Robert J. Huston, *Chairman* R. B. "Ralph" Marquez, *Commissioner* John M. Baker, *Commissioner* Jeffrey A. Saitas, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

February 16, 2001

Dr. Ron Reaves, Superintendent New Braunfels Independent School District 430 West Mill Street New Braunfels, TX 78130

Re: Edwards Aquifer, Comal County

NAME OF PROJECT: New Braunfels High School Additions & Renovations; 2551 Loop 337; New Braunfels, Texas TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer Edwards Aquifer Protection Program File No. 1591.00

Dear Dr. Reaves:

The Texas Natural Resource Conservation Commission (TNRCC) has completed its review of the WPAP application for the referenced project submitted to the San Antonio Regional Office by Jerry Powell, P.E. of CDS/Muery Services on behalf of New Braunfels Independent School district on October 24, 2000. Final review of the WPAP submittal was completed after additional material was received on January 2, 2001, January 23, 2001, February 13, 2001, and February 14, 2001. As presented to the TNRCC, the Temporary and Permanent Best Management Practices (BMPs) 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 20 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.

Reply To: Region 13 • 14250 Judson Rd. • San Antonio, Texas 78233-4480 • 210/490-3096 • Fax 210/545-4329

Dr. Ron Reaves Page 2 February 16, 2001

PROJECT DESCRIPTION

The subject site is 56 acres and has approximately 25.2 acres (45%) of existing impervious cover. Eight of the 56 acres are undeveloped and downgradient of the proposed on-site construction area. New construction will include parking lots (2.12 acres), classrooms (0.23 acres), concessions and restroom building (0.05 acres) near the existing football stadium and softball field as described in the application. The Gym/Cafeteria and football stadium will undergo renovations. The proposed additions and renovations will add 2.4 acres (4.3%) of impervious cover. The total impervious cover will be 27.59 acres (49%). Project wastewater will be disposed of by conveyance to the existing Kuehler Street Sewage Treatment Plant owned by New Braunfels Utilities.

PERMANENT POLLUTION ABATEMENT MEASURES

A sedimentation/filtration basin and a vegetated filter will be constructed to treat stormwater runoff. Because of the existing development on the site, the proposed measures will treat a pollutant load equivalent to the proposed 4.3% increase in impervious cover. The measures are designed to meet the required 80 percent removal of the increased load in total suspended solids caused by the proposed construction. In lieu of the originally proposed vegetated filter strip, the sedimentation/filtration basin described below will be oversized to capture stormwater runoff from existing impervious cover. The individual treatment measures will consist of the following.

The partial sedimentation/filtration basin is designed in accordance with the 1999 edition of the TNRCC's "Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices," and is sized to capture the first 0.23 inches of stormwater run-off from ten acres, providing a total capture volume of 10,019 cubic feet. The filtration system will consist of:

- 1. 1,350 square feet of sand, which is 18 inches thick,
- 2. an underdrain piping wrapped with geotextile membrane, and
- 3. an impervious liner.

<u>GEOLOGY</u>

An exception to submitting a geologic assessment was requested because one had been submitted with a previous application for construction of regulated activities at the subject site. The San Antonio Regional Office site inspection of January 22, 2001, no additional geologic or manmade features. However, the vegetated filter strip for the proposed parking area adjacent to Loop 337 would have used the TXDOT right of way. Additionally, four temporary buildings without wastewater service, and two temporary buildings with wastewater service were observed on the site.

Dr. Ron Reaves Page 3 February 16, 2001

SPECIAL CONDITIONS

- 1. The request for exception not to submit the required geologic assessment is hereby granted.
- 2. Based on the January 22, 2001 on-site inspection of the project site, Commission records indicate that six temporary buildings were placed on the site on or before January 22, 2001. These activities were conducted without the prior approval of the water pollution abatement plan for the project, as required by Commission rules (30 TAC Chapter 213). Therefore, the applicant is hereby advised that the after-the-fact approval of the installation of the temporary buildings, as provided by this letter, shall not absolve the applicant of any prior violations of Commission rules related to this project, and shall not necessarily preclude the Commission from pursuing appropriate enforcement actions and administrative penalties associated with such violations, as provided in 30 TAC §213.10 of Commission rules.

STANDARD CONDITIONS

1. Pursuant to §26.136 of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

Prior to Commencement of Construction:

- 2. 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, TNRCC-0625) that you may use to deed record the approved WPAP is enclosed.
- 3. 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.
- 4. 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.
- 5. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to

Dr. Ron Reaves Page 4 February 16, 2001

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 file 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.

- 6. 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. The TNRCC 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.
- 7. 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:

- 8. 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.
- 9. 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.
- 10. No wells exist on the 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.

Dr. Ron Reaves Page 5 February 16, 2001

- 11. 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.
- 12. 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.
- 13. 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:

- 14. 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.
- 15. 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 (TNRCC-10263) is enclosed.
- 16. 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.

Dr. Ron Reaves Page 6 February 16, 2001

- 17. 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.
- 18. 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.

If you have any questions or require additional information, please contact John Mauser of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4024.

Sincerely, . Callwa

Jeffrey A. Saitas, P.E. Executive Director Texas Natural Resource Conservation Commission

JAS/jkm

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

cc: Mr. Jerry Powell, P.E., CDS/Muery Services Mr. Harry Bennett, City of New Braunfels Mr. John Bohuslav, TXDOT San Antonio District Mr. Tom Hornseth, Comal County Mr. Greg Ellis, Edwards Aquifer Authority TNRCC Field Operations, Austin Bryan W. Shaw, Ph.D., Chairman Buddy Garcia, Commissioner Carlos Rubinstein, Commissioner Mark R. Vickery, P.G., Executive Director



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 7, 2011

RECEIVED

JAN 1 0 2011

COUNTY ENGINEER

Mr. Thomas H. Hornseth, P.E. Comal County Engineer 195 David Jonas Drive New Braunfels TX 78132-3710

Re: Edwards Aquifer, Comal County PROJECT NAME: New Braunfels High School, located at 2551 Loop 337, New Braunfels, Texas PLAN TYPE: Application for Approval of a Water Pollution Abatement Plan, 30 Texas Administration Code (TAC) Chapter 213; Edwards Aquifer Protection Program EAPP File No.: 1591.07

Dear Mr. Hornseth:

The referenced application is being forwarded to you pursuant to the Edwards Aquifer Rules. The Texas Commission on Environmental Quality (TCEQ) is required by 30 TAC Chapter 213 to provide copies of all applications to affected incorporated cities and underground water conservation districts for their comments prior to TCEQ approval.

Please forward your comments to this office by February 7, 2011.

The Texas Commission on Environmental Quality appreciates your assistance in this matter and your compliance efforts to ensure protection of the State's environment. If you or members of your staff have any questions regarding these matters, please feel free to contact the San Antonio Region Office at (210) 490-3096.

Sincerely

Todd Jones Water Section Work Leader San Antonio Regional Office

TJ/eg

TCEQ Region 13 • 14250 Judson Rd. • San Antonio, Texas 78233-4480 • 210-490-3096 • Fax 210-545-4329

1591.07

Edwards Aquifer Protection Program Modification of a Previously Approved Plan

Edwards Aquifer Recharge Zone

TCEQ-R13 DEC 30 2010 SAN ANTONIO Attn: TCEQ San Antonio Regional Office 14250 Judson Road San Antonio, TX 78233-4480

RECEIVED

JAN 1 0 2011

COUNTY ENGINEER

For:

To:

New Braunfels Independent School District New Braunfels High School 2551 Loop 337 New Braunfels, Texas 78130

Prepared by:

Gill Engineering Associates. Inc.



General Information Form

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

REGULATED ENTITY NAME: New Braunfels High School COUNTY ENGINEER STREAM BASIN: Panther Canyon COUNTY: Comal ✓ RECHARGE ZONE EDWARDS AQUIFER: TRANSITION ZONE ✓ WPAP __ AST PLAN TYPE: EXCEPTION __scs __ust MODIFICATION - R13 DEC 30 2010 CUSTOMER INFORMATION SAN ANTONIO 1 Customer (Applicant): Contact Person: Darvl Stoker New Braunfels Independent School District Entity: Mailing Address: 430 W. Mill Street City, State: New Braunfels, Texas Zip: 78130 (830) 627-6731 FAX: (830) 627-6741 Telephone: Agent/Representative (If any): Contact Person: Victor Gil, P.E. Gil Engineering Associates, Inc. Entity: Mailing Address: 506 E. Braker Ln.
 Austin, Texas
 Zip:
 78753

 (512) 835-4203
 FAX:
 (512) 835-4407
 City, State: Telephone: This project is inside the city limits of <u>New Braunfels</u> 2. \checkmark This project is outside the city limits but inside the ETJ (extra-territorial jurisdiction) of This project is not located within any city's limits or ETJ. The location of the project site is described below. The description provides sufficient detail 3. and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

The project location is on the current New Braunfels High School site. The physical address is 2551 Loop 337 N, New Braunfels, Texas 78130.

- 4. **ATTACHMENT A ROAD MAP**. A road map showing directions to and the location of the project site is attached at the end of this form.
- 5. 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 behind this sheet. The map(s) should clearly show:

RECEIVED

JAN 1 0 2011

- ✓ Project site.
- USGS Quadrangle Name(s).
- Boundaries of the Recharge Zone (and Transition Zone, if applicable).
- Drainage path from the project to the boundary of the Recharge Zone.
- 6. ✓ 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. The TCEQ must be able to inspect the project site or the application will be returned.
- 8. 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: Existing High School Site

PROHIBITED ACTIVITIES

- - (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).
- - (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

- 11. The fee for the plan(s) is based on:
 - ✓ For a Water Pollution Abatement Plan and Modifications, the total acreage of the site where regulated activities will occur.

- ____ For an Organized Sewage Collection System Plans and Modifications, the total linear footage of all collection system lines.
- For a UST Facility Plan or an AST Facility Plan, 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.
- 12. 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)
- 13. ✓ 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.
- 14. ✓ 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.

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:

Daryl Stoker Print Name of Customer/Agent

Signature of Customer/Agent

2/8/10 Date

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.



ATTACHMENT A Road Map



ATTACHMENT B USGS/ Edwards Recharge Zone Map

PROJECT DESCRIPTION

Introduction

The project site consists of a 2000 square foot area behind the stadium football field near the east side bleachers. The area is an existing natural turf play field. The impervious cover proposed by this project is a 1800 square foot green house and a 24' \times 5' wide (120 square feet) of sidewalk for a handicapped entrance.

This site is in the City of New Braunfels and in Comal County and is zoned R-2 (Single Family and Two Family Residential). The existing high school site currently is unplatted as raw acreage (56 acres) and was conveyed in Volume 123 Page 210 of the Official Records of Comal County.

The site is NOT within the limits of any 100 year flood plain and does NOT have a Critical Water Quality Zone. There are NO areas irrigated with wastewater.

The project's proposed Limits of Construction (LOC) boundary has been located around the proposed modifications to minimize site disturbances to an area of approximately 2000 sf. The planned modifications consist of the demolition and removal of approximately 2000 square feet (sf) of existing pervious sod and organics from the site and approximately as shown on Site Plan Sheet S1. Excavation of this area prepares the surface for the installation of approximately 1800 sf of a green house building. See Plan Sheet S1 for a table containing impervious/pervious cover calculations. The demolition will also include 900 square feet of asphaltic material to offset the impervious cover added to the site.

The greenhouse building will decrease nutrient loads by not requiring monthly applications of fertilizer to maintain the current field.

The project is to begin as soon as possible (upon project approval) and is to be completed within 12 months (after site plan approval). There is no proposed phasing of the project.

The entire site is located within the jurisdiction of the City of New Braunfels.

Drainage Area

There is NO existing 100 year flood plain.

Runoff generated on the football field surfaces is currently routed via overland flow and allowed to flow over land to the south east section of the property where it exits the site without detention or treatment. Proposed modifications will collect and direct runoff to this same route.

Discussion of the Existing and Proposed Drainage Patterns

ATTACHMENT C Project Description The existing site currently does have a sedimentation filtration pond on site. The pond was oversized to catch a few improvements that were to take place in the future. The previous WPAP modification took into account most of the excess storage in the pond. This addition will also take some of the excess storage in the pond. The removal of asphaltic impervious cover from the site (900 sf) will also offset the amount of impervious cover added to the site.

The existing drainage patterns will NOT be altered.

There is NO floodplain modification proposed by this Site Plan.

The existing site is NOT contained within any known 100 year flood plains.

Discussion of Proposed Variances

There are NO variances proposed by this project.

Critical Environmental Features within the Project and Know Features within 150 feet of the Project

The surrounding area has been fully developed. A cursory review by the undersigned of the entire site area did NOT reveal any critical environmental features within the limits of construction. This area is located in the Recharge Zone of the Edward's Aquifer.

Tree Preservation Plan

There are no existing trees to be protected as a part of this project.

Known Underground Storage Tanks

There are NO underground storage tanks located within the project area. There are underground storage tanks on the entire school site area. This was permitted on June 25, 1985 (NBISD Transportation Facility, EAPP File **#**785.00)

> ATTACHMENT C Project Description

Geologic Assessment

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

REGULATED ENTITY NAME:	New Braunfels	s High School		
TYPE OF PROJECT: X WPAP	AST	scs	UST	
LOCATION OF PROJECT: X R	Recharge Zone	Transition	Zone	Contributing Zone within
PROJECT INFORMATION				

- 1. ___ Geologic or manmade features are described and evaluated using the attached GEOLOGIC ASSESSMENT TABLE.
- 2. 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.

Soil Units, Infiltration Characteristics & Thickness							
Soil Name Group* Thickness (feet)							
Comfort-Rock outcrop complex (CrD)	D	1.67'					
Eckrant-Rock outcrop complex (ErG)	D	1.67'					
Rumple-Comfort association (RUD)	с	3.0'					

* (Abl	Soil previat	Group ted)	Definitions				
A. S wher	A. Soils having a <u>high infiltration</u> rate when thoroughly wetted.						
B. S rate v	oils ha when th	ving a <u>mode</u> oroughly we	erate infiltration etted				
C. S wher	Soils ha thorou	ving a <u>slow</u> ighly wetted.	infiltration rate				
D. S rate v	oils ha when th	ving a <u>very s</u> oroughly we	slow infiltration tted.				

- X A STRATIGRAPHIC COLUMN is attached at the end of this form that shows formations, members, and thicknesses. The outcropping unit should be at the top of the stratigraphic column.
- 4. X A NARRATIVE DESCRIPTION OF SITE SPECIFIC GEOLOGY is attached at the end of this form. The description must include a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure, and karst characteristics of the site.
- 5. X Appropriate SITE GEOLOGIC MAP(S) are attached:

The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'

3

Applicant's Site Plan Scale	1" =	100'
Site Geologic Map Scale	1" =	100'
Site Soils Map Scale (if more than 1 soil type)	1" =	6,660

6. Method of collecting positional data:

9.

- X Global Positioning System (GPS) technology.
 - _ Other method(s).
- 7. X The project site is shown and labeled on the Site Geologic Map.
- 8. X Surface geologic units are shown and labeled on the Site Geologic Map.
 - 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.
 - X Geologic or manmade features were not discovered on the project site during the field investigation.
- 10. X The Recharge Zone boundary is shown and labeled, if appropriate.
- 11. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, 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 Chapter 76.
 - X There are no wells or test holes of any kind known to exist on the project site.

ADMINISTRATIVE INFORMATION

12. X One (1) original and three (3) copies of the completed assessment has been provided.

Date(s) Geologic Assessment was performed:

November 29, 2010 Date(s)

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.

<u>Jonathan B. Selby,</u> Print Name of Geologis	st	STATE OF TEXAS	(512) 330-4599 Tele	phone
		JONATHAN B. SELBY	(512) 330-4599	Fax
Signature of Geologist		No. 2445	ember 8, 2010	
Representing:	Jonathan B. Selby, TX Name of Company)	License Professional G	Seoscientist #2445	

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.

GEOLOGIC ASSESSMENT TABLE				PROJECT NAME: New Braunfels High School																
	OCATIO)N				FEA	TUR	E CH	HARAC	FER	ISTICS	6			EVALUATION PHYSICAL			SETTING		
1A	18 *	10.	2A	28	З		4		5	5A	6	7	BA	88	9		10		11	12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DMME	NISKONIS	(FEET)	TREND (DEGREES)	ş	OENSITY (NOAFT)	APERTURE (FEET)	NFRL	RELATIVE INFILTRATION RATE	TOTAL	SENS	, TMTI	CATCHM (AC	ENT AREA RES)	TOPOGRAPHY
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SC	Solution ca	avity			20		с	Coar	se - cobble	es bi	reakdow	n sand d	oravel							
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F	Fault	nargea nac	10.0(0)		20		F	Fines	compact	ed d	av-rich s	ediment	soil pro	file oray or r	ed color	s				
0	Other natu	ral bedrock	features		5		v	Vege	tation Giv	e de	tails in n	arrative d	lescripti	on		•				
MB	Manmade	feature in b	edrock		30		FS	Flows	stone, cen	nents	, cave d	eposits								
sw	Swallow he	ble			30		x	Other	materials											
SH	Sinkhole				20					-										
CD	Non-karst	closed depr	ression		5					12 1	OPOGE	RAPHY								
z	Zone, clus	tered or alic	ned featu	ires	30		Cli	ff, H	illtop, H	Hills	ide, D	Draina	qe, F	loodplair	, Stre	aml	bed			
			i have rea	ad, I und	erstood, a	nd I ha	ave fo	llowed	the Texa	s Coi	mmissioi	n on Envi	ronmen	tal Quality's I	nstructio	ons to	Geolo	gists.	The	

information presented here complies with that document and is a true representation of the conditions observed in the field

that I am qualified as a geologist as defined by 30 TAC Chapter 213. ati Q.

Jon Selby, Texas Licensed Professional Geoscientist #2445

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



Date

Dec. 8,2010

Sheet _1___ of __1___



Soil Map–Comal and Hays Counties, Texas (New Braunfels High School)

	MAP L	EGEND		MAP INFORMATION				
Area of In	terest (AOI)	۵	Very Stony Spot	Map Scale: 1:6,660 if printed on A size (8.5" × 11") sheet.				
	Area of Interest (AOI)	*	Wet Spot	The soil surveys that comprise your AOI were mapped at 1:20,00				
Soils	Soil Map Units	•	Other	Please rely on the bar scale on each map sheet for accurate map measurements.				
Special ଏ	Point Features Blowout	Special	Gully Short Steep Slope	Source of Map: Natural Resources Conservation Service Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov Coordinate System: UTM Zone 14N NAD83				
*	Clay Spot	Political F	Other	This product is generated from the USDA-NRCS certified data as the version date(s) listed below.				
×	Gravel Pit	O Water Fea	Cities Itures	Soil Survey Area: Comal and Hays Counties, Texas Survey Area Data: Version 7, Oct 27, 2009				
 Ф	Gravelly Spot Landfill		Oceans Streams and Canals	Date(s) aerial images were photographed: 1995 The orthophoto or other base map on which the soil lines were				
۸ معد	Lava Flow Marsh or swamp	Transport	lation Rails Interstate Hindways	compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifti of map unit boundaries may be evident.				
* ©	Mine or Quarry Miscellaneous Water Perennial Water	~	US Routes Major Roads					
~ +	Rock Outcrop Saline Spot	~	Local Roads					
24 	Sandy Spot Severely Eroded Spot							
\$ }	Slide or Slip							
ø E	Spoil Area							

STRATIGRAPHIC COLUMN

New Braunfels High School 2551 Loop 337 New Braunfels TX, 78130

SYSTEM	FORMATION	THICKNESS	GENERAL DESCRIPTION
Cretaceous	Pearson (Kep)	~50' - 75'	Cyclic and Marine Members, Undivided Limestone, dolomite and chert: limestone is fine-grained, massive to thin bedded; dolomite is fine-grained, grayish brown and porous; chert nodules common. Vuggy.
Cretaceous	Kainer (Kek)	100'	Massively bedded cyclic subtidal to tidal flat mudstone to grainstone dolomitic limestone



NEW BRAUNFELS HIGH SCHOOL GREENHOUSE ADDITION

Modification of a Previously Approved Plan

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

- Current Regulated Entity Name:
 New Braunfels High School

 Original Regulated Entity Name:
 New Braunfels High School

 Assigned Regulated Entity Numbers (RN):
 1)
 102767803, 2)
 , 3)
 - ✓ The applicant has not changed and the Customer Number (CN) is: CN 600397814 The applicant 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 any letters approving modification are found at the end of this form.

- 3. A modification of a previously approved plan in 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.

WPAP Modification Summary Acres Type of Development Number of Residential Lots Impervious Cover (acres) Impervious Cover (%) Permanent BMPs Other	Approved Project 56 High School 0 29.94 53.46% Sand Filter	Proposed Modification 56 High School 0 29.96 53.50% Sand Filter
SCS Modification Summary Linear Feet Pipe Diameter Other	Approved Project	Proposed Modification
AST Modification Summary Number of ASTs Volume of ASTs Other	Approved Project	Proposed Modification

Ap	proved	Pro	iect
, vp	provou	1 10	000

Proposed Modification

UST Modification	Summary
	Number of USTs
	Volume of USTs
	Other

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Attachment B: Narrative of Proposed Modification. A narrative description of the nature of the proposed modification is provided at the end of this form. It discusses what was approved, including previous modifications, and how this proposed modification will change the approved plan.

- ✓ 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 provided at the end of this form. 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.
- ____ 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.
- _____ 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.

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 TO A PREVIOUSLY APPROVED PLAN** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Daryl Stoker Print Name of Customer/Agent

Signature of Customer/Agent

12/8/10

Date

Robert J. Huston, *Chairman* R. B. "Ralph" Marquez, *Commissioner* John M. Baker, *Commissioner* Jeffrey A. Saitas, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

February 16, 2001

Dr. Ron Reaves, Superintendent New Braunfels Independent School District 430 West Mill Street New Braunfels, TX 78130

Re: Edwards Aquifer, Comal County

NAME OF PROJECT: New Braunfels High School Additions & Renovations; 2551 Loop 337; New Braunfels, Texas TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer Edwards Aquifer Protection Program File No. 1591.00

Dear Dr. Reaves:

The Texas Natural Resource Conservation Commission (TNRCC) has completed its review of the WPAP application for the referenced project submitted to the San Antonio Regional Office by Jerry Powell, P.E. of CDS/Muery Services on behalf of New Braunfels Independent School district on October 24, 2000. Final review of the WPAP submittal was completed after additional material was received on January 2, 2001, January 23, 2001, February 13, 2001, and February 14, 2001. As presented to the TNRCC, the Temporary and Permanent Best Management Practices (BMPs) 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 20 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.

Reply To: Region 13 • 14250 Judson Rd. • San Antonio, Texas 78233-4480 • 210/490-3096 • Fax 210/545-4329

Dr. Ron Reaves Page 2 February 16, 2001

PROJECT DESCRIPTION

CEN EVVIVOVVIEI

The subject site is 56 acres and has approximately 25.2 acres (45%) of existing impervious cover. Eight of the 56 acres are undeveloped and downgradient of the proposed on-site construction area. New construction will include parking lots (2.12 acres), classrooms (0.23 acres), concessions and restroom building (0.05 acres) near the existing football stadium and softball field as described in the application. The Gym/Cafeteria and football stadium will undergo renovations. The proposed additions and renovations will add 2.4 acres (4.3%) of impervious cover. The total impervious cover will be 27.59 acres (49%). Project wastewater will be disposed of by conveyance to the existing Kuehler Street Sewage Treatment Plant owned by New Braunfels Utilities.

PERMANENT POLLUTION ABATEMENT MEASURES

A sedimentation/filtration basin and a vegetated filter will be constructed to treat stormwater runoff. Because of the existing development on the site, the proposed measures will treat a pollutant load equivalent to the proposed 4.3% increase in impervious cover. The measures are designed to meet the required 80 percent removal of the increased load in total suspended solids caused by the proposed construction. In lieu of the originally proposed vegetated filter strip, the sedimentation/filtration basin described below will be oversized to capture stormwater runoff from existing impervious cover. The individual treatment measures will consist of the following.

The partial sedimentation/filtration basin is designed in accordance with the 1999 edition of the TNRCC's "Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices," and is sized to capture the first 0.23 inches of stormwater run-off from ten acres, providing a total capture volume of 10,019 cubic feet. The filtration system will consist of:

- 1. 1,350 square feet of sand, which is 18 inches thick,
- 2. an underdrain piping wrapped with geotextile membrane, and
- 3. an impervious liner.

GEOLOGY

An exception to submitting a geologic assessment was requested because one had been submitted with a previous application for construction of regulated activities at the subject site. The San Antonio Regional Office site inspection of January 22, 2001, no additional geologic or manmade features. However, the vegetated filter strip for the proposed parking area adjacent to Loop 337 would have used the TXDOT right of way. Additionally, four temporary buildings without wastewater service, and two temporary buildings with wastewater service were observed on the site.

Dr. Ron Reaves Page 3 February 16, 2001

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SPECIAL CONDITIONS

- 1. The request for exception not to submit the required geologic assessment is hereby granted.
- 2. Based on the January 22, 2001 on-site inspection of the project site, Commission records indicate that six temporary buildings were placed on the site on or before January 22, 2001. These activities were conducted without the prior approval of the water pollution abatement plan for the project, as required by Commission rules (30 TAC Chapter 213). Therefore, the applicant is hereby advised that the after-the-fact approval of the installation of the temporary buildings, as provided by this letter, shall not absolve the applicant of any prior violations of Commission rules related to this project, and shall not necessarily preclude the Commission from pursuing appropriate enforcement actions and administrative penalties associated with such violations, as provided in 30 TAC §213.10 of Commission rules.

STANDARD CONDITIONS

1. Pursuant to §26.136 of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

Prior to Commencement of Construction:

- 2. 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, TNRCC-0625) that you may use to deed record the approved WPAP is enclosed.
- 3. 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.
- 4. 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.
- 5. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to

Dr. Ron Reaves Page 4 February 16, 2001

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 file 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.

- 6. 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. The TNRCC 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.
 - 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:

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- 8. 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.
- 9. 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.
- 10. No wells exist on the 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.

Dr. Ron Reaves Page 5 February 16, 2001

- 11. 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.
- 12. 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.
- 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:

- 14. 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.
- 15. 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 (TNRCC-10263) is enclosed.
- 16. 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.

Dr. Ron Reaves Page 6 February 16, 2001

- 17. 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.
- 18. 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.

If you have any questions or require additional information, please contact John Mauser of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4024.

Sincerely,

Jeffrey A. Śaitas, P.E. Executive Director Texas Natural Resource Conservation Commission

JAS/jkm

- Enclosure: Deed Recordation Affidavit, Form TNRCC-0625 Change in Responsibility for Maintenance on Permanent BMPs-Form TNRCC-10263
- cc: Mr. Jerry Powell, P.E., CDS/Muery Services
 Mr. Harry Bennett, City of New Braunfels
 Mr. John Bohuslav, TXDOT San Antonio District
 Mr. Tom Hornseth, Comal County
 Mr. Greg Ellis, Edwards Aquifer Authority
 TNRCC Field Operations, Austin

TE OF TEXAS COUNTY OF COMAL

This is to certify that this document we FILED and RECORDED in the Official Public Records of Comal County, Texas on the date and time stamped thereon.

CLERN

Doc# 200106009124 # Pages 7 Date: 3/16/01 11:25:22 AM Filed & Recorded in Official Records of COMAL COUNTY JOY STREATER COUNTY CLERK Fees \$21.00

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

November 8, 2002

Dr. Ron Reaves, Superintendent New Braunfels Independent School District 430 West Mill Street New Braunfels, TX 78130

Re: <u>Edwards Aquifer</u>, Comal County
 NAME OF PROJECT: New Braunfels High School Obstacle Course; Located at 2551 Loop 337
 North; New Braunfels, Texas
 TYPE OF PLAN: Request for Modification of a Water Pollution Abatement Plan (WPAP); 30
 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
 Edwards Aquifer Protection Program File No. 1591.02

Dear Dr. Reaves:

The Texas Commission on Environmental Quality (TCEQ, formerly TNRCC) has completed its review of the request for modification of the approved WPAP for the referenced project submitted to the San Antonio Regional Office by Mr. Wade Hawkins on behalf of the New Braunfels Independent School District on October 10, 2002, 2002. Final review of the WPAP submittal was completed after additional material was received on October 18, 2002.

The proposed modifications will be considered minor in scope and nature, are in general compliance with the requirements of 30 TAC Chapter 213. Therefore, the 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 20 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

This facility was previously approved by letter dated February 16, 2001. A subsequent modification was approved by letter dated May 29, 2002. As presented, the proposed modification to the water pollution abatement plan will consist of constructing a 15 foot wide pathway for an obstacle course along the top and near the base of the sedimentation/filtration basin berm and detention basin berm.

REPLY TO: REGION 13 • 14250 JUDSON RD. • SAN ANTONIO, TEXAS 78233-4480 • 210/490-3096 • FAX 210/545-4329

Dr. Ron Reaves November 8, 2002 Page 2

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent pollution of stormwater runoff originating on-site or up-gradient of the site and potentially. flowing across and off the site after construction, the slope will be stabilized with vegetation.

SPECIAL CONDITIONS

- I. This modification is subject to all Special and Standard Conditions listed in the WPAP approval letters of February 16, 2001, and May 29,2002, including deed recordation of this letter, and the placement of temporary and permanent erosion and sedimentation controls.
- II. There shall be no loss of water quality volume to the sedimentation / filtration basin.
- III The City of New Braunfels should be consulted about any requirements related to the modification of the detention basin.

If you have any questions or require additional information, please contact John Mauser of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4024.

Sincerely, Devel

Margaret Hoffman Executive Director Texas Commission on Environmental Quality

MH/JKM/eg

cc: Mr. Michael Short, City of New Braunfels Mr. Tom Hornseth, Comal County Mr. Greg Ellis, Edwards Aquifer Authority TCEQ Field Operations, Austin Kathleen Hartnett White, Chairman Larry R. Soward, Commissioner H. S. Buddy Garcia, Commissioner Glenn Shankle, Executive Director



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 17, 2007

Mr. Daryl Stoker New Braunfels Independent School District 566 Butcher Street New Braunfels, Texas 78130

Re: Edwards Aguifer, Comal County

NAME OF PROJECT: NBISD High School Field House; Located on Loop 337, north of Hwy 46, New Braunfels, Texas

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

Edwards Aquifer Protection Program ID No. 1591.05; Investigation No. 564648; Regulated Entity No. RN102767803

Dear Mr. Stoker:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the request for modification of the approved WPAP for the above-referenced project submitted to the San Antonio Regional Office by Gil Engineering Associates, Inc. on behalf of New Braunfels Independent School District on June 14, 2007. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) 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 New Braunfels High School was originally constructed in the 1960's. In 1985, the installation of underground storage tanks was approved at the school site on June 24, 1985 (NBISD Transportation Facility, EAPP File #785.00).

In 2001, the renovations and additions fell under the regulations of the TCEQ (TNRCC at the time) and 30 TAC Chapter 213. The 56 acre site had approximately 25.2 acres of existing impervious cover. The WPAP approved on February 16, 2001, added 2.4 acres of additional impervious cover and increased the total impervious cover to 27.6 acres (49%). A partial sedimentation/filtration system designed using the 1999 edition of the TNRCC's "Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices" was constructed. The basin was designed with a water capture volume of 10,179

Reply To: Region 13 • 14250 Judson Rd. • San Antonio, Texas 78233-4480 • 210-490-3096 • Fax 210-545-4329

Mr. Daryl Stoker August 17, 2007 Page 2

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cubic feet (10,019 cubic feet required) and a sand filter area of 1,350 square feet (1,252 square feet required).

A modification was approved on November 8, 2002 for the impervious cover associated with an obstacle course area. There was no loss of water quality volume associated with this modification.

PROJECT DESCRIPTION

The proposed commercial (school) project has a total site area of approximately 56 acres. The proposed modification will disturb approximately 1.44 acres and will include the remodeling of the field house buildings and parking areas. The net increase of impervious cover will be 47 square feet. Project wastewater will be disposed of by conveyance to the existing Kuehler Street Water Recycling Center owned by New Braunfels Utilities.

PERMANENT POLLUTION ABATEMENT MEASURES

The 47 square feet of additional impervious cover generates 0.88 pounds of total suspended solids and requires a water quality volume of 7 cubic feet. The water quality basin was designed with a water quality volume of 10,179 cubic feet (10,026 cubic feet now required) and a sand filter area of 1,350 square feet (1,253 square feet now required). The existing sedimentation/filtration basin has sufficient capacity to account for these amounts stated above. The approved measures meet the required 80 percent removal of the increased load in total suspended solids caused by the project.

<u>GEOLOGY</u>

According to the geologic assessment included with the application, no geologic or manmade features exist on the modification site. The San Antonio Regional Office did not conduct an on site inspection.

SPECIAL CONDITIONS

I. The holder of the approved Edwards Aquifer WPAP must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the application.

II. This modification is subject to all Special and Standard Conditions listed in the WPAP approval letter dated February 16, 2001.

- Intentional discharges of sediment laden storm 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.
- 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.

STANDARD CONDITIONS

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. Mr. Daryl Stoker August 17, 2007 Page 3

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Prior to Commencement of Construction:

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.

3. 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.

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.

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.

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.

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:

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.

Mr. Daryl Stoker August 17, 2007 Page 4

9.

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.

10. 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

11. 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.

12. 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.

13. 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:

14. 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.

15. 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.

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

16.
Mr. Daryl Stoker August 17, 2007 Page 5

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.

17. 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.

18. 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.

If you have any questions or require additional information, please contact Charly Fritz of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4065.

Sincerely,

Hl. l.

Glenn Shankle Executive Director Texas Commission on Environmental Quality

GS/CEF/eg

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

cc:

Mr. Victor Gil, P.E., Gil Engineering Associates, Inc. Mr. Robert Potts, Edwards Aquifer Authority Mr. Bruce Boyer, City of New Braunfels Mr. Tom Hornseth, Comal County TCEQ Central Records, Building F, MC 212 Buddy García, Chairman Larry R. Soward, Commissioner Bryan W. Shaw, Ph.D., Commissioner Mark R. Vickery, P.C., Executive Director

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 4, 2008

Mr. Daryl Stoker New Braunfels Independent School District 430 W. Mill St. New Braunfels, Texas 78130

Re: <u>Edwards Aquifer</u>, Comal County

NAME OF PROJECT: NBISD High School Field House; Located on Loop 337 north of Hwy 46; New Braunfels, Texas

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

Edwards Aquifer Protection Program ID No. 1591.06; Investigation No. 683251; Regulated Entity No. RN102767803

Dear Mr. Stoker:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the request for modification of the approved WPAP for the above-referenced project submitted to the San Antonio Regional Office by Gil Engineering Associates, Inc. on behalf of New Braunfels Independent School District on June 16, 2009. Final review of the WPAP was completed after additional material was received on July 18, 2008. As presented to the TCEQ, the Temporary Best Management Practices (BMPs) 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 New Braunfels High School was originally constructed in the 1960's. The installation of underground storage tanks was approved at the school site on June 24, 1985 (NBISD Transportation Facility, EAPP File #785.00).

In 2001, the renovations and additions fell under the regulations of the TCEQ (TNRCC at the time) and 30 TAC Chapter 213. The 56 acre site had approximately 25.2 acres of existing impervious cover. The WPAP approved on February 16, 2001, added 2.4 acres of additional impervious cover and increased the total impervious cover to 27.6 acres (49%). A partial sedimentation/filtration system designed using the

Reply To: Region 13 • 14250 Judson Rd. • San Antonio, Texas 78233-4480 • 210-490-3096 • Fax 210-545-4329

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1999 edition of the TNRCC's "Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices" was constructed. The basin was designed with a water capture volume of 10,179 cubic feet (10,019 cubic feet required) and a sand filter area of 1,350 square feet (1,252 square feet required).

A modification was approved on November 8, 2002 for the impervious cover associated with an obstacle course. There was no loss of water quality volume associated with this modification.

A second modification was approved on August 17, 2007 for renovations to the field house and parking area. The net increase in impervious cover was 47 square feet. The required water quality volume was raised to 10,026 cubic feet.

PROJECT DESCRIPTION

The proposed commercial project will have an area of approximately 4.1 acres. It will include the removal of the natural grass football field and the installation of an impermeable liner, permeable aggregate base, underlying collector pipes and an artificial turf football field. The two "D" areas adjacent to the field end zones will be converted from natural grass to rubberized track surface. All other areas associated with the track and football field area are considered existing impervious cover. The new impervious cover will be 2.35 acres (57 percent of the 4.1 acre site) and 29.94 acres impervious cover for the total site. No change to the wastewater disposal system or treatment plant is proposed by this modification.

PERMANENT POLLUTION ABATEMENT MEASURES

No permanent BMPs are proposed for this project. The new impervious cover for the 4.1 acre site is 1.874 acres for the football field and 0.476 for the "D" areas.

EXCEPTION JUSTIFICATION

The application proposed an exception request from the requirement of installing permanent BMPs. As stated by the project engineer, the artificial turf and rubberized "D" ring areas will reduce the amount of TSS generated.

The natural grass field:

- Requires approximately 200 pounds of fertilizers a week during growing season
- Requires mowing and clipping, which if not captured, decay and release organic particles which contribute to TSS
- Requires a regular watering schedule
- Can develop bare spots where erosion can occur

The artificial turf field and rubberized "D" areas eliminate all of the above requirements for a natural grass field. The artificial turf field is designed to have approximately six inches of gravel and filter sand above the collector underedrain pipes. This will provide a limited storage capacity and a limited filtration aspect for stormwater which lands on the football field.

The rubberized "D" areas will consist of an asphalt paving with rubberized track surface sealed with a latex binder. This area will receive only pedestrian traffic as vehicular traffic would destroy the

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rubberized surface. As stated by the project engineer, this rubberized "D" area will produce less TSS than the current natural grass field.

GEOLOGY

According to the geologic assessment included with the application, the site is located on the Person Formation. One manmade feature in bedrock was rated non-sensitive by the project geologist. The San Antonio Regional Office site assessment conducted on July 25, 2008 revealed the site as described in the geologic assessment.

SPECIAL CONDITIONS

- I. This modification is subject to all Special and Standard Conditions listed in the WPAP approval letter dated February 16, 2001.
- II. The exception request is granted based on the discussion presented in this letter summarized from correspondence from the project engineer.

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 and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, PST) 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

Mr. Daryl Stoker August 4, 2008August 1, 2008 Page 4

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

Mr. Daryl Stoker August 4, 2008August 1, 2008 Page 5

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 storm 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

Mr. Daryl Stoker August 4, 2008August 1, 2008 Page 6

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.

If you have any questions or require additional information, please contact Charly Fritz of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4065.

Sincerely,

B. Haleile

Mark R. Vickery, P.G. Executive Director Texas Commission on Environmental Quality

MRV/CEF/eg

Enclosure: Deed Recordation Affidavit, Form TCEQ-0625

Mr. Victor Gil, P.E., Gil Engineering Associates, Inc.
 Mr. Bruce Boyer, City of New Braunfels
 Mr. Tom Hornseth, P.E., Comal County
 Ms. Velma Danielson, Edwards Aquifer Authority
 TCEQ Central Records, Building F, MC212

NARRATIVE OF PROPOSED MODIFICATION

Modifications to the Water Pollution Abatement Plan (WPAP) and approved by the TNRCC/TCEQ:

- February 16, 2001 added 2.4 acres of additional impervious cover. A partial sedimentation/filtration system was constructed.
- November 8, 2002 added new impervious cover associated with an obstacle course area. There was no loss or gain of water quality volume associated with this modification.
- August 17, 2007 added 47 sf of additional impervious cover associated with the Field House renovation. The increase of impervious cover generated approximately 0.88 pounds of total suspended solids requiring a water quality volume of 7 cubic feet. The existing sedimentation/filtration basin had sufficient capacity to account for these amounts.
- August 4, 2008 Replaced natural stadium turf with artificial turf. The findings were that the artificial turf although impervious reduced the actual amount of TSS generated by the erosion, watering and fertilizing of a natural grass playing field. This modification added 2.35 acres of impervious cover. The total impervious cover for the site after this modification was 29.94 acres out of the 56 acre site.

The planned modifications consist of the demolition and removal of approximately 2,000 square feet (sf) of existing pervious sod and organics from the site and as shown on Site Plan Sheet S1. Also 900 square feet of existing asphaltic pavement will be removed to offset the increase in impervious cover from the green house building. Excavation of this area prepares the surface for the installation of approximately 1,800 sf of a proprietary greenhouse. Additionally, approximately 120 sf of sidewalk is proposed at the south end of the greenhouse. The removal and addition of impervious cover nets 0.02 acres of impervious cover. The total impervious cover for the site after this modification will be 29.96 acres out of the 56 acre site. (53.5%)

The existing site area does have runoff detention and treatment in place.

The existing drainage patterns will NOT be altered.

ATTACHMENT B Narrative of Proposed Modification



1. Written construction notification must be given to the appropriate TCEQ regional office no later than 48 hours prior to commencement of the regulated activity. Information must include the date on which the regulated activity will commence, the name of the approved plan for the regulated activity, and the name of the prime contractor and the name and telephone number of the contact person.

2. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan 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 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. The regulated activities near the sensitive feature may not proceed until the TCEQ has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse

4. No temporary aboveground hydrocarbon and hazardous substance storage tank system is installed within 150 feet of a domestic, industrial, irrigation, or public water

4. Prior to commencement of construction, all temporary erosion and sedimentation (E&S) control measures must be properly selected, installed, and maintained in accordance with the manufacturers specifications and good engineering practices. Controls specified in the temporary storm water section of the approved Edwards Aquifer Protection Plan are required during construction. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. The controls must remain in place until disturbed areas are revegetated and the areas have become permanently stabilized.

5. If segiment 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).

6. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake must be provided that can indicate when the sediment occupies 50% of the basin volume.

7. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g.,

8. All spoils (excavated material) generated from the project site must be stored on-site with 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.

9. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently cease is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as

10. The following records shall 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.

11. The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior

A. any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants,

B.any 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;

C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL

Table 1: Hydromulching for Temporary Vegetative Stabilization

Description	Longevity	Typical Applications	Application Rates
70% Wood ;30% paper 3% Tackifier	0-3 months	Moderate slopes; from flat to 3:1	45.9 lbs/1000 sf
96% Wood 3% Tackifier	0-3 months	Moderate slopes; from flat to 3:1	45.9 lbs/1000 sf

1. From September 15 to March 1, seeding is considered to be temporary stabilization only. If cool season cover crops exist where permanent vegetative stabilization is desired, the grasses shall be mowed to a height of less than one-half (1/2) inch and the area shall be

2. From March 2 to September 14, seeding shall be with hulled Bermuda at a rate of 1 pound per 1000 SF with a purity of 95% with 85% germination. Bermuda grass is a warm season grass and is considered permanent erosion control. A. Fertilizer shall be a water soluble with an analysis of 15-15-15 to be applied once at planting and once during the period of

C. The planted area shall be irrigated or sprinkled in a manner that will not erode the topsoil, but will sufficiently soak the soil to a depth of six inches. The irrigation shall occur at daily intervals (minimum) during the first two months. Rainfall occurrences of 1/2 inch or

D. Permanent erosion control shall be acceptable when the grass has grown at least 11/2 inches high with 95% coverage, provided no

E. When required, native grass seeding shall comply with requirements of the City of Austin Environmental Criteria Manual.

Table 2: Hydromulching for Permanent Vegetative Stabilization

	Description	Longevity	Typical Applications	Application Rates
BFM)	80% Thermally Refined Wood 10% Tackifier	6 months	On slopes up to 2:1 and erosive soil conditions	68.9 lbs/SF to 80.3 lbs/ 1000SF
ix (FRM)	75% Thermally Refined Wood 5% Reinforcing Fibers	12 months	On slopes up to 1:1 and erosive soil conditions	68.9 lbs/SF to 80.3 lbs/ 1000SF

Owner NEW BRAUNFELS INDEPENDENT SCHOOL DISTRICT Phone # 830-643-5701

Owner's representative responsible for pian alterations:

_ Phone #___

Phone #

Phone #____

10% Tackifier

Person or firm responsible for erosion/sedimentation control maintenance:

Person or firm responsible for tree/natural area protection Maintenance

11. The contractor shall not dispose of surplus excavated material from the site without notifying the Watershed Protection and Development Review Department at 974-2278 at least 48 hours prior with the location and a copy of the permit issued to receive the



Water Pollution Abatement Plan Application

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

REGULATED ENTITY NAME: New Braunfels High School

REGULATED ENTITY INFORMATION

1. The type of project is:

- ____ Residential: # of Lots:
- ____ Residential: # of Living Unit Equivalents:
- ____ Commercial

✓ Other: ____ Civic (Public High School) _____

2. Total site acreage (size of property): <u>56</u>

3. Projected population: 2500

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

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	316,353	÷ 43,560 =	7.27
Parking	596,611	÷ 43,560 =	13.56
Other paved surfaces	392,040	÷ 43,560 =	9.00
Total Impervious Cover	1,305,004	÷ 43,560 =	29.96
Total Impervious Cover + Total Acr	eage x 100 = 53.5%		53.5%

5. ____ ATTACHMENT A - Factors Affecting Water Quality. A description of any factors that could affect surface water and groundwater quality is provided at the end of this form.

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: _____

- Length of Right of Way (R.O.W.): 9. ____feet. _____ feet. Width of R.O.W.: L x W = _____ Ft² ÷ 43,560 Ft²/Acre = acres.
- 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. 10.
- A rest stop will be included in this project. 11. 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

ATTACHMENT B - Volume and Character of Stormwater. A description of the 13. \checkmark volume and character (quality) of the stormwater runoff which is expected to occur from the proposed project is provided at the end of this form. The estimates of stormwater runoff quality and quantity should be based on area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and postconstruction conditions.

WASTEWATER TO BE GENERATED BY THE PROPOSED PROJECT

- The character and volume of wastewater is shown below: 14
 - _% Domestic _____ gallons/day _____ gallons/day
 - __% Industrial _____ gallons/day __% Commingled _____ gallons/day

TOTAL 0 gallons/day

- 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. The appropriate licensing authority's (authorized agent) written approval is provided at the end of this form. It states that the land is suitable for the use of an onsite sewage facility or identifies areas that are not suitable.
 - 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 <u>North</u> Kuehler Water Recycling Facility 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 through 27 must be included on the Site Plan.

- 17. The Site Plan must have a minimum scale of 1" = 400'. Site Plan Scale: 1" = <u>100</u>.
- 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):

FEMA Map Item ID: 4854930005D Map Revision Date 05/15/1991

- 19. <u>✓</u> The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Show lots, recreation centers, buildings, roads, etc.
 - ✓ The layout of the development is shown with existing contours. Finished topographic contours will not differ from the existing topographic configuration and are not shown.
- 20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):
 - ✓ There are <u>0</u> (#) 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. An exception to the Geologic Assessment requirement is requested and explained at the end of this form.
- 22. <u>
 ✓</u> The drainage patterns and approximate slopes anticipated after major grading activities.
- 23. ✓ Areas of soil disturbance and areas which will not be disturbed.

- 25. _ ✓ Locations where soil stabilization practices are expected to occur.
- 26. _ ✓ Surface waters (including wetlands).
- 27. $_$ Locations where stormwater discharges to surface water or sensitive features. There will be no discharges to surface water or sensitive features.

ADMINISTRATIVE INFORMATION

- 28. ✓ 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.
- 29. ✓ Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

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:

Daryl Stoker Print Name of Customer/Agent

Signature of Customer/Agent

18/10 12

Date

FACTORS AFFECTING WATER QUALITY

The planned improvements consist of a 1,800 square foot green house building and 120 square feet of sidewalk. The on-site generated runoff is currently flowing offsite with a sedimentation filtration pond currently in place. Proposed site generated runoff will be routed through the existing sedimentation filtration pond. The existing sedimentation filtration will return the flows to predevelopment rates and remove post development TSS down to background levels. The removal of 900 sf of asphaltic imperious cover will help offset the 1800 sf additional impervious cover.

Factors that could affect surface water or groundwater quality:

- The character of the storm water would be classified as runoff associated with common commercial sites with buildings and parking lots and drives.
- Chemicals used or stored and related to greenhouse facilities will total less than the regulated quantity of 500 gallons. The cleanup of spills will be conducted in a manner to minimize the potential for impact to the environment.
- Activities relating to work on the greenhouse, spills of automotive fluids or other activities that might affect stormwater quality will be conducted in a manner to minimize the potential for impact to the environment.
- There are no other types of activities at a greenhouse facility to affect the character of the storm water.

VOLUME AND CHARACTER OF STORMWATER

The proposed impervious cover is a greenhouse building to be located on an 56 acre existing high school site. The construction of these improvements adds approximately 1,920 square feet (0.02 acres) of impervious cover. Currently, the site contains 29.94 acres of impervious cover. Therefore, the addition of the proposed impervious cover amounts to an approximate 0.3% increase to total proposed impervious cover. The proposed categories of impervious cover will include building, and hard surface flatwork. New impervious cover total will be 27.96 acres after this development.

Existing Drainage Area drains from northwest to southeast and towards Panther Canyon Creek

EXISTING EDA -approximate stormwater flows: 2 year 0.08 cfs 5 year 0.13 cfs 10 year 0.17 cfs 25 year 0.23 cfs 50 year 0.29 cfs 100 year 0.33 cfs

PROPOSED EDA -approximate stormwater flows: 2 year 0.24 cfs 5 year 0.29 cfs 10 year 0.33 cfs 25 year 0.39 cfs 50 year 0.43 cfs 100 year 0.47 cfs

The increase in storm water flow created by post developed improvements will be routed into existing filtration / sedimentation pond this will decrease the post development flow back to pre-development levels.

The character of the storm water would be classified as runoff associated with common commercial sites with buildings and parking lots and drives. There are no other types of activities at a high school to affect the character of the storm water.

Temporary Stormwater Section

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

REGULATED ENTITY NAME: New Braunfels High School

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:
 - Aboveground storage tanks with a cumulative storage capacity of less that 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-site.
- 2. ATTACHMENT A Spill Response Actions. A description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is provided at the end of this form.
- 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. Describe in an attachment at the end of this form any other activities or processes which may be a potential source of contamination.
 - ____ There are no other potential sources of contamination.

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 provided at the end of this form. For each activity described, an estimate of the total area of the site to be disturbed by each activity is given.
- 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: <u>Panther Canyon</u>

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**

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on the site plan.

- 7. ✓ ATTACHMENT D Temporary Best Management Practices and Measures. A description of the TBMPs and measures that will be used during and after construction are provided at the end of this form. For each activity listed in the sequence of construction, include appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented.
 - ✓ 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 has been provided in the attachment at the end of this form
 - a. 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.
 - b. 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.
 - c. A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
 - d. 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 provided at the end of this form. 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. Describe 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. Placement of structural practices in floodplains has been avoided.
- 10. **ATTACHMENT G Drainage Area Map**. A drainage area map is provided at the end of this form to support the following requirements.
 - ____ 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.
- 11. <u>n/a</u> **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 has 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 provided as at the end of this form.
- 12. ATTACHMENT I Inspection and Maintenance for BMPs. A plan for the inspection of temporary BMPs and measures and for their timely maintenance, repairs, and, if necessary, retrofit is provided at the end of this form. A description of documentation procedures and recordkeeping practices is included in the plan.
- 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 at the end of this form.
- 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. <u>Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.</u>

ADMINISTRATIVE INFORMATION

- 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.

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:

Daryl Stoker Print Name of Customer/Agent

Signature of Customer/Agent

12/8/10

Date

SPILL RESPONSE ACTIONS

(1) To the extent that the work can be accomplished safely, spills of oil, petroleum products, 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 stormwater 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

ATTACHMENT A Spill Response Actions 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:

ATTACHMENT A Spill Response Actions (1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 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.

ATTACHMENT A Spill Response Actions

POTENTIAL SOURCES OF CONTAMINATION

Potential sources of contamination at the site include:

- Placement of asphalt, emulsions, or coatings for asphaltic pavement surfaces.
- Oil and other engine fluids from vehicles and equipment during and after construction.
- Short-term storage of road flexible base material, asphaltic products, pipe bedding materials, and miscellaneous soils, gravel, etc.
- Possible littering around the construction site.
- Short term exposure of soil surfaces during construction and prior to stabilization.
- Short term storage and use of fertilizers for use in establishing vegetation.

All activities will be conducted in a manner to minimize the potential for impact to the environment.

ATTACHMENT B Potential Sources of Contamination

SEQUENCE OF MAJOR ACTIVITIES

- A. After the acquisition of all required permits, notify the environmental inspector for a pre-construction conference 3 days in advance.
- B. Install the temporary erosion / sedimentation controls. Erosion / Sedimentation controls rock berm, silt fence, and construction entrance, will be installed according to the plan. (10% site disturbed)
- C. Demolition and rough grading. Including protecting existing filtration / sedimentation pond from damage.(85% site disturbed)
- D. Construction of building and appurtenances. (85% site disturbed)
- E. Check existing permanent erosion controls. Ensure that existing permanent erosion controls are in good working order. (50% site disturbed)
- F. Obtain concurrence letter from engineer, and the final inspection will be scheduled upon receipt of the letter.
- G. Remove temporary erosion controls after acceptance of the existing permanent controls.

ATTACHMENT C Sequence of Major Activities

TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

- A. BMP and measures will prevent pollution of surface water, groundwater or storm water that originates up gradient from the site and flows across the site by diverting the up gradient storm water from the construction site. Upgradient stormwater will be diverted through an existing storm sewer system and through existing concrete and grass channels to rock berms and silt fences that shall be placed to prevent pollution of surface water, groundwater or storm water.
- B. BMP and measures will prevent pollution of surface water, groundwater or storm water that originates on-site or flows off site, including pollution caused by contaminated storm water runoff from the site. All other areas will have silt fences and rock berms to prevent pollution of surface water, groundwater or storm water that originates on-site or flows off site, including pollution caused by contaminated storm water runoff from the site. Areas that will not have soil disturbance shall be left with its natural ground cover. The contractor shall not abrade any areas outside the limits of construction (LOC).
- C. Silt fences and rock berms shall be placed to prevent pollutants from entering surface streams, sensitive features or the aquifer. There are no sensitive features located on this site at this time by the geologic assessment.
- D. Silt fences and rock berms placed on site will be maintained according to the maintenance schedule. This will maintain flow to naturally occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction. There are no sensitive features located on this site at this time by the geologic assessment.

ATTACHMENT D Temporary Best Management Practices and Measures

STRUCTURAL PRACTICES

Before construction, silt fence will be placed to store flows and to limit runoff discharge of pollutants from exposed areas of the site. Rock berm will be placed to divert flows away from exposed soils and to limit runoff discharge of pollutants. Placement of structural practices in floodplains has been avoided. There is no silt fence or rock berm placed in any flood plain.

ATTACHMENT F Structural Practices



INSPECTION AND MAINTENANCE FOR BMPs

All temporary BMPs shall be inspected weekly and after each rain event or water usage or leakage.

SILT FENCE

ONCE EACH WEEK: Silt Fence shall be inspected weekly for damage by workers, machinery or any other activity that may cause damage to silt fence.

AFTER RAIN EVENT OR WATER USAGE/LEAKAGE: Silt Fence shall be inspected after every rain event and after water usage or leakage. If there is any silt accumulation 6 inches or greater the contractor will be required to clean the silt fence and dispose of silt at an approved landfill location. Contractor will be required to repair or replace any silt fence that is damaged and fails to stop erosion or sediment transport.

CONSTRUCTION ENTRANCE

ONCE EACH WEEK: Construction entrance shall be inspected weekly for damage by workers, machinery or any other activity that may cause damage to construction entrance including erosion and normal wear and tear. Construction Entrance should be maintained to the standards shown in Detail 1, Sheet C#.

AFTER RAIN EVENT OR WATER USAGE/LEAKAGE: Construction entrance shall be inspected after every rain event and after water usage or leakage. If there is any silt accumulation 6 inches or greater on or around the construction entrance, the contractor will be required to clean the construction entrance and dispose of silt at an approved landfill location. Contractor will be required to repair or replace any construction entrance that is damaged and fails to stop erosion or sediment transport.

ROCK BERMS

ONCE EACH WEEK: Silt Fence shall be inspected weekly for damage by workers, machinery or any other activity that may cause damage to rock berm. Repair any loose wire sheathing and reshape as needed. Contractor will be required to replace rock berm if the structure ceases to function.

AFTER RAIN EVENT OR WATER USAGE/LEAKAGE: Rock berm shall be inspected after every rain event and after water usage or leakage. If there is any silt accumulation 6 inches or greater the contractor will be required to clean the silt fence and dispose of silt at an approved landfill location.

If a discharge occurs or if the project receives a written notice or order from any regulatory agency, the contractor will immediately notify the Engineer and will file a written report to the regulatory agency within 7 days of the discharge event, notice, or order. Corrective measures will be implemented immediately following the discharge, notice or order.

The report to the regulatory agency will contain the following items:

- The date, time, location, nature of operation, and type of discharge, including the case or nature of the notice or order;
- The BMPs deployed before the discharge event, or prior to receiving notice or order;
- The date of deployment and type of BMPs deployed after the discharge event, or after receiving the notice or order, including additional BMPs installed or planned to reduce or prevent re-occurrence;
 - An implementation and maintenance schedule for any affected BMPs

Recordkeeping:

A qualified inspector will inspect the site each week and after each rain event. Regular weekly reports of compliance or non-compliance will be kept. The weekly reports shall be kept on site during the construction period. After the project has ended the contractor shall keep the weekly reports for a period of 3 years after the certificate of occupancy has been delivered to the owner. A copy of the weekly report to be completed by the qualified inspector is attached.

SITE STABILIZATION

Temporary BMPs shall be left in place until site is completely stabilized and silt and debris should be removed and disposed of in the proper manner.

> ATTACHMENT I Inspection and Maintenance for BMPs

NPDES STORM WATER CONSTRUCTION COMPLIANCE INSPECTION REPORT FOR CONTRACTORS

NPDES PERMIT NO.: PROJECT NAME: PROJECT DESCRIPTION (check one):Residential	DATE OF INSPECTION: COUNTY: Commercial Other:
I. TYPE OF INSPECTION:	
 1) At least once every 7 calendar days, or 2) At least once every 14 calendar days and within 24 hrs of the e U WEATHER CONDITIONS 	end of a storm event of 0.5 inches or greater.
1) Weather conditions during inspection:	
2) Weather conditions since last inspection, including rainfall informat	
III. SITE AND PLAN REVIEW	
Are the following required items available for regulatory review:	
 Y N 1) SWPPP Y N 2) Copy of the General Permit Y N 3) NOI Y N 4) DHEC Coverage Letter Y N 5) Co-permittee agreements or contractor certification st Y N 6) Weekly inspection forms 	tatements
IV. BEST MANAGEMENT PRACTICES	
 Y N 1) Is the Construction entrance/exit properly installed accordin Y N 2) Is the perimeter silt fence and/or other controls properly inst Y N 3) Did any BMPs fail to operate as designed or prove inadeque 	ng to plans stalled nate? *If Yes, Identify BMPs and location(s):
Y* N 4) Are additional BMPs needed? *If Yes, identify BMPs need	led and which location(s):
Y* N 5) Do any BMPs require maintenance? * If Yes, provide locat	tion(s) and description(s):
 Y N 6) Is construction activity following the phasing and sequenci Y N 7) Has construction activity on the site ceased for 14 days or r 	ng plan? nore?

Y	N*	8) If activity	has ceased,	, have temporary	stabilization	n measures been	installed with	in 14 days? *	If No, identify le	ocation(s)
nee	eding	stabilization:								

V. FINAL	STABILIZATION
Y* N F Y	Have all land disturbing activities at the site permanently ceased? "If Yes, complete the following questions: N 1) Are there any areas of active erosion evident? If Yes, location(s):
У п	N 2) Does the permitted area have 70% permanent vegetative cover (i.e. grass or other cover) OR have equivalent neasures such as riprap, or geotextiles been installed?
VL OFFS	ITE IMP ACTS FROM PROJECT
1) Are th	here any offsite impacts? No Yes, where? Public Right of Way Adjoining Property Owne Wetlands Creek/River Lake/Pond Other (please specify):
2) If answ	ering "Yes" to the previous question, indicate the location and describe the impact:
VII. DEF	ICIENCIES/ CORRECTIVE ACTIONS
Were def Correctiv	iciencies noted in this inspection previously listed in a monthly report?YesNo e Action needed as a result of this inspection, including date to be completed:
Were def Correctiv	iciencies noted in this inspection previously listed in a monthly report?YesNo e Action needed as a result of this inspection, including date to be completed:
Were def Correctiv	iciencies noted in this inspection previously listed in a monthly report?YesNo e Action needed as a result of this inspection, including date to be completed: DRM WATER POLLUTION PREVENTION PLAN UPDATES
Were def Correctiv VIII. STC Y N 1) Y N 2)	iciencies noted in this inspection previously listed in a monthly report?YesNo e Action needed as a result of this inspection, including date to be completed: DRM WATER POLLUTION PREVENTION PLAN UPDATES Does the SWPPP need to be modified as a result of the inspection? Has the SWPPP been modified since the last inspection? If so, note the date(s):
Were def Correctiv VIII. STO Y N 1) Y N 2) IX. COMM	iciencies noted in this inspection previously listed in a monthly report?YesNo e Action needed as a result of this inspection, including date to be completed:
Were def Correctiv VIII. STC Y N 1) Y N 2) IX. COMM	iciencies noted in this inspection previously listed in a monthly report?YesNo e Action needed as a result of this inspection, including date to be completed:
Were def Correctiv VIII. STC Y N 1) Y N 2) IX. COMM	iciencies noted in this inspection previously listed in a monthly report?YesNo e Action needed as a result of this inspection, including date to be completed:
Were def Correctiv 	iciencies noted in this inspection previously listed in a monthly report?YesNo e Action needed as a result of this inspection, including date to be completed:
Were def Correctiv	iciencies noted in this inspection previously listed in a monthly report?YesNo e Action needed as a result of this inspection, including date to be completed: PRM WATER POLLUTION PREVENTION PLAN UPDATES Does the SWPPP need to be modified as a result of the inspection? Has the SWPPP been modified since the last inspection? If so, note the date(s): IENTS

SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

Existing on-site vegetation will be protected through limiting the construction areas as well as through the use of temporary best management practices including silt fence and tree protection. Areas around the daycare will be sodded with Bermuda grass sod as soon as, but no more than 14 days after construction activities in that area have permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently cease is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently cased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable. Hydromulching will be required on all abraded areas for permanent soil stabilization as shown by hatching on our site plan. Temporary BMPs shall not be removed until grass from hydromulching is established to prevent erosion. On all 4:1 slopes, grass sod is required. There are no slopes greater than 4:1 on site.

> ATTACHMENT J Schedule of Interim and Soil Stabilization Practices

Permanent Stormwater Section

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

REGULATED ENTITY NAME: New Braunfels High School

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

- 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 provided below:
- 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.
- 4. <u>n/a</u> 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.
 - ____ This site will be used for low density single-family residential development and has 20% or less impervious cover.
 - ____ This site will be used for low density single-family residential development but has more than 20% impervious cover.
 - ____ This site will not be used for low density single-family residential development.
- 5. <u>n/a</u> The executive director may waive the requirement for other permanent BMPs for multifamily 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. This 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 found at the end of this form.
- This site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
- ____ This 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 identified as **ATTACHMENT B** at the end of this form.
- ✓ If no surface water, groundwater or stormwater originates upgradient from the site and flows across the site, an explanation is provided as ATTACHMENT B at the end of this form.
- ____ If 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, an explanation is provided as **ATTACHMENT B** at the end of this form.

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 identified as **ATTACHMENT C** at the end of this form.
- If 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, an explanation is provided as **ATTACHMENT C** at the end of this form.
- 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 provided at the end of this form. Each feature identified in the Geologic Assessment as "sensitive" has been addressed.
- 9. <u>·</u> 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" or "possibly sensitive" feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed for any naturally-occurring "sensitive" or "possibly sensitive" features on this site.
 - <u>n/a</u> **ATTACHMENT E Request to Seal Features.** A request to seal a naturallyoccurring "sensitive" or "possibly sensitive" feature, that includes a justification as to why no reasonable and practicable alternative exists, is found at the end of this form. A request and justification has been provided for each feature.
- 10. ATTACHMENT F Construction Plans. Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information have been signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed permanent BMPs and measures are provided at the end of this form. Design Calculations, TCEQ

Construction Notes, all man-made or naturally occurring geologic features, all proposed structural measures, and appropriate details must be shown on the construction plans.

- 11. ✓ ATTACHMENT G Inspection, Maintenance, Repair and Retrofit Plan. A plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is provided at the end of this form. The plan has been prepared and certified by the engineer designing the permanent BMPs and measures. The plan has been signed by the owner or responsible party. The plan includes procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofits as well as a discussion of record keeping procedures.
- 12. ____ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.
 - Pilot-scale field testing (including water quality monitoring) may be required for BMPs that are not contained in technical guidance recognized by or prepared by the executive director.
 - **ATTACHMENT H Pilot-Scale Field Testing Plan.** A plan for pilot-scale field testing is provided at the end of this form.
- 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 provided at the end of this form. 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.

Responsibility for maintenance of permanent BMPs 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.
- 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.

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:

Daryl Stoker Print Name of Customer/Agent

Signature of Customer/Agent

12/8/10 Date

BMPs FOR UP GRADIENT STORMWATER

NO up gradient storm water currently flows across the site. An existing channel is provided to route this flow so that it does not and will not commingle with any on site storm water.

ATTACHMENT B BMPs for Upgradient Stormwater
BMPs FOR ONSITE STORMWATER

To prevent pollution of stormwater runoff originating on-site or up-gradient of the site and potentially flowing across and off the site, a berm to divert up gradient water will be provided. The onsite water will be routed to the existing sedimentation / filtration pond to reduce TSS and return the flow to panther canyon. The existing sedimentation / filtration pond will act as a sediment trap while construction is occurring.

On site BMP will use silt fence to temporally control storm water during construction.

The project consists of 0.05 acres total project area included in plan. The Predevelopment Impervious cover area is 0.02 acres (900 sf), which will be removed.

Total post development impervious cover area is 0.4 acres

The post development impervious cover fraction is 0.98

The total load required to be removed from this project is $L_M=22$ LBS.

The existing sedimentation filtration pond was sized at 10,179 Cubic feet with (10,019) required. The pond will be sized to capture the first 0.47 inches of storm water run-off from 0.04 acres of impervious cover within a 0.05 acre catchment area. Total capture volume for the addition is 64 cf. The basin will provide a total capture volume to treat 10,179 pounds of total suspended solids The additional treatment required by the addition is 64 cubic feet for a total of 10,083 cf required.

ATTACHMENT C BMPs for Onsite Stormwater Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: New Braunfels Green House Date Prepared: 12/8/2010

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 fo	r 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 x P)		
where:	LM TOTAL PROJECT =	Required TS	S removal resulting fr	rom the proposed development = 80% of increased load
	A _N =	Net increase	in impervious area fo	or the project
	P =	Average ann	ual precipitation, inch	les
Site Data: Determine Required	Load Removal Based on the Entire Project	t		
	County =	Comal		
	Total project area included in plan * =	0.05	acres	
Predevelopment imper	vious area within the limits of the plan * =	0.02	acres	
Total post-development impe	rvious area within the limits of the plan" =	0.04	acres	
lotal post-d	evelopment impervious cover fraction =	0.98		
	P =	33	incnes	
	LM TOTAL PROJECT =	22	lbs.	
* The values entered in these field	s should be for the total project area.			
Number of drainage basi	ns / outfalls areas leaving the plan area =	1		
2. Drainage Basin Parameters (This	s information should be provided for ea	ch basin):		
	Drainage Basin/Outfall Area No. =	1		
	Total drainage basin/outfall area =	0.05	acres	
Predevelopment impervious	s area within drainage basin/outfall area =	0.02	acres	
Post-development impervious	s area within drainage basin/outfall area =	0.04	acres	
Post-development impervious fr	action within drainage basin/outfall area =	0.80		
	L _{M THIS BASIN} =	18	lbs.	
3. Indicate the proposed BMP Code	for this basin.			

Proposed BMP = Sand Filter

Removal efficiency =	89 the selected	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
PC-348 Page 3, 33 Equation 3, 7: 1 =	(BMP officia		$(24.6 \pm 4.5 \times 0.54)$
KG-346 Fage 3-33 Equation 3.1. L _R =			(34.0 + Mp X 0.34)
where: A _c =	Total On-Sit	e drainage are	a in the BMP catchment area
A ₁ =	Impervious	area proposed	in the BMP catchment area
	TSS Load r	ea remaining in	the BMP catchment area
	133 Luau R		is calcument area by the proposed Divir
A _c =	0.05	acres	
A ₁ =	0.04	acres	
A _P =	0.01	acres	
L _R =	41	lbs	
5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall	area		
Desired L _{M THIS BASIN} =	22	lbs.	
F =	0.54		
6. Calculate Capture Volume required by the BMP Type for this drainage ba	asin / outfal	ll area.	Calculations from RG-348 Pages 3-34 to 3-36
Rainfall Donth -	0 47	inches	
Post Development Runoff Coefficient =	0.62	1101163	
On-site Water Quality Volume =	54	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 Water Quality Volume =	= 0.00	cubic feet
Storage for Sediment =	= 11 - 64	aubic faat
The following sections are used to calculate the required water quality vo	ume(s) for the	e selected BMP.
The values for BMP Types not selected in cell C45 will show NA.	-	
7. Retention/Irrigation System	Designed as I	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 Enter determined permeability rate or assumed value of 0.1
Irrigation area =	= NA	square feet
	NA	acres
8. Extended Detention Basin System	Designed as I	Required in RG-348 Pages 3-46 to 3-51
Required Water Quality Volume for extended detection basis -	- NA	cubic fact
Required Water Quality Volume for extended detention basin -		
9. Filter area for Sand Filters	Designed as I	Required in RG-348 Pages 3-58 to 3-63
9. Filter area for Sand Filters 9A. Full Sedimentation and Filtration System	Designed as I	Required in RG-348 Pages 3-58 to 3-63
9. Filter area for Sand Filters 9A. Full Sedimentation and Filtration System Water Quality Volume for sedimentation basin =	Designed as I	Required in RG-348 Pages 3-58 to 3-63 cubic feet
<u>9. Filter area for Sand Filters</u> <u>9A. Full Sedimentation and Filtration System</u> Water Quality Volume for sedimentation basin = Minimum filter basin area =	Designed as = 64 = 3	Required in RG-348 Pages 3-58 to 3-63 cubic feet square feet
<u>9. Filter area for Sand Filters</u> <u>9A. Full Sedimentation and Filtration System</u> Water Quality Volume for sedimentation basin = Minimum filter basin area = Maximum sedimentation basin area =	Designed as = 64 = 3 = 27	Required in RG-348 Pages 3-58 to 3-63 cubic feet square feet square feet For minimum water depth of 2 feet
9. Filter area for Sand Filters 9A. Full Sedimentation and Filtration System Water Quality Volume for sedimentation basin = Minimum filter basin area = Maximum sedimentation basin area = Minimum sedimentation basin area =	Designed as 1 = 64 = 3 = 27 = 7	Required in RG-348 Pages 3-58 to 3-63 cubic feet square feet square feet For minimum water depth of 2 feet square feet For maximum water depth of 8 feet
9. Filter area for Sand Filters 9A. Full Sedimentation and Filtration System Water Quality Volume for sedimentation basin = Minimum filter basin area = Maximum sedimentation basin area = Minimum sedimentation basin area =	Designed as = 64 = 3 = 27 = 7	Required in RG-348 Pages 3-58 to 3-63 cubic feet square feet square feet For minimum water depth of 2 feet square feet For maximum water depth of 8 feet
9. Filter area for Sand Filters 9A. Full Sedimentation and Filtration System Water Quality Volume for sedimentation basin = Minimum filter basin area = Maximum sedimentation basin area = Minimum sedimentation basin area =	Designed as I = 64 = 3 = 27 = 7	Required in RG-348 Pages 3-58 to 3-63 cubic feet square feet square feet For minimum water depth of 2 feet square feet For maximum water depth of 8 feet
9. Filter area for Sand Filters 9A. Full Sedimentation and Filtration System Water Quality Volume for sedimentation basin = Minimum filter basin area = Maximum sedimentation basin area = Minimum sedimentation basin area = Maximum sedimentation basin area = Minimum sedimentat	Designed as = 64 = 3 = 27 = 7 = 7	Required in RG-348 Pages 3-58 to 3-63 cubic feet square feet square feet For minimum water depth of 2 feet square feet Cubic feet
9. Filter area for Sand Filters 9A. Full Sedimentation and Filtration System Water Quality Volume for sedimentation basin area = Minimum filter basin area = Maximum sedimentation basin area = Minimum sedimentation basin area = 9B. Partial Sedimentation and Filtration System Water Quality Volume for combined basins = Minimum filter basin area =	Designed as 1 = 64 = 3 = 27 = 7 = 7 = 64 = 5	Required in RG-348 Pages 3-58 to 3-63 cubic feet square feet For minimum water depth of 2 feet square feet cubic feet square feet
 <u>9. Filter area for Sand Filters</u> <u>9A. Full Sedimentation and Filtration System</u> Water Quality Volume for sedimentation basin = Minimum filter basin area = Maximum sedimentation basin area = <u>9B. Partial Sedimentation and Filtration System</u> Water Quality Volume for combined basins = Minimum filter basin area = 	Designed as l = 64 = 3 = 27 = 7 = 7 = 64 = 5 = 21	Required in RG-348 Pages 3-58 to 3-63 cubic feet square feet square feet For minimum water depth of 2 feet square feet square feet For maximum water depth of 2 feet
 <u>9. Filter area for Sand Filters</u> <u>9A. Full Sedimentation and Filtration System</u> Water Quality Volume for sedimentation basin area = Minimum filter basin area = Maximum sedimentation basin area = Minimum sedimentation basin area = Mater Quality Volume for combined basins = Minimum filter basin area = Mater Quality Volume for combined basins = Minimum filter basin area = 	Designed as 1 = 64 = 3 = 27 = 7 = 7 = 64 = 5 = 21 = 1	Required in RG-348 Pages 3-58 to 3-63 cubic feet square feet square feet For minimum water depth of 2 feet square feet For maximum water depth of 8 feet cubic feet square feet square feet For maximum water depth of 2 feet square feet For maximum water depth of 2 feet square feet For minimum water depth of 2 feet square feet For minimum water depth of 2 feet
 <u>9. Filter area for Sand Filters</u> <u>9A. Full Sedimentation and Filtration System</u> Water Quality Volume for sedimentation basin area = Minimum filter basin area = Maximum sedimentation basin area = <u>9B. Partial Sedimentation and Filtration System</u> Water Quality Volume for combined basins = Minimum filter basin area = Minimum filter basin area = 	Designed as = 64 = 3 = 27 = 7 = 7 = 64 = 5 = 21 = 1 Designed as	Required in RG-348 Pages 3-58 to 3-63 cubic feet square feet square feet For minimum water depth of 2 feet square feet For maximum water depth of 8 feet cubic feet square feet square feet For minimum water depth of 2 feet square feet For minimum water depth of 2 feet square feet For minimum water depth of 2 feet square feet For maximum water depth of 2 feet square feet For maximum water depth of 3 feet
 <u>9. Filter area for Sand Filters</u> <u>9A. Full Sedimentation and Filtration System</u> Water Quality Volume for sedimentation basin area = Minimum filter basin area = Maximum sedimentation basin area = Minimum sedimentation basin area = <u>9B. Partial Sedimentation and Filtration System</u> Water Quality Volume for combined basins = Minimum filter basin area = Maximum sedimentation basin area = Mater Quality Volume for combined basins = Minimum filter basin area = Minimum sedimentation basin area = 	Designed as 1 = 64 = 3 = 27 = 7 = 64 = 5 = 21 = 1 Designed as 1	Required in RG-348 Pages 3-58 to 3-63 cubic feet square feet square feet For minimum water depth of 2 feet square feet For maximum water depth of 8 feet cubic feet square feet square feet For minimum water depth of 2 feet square feet For maximum water depth of 2 feet square feet For minimum water depth of 2 feet square feet For maximum water depth of 2 feet square feet For maximum water depth of 3 feet Required in RG-348 Pages 3-63 to 3-65

11. Wet Basins	Designed as	Required in R	G-348 Pages 3-66 to 3-71
Required capacity of Permanent Pool = Required capacity at WQV Elevation =	= NA = NA	cubic feet cubic feet	Permanent Pool Capacity is 1.20 times the WQV Total Capacity should be the Permanent Pool Capacity plus a second WQV.
12. Constructed Wetlands	Designed as	s Required in R	G-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 R	Pages 3-74 to 3-78
** 2005 Technical Guidance Manual (RG-348) does not exempt the requir	ed 20% increa	ase with main	tenance contract with AquaLogic [™] .
Required Sedimentation chamber capacity Filter canisters (FCs) to treat WQV Filter basin area (RIA _F)	= NA = NA = NA	cubic feet cartridges square feet	
14. Stormwater Management StormFilter® by CONTECH			
Required Water Quality Volume for Contech StormFilter System	= NA	cubic feet	
THE SIZING REQUIREMENTS FOR THE FOLLOWING BMPs / LOAD REM	OVALS ARE I	BASED UPON	FLOW RATES - NOT CALCULATED WATER QUALITY VOLUMES
15. Grassy Swales	Designed as	s Required in R	IG-348 Pages 3-51 to 3-54
Design parameters for the swale:			
Drainage Area to be Treated by the Swale = A Impervious Cover in Drainage Area Rainfall intensity = i Swale Slope Side Slope (z) Design Water Depth = y Weighted Runoff Coefficient = C	= 3. = 0. = 0. = 0.	00 acres 25 acres 1.1 in/hr 01 ft/ft 33 ft 36	
A _{CS} = cross-sectional area of flow in Swale	= 3.	36 sf	
P _w = Wetted Perimeter	= 11.	50 feet	
R_{H} = hydraulic radius of flow cross-section = A_{CS}/P_{W} n = Manning's roughness coefficient	= 0.	29 feet).2	
15A. Using the Method Described in the RG-348			

Manning's Equation:	$Q = 1.49 A_{CS} R_{H}^{2/3} S^{0.5}$
	n

 $b = \frac{0.134 \times Q}{y^{1.67} S^{0.5}} - zy = 8.75 \text{ feet}$

Q = CiA =

To calculate the flow velocity in the swale:

V (Velocity of Flow in the swale) = Q/A_{cs} = 0.36 ft/sec

To calculate the resulting swale length:

L = Minimum Swale Length = V (fl/sec) * 300 (sec) = 107.24 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.

1.20 cfs

15B. Alternative Method us	sing Excel Solver				To solve for bottom v Excel can simultaned The required "Swale
	Design Q = CiA =	1.20 cfs			
		0.70 - /-	Face 1 -	0.42	First, highlight Cell F
	Manning's Equation Q =	0.78 CIS	Error I =	0.42	The value in the "Set
	Swale Width=	6.00 π			The value in the "By
					Click on solve
					CIICK OII SOIVE.
Instructions	s are provided to the right (green comments).				The resulting "Swale
					If the resulting "Swal
		0.25 410			in the resulting out
	Flow velocity	0.30 105			If there is not the opt
	Minimum Length -	107.24 1			Click on "Tools" and
	and any data data data data (blue seminanta)				Then proceed as inst
Instructions	s are provided to the right (blue comments).				Then proceed as inst
	Design Width =	6 ft			If you would like to in
	Design Discharge =	0.78 cfs	Error 2 =	0.42	Excel can simultaneo
	Design Depth =	0.33 ft	2		The required "Design
	Flow Velocity =	0.32 cfs			Contraction Contraction
	Minimum Length =	95.58 ft			First set the desired
	in the congre				Highlight Cell F232.
				THE PARTY OF THE P	0

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

Click on "Tools" and The value in the "Set The value in the "By

			Click on solve.
There are no calculations required for determining the load or size of veg. The 80% removal is provided when the contributing drainage area does no the sheet flow leaving the impervious cover is directed across 15 feet of e across 50 feet of natural vegetation with a maximum slope of 10%. There	The resulting "Desig If the resulting "Desi First set the desired Highlight Coll 5232		
If vegetative filter strips are proposed for an Interim permanent BMP, they	/ may be sized as described	on Page 3-56 of RG-348.	Click on "Tools" and The value in the "Set
17. Wet Vaults	Designed as Required in RG	-348 Pages 3-30 to 3-32 & 3-79	Click on solve.
Required Load Removal Based upon Equation 3.3 =	NA Ibs		The resulting "Desig
First calculate the load removal at 1.1 in/hour			n no rooming boo
RG-348 Page 3-30 Equation 3.4: Q = CiA	í.		
C = runoff coefficient for the drainage area = i = design rainfall intensity = A = drainage area in acres =	0.64 1.1 in/hour 1 acres	C = Runoff Coefficient = 0.546 (IC) ² + 0.328 (IC) + 0.03	
Q = flow rate in cubic feet per second =	0.71 cubic feet/see		
RG-348 Page 3-31 Equation 3.5: V _{OR} = Q/A	ε.		
Q = Runoff rate calculated above = A = Water surface area in the wet vault =	0.71 cubic feet/sec 150 square feet	3	
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 = Efficiency Reduction for Actual Rainfall Intensity =	0.75 percent 0.83 percent		
Resultant TSS Load removed by Wet Vault =	#VALUE! Ibs		
18. Permeable Concrete	Designed as Required in RG	-348 Pages 3-79 to 3-83	
DEDMEADLE CONCRETE MAY ONLY BE USED ON THE CONTRIBUTING	ONE		

 PERMEABLE CONCRETE MAY ONLY BE USED ON THE CONTRIBUTING ZONE

19. BMPs Insta	alled in a Series	Designed as I	Required in R	G-348 Pages 3-32
	Michael E. Barrett, Ph.D., P.E. recommended that the coef	ficient for E ₂ b	e changed fr	om 0.5 to 0.65 on May 3, 2006
	$E_{TOT} = [1 - ((1 - E_1) \times (1 - 0.65E_2) \times (1 - 0.25E_3))] \times 100 =$	#VALUE!	percent	NET EFFICIENCY OF THE BMPs IN THE SERIES
	EFFICIENCY OF FIRST BMP IN THE SERIES = E_1 =	70.0	percent	
	EFFICIENCY OF THE SECOND BMP IN THE SERIES = E_2 =	80.0	percent	
	EFFICIENCY OF THE THIRD BMP IN THE SERIES = E_3 =	:	percent	
	THEREFORE, THE NET LOAD REMOVAL WOULD BE: (A ₁ AND A _P VALUES ARE FROM SECTION 3 ABOVE)			
	L _R = E _{TOT} X P X (A ₁ X 34.6 X A _P X0.54) =	#VALUE!	lbs	
20 Stormoont	~			
20. Stormcept	or Desuited TSS Removal in BMR Drainage Areas	NA	lbc	
	Required 155 Removal in Bivir Drainage Area-	0.0000	105	
	TSS Demoval for Linearthred Area	0.0000	du Ibo	
	155 Removal for Uncaptured Area =	0.00	105	
	BMP Sizing		F 4	
	Effective Area =	e NA	EA	
	Calculated Model Size(s) =	#N/A		
	Actual Model Size (if multiple values provided in Calculated	1.5.1		
	Model Size or if you are choosing a larger model size) =	0	Model Size	
	Surface Area =	= #N/A	ft ²	
	Overflow Rate =	#VALUE!	Vor	
	Rounded Overflow Rate =	#VALUE!	Vor	
	BMP Efficiency % =	#VALUE!	%	
	La Value =	#VALUE!	lbe	
		WUNCOL.	105	
	TSS Load Credit =	#VALUE!	lbs	
	Is Sufficient Treatment Available? (TSS Credit ≥ TSS Uncapt.)	#VALUE!		
	TSS Treatment by BMP (LM + TSS Uncapt.) =	#VALUE!		
21. Vortech				
	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 choosing larger model size) =	Vx1000	Pick Model Size
Surface Area =	7.10	ft ²
Overflow Rate =	#VALUE!	Vor
Rounded Overflow Rate =	#VALUE!	Vor
BMP Efficiency % =	#VALUE!	%
L _R Value =	#VALUE!	lbs
TSS Load Credit =	#VALUE!	lbs
Is Sufficient Treatment Available? (TSS Credit	#VALUE!	

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









width of the trapezoidal swale (b) using the Excel solver: busly solve the "Design Q" (C217) vs "Manning's Q" (C219) by varying the "Swale Width" (C220). Width" occurs when the "Design Q" = "Manning's Q"

219 (Error 1 value). The equation showing in the fx screen for Cell F219 should be "= \$C\$217-\$C\$219"" and "Solver". The "Solver Parameters" screen pops up.Target cell" should be \$F\$219"Error 1 ="Changing Cells" should be \$C\$220"Swale Width"

Width" must be less than 10 feet to meet the requirements of the TGM. le Width" exceeds 10 feet then the design parameters must be revised and the solver run again.

ion for "Solver" under "Tools" "Add Ins" and then check "Solver Add-in" ructed above.

icrease the bottom width of the trapezoidal swale (b):
busly solve the "Design Q" (C217) vs "Design Discharge" (C232) by varying the "Design Depth" (C233).
i) Depth" for a 10-foot bottom width occurs when the "Design Q" (C217) = the "Design Discharge" (C232).

bottom width in Cell C231. The equation showing in the fx screen for Cell F232 should be "= \$C\$217-\$C\$232"

"Solver". The "Solver Parameters" screen pops up. Target cell" should be \$F\$232 "Error 2" Changing Cells" should be \$C\$233 "Design Depth" n Depth" must be equal to or less than 0.33 feet to meet the requirements of the TGM. gn Depth" exceeds 0.33 feet then the design parameters must be revised and the solver run again. bottom width in Cell C231. The equation showing in the fx screen for Cell F232 should be "= \$C\$217-\$C\$232"

"Solver". The "Solver Parameters" screen pops up. Target cell" should be \$F\$232 "Error 2" Changing Cells" should be \$C\$233 "Design Depth"

n Depth" must be equal to or less than 0.33 feet to meet the requirements of the TGM. gn Depth" exceeds 0.33 feet then the design parameters must be revised and the solver run again.

BMPs FOR SURFACE STREAMS

An existing sedimentation and filtration pond will prevent pollutants from entering the aquifer. The existing sedimentation and filtration pond was built in accordance with the TCEQ's Technical Guidance Manual (TGM).

Detention will be held on site using the existing detention pond. The 100 year storm was used to size the components of the detention pond.

There are no sensitive or possibly sensitive features on this site.

ATTACHMENT D BMPs for Surface Streams

Inspection, Maintenance, Repair and Retrofit Plan

Sedimentation Basins

- Monthly: The vegetative growth in the basin shall be checked. The growth shall not exceed 18 inches in height.
- Quarterly: The level of accumulated silt shall be checked. If depth of silt exceeds 6 inches, it shall be removed and disposed of "properly" and in an "approved" location.

The basin shall be checked for accumulation of debris and trash. The debris and trash shall be removed if excessive. All debris and trash shall be removed at least every six months.

- Annually: The basin shall be inspected for structural integrity and repaired if necessary.
- After Rainfall: The basin shall be checked after each rainfall occurrence to insure that it drains within 48 hours after the storm is over. If it does not drain within this time, corrective maintenance will be accomplished.

Filtration Basins

Monthly: The vegetative growth in the basin shall be checked. The growth shall not exceed 18 inches in height.

Quarterly:

The accumulation of pollutants/oils shall be checked. If the pollutants have significantly reduced the designed capacity of the sand filter, the pollutants shall be removed.

The level of accumulated silt shall be checked. If depth of silt/pollutants exceeds 1/2 inch, it shall be removed and disposed of "properly" and in an "approved" location.

The basin shall be checked for accumulation of debris and trash. The debris and trash shall be removed if excessive. All debris and trash shall be removed at least every six months.

Annually: The basin shall be inspected for structural integrity and repaired if necessary. Filter underdrain piping network shall be cleaned to remove sediment buildup.

After Rainfall: The basin shall be checked after each rainfall occurrence to insure that it drains within 48 hours. If it does not drain within this time, corrective maintenance will be accomplished.

Following any required maintenance, the surface of the filtration basin shall be raked and leveled to restore the system to it designed condition.

"Proper" disposal of accumulated silt shall be accomplished following Texas Commission on Environmental Quality and City of New Braunfels / Comal County guidelines and specifications.

An amended copy of this document will be provided to the Texas Commission on Environmental Quality within thirty (30) days of any changes in the following information

Responsible Party:	Daryl Stoker	
Entity	New Braunfels High School Field House	******
Mailing Address	2551 Loop 337 North	
City, State, Zip Code	New Braunfels, Texas 78130	
Telephone:	(830) 627-6400 FAX: (830) 627-6401	
Day A	och	10/14/10
Signature of Responsib	le Party	Date

Signature of Responsible Party

ATTACHMENT G Inspection, Maintenance, Repair and Retrofit Plan





4. A pre-construction conference shall be held on-site with the contractor, design engineer/permit applicant and Environmental Inspector after installation of the erosion / sedimentation controls and tree/natural area protection measures and prior to beginning any site preparation work The contractor shall notify the City of New Braunfels, at least three days prior to the meeting date.

5. Any significant variation in materials or locations of controls or fences from those shown on the approved plan a must be approved by the reviewing Engineer, Environmental Specialist or City Arborist as appropriate.

6. The contractor is required to inspect the controls and fences at weekly intervals and after significant rainfall events to insure that they are functioning properly. The person(s) responsible for maintenance of controls and fences shall immediately make any necessary repairs to damaged areas. Silt accumulation at controls must be removed when the depth reaches six (6) inches.

7. Prior to final acceptance by the City, haul roads and waterway crossings constructed for temporary contractor access must be removed, accumulated sediment removed from the waterway and the area restored to the original grade and revegetated All land clearing debris shall be disposed of in approved spoil disposal sites.

8. Field revisions to the Erosion and Sedimentation Control Plan may be required by the Environmental Inspector during the course of construction to correct control inadequacies. Major revisions must be approved by the City of New Braunfels.

9. Permanent Erosion Control:

All disturbed areas shall be restored as noted below.

right-of-way line.

ii. From March 2 to September 14, seeding shall be with hulled Bermuda at a rate of 1.0 pounds per 600 square feet with a purity of 95% with 85% germination.

(c) Fertilizer shall have an analysis of 15-15-15 and shall be applied at the rate of 600 pounds per acre.

(d) The planted area shall be irrigated or sprinkled in a manner that will not erode the topsoil, but will sufficiently soak the soil to a depth of six inches. The irrigation shall occur at ten-day intervals during the first two months. Rainfall occurrences of 1/2 inch or more shall postpone the watering schedule for one week.

(f) Restoration shall be acceptable when the grass has grown at least 1-1/2 inches high with 95% coverage, provided no bare spots larger than 16 square feet exist.

430 W. Mill Street New Braunfels, TX 78130 (830)643-5700, (830)643-5701 Fax

Owner's representative responsible for plan alterations:

SHW GROUP (512)795-0088 Person or firm responsible for erosion/sedimentation control maintenance:

Person or firm responsible for tree/natural area protection maintenance:

(1) Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in2, ultraviolet stability exceeding 70%%%, and minimum apparent opening size of U.S. Sieve No. 70-100. (2) Fence posts should be made of hot rolled steel, at least 4 feet long with Tee or Ybar cross section, surface painted or galvanized, minimum nominal weight 1.25 lb/ft2, and Brindell hardness exceeding 140. (3) Woven wire backing to support the fabric should be galvanized 2" x 4" welded wire, 12 gauge minimum.

(1) Steel posts, which support the silt fence, should be installed on a slight angle toward the anticipated runoff source. Post must be embedded a minimum of 1- foot deep and spaced not more than 8 feet on center. Where water concentrates, the maximum spacing should be 6 feet. (2) Lay out fencing down—slope of disturbed area, following the contour as closely as possible. The fence should be sited

so that maximum drainage are is 1/4 acre/100 feet of fence. (3) The toe of the silt fence should be trenched in with a spade or mechanical trencher, so that the down-slope face of

the trench is flat and perpendicular to the line of flow. Where fence cannot be trenched in (e.g., pavement or rock outcrop), weight fabric flap with 3 inches of pea gravel on uphill side to prevent flow from seeping under fence. (4) The trench must be a minimum of 6 inches deep and 6 inches wide to allow for the silt fence fabric to be laid in the ground and backfilled with compacted material.

(5) Silt fence should be securely fastened to each steel support post or to woven wire, which is in turn attached to the steel fence post. There should be a 3-foot overlap, securely fastened where ends of fabric meet. (6) Silt fence should be removed when the site is completely stabilized so as not to block or impede storm flow or

(1) Fence not installed along the contour causing water to concentrate and flow over the fence. (2) Fabric not seated securely to ground (runoff passing under fence) (3) Fence not installed perpendicular to flow line (runoff escaping around sides)

(4) Fence treating too large an area, or excessive channel flow (runoff overtops or collapses fence)

(2) Remove sediment when buildup reaches 6 inches.

(3) Replace any torn fabric or install a second line of fencing parallel to the torn section.

(4) 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. (5) 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

STANDARD NOTES FOR EROSION AND SEDIMENTATION CONTROL

1. The contractor shall install erosion / sedimentation controls and tree/natural area protective fencing prior to any site preparation

2. The placement of erosion / sedimentation controls shall be in accordance with the approved Erosion and Sedimentation Control

3. The placement of tree / natural area protective fencing shall be in accordance with the approved Grading / Tree and Natural

(a) A minimum of four inches of topsoil shall be placed in all drainage channels (except rock) and between the curb and

(b) The seeding for permanent erosion control shall be applied over areas disturbed by construction as follows:

i. From September 15 to March 1, seeding shall be with a combination of 1.0 pounds per 1000 square feet of unhulled Bermuda and 5.0 pounds per 1000 square feet of Winter rye with a purity of 95% with 90% germination.

(e) Mulch type used shall be cellulose, applied at a rate of 2000 pounds per acre.

(g) When required, native grass seeding shall comply with requirements of the City of New Braunfels.







MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

Flow from the site is to remain unchanged to the grassy swale and the Vegetative filter strip to minimize surface stream contamination and minimize any changes in the way water enters a stream.

All measures were designed and included in accordance with the City of New Braunfels's drainage ordinance guidelines and requirements for minimizing surface stream contamination.

•	
	Agent Authorization Form For Required Signature Edwards Aquifer Protection Program Relating to 30 TAC Chapter 213 Effective June 1, 1999
١	Daryl Stoker, Print Name
	Director of Facility Management Title - Owner/President/Other
of	New Braunfels Independent School District Corporation/Partnership/Entity Name
have	authorized Victor M. Gil Print Name of Agent/Engineer
of	Gil Engineering Associates Inc. Print Name of Firm
to rep the p Envir activi	present and act on the behalf of the above named Corporation, Partnership, or Entity for purpose of preparing and submitting this plan application to the Texas Commission on onmental Quality (TCEQ) for the review and approval consideration of regulated ties.
l 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:

Applicant's Signature

<u>10/18/10</u> Date

THE STATE OF Texas §

County of Comal §

BEFORE ME, the undersigned authority, on this day personally appeared <u>Dary Stoker</u> 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 (8th day of October, 2010.

Blanche Frey NOTARY PUBLIC



Blanche Fray Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 1-28-2012

Texas Commission on Environmental Quality Edwards Aquifer Protection Program Application Fee Form

NAME OF PROPOSED REGULATED ENTITY:	New Braunfels High School		
REGULATED ENTITY LOCATION: 2551 Loop 337 N	ew Braunfels Texas 78130		
CONTACT PERSON: Daryl Stoker	PHONE: (830)	627-6731	
(Please Print)			
Customer Reference Number (if issued): CN6	600397814	(nine digits)	
Regulated Entity Reference Number (if issued): RN1	02767803	(nine digits)	
Austin Regional Office (3373)	Travis 🗌 Williamson		
San Antonio Regional Office (3362) 🛛 🗌 Bexar 🛛 🕅	Comal 🗌 Medina 📋	Kinney 🗌 Uvalde	
Application fees must be paid by check, certified check, o Environmental Quality . Your canceled check will serve your fee payment. This payment is being submitted to (C	r money order, payable to the as your receipt. This form r Check One):	e Texas Commission on must be submitted with	
Austin Regional Office	🛛 San Antonio Regional Of	fice	
Mailed to TCEQ:Overnight Delivery to TCEQ:TCEQ - CashierTCEQ - CashierRevenues Section12100 Park 35 CircleMail Code 214Building A, 3rd FloorP.O. Box 13088Austin, TX 78753Austin, TX 78711-3088512/239-0347			
Site Location (Check All That Apply): 🛛 Recharge Zor	ne 🗌 Contributing Zone	Transition Zone	
Type of Plan	Size	Fee Due	
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	\$	
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	50° Acres	\$ 8,000.00	
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	56 Acres	\$ \$,000	
Sewage Collection System	L.F.	\$	
Lift Stations without sewer lines	Acres	\$	
Underground or Aboveground Storage Tank Facility	Tanks	\$	
Piping System(s)(only)	Each	\$	
Exception	Each	\$	
Extension of Time	Each	\$	

12.30.2010

Date

Signature

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.

TCEQ-0574 (Rev. 4/25/08)

Texas Commission on Environmental Quality Edwards Aquifer Protection Program Application Fee Schedule 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications Contributing Zone Plans and Modifications

PROJECT	PROJECT AREA IN ACRES	FEE
One Single Family Residential Dwelling	< 5	\$650
Multiple Single Family Residential and Parks	< 5 5 < 10 10 < 40 40 < 100 100 < 500 ≥ 500	\$1,500 \$3,000 \$4,000 \$6,500 \$8,000 \$10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	<pre>< 1 1 < 5 5 < 10 10 < 40 40 40 < 100 ≥ 100</pre>	\$3,000 \$4,000 \$5,000 \$6,500 \$8,000 \$10,000

Organized Sewage Collection Systems and Modifications

PROJECT	COST PER LINEAR FOOT	MINIMUM FEE MAXIMUM FEE		
Sewage Collection Systems	\$0.50	\$650 - \$6,500		

Underground and Aboveground Storage Tank System Facility Plans and Modifications

PROJECT	COST PER TANK OR PIPING SYSTEM	MINIMUM FEE MAXIMUM FEE		
Underground and Aboveground Storage Tank Facility	\$650	\$650 - \$6,500		

Exception Requests

PROJECT	FEE
Exception Request	\$500

Extension of Time Requests

PROJECT	FEE				
Extension of Time Request	\$150				



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	N I: Ger	ieral Information	n of this torn	i, please rea	ad the Core	Data Form ins	tructions or	all 012-239-	5175.	
1. Reason fo	or Submiss	ion (If other is checked please	describe in	space pro	vided)					
New Per	rmit, Regist	ration or Authorization (Core Da	ata Form sh	ould be su	bmitted wit	h the program	m applicatio	n)		
Renewa	I (Core Da	ta Form should be submitted wi	th the renew	wal form)		ther Mo	dificatio	n of WP	'AP	
2. Attachme	nts	Describe Any Attachments: (ex. Title V A	pplication, V	Vaste Trans	porter Applicat	tion, etc.)			
⊠Yes	No	WPAP Modification Ap	oplication	1						
3. Customer	Reference	Number (if issued)	Follow this	link to sear	ch 4. R	egulated En	tity Refere	nce Numbe	er (if issued)	
CN 6003	97814		tor CN or F	Registry**	R	N 1027678	803			
SECTION	N II: Cu	stomer Information								
5. Effective I	Date for Cu	stomer Information Updates (mm/dd/yyy	/y) 12	/17/2010)				
6. Customer	Role (Prop	osed or Actual) - as it relates to the	Regulated E	Entity listed	on this form.	Please check	only <u>one</u> of	the following.	,	
Owner	onal License	Operator Responsible Party		wner & Op oluntary C	berator leanup App	blicant	Other:			
7. General C	ustomer In	formation					-	· · · · · · · · · · · · · · · · · · ·		
New Cus	tomer Legal Nam nge" and S	Lup the (Verifiable with the Texas Sec Section I is complete, skip to S	odate to Cu cretary of St cection III –	stomer Info tate) Regulate	ormation d Entity In:	formation.	Change in <u>No Chang</u> e	Regulated	Entity Ownersh	ip
8. Type of C	ustomer:			ndividual		Sole F	Proprietorsh	iip- D.B.A		
City Gove	ernment	County Government	Federal Government			State Government				
Other Go	vernment	General Partnership		imited Par	tnership	Other:	, ,			
9. Customer	Legal Nam	ne (If an individual, print last name l	first: ex: Doe,	, John)	<u>lf new Cu</u> below	stomer, enter	previous Cu	<u>istomer</u>	End Date:	
10. Mailing										
Address:	City		State	-	7IP			71D + A		
	City	<u></u>	State					21F 1 4		
11. Country	Mailing Inf	ormation (if outside USA)		12	. E-Mail A	ddress (if app	olicable)			
13. Telephor	ne Number	1	4. Extensi	on or Cod	e	15. F	ax Numbe	r (if applica	ble)	
()	-					1) -	,	/	
16. Federal 1	Tax ID (9 digi	is) 17. TX State Franchise Ta	ax ID (11 digi	its) 18.	DUNS Nur	mber(if applicab	/e) 19. T)	(SOS Filin	g Number (if app	ilicable)
20. Number	of Employe	285				21	. Independ	ently Own	ed and Operat	ed?
□ 0-20 □	7 21-100	101-250 251-500	☐ 501 a	nd hioher			יר	'es	No	
SECTION	NIII: R	egulated Entity Infor	mation	ind highlor			\			
22. General	Regulated	Entity Information (If 'New Rea	ulated Enti	ty" is selec	ted below t	this form sho	uld be acco	mpanied by	a permit applic	cation)
New Req	ulated Entity	y Update to Regulated Er	ntity Name	Upo	late to Reg	ulated Entity	Information		Change** (See	e below)
		**If "NO CHANGE" is checked	and Section	l is complet	e, skip to Se	ction IV, Prepar	rer Informatio	n.		
23. Regulate	d Entity Na	me (name of the site where the reg	gulated actio	n is taking p	olace)					

24. Street Address	S										
Entity:										T	
(No P.O. Boxes)	City			State		ZIP				ZIP + 4	
25. Mailing											7
Audress.	City			State		ZIP				ZIP + 4	
26. E-Mail Addres	s:			0.010							
27. Telephone Nu	mber			28. Extension	or Code	29). Fax Nu	imber (if ap	plicable)		
().						()	-			
30. Primary SIC C	ode (4 digits	s) 31. Seconda	ary SIC C	ode (4 digits)	32. Primary	NAICS	Code	33. 5	Second	ary NAICS	Code
				5				(5.01)			
34. What is the Pr	imary Bus	iness of this enti	ity? (Ple	ease do not repea	at the SIC or N	VAICS d	escription	.)			
	Questio	ns 34 – 37 addre	ss geogr	aphic location.	Please ref	er to th	ne instru	ctions for	applica	bility.	
		<u></u>	_		<u></u>				<u></u>		
Physical Location	c										
36. Nearest City				County			State			Nearest Z	P Code
•				•		ſ					
37. Latitude (N)	In Decima	I:			38. Longi	itude (\	N) In I	Decimal:			
Degrees	Minute	<u>s</u>	Seconds		Degrees			Minutes		Secon	ds
9. TCEQ Program	s and ID N	umbers Check all P	rograms and	d write in the permit	s/registration n	umbers t	hat will be	affected by the	e updates	submitted on th	nis form or the
Dam Safety	e. It your Pro	gram is not listed, chec	ck other and	write it in. See the	Core Data For		Industria	Hazardous	Nosto	Municir	al Solid Mag
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New Source Rev	iew – Air			Petroleum	Slorage Tank		PWS			Sludge	
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Stormwater		Title V – Air		Tires			Used Oi	[Utilitie	s
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Voluntary Clea	nup	🛛 Waste Water		U Wastewa	ter Agriculture	e 🗌	Water R	ights		Other:	
ECTION IV	': Prepa	arer Inform	ation								
0. Name: Vio	ctor M. (Gil			4	1. Title	: P	rincipal			
2. Telephone Nur	nber	43. Ext./Code	44	. Fax Number		45. E-M	lail Add	ress			
512) 835-420	03		()	512)835-44	407	vgila	gilen	gineering	.com		
ECTION V	Auth	orized Signa	ture	· · · · · · · · · · · · · · · · · · ·	<u> </u>		<u> </u>		-	(41)	
$\frac{2}{10}$ By my signatu	ire below	l certify to the	best of n	iv knowledge	that the in	format	ion prov	vided in th	is form	is true and	complete
nd that I have signate	nature aut	hority to submit	this form	n on behalf of	the entity s	specifi	ed in Se	ction II, Fi	ield 9 a	ind/or as re-	quired for t
odates to the ID r	umbers io	dentified in field	39.		- Mai						
See the Core Date	a Form in	structions for m	iore info	rmation on w	ho should :	sign th	is form	.)			
Company:	Gil Eng	gineering Asso	ociates,	Inc.	Job Tit	tle:	Princi	pal	1		
ame(In Print):								1	1		
	Victor.	M. Gil						Phone:	: (:	512)835	4203



Gil Engineering Associates. Inc.

CONSULTING ENGINEERS 🗇 SURVEYORS PLANNERS 🗇 BUILDING DESIGNERS 506 EAST BRAKER LANE AUSTIN, TEXAS 78753-2751 phone (512) 835-4203

fax (512) 835-4407

3-4-11

March 3, 2011

Alan G. Jones Texas Commission on Environmental Quality 14250 Judson Rd. San Antonio, TX 78233-4480

MAR 2 3 2011

COUNTY ENGINEER

Re: New Braunfels ISD New Braunfels High School Greenhouse addition

Dear Mr. Jones:

Please accept this as our response to your letter dated March 3, 2011.

2. TCEQ 600 Item 7

Attachment C has been corrected to be 1654 pounds of TSS not the Water Quality Volume amount.

If you should need additional information, please do not hesitate to call.

Sincerely,

Victor M. Gil, P.E., R.P.L.S. Gil Engineering Associates, Inc.

BMPs FOR ONSITE STORMWATER

To prevent pollution of stormwater runoff originating on-site or up-gradient of the site and potentially flowing across and off the site, a berm to divert up gradient water will be provided. The onsite water will be routed to the existing sedimentation / filtration pond to reduce TSS and return the flow to panther canyon. The existing sedimentation / filtration pond will act as a sediment trap while construction is occurring.

On site BMP will use silt fence to temporally control storm water during construction.

RECEIVED The project consists of 10 acres total project area included in plan. The Predevelopment Impervious cover area is 40 % (4 acres) 900 sf, of asphalt which will be removed. Total post development impervious cover area is 4.02 acres The post development impervious cover fraction is 40.2% The total load required to be removed from this project is L_{M} =1654 LBS.

The existing sedimentation filtration pond was sized at 10,179 Cubic feet with (10,019) required. The pond will be sized to capture the first 0.23 inches of storm water run-off from 4.02 acres of impervious cover within a 10 acre catchment area. Total capture volume for the addition is 10019 cf. The basin will provide a total capture volume to treat 1,654 pounds of total suspended solids The additional treatment required by the addition is 0 cubic feet for a total of 10,019 cf required plus 7 cf from previous WPAP for a grand total of 10,026 cf.

MAR 2 3 2011

COUNTY ENGINEER

ATTACHMENT C BMPs for Onsite Stormwater



Gil Engineering Associates. Inc.

CONSULTING ENGINEERS D SURVEYORS PLANNERS D BUILDING DESIGNERS 506 EAST BRAKER LANE AUSTIN, TEXAS 78753-2751 phone (512) 835-4203 fax (512) 835-4407

February 22, 2011

Alan G. Jones Texas Commission on Environmental Quality 14250 Judson Rd. San Antonio, TX 78233-4480 RECEIVED MAR 2 3 2011 COUNTY ENGINEER

Re: New Braunfels ISD New Braunfels High School Greenhouse addition

Dear Mr. Jones:

Please accept this as our response to your letter dated February 18, 2011.

1. TCEQ 0590 Item 7

The area of the Site has NOT changed. The revised form has been attached.

2. TCEQ 600 Item 7

Attachment C has been corrected to be 0.02 acres of impervious cover not 0.4 acres. Also attachment C has been corrected to use the 1999 calculations not the 2005 calculations. A copy of the 1999 guidance calculations has been provided.

If you should need additional information, please do not hesitate to call.

Sincerely,

Victor M. Gil, P.E., R.P.L.S. Gil Engineering Associates, Inc.

2011 FEB 25 AM IO: 3

BMPs FOR ONSITE STORMWATER

To prevent pollution of stormwater runoff originating on-site or up-gradient of the site and potentially flowing across and off the site, a berm to divert up gradient water will be provided. The onsite water will be routed to the existing sedimentation / filtration pond to reduce TSS and return the flow to panther canyon. The existing sedimentation / filtration pond will act as a sediment trap while construction is occurring.

On site BMP will use silt fence to temporally control storm water during construction.

The project consists of 10 acres total project area included in plan. The Predevelopment Impervious cover area is 40 % (4 acres) 900 sf, of asphalt which will be removed. Total post development impervious cover area is 4.02 acres The post development impervious cover fraction is 40.2%

The total load required to be removed from this project is L_M =1654 LBS.

The existing sedimentation filtration pond was sized at 10,179 Cubic feet with (10,019) required. The pond will be sized to capture the first 0.23 inches of storm water run-off from 4.02 acres of impervious cover within a 10 acre catchment area. Total capture volume for the addition is 10019 cf. The basin will provide a total capture volume to treat 10,179 pounds of total suspended solids The additional treatment required by the addition is 0 cubic feet for a total of 10,019 cf required plus 7 cf from previous WPAP for a grand total of 10,026 cf.

MAR 2 3 2011

COUNTY ENGINEER

ATTACHMENT C BMPs for Onsite Stormwater

TNRCC ANNUAL POLLUTANT LOAD

Project: New Braunfels High School

Average Annual Stormwater Pollutant Concentrations	Background Conditions (mg/L)	Developed Conditions (mg/L)
Total Suspended Solids (TSS)	80	170

	TSS
BMP	Reduction
	(%)
Retention / Irrigation	100
Ext. Detention Basin	75
Grassy Swales	70
Vegetated Filter Strips	85
Sand Filters	89
Wet Basins	93
Constructed Wetlands	93

		Background Conditions	Developed Conditions		Difference between Background and Developed Conditions	Required Reduction (80%)
annual pollutant Load (lb.)	L=	17670.4	19738.1		2067.8	1654.2
Contributing Drainage Area (ac.)	A=	56	56			
Average annual Precipitation (in.)	P=	33	33			
Runoff coefficient for the fraction of impervious						
cover	R _v =	0.288	0.322			
site impervious cover in percent	IC=	0.45	0.4904	1		
pollutant concentration in mg/L	C=	80	170			
Previously developed portion of tract (ac.)	A _d =	48	48			
Previously undeveloped portion of tract (ac.)	A _u =	8	8			

MAR 2 3 2011 COUNTY ENGINEER

L _R =L _I x F x Fraction of site treated x (TSS removal	Efficiency)				
		Background 1	591.07		
Load removed (lb.)	L _R =	1654.2	Area Treated	10 ac	
Post development load for entire site (lb.)	L ₁ =	19738.1	Area IC	40 %	
Fraction of the load capture by the BMP	F=	0.145	2011 Dev		
Fraction of site treated		0.649	Area Treated	10 ac	ic = 4ac +0.02 ac= 4.02 ac
TSS removal Efficiency		0.89	Area ic	40.2 %	

Runof Depth vs. Load captured for various Imperivous Covers

Runoff Depth (in)	20%	30%	40%	50%	60%	70%	80%	90%	100%
0	0	0	0	0	0	0	0	0	0
0.1	57	49	45	40	33	25	21	17	9
0.3	90	79	75	70	61	53	48	43	34
0.5	100	98	92	87	83	78	73	68	64
0.75		100	98	95	91	87	85	82	79
1			100	100	97	93	90	86	83
1.5					100	100	96	92	88
2							100	95	93
3								100	98
4									100

F= 0.23 in

County	Average Annual Precipitation (inches)	WQV=	10 acres	x1.2x	0.23	10019 cf
Bexar	30					7 cf
Comal	33					10026 cf
Hays	33				basin sized at	10179 cf
Kinney	22				excess=	153.2 cf
Medina	28					
Travis	32					
Uvalde	25					
Williamson	32					

Total Suspended Solids (TSS) Post Development Load L = A x P x R_v x C x 0.2266

COUNTY ENGINEER MAR 2 3 2011

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 $Rv = 0.546(IC)^{2} + 0.238(IC) + 0.030$ Background Load L=P(A_u X 0.54 + A_d x R_v x 38.4)

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COUNTY ENGINEER

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Modification of a Previously Approved Plan

for Regulated Activities on the Edwards Aquifer Recharge Zone and Transition Zone and Relating to 30 TAC 213.4(j), Effective June 1, 1999 MAR 2 3 2011

COUNTY ENGINEER

1.	Current Regulated Entity Name:	New Braunfels High School	
	Original Regulated Entity Name:	New Braunfels High School	
	Assigned Regulated Entity Number	ers (RN): 1) <u>102767803</u> , 2)	, 3)

- ____ The applicant has not changed and the Customer Number (CN) is: CN__600397814__ The applicant has changed. A new Core Data Form has been provided.
- 2. <u>Attachment A: Original Approval Letter and Approved Modification Letters</u>: A copy of the original approval letter and copies any letters approving modification are found at the end of this form.
- 3. A modification of a previously approved plan in 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.

WPAP Modification Summary Acres Type of Development Number of Residential Lots Impervious Cover (acres) Impervious Cover (%) Permanent BMPs Other	Approved Project <u>56</u> <u>High School</u> 0 <u>29.94</u> <u>53.46%</u> <u>Sand Filter</u>	Proposed Modification 56 <u>High School</u> 0 <u>29.96</u> 53.50% Sand Filter
SCS Modification Summary Linear Feet Pipe Diameter Other	Approved Project	Proposed Modification
AST Modification Summary Number of ASTs Volume of ASTs Other	Approved Project	Proposed Modification
Approv	ed Pro	iect
-----------	--------	------
, .pp. 01	00110	1000

Proposed Modification

UST Modification Summary Number of USTs Volume of USTs Other

- 5. ____ Attachment B: Narrative of Proposed Modification. A narrative description of the nature of the proposed modification is provided at the end of this form. It discusses what was approved, including previous modifications, and how this proposed modification will change the approved plan.
 - 6. <u>✓</u> 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 provided at the end of this form. 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.

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 TO A PREVIOUSLY APPROVED PLAN** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Darvl Stoker Print Name of Customer/Agent

Signature of Customer/Agent

2/23/11

Date

FAX TRANSMITTAL

DATE: 2/18/2011

NUMBER OF PAGES (including this cover sheet): 4

Protecting Texas by Reducing and Preventing Pollution

Name	Mr. Daryl Stoker		
Organization	New Braunfels Independent School District		
FAX Number	(830) 627-6741	RECEIVED	
Name	Mr. Victor Gil, P.E.	MAR 2 3 2011	
Organization	Gil Engineering Assoclates, Inc.	COUNTY ENGINEER	
FAX Number	(512) 835-4407		
	Name Organization FAX Number Name Organization FAX Number	Name Mr. Daryl Stoker Organization New Braunfels Independent School I FAX Number (830) 627-6741 Name Mr. Victor Gil, P.E. Organization Gil Engineering Associates, Inc. FAX Number (512) 835-4407	

FROM: TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Name	Alan G. Jones
Division/Region	Field Operations Division, Region 13 (San Antonio)
Telephone Number	(210) 403-4074
FAX Number	(210) 545-4329

Re: Edwards Aquifer, Comal County

NAME OF PROJECT: New Braunfels High School, 2551 Loop 337, New Braunfels, Texas

TYPE OF PLAN: Modification of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer Edwards Aquifer Protection Program San Antonio File No.1591.07 Investigation No. 887862, Regulated Entity No. RN102767803

We are in the process of technically reviewing the WPAP application you submitted for the abovereferenced project. Before we can proceed with our review, the following comments relating to the application must be addressed:

1. TCEQ-0590, Modification of a Previously Approved Plan, Item No.7

The response shows that acreage has been added to the plan. It is understood that the acreage (area of the site) has not changed, but that a small increase in impervious cover is proposed within the site. Please revise the response as appropriate.

2.TCEQ-0600, Permanent Stormwater Section, Item No.7, Attachment C, BMPs for on-site stormwater, and Item No. 10, design calculations.

Calculations for the sedimentation and filtration basin use a 0.05 acre catchment area. The original (1999 guidance) calculations use a 10 acre catchment area. Also, it is understood that added (post-

Mr. Stoker and Mr. Gil February 18, 2011 Page 2

development) impervious cover is to be 0.02 acre, not 0.04 acre. As the basin was constructed under TNRCC's 1999 guidance, it is deemed appropriate to calculate additional needed water quality volume and sand filter area using the 1999 guidance (see attachment). (Note: TCEQ's 2005 guidance would require a larger basin than what was constructed). Please revise your response using the 1999 guidance and remember to include the 7 cubic feet taken by the modification approved August 17, 2007.

We ask that you submit one original and four copies of the amended materials to supplement the WPAP application to this office by no later than 14 days from the date of this notice to avoid denial of the plan. If the response to this notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, a second notice will be sent to you requiring a response within 14 days from the notice date. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate. 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 will be denied unless you provide written notification that the application is being withdrawn. Please note that the application fee will be forfeited if the plan is not withdrawn. If you have any questions or require additional information, please contact Alan G. Jones the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4074.



February 13, 2001

3411 Magic Drive San Antonio, Texas 78229 Phone: (210) 581-1111 Fax: (210) 581-5555

> EAPP NO. 1591.07 NOD ATTACHMENT

> > RECE

MAR 2 3 2011

COUNTY ENGINEER

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Mr. John Mauser Environmental Investigator Texas Natural Resources Conservation Commission 14250 Judson Road San Antonio, Texas 78233-4480

RE: Edwards Aquifer, Comal County New Braunfels ISD - High School Water Pollution Abatement Plan Edwards Aquifer Protection Program Project #1591.00

Dear Mr. Mauser:

In response to your fax transmittal dated January 23, 2001, an alternative for treatment of the proposed parking lot adjacent to Loop 337 will be provided. As NBISD was unable to obtain written approval for use of TxDOT right-of-way, the sand filter proposed in the above referenced WPAP will be enlarged. The design volume and surface area of the sand filter have been increased to accommodate an additional pollutant load equivalent to the load that would have been treated by the proposed vegetated filter strip. A revised plan sheet and sizing calculations for the revised sand filter accompany this letter.

Sincerely,

11-4

Jason W. Hubbert, E.I.T.

H:\Admin\JOBS\00129\FilterRev.wpd

Rainfall (P)	: 33 inches	, .	RECEIVED
Developed Area (A)			THUE VED
Bunoff Coefficient (By)	: 0.288	(Ea	MAP 9 9 2011
Runoff Coefficient (Rv.)	: 0.322	(Eq.	3.2)
Existing Load (L,)	: 17660 lbs.	(Eq.	3.4) COUNTY ENGINEER
Post Project Load (L2)	: 19728 (bs,	(Eq.	3.4)
Required Reduction (L _n)	: 1654 lbs.		
SAND FILTER		e • .	
Load: 1654 lbs.			
Area treated: 10 ac f = 1/	cres, 40% Impervious 4.5% of impervious co	Cover Ver	
1654	= 19728 x F x 0.14	5 x 0.89 (Eq.	3.6)
F = 0	.650 - runoff depth =	= 0.23 inches (From Ta	ble 3.3)
Water Quality Volume:	(10 acres x 0.23 in)	x 1.2 = 10019 ft ²	
Required Surface Area:	A, = <u>10019</u> 2(1.5 -	(1.5 ft) (partial sec + 1.5) 2 (avg. depth depth 3 ft.)	dimentation) n 1.5 ft, full
	= 1252 ft ²		
Design Surface Area:	$30' \times 45' = 1350 \text{ ft}^2$	(> 1 252 ft ²)	
Design Volume:	10179 ft ³	(> 10019 ft³)	······

Contractions of SYC
Contraction of SMGP

DESIGN CALCULATIONS

POLLUTANT LOADINGS

p. Z.

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EAPP No. 1591,07 NOD ATTACHMENT

Water Pollution Abatement Plan

for

New Braunfels High School - Additions and Renovations New Braunfels, Comal County, Texas

4

Prepared for:

AM 8:

New Braunfels Independent School District and Texas Natural Resource Conservation Commission

CDS/MUERY SERVICES Engineering & Surveying

> 3411 Magic Drive San Antonio, Texas 78229-2906 210-581-1111 210-581-5555 (fax)

RECEIVED

OCT 3 1 2008

COUNTY ENGINE Prepared By:

Robert J. Huston, *Chairman* R. B. "Ralph" Marquez, *Commissioner* John M. Baker, *Commissioner* Jeffrey A. Saitas, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

RECEIVED

February 16, 2001

FEB 2 1 2001 COUNTY ENGINEER

Dr. Ron Reaves, Superintendent New Braunfels Independent School District 430 West Mill Street New Braunfels, TX 78130

Re: Edwards Aquifer, Comal County

NAME OF PROJECT: New Braunfels High School Additions & Renovations; 2551 Loop 337; New Braunfels, Texas TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer Edwards Aquifer Protection Program File No. 1591.00

Dear Dr. Reaves:

The Texas Natural Resource Conservation Commission (TNRCC) has completed its review of the WPAP application for the referenced project submitted to the San Antonio Regional Office by Jerry Powell, P.E. of CDS/Muery Services on behalf of New Braunfels Independent School district on October 24, 2000. Final review of the WPAP submittal was completed after additional material was received on January 2, 2001, January 23, 2001, February 13, 2001, and February 14, 2001. As presented to the TNRCC, the Temporary and Permanent Best Management Practices (BMPs) 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 20 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.

REPLY TO: REGION 13 • 14250 JUDSON RD. • SAN ANTONIO, TEXAS 78233-4480 • 210/490-3096 • FAX 210/545-4329

P.O. Box 13087 • Austin, Texas 78711-3087 • 512/239-1000 • Internet address: www.tnrcc.state.+

Dr. Ron Reaves Page 2 February 16, 2001

PROJECT DESCRIPTION

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The subject site is 56 acres and has approximately 25.2 acres (45%) of existing impervious cover. Eight of the 56 acres are undeveloped and downgradient of the proposed on-site construction area. New construction will include parking lots (2.12 acres), classrooms (0.23 acres), concessions and restroom building (0.05 acres) near the existing football stadium and softball field as described in the application. The Gym/Cafeteria and football stadium will undergo renovations. The proposed additions and renovations will add 2.4 acres (4.3%) of impervious cover. The total impervious cover will be 27.59 acres (49%). Project wastewater will be disposed of by conveyance to the existing Kuehler Street Sewage Treatment Plant owned by New Braunfels Utilities.

PERMANENT POLLUTION ABATEMENT MEASURES

A sedimentation/filtration basin and a vegetated filter will be constructed to treat stormwater runoff. Because of the existing development on the site, the proposed measures will treat a pollutant load equivalent to the proposed 4.3% increase in impervious cover. The measures are designed to meet the required 80 percent removal of the increased load in total suspended solids caused by the proposed construction. In lieu of the originally proposed vegetated filter strip, the sedimentation/filtration basin described below will be oversized to capture stormwater runoff from existing impervious cover. The individual treatment measures will consist of the following.

The partial sedimentation/filtration basin is designed in accordance with the 1999 edition of the TNRCC's "Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices," and is sized to capture the first 0.23 inches of stormwater run-off from ten acres, providing a total capture volume of 10,019 cubic feet. The filtration system will consist of:

- 1. 1,350 square feet of sand, which is 18 inches thick,
- 2. an underdrain piping wrapped with geotextile membrane, and
- 3. an impervious liner.

<u>GEOLOGY</u>

An exception to submitting a geologic assessment was requested because one had been submitted with a previous application for construction of regulated activities at the subject site. The San Antonio Regional Office site inspection of January 22, 2001, no additional geologic or manmade features. However, the vegetated filter strip for the proposed parking area adjacent to Loop 337 would have used the TXDOT right of way. Additionally, four temporary buildings without wastewater service, and two temporary buildings with wastewater service were observed on the site.

Dr. Ron Reaves Page 3 February 16, 2001

SPECIAL CONDITIONS

- 1. The request for exception not to submit the required geologic assessment is hereby granted.
- 2. Based on the January 22, 2001 on-site inspection of the project site, Commission records indicate that six temporary buildings were placed on the site on or before January 22, 2001. These activities were conducted without the prior approval of the water pollution abatement plan for the project, as required by Commission rules (30 TAC Chapter 213). Therefore, the applicant is hereby advised that the after-the-fact approval of the installation of the temporary buildings, as provided by this letter, shall not absolve the applicant of any prior violations of Commission rules related to this project, and shall not necessarily preclude the Commission from pursuing appropriate enforcement actions and administrative penalties associated with such violations, as provided in 30 TAC §213.10 of Commission rules.

STANDARD CONDITIONS

1. Pursuant to §26.136 of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

Prior to Commencement of Construction:

- 2. 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, TNRCC-0625) that you may use to deed record the approved WPAP is enclosed.
- 3. 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.
- 4. 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.
- 5. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to

Dr. Ron Reaves Page 4 February 16, 2001

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 file 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.

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- 6. 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. The TNRCC 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.
- 7. 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:

- 8. 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.
- 9. 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.
- 10. No wells exist on the 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.

Dr. Ron Reaves Page 5 February 16, 2001

- 11. 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.
- 12. 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.
- 13. 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:

- 14. 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.
- 15. 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 (TNRCC-10263) is enclosed.
- 16. 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.

Dr. Ron Reaves Page 6 February 16, 2001

17. 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.

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18. 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.

If you have any questions or require additional information, please contact John Mauser of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4024.

Sincerely,). Callwell

Jeffrey A. Saitas, P.E. Executive Director Texas Natural Resource Conservation Commission

JAS/jkm

- Enclosure: Deed Recordation Affidavit, Form TNRCC-0625 Change in Responsibility for Maintenance on Permanent BMPs-Form TNRCC-10263
- cc: Mr. Jerry Powell, P.E., CDS/Muery Services Mr. Harry Bennett, City of New Braunfels Mr. John Bohuslav, TXDOT San Antonio District Mr. Tom Hornseth, Comal County Mr. Greg Ellis, Edwards Aquifer Authority TNRCC Field Operations, Austin

Water Pollution Abatement Plan

for

New Braunfels High School - Additions and Renovations New Braunfels, Comal County, Texas

New Braunfels Independent School District and Texas Natural Resource Conservation Commission

> October 12, 2000 00129



Prepared By:

mil 10.12.2000 Jerry C. Powell, P.E.

CDS / MUERY SERVICES 3411 Magic Drive San Antonio, Texas 78229-2906 210-581-1111 210-581-5555 (fax)



GENERAL INFORMATION FORM

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

PROJ		BRAUNFELS HS ADDITIO	NS & RENOVA	TIONS
COUN	ITY: <u>COMAL</u>		STREAM BA	SIN: <u>COMAL RIVER</u>
EDWA	ARDS AQUIFER:	X RECHARGE ZONE TRANSITION ZONE		
PLAN	TYPE:	X WPAPAS SCSUS	T T	EXCEPTION MODIFICATION
APPL	ICANT INFORMATION	I		
1.	Applicant:			
2	Contact Person: Entity: Mailing Address: City, State: Telephone:	Dr. Ron Reaves, Superinter New Braunfels Independent 430 West Mill Street New Braunfels 830-620-6200	dent School District Zip: FAX: 830-6	
Ζ.	Contact Person: Entity: Mailing Address: City, State: Telephone:	Jerry C. Powell, P.E. CDS/Muery Services 3411 Magic Drive San Antonio 210-581-1111	Zip: <u>78229</u> FAX:210	D-581-5555
PROJ	ECT LOCATION			
3.	Site Address: Street: City:	New Braunfels High Schoo 2551 Loop 337 North New Braunfels	Zip:	78130

4. <u>X</u> This project is inside the city limits of <u>New Braunfels</u> This project is outside the city limits but inside the ETJ (extra-territorial jurisdiction) of

_ This project is not located within any city's limits or ETJ.

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

From IH 35, take Loop 337 North (Ruekle Rd) Exit 184 approximately 3.5 miles the school is on the right, past the intersection of TX 46 and Loop 337.

- 6. Х ATTACHMENT A - ROAD MAP. A road map showing directions to and the location of the project site is attached at the end of this form.
- 7. Х ATTACHMENT B - USGS / EDWARDS RECHARGE ZONE MAP. A copy of the official 7 1/2 minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached behind this sheet. The map(s) should clearly show:
 - Project site.
 - <u>Х</u> Х USGS Quadrangle Name(s).
 - Х Boundaries of the Recharge Zone (and Transition Zone, if applicable).
 - Х Drainage path from the project to the boundary of the Recharge Zone.
- 8. Х Sufficient survey staking is provided on the project to allow TNRCC regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment. The TNRCC must be able to inspect the project site or the application will be returned.
- 9. ATTACHMENT C - PROJECT DESCRIPTION. Attached at the end of this form is a X detailed narrative description of the proposed project.
- 10. 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)
 - X Other: ____ Existing school

PROHIBITED ACTIVITIES

- 11. Х 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);
 - new feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3; (2)
 - land disposal of Class I wastes, as defined in 30 TAC §335.1; (3)
 - the use of sewage holding tanks as parts of organized collection systems; and (4)
 - new municipal solid waste landfill facilities required to meet and comply with Type (5)I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).
- 12. I am aware that the following activities are prohibited on the Transition Zone and are not Х 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
 - new municipal solid waste landfill facilities required to meet and comply with Type (3)I standards which are defined in §330.41 (b), (c), and (d) of this title.

ADMINISTRATIVE INFORMATION

- 13. The fee for the plan(s) is based on:
 - X For a Water Pollution Abatement Plan and Modifications, the total acreage of the site where regulated activities will occur.
 - ____ For an Organized Sewage Collection System Plans and Modifications, the total linear footage of all collection system lines.
 - ____ For a UST Facility Plan or an AST Facility Plan, the total number of tanks or piping systems.
 - ____ A Contributing Zone Plan.
 - 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.
- 14. Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TNRCC 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:
 - _____ TNRCC cashier
 - _ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
 - X San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)
- 15. X Submit one (1) original and three (3) copies of the completed application to the appropriate regional office for distribution by the TNRCC to the local municipality or county, groundwater conservation districts, and the TNRCC's Central Office.
- 16. X 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. No person shall commence any regulated activity until the Contributing Zone Plan for the activity has been filed with the executive director.

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 TNRCC review. The application was prepared by:

JERRY C. POWELL, P.E. Print Name of Applicant/Owner/Agent

nll

Signature of Applicant/Owner/Agent

10-12-2000 Date

ATTACHMENT A

(Form TNRCC-0587)

Road Map



Streets Plus

ATTACHMENT B

(Form TNRCC-0587)

USGS/Edwards Recharge Zone Map



ATTACHMENT C

(Form TNRCC-0587)

Project Description

This project will consist of 9 separate construction activities at the New Braunfels High School campus on Loop 337. Each activity is numbered and corresponds to areas listed on the site plans.

- 1. Construction of a new parking lot adjacent to the existing tennis court. The lot will be curbed and will add **0.81 ac** of impervious cover.
- 2. Expansion of parking adjacent to the main building. Existing curbing will be removed and pushed back to the northern property line for new parking along the existing drive. The new parking will add **0.48 ac** of impervious cover.
- 3. The addition of pavement and curbing to an existing unpaved parking lot between the football stadium and Loop 337. The paving will increase impervious cover by **0.83 ac.**
- 4. GYM/Cafeteria on the southeastern corner of the existing High School Building. Construction of a new Gym/Cafeteria and renovation of existing building expansions will replace existing asphalt and will result in **no net change** in impervious cover.
- 5. Construction of a new classroom addition on the north side of the main building. The additions will add **0.23 ac** of impervious cover.
- 6. Construction of a new bus drop-off area. As construction will take place over existing asphalt this activity will result in **no net change** in impervious cover.
- 7. Construction of a new building to house concessions and restrooms. The building will be located near the existing football stadium and softball field. This building will add **0.05 ac** of additional impervious cover.
- 8. Renovations and additions to the football stadium. An elevator, press box and restrooms will be added and the bleachers will be expanded. This area is already paved over and the additions will **not increase** impervious.
- 9. Detention and water quality facilities. This portion of the project will include a detention pond for stormwater runoff and a sand filter pond for required water quality standards. There will be **no increase** in impervious cover as work will involve grading and excavation of earth over an area of about 1 acre.

WATER POLLUTION ABATEMENT PLAN APPLICATION FOR REGULATED ACTIVITIES ON THE EDWARDS AQUIFER RECHARGE ZONE AND RELATING TO 30 TAC §213.5(b), EFFECTIVE JUNE 1, 1999

PROJECT NAME: NEW BRAUNFELS HS ADDITIONS & RENOVATIONS

PROJECT INFORMATION

1. The type of project is:

- ____ Residential: # of Lots:
- ____ Residential: # of Living Unit Equivalents:
- ___ Commercial
- ____ Industrial
- X Other: School

2. Total site acreage (size of property): <u>56</u>

- 3. Projected population: 2,300
- 4. The amount and type of impervious cover expected after construction are shown below:

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres	
Structures/Rooftops	297,753	÷ 43,560 =	6.84	
Parking	435,761	÷ 43,560 =	10.00	
Other paved surfaces	468,350	÷ 43,560 =	10.75	
Total Impervious Cover	1,201,864	÷ 43,560 =	27.59	
Total Impervious Cover ÷ Total Acreage x 100 =			49.3	%

(Note: Previous Impervious Cover = 25.2 Acres, 45%)

- 5. <u>X</u> ATTACHMENT A Factors Affecting Water Quality. A description of any factors that could affect surface water and groundwater quality is provided at the end of this form.
- 6. X 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.

Page 1

TNRCC-0584 (Rev. 6/1/99)

WATER POLLUTION ABATEMENT PLAN APPLICATION FOR REGULATED ACTIVITIES ON THE EDWARDS AQUIFER RECHARGE ZONE AND RELATING TO 30 TAC §213.5(b), EFFECTIVE JUNE 1, 1999

PROJECT NAME: NEW BRAUNFELS HS ADDITIONS & RENOVATIONS

PROJECT INFORMATION

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- Residential: # of Living Unit Equivalents:
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Total Impervious Cover + Total Acreage x 100 =			49.3 %

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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.): Width of R.O.W.:	feet. feet.
	L x W = Ft ² ÷ 43,560 Ft ² /Acre =	acres.
10.	Length of pavement area: Width of pavement area:	feet.
	L x W = $Ft^2 \div 43,560 Ft^2/Acre =$ Pavement area acres ÷ R.O.W. area	acres. 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 TNRCC 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 TNRCC.

STORMWATER TO BE GENERATED BY THE PROPOSED PROJECT

13. **ATTACHMENT B - Volume and Character of Stormwater.** A description of the volume and character (quality) of the stormwater runoff which is expected to occur from the proposed project is provided at the end of this form. The estimates of stormwater runoff quality and quantity should be based on 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>100</u> % Domestic <u>50,000</u> gallons/day
- _____ % Industrial ______ gallons/day

_____ % Commingled _____ gallons/day

TOTAL <u>50,000</u> gallons/day

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. The appropriate licensing authority's (authorized agent) written approval is provided at the end of this form. It states that the land is suitable for the use of an on-site sewage facility or identifies areas that are not suitable.

- 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 §285.
- X Sewage Collection System (Sewer Lines):
 - X 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 <u>N.B.U.</u>, <u>KUEHLER</u> <u>STREET</u> Treatment Plant. The treatment facility is :

- X existing.
- ___ proposed.

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

SITE PLAN REQUIREMENTS

Items 17 through 27 must be included on the Site Plan.

Applicant note: All exhibit backgrounds are based on aerial photography dated 8-11-00.

- 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.
 - X 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):

FEMA: FIRM PANEL NO. 485493 0005 D; MAY 15 1991

- 19. X The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Show lots, recreation centers, buildings, roads, etc.
 - ____ The layout of the development is shown with existing contours. Finished topographic contours will not differ from the existing topographic configuration and are not shown.
- 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 30 TAC §238.

- X 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 and possibly sensitive** geologic or manmade features identified in the Geologic Assessment are shown and labeled.
 - _ No **sensitive and possibly sensitive** geologic or manmade features were identified in the Geologic Assessment.
 - _____ ATTACHMENT D Exception to the Required Geologic Assessment. An exception to the Geologic Assessment requirement is requested and explained in ATTACHMENT D provided at the end of this form. Geologic or manmade features were found and are shown and labeled.
 - X ATTACHMENT D Exception to the Required Geologic Assessment. An exception to the Geologic Assessment requirement is requested and explained in ATTACHMENT D provided at the end of this form. No geologic or manmade features were found.
- 22. X The drainage patterns and approximate slopes anticipated after major grading activities.
- 23. \underline{X} Areas of soil disturbance and areas which will not be disturbed.
- 24. <u>X</u> Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
- 25. <u>X</u> Locations where soil stabilization practices are expected to occur.
- 26. <u>X</u> Surface waters (including wetlands).
- 27. Locations where stormwater discharges to surface water or sensitive features.
 - X There will be no discharges to surface water or sensitive features.

ADMINISTRATIVE INFORMATION

- 28. X One (1) original and three (3) copies of the completed application have been provided.
- 29. <u>X</u> Any modification of this WPAP will require TNRCC executive director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

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 TNRCC review and executive director approval. The form was prepared by:

_____JERRY C. POWELL, P.E. Print Name of Applicant/Owner/Agent

Signature of Applicant/Owner/Agent

10.12.2000

Date

Page 4

ATTACHMENT A

(Form TNRCC-0584)

Factors Affecting Water Quality

Factors affecting water quality as a result of this project are listed below:

- Increase in the amount of direct runoff as a result of increased impervious cover.
- Increased potential for contamination from vehicles due to both construction and an increase in the number of parking spaces.
- Potential contamination of exposed soils during excavation for buildings, parking lots, and utility lines.
- Potential for erosion of spoils from excavation and grading activities.
- Increased potential of contamination from sanitary sewers as a result of additional service laterals.
- Potential contamination from the use of asphaltic products for paving.

ATTACHMENT B

(Form TNRCC-0584)

Volume and Character of Stormwater

- The site lies within two different watersheds. Panther Creek and the Comal River. A small portion of the site (4.5 ac) along Loop 337 drains into bar ditches that ultimately reach the Comal River approximately 1.7 miles downstream. The remaining portions of the site drain into Panther Creek along the southern edge of the site.
- The following runoff estimates were calculated using the Rational Method and standard industry practices for time of concentration and runoff coefficient values. Flowrates are based on 25-year return period.

Watershed: Comal River Drainage Area: 4.5 acres Runoff Coefficient: "C": 0.63 existing development 0.70 post-development Time of Concentration "t_c": 15 minutes (City of New Braunfels - Drainage Design Manual) Intensity "I": 7.5 in/hr Flowrate: Q=CIA $Q_{25} = 0.63 (7.5) 4.5 = 21.3 cfs$ Existing $Q_{25} = 0.70 (7.5) 4.5 = 23.6 cfs$ (11% increase) Proposed Watershed: Panther Creek Drainage Area: 51.5 acres Runoff Coefficient: "C": 0.66 existing development 0.69 post-development Time of Concentration "t_c": 28 minutes Intensity "I": 5.4 in/hr (City of New Braunfels - Drainage Design Manual) Flowrate: Q=CIA

Existing $Q_{25} = 0.66 (5.4) 51.5 = 183.5 \text{ cfs}$ Proposed $Q_{25} = 0.69 (5.4) 51.5 = 191.9 \text{ cfs}$ (5% increase)

The stormwater character will be typical for parking lots and roofed areas pollutants will include sediments, hydrocarbons, and other vehicular fluids. Runoff may include small amounts of fertilizers and pesticides associated with athletic fields. The proposed projects will not significantly change the volume or character of stormwater generated from this site as it is already substantially developed.

ATTACHMENT D

(Form TNRCC-0584)

Exception to the Required Geologic Assessment, if requesting and exception Site Plan

• As a previous geologic assessment report based upon a full site investigation was submitted in December 1997, this applicant believes no new information would be learned from another geologic assessment. No sensitive geologic features were found in the previous report. The only sensitive feature observed was manmade and the result of utility line trenching that has since been backfilled. Furthermore, a substantial portion of the site has been developed over the past 40 years and little, if any, of the site is in a natural state with no known manmade features, as documented in the previous geologic assessment. All other applicable requirements of 30 TAC §213 Subchapter A will be followed in the Water Pollution Abatement Plan to be submitted.



TEMPORARY STORMWATER SECTION

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

PROJECT NAME: _____ NEW BRAUNFELS HS ADDITIONS & RENOVATIONS 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:
 - _ Aboveground storage tanks with a cumulative storage capacity of less that 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 TNRCC prior to moving the tanks onto the project.
 - X Fuels and hazardous substances will not be stored on-site.
- 2. <u>X</u> ATTACHMENT A Spill Response Actions. A description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is provided at the end of this form.
- 3. <u>X</u> 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. <u>X</u> **ATTACHMENT B Potential Sources of Contamination.** Describe in an attachment at the end of this form any other activities or processes which may be a potential source of contamination.
 - ____ The are no other potential sources of contamination.

SEQUENCE OF CONSTRUCTION

- 5. <u>X</u> 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 provided at the end of this form. For each activity described, an estimate of the total area of the site to be disturbed by each activity is given.
- 6. <u>X</u> 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: <u>Panther, Comal Creeks</u>

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. <u>X</u> ATTACHMENT D Temporary Best Management Practices and Measures. A description of the TBMPs and measures that will be used during and after construction are provided at the end of this form. For each activity listed in the sequence of construction, include appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented.
 - X 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 has been provided in the attachment at the end of this form
 - a. 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.
 - b. 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.
 - c. A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
 - d. 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, TNRCC 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 provided at the end of this form. The request includes justification as to why no reasonable and practicable alternative exists for each feature.
 - X There will be no temporary sealing of naturally-occurring sensitive features on the site.
- 9. <u>X</u> **ATTACHMENT F Structural Practices.** Describe 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. Placement of structural practices in floodplains has been avoided.

- X ATTACHMENT G Drainage Area Map. A drainage area map is provided at the end of this form to support the following requirements.
 - ____ 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.
 - X 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.
- 11. X 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 has 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 provided as at the end of this form.
- 12. <u>X</u> **ATTACHMENT I Inspection and Maintenance for BMPs.** A plan for the inspection of temporary BMPs and measures and for their timely maintenance, repair, and, if necessary, retrofit is provided at the end of this form. A description of documentation procedures and recordkeeping practices is included in the plan.
- 13. X All control measures must be properly selected, installed, and maintained in accordance with the manufacturers specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicates a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.
- 14. X 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. X 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. X 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. X 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 at the end of this form.
- 18. X 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. <u>X</u> Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

ADMINISTRATIVE INFORMATION

- 20. X All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.
- 21. X 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 TNRCC Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TNRCC has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.
- 22. X 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.

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 TNRCC review and executive director approval. The application was prepared by:

<u>Jerry C, Powell, P.E.</u> Print Name of Applicant/Owner/Agent

fature of Applicant/Owner/Agent

10 + 12.00 Date

ATTACHMENT A

(Form TNRCC-0602)

Spill Response Actions

• No hazardous materials will be used during construction. NBISD will require a spill containment kit to be kept on site during construction. Any contamination will be properly disposed of according to applicable rules. In the event of a hydrocarbon or hazardous substance spill during construction, immediate cleanup and notification of the proper authorities will be required.
ATTACHMENT B

(Form TNRCC-0602)

Potential Sources of Contamination

Potential sources of contamination for this project include:

- Drippings from vehicles, both construction and non-construction.
- Grading and excavation. Stormwater runoff has the potential to be contaminated during the construction process and related excavation and grading.
- Asphaltic materials. Asphaltic materials will be used for paving.
- Building materials. Materials include concrete, wood, mortar, and paint among others.
- Chemicals. Chemicals are used in vehicle maintenance and classroom instruction. (Note: An acid tank will be used to neutralize chemicals disposed of in classrooms.)

ATTACHMENT C

(Form TNRCC-0602)

Sequence of Major Activities

The activities described in the project description will be constructed in no particular order, though the new parking areas (5, 6, 8) are considered a priority and will be constructed first if contractors are not able to begin work on all areas at the same time. Each activity is listed below in order of decreasing priority.

- 1. New Student Parking (0.88 ac) excavation, grading, laying of asphalt.
- 2. Main Building Parking (0.82 ac) excavation, grading, utility trenching.
- 3. Stadium Parking (1.04) ac excavation, grading.
- 4. Gym/Cafeteria Expansions (1.24 ac) excavation, grading, utility trenching.
- 5. Classroom Additions (0.66 ac) excavation, grading, utility trenching.
- 6. Bus Drop-off and Canopy (0.25 ac) excavation, grading.
- 7. Concessions/Restrooms Renovations (0.09 ac) excavation, grading, utility trenching.
- 8. Stadium (0.05 ac) excavation grading.
- 9. Detention(1 ac) excavation, grading.

For each of the above, the necessary temporary BMPs will be in-place prior to major construction activities such as grading, building erection, and utility installation. Following construction activities, soil stabilization controls will be implemented and temporary measures will be removed as needed on an individual basin.

ATTACHMENT D

(Form TNRCC-0602)

Temporary Best Management Practices and Measures

- 1. No BMPs will be employed to prevent pollution of upgradient groundwater and stormwater. The site is on a topographic high and receives no upgradient stormwater flows.
- 2. Most of the proposed construction activities are in small, isolated areas that will be addressed individually for approximately BMPs. Construction exists will be placed at each individual project area.
 - Area 1: BMPs for this area include silt fences and rock berms to be installed before any excavation. The silt fences will be a place along the downgradient edge of the disturbed area. Any discharge of storm water will be through two rock berm located at the southern most corners of the construction area.
 - Area 2: Filter dikes and rock berms will be used as preventive measures in this area that will be a new parking lot along an existing drive. The area is long and narrow whose high point is also a topographic high and therefore receives no upgradient flows from other areas of the site. A rock berm and filter dike will be built on the downstream end of the area to reduce pollutants before draining into Ohio Street to the southeast.
 - Area 3: This area is along a topographic high. A imaginary line extending down the middle of the new parking lot along its length divides the drainage between ditches along Loop 337 and downstream portions of the campus site. Silt fences will be used along the northern and southern edges to prevent pollutant discharge from disturbed areas.
 - Area 4: Construction activities in this area will be related to additions to the main High School building. Filter dikes will be used in order to maintain access to the project area when needed since it is enclosed on two sides by the existing building. Existing roof drains will be diverted away from construction. In addition, discharges from

this portion of the site are drained by an existing sand filter basin. During construction the filter will be inspected for excessive sediment buildup.

- Area 5: This area also consists of building additions and is partially surrounded by existing buildings. Triangular filter dikes will be placed along the outside perimeter to prevent pollutants from draining into the driveway which borders this area.
- Area 6: Construction in this long and narrow area that drains to Ohio Street will be protected by a rock berm at the downstream discharge point.
- Area 7: This relatively small constructed area will use silt fences as a BMP.
- Area 8: This project area will not disturb any soils as renovations will take place in the press box above ground level.
- Area 9: Construction in this area will consist of necessary grading and excavation for construction of stormwater detention and water quality facilities. Silt fencing and rock berms will be in place until construction of the permanent structures is complete.
- c. No areas of the site directly discharge into surface streams sensitive features or the aquifer. All runoff from disturbed areas will have been treated by either temporary or permanent BMPs.
- d. All proposed BMPs will be placed and will discharge with respect to natural drainage patterns. No naturally occurring sensitive features are known to exist on site and upon discovery of any feature(s) conditions will be evaluated to determine the most appropriate action to be taken.

ATTACHMENT F

(Form TNRCC-0602)

Structural Practices

• Temporary structural practices include a diversion dike, silt fences, rock berms, and filter dikes. These measures will be placed to filter runoff as it leaves exposed areas of the site. No structures will be placed in the flood plain. Structural practices will be removed once construction is completed and soils have been stabilized.

ATTACHMENT G

(Form TNRCC-0602)

Drainage Area Map

See Attached



AREA 8 0.06 ACRE AREA 0.09 ACRE NOTE: THE SUM TOTAL OF ALL DISTURBED AREAS IS LESS THAN 10 ACRES. KKKK R 0.88 ACRE AREA 1.00 ACRE 1=60 DESIGNED BY CDS/MUERY SERVICES DRAWN BY_ CHECKED BY Engineering & Surveying JERRY C. POWE 47487 **REVIEWED BY** 3411 MAGIC DR. • SAN ANTONIO, TEXAS 78229 • 210-581-1111 BY DATE NO DATE REVISION



ATTACHMENT H

(Form TNRCC-0602)

Temporary Sediment Pond(s) Plans and Calculations

• No temporary sediment ponds will be constructed.

ATTACHMENT I

(Form TNRCC-0602)

Inspection and Maintenance for BMPs

• Inspections will be made weekly and after rainfall events. For silt fences and rock berms, accumulated sediments shall be removed when it reaches 6 inches. Sediment shall be removed from filter dikes after each rainfall. Diversion dikes shall be inspected for erosion and sediment buildup. Damage to any structures from construction activities shall be repaired in a timely manner. All inspections and/or repairs shall be documented in a log book noting the date, location and any actions taken.

ATTACHMENT J

(Form TNRCC-0602)

Schedule of Interim and Permanent Soil Stabilization Practices

• As construction will take place in small isolated areas, no large areas of vegetation will be disturbed that wont become new impervious cover. Soil stabilization will be implemented by the following practices:

- 1. Installation of permanent landscaping around building and parking lot perimeter.
- 2. Establishment of permanent grass cover on slopes of stormwater/water quality facilities.
- 3. Installation of concrete riprap where slopes exceed those allowed for earthen slopes. (maximum 3:1)
- 4. Construction of outlet stabilization structures at discharge locations of water quality and stormwater facilities.
- Temporary BMP structures will only be removed once permanent soil stabilization has been completed.

PERMANENT STORMWATER SECTION FOR REGULATED ACTIVITIES ON THE EDWARDS AQUIFER RECHARGE ZONE AND RELATING TO 30 TAC §213.5(b)(4)(C), (D)(ii), (E), and (5), EFFECTIVE JUNE 1, 1999

PROJECT NAME: _____ NEW BRAUNFELS HS ADDITIONS & RENOVATIONS

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

- 1. <u>X</u> Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.
- 2. X 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.
 - X The TNRCC Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.
 - A technical guidance other than the TNRCC TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is provided below
- 3. <u>X</u> 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.
- 4. X 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.
 - This site will be used for low density single-family residential development and has 20% or less impervious cover.
 - This site will be used for low density single-family residential development but has more than 20% impervious cover.
 - X This site will not be used for low density single-family residential development.
- 5. <u>X</u> The executive director may waive the requirement for other permanent BMPs for multifamily 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.** This 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 found at the end of this form.
- X This site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
- ____ This 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 identified as **ATTACHMENT B** at the end of this form.
- X If no surface water, groundwater or stormwater originates upgradient from the site and flows across the site, an explanation is provided as **ATTACHMENT B** at the end of this form.
- If 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, an explanation is provided as ATTACHMENT B at the end of this form.

7. ATTACHMENT C - BMPs for On-site Stormwater.

- X 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 identified as **ATTACHMENT C** at the end of this form.
- _____ If 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, an explanation is provided as **ATTACHMENT C** at the end of this form.
- 8. <u>X</u> 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 provided at the end of this form. Each feature identified in the Geologic Assessment as "sensitive" or "possibly sensitive" has been addressed.
- 9. X 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.

- X The permanent sealing of or diversion of flow from a naturally-occurring "sensitive" or "possibly sensitive" feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed for any naturally-occurring "sensitive" or "possibly sensitive" features on this site.
- **ATTACHMENT E Request to Seal Features.** A request to seal a naturallyoccurring "sensitive" or "possibly sensitive" feature, that includes a justification as to why no reasonable and practicable alternative exists, is found at the end of this form. A request and justification has been provided for each feature.
- 10. X ATTACHMENT F Construction Plans. Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information have been signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed permanent BMPs and measures are provided at the end of this form. Design Calculations, TNRCC Construction Notes, all man-made or naturally occurring geologic features, all proposed structural measures, and appropriate details must be shown on the construction plans.
- 11. X ATTACHMENT G Inspection, Maintenance, Repair and Retrofit Plan. A plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is provided at the end of this form. The plan has been prepared and certified by the engineer designing the permanent BMPs and measures. The plan has been signed by the owner or responsible party. The plan includes procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofits as well as a discussion of record keeping procedures.
- 12. X The TNRCC Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.
 - Pilot-scale field testing (including water quality monitoring) may be required for BMPs that are not contained in technical guidance recognized by or prepared by the executive director.
 - **ATTACHMENT H Pilot-Scale Field Testing Plan.** A plan for pilot-scale field testing is provided at the end of this form.
- 13. X 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 provided at the end of this form. 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.

Responsibility for maintenance of permanent BMPs and measures after construction is complete.

14. X 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.

15. <u>X</u> 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.

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 **TNRCC** review and executive director approval. The application was prepared by:

JERRY C. POWELL, P.E. Print Name of Applicant/Owner/Agent

ture of Applicant/Owner/Agent

10.12.2000

ATTACHMENT B

(Form TNRCC-0600)

BMPs for Upgradient Stormwater

Permanent BMP's are not required to prevent pollution of upgradient flows as no upgradient stormwater, groundwater or surface water flows across the site or any disturbed areas on site. The site is located at or near a topographic high and stormwater is already diverted around the site by a natural channel (Panther Creek) and manmade ditches along Loop 337.

ATTACHMENT C

(Form TNRCC-0600)

BMPs for On-site Stormwater

Pollution prevention of surface water and groundwater that originates onsite will be accomplished by the use of several BMPs. First, the site has an existing sand filtration pond to the southwest of the main high school building. This filter will remain and continue to treat runoff from approximately 28,000 ft² of the site as outlined in a previous Water Pollution Abatement Plan dated December 1997. In addition, new measures will be implemented to compensate for additional loading as a result of planned improvements to the campus. Since the site is already substantially developed, the type and location of proposed BMPs were limited. The permanent BMP's that were chosen will treat an equivalent pollutant load from a portion of the site that has been previously developed, mitigating loading from the new development that cannot be treated in a practical manner. Given these constraints two measures have been chosen to treat contaminated stormwater originating onsite:

- A vegetative filter strip along Loop 337 to the north of the football stadium. The existing caliche parking lot will be expanded and paved. Runoff from a portion of the new paving will be treated by an existing vegetated slope that extends along the length of the parking lot.
- A sand filter located east of the softball field. This BMP will mitigate pollutant loads generated by new development at various locations on site. It will be a partial sedimentation sand filter and drain approximately 10 acres of the site including portions of the football stadium, baseball stadium and parking, ROTC building, West Field House, new concessions building, transportation facilities and the Campus Inner Drive. The location of the sand filter is adjacent to a proposed detention pond. An earthen berm channels runoff into the inlet structure of the sand filter. A bypass structure directs flow into the detention pond when the sand filter has reached its required volume. Treated runoff is collected in pipes underneath the sand bed and is drained by gravity to a discharge point on a natural slope to the south of the project area.

DESIGN CALCULATIONS

Pollutant Loadings

Rainfall (P)	: 33 inches
Undeveloped Area (Au)	: 8 acres
Developed Area (Ad)	: 48 acres
Runoff Coefficient (Rv1)	: 0.288 (Eq. 3.2)
Runoff Coefficient (Rv2)	: 0.322 (Eq. 3.2)
Existing Load (L1)	: 17660 lbs. (Eq. 3.4)
Post Project Load (L2)	: 19728 lbs. (Eq. 3.4)
Required Reduction (Lr)	: 1654 lbs.

(to remain, see site plan) (previously developed, see site plan) (existing imp. cover 25.2 acres, 45%) (proposed imp. cover 25.6 acres, 49%)

Vegetated Filter Strip

Area treated:22,800 sq. ft. (0.52 acre, 1.88% of total imp. cover, see ATT F)Required length: $Area \ge P \ge eff. = L \ge length of strip$
4.6 cu. ft./sq. ft.
length of strip = 22.7' \Rightarrow use 23'Load Reduction: $Lr = 19728 \ge 0.0188 \ge 0.85 = 316$ lbs. (Eq. 3.5)

Sand Filter

Remaining Load:	1338 lbs.	(1654 I	lbs 316 lbs	. = 1338 lbs.)
Area treated:	10 acres, 40% imperviou f = 14.5% of total imp. co) acres, 40% impervious cover (see ATT F) = 14.5% of total imp. cover (40% x 10 a		
1338 = 19728 x F x 0.145 x 0.89 (Eq. 3.6)				
$F = 0.525 \implies runoff depth = 0.15 inches$ (From Tal				
Water Quality Volume: WQV = (10 acres x 0.15 in) x 1.2 = 6534 cu. ft.				
Required Filter Area: Af = <u>6534 (1.5 ft)</u> (<i>partial sedimentation</i>) 2x(1.5 + 1.5)x2 (<i>avg. depth 1.5 ft, full depth 3 ft.</i>) = 816.75 sq. ft.				
Design Filter Area: 2	5' x 40' = 1000 sq. ft. (> 5	816.75 sq. i	ft.)	
Design Volume:	6946 cu. ft.	(> 6534 cu	ı. ft.)	

TNRCC-0600 (Rev. 6/1/99)

ATTACHMENT D (Form TNRCC-0600)

1

BMPs for Surface Streams

• No sensitive features have been identified and no surface streams exist on site.

ATTACHMENT F

(Form TNRCC-0600)

Construction Plans

See Attached

* * * * N' VARNN. (40% IMP. COVER) m SAND DESIGNED BY DRAWN BY CHECKED BY **REVIEWED BY** BY DATE REVISION NO DATE Contraction of the local design of the local d

and the second se



C regional office no later than uust include the date on which the regulated activity, and the e contact person. TNRCC letter indicating the specific the contractors are required to the contractors are required to the contractors are the sensitive office must be immediately gulated activities near the sensitive acts to water quality. To the control for the other sensitive feature. If inspections indicate a place or modify the control for e revegetated and the areas have iton. If inspections indicate a place or modify the control for a revegetated and the areas have diment must be removed at a tive sediment in street being ds not later than when design ds not later than uto daily).	e stored on-site with proper E&S s Aquifer Recharge Zone, the an for the placement of fill e. rtions of the site where rase more than 14 days after the activities will be arrary or permanently cease is as soon as practicable. Where arth disturbing activities will be be initiated on that portion of easures by the 14th day after r seasonal arid conditions, TNRCC upon request: the dates temporarily or permanently cease initiated. TNRCC upon request: the dates temporarily or permanently cease initiated. TNRCC upon request: the dates temporarily or permanently cease initiated. TNRCC upon request is the dates temporarily or permanently cease intiated. TNRCC upon request the dates temporarily or permanently cease intiated.		3.5'		SHEET NO. 1 OF 1 SHEETS FILE NO. 00129 filter.DwG
TEXAS NATURAL RESOURCE CONSERVATION COMMISSION WATER POLLUTION ABATEMENT PLAN GENERAL CONSTRUCTION NOTES 1. Written construction notification must be given to the appropriate TNRG 48 hours prior to commencement of the regulated activity. Information in the regulated activity will commence, the name of the approved plan for- name of the prime contractor and the name of the approved plan for- the regulated activities associated with this proj complete copies of the approved Water Pollution Abatement Plan and the conditions of its approval. During the course of threse regulated activities keep on-site copies of the approved Nater Pollution Abatement Plan and the conditions of its approval. During the course of these regulated activities keep on-site copies of the approval the re- served and approval. The approval letter. 3. If any sensitive feature is discovered during construction. The re- feature must be suspended immedically. The appropriate TNRCC regional notified of any sensitive features encountered during construction. The sensitive feature and the Edwards Aquifer from any potentially adverse imp office of any sensitive feature and the Edwards Aquifer from any potentially adverse imp feature must be suspended immedically. The appropriate TNRCC regional notified of any sensitive feature and the Edwards Aquifer from any potentially adverse imp feature must be average and the Edwards Aquifer from any potentially adverse imp feature must be properly selection. Plan are required during construc- tion to commencement of construction, all temporary erosion and se measures must be properly selection. Plan are required during construc- tion to control has been used indopropriately, or public water applicant must a specifications and appropriately, or incorrective, the applicant must a specifications and appropriately, or incorrective, the applicant must a specifications and appropriately, or incorrective, the applicant must a specification sufficient to minimize offsite impacts to water quality (e.g., fugi washed in	 All spoils (excavated material) generated from the project site must bare controls. For storage or disposal of spoils at another site on the Edward owner of the site must receive opproval of a water pollution abatement processer and the site must receive opproval of a water pollution abatement processer and the site must receive opproval of a water pollution activity temporativation measures by the 14th day after construction activity temporary stabilization measures shall be initiated a construction activity on performance of stabilization measures by the 14th day after construction activity temporary stabilization measures shall be initiated a construction activity on performance of stabilization measures by the 14th day after construction activity temporary stabilization measures and the site is temporarily or permaned of stabilization measures shall be initiated a construction activity on performanely or permanenty recessed, and ensumed with 21 days, temporary stabilization measures and not be site. In areas experiencing droughts where the initiation of stabilization measures shall be initiated as construction activity temporary stabilization measures are into a stabilization measures shall be initiated a construction activity temporary stabilization measures are into an a portion of the site; and the dates when construction activity temporary stabilization measures are into any physical or operational from the executive director pollution apoint in writing and obtain approved fewerd Aquifer protection plan must noti in writing and obtain approved for the significantly impact the apility of the pfewords Aquifer, resonand and adversion and any approved of any approved or character of the regulated activity frame and inwertened activity frame activity frame activity frame activity induction of any development and in writing and obtain approved frame activity impact the apility of the pfewords Aquifer. Teams Parts Aguifer pounds of any development of an approved or character of the regulated activ	the definition of the definiti	40.0' sedimentation Basin	10' 10' 4 Bars © 12" O.C. BOTH WAYS 4 Bars © 12" O.C. BOTH WAYS 00 PSI CONCRETE 10 PSI CONCRETE 11 PARA SECTION	UNFELS HIGH SCHOOL IS AND RENOVATIONS STORMWATER SECTION STRUCTION PLAN
			GABION TOP = 809.0 4" ROCK SIZE	TYPIC	NEW BRA ADDITION PERMANENT CON



ATTACHMENT G

Inspection, Maintenance, Repair and Retrofit Plan

- Sand filter basin shall be inspected twice annually (at least once after a rainfall event.) Eroded and structurally damaged areas shall be identified and repaired immediately. Excess sediment shall be removed when accumulation reaches 20% of the design volume as indicated on basin. When draw down time exceeds 48 hours or 0.5 inch silt accumulation on the surface of the filter media should be removed. A draw down time of more than 72 hours will required more extensive maintenance including removal and replacement of geotechnical material gravel and/or sand media. Debris and other litter shall be removed regularly, piping shall be cleaned every 2 years and grass around the structure shall be kept at a height no more than 18 inches.
- All maintenance activities shall be recorded in a log book noting the date, location, observation and actions taken.
- Filter strip areas shall be inspected twice annually for erosion and/or damage to vegetation. Bare spots and areas of erosion shall be replanted and restored. Debris and other litter should be removed at least twice annually.
- A copy of the maintenance guidelines prescribed in TNRCC's Technical Guidance Manual will be provided to facility caretakers as well.

ATTACHMENT I

(Form TNRCC-0600)

Measures for Minimizing Surface Stream Contamination

To the maximum extent possible, existing drainage patterns will be honored during and after construction. Where flows are diverted from their original paths, new discharge locations will be located within 100 feet. Any increase in stream flashing and flowrates will be mitigated by onsite detention as required by the City of New Braunfels, which limits peak flow from the site to predeveloped conditions. All concentrated stormwater discharge locations will have erosion control measures incorporated into the design.

	AGENT AUTHORIZATION FORM FOR REQUIRED SIGNATURE EDWARDS AQUIFER PROTECTION PROGRAM RELATING TO 30 TAC CHAPTER 213 EFFECTIVE JUNE 1, 1999		
Ι	RON REAVES		
	Print Name		
	SUPERINTENDENT OF SCHOOLS		
	Title - Owner/President/Other		
of	NEW BRAUNFELS INDEPENDENT SCHOOL DISTRICT Corporation/Partnership/Entity Name		
have	authorized JERRY C. POWELL P.F.		
navo	Print Name of Agent/Engineer		
of	CDS/MUERY SERVICES		
01	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 Natural Resource Conservation Commission (TNRCC) for the review and approval consideration of regulated activities.			
l also	understand that:		
1.	The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TNRCC's approval letter. The TNRCC is authorized to assess administrative penalties of up to \$10,000 per day per violation.		
2.	A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and the forms must accompany the completed application.		
3.	Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TNRCC cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.		

4. For applicants who are not the property owner, but who have the right to control and possess and control the property, additional authorization is required from the owner.

Applicant's Signature

<u>8 · 28 · 0</u>0 Date

THE STATE OF TEXAS §

County of COMAL §

BEFORE ME, the undersigned authority, on this day personally appeared <u>Rew REAVES</u> 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 28^{+} day of <u>AUGUST</u>, 2000.

nh. Stehe NOTARY PUBLIC

SUSAN L. STEHLE Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 11.16.03



SUSAN L. STEHLE Notary Public, State of Texas No. 100659268-8 Qualified in Comal County Commission Expires Nov. 16, 2003

Page 2

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION EDWARDS AQUIFER PROTECTION PLAN APPLICATION FEE FORM

NAME OF PROJECT NAME OF APPLICAN CONTACT	PROPOSED PROJECT: <u>NEW BR</u> LOCATION: <u>2551 LOOP 337 NC</u> APPLICANT: <u>NEW BRAUNFELS</u> NT'S ADDRESS: <u>430 WEST MILL S</u> PERSON: <u>JERRY C. POWELL</u> , Please Print	AUNFELS ORTH, NEV INDEPENI STREET, N P.E.	HIGH SCH W BRAUNF DENT SCH NEW BRAU PH	OOL ADI ELS, TE OOL DIS NFELS, ONE:	DITIONS & RENOVA XAS 78130 TRICT TEXAS 78130 210-581-1111	.TIONS
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□ Travis			al 🗌 Uvalde			
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☑SAN ANTONIO REGIONAL OFFICE□AUSTIN REGIONAL OFFICE□Mailed to TNRCC: TNRCC - Cashier Revenues Section Mail Code 214 P.O. Box 13088 Austin, TX 78711-3088□Overnight Delivery to TNRCC: TNRCC - Cashier 12100 Park 35 Circle Building A, 3rd Floor Austin, TX 78753 512/239-0347				_		
	Type of Plan		Size		Fee Due	
N F	Vater Pollution Abatement, One Singl amily Residential Dwelling	e		Acres	\$	
N F	Vater Pollution Abatement, Multiple S amily Residential and Parks	ingle		Acres	\$	
N	Vater Pollution Abatement, Non-resid	ential	56.0	Acres	\$5,000.00	
s	Sewage Collection System			L.F.	\$	
Li	ift Stations without sewer lines	÷		Acres	\$	
U	Inderground or Aboveground Storage acility	e Tank		Tanks	\$	
P	Piping System(s)(only)			Each	\$	
E	Exception			Each	\$	
E	xtension of Time			Each	\$	

my churce Signature

10.12.2000 Date

TNRCC-0574 (Rev. 6/1/99)

