

# CHATHAM COUNTY

Subdivision Name\_Chapel Ridge Phase 3/Woodlands (Formerly Page and Grantham subdivisions as well a portion of the Womble subdivision

## MAJOR SUBDIVISION REVIEW CHECKLIST

Review For:  Sketch  Prelim  Final

Attach all supporting documentation regarding these approvals. If approvals are still pending, attach applications for approval.

SKETCH DESIGN REVIEW	APPROVAL DATE
<input type="checkbox"/> 25 Copies of Plat with topo along with one (1) 8-1/2 x 11 copy	_____
<input type="checkbox"/> Application w/Complete Adjacent Owner Addresses	_____
<input type="checkbox"/> Soil Scientist Report and soil map	_____
<b>{ } 1 electronic copy of all items above (see Digital Document Requirements)</b>	
PRELIMINARY PLAT REVIEW	
<input type="checkbox"/> 25 Copies of Plat along with one (1) 8-1/2 x 11 copy	.....
<input type="checkbox"/> Application w/ Complete Adjacent Owner Addresses	.....
<input type="checkbox"/> Detailed Soils Map and Letter of explanation or D.E.M. approval	___/___/___
{see Requirements for soil scientist report}	
<input type="checkbox"/> NCDOT Approval (if public roads)	___/___/___
<input type="checkbox"/> DOT Comm. Driveway Permit	___/___/___
<input type="checkbox"/> Erosion Control Plan Approval (if new roads or one acre disturbed)	___/___/___
<input type="checkbox"/> U.S. Army Corps of Engineers Permit (if appl)	___/___/___
<input type="checkbox"/> Road Name Request Form	___/___/___
<input type="checkbox"/> County Public Water Approval (if applicable)	___/___/___
<input type="checkbox"/> State Public Water Approval (if applicable)	___/___/___
<input type="checkbox"/> Chatham Co. Schools' Road Comments (if new roads)	___/___/___
<input type="checkbox"/> Stormwater Management Plan Approval (if appl)	___/___/___
<input type="checkbox"/> Economic & Environmental Impact Study (if appl)	___/___/___
<input type="checkbox"/> Water / Sewer Impact Statement (if appl)	___/___/___
<b>{ } 1 electronic copy of all items above (see Digital Document Requirements)</b>	
FINAL PLAT REVIEW	
<input checked="" type="checkbox"/> 25 Copies of Plat	_____
<input checked="" type="checkbox"/> Application	.....
<b>{X } 1 electronic copy of all items above (see Digital Document Requirements)</b>	___/___/___
<input checked="" type="checkbox"/> Chatham County Environmental Health Division septic improvement permits or NCDWQ septic permits for each lot.	___/___/___
** HUD receipt information supplied herewith	
<input checked="" type="checkbox"/> Road Completion Certificate or Financial Guarantee- previously submitted & approved	___/___/___
<input checked="" type="checkbox"/> Utilities Completion Cert. or Financial Guarantee-previously submitted & approved	___/___/___

Comment \_\_\_\_\_

Date Complete Application Rec'd: \_\_\_\_/\_\_\_\_/\_\_\_\_, By: \_\_\_\_\_

**Chatham County Planning Department**

P.O. Box 54  
Pittsboro, NC 27312  
Tel: (919) 542-8204  
Fax: (919) 542-2698

**Type of Review**

- Sketch
- Preliminary
- Final

**MAJOR SUBDIVISION APPLICATION**

**Name of Subdivision:** Chapel Ridge Phase 3/Woodlands (formerly the Page and Grantham subdivisions as well as a portion of Womble subdivision on west side of Old Graham Road).

**Subdivision Applicant:**

**Subdivision Owner:**

Name: Darden Development, LLC and Jordan Lake Preserve Corporation

Name: Polk-Sullivan LLC, Chatham Partners LLC and Virginia Grantham

Address: Post Office Box 5689  
Cary, NC 27512

Address: See ownership information attached.

Phone:(W)(919) 469-8764

Phone:(W) \_\_\_\_\_

Phone:(H) \_\_\_\_\_ Fax (919) 469-4778

Phone:(H) \_\_\_\_\_ Fax: \_\_\_\_\_

E-Mail \_\_\_\_\_

E-Mail \_\_\_\_\_

Township: Hadley Zoning: Unzoned

P. I. N. # 9734-63-8428

# 9734-54-8599

# 9734-45-5020

# 9734-85-7185

# 9734-66-7792

**Flood Map #** 3710973400J **Zone:** X and A/E  
**Watershed:** WS IV-PA

**Parcel #** 82013, 82014, 82015, 66108 & 66107  
**Existing Access Road:** S.R. #1520  
**S.R. road name** Old Graham Road

**Total Acreage:** +/- 241.71 acres

**Total # of Lots:** 173

**Min. Lot Size:** .92 acres

Ph. I Acreage \_\_\_\_\_

Ph. I # of lots 173

**Max. Lot Size:** 3.1 acres

Ph. II Acreage. \_\_\_\_\_

Ph. II # of lots \_\_\_\_\_

**Avg. Lot Size:** 1.25 acres

Ph. III Acreage \_\_\_\_\_

Ph. III # of lots \_\_\_\_\_

**Type of new road:**  Private/ Length 15,930 l.f.

Public/ Length \_\_\_\_\_

**Road Surface:**

- paved
- gravel

**Water System:**

- individual wells
  - community wells
  - public system
- name Heater Utilities, Inc.

**Sewer System:**

- septic systems
  - community system
  - public system
- name Heater Utilities, Inc.

**List other facilities:** commercial, recreation, etc., and the approximate acreage or square footage:

[Signature] Date \_\_\_\_\_  
Signature of Applicant

[Signature] Date \_\_\_\_\_  
Signature of Owner

Darden Development LLC

Polk-Sullivan LLC

For Office Use Only:

Notes:

Approved by County Commissioners: \_\_\_\_\_  
Sketch \_\_\_\_\_  
Preliminary \_\_\_\_\_  
Final \_\_\_\_\_

Payment: Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Amount: \$ \_\_\_\_\_

**Chatham County Planning Department**

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**Type of Review**

- Sketch
- Preliminary
- Final

**MAJOR SUBDIVISION APPLICATION**

**Name of Subdivision:** \_\_\_\_\_  
**Subdivision Applicant:** \_\_\_\_\_ **Subdivision Owner:** \_\_\_\_\_

**Name:** \_\_\_\_\_ **Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_ **Address:** \_\_\_\_\_

**Phone:(W)** \_\_\_\_\_ **Phone:(W)** \_\_\_\_\_

**Phone:(H)** \_\_\_\_\_ **Fax:** \_\_\_\_\_ **Phone:(H)** \_\_\_\_\_ **Fax:** \_\_\_\_\_

**E-Mail** \_\_\_\_\_ **E-Mail** \_\_\_\_\_

**Township:** \_\_\_\_\_ **Zoning:** \_\_\_\_\_ **P. I. N. #** \_\_\_\_\_

**Flood Map #** \_\_\_\_\_ **Zone:** \_\_\_\_\_ **Parcel #** \_\_\_\_\_

**Watershed:** \_\_\_\_\_ **Existing Access Road: S.R. #** \_\_\_\_\_

**S.R. road name** \_\_\_\_\_

**Total Acreage:** \_\_\_\_\_ **Total # of Lots:** \_\_\_\_\_ **Min. Lot Size:** \_\_\_\_\_

**Ph. I Acreage** \_\_\_\_\_ **Ph. I # of lots** \_\_\_\_\_ **Max. Lot Size:** \_\_\_\_\_

**Ph. II Acreage.** \_\_\_\_\_ **Ph. II # of lots** \_\_\_\_\_ **Avg. Lot Size:** \_\_\_\_\_

**Ph. III Acreage** \_\_\_\_\_ **Ph. III # of lots** \_\_\_\_\_

**Type of new road:**  Private/ Length \_\_\_\_\_  Public/ Length \_\_\_\_\_

**Road Surface:**

- paved
- gravel

**Water System:**

- individual wells
- community wells
- public system  
name \_\_\_\_\_

**Sewer System:**

- septic systems
- community system
- public system  
name \_\_\_\_\_

**List other facilities:** commercial, recreation, etc., and the approximate acreage or square footage:

JORDAN LAKE PRESERVE CORP.

*Paul Ward*  
Signature of Applicant

Date 8/14/06

Date \_\_\_\_\_

Signature of Owner

**For Office Use Only:**

**Notes:** \_\_\_\_\_

Approved by County Commissioners: Sketch \_\_\_\_\_  
Preliminary \_\_\_\_\_  
Final \_\_\_\_\_

Payment: Date \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Amount: \$ \_\_\_\_\_

CHATHAM PARTNERS, L.L.C.

*[Handwritten Signature]*

Date 6/14/06

\_\_\_\_\_  
Signature of Applicant

Date

\_\_\_\_\_  
Signature of Owner

For Office Use Only:  
Notes:

Approved by County Commissioners:

Sketch \_\_\_\_\_  
Preliminary \_\_\_\_\_  
Final \_\_\_\_\_

Payment: Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Amount: \$ \_\_\_\_\_

\_\_\_\_\_  
Signature of Applicant      Date \_\_\_\_\_ *Virginia Grantham* \_\_\_\_\_ Date \_\_\_\_\_  
Signature of Owner

*For Office Use Only:*  
Notes:

\_\_\_\_\_  
Approved by County Commissioners:      Sketch \_\_\_\_\_  
Preliminary \_\_\_\_\_  
Final \_\_\_\_\_

Payment: Date: \_\_\_\_/\_\_\_\_/\_\_\_\_      Amount: \$ \_\_\_\_\_

Date

*Virginia Grammer Trustee*

Date

Signature of Applicant

Signature of Owner

For Office Use Only:

Notes:

Approved by County Commissioners:

Sketch

Preliminary

Final

Payment: Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Amount: \$ \_\_\_\_\_



ADJOINING LAND OWNERS

Clarice M. Page  
400 Lindsay Street  
Carrboro, NC 27510  
Parcel #60093

Virginia M. Grantham  
Benjamin Grantham  
405 Lindsay Street  
Carrboro, NC 27510  
Parcel #66108

Chatham Partners LLC  
Roanoke Investments LLC  
1000 St. Albans Drive, Suite 400  
Raleigh, NC 27609  
Parcel #82017

Winfred Lynn Cheek  
Sharon C. Holland  
6935 Old Graham Road  
Pittsboro, NC 27312  
Parcel #10944

Hilda McBane  
7395 Old Graham Road  
Pittsboro, NC 27312  
Parcel #10917

Scott W. Barringer  
Dawn M. Barringer  
300 Bradson Road  
Morrisville, NC 27560

Larry R. Motz  
Nancy J. Motz  
34306 Desert Road  
Acton, CA 93510

Nathaniel Jacobs  
Sandra C. Jacobs  
6231 Martins Brandon Way  
Centreville, VA 20120

Eric A. Croson  
Mari Jan Pitcher  
3006 Wild Meadow Drive  
Durham, NC 27705

John Schneidmuller  
34 Wood Lane  
Locust Valley, NY 11560

Jordan Lake Preserve Corporation  
840 The Preserve Trail  
Chapel Hill, NC 27517  
Parcel #10950

Chatham Partners LLC  
Polk-Sullivan LLC  
P. O. Box 5689  
Cary, NC 27512  
Parcel #10919



Michael F. Easley, Governor

William G. Ross Jr., Secretary  
North Carolina Department of Environment and Natural Resources

Alan W. Klimek, P.E. Director  
Division of Water Quality

April 26, 2006

MICHAEL J. MYERS – ENGINEERING & COMPLIANCE MANAGER  
HEATER UTILITIES, INC.  
202 MACKENAN COURT  
CARY, NORTH CAROLINA 27511

Subject: Permit No. WQ0022870  
Buck Mountain Service Area  
Wastewater Treatment and  
Reclaimed Water Utilization System  
Chatham County

Dear Mr. Myers:

In accordance with your modification request received October 6, 2005, and subsequent additional information received November 10, 2005 and December 1, 2005, we are forwarding herewith Permit Number WQ0022870, dated April 26, 2006, to Heater Utilities, Inc. for the construction and continued operation of the subject wastewater treatment and reclaimed water utilization system.

This permit shall be effective from the date of issuance until February 28, 2009, shall void Permit No. WQ0022870 issued November 29, 2004, and shall be subject to the conditions and limitations as specified therein. Please pay particular attention to the monitoring requirements in this permit. Failure to establish an adequate system for collecting and maintaining the required operational information will result in future compliance problems.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within thirty (30) days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made this permit shall be final and binding.

One set of approved plans and specifications is being forwarded to you. If you need additional information concerning this matter, please contact Nathaniel Thornburg at (919) 715-6160.

Sincerely,

Alan W. Klimek, P.E.

cc: Chatham County Health Department  
Raleigh Regional Office, Aquifer Protection Section  
~~Mark Ashness, P.E. - CE Group, Inc.~~  
Steven J. Levitas, Esq. – Kilpatrick Stockton LLP  
Technical Assistance and Certification Unit  
Aquifer Protection Central Files  
LAU Files

One  
North Carolina  
Naturally

NORTH CAROLINA

ENVIRONMENTAL MANAGEMENT COMMISSION

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

RALEIGH

WASTEWATER TREATMENT AND RECLAIMED WATER UTILIZATION PERMIT

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In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules, and Regulations

PERMISSION IS HEREBY GRANTED TO

**Heater Utilities, Inc.**

Chatham County

FOR THE

operation of a 500,000 gallon per day (GPD) wastewater treatment and reclaimed water utilization system consisting of the:

construction and operation of approximately 216 acres divided into 149 acres of primary low spray areas (PLSA), 50 acres of primary high spray areas (PHSA) and 17 acres of secondary spray areas (SSA); the

continued operation of one (1) 2,860,825 gallon clay-lined upset pond to provide a minimum of five (5) days of upset storage, one (1) upset pond pump station with two (2) 200 GPM pumps, one (1) 42,839,747 gallon clay-lined irrigation storage pond to provide a minimum of 92 days of storage, one (1) 16 foot by 7.6 foot by 8 foot irrigation pump tank with three (3) 600 GPM pumps and spray irrigation of wastewater on approximately 212 acres on common areas and golf course areas pursuant to an Effluent Easement and Irrigation Agreement between the Permittee and Jordan Lake Preserve Corporation, and the

continued operation of a 500,000 gallon per day (GPD) wastewater treatment system consisting of one (1) 165,900 gallon equalization basin with a 15 horsepower (HP) aerator, a manually cleaned bar screen, a flow splitter box, two (2) 370,200 gallon aeration basins with two (2) 15 HP aerators in each basin, two (2) 63,000 gallon clarifiers each with two (2) air lift pumps, one (1) 130,800 sludge holding basin with two (2) 10 HP aerators and a variable water level air lift pump, four (4) 100 square foot (ft<sup>2</sup>) tertiary filters, one (1) 32,600 gallon clearwell with four (4) 750 gallon per minute (GPM) pumps, one (1) 38,200 gallon mudwell with two (2) 200 GPM pumps, one (1) 25,100 gallon chlorine contact chamber with two (2) variable speed pumps, two (2) UV disinfections systems with 20 lamps each (rated for 500,000 GPD), one (1) 23,800 gallon dechlorination chamber, an ultrasonic effluent flow measuring device, an effluent composite sampler, continuous effluent turbidity monitoring and recording, and a permanent standby generator with automatic transfer switch capable of powering all essential wastewater treatment units to serve approximately 1,900 residences (with a presumed average flow of 250 GPD per residence) and amenities in the Buck Mountain Service Area, which includes the Chapel Ridge, Meadowview, Woodlands, Bluffs, Creekside and McBane subdivisions, and other residential communities in the surrounding area, with no discharge of wastes to the surface waters, pursuant to the application received October 6, 2005 and subsequent additional information received by the Division, and in conformity with the project plan, specifications, and other supporting data subsequently filed and approved by the Department of Environment and Natural Resources and considered a part of this permit.

This permit shall be effective from the date of issuance until February 28, 2009, shall void Permit No. WQ0022870 issued November 29, 2004, and shall be subject to the following specified conditions and limitations:

I. PERFORMANCE STANDARDS

1. Upon completion of construction and prior to operation of this permitted facility, a certification must be received from a professional engineer certifying that the permitted facility has been installed in accordance with this permit, the approved plans and specifications, and other supporting materials. If this project is to be completed in phases and partially certified, you shall retain the responsibility to track further construction approved under the same permit, and shall provide a final certificate of completion once the entire project has been completed. Mail the Certification to the Land Application Unit, 1636 Mail Service Center, Raleigh, NC 27699-1636.
2. The Raleigh Regional Office, telephone number (919) 791-4200, shall be notified at least forty-eight (48) hours in advance of operation of the installed facilities so that an in-place inspection can be made. Such notification to the regional supervisor shall be made during the normal office hours from 8:00 a.m. until 5:00 p.m. on Monday through Friday, excluding State Holidays.
3. Please note that the Division has concerns regarding the amount of runoff calculated in the water balance for the irrigation system. If at any time runoff, ponding or other excessive irrigation problems occur, the Permittee may be required to acquire more irrigation area or increase the storage within the system. In addition, future phases of this project shall be required to justify similar runoff calculations.
4. The Permittee shall use a synthetic liner of sufficient thickness if native soils on-site are not available to meet the hydraulic conductivity of no greater than  $1 \times 10^{-6}$  centimeters per second for a compacted 1-foot clay liner.
5. The reclaimed water utilization facilities shall be effectively maintained and operated at all times so that there is no discharge to the surface waters, nor any contamination of ground waters, which will render them unsatisfactory for normal use. In the event that the facilities fail to perform satisfactorily, including the creation of nuisance conditions or failure of the irrigation area to adequately assimilate the wastewater, the Permittee shall take immediate corrective actions including those actions that may be required by the Division of Water Quality (Division), such as the construction of additional or replacement wastewater treatment and disposal facilities.
6. The issuance of this permit shall not relieve the Permittee of the responsibility for damages to surface water or ground water resulting from the operation of this facility.
7. The residuals generated from these treatment facilities must be disposed in accordance with General Statute 143-215.1 and in a manner approved by the Division.
8. Diversion or bypassing of the untreated wastewater from the treatment facilities is prohibited.
9. The following buffers shall be maintained:
  - a. 100 feet between wetted areas and water supply wells,
  - b. 100 feet between wetted areas and waters classified as SA,
  - c. 25 feet between wetted areas and surface waters not classified as SA,
  - d. 100 feet between wastewater treatment units and wells,
  - e. 50 feet between reclaimed water storage/irrigation ponds and property lines, and
  - f. 50 feet between wastewater treatment units and property lines.
10. Public access to the irrigation sites shall be controlled during active site use. Such controls may include the posting of signs showing the activities being conducted at each site. A sign shall be posted in plain sight in the clubhouse showing these activities.

11. The disposal system shall be connected to a rain or moisture sensor that shall indicate when wastewater application is not appropriate in accordance with Condition II(4) of this permit, or irrigation shall only occur upon manual operation by the Operator in Responsible Charge.
12. The following shall be requirements for the reclaimed water distribution, storage, and utilization facilities:
  - a. All reclaimed water valves, storage facilities, and outlets shall be tagged or labeled to warn the public or employees that the water is not intended for drinking. Where appropriate, such warning shall inform the public or employees to avoid contact with the water.
  - b. All reclaimed water piping, valves, outlets, and other appurtenances shall be color-coded, taped, or otherwise marked to identify the source of the water as being reclaimed water.
    - i. All reclaimed water piping and appurtenances shall be either colored purple (i.e., Pantone 522) and embossed or integrally stamped or marked "CAUTION: RECLAIMED WATER - DO NOT DRINK" or be installed with a purple (i.e., Pantone 522) identification tape or polyethylene vinyl wrap. The warning shall be stamped on opposite sides of the pipe and repeated every three feet or less.
    - ii. Identification tape shall be at least three inches wide and have white or black lettering on purple (i.e., Pantone 522) field stating "CAUTION: RECLAIMED WATER - DO NOT DRINK." Identification tape shall be installed on top of reclaimed water pipelines, fastened at least every 10 feet to each pipe length and run continuously the entire length of the pipe.
  - c. All reclaimed water valves and outlets shall be of a type, or secured in a manner, that permits operation by authorized personnel only.
  - d. Above-ground hose bibs (i.e., spigots or other hand-operated connections) shall not be present. Hose bibs shall be located in locked below-grade vaults that shall be clearly labeled as being of non-potable quality. As an alternative to the use of locked below-grade vaults with standard hose bibs services, hose bibs, which can only be operated by a special tool or connected to a special hose connection, may be placed in non-lockable underground services boxes clearly labeled as non-potable water.
13. The soils located on site contain high amounts of silt and clay and are susceptible to compaction when wet. The Permittee shall ensure all necessary precautions are taken to avoid compaction that will have an adverse effect upon the drainage of the irrigation areas.
14. Areas of this site contain soils that are underlain by weathered and hard bedrock at shallow depths. The Permittee shall ensure that extreme care is taken during grading so that a minimum of 12 inches of soil remains above any bedrock when construction is complete. Areas mapped as Misenheimer and Goldston are the areas most likely to contain soils where the depth to bedrock is less than 12 inches.
15. Areas of this site contain soils that have a seasonal high water table that is within 1 foot of the soil surface. The Permittee shall carefully monitor water tables in these areas to ensure that wastewater will not be applied when the vertical separation between the wastewater and the seasonal high water table is less than one (1) foot.

16. Upon the completed installation of all 5 piezometers listed within the water table monitoring plan, the applicant shall submit to the Aquifer Protection Section, Raleigh Regional Office, 3800 Barrett Drive, Raleigh, NC 27609, complete soil descriptions, piezometer construction details, and longitude/latitude for each of the piezometers. The requested information must be received and acknowledged in writing by the Aquifer Protection Section, prior to the commencement of spray irrigation of reclaimed water on any of the Primary Low Spray Areas. All piezometers shall be afforded reasonable protection against damage during construction and use, as well as secured, with a locking well cap, to reasonably ensure against unauthorized access and use, as per 15A NCAC 02C .0108. All water table monitoring data shall be recorded and kept on file by the Permittee for review by the Division of Water Quality.
17. Upon the completion of site grading and shaping, an updated soil scientist site evaluation report shall be submitted to the Aquifer Protection Section, Raleigh Regional Office, 3800 Barrett Drive, Raleigh, NC 27609, for all spray field areas where the soil has been significantly altered by grading, cutting or filling. This report shall include the driving range from the original permit, which was still under construction during the review process. This report shall specifically address, but not be limited to, soil features such as depth to seasonal high water table, depth to fractured bedrock, saturated hydraulic conductivity of the least permeable layer, and soil compaction, as well as any other properties that might impact the soil's ability to accept irrigation water. The report should also certify that the significantly altered areas are still capable of accepting the designed loading rate. The requested information must be received and acknowledged in writing by the Aquifer Protection Section, prior to the commencement of spray irrigation of reuse water on any of the amended areas.

## **II. OPERATION AND MAINTENANCE REQUIREMENTS**

1. The facilities shall be properly maintained and operated at all times.
2. Upon classification of the wastewater treatment and irrigation facilities by the Water Pollution Control System Operators Certification Commission (WPCSOCC), the Permittee shall designate and employ a certified operator to be in responsible charge (ORC) and one or more certified operator(s) to be back-up ORC(s) of the facilities in accordance with 15A NCAC 8G .0201. The ORC shall visit the facilities in accordance with 15A NCAC 8G .0204 or as specified in this permit and shall comply with all other conditions specified in these rules.
3. A suitable, year-round vegetative cover shall be maintained on the irrigation areas.
4. Irrigation shall not be performed during inclement weather or when the ground is in a condition that will cause runoff.
5. Adequate measures shall be taken to prevent wastewater runoff from the irrigation field.
6. The facilities shall be effectively maintained and operated as a non-discharge system to prevent the discharge of any wastewater resulting from the operation of this facility.
7. The application rate over any twelve (12) month period at an instantaneous application rate not to exceed the values listed in Appendix A shall be adhered to.
8. An automatically activated standby power source shall be on site and operational at all times. If a generator is employed as an alternate power supply, it shall be tested weekly by interrupting the primary power source.
9. No type of wastewater other than that from the Buck Mountain Service Area shall be irrigated onto the irrigation area.

10. Freeboard in the five day upset and wet weather storage ponds shall not be less than two (2) feet at any time.
11. A waste-level gauge, to monitor waste levels in the storage pond, shall be installed and maintained. This gauge shall have readily visible permanent markings indicating the maximum liquid level at the top of the temporary liquid storage volume, minimum liquid level at the bottom of the temporary liquid storage volume, and top of the dam elevations. Caution must be taken not to damage the integrity of the liner when installing the gauge.
12. A protective vegetative cover shall be established and maintained on all earthen basin embankments (outside toe of embankment to maximum pumping elevation), berms, pipe runs, erosion control areas, and surface water diversions. Trees, shrubs, and other woody vegetation shall not be allowed to grow on the earthen basin dikes or embankments. Earthen basin embankment areas shall be kept mowed or otherwise controlled and accessible.
13. All wastewater shall be routed to the five-day holding pond should the limit for fecal coliform (daily maximum concentration of 25 per 100 ml) or turbidity (instantaneous maximum of 10 NTU) be exceeded, until such time that the problems associated with the treatment capability of the wastewater treatment plant have been corrected. The wastewater in the five-day holding pond shall be pumped back to the treatment plant for re-treatment or treated in the five-day pond prior to discharge to the storage pond.

### **III. MONITORING AND REPORTING REQUIREMENTS**

1. Any monitoring (including groundwater, surface water, soil or plant tissue analyses) deemed necessary by the Division to insure surface and ground water protection will be established and an acceptable sampling reporting schedule shall be followed.
2. Influent flow shall be continuously monitored and daily flow values shall be reported on Form NDMR. Influent flow may be represented by effluent flow from the wastewater treatment system prior to storage.

The Permittee shall install an appropriate flow measurement device consistent with approved engineering and scientific practices to ensure the accuracy and reliability of influent flow measurement. Flow measurement devices selected shall be capable of measuring flows with a maximum deviation of less than 10 percent from true flow, accurately calibrated at a minimum of once per year, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. The Permittee shall keep records of flow measurement device calibration on file for a period of at least three years. At a minimum, data to be included in this documentation shall be:

- a. Date of flow measurement device calibration
- b. Name of person performing calibration
- c. Percent from true flow



3. As an indicator of proper operation and maintenance, the facility shall produce an effluent in compliance with the following limitations:

Parameter	Monthly Average <sup>a</sup>	Daily (Instantaneous) Maximum <sup>c</sup>
Phase I Flow	270,000 GPD <sup>e</sup>	
Phase I & II Flow	500,000 GPD <sup>f</sup>	
BOD <sub>5</sub> (5-day, 20°C)	10 mg/l	15 mg/l
NH <sub>3</sub> as N	4 mg/l	6 mg/l
TSS	5 mg/l	10 mg/l
Fecal Coliform	14 per 100 ml <sup>b</sup>	25 per 100 ml
Turbidity		10 NTU <sup>d</sup>

The effluent pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.

- <sup>a</sup> Monthly averages for all but fecal coliform shall be the arithmetic mean of all samples collected during the reporting period.
- <sup>b</sup> Monthly average for fecal coliform shall be the geometric mean of all samples collected during the reporting period.
- <sup>c</sup> Daily maximum shall be the maximum value of all samples collected during the reporting period.
- <sup>d</sup> Normal operation of the facilities involves reclaimed water being conveyed to the irrigation pond at all times unless the continuous turbidity monitoring devices initiates an alarm condition. The design of the facilities is such that manual transfer of wastewater to the five-day upset pond is required in this situation. Therefore, in order to ensure that the ORC has sufficient time to conduct such manual operation, the turbidity set point that will trigger an alarm situation and initiate the telemetry system shall not be less than 6.0 NTUs.
- <sup>e</sup> Monthly Average flow allowed while the additional 216 acres of irrigation field are under construction.
- <sup>f</sup> Total monthly average flow permitted once all 428.1 acres of irrigation field are operational.

The Permittee shall monitor the effluent from the subject facilities at a point prior to irrigation for the following parameters:

Parameter	Sampling Point	Sampling Frequency	Type of Sample
Flow	Influent or Effluent	Continuous	Recording
Turbidity	Effluent	Continuous	Recording
BOD <sub>5</sub> (5-day, 20°C)	Effluent	*2/Month	Composite
NH <sub>3</sub> as N	Effluent	*2/Month	Composite
TSS	Effluent	*2/Month	Composite
Fecal Coliform	Effluent	*2/Month	Grab
Settleable Matter	Effluent	Daily	Grab
Residual Chlorine	Effluent	Daily	Grab
NO <sub>3</sub>	Effluent	** Quarterly	Grab
TDS	Effluent	** Quarterly	Grab
TOC	Effluent	** Quarterly	Grab
Chloride	Effluent	** Quarterly	Grab
pH	Effluent	** Quarterly	Grab

\* 2/Month sampling frequency only during the months of April through October. During the remainder of the year, these parameters shall be monitored monthly.

\*\* Quarterly sampling shall be conducted during March, June, September and December.

If Groundwater sampling indicates or predicts problems with the compliance with Groundwater Standards, this permit will be modified to include additional and/or more restrictive limitations.

4. The Permittee shall monitor the surface water at the specified locations for the following parameters:

Parameter	Sampling Points *	Sampling Frequency	Type of Sample
Fecal Coliform	Surface Water Station 1, 2, 3, 4, 5 & 6	** Quarterly	Grab
pH	Surface Water Station 1, 2, 3, 4, 5 & 6	** Quarterly	Grab
Total Nitrogen	Surface Water Station 1, 2, 3, 4, 5 & 6	** Quarterly	Grab
Total Phosphorus	Surface Water Station 1, 2, 3, 4, 5 & 6	** Quarterly	Grab
Water Level	Surface Water Station 1, 2, 3, 4, 5 & 6	** Quarterly	Measurement

\* Refer to Figure 1 for sampling location.

\*\* Quarterly sampling shall be conducted during March, June, September and December.

5. The Permittee shall maintain adequate records tracking the amount of wastewater disposed. These records shall include, but are not necessarily limited to the following information:
  - a. Date and time of irrigation,
  - b. Volume of wastewater irrigated,
  - c. Zone irrigated,
  - d. Length of time zone is irrigated,
  - e. Continuous weekly, monthly, and year-to-date hydraulic (inches/acre) loadings for each zone,
  - f. Weather conditions, and
  - g. Maintenance of cover crops.
6. Freeboard in the five day upset and wet weather storage ponds shall be recorded weekly.
7. Three (3) copies of all monitoring data [as specified in Conditions III(2), III(3) and III(4)] on Form NDMR-1 and three (3) copies of all operation and disposal records [as specified in Conditions III(5) and III(6)] on Form NDAR-1 shall be submitted monthly on or before the last day of the following month. All information shall be submitted to the following address:

NC Division of Water Quality  
 Information Processing Unit  
 1617 Mail Service Center  
 Raleigh, North Carolina 27699-1617

8. A record shall be maintained of all residuals removed from this facility. This record shall include the name of the hauler, permit authorizing the disposal or a letter from a municipality agreeing to accept the residuals, date the residuals were hauled, and volume of residuals removed.
9. A maintenance log shall be maintained at this facility including but not limited to the following items:
  - a. Daily sampling results of dissolved oxygen in the aeration basin and at the clarifier weir.
  - b. Visual observations of the plant and plant site.
  - c. Record of preventative maintenance (changing of filters, adjusting belt tensions, alarm testing, diffuser inspections and cleanings, etc.).
  - d. Date of calibration of flow measurement device.
  - e. Date and results of power interruption testing on alternate power supply.
10. An annual representative soils analysis (Standard Soil Fertility Analysis) shall be conducted on each soil type and the results maintained on file by the Permittee for a minimum of five years. The Standard Soil Fertility Analysis shall include, but is not necessarily limited to, the following parameters:

Acidity	Manganese	Potassium
Calcium	Percent Humic Matter	Sodium
Copper	pH	Zinc
Magnesium	Base Saturation (by calculation)	Phosphorus
Cation Exchange Capacity	Exchangeable Sodium Percentage	

#### 11. Noncompliance Notification:

The Permittee shall report by telephone to the Raleigh Regional Office, telephone number (919) 791-4200, as soon as possible, but in no case more than 24 hours or on the next working day following the occurrence or first knowledge of the occurrence of any of the following:

- a. Any occurrence at the wastewater treatment facility which results in the treatment of significant amounts of wastes which are abnormal in quantity or characteristic, such as the dumping of the contents of a sludge digester; the known passage of a slug of hazardous substance through the facility; or any other unusual circumstances.
- b. Any process unit failure, due to known or unknown reasons, that render the facility incapable of adequate wastewater treatment such as mechanical or electrical failures of pumps, aerators, compressors, etc.
- c. Any failure of a pumping station, sewer line, or treatment facility resulting in a by-pass directly to receiving waters without treatment of all or any portion of the influent to such station or facility.
- d. Any time that self-monitoring information indicates that the facility has gone out of compliance with its permit limitations.

Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at telephone number (800) 662-7956, (800) 858-0368, or (919) 733-3300. Persons reporting such occurrences by telephone shall also file a written report in letter form within five (5) days following first knowledge of the occurrence. This report must outline the actions taken or proposed to be taken to ensure that the problem does not recur.

#### IV. GROUNDWATER REQUIREMENTS

1. Prior to beginning waste disposal operations, three (3) monitor wells (MW-1, MW-2 and MW-3) shall be installed to monitor groundwater quality. The well(s) shall be constructed such that the water level in the well is never above or below the screened (open) portion of the well at any time during the year. The general location and name for each well is marked on Figure 1. Each monitoring well shall be located at the review boundary, constructed in accordance with this permit, and approved by the Raleigh Regional Office.
2. All wells that are constructed for purposes of groundwater monitoring shall be constructed in accordance with 15A NCAC 2C .0108 (Standards of Construction for Wells Other than Water Supply) and any other state and local laws and regulations pertaining to well construction.
3. The Raleigh Regional Office, telephone number (919) 791-4200, shall be notified at least forty-eight (48) hours prior to the construction of any monitoring well so that an inspection can be made of the monitoring well location. Such notification to the regional Aquifer Protection supervisor shall be made during the normal office hours from 8:00 a.m. until 5:00 p.m. on Monday through Friday, excluding state holidays.

4. Within sixty (60) days of completion of all monitoring wells, the permittee shall submit two original copies of a scaled topographic map (scale no greater than 1":100') signed and sealed by a professional engineer or a state licensed land surveyor that indicates all of the following information:
  - a. The location and identity of each monitoring well,
  - b. The location of the waste disposal system,
  - c. The location of all property boundaries,
  - d. The latitude and longitude of the established horizontal control monument,
  - e. The relative elevation of the top of the well casing (which shall be known as the "measuring point"), and
  - f. The depth of water below the measuring point at the time the measuring point is established.

The survey shall be conducted using approved practices outlined in North Carolina General Statutes Chapter 89C and the North Carolina Administrative Code Title 21, Chapter 56. The surveyor shall establish a horizontal control monument on the property of the waste disposal system and determine the latitude and longitude of this horizontal control monument to a horizontal positional accuracy of +/- 10 feet. All other features listed in a. through e. above shall be surveyed relative to this horizontal control monument. The positional accuracy of features listed in a. through e. above shall have a ratio of precision not to exceed an error of closure of 1 foot per 10,000 feet of perimeter of the survey. Any features located by the radial method will be located from a minimum of two points. Horizontal control monument shall be installed in such a manner and made of such materials that the monument will not be destroyed due to activities that may take place on the property. The map shall also be surveyed using the North American Datum of 1983 coordinate system and shall indicate the datum on the map. All bearings or azimuths shall be based on either the true or NAD 83 grid meridian. If a Global Positioning System (GPS) is used to determine the latitude and longitude of the horizontal control monument, a GPS receiver that has the capability to perform differential GPS shall be used and all data collected by the GPS receiver will be differentially corrected.

The maps and any supporting documentation shall be sent to the N.C. Division of Water Quality, Aquifer Protection Section, Land Application Unit, 1636 Mail Service Center, Raleigh, N.C. 27699-1636.

5. Upon completion of all well construction activities, a certification must be received from a professional engineer certifying that the monitoring wells are located and constructed in accordance with the Well Construction Standards (15A NCAC 2C) and this permit. This certification should be submitted with copies of the Well Completion Form (GW-1) for each well. Mail this certification and the associated GW-1 forms to the Aquifer Protection Section, Land Application Unit, 1636 Mail Service Center, Raleigh, N.C. 27699-1636.
6. For the initial sampling of the well as specified elsewhere in the permit, the permittee shall submit a copy of the GW-1 Form (Well Completion Form) with the Compliance Monitoring Form (GW-59) for that well. Compliance Monitoring Forms that do not include copies of the GW-1 form will be returned to the permittee without being processed. Failure to submit these forms as required by this permit may result in the initiation of enforcement activities pursuant to NC General Statutes 143-215.6.
7. Monitor wells MW-1, MW-2 and MW-3 shall be sampled initially after construction (and prior to waste disposal operations) and thereafter every March, June, September and December for the following parameters:

Water Level	Chloride	Total Organic Carbon (TOC)
Nitrate (NO <sub>3</sub> -N)	Fecal Coliforms	Total Ammonia Nitrogen (NH <sub>3</sub> -N)
pH	Total Dissolved Solids (TDS)	Total Phosphorus

8. The measurement of water levels must be made prior to sampling for the remaining parameters. The depth to water in each well shall be measured from the surveyed point on the top of the casing.
9. The measuring points (top of well casing) of all monitoring wells shall be surveyed to provide the relative elevation of the measuring point for each monitoring well.
10. If TOC concentrations greater than 10 mg/l are detected in any downgradient monitoring well, additional sampling and analysis must be conducted to identify the individual constituents comprising this TOC concentration. If the TOC concentration as measured in the background monitor well exceeds 10 mg/l, this concentration will be taken to represent the naturally occurring TOC concentration. Any exceedances of this naturally occurring TOC concentration in the downgradient wells shall be subject to the additional sampling and analysis as described above.
11. The results of the sampling and analysis must be received on Form GW-59 (Groundwater Quality Monitoring: Compliance Report Form) by the Division of Water Quality, Information Processing Unit, 1617 Mail Service Center, Raleigh, North Carolina 27699-1617 on or before the last working day of the month following the sampling month.
12. Waste shall not be applied or discharged onto or below the land surface when the vertical separation between the waste and the seasonal high water table is less than one (1) foot.
13. The five day upset pond shall have either a liner of natural material at least one (1) foot in thickness and having a hydraulic conductivity of no greater than  $1 \times 10^{-6}$  centimeters per second when compacted, or a synthetic liner of sufficient thickness to exhibit structural integrity and an effective hydraulic conductivity no greater than that of the natural material liner, according to 15A NCAC 2H .0219(f).
14. The Compliance Boundary and Review Boundary for the waste disposal area(s) is specified by regulations in 15A NCAC 2H, Waste Not Discharged to Surface Waters, specifically, .0219(k)(1)(C)(i)(III). The Compliance Boundary and Review Boundary for groundwater shall be established at the property boundary. An exceedance of Groundwater Quality Standards at or beyond the Compliance Boundary is subject to remediation action according to 15A NCAC 2L .0106(d)(2).

## V. INSPECTIONS

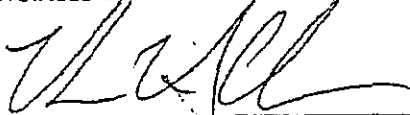
1. Adequate inspection, maintenance, and cleaning shall be provided by the Permittee to insure proper operation of the subject facilities.
2. The Permittee or his designee shall inspect the wastewater treatment and disposal facilities to prevent malfunctions and deterioration, operator errors and discharges which may cause or lead to the release of wastes to the environment, a threat to human health, or a nuisance. The Permittee shall keep an inspection log or summary including at least the date and time of inspection, observations made, and any maintenance, repairs, or corrective actions taken by the Permittee. This log of inspections shall be maintained by the Permittee for a period of three years from the date of the inspection and shall be made available upon request to the Division or other permitting authority.
3. Any duly authorized officer, employee, or representative of the Division may, upon presentation of credentials, enter and inspect any property, premises or place on or related to the disposal site or facility at any reasonable time for the purpose of determining compliance with this permit; may inspect or copy any records that must be maintained under the terms and conditions of this permit, and may obtain samples of groundwater, surface water, or leachate.

## VI. GENERAL CONDITIONS

1. This permit shall become voidable unless the facilities are constructed in accordance with the conditions of this permit, the approved plans and specifications, and other supporting data.
2. This permit is effective only with respect to the nature and volume of wastes described in the application and other supporting data.
3. The Operational Agreement between the Permittee and the Environmental Management Commission is incorporated herein by reference and shall be a condition of this permit. Noncompliance with the terms of the Operational Agreement shall subject the Permittee to all sanctions provided by North Carolina General Statutes §143-215.6A to §143-215.6C for violation of or failure to act in accordance with the terms and conditions of this permit.
4. This permit is not transferable. In the event there is a desire for the facilities to change ownership, or there is a name change of the Permittee, a formal permit request must be submitted to the Division accompanied by an application fee, documentation from the parties involved, and other supporting materials as may be appropriate. The approval of this request will be considered on its merits and may or may not be approved.
5. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to an enforcement action by the Division in accordance with North Carolina General Statute 143-215.6A to 143-215.6C.
6. The issuance of this permit does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances which may be imposed by other government agencies (local, state, and federal) which have jurisdiction, including but not limited to applicable river buffer rules in 15A NCAC 2B.0200, erosion and sedimentation control requirements in 15A NCAC Chapter 4 and under the Division's General Permit NCG010000, and any requirements pertaining to wetlands under 15A NCAC 2B .0200 and 2H .0500.
7. The Permittee shall retain a set of approved plans and specifications for the subject facility for the life of the project.
8. The Permittee shall pay the annual administering and compliance fee within thirty days of being billed by the Division. Failure to pay the fee accordingly may cause the Division to initiate action to revoke this permit as specified by 15 NCAC 2H .0205 (c)(4).
9. The Permittee, at least six (6) months prior to the expiration of this permit, shall request its extension. Upon receipt of the request, the Commission will review the adequacy of the facilities described therein, and if warranted, will extend the permit for such period of time and under such conditions and limitations as it may deem appropriate.

Permit issued this the 26<sup>th</sup> day of April, 2006

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



Alan W. Klimek, P.E., Director  
Division of Water Quality  
By Authority of the Environmental Management Commission

Permit Number WQ0022870

Permit No. WQ0022870  
April 26, 2006

ENGINEER'S CERTIFICATION

\_\_\_\_\_ Partial \_\_\_\_\_ Final

I, \_\_\_\_\_, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project,

\_\_\_\_\_

*Project Name*

\_\_\_\_\_

*Location and County*

for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of this permit, the approved plans and specifications, and other supporting materials.

Signature \_\_\_\_\_ Registration No. \_\_\_\_\_

Date \_\_\_\_\_



Appendix A -- Irrigation Loading Rates

Irrigation Field	Irrigation Area (acres)	Predominant Soil Type	Application Periods	Instantaneous Loading Rate (inches/dose)	Annual Loading Rate (inches/year)
F-1	11.40	Nason	Year Round	0.1	20.47
F-2	5.56	Nason	Year Round	0.1	20.47
F-2B	4.22	Lignum	Year Round	0.1	7.43
F-3	10.66	Goldston	Year Round	0.1	20.47
F-3B	3.01	Cid	Year Round	0.1	7.43
F-4	7.18	Herndon	Year Round	0.1	20.47
F-5	13.22	Georgeville	Year Round	0.1	20.47
F-6	4.94	Georgeville	Year Round	0.1	20.47
F-7	16.48	Georgeville	Year Round	0.1	20.47
F-8	4.06	Georgeville	Year Round	0.1	20.47
F-9	10.11	Nason	Year Round	0.1	20.47
F-10	5.76	Georgeville	Year Round	0.1	20.47
F-10B	5.69	Lignum	Year Round	0.1	7.43
F-11	4.69	Herndon	Year Round	0.1	20.47
F-11B	4.20	Georgeville	Year Round	0.1	20.47
F-11C	9.37	Lignum	Year Round	0.1	7.43
F-12	2.62	Georgeville	Year Round	0.1	20.47
F-12B	1.54	Cid	Year Round	0.1	7.43
F-13	8.49	Georgeville	Year Round	0.1	20.47
F-13B	2.20	Lignum	Year Round	0.1	7.43
F-14	9.91	Georgeville	Year Round	0.1	20.47
F-15	4.79	Nason	Year Round	0.1	20.47
F-16	9.05	Goldston	Year Round	0.1	20.47
F-17	5.37	Georgeville	Year Round	0.1	20.47
F-18	17.80	Georgeville	Year Round	0.1	20.47
DR	14.90	Goldston	Year Round	0.1	20.47
OS-1	0.7	Georgeville	Year Round	0.1	20.47
OS-2	1.65	Georgeville	Year Round	0.1	20.47
OS-3	0.49	Georgeville	Year Round	0.1	20.47
OS-4	2.71	Nason	Year Round	0.1	20.47
OS-5	0.95	Nason	Year Round	0.1	20.47
OS-6	1.29	Tatum	Year Round	0.1	20.47
OS-6B	1.99	Cid	Year Round	0.1	7.43
OS-7	3.83	Tatum	Year Round	0.1	20.47
CH	1.34	Georgeville	Year Round	0.1	20.47

PLSA-1	5.1	Cid	April - November	0.1	13.53
PLSA-2	6.2	Cid	April - November	0.1	13.53
PLSA-3	16.9	Cid	April - November	0.1	13.53
PLSA-4	3.7	Misenheimer	April - November	0.1	13.53
PLSA-5	5.9	Cid	April - November	0.1	13.53
PLSA-6A	2.8	Cid	April - November	0.1	13.53
PLSA-6B	2.3	Cid	April - November	0.1	13.53
PLSA-7	17.9	Cid	April - November	0.1	13.53
PLSA-8	3.8	Cid	April - November	0.1	13.53
PLSA-9	1.7	Goldston	April - November	0.1	13.53
PLSA-10	7.2	Cid	April - November	0.1	13.53
PLSA-11	12.6	Misenheimer	April - November	0.1	13.53
PLSA-12	2.2	Cid	April - November	0.1	13.53
PLSA-13	7.1	Cid	April - November	0.1	13.53
PLSA-14	3.1	Cid	April - November	0.1	13.53
PLSA-15	5.0	Cid	April - November	0.1	13.53
PLSA-16	17.4	Cid	April - November	0.1	13.53
PLSA-17	1.3	Cid	April - November	0.1	13.53
PLSA-18	5.1	Cid	April - November	0.1	13.53
PLSA-19	1.1	Cid	April - November	0.1	13.53
PLSA-20	1.4	Cid	April - November	0.1	13.53
PLSA-21	5.3	Cid	April - November	0.1	13.53
PLSA-22	9.4	Cid	April - November	0.1	13.53
PLSA-24	3.2	Cid	April - November	0.1	13.53
PLSA-26	1.1	Cid	April - November	0.1	13.53
PHSA-1	1.1	Cid	Year Round	0.1	15.86
PHSA-2	6.0	Goldston	Year Round	0.1	15.86
PHSA-3	2.9	Goldston	Year Round	0.1	15.86
PHSA-4	15.7	Cid	Year Round	0.1	15.86
PHSA-5	9.7	Cid	Year Round	0.1	15.86
PHSA-6	1.7	Tarrus	Year Round	0.1	15.86
PHSA-7	13.6	Tarrus	Year Round	0.1	15.86
SSA-1	1.1	Cid	May - October	0.1	7.00
SSA-2	3.3	Crawfordsville	May - October	0.1	7.00
SSA-4	5.6	Cid	May - October	0.1	7.00
SSA-6	4.0	Cid	May - October	0.1	7.00
SSA-8	3.4	Cid	May - October	0.1	7.00
Totals	428.1				



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
WASHINGTON, DC 20410-8000

OFFICE OF HOUSING

Mr. Jeffrey C. Lorenz  
4960 Conference Way North  
Suite 100  
Boca Raton, FL 33431

Subject: ILS Number- 31000; Jordan Lake Preserve Corporation; Chapel Ridge f/k/a Buck Mountain; Consolidation request received 07/27/2006

Dear Jeffrey C. Lorenz:

Thank you for filing a consolidation request under the Interstate Land Sales Full Disclosure Act. HUD appreciates your efforts to comply with this important consumer protection law.

HUD received your material on 07/27/2006. You should have also sent a payment, payable to the "Treasurer of the United States," to HUD's Atlanta address: HUD Interstate Land Sales/RESPA Division, P.O. Box 100655, Atlanta, GA 30384-0655. If you have paid us and we do not respond within thirty days from your initial filing date, your Statement of Record will become effective automatically.

Please make a note of your ILS number: 31000. Use this number whenever you contact HUD concerning this particular filing. In addition, please note the ILS number on the face of any future payments.

Sincerely,

Mattie M. Akins, Examiner  
Office of RESPA and  
Interstate Land Sales

**Nick Robinson**

---

**From:** "Jeff Lorenz" <Jeff.Lorenz@bluegreencorp.com>  
**To:** "Fred Ward - Reg 828" <Fred.Ward@bluegreencorp.com>  
**Cc:** <robinson@bradshawrobinson.com>; "Yvonne Seoane" <Yvonne.Seoane@bluegreencorp.com>  
**Sent:** Monday, August 07, 2006 10:19 AM  
**Attach:** Chapel Ridge Consolidation Phase III Receipt.doc  
**Subject:** Chapel Ridge - HUD Consolidation of Phase III - Receipt

Fred,

Enclosed as per your request please find the HUD receipt for the above-mentioned Consolidation. I will let you know as soon as it gets approved.

Jeffrey C. Lorenz  
Manager, Corporate Governance & Compliance  
Bluegreen Corporation  
4960 Conference Way N., Suite 100  
Boca Raton, FL 33431  
(P) 561.912.8006  
(F) 561.912.8299

**Note:** The information contained in this message may be privileged and confidential and protected from disclosure. If the reader of this message is not the intended recipient, or an employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by replying to the message and deleting it from your computer. Thank you. Bluegreen Corporation\*

\*This is a registered trademark of Bluegreen Corporation.



LAND PLANNING  
 CIVIL ENGINEERING  
 CONSTRUCTION MANAGEMENT

## Transmittal

TO: Chatham County Erosion Control
P.O. Box 130, 80 East St.
Pittsboro, NC 27312-0130
(919) 545-8343
ATTENTION: <b>Kelly Brown</b>

DATE: 7/14/2006
PROJECT NO: 500-18
RE: Chapel Ridge Phase 3 Connector Road
Chatham County, N.C.

Quantity	Drawing No.	Description
3	Dated 7/14/06	Checklist
3	Dated 7/14/06	Financial Responsibility/Ownership Forms
3	Dated 7/14/06	Land-Disturbing Permit Application
1	Dated 7/14/06	Check for \$250 (Plan Review Fee ) (0.72 acres)
3	Dated 7/14/06	Erosion Control / Drainage Calculations
3	Dated 7/14/06	Woodlands Subdivision E/C Plans

REMARKS Kelly, we are submitting these plans for your review and approval.  
Please call should you have any questions or require additional information. Thanks

CC: CE Group, inc.

Signed R. Stephen Rambeau, Jr.

**THE WOODLANDS (CHAPEL RIDGE PH.3)  
& CHAPEL RIDGE PHASES 1, 2A & 2B COMBINED**

**NET LAND AREA COMPUTATION**

**A) Gross Land Area**

Existing Chapel Ridge (677 units)	792.5 acres
The Woodlands (Chapel Ridge Ph. 3) (173 units)	240 acres
<b>total =</b>	<b><u>1,032.5 acres</u></b>

**B) Land in Road Right-of-Way**

Existing Chapel Ridge	58.2 acres
The Woodlands (Chapel Ridge Ph. 3)	23.39 acres
<b>total =</b>	<b><u>81.6 acres</u></b>

**C) 100 Year Floodplain, Wetlands, Ponds > 1 AC**

Existing Chapel Ridge	45.6 acres
The Woodlands (Chapel Ridge Ph. 3)	17.6 acres
<b>total =</b>	<b><u>63.2 acres</u></b>

**A - B - C = 887.7 AC      Net Land Available (AC)**

**38,668,647.6 SF      Net Land Area Available for Dwelling Units**

**967 UNITS      Dwelling Unit / 40,000 SF**

<b>850 UNITS</b>	<b>Proposed Dwelling Units</b>
<b>0.82 UNITS</b>	<b>Per Gross Acre</b>
<b>1.21 AC</b>	<b>Per Unit</b>

**THE WOODLANDS (CHAPEL RIDGE PH. 3) &  
CHAPEL RIDGE PHASES 1, 2A & 2B COMBINED  
MAXIMUM POTENTIAL  
IMPERVIOUS CALCULATION**

	<u>Lots</u>	<u>Impervious Area (s.f.)</u>		
Existing Chapel Ridge	677	8,000	5,416,000	s.f.
Woodlands / Chap. Rdge 3	173	12,000	2,076,000	s.f.
			total = 7,492,000	s.f.

<u>Roadways</u>			
Existing Chapel Ridge		1,314,059	s.f.
Woodlands / Chap. Rdge 3		403,570	s.f.
		total = 1,717,629	

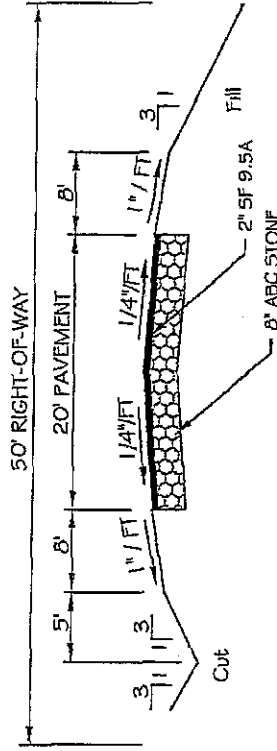
	<u>Item</u>	<u>Impervious Area</u>	
1	Homesites	7,492,000	s.f.
2	Roadways	1,717,629	s.f.
3	WWTP	200,000	s.f.
4	Golf Maintenance	90,000	s.f.
5	Club House & Amenity	209,088	s.f.
6	Sidewalks & Trails	131,402	s.f.
7	Water Tank Site	30,000	s.f.
8	Golf Course Cart Path	256,000	s.f.
9	Pump Station (The Woodlands)	4,123	s.f.
	<b>TOTAL IMPERVIOUS</b>	<b>10,130,242</b>	<b>s.f.</b>

**TOTAL TRACT AREA**

Existing Chapel Ridge	790 acres
Woodlands / Chap. Rdge 3	240 acres
	total = 1,030 acres
	44,866,800 s.f.

<b>IMPERVIOUS PERCENTAGE</b>	<b>22.6 %</b>
------------------------------	---------------

THE WOODLANDS (CHAPEL RIDGE PHASE 3)  
TYPICAL PRIVATE ROADWAY SECTION



TYPICAL 20' ROADWAY SECTION (EDGE TO EDGE)  
[50' RIGHT-OF-WAY]  
NOT TO SCALE

NOTE: THIS SECTION SHALL APPLY ONLY TO  
THE WOODLANDS / CHAPEL RIDGE PHASE 3.  
THE EXISTING CHAPEL RIDGE PHASES 1, 2A,  
AND 2B ARE CURB AND GUTTER SECTION ROADS.

**DEVELOPER**  
Jordan Lake Preserve Corporation  
PO Box 400  
Pittsboro, North Carolina 27312  
AID  
Garden Development, LLC  
1000 St. Asaph Drive, Suite 100  
Raleigh, North Carolina 27607

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Land Surveyor ..... Ablesis, Land Surveying  
Soil Scientist ..... Edin Andrews & Assoc.  
Water Engineer ..... Soil & Environmental Consultants  
Treatment Engineer ..... W. Lee Fleming, Jr., Engineer  
Geotechnical Engineer ..... Geotechnical Pro-  
fessionals, Inc.  
Public Engineer ..... Ramsey Pump & Associates, Inc.

JULY 10, 2006

NOTE: THE FEATURES DESCRIBED AND  
DEPICTED HEREIN ARE BASED UPON  
CURRENT DEVELOPMENT PLANS. ACTUAL  
DEVELOPMENT MAY BE SUBJECT TO  
CHANGE BASED UPON FURTHER COUNTY  
REVIEW.