 1,171,300.00
2	Construction Materials Testing	1	LS	$ 50,000.00	$ 50,000.00
3	Trench & Excavation Safety	1	LS	$ 250,000.00	$ 250,000.00
4	Erosion & Environmental Controls	1	LS	$ 50,000.00	$ 50,000.00
				Subtotal General	***$ 1,521,300.00***
Gravity Collection System					
1	10" Wastewater Pipe	2,000	LF	$ 115.00	$ 230,000.00
2	12" Wastewater Pipe	12,950	LF	$ 120.00	$ 1,554,000.00
3	15" Wastewater Pipe	4,850	LF	$ 125.00	$ 606,250.00
4	18" Wastewater Pipe	17,850	LF	$ 130.00	$ 2,320,500.00
5	21" Wastewater Pipe	4,630	LF	$ 150.00	$ 694,500.00
6	24" Wastewater Pipe	16,100	LF	$ 160.00	$ 2,576,000.00
7	27" Wastewater Pipe	4,200	LF	$ 170.00	$ 714,000.00
8	36" Wastewater Pipe	8,200	LF	$ 195.00	$ 1,599,000.00
9	42" Wastewater Pipe	3,300	LF	$ 220.00	$ 726,000.00
10	Bore Across Lake	400	LF	$ 1,500.00	$ 600,000.00
11	5' Dia Manhole	135	EA	$ 6,500.00	$ 877,500.00
12	6' Dia Manhole	24	EA	$ 7,500.00	$ 180,000.00
		Subtotal Gravity Collection System			***$ 12,677,800.00***
Forcemain System					
1	10" Forcemain Pipe	9,600	LF	$ 115.00	$ 1,104,000.00
2	16" Forcemain Pipe	9,601	LF	$ 165.00	$ 1,584,165.00
3	24" Forcemain Pipe	14,000	LF	$ 190.00	$ 2,660,000.00
		Subtotal Forcemain System			***$ 5,348,200.00***
Minor Lift Stations					
1	Minor Lift Station	3	LS	$ 825,000.00	$ 2,475,000.00
2	Major Lift Station	1	LS	$ 2,575,000.00	$ 2,575,000.00
		Subtotal Lift Station Improvements			***$ 5,050,000.00***
TOTAL CONSTRUCTION COST ESTIMATE					**$ 24,597,300.00**
Engineering & Contingency					
1	Design, Surveying, Permitting, Construction Phase Services, Etc.	1	LS	$ 1,967,784.00	$ 1,967,784.00
2	Construction Contingency (20%)	1	LS	$ 4,920,000.00	$ 4,920,000.00
				Subtotal Contingency	***$ 6,887,800.00***
TOTAL PROJECT COST ESTIMATE					**$ 31,485,100.00**

This Construction Cost Estimate is based on River City Engineering's experience and qualifications, and represents River City Engineering's best judgment However, since River City Engineering has no control over the cost of labor, materials, equipment or services furnished by others, River City Engineering does not guarantee that the actual construction cost will not vary from the Construction Cost Estimate.

Appendix 6.3.12
PROPOSED WASTEWATER COLLECTION SYSTEM - OPTION B ALT - FORCEMAIN TO REGIONAL LAKE MCQUEENEY WWTP
COST ESTIMATE

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
General					
1	Bonding, Mobilization, & Insurance (5% of Construction Budget)	1	LS	$ 1,061,100.00	$ 1,061,100.00
2	Construction Materials Testing	1	LS	$ 50,000.00	$ 50,000.00
3	Trench & Excavation Safety	1	LS	$ 250,000.00	$ 250,000.00
4	Erosion & Environmental Controls	1	LS	$ 50,000.00	$ 50,000.00
				Subtotal General	***$ 1,411,100.00***
Gravity Collection System					
1	10" Wastewater Pipe	2,000	LF	$ 115.00	$ 230,000.00
2	12" Wastewater Pipe	12,950	LF	$ 120.00	$ 1,554,000.00
3	15" Wastewater Pipe	4,850	LF	$ 125.00	$ 606,250.00
4	18" Wastewater Pipe	17,850	LF	$ 130.00	$ 2,320,500.00
5	21" Wastewater Pipe	4,630	LF	$ 150.00	$ 694,500.00
6	24" Wastewater Pipe	16,100	LF	$ 160.00	$ 2,576,000.00
7	27" Wastewater Pipe	4,200	LF	$ 170.00	$ 714,000.00
8	36" Wastewater Pipe	8,200	LF	$ 195.00	$ 1,599,000.00
9	42" Wastewater Pipe	3,300	LF	$ 220.00	$ 726,000.00
10	Bore Across Lake	400	LF	$ 1,500.00	$ 600,000.00
11	5' Dia Manhole	135	EA	$ 6,500 00	$ 877,500.00
12	6' Dia Manhole	24	EA	$ 7,500.00	$ 180,000.00
		Subtotal Gravity Collection System			***$ 12,677,800.00***
Forcemain System					
1	10" Forcemain Pipe	9,600	LF	$ 115.00	$ 1,104,000.00
2	16" Forcemain Pipe	9,601	LF	$ 165.00	$ 1,584,165.00
3	24" Forcemain Pipe	2,400	LF	$ 190.00	$ 456,000.00
		Subtotal Forcemain System			***$ 3,144,200.00***
Minor Lift Stations					
1	Minor Lift Station	3	LS	$ 825,000.00	$ 2,475,000.00
2	Major Lift Station	1	LS	$ 2,575,000.00	$ 2,575,000.00
		Subtotal Lift Station Improvements			***$ 5,050,000.00***
TOTAL CONSTRUCTION COST ESTIMATE					**$ 22,283,100.00**
Engineering & Contingency					
1	Design, Surveying, Permitting, Construction Phase Services, Etc.	1	LS	$ 1,782,648.00	$ 1,782,648.00
2	Construction Contingency (20%)	1	LS	$ 4,460,000.00	$ 4,460,000.00
				Subtotal Contingency	***$ 6,242,600.00***
TOTAL PROJECT COST ESTIMATE					**$ 28,525,700.00**

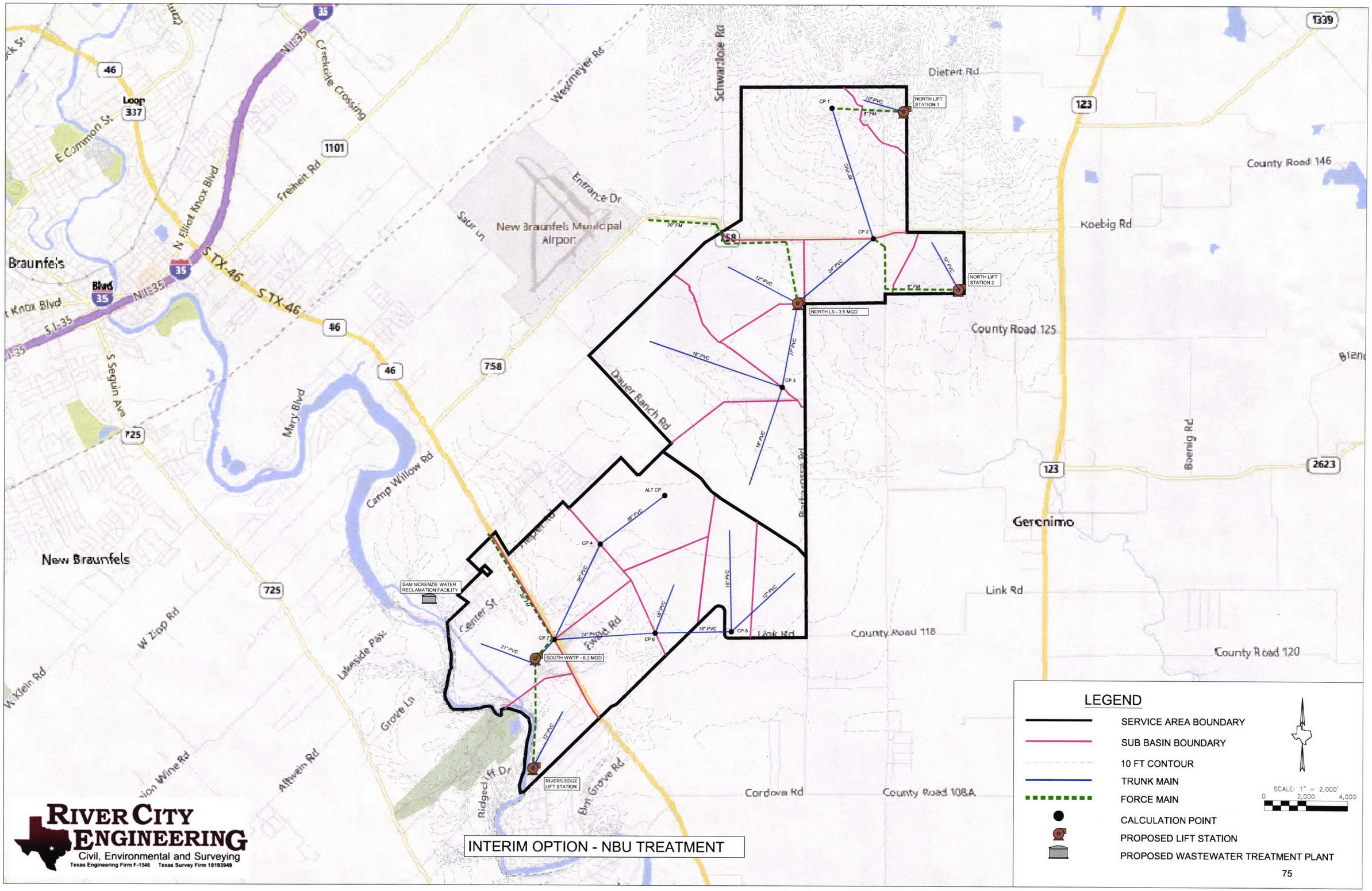
This Construction Cost Estimate is based on River City Engineering's experience and qualifications, and represents River City Engineering's best judgment. However, since River City Engineering has no control over the cost of labor, materials, equipment or services furnished by others, River City Engineering does not guarantee that the actual construction cost will not vary from the Construction Cost Estimate.


INTERIM PHASE - CITY OF SEGUIN TREATMENT
NORTH LIFT STATION 1
NORTH LIFT STATION 2
NORTH WWTP - 3.5 MGD
TO SERVE AS COLLECTION POINT FOR SEGUIN ALLIGATOR CREEK TRUNK MAIN
SOUTH WWTP - 2.8 MGD
CITY OF SEGUIN MANHOLE
CP 1
CP 2
CP 3
CP 4
CP 5
CP 6
CP 7
10" PVC
8" FM
18" PVC
24" PVC
12" PVC
27" PVC
21" PVC
15" PVC
36" PVC
New Braunfels
Geronimo
New Braunfels Municipal Airport
LEGEND
SERVICE AREA BOUNDARY
SUB BASIN BOUNDARY
10 FT CONTOUR
TRUNK MAIN
FORCE MAIN
CALCULATION POINT
PROPOSED LIFT STATION
PROPOSED WASTEWATER TREATMENT PLANT
SCALE 1" = 2,000'
0
2,000
4,000
RIVER CITY ENGINEERING
Civil, Environmental and Surveying
Texas Engineering Firm F-1546 Texas Survey Firm 10193949

Appendix 6.3.1
PROPOSED WASTEWATER COLLECTION SYSTEM - INTERIM SEGUIN - ENTIRE PLANNING AREA
COST ESTIMATE

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
General					
1	Bonding, Mobilization, & Insurance (5% of Construction Budget)	1	LS	$ 976,240.00	$ 976,240.00
2	Construction Materials Testing	1	LS	$ 50,000.00	$ 50,000 00
3	Trench & Excavation Safety	1	LS	$ 250,000.00	$ 250,000.00
4	Erosion & Environmental Controls	1	LS	$ 50,000.00	$ 50,000.00
				Subtotal General	***$ 1,326,200.00***
Gravity Collection System					
1	10" Wastewater Pipe	2,000	LF	$ 115.00	$ 230,000.00
2	12" Wastewater Pipe	13,600	LF	$ 120.00	$ 1,632,000.00
3	15" Wastewater Pipe	4,850	LF	$ 125.00	$ 606,250.00
4	18" Wastewater Pipe	28,200	LF	$ 130.00	$ 3,666,000.00
5	21" Wastewater Pipe	7,900	LF	$ 150.00	$ 1,185,000.00
6	24" Wastewater Pipe	16,100	LF	$ 160.00	$ 2,576,000.00
7	27" Wastewater Pipe	4,200	LF	$ 170.00	$ 714,000.00
8	36" Wastewater Pipe	15,500	LF	$ 195.00	$ 3,022,500.00
9	5' Dia Manhole	166	EA	$ 6,500.00	$ 1,079,000.00
10	6' Dia Manhole	38	EA	$ 7,500.00	$ 285,000.00
		Subtotal Gravity Collection System			***$ 14,995,800.00***
Forcemain System					
1	10" Forcemain Pipe	9,600	LF	$ 115.00	$ 1,104,000.00
2	12" Forcemain Pipe	5,000	LF	$ 120.00	$ 600,000.00
		Subtotal Forcemain System			***$ 1,704,000.00***
Minor Lift Stations					
1	Minor Lift Station	3	LS	$ 825,000.00	$ 2,475,000.00
		Subtotal Lift Station Improvements			***$ 2,475,000.00***
TOTAL CONSTRUCTION COST ESTIMATE					**$ 20,501,000.00**
Engineering & Contingency					
1	Design, Surveying, Permitting, Construction Phase Services, Etc.	1	LS	$ 1,640,080.00	$ 1,640,080.00
2	Construction Contingency (20%)	1	LS	$ 4,110,000.00	$ 4,110,000.00
				Subtotal Contingency	***$ 5,750,100.00***
TOTAL PROJECT COST ESTIMATE					**$ 26,251,100.00**

This Construction Cost Estimate is based on River City Engineering's experience and qualifications, and represents River City Engineering's best judgment However, since River City Engineering has no control over the cost of labor, materials, equipment or services furnished by others, River City Engineering does not guarantee that the actual construction cost will not vary from the Construction Cost Estimate.



RIVER CITY ENGINEERING
Civil, Environmental and Surveying
Texas Engineering Firm F-1546 Texas Survey Firm 10193949

Appendix 6.3.2
PROPOSED WASTEWATER COLLECTION SYSTEM - INTERIM NBU - ENTIRE PLANNING AREA
COST ESTIMATE

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
General					
1	Bonding, Mobilization, & Insurance (5% of Construction Budget)	1	LS	$ 1,223,090.00	$ 1,223,090.00
2	Construction Materials Testing	1	LS	$ 50,000.00	$ 50,000.00
3	Trench & Excavation Safety	1	LS	$ 250,000.00	$ 250,000.00
4	Erosion & Environmental Controls	1	LS	$ 50,000.00	$ 50,000.00
				Subtotal General	***$ 1,573,100.00***
Gravity Collection System					
1	10" Wastewater Pipe	2,000	LF	$ 115.00	$ 230,000.00
2	12" Wastewater Pipe	13,600	LF	$ 120.00	$ 1,632,000.00
3	15" Wastewater Pipe	4,850	LF	$ 125.00	$ 606,250.00
4	18" Wastewater Pipe	17,850	LF	$ 130.00	$ 2,320,500.00
5	21" Wastewater Pipe	2,800	LF	$ 150.00	$ 420,000.00
6	24" Wastewater Pipe	16,100	LF	$ 160.00	$ 2,576,000.00
7	27" Wastewater Pipe	4,200	LF	$ 170.00	$ 714,000.00
8	36" Wastewater Pipe	9,000	LF	$ 195.00	$ 1,755,000.00
9	42" Wastewater Pipe	1,300	LF	$ 220.00	$ 286,000.00
10	5' Dia Manhole	133	EA	$ 6,500.00	$ 864,500.00
11	6' Dia Manhole	22	EA	$ 7,500.00	$ 165,000.00
		Subtotal Gravity Collection System			***$ 11,569,300.00***
Forcemain System					
1	10" Forcemain Pipe	9,600	LF	$ 100.00	$ 960,000.00
2	12" Forcemain Pipe	5,000	LF	$ 115.00	$ 575,000.00
3	20" Forcemain Pipe	20,500	LF	$ 165.00	$ 3,382,500.00
				Subtotal Forcemain System	***$ 4,917,500.00***
Minor Lift Stations					
1	Minor Lift Station	3	LS	$ 825,000.00	$ 2,475,000.00
2	Major Lift Station	2	LS	$ 2,575,000.00	$ 5,150,000.00
		Subtotal Lift Station Improvements			***$ 7,625,000.00***
TOTAL CONSTRUCTION COST ESTIMATE					**$ 25,684,900.00**
Engineering & Contingency					
1	Design, Surveying, Permitting, Construction Phase Services, Etc	1	LS	$ 2,054,792.00	$ 2,054,792.00
2	Construction Contingency (20%)	1	LS	$ 5,140,000.00	$ 5,140,000.00
				Subtotal Contingency	***$ 7,194,800.00***
TOTAL PROJECT COST ESTIMATE					**$ 32,879,700.00**

This Construction Cost Estimate is based on River City Engineering's experience and qualifications, and represents River City Engineering's best judgment. However, since River City Engineering has no control over the cost of labor, materials, equipment or services furnished by others, River City Engineering does not guarantee that the actual construction cost will not vary from the Construction Cost Estimate.

TPDES PERMIT NO. WQ0011378001
[For TCEQ office use only - EPA I.D. No. TX0025208]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. Box 13087
Austin, Texas 78711-3087

This is a renewal that replaces TPDES Permit No. WQ0011378001 issued March 19, 2010.

PERMIT TO DISCHARGE WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

Guadalupe-Blanco River Authority

whose mailing address is

933 East Court Street
Seguin, Texas 78155

is authorized to treat and discharge wastes from the Dunlap Wastewater Treatment Facility, SIC Code 4952

located at 174 Century Ranch Road, approximately one mile east of Farm-to-Market Road 725, and 3.1 miles southeast of the intersection of Interstate Highway 35 and Farm-to-Market Road 725, New Braunfels, in Guadalupe County, Texas 78130

to Lake Dunlap portion of the Guadalupe River Below Comal River in Segment No. 1804 of the Guadalupe River Basin (Attachment B)

only according with effluent limitations, monitoring requirements and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, **February 1, 2020**.

ISSUED DATE: February 4, 2015

For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Numbers 001 and 002

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

   The combined daily average flow of effluent from Outfalls 001 and 002 shall not exceed 0.95 million gallons per day (MGD); nor shall the average discharge during any two-hour period (2-hour peak) exceed 1,979 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (79)	15	25	35	One/week	Composite
Total Suspended Solids	15 (119)	25	40	60	One/week	Composite
Ammonia Nitrogen	2 (16)	5	10	15	One/week	Composite
Total Phosphorus	1 (7.9)	2	3	4	One/week	Composite
E. coli, CFU or MPN/100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored twice per month by grab sample.

4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.

6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored once per week by grab sample.

TPDES PERMIT NO.
WQ0010232003
[For TCEQ office use only - EPA I.D. No. TX0088170]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. Box 13087
Austin, Texas 78711-3087

This is a renewal that replaces TPDES Permit No. WQ0010232003 issued on August 19, 2011.

PERMIT TO DISCHARGE WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

New Braunfels Utilities

whose mailing address is

263 Main Plaza
New Braunfels, Texas 78131

is authorized to treat and discharge wastes from the North Kuehler Wastewater Treatment Facility, SIC Code 4952

located at 1922 Kuehler Road, approximately 0.5 mile east of Farm-to-Market Road 725 and 0.5 mile south of Interstate Highway 35, off Kuehler Avenue, in the City of New Braunfels, in Comal County, Texas 78130.

to an unnamed tributary; thence to Guadalupe River Below Comal River in Segment No. 1804 of the Guadalupe River Basin

only according to effluent limitations, monitoring requirements and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation, or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, **February 1, 2020.**

ISSUED DATE: April 24, 2015

For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 3.1 million gallons per day (MGD) nor shall the average discharge during any two-hour period (2-hour peak) exceed 7,986 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements Report Daily Avg. & Daily Max.	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Biochemical Oxygen Demand (5-day)	10 (258)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (388)	25	40	60	Two/week	Composite
Total Phosphorus	3 (78)	6	8	10	Two/week	Composite
Free Cyanide*	0.018 (0.46)	N/A	0.038	0.048	One/week	Grab
E. coli, CFU or MPN/100 ml	126	N/A	399	N/A	One/week	Grab

   * See Other Requirement No. 6, Pages 31-32
2. The effluent shall contain a chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l chlorine residual and shall monitor chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 5.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

TPDES PERMIT NO.
WQ0010232001
[For TCEQ office use only - EPA I.D. No. TX0067881]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. Box 13087
Austin, Texas 78711-3087

This is a renewal that replaces TPDES Permit No. WQ0010232001 issued on December 23, 2010.

PERMIT TO DISCHARGE WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

New Braunfels Utilities

whose mailing address is

263 Main Plaza
New Braunfels, Texas 78131

is authorized to treat and discharge wastes from the South Kuehler Wastewater Treatment Facility, SIC Code 4952

located at 1608 Coco Drive, in New Braunfels in Comal County, Texas 78130

to an unnamed tributary of the Guadalupe River; thence to the Guadalupe River Below Comal River in Segment No. 1804 of the Guadalupe River Basin

only according to effluent limitations, monitoring requirements, and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation, or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, **February 1, 2020**.

ISSUED DATE: June 11, 2015

For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through date of expiration the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 4.2 million gallons per day, nor shall the average discharge during any two-hour period (2-hour peak) exceed 8,750 gallons per minute.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Biochemical Oxygen Demand (5-day)	10 (350)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (525)	25	40	60	Two/week	Composite
Total Phosphorus	3 (105)	6	8	8	Two/week	Composite
E. coli, CFU or MPN/100 ml	126	N/A	399	N/A	One/week	Grab

2. The effluent shall contain a chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l chlorine residual and shall monitor chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

TCEQ Docket No. 2013-2151-MWD
TPDES PERMIT NO.
WQ0010232004
[For TCEQ office use only - EPA I.D. No. TX0133248]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. Box 13087
Austin, Texas 78711-3087

PERMIT TO DISCHARGE WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

New Braunfels Utilities

whose mailing address is

263 Main Plaza
New Braunfels, Texas 78130

is authorized to treat and discharge wastes from the Sam C. McKenzie, Jr. Water Reclamation Facility, SIC Code 4952

located approximately 4.0 miles southeast of the City of New Braunfels, 0.7 mile southwest of the intersection of State Highway 46 and Elley Lane, and 0.6 mile downstream from the Lake Dunlap Dam on the Guadalupe River in Guadalupe County, Texas 78130

from the plant site from Outfall 001 via pipeline to the Lake Dunlap Hydroelectric Plant Canal; thence to the Guadalupe River Below Comal River; and from Outfall 002 via pipeline directly to the Guadalupe River Below Comal River in Segment No. 1804 of the Guadalupe River Basin (See Attachment A)

only according with effluent limitations, monitoring requirements and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation, or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, **February 1, 2017.**

ISSUED DATE: FEB 06 2014

For the Commission

INTERIM I EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through the completion of expansion to the 4.9 million gallons per day (MGD) facilities, the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 2.5 MGD; nor shall the average discharge during any two-hour period (2-hour peak) exceed 6,944 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg	7-day Avg	Daily Max	Single Grab	Report Daily Avg. & Daily Max.	
	mg/l (lbs/day)	mg/l	mg/l	mg/l	Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (209)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (313)	25	40	60	Two/week	Composite
Ammonia Nitrogen	3 (63)	6	10	15	Two/week	Composite
Total Phosphorus	1 (21)	2	4	6	Two/week	Composite
E. coli, CFU or MPN/100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.

4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.

6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored twice per week by grab sample.

7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

INTERIM II EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 001

1. During the period beginning upon the completion of expansion to the 4.9 million gallons per day (MGD) facilities and lasting through the completion of expansion to the 7.5 MGD facilities, the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 4.9 MGD; nor shall the average discharge during any two-hour period (2-hour peak) exceed 13,611 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements Report Daily Avg. & Daily Max.	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (409)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (613)	25	40	60	Two/week	Composite
Ammonia Nitrogen	3 (123)	6	10	15	Two/week	Composite
Total Phosphorus	1 (41)	2	4	6	Two/week	Composite
E. coli, CFU or MPN/100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.

4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.

6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored twice per week by grab sample.

7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

INTERIM III EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 001

1. During the period beginning upon the completion of expansion to the 7.5 million gallons per day (MGD) facilities and lasting through the completion of expansion to the 9.9 MGD facilities, the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 7.5 MGD; nor shall the average discharge during any two-hour period (2-hour peak) exceed 20,833 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg	7-day Avg	Daily Max	Single Grab	Report Daily Avg. & Daily Max.	
	mg/l (lbs/day)	mg/l	mg/l	mg/l	Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (626)	15	25	35	Five/week	Composite
Total Suspended Solids	15 (938)	25	40	60	Five/week	Composite
Ammonia Nitrogen	3 (188)	6	10	15	Five/week	Composite
Total Phosphorus	0.75 (47)	1.5	3	4.5	Five/week	Composite
E. coli, CFU or MPN/100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored five times per week by grab sample.

4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.

6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored five times per week by grab sample.

7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 001

1. During the period beginning upon the completion of expansion to the 9.9 million gallons per day (MGD) facilities and lasting through the date of permit expiration, the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 9.9 MGD; nor shall the average discharge during any two-hour period (2-hour peak) exceed 27,500 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (826)	15	25	35	Five/week	Composite
Total Suspended Solids	15 (1,238)	25	40	60	Five/week	Composite
Ammonia Nitrogen	3 (248)	6	10	15	Five/week	Composite
Total Phosphorus	0.5 (41)	1	2	3	Five/week	Composite
E. coli, CFU or MPN/100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored five times per week by grab sample.

4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.

6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored five times per week by grab sample.

7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

INTERIM I EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 002*

1. During the period beginning upon the date of issuance and lasting through the completion of expansion to the 4.9 million gallons per day (MGD) facilities, the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 2.5 MGD; nor shall the average discharge during any two-hour period (2-hour peak) exceed 6,944 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg	7-day Avg	Daily Max	Single Grab	Report Daily Avg. & Daily Max.	
	mg/l (lbs/day)	mg/l	mg/l	mg/l	Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (209)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (313)	25	40	60	Two/week	Composite
Ammonia Nitrogen	3 (63)	6	10	15	Two/week	Composite
Total Phosphorus	1 (21)	2	4	6	Two/week	Composite
E. coli, CFU or MPN/100 ml	126	N/A	399	N/A	Daily	Grab

* See Other Requirement No. 12

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.

4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.

6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored twice per week by grab sample.

7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

INTERIM II EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 002*

1. During the period beginning upon the completion of expansion to the 4.9 million gallons per day (MGD) facilities and lasting through the completion of expansion to the 7.5 MGD facilities, the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 4.9 MGD; nor shall the average discharge during any two-hour period (2-hour peak) exceed 13,611 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements Report Daily Avg. & Daily Max.	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (409)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (613)	25	40	60	Two/week	Composite
Ammonia Nitrogen	3 (123)	6	10	15	Two/week	Composite
Total Phosphorus	1 (41)	2	4	6	Two/week	Composite
E. coli, CFU or MPN/100 ml	126	N/A	399	N/A	Daily	Grab

* See Other Requirement No. 12

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.

4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.

6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored twice per week by grab sample.

7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

INTERIM III EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 002*

1. During the period beginning upon the completion of expansion to the 7.5 million gallons per day (MGD) facilities and lasting through the completion of expansion to the 9.9 MGD facilities, the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 7.5 MGD; nor shall the average discharge during any two-hour period (2-hour peak) exceed 20,833 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements Report Daily Avg. & Daily Max.	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (626)	15	25	35	Five/week	Composite
Total Suspended Solids	15 (938)	25	40	60	Five/week	Composite
Ammonia Nitrogen	3 (188)	6	10	15	Five/week	Composite
Total Phosphorus	0.75 (47)	1.5	3	4.5	Five/week	Composite
E. coli, CFU or MPN/100 ml	126	N/A	399	N/A	Daily	Grab

* See Other Requirement No. 12

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored five times per week by grab sample.

4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.

6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored five times per week by grab sample.

7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 002*

1. During the period beginning upon the completion of expansion to the 9.9 million gallons per day (MGD) facilities and lasting through the date of permit expiration, the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 9.9 MGD; nor shall the average discharge during any two-hour period (2-hour peak) exceed 27,500 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (826)	15	25	35	Five/week	Composite
Total Suspended Solids	15 (1,238)	25	40	60	Five/week	Composite
Ammonia Nitrogen	3 (248)	6	10	15	Five/week	Composite
Total Phosphorus	0.5 (41)	1	2	3	Five/week	Composite
E. coli, CFU or MPN/100 ml	126	N/A	399	N/A	Daily	Grab

* See Other Requirement No. 12

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored five times per week by grab sample.

4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.

6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored five times per week by grab sample.

7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

INTERIM I EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 003

1. During the period beginning upon the date of issuance and lasting through the completion of expansion to the 4.9 million gallons per day (MGD) facilities, the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 2.5 MGD; nor shall the average discharge during any two-hour period (2-hour peak) exceed 6,944 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations	Min. Self-Monitoring Requirements	
	Daily Avg lbs/day	Report lbs/day Measurement Frequency	Sample Type
Flow, MGD	Report	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	209	Two/week	Composite
Total Suspended Solids	313	Two/week	Composite
Ammonia Nitrogen	63	Two/week	Composite
Total Phosphorus	21	Two/week	Composite

2. Outfall 003 is defined as the combined flow and loadings from Outfall 001 and Outfall 002.

INTERIM II EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 003

1. During the period beginning upon the completion of expansion to the 4.9 million gallons per day (MGD) facilities and lasting through the completion of expansion to the 7.5 MGD facilities, the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 4.9 MGD; nor shall the average discharge during any two-hour period (2-hour peak) exceed 13,611 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements Report Daily Avg. & Daily Max.	
	Daily Avg lbs/day	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	409				Two/week	Composite
Total Suspended Solids	613				Two/week	Composite
Ammonia Nitrogen	123				Two/week	Composite
Total Phosphorus	41				Two/week	Composite

2. Outfall 003 is defined as the combined flow and loadings from Outfall 001 and Outfall 002.

INTERIM III EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 003

1. During the period beginning upon the completion of expansion to the 7.5 million gallons per day (MGD) facilities and lasting through the completion of expansion to the 9.9 MGD facilities, the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 7.5 MGD; nor shall the average discharge during any two-hour period (2-hour peak) exceed 20,833 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg	7-day Avg	Daily Max	Single Grab	Report Daily Avg. & Daily Max.	
	lbs/day	mg/l	mg/l	mg/l	Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	626				Five/week	Composite
Total Suspended Solids	938				Five/week	Composite
Ammonia Nitrogen	188				Five/week	Composite
Total Phosphorus	47				Five/week	Composite

2. Outfall 003 is defined as the combined flow and loadings from Outfall 001 and Outfall 002.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 003

1. During the period beginning upon the completion of expansion to the 9.9 million gallons per day (MGD) facilities and lasting through the date of permit expiration, the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 9.9 MGD; nor shall the average discharge during any two-hour period (2-hour peak) exceed 27,500 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations	Min. Self-Monitoring Requirements	
	Daily Avg lbs/day	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	826	Five/week	Composite
Total Suspended Solids	1,238	Five/week	Composite
Ammonia Nitrogen	248	Five/week	Composite
Total Phosphorus	41	Five/week	Composite

2. Outfall 003 is defined as the combined flow and loadings from Outfall 001 and Outfall 002.

TPDES PERMIT NO.
WQ0010277003
[For TCEQ office use only - EPA I.D. No. TX0103535]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. Box 13087
Austin, Texas 78711-3087

This is a renewal that replaces TPDES Permit No. WQ0010277003 issued on November 5, 2013.

PERMIT TO DISCHARGE WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

City of Seguin

whose mailing address is

205 North River Street
Seguin, Texas 78155

is authorized to treat and discharge wastes from the Geronimo Creek Wastewater Treatment Facility, SIC Code 4952

located at 450 Seitz Road in Guadalupe County, Texas 78155

via an 18-inch pipe to Geronimo Creek at a point 290 feet upstream from the confluence of Geronimo Creek and the Guadalupe River Below Comal River in Segment No. 1804 of the Guadalupe River Basin at the current outfall location for Interim Phase; directly to Guadalupe River Below Comal River in Segment No. 1804 of the Guadalupe River Basin at the proposed downstream outfall location for Final phase

only according to effluent limitations, monitoring requirements, and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation, or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, **February 1, 2020**.

ISSUED DATE: May 19, 2016

For the Commission

INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through date of discharge from the new outfall location (see Attachment A), the permittee is authorized to discharge subject to the following effluent limitations:

   The annual average flow of effluent shall not exceed 2.13 million gallons per day (MGD), nor shall the average discharge during any two-hour period (2-hour peak) exceed 3,000 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements Report Daily Avg. & Daily Max.	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Biochemical Oxygen Demand (5-day)	20 (355)	30	45	65	Two/week	Composite
Total Suspended Solids	20 (355)	30	45	65	Two/week	Composite
E. coli, colony forming units or most probable number per 100 ml	126	N/A	399	N/A	One/week	Grab

2. The effluent shall contain a chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample at each chlorine contact chamber. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l chlorine residual and shall monitor chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.