Bryan W. Shaw, Ph.D., P.E., Chairman Toby Baker, Commissioner Jon Niermann, Commissioner Richard A. Hyde, P.E., Executive Director



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution ion RECEIVED OCT 0 7 2016 COUNTY ENGINEER

September 26, 2016

Mr. Robert Lindsey 2743 Rolling Creek Spring Branch, TX 78070-5765

Re: Edwards Aquifer, Comal County

Notification of a Solution Feature Discovery at: 1347 Bordeaux Ln, Vintage Oaks, New Braunfels (Comal County), Texas 78132

Dear Mr. Lindsey:

During a recent site visit to the Vintage Oaks development, Ms. Lillian Butler of the Texas Commission on Environmental Quality (TCEQ) San Antonio Region Office conducted an evaluation of approved protective natural buffers for sensitive Edwards Aquifer geologic features located over the Recharge Zone. The evaluation was conducted to verify a citizen lodged complaint that alleged the approved protective feature buffers were not being maintained.

This letter is to inform you that during the evaluation, an additional sensitive feature (a cave) was discovered within your property boundaries at 1347 Bordeaux Ln, New Braunfels, Texas. The feature was not documented in the original Geological Assessment report completed for the Vintage Oaks at the Vineyard development in which you may reside at. Had the cave been properly disclosed during the permitting stage, it is very likely that some of your lot may have been dedicated as protective buffer.

The TCEQ Edwards Aquifer Protection Program requests that any future planning and development of the property be coordinated with the regional office and include protective buffering of the sensitive cave. For your convenience, the following excerpt from TCEQ guidance relating to sensitive feature protection is provided below:

The natural buffer around a feature should extend a minimum of 50 feet in all directions. Where the boundary of the drainage area to the feature lies more than 50 feet from the feature, the buffer should extend to the boundary of the drainage area or 200 feet, whichever is less.

For more information regarding sensitive feature protection, please see TCEQ's Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices; RG-348.

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

on recy

Mr. Robert Lindsey September 26, 2016 Page 2

The TCEQ appreciates your assistance in this matter and your efforts to ensure protection of the State's environment. Please contact Ms. Lillian Butler of in the San Antonio Region Office at (210)403-4026 if you have questions or need additional information.

Sincerely, res

Todd Jones, Water Section Work Leader San Antonio Regional Office Texas Commission on Environmental Quality

TJ/LB/eg

Mr. Jack Dean, Bluegreen Southwest Land, Inc.
 Mr. Garry Ford, Jr., P.E., City of New Braunfels
 Mr. Tom Hornseth, P.E., Comal County
 Mr. Roland Ruiz, Edwards Aquifer Authority
 Ms. Laura Ficco, SouthStar Property Management
 TCEQ Central Records, Building F, MC212

Buddy Garcia, Chairman Larry R. Soward, Commissioner Bryan W. Shaw, Ph.D., Commissioner Glenn Shankle, Executive Director



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 3, 2007

Mr. Jack Dean Bluegreen Southwest Land, Inc. P.O. Box 986 Wimberley, Texas 78676

Edwards Aquifer. Comal County

NAME OF PROJECT: Vintage Oaks At The Vineyard - Unit 1; Located on the east side of the intersection with State Hwy 46 and Cranes Mill Road in Comal County, 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. 2562.01; Investigation No. 598523; Regulated Entity No. RN105024830

Dear Mr. Dean:

Re:

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 Bluegreen Southwest Land, Inc. on behalf of Bluegreen Southwest Land, Inc. on October 11, 2007. Final review of the WPAP was completed after additional material was received on November 27, 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

This residential project was approved by letter dated September 18, 2006, for 397.69 acres, with 249 single-family residential lots, and associated roads and utilities, with 61.38 acres of impervious cover (15.43%).

PROJECT DESCRIPTION

The proposed modification is for:

P.O., Box 13087

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

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• Austin, Texas 78711-3087 • 512-239-1000 • Internet address: www.tceq.state.tx.us

the reconfiguration of protective natural buffers for features S-39, S-40, and S-46 (resulted from the re-evaluation by the project geologist), and

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the relocation of temporary erosion and sedimentation controls to conform to the criteria of RG-348 (2005), Section 1.4.

As presented, there will be no changes to the acreage, number of lots, or amount of impervious cover.

SPECIAL CONDITIONS

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.

This modification is subject to all Special and Standard Conditions listed in the WPAP approval letter dated September 18, 2006, including proof of deed recordation of this letter, and construction notification.

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.

Since this project will not have more than 20% impervious cover, an exemption from permanent BMPs is approved. If the percent impervious cover ever increases above 20% or the land use changes, the exemption for the whole site as described in the property boundaries required by $\S213.4(g)$, may no longer apply and the property owner must notify the appropriate regional office of these changes.

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.

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.

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

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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.

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.

Two 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

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Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

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.

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:

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.

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 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.

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, . Hale le

Glenn Shankle Executive Director Texas Commission on Environmental Quality

GS/JKM/eg

Enclosure:

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

Mr. Keith Strimple, P.E., M&S Engineering, Ltd. Mr. Steve Ramsey P.E., City of New Braunfels Mr. Tom Hornseth, P.E., Comal County Mr. Velma Danielson, Edwards Aquifer Authority TCEQ Central Records, Building F, MC 212 Kathleen Hartnett White, *Chairman* R. B. "Ralph" Marquez, *Commissioner* Larry R. Soward, *Commissioner* Glenn Shankle, *Executive Director*



RECEIVED

OCT 2 2006

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY COUNTY ENGINEER

Protecting Texas by Reducing and Preventing Pollution

September 18, 2006

Mr. Jack Dean Bluegreen Southwest Land, Inc. P.O. Box 986 Wimberley, TX 78676

Re: Edwards Aquifer, Comal County

NAME OF PROJECT: Vintage Oaks at the Vineyard - Unit 1; Located on the east side of the intersection with State Hwy 46 and Cranes Mill Road in Comal County, 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 ID No. 2562.00 Regulated Entity No. RN105024830 Investigation No. 510677

Dear Mr. Dean:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP application for the referenced project submitted to the San Antonio Regional Office by M&S Engineering, Ltd. on behalf of Bluegreen Southwest Land, Inc. on August 16, 2006. 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 must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The proposed residential project will have an area of approximately 397.69 acres. It will include approximately 320 acres of single-family residential lots, 47 acres of streets, and 24 acres of drain and access right-of-way. The impervious cover will be 61.38 acres (15.43 percent). According to a letter dated August 7, 2006, signed by Mr. Thomas H. Hornseth, P.E., with Comal County, the site in the development is acceptable for the use of on-site sewage facilities.

PERMANENT POLLUTION ABATEMENT MEASURES

Since this single-family residential project will not have more than 20 percent impervious cover, an exemption from permanent BMPs is approved.

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.tceq.state.tx.us printed on recycled paper using soy-based ink

WPAP

Mr. Jack Dean Page 2 September 18, 2006

<u>GEOLOGY</u>

According to the geologic assessment included with the application, 48 features were identified at the site and 6 were assessed as sensitive (S-22, S-37, S-38, S-40, S-46, and S-39). The San Antonio Regional Office did not conduct a site investigation.

SPECIAL CONDITIONS

- 1. Since this single-family residential subdivision will have less than 20% impervious cover, an exemption from permanent BMPs is approved. If the percentage of impervious cover ever increases above 20% or the land use changes, the exemption for the whole site as described in the Water Pollution Abatement Plan may no longer apply and the property owner must notify the San Antonio Regional Office of these changes.
- 2. Intentional discharges of sediment laden stormwater are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetative filter strips, sediment traps, rock berms, silt fence rings, filters, etc.
- 3. Any use of this property, other than the use described in this letter shall require notification to the TCEQ San Antonio Regional Office and may require submittal and approval of a WPAP or modification.
- 4. The applicant shall provide all contractors with a copy of pages 1-35 through 1-60 of TCEQ TGM RG-348 (2005) as a guide for soil stabilization practices and assure that any soil stabilization is performed is accordance with these practices and the approved plan.
- 5. All protective setbacks and "natural buffers" shall be measured from the perimeter of the sensitive features.
- 6. Separation distances specified in Chapter 5, Section 5.1.2 of the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (July 2005) will be observed for the following S-22, S-37, S-38, S-40, S-46, and S-39. Additionally, these separation distances will also apply to any sensitive features discovered during construction activities. "The natural buffer around a feature should extend a minimum of 50 feet in all directions. Where the boundary of the drainage area to the feature lies more than 50 feet from the feature, the buffer should extend to the boundary of the drainage area or 200 feet, which ever is less."
- Separation distances specified in 30 Texas Administrative Code 285, On-site Sewage Facilities (OSSFs) Subchapter I, Section 285.91, Table X, and Subchapter E, shall apply to the features S-22, S-37, S-38, S-40, S-46, and S-39. Additionally, these separation distances will also apply to any sensitive features discovered during construction activities. (Also see Standard Condition #9).
- 8. Separation distances specified in 30 Texas Administrative Code 290, Subchapter D, Rules and Regulations for Public Water Systems, shall apply to feature S-22.
- 9. The sensitive geologic features (S-22, S-37, S-38, S-40, S-46, and S-39) shall be recorded on the plat of the property with the appropriate separation distances specified in 30 TAC Chapter 285 and the associated natural buffers described in Special Condition VI as well as in Chapter 5 of the document

Mr. Jack Dean Page 3 September 18, 2006

Edwards Aquifer Rules: Technical Guidance on Best Management Practices (July 2005). Two copies of the recorded plat shall be provided to the TCEQ's San Antonio Office within 90 days of the date of this letter.

 A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures provided for the protection of the six sensitive features were provided as proposed. A certification letter must be submitted to the San Antonio Regional Office within 30 days of completing the OSSF Installation on each lot where the following features are located: S-22, S-37, S-38, S-40, S-46, and S-39.

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.

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, 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.
- 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 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.
- 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. 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.

Mr. Jack Dean Page 4 September 18, 2006

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 scaled, signed, and dated by a Texas Licensed Professional Engineer.
- 10. Two 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.
- 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.

Mr. Jack Dean Page 5 September 18, 2006

- 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 (TCEQ-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.
- 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 Agnieszka Hobson of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210.403.4075.

Sincerely

Glenn Shankle Executive Director Texas Commission on Environmental Quality

GS/amh

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

fc: Mr. Keith Strimple, P.E., M&S Engineering, Ltd.
 Mr. Tom Hornseth, Comal County
 cc: Mr. Robert J. Potts, Edwards Aquifer Authority

TCEQ Central Records, Building F, MC 212

WATER POLLUTION ABATEMENT PLAN

FOR



AUG 16 20061

RECEIVED AUG 2 1 2006 COUNTY ENGINEER

Vintage Oaks at the Vineyard Unit - 1

Prepared for:

Bluegreen Southwest Land, Inc. P.O. Box 986 Wimberley, Texas 78676

Prepared by:

M & S



<u>Main Office:</u> P. O. Box 970 Spring Branch, Texas 78070 830/980-4112 830-885-2170 FAX



Branch Office: P. O. Box 391 McQueeney, Texas 78123 830-560-3200 830-560-3203 FAX

August 2006

TCEQ Core Data Form

If you have questions on how to fill out this form or about our Central Registry, please contact us at 512-239-5175.

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.

SECTION I: General Information

1. Reason for Submission Example: new wastewater permit; IHW registration; change in customer information; etc. WATER POLLUTION ABATEMENT PLAN						
2. Attachments Describe Any Attachments: (ex: Title V Application, Waste Transporter Application, etc.)						
☐ Yes 🕢 No	10 March 10					
3. Customer Reference Number-if issued	4	. Regulated	Entity Reference Numb	er-if issued		
CN 602609984 (9 digits)		RN		(9 digits)		
SECTION II: Customer Information	l					
5. Customer Role (Proposed or Actual) - As It R	Relates to the Regulate	d Entity Liste	d on This Form			
Please check one of the following: Image: Owner Image: Occupational Licensee Image: Volunteer Cleanu	r 🔲 Operator p Applicant 🗌 Othe	er:	owner and Operator			
TCEQ Use Only Superfund		D F	Respondent			
6. General Customer Information New Customer Change to Customer Infor*If "No Change" and Section I is comple	6. General Customer Information ☐ New Customer ☐ Change to Customer Information ☐ Change in Regulated Entity Ownership ☑ No Change**If "No Change" and Section I is complete, skip to Section III - Regulated Entity Information.					
7. Type of Customer: Individual Federal Government State Gover Other Government	7. Type of Customer: Individual Sole Proprietorship - D.B.A. Partnership Corporation Image: State Government State Government County Government City Government Image: Other Government Image: Other Government Image: Other Government Image: Other Government					
8. Customer Name (If an individual, please print last name first) If new name, enter previous name: 9. Mailing Address:						
City		State	ZIP	ZIP + 4		
10. Country Mailing Information if outside USA 11. E-Mail Address if applicable						
12. Telephone Number () -	13. Extension or Co	de 14. Fax	Number if applicable () -	2		
15. Federal Tax ID (9 digits) 16. State Franchise Tax ID Number if applicable 17. DUNS Number if applicable (9 digits)						
18. Number of Employees 19. Independently Owned and Operated? 0-20 21-100 101-250 251-500 501 and higher YES NO				d Operated?		
SECTION III: Regulated Entity Information						
20. General Regulated Entity Information ✓ New Regulated Entity						

21. Regulated Entity Name (If an individual, please print last name first) VINTAGE OAKS AT THE VINEYARD - UNIT 1

22 Street Addres	e'								
(No P.O. Boxe	s)								
	City				Sta	te		ZIP	ZIP + 4
23. Mailing	P.O. BOX 986								
Address									
	City WIMBERLE	ΞY			Sta TX	te (7	ZIP 78676	ZIP + 4 0896
24. E-Mail Address	s:								
25. Telephone Nu	mber		26. Extensi	on or Code		27. Fax	Numbe	r if applicabl	9
(512)	847 - 5483						(5	i12) 847 -	9414
28. Primary SIC Code (4 digits) 6552	29. Secondary SIC Code (4 digits)	9. Secondary SIC Code (4 digits) 30. Primary NAICS Cod (5 or 6 digit 237210					31. Secondary NAICS Code (5 or 6 digits)		CS Code 6 digits)
32. What is the Pri SINGLE FAN	imary Business of this /ILY RESIDENTIAL \$	s entity SUBD	? (Please do IVISION	o not repeat	the	SIC or	NAICS	lescription.)	
Quest	ions 33 - 37 address g	eogra	phic location	n. Please r	e <u>fe</u> r	to the	instruc	tions for app	licability.
33. County: CON	IAL								
34. Description of ALONG THE THE INTERS	Physical Location NORTH RIGHT-OF- ECTION OF STATE	WAY I HWY 4	LINE OF ST 46 AND CR	ATE HWY	′ 46, .L R	, APPI OAD.	ROXIM	ATELY 330	0' (FT) EAST OF
35. Nearest City							State	1	learest ZIP
N	EW BRAUNFELS						тх		78132
36. Latitude (N)				37. Long	itude	e (W)			
Degrees	Minutes	S	Seconds	Dec	rees	S	Minutes Sec		Seconds
29	46		20		98			15	57
38. TCEQ Program	ns In Which This Regu this list as neede	ulated I ed. If yo	Entity Partic	ipates Not a vor are uns	all pi ure,	rogram please	s have b mark "u	een listed. P. nknown."	lease add to
Animal Feeding	Operation	🗌 Pe	troleum Stora	age Tank			🗌 Wa	ter Rights	
Title V – Air		stewater Per	rmit			STORMWATER FOW F		ER FOWARDS	
Industrial & Hazardous Waste		ter Districts							
Municipal Solid Waste		ater Utilities			Unknown				
New Source Re	view - Air	Lic	ensing - TYP	PE(s)					
SECTION IV:	Preparer Informa	ation							
20 Nama	The second s						40 TH		

39. Name HARRY SCHLESSMAN			40. Title SR. DESIGNER		
41. Telephone Number (830) 228 - 5446	42. Extension or Code 155	43. Fax	Number if applicable (830) 885 - 2170		
44. E-Mail Address: hschlessman@msengr.com					



1. FOR DEVELOPMENT DIRECTLY ADJACENT TO STATE RIGHT-OF-WAY, THE DEVELOPER/OWNER SHALL BE RESPONSIBLE FOR ADEQUATE SET-BACK AND/OR SOUND ABATEMENT MEASURE FOR FUTURE NOISE MITIGATION. 2. THE DEVELOPER/OWNER IS RESPONSIBLE FOR PREVENTING ANY ADVERSE IMPACT TO THE EXISTING DRAINAGE SYSTEM WITHIN THE HIGHWAY RIGHT-OF-WAY

3. IF SIDEWALKS ARE REQUIRED BY AN APPROPRIATE CITY ORDINANCE, A SIDEWALK PERMIT MUST BE APPROVED BY TXDOT, PRIOR TO CONSTRUCTION WITHIN STATE RIGHT-OF-WAY. LOCATIONS OF SIDEWALKS WITHIN STATE RIGHT-OF-WAY SHALL BE AS DIRECTED BY TXDOT.

4. MAXIMUM ACCESS POINTS TO THE STATE HIGHWAY FROM THIS PROPERTY WILL BE REGULATED AS DIRECTED BY "REGULATION FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". ALL POINTS OF ACCESS WILL BE DETERMINED WITH A TRAFFIC IMPACT ANALYSIS ALONG WITH ANY REQUIRED SAFETY FEATURES TO SH46.

234 1.01 Ac.

12x

-27.14

FEMA 100 YF

FLOOD PLAIN

235

236

237

1.04 Ac.

246

-16.76'

N85'27'12"W

244.56

247

1.00 Ac.

1.01 Ac.

01 Ac.

1.01 Ac.

13

NS

1.04 Ac.

10.17 Ac.

513

1.12 Ac.

1.01 Ac.

MATCHLINE SEE

1.06 Ac.

1.37 Ac.

1.42 Ac

399.23 AC. OF UNIT 1 BOUNDARY SURVEY. AREA HEREBY DEDICATED TO THE PUBLIC AS RIGHT-OF-WAY: 18,701 LINEAR FEET OF ROAD, BEING 26.41 AC. OF

204 LOTS BEING 274.21 ACRES OF PUBLIC AREA AND

52 LOTS BEING 90.91 OF PRIVATE AREA OUT OF THE

DUC# 200706000394

SCALE IN FEET

SCALE: 1'' = 200'

INE TABL

N62*28'18"E N87*26'39"W

S18'50'22"W

N81'09'50"W

N84'35'15"W

S25*37'25" N53'33'27"E

N27'23'33"E

N50*51'35"E

N51'37'24"E

N73'34'27"E

S22"11'16"E

S77*22'46"W

, A.D.,

126.42' N35'50'16"E

30.49' N10'37'37"E

84.91' N19"15'16"E

59.72' N57*54'00"E 87.43' N48*19'58"E

90.90' N59'21'45"W

L35 123.41' N48'57'00"E

L38 103.64' N89*29'34"E

L46 89.66' N1774'34"W

L47 74.00' N30'02'34"W

L48 140.12' N52'29'40"W L54 41.71' N63'18'53"W

L59 134.73' N10*47'18"W

280.82' N45'55'00'

66.85' N39*29'29"W

40.85' N58*30'35"E

L81 78.19' S77*22'46"W .370 60.56' N28*06'51"E

L371 150.39' N22'03'00"E

30.49' N33*28'24"E

73.21'

124.42'

100

L34

L36

L58

L66

L67

L68

L69

L39 55.49'

L45 121.01'

L41 101.17'

L60 57.58' L65 135.68'

NOTE: SEE SHEET 2 LINE TABLE FOR REMAINDER OF LINES BEARING AND DISTANCES THAT APPLY TO THIS SHEET.

19.94' 100.00' 10.00' 19.90' N27'45'42"E 11'25'24"

19.94' 100.00' 10.00' 19.90' N16*20'18"E 11*25'24"

19.94' 100.00' 10.00' 19.90' S16'20'18"W 11'25'24

C7 109.51' 830.00' 54.83' 109.43' N18'16'13"E 7'33'34"

C8 92.41' 530.15' 46.32' 92.29' S19'29'08"W 9'59'14"

 C9
 182.92'
 470.00'
 92.63'
 181.77'
 S25'38'25"W
 22'17'58"

 C10
 53.83'
 530.00'
 26.94'
 53.81'
 S33'52'49"W
 5'49'11"

 C11
 159.19'
 50.00'
 23.71.85'
 99.98'
 S74'38'51''W
 182'24'55''

 C12
 71.18'
 230.00'
 35.88'
 70.90'
 S27'42'20''W
 17'43'57''

 C13
 52.61'
 170.00'
 26.52'
 52.40'
 S27'42'20''W
 17'43'57''

 C14
 249.83'
 50.00'
 37.50'
 60.00'
 S71'09'38''E
 286'15'52''

 C15
 317.62'
 770.00'
 16'1.10'
 315.37'
 N24'58'23''E
 23'38'02''

 C16
 342.37'
 80.00'
 13'7.65'
 0.04'
 15'50''
 0.15'50'''

C16 342.37' 830.00' 173.65' 339.94' N24*58'23"E 23*38'02" 217.04' 470.00' 110.49' 215.11' N25'59'46"E 26'27'29"

 C28
 244.74'
 530.00'
 124.59'
 242.57'
 N25'59'46"E
 26'27'29"

 C29
 249.81'
 50.00'
 37.50'
 60.00'
 S50'46'30'E
 286'15'37"

 C81
 92.41'
 530.15'
 46.32'
 92.29'
 N19'29'08"E
 9'59'14"

101.59' 770.00' 50.87' 101.52' N18'16'13"E 7'33'34"

CURVE TABL

CURVE LENGTH RADIUS TANGENT CHORD BEARING DELTA 1071.55' 3869.72' 543.19' 1075.97' N71'02'53"W 15'52'44" 19.94' 100.00' 10.00' 19.90' S27'45'42"W 11'25'24"

67.35

137.79'

50.97'

77.01'

104.77'

SUBDIVISION SUMMARY

LOTS:

RIGHT-OF-WAY BEING OUT OF THE 399.23 AC. OF UNIT 1 BOUNDARY, AND 0.93 AC. AND 1597 LF. BEING DEDICATED TO THE PUBLIC AS RIGHT-OF-WAY ALONG STATE HIGHWAY 46.

PRIVATE RIGHT-OF-WAY FOR GATED AREA (LOT 254) 4,629 LINEAR FEET OF ROAD, BEING 6.77 AC. OF PRIVATE RIGHT-OF-WAY BEING OUT OF THE 399.23 AC. OF UNIT 1 BOUNDARY (SEE SHEET 4 OF 4) NOTE: LOT 254 WILL SERVE AS INGRESS/EGRESS FOR OWNERS OF LOT 50 THROUGH LOT 100.

MATCHLINE

29

1.43 Ac.

SEE

1.12 Ac.

REMAINING 2,802.06 ACRES

BEING OUT OF

3.201.37 AC

DOC# 200606016590

1.09 Ac.

SHEET

312.89' W

1.01 Ac.

1.75 Ac.

1.03 Ac.

27

121.64

233.65

1.76 Ac.

220.70

1.01 Ac.

26

1.26 Ac

112.0

250 PRIVATE DRAINAGE

EASEMENT

11.10 Ac.

N79"20'55"E

170 169

OF COMAL

0.06 AC

BRANCH OFFICE P.O. BOX 391 McQUEENEY, TEXAS 78123 PHONE # (830) 560-3200 FAX # (830) 560-3203

STATE OF TEXAS COUNTY OF COMAL

I, JOY STREATER, COUNTY CLERK OF COMAL COUNTY, DO HEREBY CERTIFY THAT THIS PLAT WAS FILED FOR RECORD IN MY OFFICE ON THE 5th DAY OF January

3 2007, AT 9:02 AM. AND DUTY RECORDED THE SH DAY OF JANUARY . A.D. 2007, AT Q:02 A.M. IN THE RECORDS OF MAPS AND PLATS IN SAID OFFICE OF SAID COUNTY, IN DOCUMENT # 200706000394 IN TESTIMONY WHEREOF WITNESS MY HAND AND OFFICIAL

SEAL OF OFFICE THIS 5th DAY OF January , A.D. 2007.

Therese Romero deputy

THIS PLAT OF VINTAGE OAKS AT THE VINEYARD, UNIT 1 HAS BEEN SUBMITTED TO AND CONSIDERED BY THE COMMISSIONERS COURT OF COMAL COUNTY, TEXAS AND IS HEREBY APPROVED FOR FILING BY SAID COURT ON January 4th , 2007. DATED THIS 4th DAY OF January , A.D., 2007.

JOB # : 6BSW003

DATE: DECEMBER 28, 2006

SHEET 1 OF 4



	LINE TAE	ILE		LINE TAE	BLE
LINE	LENGTH	BEARING	LINE	LENGTH	BEARING
L71	106.86'	N47'48'58"E	L112	33.76'	S81'08'27"E
L72	58.85'	N53*56'15"E	L113	50.55'	N67'34'16"E
L75	54.12'	S72"11'00"W	L114	106.95'	N00'06'45"E
L76	95.09'	S57*54'28"W	L115	87.53'	N09"29'44"E
L77	40.49'	S63'09'00"W	L116	33.44'	S87*49'33"E
L78	178.03'	S52'55'29"W	L117	90.91'	N61*47'20"E
L79	197.94'	S62'41'29"W	L118	72.60'	S15'21'22"W
L80	77.01'	S2271'16"E	L119	71.44'	S03*57'42"W
L81	78.19'	S77*22'46"W	L120	62.32'	S10'29'06"W
L83	39.86'	S02'31'11"W	L121	134.83'	S09'31'36"W
L84	159.76'	S86*35'57"E	L122	69.31 [']	S33*00'11"W
L86	122.94'	S48*57'12"₩	L123	61.29'	S4510'21"W
L87	165.15'	S54"19'27"W	L243	91.41'	N41'12'47"E
L88	130.99'	S64'08'50"W	L244	169.81'	N36'51'35"E
L89	115.01'	S60'18'59"W	L245	162.96'	N49'36'53"E
L90	79.15'	S40°41'49"W	L246	202.25'	N35'33'38"E
L91	209.84'	S22*42'41"W	L247	70.04'	N31'30'01"E
L93	210.81'	N23'03'55"E	L248	239.34'	N33°25'36"E
L94	96.99'	N33'55'44"E	L249	69.62'	N21'44'50"E
L95	94.19'	N54'58'27"E	L250	480.40'	S87*59'30"E
L96	144.52'	N48'31'04"E	L251	53.34'	N13'06'47"W
L97	137.11'	N37'55'52"E	L253	30.95'	S29*22'59"W
L98	154.07'	N02'56'42"W	L254	41.05'	S00°02'10"E
L99	81.57'	N22'06'25"W	L255	145.70'	S87°53'43"E
L100	122.42'	N48'22'16"W	L256	34.73'	S06'33'55"W
L101	246.28'	S86*46'09"E	L259	205.14'	S41°08'00"W
L102	38.70'	N02"15'17"E	L260	91.40'	S26'34'59"W
L103	72.38'	N06'08'28"W	L299	95.77'	N54'46'44"W
L104	21.31'	N0579'19"W	L300	75.59'	N79'35'17"W
L105	19.72'	N32'29'06"W	L301	280.65'	S57*49'17"W
L106	37.98'	N33'54'25"W	L333	261.44'	N22'03'00"E
L107	32.29'	N38'41'12"E	L334	261.44'	S22'03'00"W
1108	70 00'	NEO170170"W			







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

CUSTOMER INFORMATION

1. Customer (Applicant):

Contact Person:	Jack Dean		
Entity:	Bluegreen Southwest Land	, Inc.	
Mailing Address:	P.O. Box 986		
City, State:	Wimberley, Texas	Zip: 78676	
Telephone:	(512) 847-5483	FAX: <u>(512)</u> 847-9414	

Agent/Representative (If any):

Contact Person:	Keith Strimple, P.E.	
Entity:	M & S Engineering, LTD.	
Mailing Address:	P.O. Box 970	
City, State:	Spring Branch, Texas	Zip: 78070
Telephone:	(830) 228-5446	FAX: (830) 885-2170

2

____ This project is inside the city limits of _____.
___ This project is outside the city limits but inside the ETJ (extra-territorial jurisdiction) of

- X This project is not located within any city's limits or ETJ.
- 3. The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

The property is located on the east side of the intersection with State Hwy 46 and Cranes Mill Road in Comal County, Texas.

- 4. <u>X</u> 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. <u>X</u> 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:

- X Project site.
- X USGS Quadrangle Name(s).
- X Boundaries of the Recharge Zone (and Transition Zone, if applicable).
- X Drainage path from the project to the boundary of the Recharge Zone.
- 6. <u>X</u> 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.
- 7. <u>X</u> ATTACHMENT C PROJECT DESCRIPTION. Attached at the end of this form is a detailed narrative description of the proposed project.
- 8. Existing project site conditions are noted below:
 - Existing commercial site
 - Existing industrial site
 - Existing residential site
 - X Existing paved and/or unpaved roads
 - Undeveloped (Cleared)
 - X Undeveloped (Undisturbed/Uncleared)
 - ____ Other:

PROHIBITED ACTIVITIES

- 9. <u>X</u> I am aware that the following activities are prohibited on the **Recharge Zone** and are not proposed for this project:
 - (1) waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
 - (2) new feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
 - (3) land disposal of Class I wastes, as defined in 30 TAC §335.1;
 - (4) the use of sewage holding tanks as parts of organized collection systems; and
 - (5) new municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).
- 10. X I am aware that the following activities are prohibited on the **Transition Zone** and are not proposed for this project:
 - (1) waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);
 - (2) land disposal of Class I wastes, as defined in 30 TAC §335.1; and
 - (3) new municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

ADMINISTRATIVE INFORMATION

11. 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.
- 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)
 - X San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)
- 13. X Submit one (1) original and three (3) copies of the completed application to the appropriate regional office for distribution by the TCEQ to the local municipality or county, groundwater conservation districts, and the TCEQ's Central Office.
- 14. 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.
 - X 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 TCEQ review. The application was prepared by:

Keith Strimple, P.E Print Name of Gustomer/Agent

Signature of Gustomer/Agent

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



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Attachment B

USGS/Edwards Recharge Zone Map



Vintage Oaks At The Vineyard - Unit 1

USGS / Edwards Aquifer Recharge Zone Map / Smithson Valley and Sattler Quad Sheets



Copyright (C) 1999, Maptech, Inc.







SHEET 3C

Copyright (C) 1999, Maptech, Inc.

SHEET 3D

Copyright (C) 1999, Maptech, Inc.

SHEET BE

Attachment C

Project Description

PROJECT DESCRIPTION

The project is proposed to be a Single Family Residential Subdivision, located on 397.69 acres, approximately 3300 feet east of the intersection of State Highway 46 and Cranes Mill Road. The site would ultimately include approximately 24 acres of drain & access R.O.W., 320 acres of single-family residential lots, and 47 acres of street dedication.

The north, northwest, and southern most portions of the site slopes generally towards that Dry Comal Creek. The northeastern portion of this site slopes generally towards Little Bear Creek. The proposed site is less than 20% impervious cover and thus requires no treatment for the run-off.

June 30, 2006

M&S Engineering, Ltd. 6477 F.M. 311, P.O. Box 970 Spring Branch, Texas 78070

Attn: Mr. Keith Strimple, P.E.

Re: Geologic Assessment Vintange Oaks at the Vineyard Unit 1 Approximate 389-Acre Tract Highway 46 Comal County, Texas PSI Project No. PO-435-6G010

Dear Mr. Strimple:

In accordance with our agreement dated June 12, 2006, Professional Service Industries, Inc. (PSI) has performed a Geologic Assessment (GA) of the above referenced property. Please find one bound and three unbound copies of the final report enclosed.

Thank you for choosing PSI as your consultant for this project. If you have any questions, or if we can be of additional service, please call us at (210) 342-9377.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

John Langan, P.G. Senior Environmental Scientist

Enclosures

Geologic Assessment

In This Section

TCEQ-0858 Geologic Assessment

Narrative Description of Geology

Overview Maps

Site Geologic Map and Geologic Assessment Tables

Site Photographs
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: _______ Vintage Oaks at The Vineyard Unit #1______

TYPE OF PROJECT: <u>X</u> WPAP __ AST __ SCS __ UST

LOCATION OF PROJECT: X_Recharge Zone __Transition Zone __ Contributing Zone within the

_ Contributing Zone with

PROJECT INFORMATION

- 1. <u>x</u> 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, In Characteristics	nfiltration & Thickne	SS
Soil Name	Group*	Thickness (feet)
Comfort- Rock outcrop complex, Undulating	с	1
Rumple-Comfort Assn. undulationg	С	1-2
Eckrant-rock outcrop complex, steep	С	1

- 3. <u>x</u> 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. <u>X</u> 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. <u>x</u> 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'

Applicant's Site Plan Scale	1"	=	<u>400</u> '
Site Geologic Map Scale	1"		<u>400</u> '
Site Soils Map Scale (if more than 1 soil type)	1"	-	

6. Method of collecting positional data:

- X Global Positioning System (GPS) technology.
- Other method(s).
- 7. Х The project site is shown and labeled on the Site Geologic Map.
- Surface geologic units are shown and labeled on the Site Geologic Map. 8 X
- Х Geologic or manmade features were discovered on the project site during the field 9. investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.
 - Geologic or manmade features were not discovered on the project site during the field investigation.
- Х 10. The Recharge Zone boundary is shown and labeled, if appropriate.
- All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): 11.
 - Х There are 2 (#) 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. (S-3) S-22 will be used for X The wells are in use and comply with 16 TAC Chapter 76. water supply There are no wells or test holes of any kind known to exist on the project site.

ADMINISTRATIVE INFORMATION

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

6/15-6/28/2006 Date(s) Geologic Assessment was performed:

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.

John Langan	210/342-9377
Print Name of Geologist	Telephone
	210/342-5727
\circ 1	Fax
John In	6/30/2006
Signature of Geologist	Date
Representing:PSI	

(Name of Company)

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.





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

STRATIGRAPHIC COLUMN

Vintage Oaks at the Vineyard Unit 1 Approximate 389-Acre Tract Highway 46 Comal County, Texas

FORMATION	THICKNESS	LITHOLOGIC DESCRIPTION						
Georgetown Formation	<10'	Light tan limestone identified by proximity to Del Rio clay and diagnostic marker fossil: <i>waconella wacoensis</i> brachiopod; low porosity and permeability development.						
Person Formation	180-224'	Limestones and dolomites, extensive porosity development in "honeycomb sections, interbedded with massive recrystallized limestones with more limited permeabilities (especially Regional Dense Member separating the Person and Kaiper Formations						
Kainer Formation	260-310'	Hard, miliolid limestones, overlying calcified dolomites and dolomite. Leached evaporitic "Kirschberg" zone of very porous and permeable collapse breccia formed by the dissolution of gypsum. Overlies the basal nodular (Walnut) bed.						

Narrative Description of Geology



June 30, 2006

M&S Engineering, Ltd. 6477 F.M. 311, P.O. Box 970 Spring Branch, Texas 78070

Attn: Mr. Keith Strimple, P.E.

Re: Geologic Assessment Vintange Oaks at the Vineyard Unit 1 Approximate 389-Acre Tract Highway 46 Comal County, Texas PSI Project No. PO-435-6G010

Dear Mr. Strimple:

Professional Service Industries, Inc. (PSI) has completed a geologic recharge assessment for the above referenced project in compliance with the Texas Commission on Environmental Quality (TCEQ) requirements for regulated developments located on the Edwards Aquifer Recharge Zone (EARZ). The purpose of this report is to describe surficial geologic units and identify the locations and extent of significant recharge features present in the development area.

AUTHORIZATION

Authorization to perform this assessment was given by a signed copy of PSI Proposal No. PO-435-6G0156 between M&S Engineering, Ltd. dated June 12, 2006.

PROJECT DESCRIPTION

The subject site is located on the north side of Highway 46, approximately one and a half miles east of F.M. 3009 in Comal County, Texas. The tract is an approximate 389-acre, irregularly shaped parcel of undeveloped land that is hilly, with rugged, occasionally steep slopes that dip in all directions. Unnamed tributaries to the Dry Comal Creek drain the property in a southerly direction, towards Highway 46. The site vegetation consists primarily of native grasses, ashe juniper, live oak, burr oak, cedar elm and persimmon trees, with abundant mountain laurel, agarita, and prickly pear cactus.

REGIONAL GEOLOGY

Physiography

Comal County lies within two physiographic provinces, the Edwards Plateau and the Blackland Prairie. Most of Comal County lies within the Edwards Plateau, which is characterized by rugged and hilly terrain, with elevations up to 1,300' feet above sea level in the northern portion of the county. This area is underlain by beds of limestone that dip gently to the southeast. South of the Edwards Plateau is the Balcones Fault Zone, which is also the northernmost limit of the Blackland Prairie. The Balcones Fault Zone extends northeast-southwest across Comal County and is composed of fault blocks of limestone, chalk, shale and marl. The undulating, hilly topography of the Blackland Prairie ranges in elevation from about 650 feet to 1100 feet above sea level. The regional dip of the lower Cretaceous rocks in Comal County is 15 feet per mile towards the southeast. The faults are predominantly normal, down-to-the Gulf Coast, with near vertical throws. Elevations at the Vintage Oaks at the Vineyard, Unit 1 Tract range from approximately 1,235 feet above mean sea level in the northwestern corner of the tract to approximately 1,060 feet above mean sea level in the southeast portion of the tract.

Stratigraphy and Structure

Rocks at the site are members of the Lower Cretaceous Edwards Kainer Formation. The site is covered with a thin veneer of soil, and large expanses of vuggy and fractured rock outcrops are exposed throughout the site, especially in the northeast portion. According to United States Geologic Survey (USGS) maps reviewed as part of this assessment, the northeast-southwest trending Bear Creek Fault have been mapped on the site. In general, the streams contained large amounts of boulders, gravel and vuggy/fractured to relatively dense Edwards Kainer outcrops. According to "The Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Outcrop, Comal County Texas" written by the USGS, the Kainer Formation ranges between 260 and 310 feet thick and forms the lower member of the Edwards Group, beneath the Person Formation which compromises the Edwards Aquifer, a federally-designated sole source aquifer for the region.

SITE INVESTIGATION

The site investigation was performed by systematically traversing the subject tract, and



M&S Engineering, Ltd. June 30, 2006 Page 3

mapping fractured or vuggy rock outcrops, closed depressions, sinkholes, caves, or indications of fault/fracture zones. Several closed depressions and solution cavities were observed on the site, and one small cave was noted in the northeast portion of the tract. As stated previously, numerous outcrops of Kainer Formation were observed throughout the site, on hilltops and hillsides, with varying degrees of fracturing and indications of interconnectedness, such as vugs, solution cavities or fractured rock zones. The purpose of the site investigation was to delineate features with recharge potential that may warrant special protection or consideration. The results of the site investigation are included in the attached TCEQ report format.

SUMMARY

Sensitive recharge features that scored higher than 40 points on the TCEQ scoring system were noted on the subject tract. These features included a monitor or test well, solution cavities, a cave, and an extensive outcrop several hundred feet long.

The monitor well, feature S-22, is reportedly slated to be used as a production well, but did not appear to have bentonite grout by the surface casing as shown in photograph 24. Features S-37 and S-38, a sinkhole and solution cavity, respectively, are located on the eastern portion of the site. The combination of feature type points (20) and higher relative infiltration rates due to fracturing or vugs, resulted in "sensitive" designations. Feature S-39 is a cave on the eastern portion of the site, and part of an extensive zone of vuggy, fractured rock outcrop identified as feature S-40. The downhole extent of the cave was not defined, as thick vegetation prevented accessibility. It is possible that rock breakdown obscured one or more additional passages in this feature. Feature S-40 is an extensive, fractured vuggy rock outcrop that extends from an east-west drainage feature in the northeast portion of the site, in a southerly direction down to the cave (S-39). The drainage feature likely directs water into this feature's numerous fractures and vugs during precipitation events. Feature S-46 is an isolated sinkhole, also on the eastern portion of the site, which also scored a sensitive rating due to the combination of feature points and relative infiltration rates. The preponderance of sensitive features on the eastern portion of the subject site may be related to the proximity of the mapped Bear Creek Fault, as movement can result in fracture zones and porosity development in the vicinity of faults.



M&S Engineering, Ltd. June 30, 2006 Page 4

The grass on the subject site is fairly tall, 1 to 3 feet high. Please note that subtle features, obscured from view, may be present in the grassy areas. It is also likely that clearing/construction activities will reveal the presence of features currently hidden by thick vegetation and/or soil cover. Should any caves, sinkholes, or solution cavities be encountered during future clearing/construction activities, please contact our office for additional assistance.

We appreciate this opportunity to be of service to you. If you have any questions, please do not hesitate to contact our office.

Respectfully submitted, PROFESSIONAL SERVICE INDUSTRIES, INC.

Phil Rasor, P.G. Project Manager

John Langan, P.G. Senior Environmental Scientist





M&S Engineering, Ltd. June 30, 2006 Page 4

WARRANTY

The field observations and research reported herein are considered sufficient in detail and scope to form a reasonable basis for a general geological recharge assessment of this site. PSI warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted geologic methods, only for the site described in this report. These methods have been developed to provide the client with information regarding apparent indications of existing or potential conditions relating to the subject site and are necessarily limited to the conditions observed at the time of the site visit and research. This report is also limited to the information available at the time it was prepared. In the event additional information is provided to PSI following the report, it will be forwarded to the client in the form received for evaluation by the client. There is a possibility that conditions may exist which could not be identified within the scope of the assessment or which were not apparent during the site visit. PSI believes that the information obtained from others during the review of public information is reliable; however, PSI cannot warrant or guarantee that the information provided by others is complete or accurate.

This report has been prepared for the exclusive use of M&S Engineering, Ltd. for the site discussed herein. Reproductions of this report cannot be made without the expressed approval M&S Engineering, Ltd. The general terms and conditions under which this assessment was prepared apply solely to M&S Engineering, Ltd. No other warranties are implied or expressed.



SOILS NARRATIVE

According to the Soil Survey of Comal County, published by the United States Department of Agriculture, Soil Conservation Service, in cooperation with the Texas Agricultural Extension Service, reissued in 1984, indicated the soils beneath the subject property have been classified as Comfort-Rock outcrop complex, undulating (CrD), Rumple-Comfort association, undulating (RUD) and Eckrant-Rock outcrop complex, steep (ErG). Comfort extremely stony clay makes up between 49 and 95% of the series, and indurated rock outcrop and soil less than 4 inches deep make up 5 to 36% of the complex. Typically, the surface layer is dark brown extremely stony soil about 6 inches thick. Cobbles, stones and "float" rock comprise about 45% of the surface. The subsoil extends to about 13 inches, and overlies the fractured limestone parent material. Comfort soil is well-drained, with slow to medium surface runoff, slow permeability, and very low water capacity.

Eckrant-Rock outcrop complex, steep is similar in profile, but are found on long, narrow slopes on high hills and ridges and along escarpments. The surface layer of Eckrant soil is very dark gray extremely stony clay about 10 inches thick. The lower portion of the surface layer is up to 75% stones and cobbles, and overlies the fractured limestone parent material.

Rumple-Comfort association consists of shallow and moderately deep soils on uplands in the Edwards Plateau Land Resource Area. The surface layer of Rumple soil is dark reddish brown very cherty clay loam about 10 inches thick. The stoniness increases with depth, becoming about 75% cobbles and stone between 14 and 28 inches in depth. The surface layer of Comfort soil was described above. This association is well drained, with medium surface runoff, slow permeability and very low water capacity. These soils are best suited for range and wildlife habitat.













Site Geologic Map and Geologic Assessment Tables



LOCATION MAP





GEOLOGIC ASSESSMENT TABLE PRO										ME		Vintag	e Oaks	s at the Vir	eyard	Unit	1 Ge	eologic Assessment		
	LOCATIO	DN	Г			FEA	TUR	E CI	HARACT	ER	ISTICS	3			EVAL	UAT	10N	PHY	SICA	SETTING
1A	16 *	1C*	2A	28	3		4		5	5A	6	7	8A	86	9	1	0	1	1	12
FEATURE (D	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIME	NSIONS	FEET)	TRENO (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENS	ΠΝΠΥ	CATCHM (AC	ENT AREA RES)	TOPOGRAPHY
						х	Y	Z		10						<40	<u>>40</u>	<1.6	<u>≥1.6</u>	
S-1	29-46-56	98-15-56	0	5	Kek	50	25	2	E-W		2	0.1	0	10	15	Х		Х		Hillside
S-2	29-47-00	98-15-58	0	5	Kek	350	50	4	NW-SE		3	0.2	F	15	20	х		х		Hillside
S-3	29-47-08	98-15-58	MB	30	Kek	1	1	>100					х	5	35	х		х		Hilltop
S-4	29-47-7	98-15-58	0	5	Kek	75	30	2			3	0.2	0	15	20	Х		Х	_	Hilltop
S-5	29-46-57	98-16-2.5	0	5	Kek	190	30	3			3	0.1	0	15	20	х		Х		Hillside
S-6	29-47-2.5	98-16-1	CD	5	Kek	3	3	1					F	20	25	х		Х		Hillside
S-7	29-47-3.4	98-16-0.4	CD	5	Kek	7	4	1.5					F	20	25	х		х		Hillside
S-8	29-47-0.5	98-16-1.2	CD	5	Kek	10	10	2					F	20	25	х		х		Hillside
S-9	29-46-59	98-16-05	0	5	Kek	40	25	3			2	0.1	F	15	20	х		х		Streambed
S-10	29-46-5	98-16-4.5	0	5	Kek	270	40	4			3	0.2	F	20	25	х		х		Streambed
S-11	29-46-50	98-16-2.4	0	5	Kek	100	20	3			2	0.1	F	15	20	х		х		Streambed
S-12	29-46-47	98-16-1	0	5	Kek	375	50	5			4	0.2	F	25	30	х		х		Streambed
S-13	29-46-43	98-15-58	0	5	Kek	150	30	3			3	0.1	F	15	20	х		х		Streambed
S-14	29-46-35	98-15-57	0	5	Kek	240	20	3			3	0.2	F	20	25	х		х		Streambed
S-15	29-46-36	98-15-48	MB	30	Kek	150	75	4					F	5	35	х			х	Streambed
S-16	29-46-23	98-15-0.2	0	5	Kek	120	15	2			0.1	0.1	F	10	15	х		х		Streambed
S-17	29-46-24	98-15-36	MB	30	Kek	100	50	5					F	5	35	х		х		Streambed
* DATUM																				

2A TYPE	TYPE	2B POINTS		8A INFILLING						
С	Cave	30	N	None, exposed bedrock	•					
SC	Solution cavity	20	С	Coarse - cobbles, breakdown, sand, gravel						
SF	Solution-enlarged fracture(s)	20	0	Loose or soft mud or soil, organics, leaves, sticks, dark colors						
F	Fault	20	F	Fines, compacted clay-rich sediment, soil profile, gray or red colors						
0	Other natural bedrock features	5	V Vegetation. Give details in narrative description							
MB	Manmade feature in bedrock	30	FS	Flowstone, cements, cave deposits						
SW	Swallow hole	30	x	Other materials						
SH	Sinkhole	20								
CD	Non-karst closed depression	5		12 TOPOGRAPHY						
z	Zone, clustered or aligned features	30	30 Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed							

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213. Date $\frac{6}{30}/06$ Sheet $\frac{1}{06}$ of $\frac{3}{30}$ the y



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

GEOL	.OGIC	ASSES	SMEN			PR	OJE	CT NA	ME		Vintag	e Oaks	at the Vir	eyard Unit 1 Geologic Assessment						
- I	LOCATIO	DN			Color of Manual Science	FE/	TUR	E CI	HARAC1	ER	ISTICS	;			EVA	LUAT	TON	PHYSICAL		SETTING
1A	1B '	1C'	2A	2B	3		4		5	5A	6	7	8A	8B	9		10	1	11	12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIME	NSIONS (FEET)	TREND (DEGREES)	ром	DENSITY (NQ/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENS	ITIVITY	САТСНМ (АС	ENT AREA RES)	TOPOGRAPHY
						х	Y	Z		10						<40	<u>>40</u>	<16	≥1.6	
S-18	29-46-50	98-15-44	0	5	Kek	150	100	4			3	0.1	F	20	25	х		X		Hillside
S-19	29-46-54	98-15-41	MB	30	Kek	150	125	5					F	5	35	х		х		Hillside
S-20	29-46-59	98-15-36	CD	5	Kek	10	8	1.5					F	20	25	х		Х		Hillside
S-21	29-47-1	98-15-44	0	5	Kek	150	40	6			1	0.1	F	15	20	х		х		Streambed
S-22	29-46-23	98-15-42	мв	30	Kek	1	1	>100					х	30	60		х	х		Hillside
S-23	29-46-55	98-15-44	0	5	Kek	550	75	6			3	0.25	0	25	30	х		х		Hillside
S-24	29-46-57	98-15-48	0	5	Kek	325	40	5			1	0.1	F	15	20	х		х		Streambed
S-25	29-46-50	98-15-47	0	5	Kek	190	30	4			3	0.2	F	20	25	х		х		Streambed
S-26	29-46-60	98-16-00	CD	5	Kek	8	6	1					F	15	20	х		х		Hillside
S-27	29-47-5	98-15-52	0	5	Kek	175	30	4			3	0.1	F	20	25	х		х		Streambed
S-28	29-47-1	98-15-50	0	5	Kek	220	35	6			2	0.2	F	25	30	х		х		Streambed
S-29	29-46-50	98-15-34	CD	5	Kek	8	6	1					F	25	30	х		х		Hillside
S-30	29-46-53	98-15-33	CD	5	Kek	6	6	1.5		10000			F	25	30	х		х		Hillside
S-31	29-46-56	98-15-35	CD	5	Kek	7	5	1.5					F	25	30	х		х		Hillside
S-32	29-46-59	98-15-28	0	5	Kek	200	60	9			3	0.2	0	25	30	х		х		Hillside
S-33	29-47-13	98-15-12	0	5	Kek	125	15	4			3	0.1	0	20	25	х		х		Streambed
S-34	29-46-51	98-15-38	0	5	Kek	300	50	5			2	0.2	F	25	30	х		х		Hillside
* DATUM			_										2 2 2 2							
2A TYPE	_	TYPE		2E	B POINTS	1					8A	INFILLIN	1G							
С	Cave				30		N	None	, exposed	bedr	ock									
SC	Solution ca	avity			20		С	Coars	e - cobble	s, br	eakdowr	n, sand, d	aravel							
SF	Solution-e	, nlarged frac	ture(s)		20		0	Loose	or soft m	ud ou	soil or	nanics le	aves st	icks dark co	lors					
F	Fault	nargou nac	ildiro(c)		20		F	Fines	compacte	ad cl	av-rich s	ediment	soil pro	file grav or n	ed color	s				
0	Other natu	ral bedrock	features		5		v	Veget	ation. Give	e det	alls in na	arrative d	escriptic	n		-				
- MB	Manmade	feature in h	edrock		30		FS	Flows	tone. cem	ents	cave de	enosits	ssorput							
sw	Swallow h	ble	- 5.00.		30		X Other materials													
SH	Sinkhole				20		.,	20,01												
CD	Non-karst	closed depi	ression		5															
7	Zone clus	tered or alic	ned featu	res	30		Cliff	Hillt	on Hills	ide	Draina	ne Flo	odolai	n Stream	hed					

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The Information presented here complies with that document and is a true representation of the conditions observed in the field.

My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

for

1213. Date 6/30/06 Sheet <u>2</u> of <u>3</u>



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

GEOLOGIC ASSESSMENT TABLE PROJECT NAME: Vintage Oaks at the Vineyard Unit 1												1 Ge	eologic Assessment							
l l	OCATIO	DN				FEA	EATURE CHARACTERISTICS							EVALUATION			PHY	SICAL	_ SETTING	
1A	18 *	1C*	2A	2B	3		4		5	5A	6	7	8A	6B	9	1	10	1	1	12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIME	VSIONS (I	FEET)	TREND (DEGREE8)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENS	ITIVITY	CATCHM (ACI	ENT AREA RES)	TOPOGRAPHY
			_	_		х	Y	Z		10						<40	>40	<1.6	<u>>1.6</u>	
S-35	29-46-58	98-15-16	CD	5	Kek	4	3	1					F	20	25	х		х		Hillside
S-36	29-46-52	98-15-19	CD	5	Kek	10	8	1					F	20	25	х		х		Hillside
S-37	29-46-51	98-15-16	SH	20	Kek	15	8	5					С	30	50		х		х	Streambed
S-38	29-46-48	98-15-10	SC	20	Kek	2	2	2					С	30	50		х	х		Streambed
S-39	29-46-55	98-15-11	С	30	Kek	10	10	6					С	30	60		х	х		Hillside
S-40	29-47-03	98-15-10	Z	30	Kek	1100	200	25			4	0.3	С	30	60		х		х	Streambed
S-41	29-46-33	98-15-48	0	5	Kek	25	20	6			3	0.1	F	20	25	х		х		Streambed
S-42	29-46-29	98-15-47	CD	5	Kek	8	6	1					F	20	25	х		х		Hillside
S-43	29-46-41	98-15-43	0	5	Kek	450	300	8			4	0.2	0	30	35	х		х		Hillside
S-44	29-46-47	98-15-48	0	5	Kek	700	75	30	N-S		4	0.25	0	30	35	х		х		Streambed
S-45	29-46-38	98-15-48	0	5	Kek	75	25	5	N-S		3	0.2	0	25	30	х		х		Streambed
S-46	29-46-58	98-15-04	SH	20	Kek	2.5	2	3					0	20	40		Х	х		Hillside
S-47	29-46-26	98-16-00	0	5	Kek	150	20	3	N-50-E		0.2	0.1	0	15	20	х		х		Streambed
S-48	29-46-29	98-15-34	F	20	Kek				NE-SW					15	35	х			х	Hillside
		_																		
* DATUM												0					_			

			 	_
2A TYPE	TYPE	2B POINTS		
С	Cave	30	N	N
SC	Solution cavity	20	С	C
SF	Solution-enlarged fracture(s)	20	0	Lo
F	Fault	20	F	Fi
0	Other natural bedrock features	5	v	Ve
MB	Manmade feature in bedrock	30	FS	F
SW	Swallow hole	30	Х	0
SH	Sinkhole	20		
CD	Non-karst closed depression	5		
Z	Zone, clustered or aligned features	30	Cli	ff, ŀ

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

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

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

Site Photographs







View of fractured rock outcrop at Vintage Oaks at The Vineyard, Unit 1, 1. location: 29-46-56; 98-15-56.7.



2. View of operational water well located at the northwest corner of the tract at 29-47-08; 98-15-58.

Project No. 435-6G010 June 2006

Vintage Oaks at The Vineyard, Unit 1



4. View of smaller man-made pit/excavation at 29-46-24.1; 98-15-36.3 (south of a larger stock tank).



Project No. 435-6G010 June 2006 Vintage Oaks at The Vineyard, Unit 1



6. View northwest of S-12 from the same location as Photograph 5.





7. View south of S-16 at 29-46-23; 98-16-00.2.



8. View of man-made stock tank/pond at 29-46-54; 98-15-41, in the northern portion of the tract.





9. View of man-made stock tank/pond at 29-46-36.1; 98-15-48.11, in the south-central portion of the tract.



10. View of drainage in the northeast corner at 29-47-13; 98-15-12.



Vintage Oaks at The Vineyard, Unit 1



11. Vuggy rock outcrop at 29-47-11; 98-15-12.



12. View of ponded water in creek bed at 29-46-51; 98-15-16.



Vintage Oaks at The Vineyard, Unit 1



13. View northeast from the southwest corner of the tract



14. View north from the southwest corner of the tract.



Vintage Oaks at The Vineyard, Unit I



15. View of streambed feature S-44 at 29-46-47; 98-15-48.



16. View of S-44 drainage feature.



Vintage Oaks at The Vineyard, Unit 1



17. View of relatively dense portion of S-44.



18. View of scoured vuggy rock in S-44 and ponded water.

Project No. 435-6G010 June 2006



19. View of old-growth ashe-juniper and extensive vuggy rock outcrop at 29-46-59.7; 98-15-11.6 (feature S-40).



20. View east (downstream) of S-40 in the northeastern portion of the tract.





Vintage Oaks at The Vineyard, Unit 1



21. View of southern continuation of vuggy, fractured S-40 outcrop.



22. View of cave S-39 feature at 29-46-55.4; 98-15-10.8.

Project No. 435-6G010 June 2006 Vintage Oaks at The Vineyard, Unit 1



23. Close-up view of cave S-39, partially obscured by thick persimmon and brushy vegetation.



24. View of test well located at 29-46-23; 98-15-42.

Application

In This Section

TCEQ-0584 Water Pollution Abatement Plan Application

> Attachment A Factors Affecting Water Quality

Attachment B Volume and Character of Stormwater

Attachment C Suitability Letter from Authorized Agent

Attachment D Exception to the Required Geologic Assessment

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:

Vintage Oaks At The Vineyards -- Unit 1

REGULATED ENTITY INFORMATION

- 1. The type of project is:
 - 247 Residential: # of Lots:
 - Residential: # of Living Unit Equivalents:
 - 2 Commercial
 - Industrial
 - ____ Other:
- 2. Total site acreage (size of property): <u>397.69 Acres</u>
- 3. Projected population: 249 Lots
- 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 (assumed 3,800sq.ft./lot)	946,200	÷ 43,560 =	21.72
Parking (assumed 1,200sq.ft./lot)	298,800	÷ 43,560 =	6.86
Other paved surfaces (47,626ft. of streets)	1,428,780	÷ 43,560 =	32.8
Total Impervious Cover	2,673,780	÷ 43,560 =	61.38
Total Impe	15.43 %		

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

Concrete		
Annhaltin	aanarata	~

 Asphaltic	concrete	pavement

Other:	

9.	Length of Right of Way (R.O.W.): Width of R.O.W.: L x W = Ft ² ÷ 43,560 Ft ² /Acre =	 feet. feet. acres.	
10.	Length of pavement area: Width of pavement area: L x W = $Ft^2 \div 43,560 Ft^2/Acre =$ Pavement area acres $\div R.O.W.$ area	 feet. feet. 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 TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

STORMWATER TO BE GENERATED BY THE PROPOSED PROJECT

13. **ATTACHMENT B - Volume and Character of Stormwater.** A 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 preconstruction and post-construction conditions.

WASTEWATER TO BE GENERATED BY THE PROPOSED PROJECT

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

	%	Domestic	*******	gallons/day	
	0/	Industrial		nallons/day	

____% Industrial _____ gallons/day ____% Commingled _____ gallons/day

TOTAL _____ gallons/day

- 15. Wastewater will be disposed of by:
 - X 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.

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

Sewage Collection System (Sewer Lines):

- Private service laterals from the wastewater generating facilities will be connected to an existing SCS.
- Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.
 - ____ The SCS was previously submitted on _____
 - ____ The SCS was submitted with this application.
 - The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to executive director approval.

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

- ____ existing.
- ____ proposed.
- 16. ____ All private service laterals will be inspected as required in 30 TAC §213.5.

SITE PLAN REQUIREMENTS

Items 17 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" = 400'.
 - 10
- 18. 100-year floodplain boundaries
 - X Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
 - ____ No part of the project site is located within the 100-year floodplain.

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s):

Flood Insurance Rate Maps, Comal County, Texas and Unincorporated Areas, Map Number 485463 0080 C.

- 19. ____ 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.
 - X 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.):
 - X There are 2 (#) 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.
 - X The wells are not in use and will be properly abandoned.
 - ____ The wells are in use and comply with 30 TAC §238.
 - 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:
 - X 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.
- 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. 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. X Locations where soil stabilization practices are expected to occur.
- 26. X Surface waters (including wetlands).
- 27. X Locations where stormwater discharges to surface water or sensitive features. 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 TCEQ 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:

Keith Strimple, P.E. Print Name of Gustomor

Signature of Gustomer/Agent

0/15/04



EVISIONS BRANCH OFFICE P.O. BOX 391 McOUEENEY, TEXAS 78123 PHONE # (830) 560-3200 FAX # (830) 560-3203 <u>SCALE:</u> 1" = 2000' HORIZONTAL LTD. K ENGINEI MAIN OFFICE P.O. BOX 970 P.O. BOX 970 PHONE # (830) 228-5446 FAX # (830) 885-2170 Vintage Oaks At The Vineyard Unit 1 **Overview Map** designed by: Lek Checked by: KCS DRAWN BY: LEK JOB: 685W002 DATE: 08-09-06 SHEET: OF 1

SOIL DISTURBANCE NOTE

SOIL DISTURBANCES WILL OCCUR DUE TO CLEARING, GRUBBING, AND GRADING OF AREAS TO BE USED FOR ROADS, ROAD RIGHT-OF-WAYS, AND DETENTION FACILITIES. DISTURBANCES WILL ALSO OCCUR DURING THE HOME BUILDING PROCESS. THESE DISTURBANCES CAN BE ATTRIBUTED TO, BUT NOT LIMITED TO, CLEARING AND GRUBBING RELATED TO BUILDING PAD, DRIVEWAY, AND LANDSCAPE PREPARATION.

A TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE INSTALLED TO PROVIDE A STABLE ENTRANCE/EXIT CONDITION FROM THE CONSTRUCTION SITE TO KEEP MUD AND SEDIMENT OFF PUBLIC ROADWAYS (REFER TO THE EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL FOR CONSTRUCTION INFORMATION).

SOIL STABILIZATION NOTE

TEMPORARY EROSION CONTROL MEASURES WILL BE USED TO STABILIZE DISTRUBED AREAS (REFER TO THE EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL FOR CONSTRUCTION OF EROSION CONTROL MEASURES). TRAFFIC WILL BE ROUTED AROUND THESE AREAS TO REDUCE THE EXTENT OF DISTURBED AREAS BY REDUCING SEDIMENT LOADS TO SURFACE WATER.

BARE SOILS SHOULD BE SEEDED OR OTHERWISE STABILIZED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR WHERE CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED FOR MORE THAN 21 DAYS.

MULCHING/MATS CAN BE USED TO PROTECT THE DISTRUBED AREA WHILE VEGETATION BECOMES ESTABLISHED.

NATURAL BUFFER ZONE NOTE

NATIVE GRASSES, FORBS AND TREES ADJACENT TO AND UPGRADIENT OF SENSITIVE FEATURES WILL REMAIN UNDISTRUBED SO THAT RAINFALL MAY CONTINUE TO ENTER THE FEATURE. THE NATURAL VEGETATED AREAS WILL ENCOMPASS A TWO HUNDRED (200) FOOT RADIUS FROM THE CENTER OF THE FEATURE IN ORDER TO MAINTAIN PRE-DEVELOPMENT RECHARGE QUANTITY AND QUALITY.

WHEN ALL OR A PROTION OF THE BUFFER FOR A SENSITIVE FEATURE IS LOCATED WITHIN THE YARD OF A RESIDENTIAL TRACT, IT SHOULD BE SEPARATED BY A BARRIER, SUCH AS A FENCE, FROM CONVENTIONAL LANDSCAPING AND MAINTAINED IN THE NATURAL STATE.

> EFFECTIVE 100-YEAR FEMA FLOODPLAIN

11

STABILIZED CONSTRUCTION ENTRANCE PROPOSED 100-YEAR FEMA FLOODPLAIN

S-22 - Manmade feature

Bedrock - 1' x 1' x >100' This well will be utilized for

water supply.









Attachment A

Factors Affecting Water Quality

Factors Affecting Water Quality

Potential sources of pollution that may be expected to affect the quality of storm water discharges from the site during construction include:

- Soil erosion due to clearing of site.
- Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle drippings.
- Hydrocarbons from asphalt paving.
- Trash and litter from construction workers and material wrappings.
- Concrete truck washout.
- Tar, fertilizers, cleaning solvents, detergents, and petroleum based products.

Potential sources of pollution that may be expected to affect the quality of storm water discharges from the site after development include:

- Oil, grease fuel and hydraulic fluid contamination from vehicle drippings.
- Dirt and dust from vehicles.
- Trash and litter.

Attachment B

Volume and Character of Stormwater

Volume and Character of Stormwater

The overall contributing drainage area for Unit 1 of this project is comprised of 5 sub-basins which total to approximately 1,518 acres. The stormwater runoff for the pre-project conditions of Unit 1 would be across rocky soil, with native grasses. The site has an average slope ranging from 2.2% to 3.5%. Using SCS methods peak discharges for each sub-basin were calculated. A summary of the pre- and post-project conditions follows.

	Time of	Pre-Project	Post-Project	Pre-Project	Post-Project
Sub-Basin	Concentration	Curve Number	Curve Number	Discharge	Discharge
	(hours)			(cfs)	(cfs)
1-5	1.13	73	82	268.68	340.10
1-6	0.74	73	82	357.74	453.88
1-7	1.84	68	77	309.73	412.94
2-1	1.51	73	79	780.71	921.32
2-2	0.95	73	82	377.27	379.01

10-Year Pre- and Post-Project Stormwater Data

100-Year Pre- and Post-Project Stormwater Data

	Time of	Pre-Project	Post-Project	Pre-Project	Post-Project
Sub-Basin	Concentration	Curve Number	Curve Number	Discharge	Discharge
	(hours)			(cfs)	(cfs)
1-5	1.13	73	82	527.89	605.96
1-6	0.74	73	82	701.32	805.69
1-7	1.84	68	77	659.00	783.51
2-1	1.51	73	79	1545.23	1709.20
2-2	0.95	73	82	745.27	748.64

The characteristics of the post-project stormwater generated onsite will be influenced by site features that generate non-point pollution. This non-point pollution will include oil and grease from the paved areas, suspended solids, sedimentation, and nutrients for lawn care, and possible pesticides and herbicides. The stormwater runoff will flow across pervious areas of rocky soil, with native grasses before discharging into the Dry Comal Creek.





Attachment C

Suitability Letter from Authorized Agent

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Comal County OFFICE OF COMAL COUNTY ENGINEER

August 7, 2006

Bluegreen Southwest One, L.P. P.O. Box 896 Wimberley, TX 78676

Re: VINTAGE OAKS AT THE VINEYARD, UNIT 1, within Comal County, Texas

Dcar Property Owner(s):

We have completed the field inspection of the referenced for the recommendation for private sewage facilities and have found the property to be approved with the condition that individual septic systems permits shall be required for the lots within this subdivision.

Please be advised that these individual permits will be required to meet 30 TAC 285.40, Subchapter E (copy attached). Please specifically reference the one acre minimum lot size and 150 foot distance requirement to recharge features.

Should you have any questions, please feel free to contact us.

incerely.

Thomas H. Hornseth, P.E. Comal County Engineer

xc: M&S Engineering, Ltd.

Attachment D

Exception to the Required Geologic Assessment

Not Applicable

Temporary Stormwater

In This Section

TCEQ-0602 Temporary Stormwater Section

> Attachment A Spill Response Actions

Attachment B Potential Sources of Contamination

> Attachment C Sequence of Major Activities

Attachment D Temporary Best Management Practices and Measures

> Attachment E Request to Temporarily Seal a Feature

> > Attachment F Structural Practices

Attachment G Drainage Area Map

Attachment H Temporary Sediment Pond(s) Plans and Calculations

> Attachment I Inspection and maintenance of BMPs

Attachment J Schedule of Interim and Permanent Soil Stabilization Practices

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: VINTAGE OAKS AT THE VINEYARD – UNIT 1

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 than 250 gallons will be stored on the site for less than one (1) year.
 - Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.
 - Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.
 - Х Fuels and hazardous substances will not be stored on-site.
- Х 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. N/A Temporary aboveground storage tank systems of 250 gallons or core 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 features.

- 4. ATTACHMENT B - Potential Sources of Contamination. Describe in an attachment at the Х 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. Х 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.
- Name the receiving water(s) at or near the site which will be disturbed or which will receive 6. X charges from disturbed areas of the project: Dry Comal Creek and Little Bear Creek



TEMPORARY BEST MANAGEMENT PRACTICES (TBMPs)

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

- 7. <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, included 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 form 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.
 - 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 structure 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. <u>X</u> **ATTACHMENT G Drainage Area Map.** A drainage area map is provided at the end of this form to support the following requirement.
 - For areas that 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 he 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. <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 Profession 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. X 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. <u>X</u> 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 to the executive director, or other information indicates a control has been used inappropriately, or incorrectly, the applicant must replace or notify the control for site situations.
- 14. <u>X</u> If sediment escapes the construction site, off-site accumulation of sediment must be removed at a frequency sufficient to minimize offsite 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 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 he 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 he 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. <u>X</u> 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 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. 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 TCEQ review and executive director approval. The application was prepared by:

Keith Strimple, P.E. Print Name of Gustomer/ Agent

Signature of Gustomer/ Agent

Date



Attachment A

Spill Response Actions

1.4.16 Spill Prevention and Control

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

The following steps will help reduce the stormwater impacts of leaks and spills:

Education

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

General Measures

- (1) To the extent that the work can be accomplished safely, spills of oil, petroleum products, 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 runon during rainfall to the extent that it doesn't compromise clean up activities.
- (7) Do not bury or wash spills with water.

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

Cleanup

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

Minor Spills

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

Semi-Significant Spills

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

Spills should be cleaned up immediately:

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

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

- (1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 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.

More information on spill rules and appropriate responses is available on the TCEQ website at: <u>http://www.tnrcc.state.tx.us/enforcement/emergency_response.html</u>

Vehicle and Equipment Maintenance

- (1) If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.
- (2) Regularly inspect onsite vehicles and equipment for leaks and repair immediately
- (3) Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- (4) Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- (5) Place drip pans or absorbent materials under paving equipment when not in use.
- (6) Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
- (7) Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
- (8) Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
- (9) Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

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

Attachment B

Potential Sources of Contamination

- Oil, grease, fuel and hydraulic contamination from construction equipment and vehicle leakage.
 Remedy: Lubrication and fueling will be preformed in a designated area. This area will be monitored daily for contamination.
- 2. Miscellaneous trash and litter form construction workers. Remedy: Designated receptacles will be strategically located and workers will be directed to deposit trash there.
- 3. Construction debris.

Remedy: Debris will be collected weekly and deposited in bins for offsite disposal. Situations requiring immediate attention will be handled on a case by case basis.

4. Asphalt products.

Remedy: After placement of asphalt, emulsion or coatings, the contractor will be responsible for immediate cleanup should an unexpected rain occur. For the duration of the asphalt product curing time, the contractor will maintain standby personnel and equipment to maintain and asphalt wash-off should and unexpected rain occurs. The contractor will be instructed not to place asphalt products on the ground within 48 hours of a forecasted rain.

Attachment C

Sequence of Major Activities

Sequence of Major Activities

1. Site Preparation:

Site preparation will include the clearing, grubbing, and grading of construction areas. These areas include right of way preparation for streets and roads, drainage easements, and excavation of proposed detention areas. Additionally, residential lots will undergo limited site preparation for building pads, driveways, and landscaping.

2. Construction:

Construction activities will consist of constructing buildings, driveways, parking areas, streets, utilities, landscaping and site cleanup, including removal of excess materials. An approximate area of 66 acres will be disturbed during the construction of streets and roads. Approximately 34 acres could be disturbed during the construction of homes /buildings. In addition, approximately 20 acres will be disturbed due to excavation and re-grading of detention areas.





Temporary Best Management Practices and Measures

Temporary Best Management Practices and Measures

All TBMPs will be installed prior to the beginning of site preparation and construction activities as per the Storm Water Pollution Prevention Plan. The TBMPs will remain in place and will be maintained until all construction has ceased and a perennial vegetative cover with a density of 70 percent has been established.

- a. Silt fences and rock berms will be used to protect disturbed soils during construction in order to prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.
- b. Silt fences and rock berms will be used to protect disturbed soils during construction in order to 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 200-foot radius natural buffer zone adjacent to and upgradient of sensitive features will remain undisturbed so that rainfall may continue to enter the feature. The natural vegetated areas will ensure that pre-development stormwater quantity and quality will continue to recharge the aquifer via the feature. Rock berms will be placed downgradient of all construction activities so that potentially contaminated stormwater may be treated before leaving the sited and entering downstream surface water.
- d. No construction will occur within a 200-foot radius of naturally-occurring sensitive features. The vegetative buffer zone will serve as both TMBP and BMP for the sensitive features. In the case that construction activities occur upgradient of a sensitive feature (greater than the 200-foot radius) the disturbed soils will be protected from erosion by silt fences as outlined above.

Attachment E

Request to Temporarily Seal a Feature

Request to Temporarily Seal a Feature

NOT APPLICABLE

Attachment F

Structural Practices

Structural Practices

The structural practices that will limit runoff discharge of pollutants form exposed areas of the site will be the use of the water trenches, rock berms, silt fences, and stabilized construction entrance to prevent the excavated material from leaving the site.

Attachment G

Drainage Area Map



Attachment H

Temporary Sediment Pond(s) Plans and Calculations
Temporary Sediment Pond(s) Plans and Calculations

NOT APPLICABLE

Attachment I

Inspection and maintenance of BMPs

The BMPs for the construction of this project will be the use of rock berms, silt fencing, gravel filter bags, stabilized construction entrance and the utility trenches. The following inspection and maintenance procedures will be implemented:

- 1. Sift fencing, rock berms, and construction entrances must be in place prior to the start of construction and will remain in place until construction has been complete and the site stabilized from further erosion.
- 2. The contractor will inspect the rock berms, silt fencing and construction entrance at least once a week and within 24 hours of a storm of 0.5 inches or more in depth. The contractor will repair or replace any damaged TBMPs. The contractor shall correct damage or deficiencies as soon as practical after the inspection but no later than 7 days after the inspection.
- 3. Contractor will place trench excavation on the upgradient side of the trench.
- 4. All soil, sand, gravel, and excavated material stockpiled on-site will have appropriately sized silt fencing placed upgradient and down gradient.
- 5. The contractor will keep a record of the weekly inspections, noting the condition of the rock berms, silt fencing and construction entrance and any corrective action taken to maintain the erosion control structures. In addition to the inspection and maintenance reports, the operator should keep records of the construction activity on-site, in particular, the following information should be kept.
 - A. The dates when major grading activities occur in a particular area.
 - B. The dates when construction activities cease in an area, temporarily or permanently.
 - C. The dates when an area is stabilized, temporarily or permanently.
 - D. Records to be maintained in SWPPP.

Attachment J

Schedule of Interim and Permanent Soil Stabilization Practices

Schedule of Interim and Permanent Soil Stabilization Practices

The schedule of interim and permanent soil stabilization will be as follows:

- 1. Once construction of the project has commenced, the construction activity is planned to continue until the project is complete. The water, electrical, cable TV and telephone trenches will be excavated. The trenches will then be re-excavated and the water, electrical, cable TV and telephone lines will be installed. This work is intended to continue until all the lines are installed. The utility lines are located within the project boundaries as shown on the site plan. As soon as the underground utilities are installed, the road base will be installed and compacted providing the interim soil stabilization for the paved area and the permanent soil stabilization for the parking areas. Once the individual residential buildings are built and landscaped this will provide permanent soil stabilization for the building areas.
- 2. Much of the excavation for this project will be in solid rock, helping to minimize the amount of loose soil which has the potential to become suspended in runoff and washed downstream.
- 3. 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 temporary or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently cease in 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 practicable.

Permanent Stormwater

In This Section

TCEQ-0600 Permanent Stormwater Section

Attachment A 20% or Less Impervious Cover Waiver

> Attachment B BMPs for Ungradient Stormwater

> > Attachment C BMPs for On-site Stormwater

> > > Attachment D BMPs for Surface Streams

Attachment E Request to Seal Features

> Attachment F Construction Plans

Attachment G Inspection, Maintenance, Repair and Retrofit Plan

> Attachment H Pilot-Scale Field Testing Plan

Attachment I Measures for Minimizing Surface Stream Contamination

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: ______ Vintage Oaks At The Vineyard – Unit 1 ______ Permanent best management practices (BMPs) and measures that will be used during and after construction is completed.

- 1 <u>N/A</u> Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.
- 2. <u>N/A</u> 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 <u>N/A</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. <u>X</u> Where a site used for low density single-family residential development and has 20% or less impervious cover, other permanent BMPs are not required. The 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.
 - X 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. The 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 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 sited by has more than 20% impervious cover.
- ____ This site will not be used for multi-family residential development, 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.
- X If permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from this 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, or stormwater 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.
- X 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 to 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.
 - ____ 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. <u>N/A</u> **ATTACHMENT F Construction Plans.** Construction plans and design calculation 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 Profession Engineer. Construction plans for the proposed permanent BMPs and measures are provided at the end of this form. Design Calculations, TCEQ Construction Notes, all manmade or naturally occurring geologic features, all proposed structural measurers, and appropriate details must be shown on the construction plans.
- 11 <u>N/A</u> **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, retrofit as well as a discussion of record keeping procedures.
- 12 <u>X</u> 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. <u>N/A</u> **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 measurers 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 obligation 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 with 30 days of the transfer in 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:

Keith Strimple, P.E. Print Name of Gustomer/Agent

Signature of Gustomer/Agen

104

Attachment A

20% or Less Impervious Cover Waiver

Attachment A

20% Or Less Impervious Cover Waiver

NOT APPLICABLE

Attachment B

BMPs for Ungradient Stormwater

BMPs for Upgradient Stormwater

The upgradient stormwater would continue to be accepted onto the project site. The stormwater runoff from the areas that are immediately upgradient of the 397.69 acres are currently undeveloped. No BMPs are required because the site will be re-vegetated after construction is complete.

Attachment C

BMPs for On-site Stormwater

Attachment C

BMPs for On-Site Stormwater

The proposed Vintage Oaks at the Vineyard, Unit 1 is less than 20% impervious cover, therefore no permanent BMP is required for the runoff entering the Dry Comal Creek. However, naturally vegetated buffer zones around sensitive recharge features will be maintained as a permanent BMP to provide treatment to potentially contaminated stormwater entering the sensitive features. The buffer zones will be recorded on the plat and will become deed restricted easements preventing any type of construction or development.

Attachment D

BMPs for Surface Streams

BMPs for Surface Streams

The proposed Vintage Oaks At The Vineyard, Unit 1 is less than 20% impervious cover, therefore not filtration is required for the runoff entering the Dry Comal Creek.

According to the geologic assessment, there were six "sensitive" features identified on this site as S-22, S-37 thru S-40, and S-46.

- S-22 (Man made feature in Bedrock, site photograph #24) Test well located in the vicinity of a proposed lot.
 - This feature will be utilized for water supply.
- **S-37** (Sinkhole, site photograph #12) Located within the vicinity of a proposed lot.
- **S-38** (Solution cavity) Located within the vicinity of a proposed lot.
- S-40 (Zone, clustered or aligned feature, site photographs #19 thru #21) Located in the vicinity of proposed lots.
- S-46 (Sinkhole) Located in the vicinity of a proposed lot.
 - Native grasses, forbs and trees adjacent to and upgradient of these features will remain undisturbed so that rainfall may continue to enter each feature. The natural vegetated areas would encompass a two hundred (200) foot radius from the center of each feature in order to maintain pre-development recharge quantity and quality.
 - When all or a portion of the buffer for these sensitive features is located with the yard of a residential tract, it should be separated by a barrier, such as a fence, from conventional landscaping and maintained in the natural state.

S-39 (Cave, site photographs #22, and #23) Located within the vicinity of several proposed lots.

- Native grasses, forbs and trees adjacent to and upgradient of these features will remain undisturbed so that rainfall may continue to enter each feature. The natural vegetated areas would encompass a two hundred (200) foot radius from the center of each feature in order to maintain pre-development recharge quantity and quality.
- When all or a portion of the buffer for these sensitive features is located with the yard of a residential tract, it should be separated by a barrier, such as a fence, from conventional landscaping and maintained in the natural state.
- In addition, a Transparent Cave Gate with Secure Entrance will be installed.

Attachment E

Request to Seal Features

<u>Request To Seal Features</u>

NOT APPLICABLE

Attachment F

Construction Plans

Attachment F

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Construction Plans

NOT APPLICABLE

Attachment G

Inspection, Maintenance, Repair and Retrofit Plan

Attachment G

Inspection, Maintenance, Repair, And Retrofit Plan

NOT APPLICABLE

Attachment H

Pilot-Scale Field Testing Plan

Attachment H

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Pilot-Scale Field Testing Plan

NOT APPLICABLE



Measures for Minimizing Surface Stream Contamination

Attachment I



NOT APPLICABLE



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Agent Authorization Form For Required Signature Edwards Aquifer Protection Program Relating to 30 TAC Chapter 213 Effective June 1, 1999	
I JACK Dean,	
Print Name	
Vice President	
Title Owner/President/Other	
Diversion Continuent Land Line	
ofBluegreen Southwest Land, Inc.	
Corporation/Partnership/Entity Name	
have authorized Keith Strimple P F	
Drint Name of Agent/Engineer	_
Print Name of Agenvengineer	
of M & S Engineering, Ltd.	
Print Name of Firm	

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

I also understand that:

- 1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to \$10,000 per day per violation.
- 2. 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 TCEQ 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.

BLUELREENS SOUTHWEST LAND, FUL Applicant's Signature

THE STATE OF $\underline{\mathcal{T}X}_{\S}$ County of Har

BEFORE ME, the undersigned authority, on this day personally appeared <u>Jack H. Dean</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.

State of Texas My Commission Expires May 07, 2009

GIVEN under my hand and seal of office on this 1st day of Cugues Michele R Typed or Printed Name of Notary MY COMMISSION EXPIRES: 5/ 7/09 MICHELE R. LINDSEY NOTARY PUBLIC

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

NAME OF PROPOSED REGULATED ENTITY: Vintage Oaks At The Vineyard- Unit 1 REGULATED ENTITY LOCATION: Approximately 3,815 feet East Of intersection of State Hwy 46 & Cranes Mill Road NAME OF CUSTOMER: Bluegreen Southwest Land, Inc. CONTACT PERSON: Keith Strimple, P.E. PHONE: 830-228-5446 (Please Print) **Customer Reference Number** (if issued): CN ____602609984 (nine digits) Regulated Entity Reference Number (if issued): RN (nine digits) **AUSTIN REGIONAL OFFICE (3373)** SAN ANTONIO REGIONAL OFFICE (3362) ~ Bexar ~ Hays ~ Medina ~ Travis X Comal ~ Uvalde ~ Williamson ~ Kinney

APPLICATION FEES MUST BE PAID BY CHECK, CERTIFIED CHECK, OR MONEY ORDER, PAYABLE TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY. YOUR CANCELED CHECK WILL SERVE AS YOUR RECEIPT. THIS FORM MUST BE SUBMITTED WITH YOUR FEE PAYMENT. THIS PAYMENT IS BEING SUBMITTED TO (CHECK ONE):

X SAN ANTONIO REGIONAL OFFICE

 Mailed to TCEQ: TCEQ - Cashier Revenues Section Mail Code 214

P.O. Box 13088

Austin, TX 78711-3088

~ AUSTIN REGIONAL OFFICE

 Overnight Delivery to TCEQ: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
512/239-0347

Type of Plan	Size	Fee Due
Water Pollution Abatement, One Single Family Residential Dwelling	Acres	\$
Water Pollution Abatement, Multiple Single Family Residential and Parks	397.69 Acres	\$5,000
Water Pollution Abatement, Non-residential	Acres	\$
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	\$

all Signature

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.

Texas Commission on Environmental Quality Edwards Aquifer Protection Program Application Fee Schedule 30 TAC ∋213.14 (effective 11/14/97) & 30 TAC ∋213.9 (effective 6/1/99)

Water Pollution Abatement Plans and Modifications

PROJECT	PROJECT AREA IN ACRES	FEE
One Single Family Residential Dwelling	<5	\$500
Multiple Single Family Residential and Parks	<5 5 < 10 10 < 50 ≥50	\$1,000 \$2,000 \$3,000 \$5,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 ≥10	\$2,000 \$3,000 \$4,000 \$5,000

Organized Sewage Collection Systems and Modifications

PROJECT	COST PER LINEAR FOOT	MINIMUM FEE MAXIMUM FEE
Sewage Collection Systems	\$0.50	\$500 - \$5,000

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	\$500	\$500 - \$5,000

Exception Requests

PROJECT	FEE
Exception Request	\$250

Extension of Time Requests

PROJECT	FEE
Extension of Time Request	\$100

Pollutant Calculations

In This Section

TSS Removal and BMP Sizing Calculations

NOT APPLICABLE

Buddy Garcia, Chairman Larry R. Soward, Commissioner Bryan W. Shaw, Ph.D., Commissioner Glenn Shankle, Executive Director



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 3, 2007

Mr. Jack Dean Bluegreen Southwest Land, Inc. P.O. Box 986 Wimberley, Texas 78676

Edwards Aquifer. Comal County

NAME OF PROJECT: Vintage Oaks At The Vineyard - Unit 1; Located on the east side of the intersection with State Hwy 46 and Cranes Mill Road in Comal County, 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. 2562.01; Investigation No. 598523; Regulated Entity No. RN105024830

Dear Mr. Dean:

Re:

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 Bluegreen Southwest Land, Inc. on behalf of Bluegreen Southwest Land, Inc. on October 11, 2007. Final review of the WPAP was completed after additional material was received on November 27, 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

This residential project was approved by letter dated September 18, 2006, for 397.69 acres, with 249 single-family residential lots, and associated roads and utilities, with 61.38 acres of impervious cover (15.43%).

PROJECT DESCRIPTION

The proposed modification is for:

P.O., Box 13087

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

estable on encoded paper using spr-insert infe

• Austin, Texas 78711-3087 • 512-239-1000 • Internet address: www.tceq.state.tx.us

Mr. Jack Dean December 3, 2007 Page 2

the reconfiguration of protective natural buffers for features S-39, S-40, and S-46 (resulted from the re-evaluation by the project geologist), and

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the relocation of temporary erosion and sedimentation controls to conform to the criteria of RG-348 (2005), Section 1.4.

As presented, there will be no changes to the acreage, number of lots, or amount of impervious cover.

SPECIAL CONDITIONS

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.

This modification is subject to all Special and Standard Conditions listed in the WPAP approval letter dated September 18, 2006, including proof of deed recordation of this letter, and construction notification.

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.

Since this project will not have more than 20% impervious cover, an exemption from permanent BMPs is approved. If the percent impervious cover ever increases above 20% or the land use changes, the exemption for the whole site as described in the property boundaries required by $\S213.4(g)$, may no longer apply and the property owner must notify the appropriate regional office of these changes.

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.

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.

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 Mr. Jack Dean December 3, 2007 Page 3

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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.

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.

Two 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
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Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

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.

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:

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.

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 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.

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. Mr. Jack Dean December 3, 2007 Page 5

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, . Hale le

Glenn Shankle Executive Director Texas Commission on Environmental Quality

GS/JKM/eg

Enclosure:

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

Mr. Keith Strimple, P.E., M&S Engineering, Ltd. Mr. Steve Ramsey P.E., City of New Braunfels Mr. Tom Hornseth, P.E., Comal County Mr. Velma Danielson, Edwards Aquifer Authority TCEQ Central Records, Building F, MC 212