



TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission (If other is checked please describe in space provided.)		
<input type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)		<input checked="" type="checkbox"/> Other Modification
2. Customer Reference Number (if issued)	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number (if issued)
CN 600529069		RN 107133506

SECTION II: Customer Information

4. General Customer Information		5. Effective Date for Customer Information Updates (mm/dd/yyyy)			
<input type="checkbox"/> New Customer		<input type="checkbox"/> Update to Customer Information		<input type="checkbox"/> Change in Regulated Entity Ownership	
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)					
The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).					
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)				<i>If new Customer, enter previous Customer below:</i>	
7. TX SOS/CPA Filing Number		8. TX State Tax ID (11 digits)		9. Federal Tax ID (9 digits)	
				10. DUNS Number (if applicable)	
11. Type of Customer:		<input type="checkbox"/> Corporation		<input type="checkbox"/> Individual	
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Other		<input type="checkbox"/> Sole Proprietorship		Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited	
12. Number of Employees		<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher		13. Independently Owned and Operated?	
				<input type="checkbox"/> Yes <input type="checkbox"/> No	
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following					
<input type="checkbox"/> Owner		<input type="checkbox"/> Operator		<input type="checkbox"/> Owner & Operator	
<input type="checkbox"/> Occupational Licensee		<input type="checkbox"/> Responsible Party		<input type="checkbox"/> Voluntary Cleanup Applicant <input type="checkbox"/> Other:	
15. Mailing Address:					
City		State		ZIP	ZIP + 4
16. Country Mailing Information (if outside USA)				17. E-Mail Address (if applicable)	
18. Telephone Number		19. Extension or Code		20. Fax Number (if applicable)	
() -				() -	

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If 'New Regulated Entity' is selected below this form should be accompanied by a permit application)	
<input type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input checked="" type="checkbox"/> Update to Regulated Entity Information	
The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC).	
22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)	
University Pump Station	

23. Street Address of the Regulated Entity: (No PO Boxes)	7098 W Hausman Rd							
	City	SanAntonio	State	TX	ZIP	78249	ZIP + 4	
24. County	Bexar							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	Approximately 550 LF east of the intersection of Babcock Rd and W Hausman Rd							
26. Nearest City				State		Nearest ZIP Code		
San Antonio				TX		78249		
27. Latitude (N) In Decimal:		29.5717		28. Longitude (W) In Decimal:		-98.6296		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds			
29	34	18.1	-98	37	46.4			
29. Primary SIC Code (4 digits)		30. Secondary SIC Code (4 digits)		31. Primary NAICS Code (5 or 6 digits)		32. Secondary NAICS Code (5 or 6 digits)		
1623		1731		238910		238110		
33. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.)								
To increase water service capacity to northwest San Antonio								
34. Mailing Address:								
		City		State		ZIP		ZIP + 4
35. E-Mail Address:		Vincente.Garza@saws.org						
36. Telephone Number			37. Extension or Code			38. Fax Number (if applicable)		
(210) 366-1988						(210) 366-1980		

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

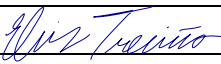
<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input checked="" type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source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

SECTION IV: Preparer Information

40. Name:	Elvis Treviño		41. Title:	Project Manager
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address	
(210) 366-1988	8114	(210) 366-1980	etrevino@maesce.com	

SECTION V: Authorized Signature

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

Company:	Maestas & Associates, LLC	Job Title:	Project Manager
Name (In Print):	Elvis Treviño	Phone:	(210) 366- 1988
Signature:		Date:	8/20/2024

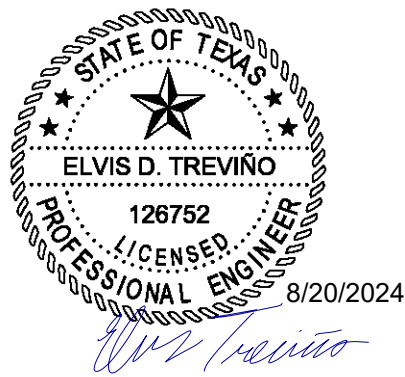
University Pump Station

WPAP Modification

August 2024

Prepared for:

San Antonio Water System



Prepared by:

MAESTAS

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with [30 TAC 213](#).

Administrative Review

1. [Edwards Aquifer applications](#) must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.

To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: <http://www.tceq.texas.gov/field/eapp>.

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.
3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.
4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.
6. If the geologic assessment was completed before October 1, 2004 and the site contains “possibly sensitive” features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.
2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.
4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a “Mid-Review Modification”. Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available:

- If the technical review has begun your application can be denied/withdrawn, your fees will be forfeited, and the plan will have to be resubmitted.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is denied/withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the affected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ’s Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ’s San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

1. Regulated Entity Name: University Pump Station					2. Regulated Entity No.: RN107133506				
3. Customer Name: San Antonio Water System					4. Customer No.: 600529069				
5. Project Type: (Please circle/check one)	New	Modification			Extension	Exception			
6. Plan Type: (Please circle/check one)	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	Residential	Non-residential				8. Site (acres):		4.63	
9. Application Fee:	\$4,000		10. Permanent BMP(s):			Vegetative Filter Strip			
11. SCS (Linear Ft.):	-		12. AST/UST (No. Tanks):						
13. County:	Bexar		14. Watershed:			Leon Creek			

Application Distribution

Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which cross into multiple jurisdictions, can require additional copies. Refer to the “Texas Groundwater Conservation Districts within the EAPP Boundaries” map found at:

http://www.tceq.texas.gov/assets/public/compliance/field_ops/eapp/EAPP%20GWCD%20map.pdf

For more detailed boundaries, please contact the conservation district directly.

Austin Region			
County:	Hays	Travis	Williamson
Original (1 req.)	—	—	—
Region (1 req.)	—	—	—
County(ies)	—	—	—
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Barton Springs/ Edwards Aquifer <input type="checkbox"/> Hays Trinity <input type="checkbox"/> Plum Creek	<input type="checkbox"/> Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	<input type="checkbox"/> Austin <input type="checkbox"/> Buda <input type="checkbox"/> Dripping Springs <input type="checkbox"/> Kyle <input type="checkbox"/> Mountain City <input type="checkbox"/> San Marcos <input type="checkbox"/> Wimberley <input type="checkbox"/> Woodcreek	<input type="checkbox"/> Austin <input type="checkbox"/> Bee Cave <input type="checkbox"/> Pflugerville <input type="checkbox"/> Rollingwood <input type="checkbox"/> Round Rock <input type="checkbox"/> Sunset Valley <input type="checkbox"/> West Lake Hills	<input type="checkbox"/> Austin <input type="checkbox"/> Cedar Park <input type="checkbox"/> Florence <input type="checkbox"/> Georgetown <input type="checkbox"/> Jerrell <input type="checkbox"/> Leander <input type="checkbox"/> Liberty Hill <input type="checkbox"/> Pflugerville <input type="checkbox"/> Round Rock

San Antonio Region					
County:	Bexar	Comal	Kinney	Medina	Uvalde
Original (1 req.)	<input checked="" type="checkbox"/>	—	—	—	—
Region (1 req.)	<input checked="" type="checkbox"/>	—	—	—	—
County(ies)	<input checked="" type="checkbox"/>	—	—	—	—
Groundwater Conservation District(s)	<input checked="" type="checkbox"/> Edwards Aquifer Authority <input checked="" type="checkbox"/> Trinity-Glen Rose	<input type="checkbox"/> Edwards Aquifer Authority	<input type="checkbox"/> Kinney	<input type="checkbox"/> EAA <input type="checkbox"/> Medina	<input type="checkbox"/> EAA <input type="checkbox"/> Uvalde
City(ies) Jurisdiction	<input type="checkbox"/> Castle Hills <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Helotes <input type="checkbox"/> Hill Country Village <input type="checkbox"/> Hollywood Park <input checked="" type="checkbox"/> San Antonio (SAWS) <input type="checkbox"/> Shavano Park	<input type="checkbox"/> Bulverde <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Garden Ridge <input type="checkbox"/> New Braunfels <input type="checkbox"/> Schertz	NA	<input type="checkbox"/> San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.

Elvis Treviño, PE

Print Name of Customer/Authorized Agent

Elvis Treviño

8/20/2024

Signature of Customer/Authorized Agent

Date

****FOR TCEQ INTERNAL USE ONLY****

Date(s) Reviewed:		Date Administratively Complete:	
Received From:		Correct Number of Copies:	
Received By:		Distribution Date:	
EAPP File Number:		Complex:	
Admin. Review(s) (No.):		No. AR Rounds:	
Delinquent Fees (Y/N):		Review Time Spent:	
Lat./Long. Verified:		SOS Customer Verification:	
Agent Authorization Complete/Notarized (Y/N):		Fee Check:	Payable to TCEQ (Y/N):
Core Data Form Complete (Y/N):			Signed (Y/N):
Core Data Form Incomplete Nos.:			Less than 90 days old (Y/N):

General Information Form

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **General Information Form** is hereby submitted for TCEQ review. The application was prepared by:

Print Name of Customer/Agent: Elvis Treviño, PE

Date: 08/16/2024

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: University Pump Station
2. County: Bexar
3. Stream Basin: San Antonio River Basin
4. Groundwater Conservation District (If applicable): N/A
5. Edwards Aquifer Zone:

- ☒ Recharge Zone
☐ Transition Zone

6. Plan Type:

- ☐ WPAP
☐ SCS
☒ Modification

- ☐ AST
☐ UST
☐ Exception Request

7. Customer (Applicant):

Contact Person: Ismael L. Rosales, PE

Entity: San Antonio Water System

Mailing Address: 2800 US Hwy 281 N

City, State: San Antonio, Texas

Zip: 78212

Telephone: 210-233-3705

FAX: 210-233-4288

Email Address: Ismael.Rosales@saws.org

8. Agent/Representative (If any):

Contact Person: Elvis Treviño, PE

Entity: Maestas & Associates, LLC.

Mailing Address: 8122 Datapoint Drive, Suite 840

City, State: San Antonio, Texas

Zip: 78229

Telephone: 210-366-1988

FAX: 210-366-1980

Email Address: etrevino@maesce.com

9. Project Location:

- ☒ The project site is located inside the city limits of City of San Antonio.
- ☐ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
- ☐ The project site is not located within any city's limits or ETJ.

10. ☒ The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

The project is located at 7098 W Hausman Rd near the intersection of Babcock and W Hausman Rd.

11. ☒ **Attachment A – Road Map.** A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.

12. ☒ **Attachment B - USGS / Edwards Recharge Zone Map.** A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:

- ☒ Project site boundaries.
- ☒ USGS Quadrangle Name(s).
- ☒ Boundaries of the Recharge Zone (and Transition Zone, if applicable).
- ☒ Drainage path from the project site to the boundary of the Recharge Zone.

13. ☒ **The TCEQ must be able to inspect the project site or the application will be returned.** Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.

☒ Survey staking will be completed by this date: 1-1-2025

14. ☒ **Attachment C – Project Description.** Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:

- ☒ Area of the site
- ☒ Offsite areas
- ☒ Impervious cover
- ☒ Permanent BMP(s)
- ☒ Proposed site use
- ☒ Site history
- ☒ Previous development
- ☒ Area(s) to be demolished

15. Existing project site conditions are noted below:

- ☐ Existing commercial site
- ☒ Existing industrial site
- ☐ Existing residential site
- ☐ Existing paved and/or unpaved roads
- ☐ Undeveloped (Cleared)
- ☐ Undeveloped (Undisturbed/Uncleared)
- ☐ Other: _____

Prohibited Activities

16. ☒ I am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:

- (1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
- (2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
- (3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;
- (4) The use of sewage holding tanks as parts of organized collection systems; and
- (5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).
- (6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.

17. ☒ I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:

- (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);

- (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and
- (3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

Administrative Information

18. The fee for the plan(s) is based on:

- ☒ For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
- ☐ For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
- ☐ For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.
- ☐ A request for an exception to any substantive portion of the regulations related to the protection of water quality.
- ☐ A request for an extension to a previously approved plan.

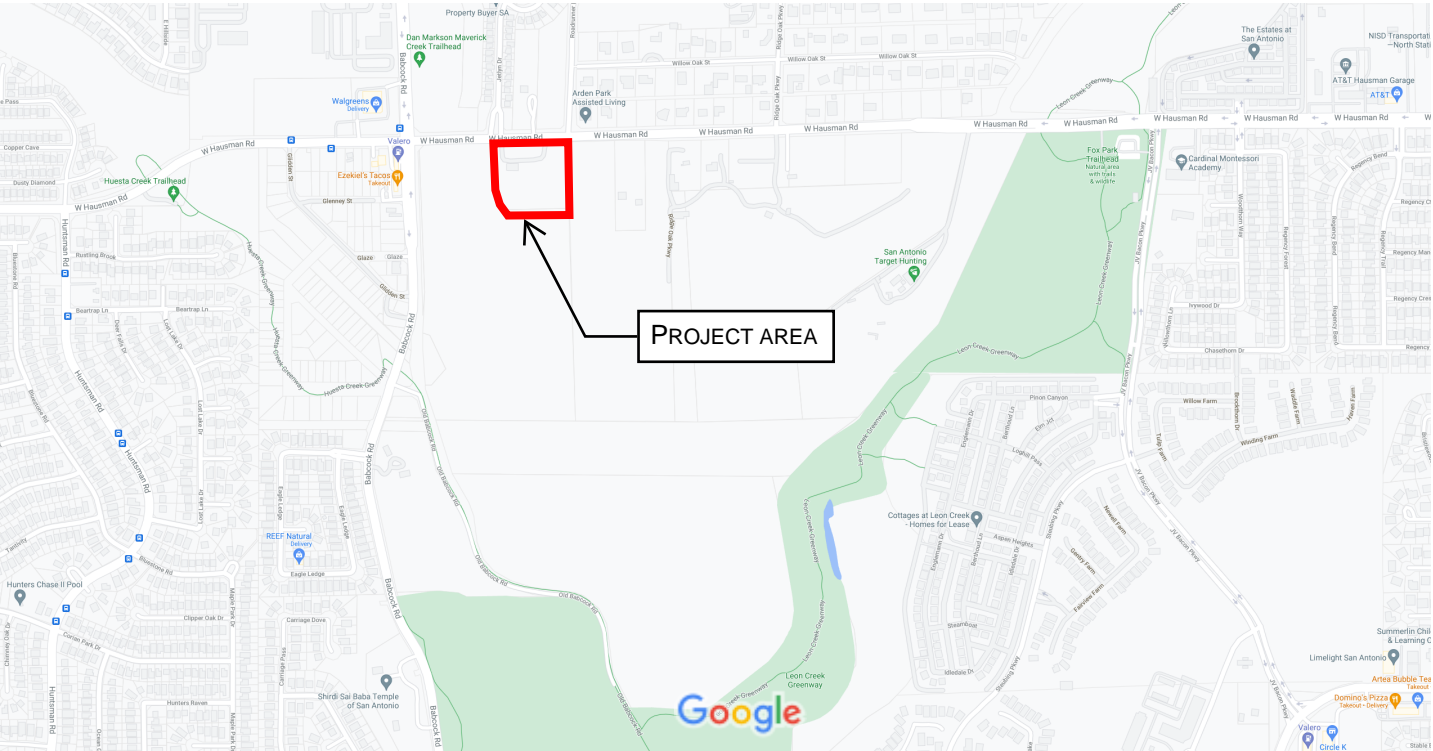
19. ☒ Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

- ☐ TCEQ cashier
- ☐ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
- ☒ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

20. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

21. ☒ No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.

University Pump Station



200 ft

LEGEND

 WPAP PROJECT SITE



ATTACHMENT A

PROJECT LOCATION

UNIVERSITY PUMP STATION

GENERAL INFORMATION FORM ATTACHMENTS

ATTACHMENT A – ROAD MAP

Attached.

ATTACHMENT B – USGS/EDWARDS AQUIFER RECHARGE ZONE MAP

Attached.

ATTACHMENT C - PROJECT DESCRIPTION

The San Antonio Water System (SAWS) is proposing to improve the existing University Pump Station. Improvements will include the replacement of a 5.0 MGD ground storage tank, yard piping, and electric components.

The project area within the Recharge Zone is 4.63 acres, which includes the replacement of the 5.0 MGD ground storage tank, revegetating all disturbed areas, and vegetative filter strips around new impervious components. All elements of the improvements drain to Leon Creek.

The proposed BMP is 8,134 square feet of vegetative filter strip around the proposed tank.

The existing curb along the property frontage will prevent off-site runoff from affecting the new impervious cover and vegetative filter strip. There is no concentration of flow within the shared use path VFS treatment area.

The total project area draining into the Recharge Zone is 4.63 acres, 1.44 acres of which is existing impervious cover (31.1% impervious cover) for predevelopment conditions. A reduction of approximately 4,076 square feet of impervious cover will result in 1.34 acres of total impervious cover and a post development percent impervious cover equal to 28.9%.

University Pump Station was platted on November 1st, 2002, recorded in Volume 9555 Page 174 of the Bexar County Records and has been used as SAWS facility since that time.

The logo for SWCA is positioned vertically on the left side of the page. It consists of the letters 'S', 'W', 'C', and 'A' stacked vertically in a large, light blue, serif font. The 'S' and 'W' are slightly larger than the 'C' and 'A'.

Geologic Assessment for University Ground Storage Tank Project, San Antonio, Bexar County, Texas

FEBRUARY 2022 (REVISED APRIL 2022)

PREPARED FOR

Black & Veatch Corporation

PREPARED BY

SWCA Environmental Consultants

Texas Board of Professional Geoscientists, Firm Registration No. 50159

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**GEOLOGIC ASSESSMENT
FOR THE UNIVERSITY GROUND STORAGE TANK PROJECT, SAN ANTONIO,
BEXAR COUNTY, TEXAS**

Prepared for

Black & Veatch Corporation
14100 San Pedro Ave.,
Suite 570
San Antonio, TX 78232

Prepared by

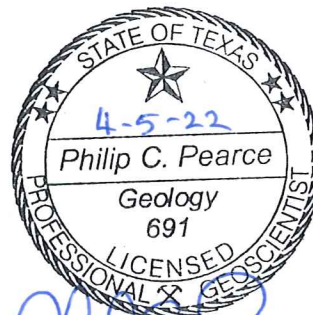
Philip Pearce, P.G.
Debbie J. Duran, G.I.T.

SWCA ENVIRONMENTAL CONSULTANTS

Texas Board of Professional Geoscientists, Firm Registration No. 50159
4949 N Loop 1604 W, Suite 235
San Antonio, TX 78249
www.swca.com

SWCA Project Number 61981

February 2022
(Revised April 2022)



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FIGURES

Figure 1. Project Area location map.	2
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APPENDICES

Appendix A	Texas Commission on Environmental Quality (TCEQ) Forms
Attachment A –	Geologic Assessment Table
Attachment B –	Stratigraphic Column
Attachment C –	Narrative Description of Site Geology
Attachment D –	Site Geologic Map

1 INTRODUCTION

This narrative Geologic Assessment accompanies the Texas Commission on Environmental Quality (TCEQ) Geologic Assessment form TCEQ-0585 completed of a proposed water ground storage tank project located approximately 0.1 miles east of the intersection of Babcock Road and West Hausman Road (Project Area) in San Antonio, northwestern Bexar County, Texas (Figure 1). The Project Site includes property owned and managed by the San Antonio Water System (SAWS) and additional property on the west and south sides of the SAWS facility that are being added to the facility.

2 METHODOLOGY

SWCA scientists conducted field surveys on 7 December 2020 and 28 January 2022. The pedestrian survey was completed by walking parallel transects spaced approximately 50 feet apart as directed by the TCEQ in the Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones (Rev. 10-01-04). Closer spacing was used where vegetation inhibited clear observation. The SWCA scientist carefully examined all potential karst features, including depressions, holes, and animal burrows, for subsurface extent evidence. SWCA used several techniques for this effort, including probing with a digging implement to determine the thickness and consistency of fill material and feeling for air flow which may indicate the presence of a sub-surface void space. Other techniques included recording notable feature site characteristics such as vegetation types or a semi-circular burrow mound produced by small mammal activity.

3 RESULTS

3.1 Site Overview

The Project Site lies within the Edwards Aquifer Recharge Zone (TCEQ 2020). The Project Site is located on a divide between Leon Creek and an unnamed tributary to Leon Creek. Topography generally slopes to the west, south, and east toward Leon Creek and the unnamed tributary, with an elevation of approximately 948 to 952 feet above mean sea level. A water ground storage tank and other public water supply infrastructure are present on the Project Site.

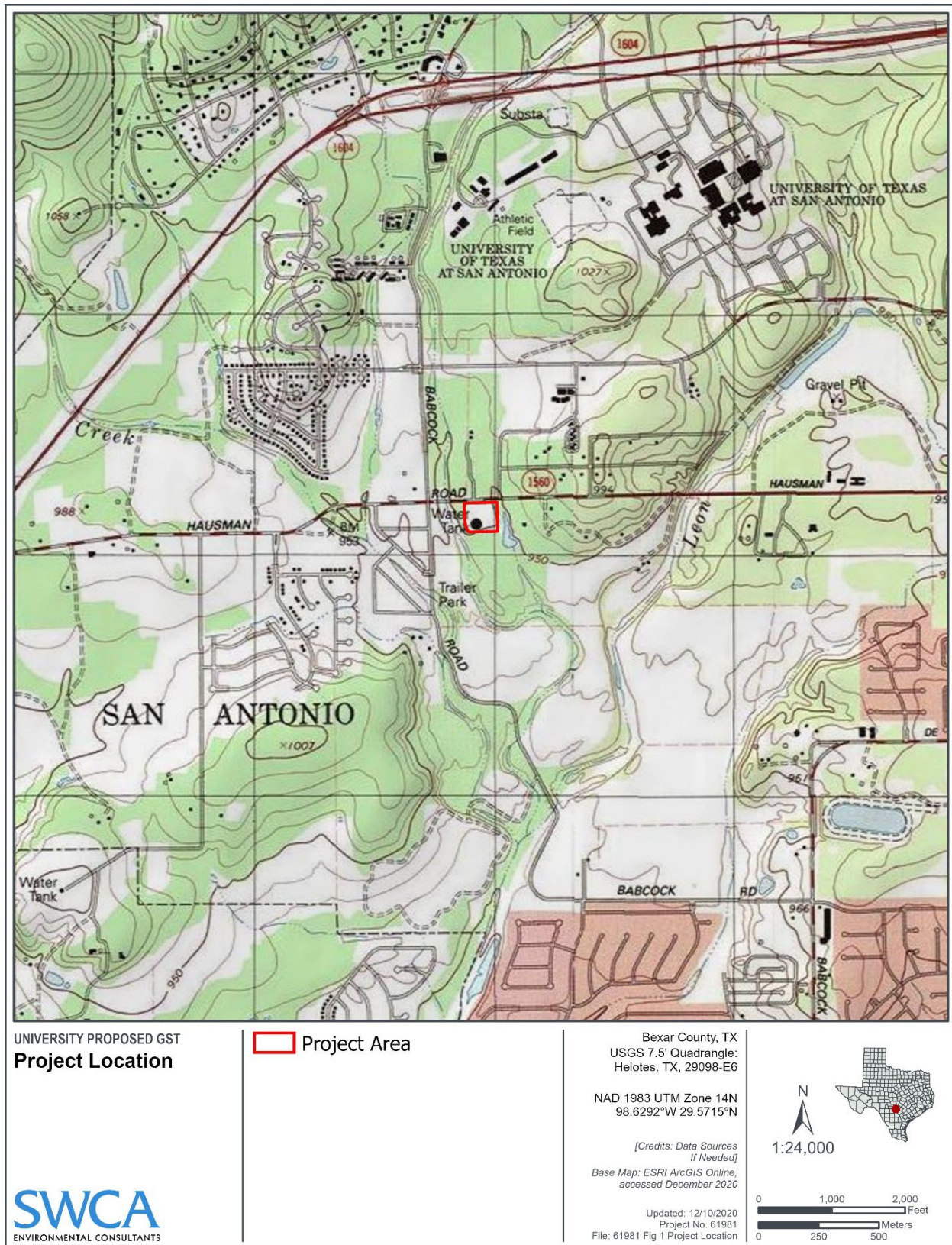


Figure 1. Project Site location map.

3.2 Geology

The Subject Site is underlain by the Del Rio Clay (Collins 1995) (Attachment D). The geology of the Project Site has been mapped most recently at a useful scale by Collins (1995) and SWCA finds this interpretation of the geology to be generally accurate. A Stratigraphic Column is included as Attachment B within Appendix A.

The Project Site occurs along the Balcones Fault Zone (BFZ) within the Edwards Aquifer Recharge Zone. Structural down-warping occurred with the Gulf of Mexico's ancestral formation during the middle Tertiary. The earth's crust was stretched in response and the BFZ formed along a zone of weakness, which currently marks the boundary between the Edwards Plateau and the Gulf Coastal Plain in central Texas. This zone is characterized by a series of northeast trending, predominantly normal, nearly vertical, en echelon faults. No faults cross the Project Area (Collins 1997).

The Project Site is within the Edwards Aquifer Recharge Zone (EARZ). Recharge into the Edwards Aquifer primarily occurs in areas where the Edwards Group and Georgetown Formation are exposed at the surface. Most recharge is from direct infiltration via precipitation and streamflow loss. Recharge occurs predominantly along secondary porosity features such as faults, fractures, and karst features (caves, solution cavities, sinkholes, etc.). Karst features are commonly formed along joints, fractures, and bedding plane surfaces in the Edwards Group and Georgetown Formation.

3.3 Soils

The Natural Resources Conservation Service (NRCS) identifies one soil unit within the Project Site (NRCS 2019). The Lewisville silty clay (LvB), 1 to 3 percent slopes, is mapped within the Project Site (NRCS 2019).

The LvB soil type is considered in the "B" hydrologic soil group classification, which has a moderate infiltration rate when thoroughly wetted.

3.4 Site Hydrogeologic Assessment

SWCA identified one geologic feature, a fault (S-1), on the Project Site. No karst features with surface expressions were observed on the Project Site. Feature S-1 is a normal, intraformational fault within the Del Rio Clay that crosses the northwestern corner of the Project Site. No evidence of enhanced permeability was observed in the vicinity of the fault, and the fault is located within the Del Rio Clay at the land surface; therefore, the probability of rapid infiltration is low.

The overall potential for fluid migration to the Edwards Aquifer for the site appears relatively low compared to background infiltration rates due to the presence of no karst or sensitive features and the presence of the Del Rio Clay. The Del Rio Clay is a relatively impermeable upper confining unit of the Edwards Aquifer. The depth to water in the Edwards Aquifer below ground surface in the vicinity of the site appears to be approximately 235 feet below land surface based on water levels measured in nearby State Wells No. 68-27-612 and No. 68-27-611 (Texas Water Development Board 2020).

4 REFERENCES

- Collins, E.W.1995. Geologic map of the Helotes quadrangle Texas. University of Texas at Austin, Bureau of Economic Geology, Open-File Map STATEMAP Study Area 5, scale 1:24,000. Accessed January 2021.
- Natural Resource Conservation Service (NRCS). 2020. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available at: <http://websoilsurvey.nrcs.usda.gov/>. Accessed December 2020.
- Texas Commission on Environmental Quality. 2020. Edwards Aquifer Viewer v3.8. Available at: <http://tceq.maps.arcgis.com/apps/webappviewer/index.html?id=2e5afa3ba8144c30a49d3dc1ab49edcd>. Accessed December 2020.
- Texas Water Development Board (TWDB). 2020. Water Data Interactive, interactive GIS database. Available at: <http://www2.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer>. Accessed December 2020.

APPENDIX A

Texas Commission on Environmental Quality (TCEQ) Forms

Geologic Assessment

Texas Commission on Environmental Quality

For Regulated Activities on The Edwards Aquifer Recharge/transition Zones and Relating to 30 TAC §213.5(b)(3), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist: Philip Pearce, P.G.

Telephone: 210.877.2847

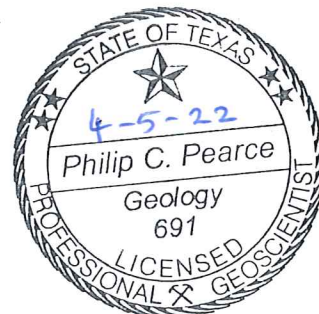
Date: _____

Fax: 210.877.2848

Representing: SWCA Environmental Consultants (TBPG Firm Registration #50159) (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:

Philip C. Pearce



Regulated Entity Name: University Ground Storage Tank

Project Information

1. Date(s) Geologic Assessment was performed: 7 December 2020 and 28 January 2022

2. Type of Project:

- ☒ WPAP
☐ SCS

- ☐ AST
☐ UST

3. Location of Project:

- ☒ Recharge Zone
☐ Transition Zone
☐ Contributing Zone within the Transition Zone

4. ☒ **Attachment A - Geologic Assessment Table.** Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.
5. ☒ Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map.

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
Lewisville Silty Clay (LvB)	B	1-3

** Soil Group Definitions (Abbreviated)*

- A. Soils having a high infiltration rate when thoroughly wetted.
- B. Soils having a moderate infiltration rate when thoroughly wetted.
- C. Soils having a slow infiltration rate when thoroughly wetted.
- D. Soils having a very slow infiltration rate when thoroughly wetted.

6. ☒ **Attachment B – Stratigraphic Column.** A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.
7. ☒ **Attachment C – Site Geology.** A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.
8. ☒ **Attachment D – Site Geologic Map(s).** The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'
 Applicant's Site Plan Scale: 1" = 60'
 Site Geologic Map Scale: 1" = 60'
 Site Soils Map Scale (if more than 1 soil type): 1" = N/A'
9. Method of collecting positional data:
 - ☒ Global Positioning System (GPS) technology.
 - ☐ Other method(s). Please describe method of data collection: _____
10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.

12. ☒ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.
- ☐ Geologic or manmade features were not discovered on the project site during the field investigation.
13. ☒ The Recharge Zone boundary is shown and labeled, if appropriate.
14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.
- ☐ There are 0 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
- ☐ The wells are not in use and have been properly abandoned.
- ☐ The wells are not in use and will be properly abandoned.
- ☐ The wells are in use and comply with 16 TAC Chapter 76.
- ☒ There are no wells or test holes of any kind known to exist on the project site.

Administrative Information

15. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

ATTACHMENT A

Geologic Assessment Table

GEOLOGIC ASSESSMENT TABLE									PROJECT NAME: Universtiy Ground Storage Tank											
LOCATION			FEATURE CHARACTERISTICS												EVALUATION		PHYSICAL SETTING			
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10	11		12	
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY	CATCHMENT AREA (ACRES)		TOPOGRAPHY	
						X	Y	Z		10						<40	≥40	<1.6	≥1.6	
S-1	29°34'18.63"N	98°37'48.17"W	F	20	Kdr	300	-	-	N55E	10				5	35	X		X		Hillside

* DATUM: NAD 83

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials

12 TOPOGRAPHY
Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

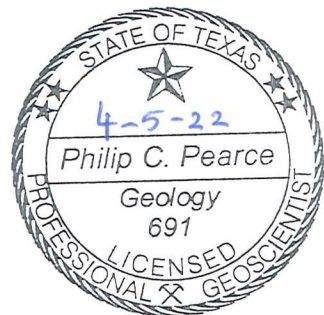
I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Philip C. Pearce

Date

Sheet 1 of 1

TCEQ-0585-Table (Rev. 10-01-04)



ATTACHMENT B

Stratigraphic Column

Stratigraphic Column

Note: The shaded areas represent the lithology that outcrops on the property.¹

Upper Cretaceous	Upper Confining Units			Navarro and Taylor Groups, undivided; 600 feet thick	
				Austin Group; 130-150 feet thick	
				Eagle Ford Group; 30-50 feet thick	
				Buda Limestone; 40-50 feet thick	
				Del Rio Clay; 40-50 feet thick	
Lower Cretaceous	I	Edwards Aquifer	Edwards Group	Georgetown Formation	10-40 feet thick
	II			Person Formation; 170-200 feet thick	Cyclic and Marine member, undivided
	III				Leached and Collapsed member, undivided
	IV				Regional Dense member
	V		Kainer Formation; 260-310 feet thick	Grainstone member	
	VI			Kirschberg Evaporite member	
	VII			Dolomitic member	
	VIII			Basal Nodular member	
	Lower Confining Units			Upper member of Glen Rose Formation; 350-500 feet thick	

¹ Blome, C.D., Faith, J.R., Pdraza, D.E, Ozuna, G.B, Cole, J.C., Clark, A.K., Small, T.A., and Morris, R.R. 2005. Geologic map of the Edwards aquifer recharge zone, south-central-Texas. U.S. Geological Survey SIM-2873. Scale 1:200,000.

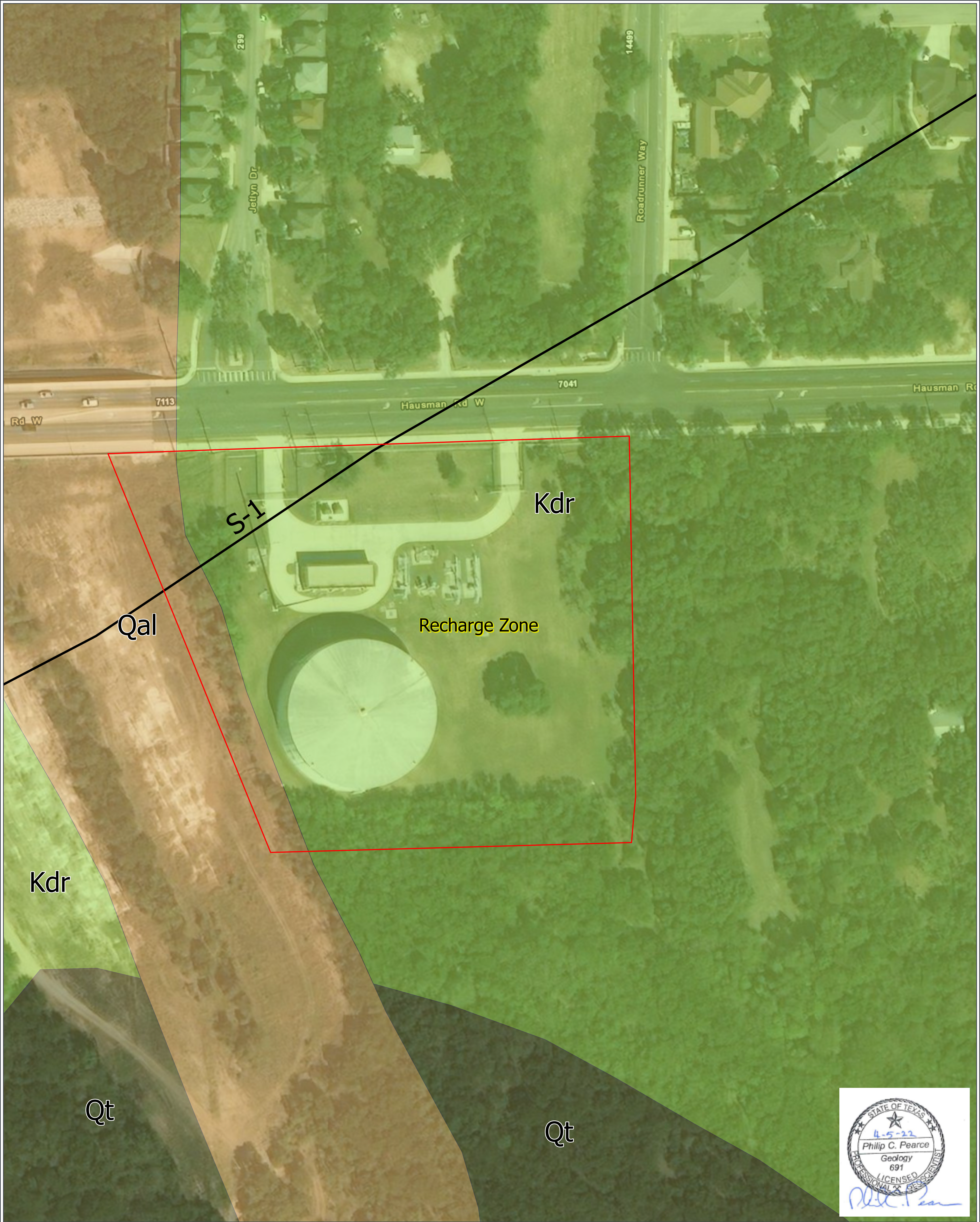
ATTACHMENT C

Narrative Description of Site Geology

PLEASE REFER TO SECTION 3.2 OF THIS REPORT FOR GEOLOGIC NARRATIVE DESCRIPTION

ATTACHMENT D

Site Geologic Map



Modification of a Previously Approved Plan

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Transition Zone and Relating to 30 TAC 213.4(j), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This request for a **Modification of a Previously Approved Plan** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: Elvis Treviño, PE

Date: 08/16/2024

Signature of Customer/Agent:



Project Information

1. Current Regulated Entity Name: University Pump Station
Original Regulated Entity Name: University Pump Station
Regulated Entity Number(s) (RN): RN107133506
Edwards Aquifer Protection Program ID Number(s): _____
☒ The applicant has not changed and the Customer Number (CN) is: 600529069
☐ The applicant or Regulated Entity has changed. A new Core Data Form has been provided.
2. ☒ **Attachment A: Original Approval Letter and Approved Modification Letters.** A copy of the original approval letter and copies of any modification approval letters are attached.

3. A modification of a previously approved plan is requested for (check all that apply):
- ☐ Physical or operational modification of any water pollution abatement structure(s) including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;
 - ☐ Change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;
 - ☒ Development of land previously identified as undeveloped in the original water pollution abatement plan;
 - ☐ Physical modification of the approved organized sewage collection system;
 - ☐ Physical modification of the approved underground storage tank system;
 - ☐ Physical modification of the approved aboveground storage tank system.
4. ☒ Summary of Proposed Modifications (select plan type being modified). If the approved plan has been modified more than once, copy the appropriate table below, as necessary, and complete the information for each additional modification.

<i>WPAP Modification</i>	<i>Approved Project</i>	<i>Proposed Modification</i>
<i>Summary</i>		
Acres	<u>4.63</u>	<u>4.63</u>
Type of Development	<u>Industrial</u>	<u>Industrial</u>
Number of Residential Lots	<u>0</u>	<u>0</u>
Impervious Cover (acres)	<u>1.44</u>	<u>1.34</u>
Impervious Cover (%)	<u>31.1%</u>	<u>28.9%</u>
Permanent BMPs	<u>VFS</u>	<u>VFS</u>
Other	_____	_____

<i>SCS Modification</i>	<i>Approved Project</i>	<i>Proposed Modification</i>
<i>Summary</i>		
Linear Feet	_____	_____
Pipe Diameter	_____	_____
Other	_____	_____

**AST Modification
Summary**

Approved Project

Proposed Modification

Number of ASTs

Volume of ASTs

Other

**UST Modification
Summary**

Approved Project

Proposed Modification

Number of USTs

Volume of USTs

Other

5. ☒ **Attachment B: Narrative of Proposed Modification.** A detailed narrative description of the nature of the proposed modification is attached. It discusses what was approved, including any previous modifications, and how this proposed modification will change the approved plan.
6. ☒ **Attachment C: Current Site Plan of the Approved Project.** A current site plan showing the existing site development (i.e., current site layout) at the time this application for modification is attached. A site plan detailing the changes proposed in the submitted modification is required elsewhere.
- ☐ The approved construction has not commenced. The original approval letter and any subsequent modification approval letters are included as Attachment A to document that the approval has not expired.
- ☒ The approved construction has commenced and has been completed. Attachment C illustrates that the site was constructed as approved.
- ☐ The approved construction has commenced and has been completed. Attachment C illustrates that the site was **not** constructed as approved.
- ☐ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was constructed as approved.
- ☐ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was **not** constructed as approved.
7. ☒ The acreage of the approved plan has increased. A Geologic Assessment has been provided for the new acreage.
- ☐ Acreage has not been added to or removed from the approved plan.
8. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

MODIFICATION OF A PREVIOUSLY APPROVED PLAN ATTACHMENTS

ATTACHMENT A – ORIGINAL APPROVAL LETTER AND APPROVED MODIFICATION LETTER

The Original Approval and Approved Modification Letters are attached.

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Zak Covar, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



2262

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 5, 2014

Mr. Juan Rodriguez
San Antonio Water System
2800 U. S. Highway 281 North
San Antonio, Texas 78249

Re: Edwards Aquifer, Bexar County

NAME OF PROJECT: University Pump Station; Located at 7098 W. Hausman Road; San Antonio, Texas

TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Investigation No. 1184335; Regulated Entity No. RN107133506; Additional ID No. 13-14071601

Dear Mr. Rodriguez:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Application for the above-referenced project submitted to the San Antonio Regional Office by Freese and Nichols, Inc. on behalf of the San Antonio Water System on July 16, 2014. Final review of the WPAP was completed after additional material was received on August 25, 2014. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The San Antonio Water System proposes to improve the existing University Pump Station. The area of the site is 4.09 acres with 1.01 acres (24.69 percent) of impervious cover. Proposed improvements include the addition of a 10 million gallon per day high service pump, construction

of a new electrical building, fence replacement and the removal and replacement of existing paving and curbs. No wastewater will be generated by this project.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, engineered vegetative filter strips, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 824 pounds of TSS generated from the 1.01 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The 15-foot engineered vegetative filter strips will provide 824 pounds of TSS removal. They shall have a uniform slope of less than 20 percent and vegetated cover of at least 80 percent which will extend along the entire length of the contributing area and will be free of gullies or rills that can concentrate overland flow. The contributing area shall be relatively flat to evenly distribute runoff, and the impervious cover in the direction of flow shall not exceed 72 feet. The engineered vegetative filter strips will merge with existing natural vegetative buffers.

GEOLOGY

According to the geologic assessment included with the application, the site is located within the Person Formation of the Edwards Group. Nine, non-sensitive geologic features were noted in the assessment by the project geologist. The San Antonio Regional Office site assessment conducted on August 27, 2014 revealed that the site was generally as described in the application.

SPECIAL CONDITIONS

- I. The permanent pollution abatement measures shall be operational prior to occupancy of the facility.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in

the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.

5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
6. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.
8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The

applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

13. No wells exist on the site. One well is in use and the other has been properly plugged. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

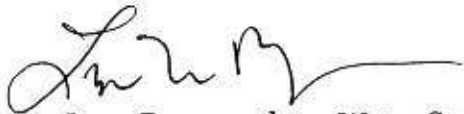
18. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.
19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan

for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Dianne Pavlicek, P.G., of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210-403-4074.

Sincerely,



Lynn Bumgardner, Water Section Manager
San Antonio Region Office
Texas Commission on Environmental Quality

LB/DP/eg

Enclosure: Deed Recordation Affidavit, Form TCEQ-0625
Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Mr. Patrick Garnett, CWB, Freese and Nichols, Inc.
Mr. David T. Bennett, P.E., Freese and Nichols, Inc.
Mr. Scott Halty, San Antonio Water System
Ms. Renee Green, P.E., Bexar County Public Works
Mr. Roland Ruiz, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC 212

Exhibit A

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 1, 2022

Mr. Vicente Garza, P.E.
San Antonio Water System
2800 US Highway 281 N
San Antonio, Texas 78212

Re: Edwards Aquifer, Bexar County

NAME OF PROJECT: University Pump Station; Located at 7098 W Hausman Rd, San Antonio; Texas

TYPE OF PLAN: Request for Modification of an Approved Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Regulated Entity No. RN 107133506; Additional ID No. 13001519

Dear Mr. Garza:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Modification application for the above-referenced project submitted to the San Antonio Regional Office by Maestas & Associates, LLC on behalf of the San Antonio Water System on April 15, 2022. Final review of the WPAP Modification was completed after additional material was received on June 27, 2022. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The University Pump Station was approved by letter dated September 5, 2014, additional identification number 13-1407160, for improvements to the existing pump station.

PROJECT DESCRIPTION

The proposed industrial project will have an area of approximately 4.63 acres. It will include making improvements to the existing University Pump Station. Improvements will include the addition of a 5 million gallons storage ground storage tank, yard piping, control valve structure (concrete pad), electric components, additional property acquisition, and the replacement of the security fence around the perimeter of the property. The new impervious cover will be 0.43 acres to have a total impervious cover of 1.44 acres (31.1- percent). No wastewater will be generated by this project.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, two (2) engineered vegetative filter strips, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 351 pounds of TSS generated from 0.43 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

GEOLOGY

According to the geologic assessment included with the application, the site is located on the Del Rio Clay. One non-sensitive geologic feature (fault) was noted by the project geologist. The San Antonio Regional Office site assessment conducted on June 23, 2022, revealed the site was as described in the application.

SPECIAL CONDITIONS

- I. This modification is subject to all Special and Standard Conditions listed in the WPAP approval letter dated September 5, 2014.
- II. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.

5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
6. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.
8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction, and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
13. No wells exist on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being

washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

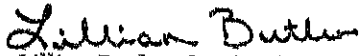
After Completion of Construction:

18. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.
19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through the San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

Mr. Vicente Garza, P.E.
Page 5
July 1, 2022

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Neri B. Valdez of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210-403-4087.

Sincerely,



Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/nbv

Enclosures: Deed Recordation Affidavit, Form TCEQ-0625
Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Mr. Elvis Treviño, P.E., Maestas & Associates, LLC

ATTACHMENT B – NARRATIVE OF PROPOSED MODIFICATION

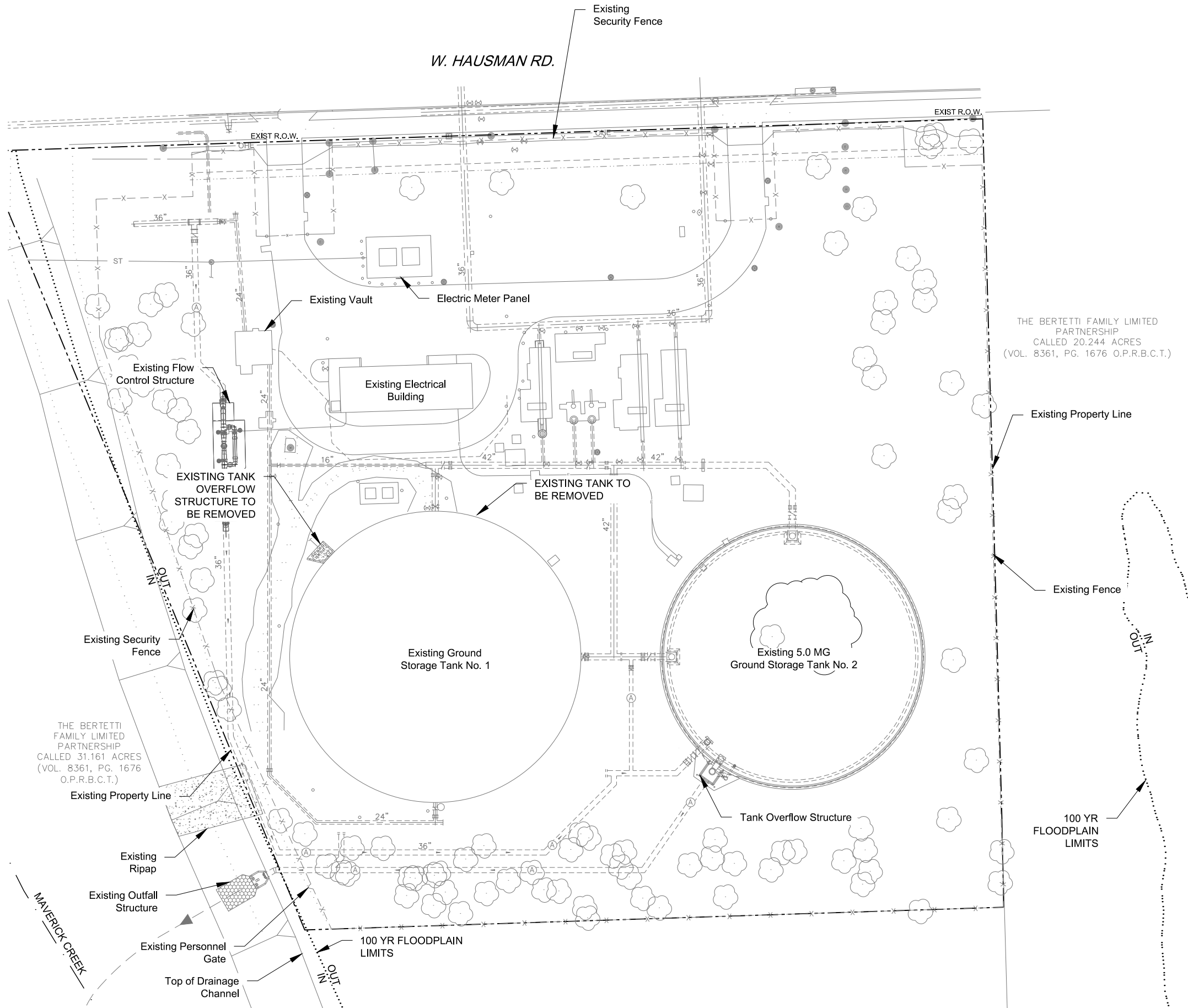
The University Pump Station is a San Antonio Water System (SAWS) facility. This pump station was previously upgraded in 2024. These improvements met TCEQ regulations for the Edwards Aquifer Protection Program and were documented and constructed following the parameters set in the Water Pollution Prevention Plan submitted and approved in 2022. The WPAP for this project site documented the total project area as 4.63 acres, including 1.44 acres of impervious cover (31.1% impervious cover). The improvements were constructed per plan and included the addition of the 5 MGD Ground Storage Tank No. 2, yard piping, control valve structure (concrete pad), electric components, additional property acquisition, and the replacement of the security fence around the perimeter of the property. A 15-foot vegetative filter strip was installed around the perimeter of the improvements approved in the WPAP to receive and treat runoff from the proposed impervious cover.

The proposed modification to the existing site includes the replacement of the 5.0 MGD Ground Storage Tank No.1 and removal of two vault structures. These proposed improvements will result in a decrease of 0.1 acres of impervious cover. The proposed modification for 4.63 acres will change the impervious cover percentage from 31.1% to 28.9%. It is proposed that a 15-foot vegetative filter strip be installed around the perimeter of the improvements to receive and treat runoff from the proposed impervious cover. The TCEQ Technical Guidance Manual (TGM) was used to design the permanent BMPs and measures for this site.

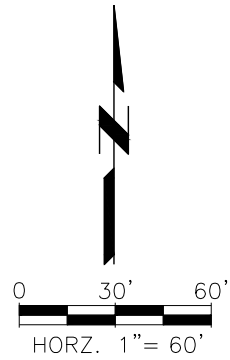
There is a previous modification to the approved WPAP for this site.

ATTACHMENT C – CURRENT SITE PLAN OF THE APPROVED PROJECT

Attached. This site plan illustrated that the site was constructed as approved.



THE BERTETTI FAMILY LIMITED
PARTNERSHIP
CALLED 20.244 ACRES
(VOL. 8361, PG. 1676 O.P.R.B.C.T.)



- LEGEND**
- X---X--- EXISTING CHAINLINK FENCE
 - EXISTING PROPERTY LINE
 - - - - - EASEMENT
 - 100 YR FLOODPLAIN LIMITS
 - CREEK CENTERLINE

NO. BY CK APP	
DATE	
REVISIONS AND RECORD OF ISSUE	
XREF1: BORDER.dwg	
XREF2:	
XREF3:	
XREF4:	
XREF5:	
PLOTTER:	
USER: Vinisha	
DWG VER: 1001	

PLANNING+ENGINEERING+PROJECT MANAGEMENT
MCI Moreno Cardenas Inc.
SAN ANTONIO, TEXAS
9901 McAllister Freeway #975, San Antonio, TX 78216 (710) 714-3553
Texas Board of Professional Engineers Registration No. F-000554
MCI PN 22122

SAN ANTONIO WATER SYSTEM
UNIVERSITY PUMP STATION

CIVIL
EXISTING SITE LAYOUT

DESIGNED:	
DETAILED:	
CHECKED:	
APPROVED:	
DATE:	
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
MCI PROJECT NO. 22114	
SAWS JOB NO. 22-6004	
1 SHEET 1 OF 1	

MAESTAS

8122 DATAPoint DR., STE. 840 SAN ANTONIO, TX 78229
(210) 366-1988 TBPE No.: F-333 TBPLS No.: 10194506

Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Water Pollution Abatement Plan Application Form** is hereby submitted for TCEQ review and Executive Director approval. The form was prepared by:

Print Name of Customer/Agent: Elvis Treviño, PE

Date: 08/16/2024

Signature of Customer/Agent:

_____

Regulated Entity Name: University Pump Station

Regulated Entity Information

1. The type of project is:

- ☐ Residential: Number of Lots: _____
- ☐ Residential: Number of Living Unit Equivalents: _____
- ☐ Commercial
- ☒ Industrial
- ☐ Other: _____

2. Total site acreage (size of property): 4.63

3. Estimated projected population: 0

4. The amount and type of impervious cover expected after construction are shown below:

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	30850.58	÷ 43,560 =	0.71
Parking		÷ 43,560 =	
Other paved surfaces	27556.49	÷ 43,560 =	0.63
Total Impervious Cover	58407.07	÷ 43,560 =	1.34

Total Impervious Cover 1.34 ÷ Total Acreage 4.63 X 100 = 28.9% Impervious Cover

5. ☒ **Attachment A - Factors Affecting Surface Water Quality.** A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use is attached.
6. ☒ Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

For Road Projects Only

Complete questions 7 - 12 if this application is exclusively for a road project.

7. Type of project:

- ☐ TXDOT road project.
- ☐ County road or roads built to county specifications.
- ☐ City thoroughfare or roads to be dedicated to a municipality.
- ☐ Street or road providing access to private driveways.

8. Type of pavement or road surface to be used:

- ☐ Concrete
- ☐ Asphaltic concrete pavement
- ☐ Other: _____

9. Length of Right of Way (R.O.W.): _____ feet.

Width of R.O.W.: _____ feet.

L x W = _____ Ft² ÷ 43,560 Ft²/Acre = _____ acres.

10. Length of pavement area: _____ feet.

Width of pavement area: _____ feet.

L x W = _____ Ft² ÷ 43,560 Ft²/Acre = _____ acres.

Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = _____% impervious cover.

11. ☐ A rest stop will be included in this project.

☐ A rest stop will not be included in this project.

12. ☐ Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

Stormwater to be generated by the Proposed Project

13. ☒ **Attachment B - Volume and Character of Stormwater.** A detailed description of the volume (quantity) and character (quality) of the stormwater runoff which is expected to occur from the proposed project is attached. The estimates of stormwater runoff quality and quantity are based on the area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

Wastewater to be generated by the Proposed Project

14. The character and volume of wastewater is shown below:

<u> 0 </u> % Domestic	<u> 0 </u> Gallons/day
<u> 0 </u> % Industrial	<u> 0 </u> Gallons/day
<u> 0 </u> % Commingled	<u> 0 </u> Gallons/day
TOTAL gallons/day <u> 0 </u>	

15. Wastewater will be disposed of by:

☐ On-Site Sewage Facility (OSSF/Septic Tank):

☐ **Attachment C - Suitability Letter from Authorized Agent.** An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.

☐ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☐ Sewage Collection System (Sewer Lines):

☐ Private service laterals from the wastewater generating facilities will be connected to an existing SCS.

☐ Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.

☐ The SCS was previously submitted on ____.

☐ The SCS was submitted with this application.

☐ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

☐ The sewage collection system will convey the wastewater to the _____ (name) Treatment Plant. The treatment facility is:

☐ Existing.

☐ Proposed.

16. ☐ All private service laterals will be inspected as required in 30 TAC §213.5.

Site Plan Requirements

Items 17 – 28 must be included on the Site Plan.

17. ☒ The Site Plan must have a minimum scale of 1" = 400'.

Site Plan Scale: 1" = 60 '.

18. 100-year floodplain boundaries:

☐ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.

☒ No part of the project site is located within the 100-year floodplain.

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): Flood Data by FEMA panel 48029C0210G, accessed in April 2014.

19. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, open space, etc. are shown on the plan.

☐ The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, open space, etc. are shown on the site plan.

20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

☐ There are ____ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)

☐ The wells are not in use and have been properly abandoned.

☐ The wells are not in use and will be properly abandoned.

☐ The wells are in use and comply with 16 TAC §76.

☒ There are no wells or test holes of any kind known to exist on the project site.

21. Geologic or manmade features which are on the site:

☐ All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.

☒ No sensitive geologic or manmade features were identified in the Geologic Assessment.

☐ **Attachment D - Exception to the Required Geologic Assessment.** A request and justification for an exception to a portion of the Geologic Assessment is attached.

- 22. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.
- 23. ☒ Areas of soil disturbance and areas which will not be disturbed.
- 24. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
- 25. ☒ Locations where soil stabilization practices are expected to occur.
- 26. ☒ Surface waters (including wetlands).
☐ N/A
- 27. ☒ Locations where stormwater discharges to surface water or sensitive features are to occur.
☒ There will be no discharges to surface water or sensitive features.
- 28. ☒ Legal boundaries of the site are shown.

Administrative Information

- 29. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
- 30. ☒ Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

ATTACHMENT A

Factors Affecting Water Quality

The activities in this project include the addition of impervious cover via construction of new buildings, pump pads, parking, and other related improvements that will upgrade the pump station. There is no surface water located on the proposed project site and no groundwater is anticipated to be affected by the project construction activities. The following are factors that may potentially affect water quality during the project construction, but BMPs are in place to help control them:

- Sediment-laden stormwater runoff over the construction area
- Construction vehicle traffic and fuel
- Temporary sanitary and trash facilities

ATTACHMENT B

Volume and Character of Stormwater

In reference to the impervious cover table in this package, impervious cover will account for 28.9% of the 4.63 acre site. To calculate peak discharge and other Stormwater factors, the rational method was used.

The existing site is approximately 1.44 acres impervious cover, which accounts for the existing two 5-million-gallon ground storage tanks, driveway, pump pads, and concrete vault structures and equipment. There are a few large mature trees along the east side of the property, with grass covering range from 50 - 75% of the site. The average Runoff Coefficient for the site pre-development is 0.58, while the average Runoff Coefficient for post development conditions is 0.57. The storms and peak discharge for pre-development and post development conditions are listed below.

Table 1 — Design Storms

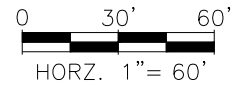
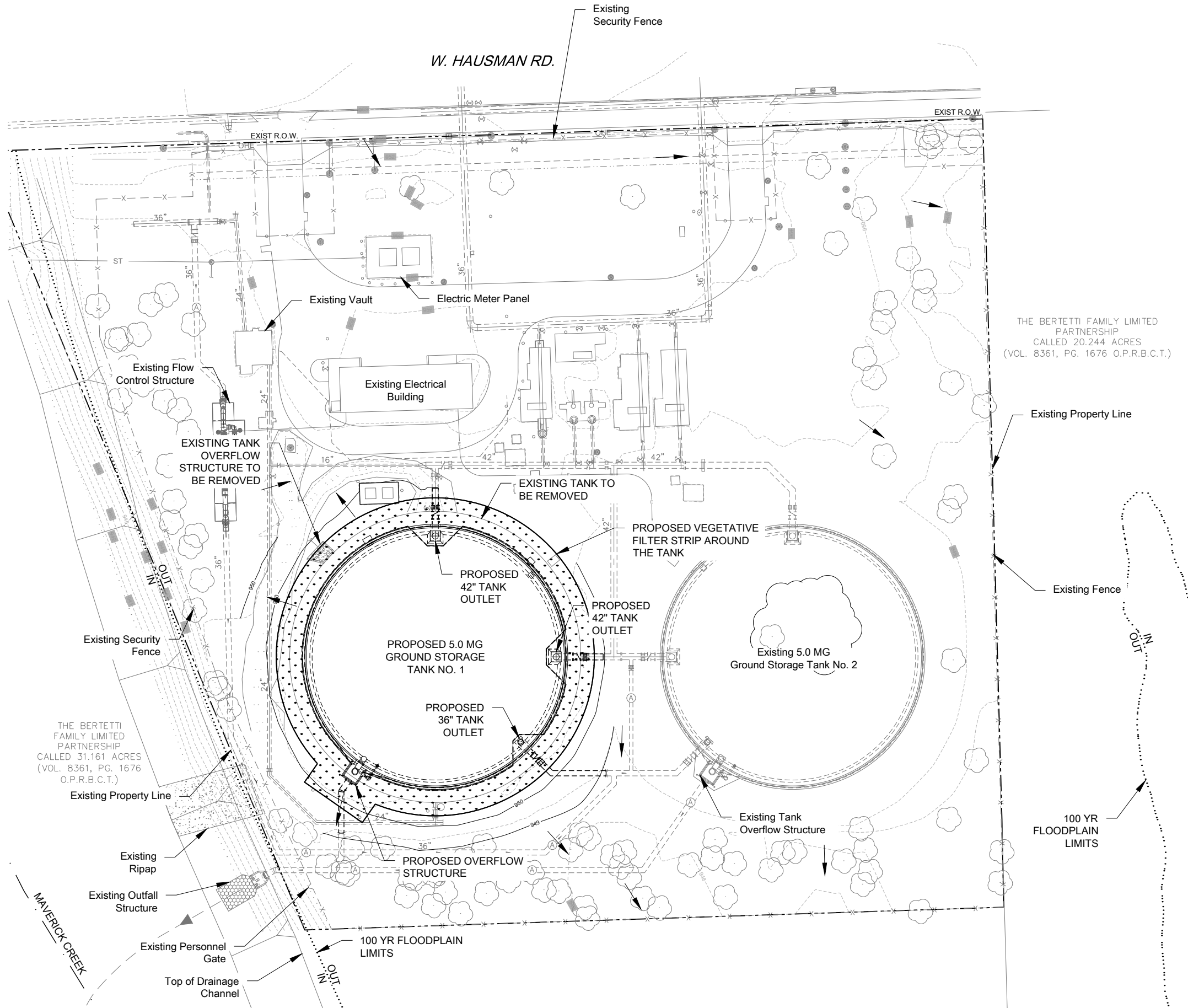
	Storm #1	Storm #2	Storm #3
Frequency (yr)	5	25	100
PRE-DEVELOPMENT Average Rainfall Intensity, i (in/hr)	4.54	6.28	7.79
POST DEVELOPMENT Average Rainfall Intensity, i (in/hr)	4.54	6.28	7.79
PRE-DEVELOPMENT Peak Discharge, Q (cfs)	12.22	16.89	20.95
POST DEVELOPMENT Peak Discharge, Q (cfs)	11.98	16.54	20.53

The times of concentration (Tc) for the site for pre and post conditions were determined and are listed below.

Table 2 — Time of Concentration

	Pre-development	Post Development
Sheet Flow	Tc = 9.4 minutes	Tc = 9.4 minutes
Shallow Concentrated Flow	L= 451 ft, Slope =0.010 ft/ft, Velocity = 0.68 fps Travel time = 11.0 minutes	L= 451 ft, Slope =0.010 ft/ft, Velocity = 0.68 fps Travel time = 11.0 minutes
Total Tc	20.41 minutes	20.41 minutes

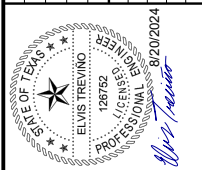
The quality of the Stormwater will be largely unaltered. The small amount of impervious cover decreased has reduced the site runoff. Potential contaminants include fuel, oils, and chemicals from vehicles entering and leaving the site.



REVISIONS AND RECORD OF ISSUE			
DATE	DESCRIPTION	BY	CHK
5/30/2012	Templates		
2018 Blank 2D Template (Imperial).dwg			
SAVED: Vmisha, 9/28/2023 12:25:56 PM			
PLOTTED:			
USER: Vmisha			
DWG VER: 1001			

- NOTES:
1. NO PART OF THE PROJECT SITE IS LOCATED WITHIN THE 100-YEAR FLOODPLAIN.
 2. THERE ARE NO KNOWN SURFACE WATERS ON THIS SITE.
 3. THERE WILL BE NO DISCHARGES TO SURFACE WATER ON SENSITIVE FEATURES.
 4. DIMENSIONS SHOWN TO BE USED FOR REFERENCE, CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.

REVISIONS AND RECORD OF ISSUE			
DATE	DESCRIPTION	BY	CHK
5/30/2012	Templates		
2018 Blank 2D Template (Imperial).dwg			
SAVED: Vmisha, 9/28/2023 12:25:56 PM			
PLOTTED:			
USER: Vmisha			
DWG VER: 1001			



PLANNING+ENGINEERING+PROJECT MANAGEMENT

MCI Cardenas Inc.
SAN ANTONIO
9901 McAllister Freeway #970, San Antonio, TX 78216 (710) 714-3553
Texas Board of Professional Engineers Registration No. F-000554
MCI PN 22122

SAN ANTONIO WATER SYSTEM
UNIVERSITY PUMP STATION

CIVIL
OVERALL SITE LAYOUT

DESIGNED:	
DETAILED:	
CHECKED:	
APPROVED:	
DATE:	
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
MCI PROJECT NO. 22114	
SAWS JOB NO. 22-6004	
1 SHEET 1 OF 1	

Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Temporary Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Elvis Treviño, PE

Date: 08/16/2024

Signature of Customer/Agent:



Regulated Entity Name: University Pump Station

Project Information

Potential Sources of Contamination

Examples: Fuel storage and use, chemical storage and use, use of asphaltic products, construction vehicles tracking onto public roads, and existing solid waste.

1. Fuels for construction equipment and hazardous substances which will be used during construction:

☐ The following fuels and/or hazardous substances will be stored on the site: _____

These fuels and/or hazardous substances will be stored in:

- ☐ Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.

- ☐ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.
- ☐ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.
- ☒ Fuels and hazardous substances will not be stored on the site.
- 2. ☒ **Attachment A - Spill Response Actions.** A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.
- 3. ☒ Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
- 4. ☒ **Attachment B - Potential Sources of Contamination.** A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

- 5. ☒ **Attachment C - Sequence of Major Activities.** A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.
 - ☒ For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.
 - ☒ For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.
- 6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Maverick Creek(tributary to Upper Leon Creek)

Temporary Best Management Practices (TBMPs)

Erosion control examples: tree protection, interceptor swales, level spreaders, outlet stabilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized construction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment basins. Please refer to the Technical Guidance Manual for guidelines and specifications. All structural BMPs must be shown on the site plan.

- 7. ☒ **Attachment D – Temporary Best Management Practices and Measures.** TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information is attached:

- ☒ A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.
 - ☒ A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.
 - ☒ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
 - ☒ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.
8. ☐ The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.
- ☐ **Attachment E - Request to Temporarily Seal a Feature.** A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.
- ☒ There will be no temporary sealing of naturally-occurring sensitive features on the site.
9. ☒ **Attachment F - Structural Practices.** A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.
10. ☒ **Attachment G - Drainage Area Map.** A drainage area map supporting the following requirements is attached:
- ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.
 - ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.
 - ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.
 - ☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

- ☒ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.
11. ☐ **Attachment H - Temporary Sediment Pond(s) Plans and Calculations.** Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.
- ☒ N/A
12. ☒ **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.
13. ☒ All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.
14. ☒ If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
15. ☒ Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.
16. ☒ Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

Examples: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or preservation of mature vegetation.

17. ☒ **Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices.** A schedule of the interim and permanent soil stabilization practices for the site is attached.

- 18. ☒ Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
- 19. ☒ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

- 20. ☒ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.
- 21. ☒ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.
- 22. ☒ Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

TEMPORARY STORMWATER SECTION

ATTACHMENTS

ATTACHMENT A — Spill Response Actions

The Contractor is required to remediate any spills, and to immediately report spills (including sanitary sewer discharge) of reportable quantities to the following:

- *To the National Response Center at (800) 424-8802,
- *To the Edwards Aquifer Authority at (210) 222-2204,
- *To the San Antonio Water Systems (SAWS) at (210) 704-7297 and one of the following:
 - To the State Emergency Response Center (800) 832-8224 (if after hours),
 - or to the TCEQ San Antonio Regional Office (210) 490-3096 (if during business hours).

This section describes measures to prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees.

The following steps will help reduce the storm water impacts of leaks and spills:
Education

- (1) Be aware that different materials pollute in different amounts. Make sure that each employee knows what a “significant spill” is for each material they use, and what is the appropriate response for “significant” and “insignificant” spills. Employees should also be aware of when spill must be reported to the TCEQ. Information available in 30 TAC 327.4 and 40 CFR 302.4.
- (2) Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
- (3) Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
- (4) Establish a continuing education program to indoctrinate new employees.
- (5) Have contractor’s superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

- (1) To the extent that the work can be accomplished safely, spills of oil, petroleum products, and substances listed under 40 CFR parts 110, 117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
- (2) Store hazardous materials and wastes in covered containers and protect from vandalism.
- (3) Place a stockpile of spill cleanup materials where it will be readily accessible.
- (4) Train employees in spill prevention and cleanup.
- (5) Designate responsible individuals to oversee and enforce control measures.

- (6) Spills should be covered and protected from storm water runoff during rainfall to the extent that it doesn't compromise clean-up activities.
- (7) Do not bury or wash spills with water.
- (8) Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
- (9) Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.
- (10) Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
- (11) Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
- (12) Keep waste storage areas clean, well-organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

- (1) Clean up leaks and spills immediately.
- (2) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
- (3) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

- (1) Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
- (2) Use absorbent materials on small spills rather than hosing down or burying the spill.
- (3) Absorbent materials should be promptly removed and disposed of properly.
- (4) Follow the practice below for a minor spill:
- (5) Contain the spread of the spill.
- (6) Recover spilled materials.
- (7) Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

Spills should be cleaned up immediately:

- (1) Contain spread of the spill.
- (2) Notify the project foreman immediately.
- (3) If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
- (4) If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
- (5) If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

- (1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
- (2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110, 119, and 302, the contractor should notify the National Response Center at (800) 424-8802.
- (3) Notification should first be made by telephone and followed up with a written report.
- (4) The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
- (5) Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at: <https://www.tceq.texas.gov/response>

Vehicle and Equipment Maintenance

- (1) If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the run-on of storm water and the runoff of spills.
- (2) Regularly inspect onsite vehicles and equipment for leaks and repair immediately.
- (3) Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- (4) Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- (5) Place drip pans or absorbent materials under paving equipment when not in use.
- (6) Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
- (7) Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.

- (8) Oil filters disposed of in trashcans or dumpsters can leak oil and pollute storm water. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
- (9) Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

- (1) If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the run-on of storm water and the runoff of spills.
- (2) Discourage "topping off" of fuel tanks.
- (3) Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

ATTACHMENT B — Potential Sources of Contamination

Potential sources of contamination include the hydrocarbons, hydraulic fluid and fuels required to service and operate the construction equipment, the materials and liquids used to conduct paving operations, various paints and solvents, and soil disturbed and mobilized during excavation. Additional sources of contamination include spills associated with vehicle accidents that might occur within the boundaries of the project.

ATTACHMENT C — Sequence of Major Events

1. Install erosion and sedimentation controls down-slope of work area and initiate SWPPP inspection and maintenance activities. Post the required SWPPP site notification.
2. Provide written notification to the TCEQ 48 hours prior to commencement of construction. Schedule an on-site pre-construction coordination meeting, if applicable.
3. Begin phased construction including the following:
 - Phase 1: Demolition of existing Storage Tank and vault structures (0.50 acres) (8 weeks)
 - Phase 2: Construct Water storage tank and Outflow structure. Installation of yard piping and Grading. (1.42 acres) (20 weeks)
4. Remove temporary erosion/sedimentation controls once disturbed areas are re-vegetated. Restore all areas disturbed by the removal of E&S controls.
5. Provide final notification of completion of construction in compliance with TCEQ and SWPPP requirements.

The receiving waters are Maverick Creek (tributary to Upper Leon Creek).

ATTACHMENT D – Temporary Best Management Practices

During the construction phase, the BMPs selected for the water quality protection include the following:

- Silt fences on the downstream side of disturbed areas to route flow around work area limiting the flow over the work area.
- Rock Filter Dams and Erosion control matting on the south west side of the site at the concrete riprap to limit pollutants leaving the site into the creek.
- Construction exits will be used to minimize offsite tracking of sediment. The locations of all temporary BMPs are shown on the Temporary Erosion and Sedimentation Control Plan sheets. Standard details show information relevant to BMP installation and maintenance. The locations of staging areas will be determined by the contractor. Appropriate erosion controls will be utilized to prevent sediment discharges from the staging areas.

The locations of all temporary BMPs are shown on the WPAP site plan sheets. Standard details show information relevant to BMP installation and maintenance. The locations of staging areas will be determined by the contractor. Appropriate erosion control will be utilized to prevent sediment discharges from staging areas.

ATTACHMENT E – Request to Temporarily Seal a Feature

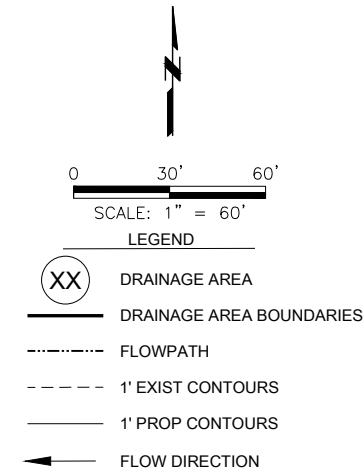
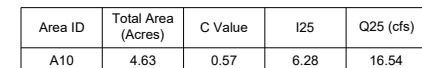
Not applicable.

ATTACHMENT F – Structural Practices

Sediment generated by the proposed activities will be controlled through the use of silt fence and rock filter dams. Construction vehicle traffic will be routed in a manner to avoid, where possible, creating loose sediment or mud that could enter waterways. The vegetative filter strips shall be installed using sod to have immediate sediment reduction.

ATTACHMENT G – Drainage Area Map

Attached – see the following sheet.



50-3012 - Templates		REVISIONS AND RECORD OF ISSUE	NO.	BY	CK	APPR
	2019 Blank 2D Template (Imperial).dwg	XREF1: BORDER.dwg				
		XREF2:				
	SAVED: Viniha, 8/15/2024 11:47:48 AM	XREF3:				
	PLOTTED:	XREF4:				
	USER: Viniha	XREF5:				
		DWG: VER: 1001				



MCi Moreno
Cardenas Inc.

EL PASO SAN ANTONIO
9001 McAllister Freeway #507, San Antonio TX 78216 (210) 314-3553
Texas Board of Professional Engineers Registration No. F-000554
MCI PN 22122

ANTONIO WATER SYSTEM
UNIVERSITY PUMP STATION



DESIGNED:
DETAILED:
CHECKED:
APPROVED:
DATE:

IF THIS BAR DOES NOT MEASURE 1" THEN
DRAWING IS NOT TO FULL SCALE

MCI PROJECT NO.
22114

SAWS JOB NO.
22-6004

1
SHEET
1 OF 1

MAESTAS
8122 DATAPOINT DR., STE. 840 SAN ANTONIO, TX 78229
(210) 366-1988 TBPE No.: F-333 TBPLS No.: 10194506

ATTACHMENT H – Temporary Sediment Pond Plan and Calculations

Sediment ponds are not planned for this project.

ATTACHMENT I – Inspection and Maintenance

Key to maintaining the performance of and efficiency of the temporary BMPs is inspection and repair when needed. The project will use an established schedule of inspection to identify the weak or failing sections of the sediment controls and institute repairs immediately to ensure the continued performance of the installed BMPs. BMPs will be inspected at least weekly and after each rain event. Damaged BMPs will either be repaired or replaced as needed. Staging of the project activities will also be used to reduce the amount of ground damage to minimize the potential for sediment to enter the waterways. The areas adjacent to creeks and drainage ways shall have priority followed by protecting storm sewer inlets. If storms damage the BMPs, efforts will be made to immediately to restore them to original performance levels.

Silt Fence

- (1) Inspection will be made weekly or after each rainfall event and repair or replacement should be made promptly as needed by the contractor.
- (2) Remove sediment when buildup reaches 6 inches. Accumulated silt will be removed after each rainfall and disposed of in a manner which will not cause additional siltation.
- (3) Replace any torn fabric or install a second line of fencing parallel to the torn section.
- (4) Dikes will be Inspected and realigned as needed to prevent gaps between sections.
- (5) Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.
- (6) When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior location of the silt fence should be revegetated. The fence itself should be disposed of in an approved landfill.

Construction Exit

- (1) Inspection will be made weekly or after each rainfall event and repair or replacement should be made promptly as needed by the contractor.
- (2) The entrance should be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment.
- (3) All sediment spilled, dropped, washed or tracked onto public right-of-way should be removed immediately by contractor.
- (4) When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way.

- (5) When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.
- (6) All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

Rock Filter Dams

- (1) Inspection should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made. Repair or replacement should be made promptly as needed by the contractor.
- (2) Remove sediment when buildup reaches a depth of 3 inches. Removed sediment should be deposited in a suitable area and in such a manner that it will not erode.
- (3) Check placement of device to prevent gaps between BMP and natural ground.
- (4) Any damaged mesh wire will be repaired.
- (5) The rock filter dam will be reshaped as needed during inspection.
- (6) The rock filter dam will be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.
- (7) The rock filter dam will be left in place until all upstream areas are stabilized and accumulated silt removed.

ATTACHMENT J – Schedule of Interim and Permanent Soil Stabilization Practices

Interim on-site stabilization measures, which are continuous, will include minimizing soil disturbances by exposing the smallest practical area of land required for the shortest period of time and maximizing use of natural vegetation. As soon as practical, all disturbed soil will be stabilized as per project specifications in accordance with pages 1-35 to 1-60 of TCEQ's Technical Guidance Manual (TGM) RG-348 (2005). Mulching, netting, erosion blankets and seeding are acceptable.

The management of land by using ground cover reduces erosion by reducing the flow rate of runoff and the raindrop impact. Bare soils should be seeded or otherwise stabilized within 14 calendar days after final grading or where construction activity has temporarily ceased for more than 21 days. Stabilization will involve simply sodding and fertilizing. Sediment that has escaped the site due to the failure of sediment and erosion controls should be removed as soon as possible to minimize offsite impacts. Permission should be obtained from adjacent landowners prior to offsite sediment removal.

Permanent Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(C), (D)(li), (E), and (5), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

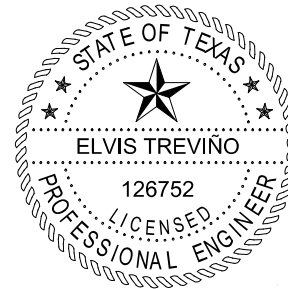
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Permanent Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Elvis Treviño, PE

Date: 08/16/2024

Signature of Customer/Agent





Regulated Entity Name: University Pump Station

Permanent Best Management Practices (BMPs)

Permanent best management practices and measures that will be used during and after construction is completed.

1. ☒ Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.
☐ N/A
2. ☒ These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.
☒ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

☐ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: _____

☐ N/A

3. ☒ Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

☐ N/A

4. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.

☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.

☒ The site will not be used for low density single-family residential development.

5. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

☐ **Attachment A - 20% or Less Impervious Cover Waiver.** The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.

☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.

☒ The site will not be used for multi-family residential developments, schools, or small business sites.

6. ☒ **Attachment B - BMPs for Upgradient Stormwater.**

- ☒ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.
- ☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.
- ☐ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.
7. ☒ **Attachment C - BMPs for On-site Stormwater.**
- ☒ A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached.
- ☐ Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.
8. ☒ **Attachment D - BMPs for Surface Streams.** A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.
- ☐ N/A
9. ☒ The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.
- ☒ The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.
- ☐ **Attachment E - Request to Seal Features.** A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.
10. ☒ **Attachment F - Construction Plans.** All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:
- ☒ Design calculations (TSS removal calculations)
- ☒ TCEQ construction notes
- ☒ All geologic features
- ☒ All proposed structural BMP(s) plans and specifications
- ☐ N/A

11. ☒ **Attachment G - Inspection, Maintenance, Repair and Retrofit Plan.** A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:
- ☒ Prepared and certified by the engineer designing the permanent BMPs and measures
 - ☒ Signed by the owner or responsible party
 - ☒ Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
 - ☒ A discussion of record keeping procedures
- ☐ N/A
12. ☐ **Attachment H - Pilot-Scale Field Testing Plan.** Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.
- ☒ N/A
13. ☒ **Attachment I - Measures for Minimizing Surface Stream Contamination.** A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that results in water quality degradation.
- ☐ N/A

Responsibility for Maintenance of Permanent BMP(s)

Responsibility for maintenance of best management practices and measures after construction is complete.

14. ☒ The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.
- ☐ N/A
15. ☒ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.
- ☐ N/A

PERMANENT STORMWATER SECTION ATTACHMENTS

ATTACHMENT A - 20% or Less Impervious Cover Waiver

Not applicable.

ATTACHMENT B - BMPs for Upgradient Stormwater

Under proposed conditions, offsite surface water will not flow through the project area. There is an existing curb along the northside of the project area and a drainage channel to the west that will reroute and capture any offsite flows. The vegetative filter strips will be placed around the proposed tank, allowing only the runoff from the proposed tank to pass the proposed BMP.

ATTACHMENT C – BMPs for On-site Stormwater

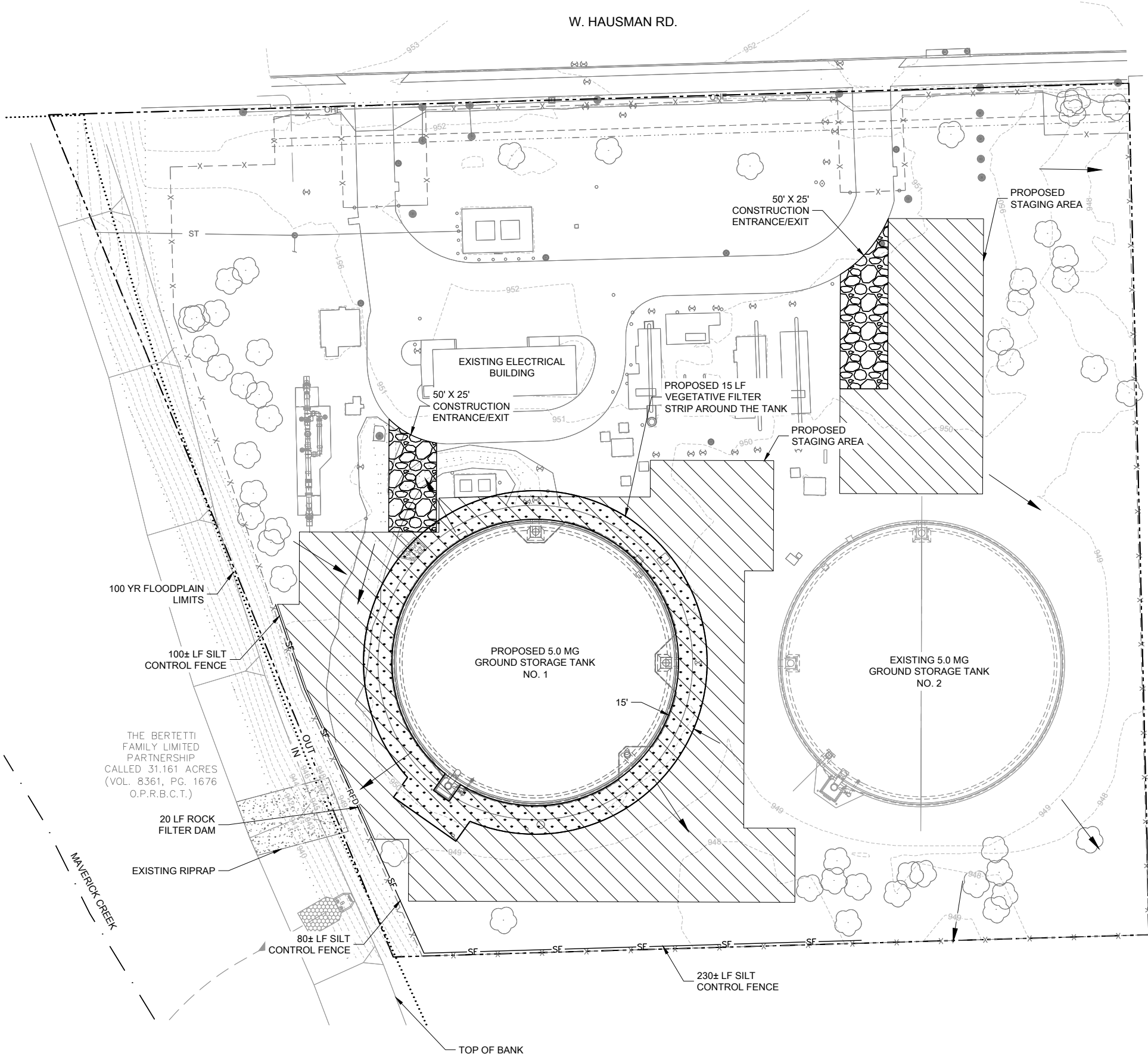
Treatment for the runoff from the drainage area on the newly constructed storage tank shall be addressed by vegetative filter strip placed around the tank.

ATTACHMENT D – BMPS FOR SURFACE STREAMS

No sensitive geologic features exist on the project site. The proposed project will replace the storage tank and outflow structure impervious covers and vegetative filter strips and trees around and throughout the project site will help filter water runoff while maintaining the natural flow to any surface streams that may be nearby the site. The undisturbed areas will remain in their natural state and any disturbed areas that are not paved will be re-vegetated. The nature of the improvements should not increase risk to surface streams. Treatment of the storage tank and the outflow structure by vegetative filter strip will provide protection to surface streams.

Action plan if sensitive features are encountered:

1. Immediately stop construction in the vicinity of the feature.
2. Notify TCEQ San Antonio Regional office staff.
3. Contact a qualified professional Geologist (and Karst biologist, if necessary) to assess the sensitivity of the feature.
4. If necessary, install temporary erosion and sedimentation controls to protect the feature from surface contamination.
5. Develop and submit to the TCEQ for review a feature closer and/or protection plan.
6. Commence construction in the vicinity of the feature only after the feature closure/protection plans has been approved by the TCEQ and the feature has been permanently protected from surface contamination.



- NOTES:
1. CONTRACTOR TO PROVIDE TEMPORARY SEDIMENT CONTROL FENCE AS INDICATED IN DRAWING AND SPECS TO MEET TCEQ REQUIREMENTS FOR SEDIMENTATION AND EROSION CONTROL.
 2. ALL TEMPORARY CONTROLS DURING CONSTRUCTION INCLUDING BUT NOT LIMITED TO, TEMPORARY SEDIMENT CONTROL, AROUND ACCESS ROADS SHALL MAINTAIN THE REQUIRED ACCESSIBILITY FOR THE DAILY OPERATION OF THE FACILITY.
 3. PRIMARY SITE ACCESS SHALL BE FROM W. HAUSMAN RD. ANY EQUIPMENT ENTERING OR EXISTING UNPAVED AREAS MUST UTILIZE CONSTRUCTION ENTRANCE/EXIT.
 4. PROJECT SITE IS WITHIN EDWARDS AQUIFER RECHARGE ZONE.
 5. CONTRACTOR SHALL SWEEP DRIVEWAY AT THE END OF EACH WORKDAY AND AS DIRECTED BY SAWS INSPECTOR.
 6. CONTRACTOR SHALL SWEEP W. HAUSMAN RD AS NEEDED OR REQUESTED BY SAWS OR COSA.
 7. CONTRACTOR TO ENSURE POSITIVE DRAINAGE FOR THE AREAS THAT ARE DISTURBED.

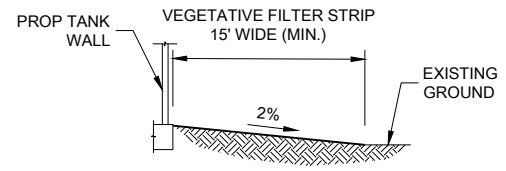
THE BERTETTI FAMILY LIMITED
PARTNERSHIP
CALLED 20.244 ACRES
(VOL. 8361, PG. 1676 O.P.R.B.C.T.)

LEGEND

- SF SEDIMENT CONTROL FENCE
- RFD ROCK FILTER DAM
- 100 YR FLOODPLAIN LIMITS
- FLOW ARROW
- CONSTRUCTION ENTRANCE/EXIT
- PROPOSED STAGING AREA
- VEGETATIVE FILTER STRIP

VEGETATIVE FILTER STRIP NOTES:

1. USE 4" TOP SOIL AND SOD TO ACHIEVE 80% VEGETATIVE COVER.
2. PRODUCE UNIFORM, SHALLOW OVERLAND FLOW ACROSS THE ENTIRE STRIP.
3. THE FILTER STRIP GRADE SHOULD NOT EXCEED 20% OF THE GRADE.
4. THE MINIMUM DIMENSION OF THE FILTER STRIP (IN THE DIRECTION OF FLOW) SHOULD BE NO LESS THAN 15 FEET.
5. THE MINIMUM VEGETATED COVER FOR ENGINEERED STRIPS IS 80%.
6. THE AREA TO BE USED FOR THE STRIP SHOULD BE FREE OF GULLIES OR RILLS THAT CAN CONCENTRATE OVERLAND FLOW.
7. THE TOP EDGE OF THE FILTER STRIP ALONG THE PAVEMENT WILL BE DESIGNED TO AVOID THE SITUATION WHERE RUNOFF WOULD TRAVEL ALONG THE TOP OF THE FILTER STRIP, RATHER THAN THROUGH IT.
8. TOP EDGE OF THE FILTER STRIP SHOULD BE LEVEL.
9. FILTER STRIP SHOULD BE INSTALLED AFTER THE TANK CONSTRUCTION IS COMPLETED. CONTRACTOR TO MAINTAIN VEGETATION BY WATERING UNTIL VEGETATION IS ESTABLISHED.



ENGINEERED VEGETATIVE
FILTER STRIP DETAIL
NOT TO SCALE

NO. BY CK APP	
REVISIONS AND RECORD OF ISSUE	
DATE	REVISIONS
5/3/2012 - Templates	
2018 Blank 2D Template (Imperial).dwg	XREF2:
2018 Blank 2D Template (Imperial).dwg	XREF3:
2018 Blank 2D Template (Imperial).dwg	XREF4:
2018 Blank 2D Template (Imperial).dwg	XREF5:
2018 Blank 2D Template (Imperial).dwg	XREF6:
2018 Blank 2D Template (Imperial).dwg	XREF7:
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2018 Blank 2D Template (Imperial).dwg	XREF100:

PLANNING+ENGINEERING+PROJECT MANAGEMENT

MCI Moreno Cardenas Inc.

EL PASO SAN ANTONIO

9001 McAllister Freeway #207, San Antonio, TX 78216 (210) 714-3553

Texas Board of Professional Engineers Registration No. F-000554

SAN ANTONIO WATER SYSTEM

UNIVERSITY GROUND STORAGE TANK

NO. 1 REPLACEMENT

CIVIL

EROSION & CONTROL PLAN

DESIGNED:

DETAILED:

CHECKED:

APPROVED:

DATE:

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

MCI PROJECT NO. 22114

SAWS JOB NO. 22-6004

C-06 SHEET 11 OF 30

1. A written notice of construction must be submitted to the TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
 - the name of the approved project;
 - the activity start date; and
 - the contact information of the prime contractor.
2. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan (WPAP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.
3. If any sensitive feature(s) (caves, solution cavity, sink hole, etc.) is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The appropriate TCEQ regional office must be immediately notified of any sensitive features encountered during construction. Construction activities may not be resumed until the TCEQ has reviewed and approved the appropriate protective measures in order to protect any sensitive feature and the Edwards Aquifer from potentially adverse impacts to water quality.
4. No temporary or permanent hazardous substance storage tank shall be installed within 150 feet of a water supply source, distribution system, well, or sensitive feature.
5. Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the manufacturers specifications. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. These controls must remain in place until the disturbed areas have been permanently stabilized.
6. Any sediment that escapes the construction site must be collected and properly disposed of before the next rain event to ensure it is not washed into surface streams, sensitive features, etc.
7. Sediment must be removed from the sediment traps or sedimentation basins no later than when it occupies 50% of the basin's design capacity.
8. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from being discharged offsite.
9. All excavated material that will be stored on-site must have proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Recharge Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.
10. If portions of the site will have a cease in construction activity lasting longer than 14 days, soil stabilization in those areas shall be initiated as soon as possible prior to the 14th day of inactivity. If activity will resume prior to the 21st day, stabilization measures are not required. If drought conditions or inclement weather prevent action by the 14th day, stabilization measures shall be initiated as soon as possible.
11. The following records should be maintained and made available to the TCEQ upon request:
 - the dates when major grading activities occur;
 - the dates when construction activities temporarily or permanently cease on a portion of the site; and
 - the dates when stabilization measures are initiated.
12. The holder of any approved Edward's Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:
 - A. any physical or operational modification of any best management practices (BMPs) or structure(s), including but not limited to temporary or permanent ponds, dams, berms, silt fences, and diversionary structures;
 - B. any change in the nature or character of the regulated activity from that which was originally approved;
 - C. any change that would significantly impact the ability to prevent pollution of the Edwards Aquifer; or
 - D. any development of land previously identified as undeveloped in the approved contributing zone plan.

San Antonio Regional Office
14250 Judson Road
San Antonio, Texas 78233-4480
Phone (210) 490-3096
Fax (210) 545-4329

8122 DATAPOINT DR., STE. 840 SAN ANTONIO, TX 78229
(210) 366-1988 TBPE No.: F-333 TBPLS No.: 10194506

SAN ANTONIO WATER SYSTEM

UNIVERSITY PUMP STATION

CIVIL

STORM WATER POLLUTION ABATEMENT PLAN NOTES

DESIGNED: _____

CHECKED: _____

APPROVED: _____

DATE: _____

IF THIS BOX DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

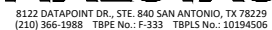
MCI PROJECT NO.
22114

SAWS JOB NO.
22-6004

1

SHEET

1 OF 1



C-07
SHEET
12 OF 30

ATTACHMENT E – Request to Seal Features

Not applicable.

ATTACHMENT F – Construction Plans/Design Calculations

Attached. See Site Plan and design calculations pages.

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.

Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.

Characters shown in red are data entry fields.

Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project:

Calculations from RG-348

Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

where: $L_{M \text{ TOTAL PROJECT}}$ = Required TSS removal resulting from the proposed development = 80% of increased load
 A_N = Net increase in impervious area for the project
 P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project
County = Bexar
Total project area included in plan * = 4.63 acres
Predevelopment impervious area within the limits of the plan * = 1.44 acres
Total post-development impervious area within the limits of the plan * = 1.34 acres
Total post-development impervious cover fraction * = 0.29
 P = 30 inches

$L_{M \text{ TOTAL PROJECT}}$ = -82 lbs.

* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 1



2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = A10
Total drainage basin/outfall area = 4.63 acres
Predevelopment impervious area within drainage basin/outfall area = 1.44 acres
Post-development impervious area within drainage basin/outfall area = 1.34 acres
Post-development impervious fraction within drainage basin/outfall area = 0.29
 $L_{M \text{ THIS BASIN}}$ = -82 lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 percent

- Aqualogic Cartridge Filter
- Bioretention
- Contech StormFilter
- Constructed Wetland
- Extended Detention
- Grassy Swale
- Retention / Irrigation
- Sand Filter
- Stormceptor
- Vegetated Filter Strips
- Vortechs
- Wet Basin
- Wet Vault

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$

where:

A_C = Total On-Site drainage area in the BMP catchment area

A_I = Impervious area proposed in the BMP catchment area

A_P = Pervious area remaining in the BMP catchment area

L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =

0.60

acres

A_I =

0.41

acres

A_P =

0.19

acres

L_R =

364

lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired L_{M THIS BASIN} =

-82

lbs.

F =

-0.23

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth =

#N/A

inches

Post Development Runoff Coefficient =

0.49

On-site Water Quality Volume =

#N/A

cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP =

0.00

acres

Off-site Impervious cover draining to BMP =

0.00

acres

Impervious fraction of off-site area =

0

Off-site Runoff Coefficient =

0.00

Off-site Water Quality Volume =

#N/A

cubic feet

Storage for Sediment =

#N/A

Total Capture Volume (required water quality volume(s) x 1.20) =

#N/A

cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

7. Retention/Irrigation System Designed as Required in RG-348 Pages 3-42 to 3-46

Required Water Quality Volume for retention basin =

NA

cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate =

0.1

in/hr

Irrigation area =

NA

square feet

NA

acres

Enter determined permeability rate or assumed value of 0.1

8. Extended Detention Basin System Designed as Required in RG-348 Pages 3-46 to 3-51

Required Water Quality Volume for extended detention basin =

NA

cubic feet

9. Filter area for Sand Filters Designed as Required in RG-348 Pages 3-58 to 3-63

9A. Full Sedimentation and Filtration System

Water Quality Volume for sedimentation basin =

NA

cubic feet

Minimum filter basin area =

NA

square feet

Maximum sedimentation basin area =

NA

square feet

Minimum sedimentation basin area =

NA

square feet

For minimum water depth of 2 feet

For maximum water depth of 8 feet

<u>9B. Partial Sedimentation and Filtration System</u>			
Water Quality Volume for combined basins =	NA	cubic feet	
Minimum filter basin area =	NA	square feet	
Maximum sedimentation basin area =	NA	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	NA	square feet	For maximum water depth of 8 feet
<u>10. Bioretention System</u>	Designed as Required in RG-348	Pages 3-63 to 3-65	
Required Water Quality Volume for Bioretention Basin =	NA	cubic feet	
<u>11. Wet Basins</u>	Designed as Required in RG-348	Pages 3-66 to 3-71	
Required capacity of Permanent Pool =	NA	cubic feet	Permanent Pool Capacity is 1.20 times the WQV
Required capacity at WQV Elevation =	NA	cubic feet	Total Capacity should be the Permanent Pool Capacity plus a second WQV.
<u>12. Constructed Wetlands</u>	Designed as Required in RG-348	Pages 3-71 to 3-73	
Required Water Quality Volume for Constructed Wetlands =	NA	cubic feet	
<u>13. AquaLogic™ Cartridge System</u>	Designed as Required in RG-348	Pages 3-74 to 3-78	
** 2005 Technical Guidance Manual (RG-348) does not exempt the required 20% increase with maintenance contract with AquaLogic™.			
Required Sedimentation chamber capacity =	NA	cubic feet	
Filter canisters (FCs) to treat WQV =	NA	cartridges	
Filter basin area (RIA _F) =	NA	square feet	
<u>14. Stormwater Management StormFilter® by CONTECH</u>			
Required Water Quality Volume for Contech StormFilter System =	NA	cubic feet	
THE SIZING REQUIREMENTS FOR THE FOLLOWING BMPs / LOAD REMOVALS ARE BASED UPON FLOW RATES - NOT CALCULATED WATER QUALITY VOLUMES			
<u>15. Grassy Swales</u>	Designed as Required in RG-348	Pages 3-51 to 3-54	
<u>Design parameters for the swale:</u>			
Drainage Area to be Treated by the Swale = A =		acres	
Impervious Cover in Drainage Area =		acres	
Rainfall intensity = i =	1.1	in/hr	
Swale Slope =		ft/ft	
Side Slope (z) =			
Design Water Depth = y =		ft	
Weighted Runoff Coefficient = C =	#DIV/0!		
A _{CS} = cross-sectional area of flow in Swale =	#DIV/0!	sf	
P _W = Wetted Perimeter =	#DIV/0!	feet	
R _H = hydraulic radius of flow cross-section = A _{CS} /P _W =	#DIV/0!	feet	
n = Manning's roughness coefficient =	0.2		
<u>15A. Using the Method Described in the RG-348</u>			
Manning's Equation:	Q = <u>1.49</u> A _{CS} R _H ^{2/3} S ^{0.5} n		

b = (0.134 x Q) / (V^1.67 S^0.5) - zy = #DIV/0! feet

Q = CiA = #DIV/0! cfs

To calculate the flow velocity in the swale:

V (Velocity of Flow in the swale) = Q/A_{CS} = #DIV/0! ft/sec

To calculate the resulting swale length:

L = Minimum Swale Length = V (ft/sec) * 300 (sec) = #DIV/0! feet

If any of the resulting values do not meet the design requirement set forth in RG-348, the design parameters must be modified and the solver rerun.

15B. Alternative Method using Excel Solver

Design Q = CiA =	#DIV/0!	cfs	
Manning's Equation Q =	0.00	cfs	Error 1 = #DIV/0!
Swale Width=	6.00	ft	

Instructions are provided to the right (green comments).

Flow Velocity	#DIV/0!	ft/s
Minimum Length =	#DIV/0!	ft

Instructions are provided to the right (blue comments).

Design Width =		ft	
Design Discharge =	0.00	cfs	Error 2 = #DIV/0!
Design Depth =	0.33	ft	
Flow Velocity =	#DIV/0!	cfs	
Minimum Length =	#DIV/0!	ft	

If any of the resulting values do not meet the design requirement set forth in RG-348, the design parameters may be modified and the solver rerun.
If any of the resulting values still do not meet the design requirement set forth in RG-348, widening the swale bottom value may not be possible.

16. Vegetated Filter Strips

Designed as Required in RG-348 Pages 3-55 to 3-57

There are no calculations required for determining the load or size of vegetative filter strips.
The 80% removal is provided when the contributing drainage area does not exceed 72 feet (direction of flow) and the sheet flow leaving the impervious cover is directed across 15 feet of engineered filter strips with maximum slope of 20% or across 50 feet of natural vegetation with a maximum slope of 10%. There can be a break in grade as long as no slope exceeds 20%.

If vegetative filter strips are proposed for an interim permanent BMP, they may be sized as described on Page 3-56 of RG-348.

17. Wet Vaults

Designed as Required in RG-348 Pages 3-30 to 3-32 & 3-79

Required Load Removal Based upon Equation 3.3 = NA lbs

First calculate the load removal at 1.1 in/hour

RG-348 Page 3-30 Equation 3.4: Q = CiA

C = runoff coefficient for the drainage area =	0.17	C = Runoff Coefficient = 0.546 (IC) ² + 0.328 (IC) + 0.03
i = design rainfall intensity =	1.1 in/hour	
A = drainage area in acres =	1 acres	
Q = flow rate in cubic feet per second =	0.19 cubic feet/sec	

To solve for bottom width of the trapezoidal swale (b) using the Excel solver:
Excel can simultaneously solve the “Design Q” (C217) vs “Manning’s Q” (C219) by varying the “Swale Width” (C220).
The required “Swale Width” occurs when the “Design Q” = “Manning’s Q”

First, highlight Cell F219 (Error 1 value). The equation showing in the fx screen for Cell F219 should be “= \$C\$217-\$C\$219”
Then click on “Tools” and “Solver”. The “Solver Parameters” screen pops up.
The value in the “Set Target cell” should be \$F\$219 “Error 1 =”
The value in the “By Changing Cells” should be \$C\$220 “Swale Width”
Click on solve.

The resulting “Swale Width” must be less than 10 feet to meet the requirements of the TGM.
If the resulting “Swale Width” exceeds 10 feet then the design parameters must be revised and the solver run again.

If there is not the option for “Solver” under “Tools”
Click on “Tools” and “Add Ins” and then check “Solver Add-in”
Then proceed as instructed above.

If you would like to increase the bottom width of the trapezoidal swale (b):
Excel can simultaneously solve the “Design Q” (C217) vs “Design Discharge” (C232) by varying the “Design Depth” (C233).
The required “Design Depth” for a 10-foot bottom width occurs when the “Design Q” (C217) = the “Design Discharge” (C232).

First set the desired bottom width in Cell C231.
Highlight Cell F232. The equation showing in the fx screen for Cell F232 should be “= \$C\$217-\$C\$232”

Click on “Tools” and “Solver”. The “Solver Parameters” screen pops up.
The value in the “Set Target cell” should be \$F\$232 “Error 2”
The value in the “By Changing Cells” should be \$C\$233 “Design Depth”
Click on solve.

The resulting “Design Depth” must be equal to or less than 0.33 feet to meet the requirements of the TGM.
If the resulting “Design Depth” exceeds 0.33 feet then the design parameters must be revised and the solver run again.
First set the desired bottom width in Cell C231.
Highlight Cell F232. The equation showing in the fx screen for Cell F232 should be “= \$C\$217-\$C\$232”
Click on “Tools” and “Solver”. The “Solver Parameters” screen pops up.
The value in the “Set Target cell” should be \$F\$232 “Error 2”
The value in the “By Changing Cells” should be \$C\$233 “Design Depth”
Click on solve.

The resulting “Design Depth” must be equal to or less than 0.33 feet to meet the requirements of the TGM.
If the resulting “Design Depth” exceeds 0.33 feet then the design parameters must be revised and the solver run again.

RG-348 Page 3-31 Equation 3.5: $V_{OR} = Q/A$

Q = Runoff rate calculated above = 0.19 cubic feet/sec
A = Water surface area in the wet vault = 150 square feet

V_{OR} = Overflow Rate = 0.00 feet/sec

Percent TSS Removal from Figure 3-1 (RG-348 Page 3-31) = 53 percent

Load removed by Wet Vault = #VALUE! lbs

If a bypass occurs at a rainfall intensity of less than 1.1 in/hours
Calculate the efficiency reduction for the actual rainfall intensity rate

Actual Rainfall Intensity at which Wet Vault bypass Occurs = 0.5 in/hour

Fraction of rainfall treated from Figure 3-2 RG-348 Page 3-32 = 0.75 percent
Efficiency Reduction for Actual Rainfall Intensity = 0.83 percent

Resultant TSS Load removed by Wet Vault = #VALUE! lbs

18. Permeable Concrete

Designed as Required in RG-348

Pages 3-79 to 3-83

PERMEABLE CONCRETE MAY ONLY BE USED ON THE CONTRIBUTING ZONE

19. BMPs Installed in a Series

Designed as Required in RG-348

Pages 3-32

Michael E. Barrett, Ph.D.. P.E. recommended that the coefficient for E_2 be changed from 0.5 to 0.65 on May 3, 2006

$E_{TOT} = [1 - ((1 - E_1) \times (1 - 0.65E_2) \times (1 - 0.25E_3))] \times 100 = 86.38$ percent NET EFFICIENCY OF THE BMPs IN THE SERIES

EFFICIENCY OF FIRST BMP IN THE SERIES = $E_1 = 75.00$ percent

EFFICIENCY OF THE SECOND BMP IN THE SERIES = $E_2 = 70.00$ percent

EFFICIENCY OF THE THIRD BMP IN THE SERIES = $E_3 = 0.00$ percent

THEREFORE, THE NET LOAD REMOVAL WOULD BE:
(A_i AND A_p VALUES ARE FROM SECTION 3 ABOVE)

$L_R = E_{TOT} \times P \times (A_i \times 34.6 \times A_p \times 0.54) = 369.76$ lbs

20. Stormceptor

Required TSS Removal in BMP Drainage Area= NA lbs
Impervious Cover Overtreatment= 0.0000 ac
TSS Removal for Uncaptured Area = 0.00 lbs

BMP Sizing

Effective Area = NA EA
Calculated Model Size(s) = #N/A
Actual Model Size (if multiple values provided in Calculated
Model Size or if you are choosing a larger model size) = 0 Model Size

Surface Area = #N/A ft²
Overflow Rate = #VALUE! V_{or}
Rounded Overflow Rate = #VALUE! V_{or}
BMP Efficiency % = #VALUE! %
 L_R Value = #VALUE! lbs

TSS Load Credit = #VALUE! lbs

Is Sufficient Treatment Available? (TSS Credit \geq TSS Uncapt.) #VALUE!

TSS Treatment by BMP (LM + TSS Uncapt.) = #VALUE!

21. Vortech

BMP Sizing

Required TSS Removal in BMP Drainage Area= NA lbs
Impervious Cover Overtreatment= 0.0000 ac
TSS Removal for Uncaptured Area = 0.00 lbs

Effective Area = NA EA
Calculated Model Size(s) = #N/A

Actual Model Size (if choosing larger model size) = Vx1000 Pick Model Size

Surface Area = 7.10 ft²
Overflow Rate = #VALUE! V_{or}
Rounded Overflow Rate = #VALUE! V_{or}
BMP Efficiency % = #VALUE! %
L_R Value = #VALUE! lbs

TSS Load Credit = #VALUE! lbs

Is Sufficient Treatment Available? (TSS Credit ≥ TSS Uncapt.) #VALUE!

TSS Treatment by BMP (LM + TSS Uncapt.) = #VALUE!

ATTACHMENT G

Maintenance Plan and Schedule for Permanent Erosion Controls

Vegetative Filter Strips

PROJECT NAME: University Pump Station Project

LOCATION: Along W Hausman Rd between Roadrunner Way and Jetlyn Dr.

CITY, STATE ZIP: San Antonio, TX 78249

Vegetative filter Strips:

Once a vegetated area is well established, little additional maintenance is generally necessary. The key to establishing a viable vegetated feature is the care and maintenance it receives in the first few months after it is planted. Once established, all vegetated BMPs require some basic maintenance to ensure the health of the plants including:

Inspections: BMP facilities shall be inspected at least twice a year to evaluate facility operation. Additional inspections shall occur after periods of heavy rain. The filter strip will be checked for uniformity of grass cover, debris and litter, and areas of sediment accumulation. Bare spots and areas of erosion identified during semi-annual inspections will be replanted and restored to meet specifications. Construction of a level spreader device may be necessary to reestablish shallow overland flow.

Records

The San Antonio Water System shall keep records of the inspections on forms that shall be retained. Efforts will be made by the SAWS to keep WPAP maintenance plans for WPAPs in the same region together for better coordination.

The inspection shall note at a minimum:

- uniformity of grass cover,
- debris and litter, and
- areas of sediment accumulation.
- Address if remediation was done during the inspection or if a task order needs to be established to replanting and restore filter strip to meet the specifications.
- Or other task order to remain in compliance with the WPAP permit.

Sediment

Removal: Remove sediment in vegetative filter strip when they build up to 3 inches at any spot or cover vegetation. Excess sediment should be removed by hand or with flat-bottomed shovels. If areas are eroded, they should be filled, compacted and reseeded so that the final grade is level with the bottom of the swale. Sediment removal will be performed as needed based on the inspections in the inspection section.

Pest

Management: The integrated pest management plan (IMP) shall assess if there are excessive pests during each inspection. Problem insects and weeds will be controlled with minimal or no use of insecticides and herbicides.

Debris and Litter

Removal: Trash tends to accumulate in vegetated areas, particularly along highways. Any filter strip structures (i.e. level spreaders) should be kept free of obstructions to reduce floatables being flushed downstream, and for aesthetic reasons. The need for this practice is determined through periodic inspection but should be performed no less than 4 times per year.

Mowing: Grass areas in and around vegetative filter strips must be mowed at least twice annually to limit vegetation height to 18 inches. Grass cuttings should be collected and disposed of offsite, or a mulching mower can be used. Regular mowing should also include weed control practices; however, herbicide use should be kept to a minimum.

Grass Reseeding And Mulching:

A healthy dense grass should be maintained on the filter strip. If areas are eroded, they should be filled, compacted, and reseeded so that the final grade is level. Grass damaged during the sediment removal process should be promptly replaced using the same seed mix used during filter strip establishment.

If possible, flow should be diverted from the damaged areas until the grass is firmly established. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored to meet specifications. Corrective maintenance, such as weeding, or replanting should be done more frequently in the first two to three years after installation to ensure stabilization. Dense vegetation may require irrigation immediately after planting, and during particularly dry periods, particularly as the vegetation is initially established.

An amended copy of this document will be provided to TCEQ within thirty (30) days of any changes in the following information:

Responsible Party for Maintenance: San Antonio Water System

Contact Person: Ismael L. Rosales, PE

Address: 2800 US Hwy 281 N

City, State Zip: San Antonio, TX 78212

Telephone Number: 210-233-3705

Ismael Rosales

Digitally signed by Ismael Rosales
Date: 2024.08.01 12:55:40-05'00'

Signature of the Responsible Party: _____

The Maintenance Plan and Schedule for Permanent Erosion Control has been prepared by Elvis Treviño, PE and is certified to be in compliance with TCEQ regulations.

Elvis Treviño

Elvis Treviño, PE

ATTACHMENT H – Pilot-Scale Field Testing Plan

Not applicable.

ATTACHMENT I – Measures for Minimizing Surface Stream Contamination

The proposed University Pump Station improvements will not create any new impervious cover since the storage tank and the outflow structure will be replaced within the site and will not increase risk to local streams. Treatment will be provided at the vegetative filter strip before exiting the project area following natural drainage patterns.

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I _____ Ismael L. Rosales, PE _____,
Print Name

_____ Manager, Plants and Major Projects _____,
Title - Owner/President/Other

of _____ San Antonio Water System _____,
Corporation/Partnership/Entity Name

have authorized _____ Elvis Treviño, PE _____
Print Name of Agent/Engineer

of _____ Maestas & Associates, LLC _____
Print Name of Firm

to represent and act on the behalf of the above-named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to \$10,000 per day per violation.
2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.
3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.
4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.
5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Ismael Posada

Applicant's Signature

8-1-24

Date

THE STATE OF Texas §

County of Bexar §

BEFORE ME, the undersigned authority, on this day personally appeared Ismael Posada known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

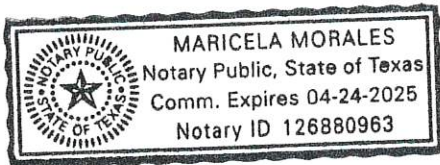
GIVEN under my hand and seal of office on this 1st day of August, 2024

Maricela Morales

NOTARY PUBLIC

Maricela Morales

Typed or Printed Name of Notary



MY COMMISSION EXPIRES: 4/24/25