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October 16, 2006

Ms. Lynn Richardson
Chatham County Planning Department
P. O. Box 54
Pittsboro, NC 27312

VIA HAND DELIVERY

RE: Preliminary Plat for Westfall Subdivision, Phases 1A, 1B and 1C (formerly known as Booth Mountain Subdivision)

Dear Lynn:

Enclosed please find a preliminary plat application on behalf of MacGregor Development Company for the subdivision formerly known as Booth Mountain. You may recall that condition #11 in the conditional use permit approval dated January 18, 2005 required the name of the development to be changed so that it does not duplicate and is not similar to other developments. Thus, the name of the subdivision will be changed to Westfall. The estates section on Lystra Road will be referred to as "Westfall." The neighborhood section on Jack Bennett Road will be referred to as "Westfall Crossing." The village section on Jack Bennet Road will be referred to As "Westfall Village."

As you can see from the enclosed checklist, we are awaiting final approval on the DOT commercial driveway permits which were submitted on August 16, 2006 to the Department of Transportation, as well as the U.S. Army Corps of Engineers/DWQ permit (submitted on August 31, 2006). We anticipate these approvals being received prior to the Planning Board meeting in November.

With regard to the roads in the subdivision, in the initial application, the roadways in the estates section accessed on Lystra Road were to be private roads. The roads accessed by Jack Bennett Road were anticipated to be public. This is to request that the roads in the Village and Neighborhood section be approved as ungated private roads built to NCDOT standards for Local Residential Subdivision roads. This request is precipitated by the NCDOT classification of these neighborhood roads as "collectors," the effect of which would be to require significantly more environmental insensitivity, wider stretches of pavement, more impervious surface, more clearing, more grading, more ground disturbance and later ground stabilization and other environmental detractions.

Letter to Ms. Lynn Richardson
October 16, 2006
Page Two

The original conditional use permit set forth 16 conditions. I will address the ones that are relevant to the preliminary plat application.

1. A right turn deceleration lane will be provided by the developer on the south side of Lystra Road at the entrance of the subdivision.
2. The no-build zones referred to in paragraph #2 and relating to lots that are a part of this current phase are set forth in the building envelopes depicted on the plat submitted.
5. The 200' non-disturbance area is as shown on the plat submitted.
6. The roads in the estate section will be private, will be built to NCDOT standards for the hilly condition and may be gated (if so, access will be made available to emergency vehicles).
7. Previously addressed.
8. The proposed plat depicts a trail easement to the Chatham County School Site. The trail will not be installed until the Chatham County Board of Education agrees to the same.
9. The preliminary field reconnaissance archeological survey was submitted to the Planning Department on June 21, 2006.
11. The name of the subdivision has been changed to Westfall, Westfall Crossing and Westfall Village as explained above.
15. The drainage area is shown on the plat submitted.
16. The developer met with the then Superintendent of the Chatham County School Administration regarding the feasibility of shared use of the Booth Mountain community wastewater treatment system and the Chatham County School's property for effluent spray irrigation. At this time no agreement between the parties has been reached but the developer is open to continued discussions.

Please let us know if you need anything further.

Very truly yours,



Nicolas P. Robinson

NPR:jbs

Enclosures

c: Mike Whitehead
Bruce Herbert
Mike Zaccardo

CHATHAM COUNTY MAJOR SUBDIVISION REVIEW CHECKLIST

Subdivision Name Booth Mountain (Phase 1A, B, C)

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	_____
<input type="checkbox"/> 1 electronic copy of all items above (see Digital Document Requirements)	_____
PRELIMINARY PLAT REVIEW	
<input checked="" type="checkbox"/> 25 Copies of Plat along with one (1) 8-1/2 x 11 copy
<input checked="" type="checkbox"/> Application w/ Complete Adjacent Owner Addresses
<input checked="" type="checkbox"/> Detailed Soils Map and Letter of explanation or D.E.M. approval	__03 / 24 / 06__
{see Requirements for soil scientist report}	__10 / 05 / 06__
<input type="checkbox"/> NCDOT Approval (if public roads) N/A	___/___/___
<input checked="" type="checkbox"/> DOT Comm. Driveway Permit Submitted 8/16/06	___/___/___
<input checked="" type="checkbox"/> Erosion Control Plan Approval (if new roads or one acre disturbed)	__08 / 30 / 06__
<input checked="" type="checkbox"/> U.S. Army Corps of Engineers Permit (if appl) Submitted 8/31/06	___/___/___
<input checked="" type="checkbox"/> Road Name Request Form Submitted on 10/6/06 and approved	___/___/___
<input checked="" type="checkbox"/> County Public Water Approval (if applicable)	__10 / 13 / 06__
<input checked="" type="checkbox"/> State Public Water Approval (if applicable)	__09 / 08 / 06__
<input checked="" type="checkbox"/> Chatham Co. Schools' Road Comments (if new roads)	__10 / 10 / 06__
<input checked="" type="checkbox"/> Stormwater Management Plan Approval (if appl) Submitted 6/8/06	___/___/___
<input type="checkbox"/> Economic & Environmental Impact Study (if appl) N/A	___/___/___
<input type="checkbox"/> Water / Sewer Impact Statement (if appl) N/A	___/___/___
<input checked="" type="checkbox"/> 1 electronic copy of all items above (see Digital Document Requirements)	___/___/___
FINAL PLAT REVIEW	
<input type="checkbox"/> 25 Copies of Plat	_____
<input type="checkbox"/> Application
<input type="checkbox"/> 1 electronic copy of all items above (see Digital Document Requirements)	___/___/___
<input type="checkbox"/> Chatham County Environmental Health Division septic improvement permits or NCDWQ septic permits for each lot.	___/___/___
<input type="checkbox"/> Road Completion Certificate or Financial Guarantee	___/___/___
<input type="checkbox"/> Utilities Completion Cert. or Financial Guarantee	___/___/___

Comment _____

Date Complete Application Rec'd: _____ / _____ / _____ By: _____

Chatham County Planning Department
P.O. Box 54
Pittsboro, NC 27312
Tel: (919) 542-8204
Fax: (919) 542-0527

Type of Review
 Sketch
 Preliminary
 Final

MAJOR SUBDIVISION APPLICATION

Name of Subdivision: Westfall (Phases 1A, B, C) (fka "Booth Mountain")

Subdivision Applicant:

Subdivision Owner:

Name: MacGregor Development Company Name: Over Jordan, LLC

Address: 201 Shannon Oaks Circle, Suite 201 Address: 201 Shannon Oaks Circle, Suite 201

Cary, North Carolina 27511

Cary, North Carolina 27511

Phone:(W) 919-465-3312

Phone:(W) 919-465-3312

Phone:(H) _____ Fax:919-465-3383

Phone:(H) _____ Fax:919-465-3383

E-Mail _____

E-Mail _____

Township: Williams Zoning: CUP RA-40 P.I.N. # _____

Flood Map #370299 0055 B Zone: X & A Parcel #20092, 18931 and 81248

Watershed Jordan Lake WS IV Protected Existing Access Road: S.R. 1721 & 1717

Total Acreage: 294.32 ac. Total # of Lots: 180 Min. Lot Size: See attached

Ph. I Acreage 159.67 ac. Ph. I # of lots 94 Max. Lot Size: See attached

Ph. II Acreage _____ Ph. II # of lots _____ Avg. Lot Size: See attached

Ph. III Acreage _____ Ph. III # of lots _____

Name and date of contact with Chatham County Historical Association:

Type of new road: Private/Length +/- 19,380 l.f. Public/Length _____

Road Surface:

paved

gravel

Water System:

individual wells

community wells

public system

name Chatham County

Sewer System:

septic systems

community system

public system

name Heater Utilities, Inc.

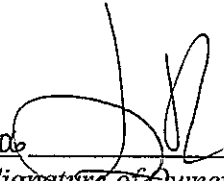
List other facilities: commercial, recreation, etc., and the approximate acreage or square footage:



Date 10/12/06

Signature of Applicant

Jerry Radman
Vice President
MacGregor Development Company



Date 10/12/06

Signature of Owner

Over Jordan, LLC
Jerry Radman, Vice President
MacGregor Development Company
Administrative Member

For Office Use Only:

Notes:

Approved by County Commissioners:

Sketch

Preliminary

Final

Payment: Date / / Amount: \$

SITE DATA

WESTFALL 35 LOTS	Minimum Lot Size	0.70 ac.
	Maximum Lot Size	1.65 ac.
	Average Lot Size	1.01 ac.

WESTFALL CROSSING 24 LOTS	Minimum Lot Size	0.32 ac.
	Maximum Lot Size	0.81 ac.
	Average Lot Size	0.57 ac.

WESTFALL VILLAGE 35 LOTS	Minimum Lot Size	0.31 ac.
	Maximum Lot Size	0.51 ac.
	Average Lot Size	0.40 ac.

WESTFALL ADJOINING LANDOWNERS

Robert Paul Waldrop & Carmen Serrano
2278 Lystra Road
Chapel Hill, NC 27517-8861

Lori A. Enney-Omara
Gerard F. Booker, Jr.
128 Foster Land
Pittsboro, NC 27312

Horse Farms Limited, LLC
David A. Watts
713 McNeil Road
Sanford, NC 27330

Elizabeth N. & Pierce A. Cassedy
2956 Lystra Road
Chapel Hill, NC 27514

United States of America
c/o U.S. Army Corps of Engineers
P. O. Box 144
Moncure, NC 27559

William W. Cure & Jennifer D. Cure
880 Buteo Road
Pittsboro, NC 27312

Roy H. Davis
2221 Lystra Road
Chapel Hill, NC 27514

R. Nelson & Janice C. Wall
64 Willow Way
Chapel Hill, NC 27514

Cynthia K. Smith & Linda Fullwood
2144 Lystra Road
Chapel Hill, NC 27514.

Martin J. Bernholz
846 Island Road
Harkers Island, NC 28531

Donna M. & John M. Huff
313 Boothe Hill Road
Chapel Hill, NC 27514

Lila J. & Denzil L. Thorn
315 Boothe Hill Road
Chapel Hill, NC 27514

Leila M. Webster
395 Boothe Hill Road
Chapel Hill, NC 27517-8877

Stephanie Lynn & Mark Allan McAdams
519 Boothe Hill Road
Chapel Hill, NC 27517

Sherrie Rakoff
185 Holly Trail
Kitty Hawk, NC 27949

Kevin Maloney
631 Boothe Hill Road
Chapel Hill, NC 27514

George Meyer & Maura L. Odonogh
988 Boothe Hill Road
Chapel Hill, NC 27517

Nancy L. Easterling & Charles T.L. Anderson
921 Boothe Hill Road
Chapel Hill, NC 27517

Jean & David L. Carlton
201 Uwharrie Ridge Road
Pittsboro, NC 27312-8110

Susan L. Fields
9671 US 15-501
Chapel Hill, NC 27517

Alvin L. & Deborah P. Fuller
839 Foxfire Trace
Pittsboro, NC 27312

Timothy B. Peck
112 Elm Street
Carrboro, NC 27510

Nancy W. Britt
616 Wimberly Road
Apex, NC 27523

Mackie W. Lambert
641 Wimberly Road
Apex, NC 27523

Chatham County Board of Education
P. O. Box 128
Pittsboro, NC 27312

Joel Eisner & Stephanie Eisner
6 Wythebrook Lane
Durham, NC 27713

Michael F. Whitehead, et al.
201 Shannon Oaks Circle, Suite 201
Cary, NC 27511

Grace B. Alston
2787 Lystra Road
Chapel Hill, NC 27514

Over Jordan, LLC
201 Shannon Oaks Circle, Suite 201
Cary, NC 27511





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

March 24, 2006

Mr. Michael J. Meyers
Engineering & Compliance Manager
Heater Utilities, Inc.
202 MacKenan Court
Cary, NC 27511

Subject: Permit No. WQ0028798
Booth Mountain Development
Wastewater Treatment and
Reclaimed Water Utilization System
Chatham County

Dear Mr. Myers:

In accordance with your permit application received May 5, 2005, and subsequent additional information received June 2, 2005, we are forwarding herewith Permit Number WQ0028798, dated March 24, 2006, to Heater Utilities, Inc. for the construction and operation of the subject wastewater treatment and reclaimed water utilization system.

This permit shall be effective from the date of issuance until February 28, 2011, 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.

NT/lj

cc: Chatham County Health Department
Raleigh Regional Office, Aquifer Protection Section
~~Mark Ashness, PE, SCE, CEM~~
Lee Fleming, PE
Steven Levitas - Kilpatrick Stockton, LLP
Technical Assistance and Certification Unit
Aquifer Protection Central Files
LAU Files

One
North Carolina
Naturally

Aquifer Protection Section
Internet: <http://h2o.enr.state.nc.us>

1636 Mail Service Center
2728 Capital Boulevard

Raleigh, NC 27699-1636
Raleigh, NC 27604

Phone (919) 733-3221
Fax (919) 715-0588
Fax (919) 715-6048

Customer Service
1-877-623-6748

NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
RALEIGH
WASTEWATER TREATMENT AND RECLAIMED WATER UTILIZATION PERMIT

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

construction and operation of a 90,000 gallon per day (GPD) dual train extended aeration wastewater treatment consisting of a manually cleaned bar screen; three (3) 10,000 gallon flow equalization basins served by two (2) 75 gallon per minute (GPM) pumps and one (1) 120 cubic feet per minute (CFM) blower; a flow splitter box; four (4) 10,000 gallon anoxic basins; fourteen (14) 10,000 gallon aeration basins served by four (4) 375 CFM blowers; four (4) 7,060 gallon clarifiers served by four (4) variable speed sludge pumps; three (3) 10,000 gallon aerated sludge holding basins served by one (1) variable speed pump and the main plant blowers; two (2) 36 square foot (ft²) tertiary filters served by a 72 CFM blower; one (1) 5,400 gallon clearwell with two (2) 540 GPM backwash pumps; a 5,800 gallon mudwell with two (2) 100 GPM pumps; one (1) 2,800 gallon chlorine contact basin with two (2) variable speed chemical pumps; a 2,800 gallon dechlorination chamber; dual chemical pumps with storage tank for a phosphorous reduction system; an effluent flow measuring device; an ultraviolet (UV) bank with 10 bulbs; a 4,500 gallon dosing chamber with dual 175 GPM pumps; an effluent monitoring device; a turbidimeter; a permanent auxiliary generator; and the

construction and operation of a 66,000 GPD reclaimed water utilization system consisting of a 506,000 gallon clay lined five day upset pond with dual 100 GPM submersible pumps and audible/visual alarms; a 7.7 million gallon (MG) clay lined storage pond with dual 400 GPM vertical turbine pumps serving eleven (11) irrigation zones consisting of approximately 38.9 acres; and all associated piping, valves and appurtenances to serve the Booth Mountain Development with no discharge of wastes to the surface waters, pursuant to the application received May 5, 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.

See Condition III(3) for the flow capacity limitation specified by this permit.

This permit shall be effective from the date of issuance until February 28, 2011, and shall be subject to the following specified conditions and limitations:

I. PERFORMANCE STANDARDS

1. The *Booth Mountain Wastewater Irrigation Agreement* between Heater Utilities, Inc. and the MacGregor Development Company shall be executed and submitted to the Aquifer Protection Section's Central and Raleigh Regional Offices within sixty (60) days of permit issuance. This agreement shall include the following:
 - a. The agreement shall indicate the responsible party for properly storing and irrigating the entire wastewater flow in accordance with all conditions outlined in a permit issued to Heater Utilities, Inc. If the responsible party is Heater Utilities, Inc., the agreement shall stipulate measures to be taken to ensure Heater Utilities, Inc. has the operational authority to properly manage the wastewater including when, where, and the duration of effluent irrigation events.
 - b. The responsible party for irrigation shall provide a certified wastewater irrigation operator at all times in accordance with 15A NCAC 8G, including site visitation requirements.
 - c. The agreement shall also indicate that aesthetic desires or management of the common green areas for the purposes of use shall not be justifiable reasons for violating conditions of the wastewater permit including the maintenance of adequate effluent storage capacity.
 - d. The agreement shall also indicate the responsible party for conducting all sampling as required by the permit, as well as, the responsible party for record keeping with regards to storage or irrigation of effluent wastewater.
 - e. The agreement shall indicate provisions for addressing enforcement and civil penalties in instances where the MacGregor Development Company is responsible for violations of the permit issued to Heater Utilities, Inc.
 - f. The agreement may not be modified or negated without approval by the Division. In the case of the sale of the Company or any of the common green area utilized for wastewater disposal, disclosure of the agreement must be made and acceptance by the purchaser must occur prior to the MacGregor Development Company being relieved of any identified responsibilities.
2. Prior to construction and operation of Irrigation Zone Y-3, the Permittee shall submit documentation to the Aquifer Protection Section's Central and Raleigh Regional Offices demonstrating that the Permittee owns the approximately 35 acre parcel (Parcel Number 18931) currently owned by Wayne & Terry Witt and Carl & Sandra Banks.
3. Irrigation Zone Y-3 shall be filled and graded such that at least one (1) foot of vertical distance is present between the soil surface and the seasonal high water table. Upon completion of site grading and shaping on Irrigation Zone Y-3, the soil scientist shall contact the Raleigh Regional Office to inquire whether or not it will be necessary for staff to perform a revised site visit. No wastewater shall be introduced into the treatment system until written approval from the Division of Water Quality is received.
4. 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.
5. 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.

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. 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, such as the construction of additional or replacement wastewater treatment and disposal facilities.
9. Diversion or bypassing of the untreated wastewater from the treatment facilities is prohibited.
10. 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.
11. 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.
12. 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.
13. 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 service boxes clearly labeled as non-potable water.

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 and instantaneous loading (i.e. dosing rate) rates shall not exceed the following:

Spray Zone	Area (acres)	Dominant Soil Series	Instantaneous Loading Rate* (inches/dose)	Annual Loading Rate (inches/year)
X-1	4.0	Pacolet	0.10	28.5
X-2	10.5	Pacolet	0.10	28.5
X-3	4.9	Appling	0.10	28.5
X-4A	5.4	Vance	0.10	28.5
X-4B	2.2	Wedowee	0.10	28.5
X-5	2.6	Louisburg	0.10	28.5
X-6	1.5	Louisburg	0.10	28.5
Y-1A	0.2	Helena	0.10	7.0
Y-1B	1.2	Helena	0.10	7.0
Y-2	3.7	Helena	0.10	7.0
Y-3	2.7	Creedmoor/White Store	0.10	7.0
Total	38.9			

* The Permittee shall not apply more than one (1) dose to each field per hour, thus limiting the instantaneous loading rate to 0.1 inches/hour.

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 Booth Mountain Development shall be irrigated onto the irrigation area.
10. Freeboard in the storage and upset 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 within 60 days of construction. 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 ^a	Daily (Instantaneous) Maximum ^c
Flow	66,000 GPD	
BOD ₅ (5-day, 20°C)	10 mg/l	15 mg/l
NH ₃ as N	4 mg/l	6 mg/l
TSS	5 mg/l	10 mg/l
Fecal Coliform	14 per 100 ml ^b	25 per 100 ml
Turbidity		10 NTU

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

^a Monthly averages for all but fecal coliform shall be the arithmetic mean of all samples collected during the reporting period.

^b Monthly average for fecal coliform shall be the geometric mean of all samples collected during the reporting period.

^c Daily maximum shall be the maximum value of all samples collected during the reporting period.

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 ₅ (5-day, 20°C)	Effluent	*2/Month	Composite
NH ₃ 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 ₃	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	** Quarterly	Grab
pH	Surface Water Station 1	** Quarterly	Grab
Total Nitrogen	Surface Water Station 1	** Quarterly	Grab
Total Phosphorus	Surface Water Station 1	** Quarterly	Grab
Water Level	Surface Water Station 1	** 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:
- Date and time of irrigation,
 - Volume of wastewater irrigated,
 - Zone irrigated,
 - Length of time zone is irrigated,
 - Continuous weekly, monthly, and year-to-date hydraulic (inches/acre) loadings for each zone,
 - Weather conditions, and
 - Maintenance of cover crops.
6. Freeboard in the storage pond 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:
- Daily sampling results of dissolved oxygen in the aeration basin and at the clarifier weir.
 - Visual observations of the plant and plant site.
 - Record of preventative maintenance (changing of filters, adjusting belt tensions, alarm testing, diffuser inspections and cleanings, etc.).
 - Date of calibration of flow measurement device.
 - 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 irrigation field 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) 571-4700, 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, one (1) upgradient monitor well (MW-1) and three (3) downgradient monitor wells (MW-2, MW-3 and MW-4) 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, MW-3 and MW-4 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 ₃ -N)	Fecal Coliforms	Total Ammonia Nitrogen (NH ₃ -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 1×10^{-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. 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.
4. 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.
5. 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.
6. The Permittee shall retain a set of approved plans and specifications for the subject facility for the life of the project.
7. 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).

8. 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 24th day of March, 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 WQ0028798

Permit No. WQ0028798
March 24, 2006

ENGINEER'S CERTIFICATION

_____ Partial _____ Final

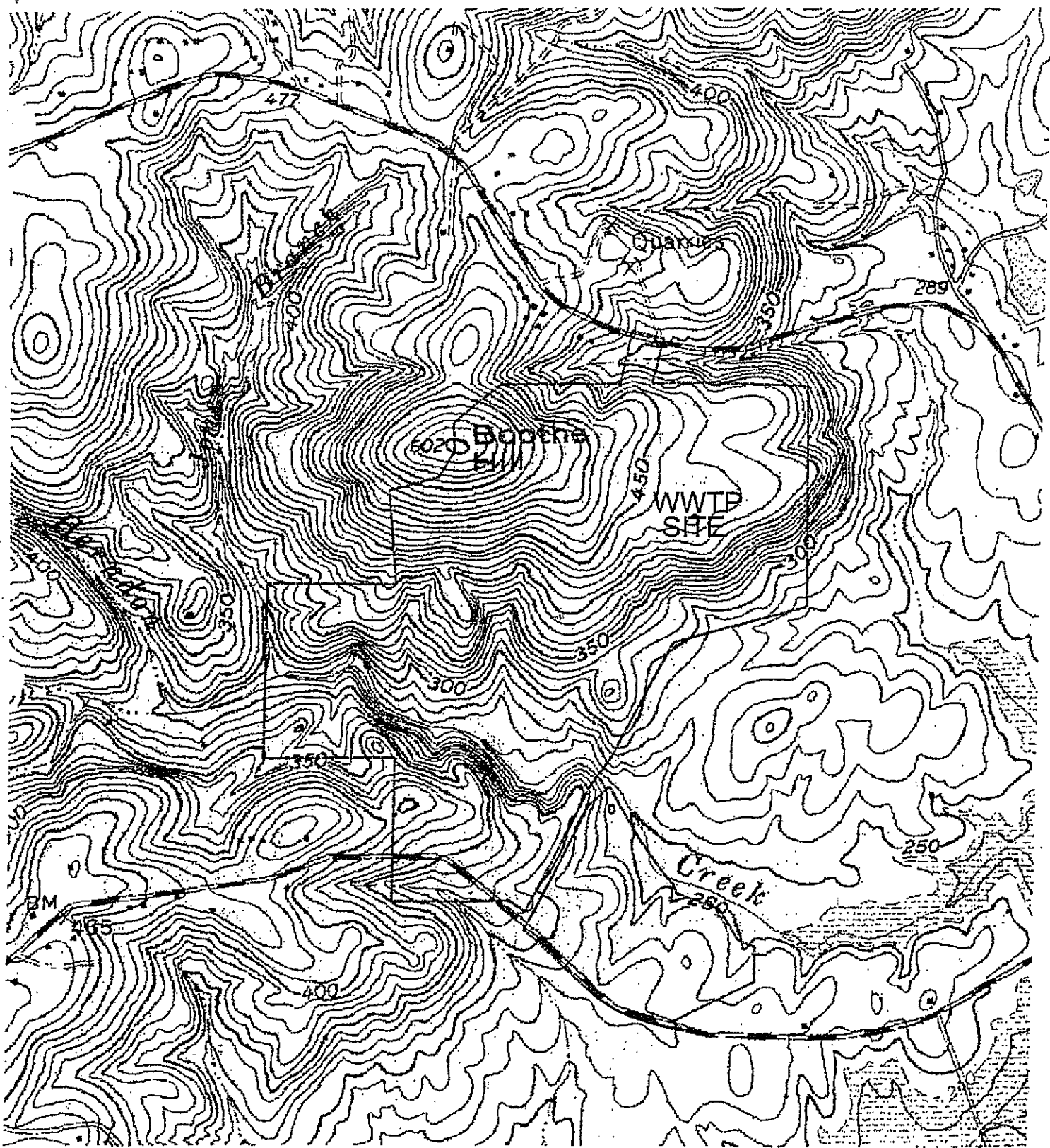
I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project,

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 _____



Heater Utilities, Inc.
Booth Mountain Development

0 500' 1000' 2000'



SCALE: 1" = 1000'

1000 78798

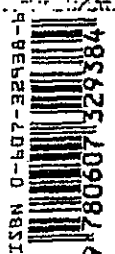


NORTH

April 19, 2005

FARRINGTON, N. C.
N3545-W7900/7.5

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**WATER POLLUTION CONTROL SYSTEM OPERATORS
CERTIFICATION COMMISSION**

**CLASSIFICATION
RATING SHEET FOR WATER POLLUTION CONTROL SYSTEMS**

FACILITY INFORMATION:

NAME OF FACILITY: Heater Utilities, Inc.-Booth Mountain Development

MAILING ADDRESS: 202 MacKenan Ct., Cary, NC 27511

COUNTY: Chatham

CONTACT PERSON: Mike Myers

TELEPHONE: 919/467-8712

PERMIT NO.: WQ0028798

Check One: NC

WQ

HEALTH DP

ORC:

TELEPHONE:

RATING INFORMATION: (Before completing this section, please refer to pages 2-4)

PERMITTED FLOW: 66,000 GPD

BNR?

YES

NO

CHECK CLASSIFICATION: WASTEWATER:

1

2

3

4

COLLECTION:

1

2

3

4

SPRAY IRRIGATION

SUBSURFACE

LAND APPLICATION

PHYSICAL/CHEMICAL

GRADE I

GRADE II

RATED BY: Randy Jones

REGION: RRO

DATE: 5/23/05

REGIONAL OFFICE TELEPHONE NUMBER: 919/571-4700

EXT: 255

Classification of Biological Water Pollution Control Treatment Systems:

Grade I Biological WPCS

- Septic tank/sand filter systems
- Biological lagoon systems
- Constructed wetlands and associated appurtenances

√

Grade II Biological WPCS

- Systems that utilize an activated sludge or fixed growth process with a permitted flow less than or equal to 0.5 million gallons per day (mgd)

Grade III Biological WPCS

- Systems that utilize an activated sludge or fixed growth process with a permitted flow of greater than 0.5 through 2.5 million gallons per day (mgd)
- Grade II systems that are required to achieve biological nutrient reduction *

Grade IV Biological WPCS

- Systems that utilize an activated sludge or fixed growth process with a permitted flow of greater than 2.5 million gallons per day (mgd)
- Grade III systems that are required to achieve biological nutrient reduction *

** Biological Nutrient Reduction -*

The reduction of total nitrogen or total phosphorus by an activated sludge or fixed growth process as required by the facilities permit.

Classification of Collection Water Pollution Control Systems:

(whichever provides lowest grade)

Same grade as biological water pollution control system. Grade of system:

Based on population served:

1,500 or Less = Grade I

1,501 to 15,000 = Grade II

15,001 to 50,000 = Grade III

50,001 or more = Grade IV

Classification of Spray Irrigation Water Pollution Control Systems:

- Systems which utilize spray irrigation for the reuse or disposal of wastewater. These systems include: septic tanks, sand filter, oil/water separators, lagoons, storage basins, screening, sedimentation. Systems other than those listed above shall be subject to additional classification.
-

Classification of Land Application of Residuals Systems:

- Systems permitted and dedicated for the land application of residuals that are produced by a water pollution control system or contaminated soils.
-

Classification of Physical/Chemical Water Pollution Control Treatment Systems:

- Grade I Physical/Chemical: Any water pollution control system that utilizes a primarily physical process to treat wastewater. This classification includes groundwater remediation systems **

- Grade II Physical/Chemical: Any water pollution control system that utilizes a primarily chemical process to treat wastewater. This classification includes reverse osmosis, electro dialysis, and ultrafiltration systems. **

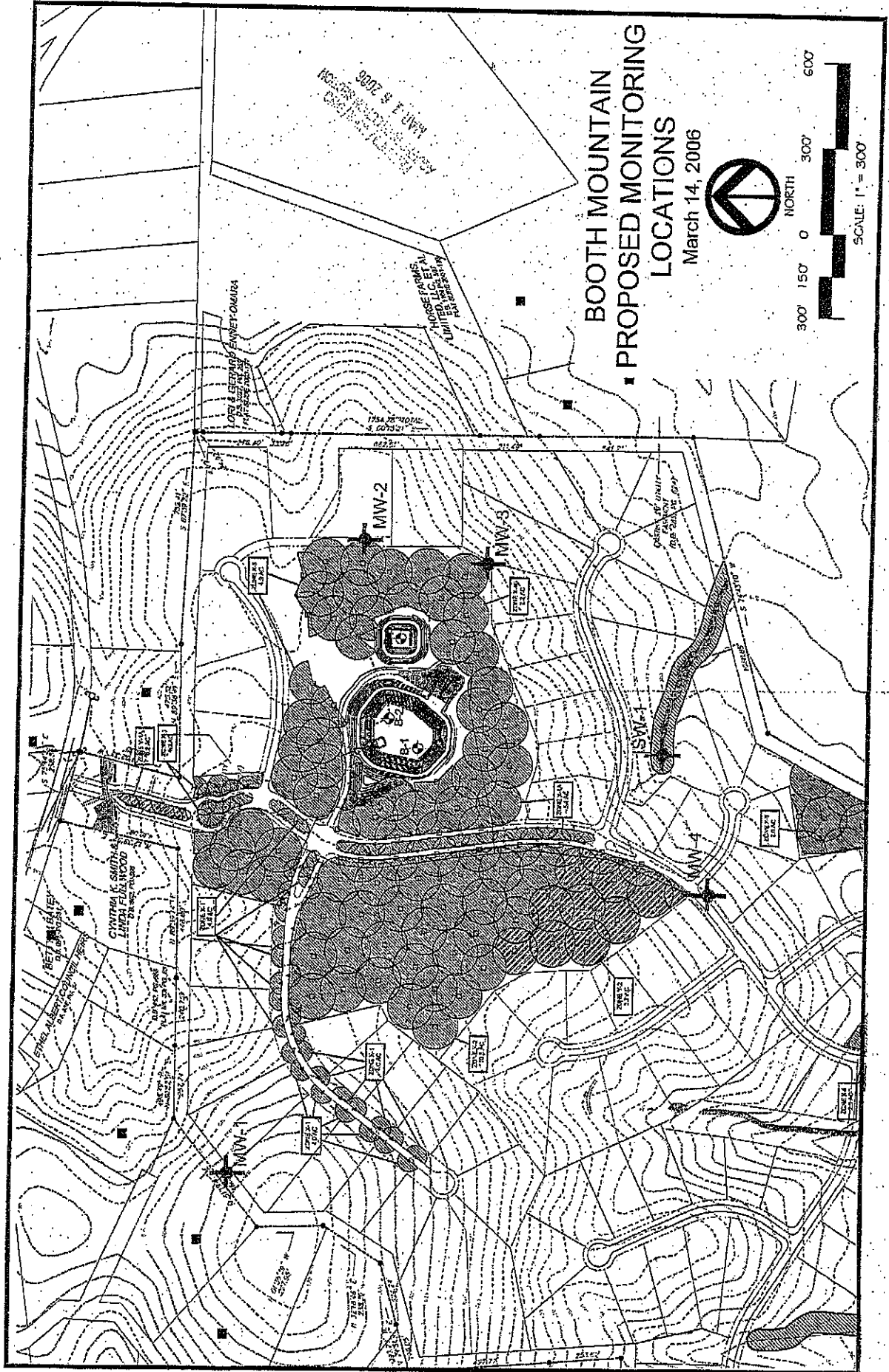
*** Any water pollution control system that utilizes a physical/chemical process to enhance an activated sludge or fixed growth process, shall not be subject to additional classification*

.....

Classification of Subsurface Water Pollution Control Systems:

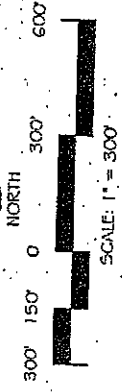
- Systems which utilize the soil for subsurface treatment and disposal of wastewater and/or are required to have a certified operator under 15A NCAC 18A.1961. ***

**** Any subsurface system that has as part of its treatment process a water pollution control system that may be classified under Rules .0302 through .0307 of this section shall be subject to additional classification.*



BOOTH MOUNTAIN PROPOSED MONITORING LOCATIONS

March 14, 2006







Michael F. Easley, Governor

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

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

October 5, 2006

Michael J. Myers,
Manager, Engineering and Compliance
Heater Utilities, Inc.
202 MacKenan Court
Cary, NC 27511

Subject: Permit No. WQ0030680
Booth Mountain Phases 1A, 1B,
& 1C
Pressure Sewer Extension
Chatham County

Dear Mr. Myers:

In accordance with your permit application received August 16, 2006, we are forwarding herewith Permit No. WQ0030680, dated October 5, 2006, to Heater Utilities, Inc. for the construction and continued operation of the subject wastewater collection extension. This permit shall be effective from the date of issuance until rescinded, and shall be subject to the conditions and limitations as specified therein.

Please pay particular attention to Permit Condition 3, which requires that the wastewater collection facilities be properly operated and maintained in accordance with 15A NCAC 2H .0227 or any individual system-wide collection system permit issued to the Permittee.

Permitting of this project does not constitute an acceptance of any part of the project that does not meet 15A NCAC 2H .0200; the Division of Water Quality's (Division) Gravity Sewer Minimum Design Criteria adopted February 12, 1996 as applicable; and the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 as applicable, unless specifically mentioned herein. Division approval is based on acceptance of the certification provided by a North Carolina-licensed Professional Engineer in the application. It shall be the Permittee's responsibility to ensure that the as-constructed project meets the appropriate design criteria and rules. Failure to comply may result in penalties in accordance with North Carolina General Statute §143-215.6A through §143-215.6C, construction of additional or replacement wastewater collection facilities, and/or referral of the North Carolina-licensed Professional Engineer to the licensing board.


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 30 days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of 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.

All sewer related matters are handled through the Pretreatment, Emergency Response and Collection Systems Unit under the Point Source Branch EXCEPT FOR FAST-TRACK SEWER PERMITTING WHICH CONTINUES TO BE ADMINISTERED THROUGH OUR REGIONAL OFFICES. The Unit is located on the 13th floor of the Archdale building in downtown Raleigh. Please ensure the letterhead information is used for all correspondence to ensure timely delivery.

Michael J. Myers
October 5, 2006
Page 2

One set of approved plans and specifications is being forwarded to you. If you need additional information concerning this matter, please contact Deborah Gore at (919) 733-5083 extension 593.

Sincerely



For Alan W. Klimek, P. E.

cc: Chatham County Health Department
Raleigh Regional Office, Water Quality Section (Permit WQ0030680)
Mike Zaccardo, PE, CE Group, Inc., 11000 Regency Parkway, Suite 410, Cary, NC; 27511
Water Quality Central Files
PERCS Files

NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
RALEIGH
WASTEWATER COLLECTION PERMIT

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

construction and continued operation of approximately 2,071 linear feet of 8-inch gravity sewer and a pressure sewer collection system consisting of 53 – 2.4 HP pump stations with simplex pumps and on-site audible and visual high-water alarms, 6 – 3.5 HP pump stations with simplex pumps and on-site audible and visual high water alarms and approximately 4,976 linear feet of 2-inch pressure sewer, 1,257 linear feet of 3-inch pressure sewer, 3,710 linear feet of 4-inch pressure sewer, 3,866 linear feet of 6-inch pressure sewer, a 255 -GPM pump station with duplex pumps and on-site audible and visual high water alarms, a 140-GPM pump station with duplex pumps and on-site audible and visual high water alarms, approximately 3,614 linear feet of 6-inch force main, approximately 3,683 linear feet of 4-inch force main to serve 94 lots (35 by gravity) in Booth Mountain Phases 1A, 1B, & 1C, and the discharge of 33,840 GPD of collected wastewater into the Heater Utilities' existing sewerage system, pursuant to the application received August 16, 2006, and subsequent additional information received by the Division, and in conformity with the project plans, 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 rescinded, and shall be subject to the following specified conditions and limitations:

1. This permit shall become revocable unless the wastewater collection facilities are constructed in accordance with the conditions of this permit; 15A NCAC 2H .0200; the Division of Water Quality's (Division) Gravity Sewer Minimum Design Criteria adopted February 12, 1996 as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 as applicable; and other supporting materials unless specifically mentioned herein.
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 wastewater collection facilities shall be properly maintained and operated at all times. The Permittee shall maintain compliance with an individual system-wide collection system permit for the operation and maintenance of these facilities as required by 15A NCAC 2H .0227. If an individual permit is not required, the following performance criteria shall be met as provided in 15A NCAC 2H .0227:

- a. The sewer system shall be effectively maintained and operated at all times to prevent discharge to land or surface waters, and any contravention of the groundwater standards in 15A NCAC 2L .0200 or the surface water standards in 15A NCAC 2B .0200.
 - b. A map of the sewer system shall be developed and shall be actively maintained.
 - c. An operation and maintenance plan shall be developed and implemented.
 - d. Pump stations that are not connected to a telemetry system shall be inspected every day (i.e. 365 days per year). Pump stations that are connected to a telemetry system shall be inspected at least once per week. This requirement does not apply to pump stations serving a single building associated with a properly permitted pressure sewer system.
 - e. High-priority sewer lines shall be inspected at least once per every six-month period of time.
 - f. A general observation of the entire sewer system shall be conducted at least once per year.
 - g. Inspection and maintenance records shall be maintained for a period of at least three years.
 - h. Overflows and bypasses shall be reported to the appropriate Division regional office in accordance with 15A NCAC 2B .0506(a), and public notice shall be provided as required by North Carolina General Statute §143-215.1C.
4. The sewage and wastewater collected by this system shall be treated in the Heater Utilities Wastewater Treatment Facility (Non-Discharge Permit No. WQ0028798) prior to being land applied by spray irrigation.
 5. 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 of Water Quality (Division) accompanied by 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.
 6. Construction of the sewers, pump station(s) and force main shall be scheduled so as not to interrupt service by the existing utilities nor result in an overflow or bypass discharge of wastewater to the surface waters of the State.
 7. Per 15A NCAC 2H .0220, upon completion of construction and prior to operation of these permitted facilities, the completed Engineering Certification form attached to this permit shall be submitted with the required supporting documents to the address provided on the form. A complete certification is one where the form is fully executed and the supporting documents are provided as applicable.
 8. A copy of the approved plans and specifications shall be maintained on file by the Permittee for the life of the wastewater collection facilities.
 9. Failure to abide by the conditions and limitations contained in this permit; 15A NCAC 2H .0200; the Division's Gravity Sewer Design Criteria adopted February 12, 1996 as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Station and Force Mains adopted June 1, 2000 as applicable; and other supporting materials may subject the Permittee to an enforcement action by the Division, in accordance with North Carolina General Statutes §143-215.6A through §143-215.6C.
 10. The issuance of this permit does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e., local, state, and federal) having jurisdiction, including but not limited to applicable river buffer rules in 15A NCAC 2B .0200, soil 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 15A NCAC 2H .0500.

11. The Permittee shall provide the following items for the pressure sewer system:

- a. Pump on/off elevations located so that 2-8 pumping cycles may be achieved per hour in any centralized pump station serving more than one building.
- b. At least 24 hours of storage capacity above the pump-on activation level for any simplex pump station serving a single family residence.
- c. An air relief valve located at all high points along the force main.
- d. A screened vent for the wet well.
- e. Fillets located in the wet well(s) at the intersection of the flooring and side walls.
- f. Three feet of cover (minimum) over the force main or the use of ferrous material where three feet cannot be maintained.
- g. Sufficient devices, which will protect the pump station from vandals.
- h. Flood protection if the pump station is located below the 100-year flood elevation.
- i. Adherence with the following minimum separations:
 - (i) Storm sewers (vertical) 12 inches
 - (ii) Water mains (vertical-water over sewer) 18 inches or (horizontal) 10 feet
 - (iii) In benched trenches (vertical) 18 inches
 - (iv) Any private or public water supply source, including any WS-I waters or Class I or Class II impounded reservoirs used as a source of drinking water 100 feet
 - (v) Waters classified WS (other than WS-I), B, SA, ORW, HQW, or SB [from normal high water (or tide elevation)] 50 feet
 - (vi) Any other stream, lake or impoundment 10 feet
 - (vii) Any building foundation 5 feet
 - (viii) Any basement 10 feet
 - (ix) Top slope of embankment or cuts of 2 feet or more vertical height 10 feet
 - (x) Drainage systems
 - (I) Interceptor drains 5 feet
 - (II) Ground water lowering and surface drainage ditches 10 feet
 - (xi) Any swimming pool 10 feet
 - (xii) Ferrous sewer pipe with joints equivalent to water main standards shall be used where these minimum separations cannot be maintained. The minimum separation shall however not be less than 25 feet from a private well or 50 feet from a public water supply well;

12. In the event that the facilities fail to perform satisfactorily, including the creation of nuisance conditions, the Permittee shall take immediate corrective action, including those that may be required by this Division, such as the construction of additional or replacement wastewater collection facilities.

13. Noncompliance Notification:

The Permittee shall verbally report to a water quality staff member at 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 either of the following:

- a. Any process unit failure, due to known or unknown reasons, that render the facility incapable of adequate wastewater transport such as mechanical or electrical failures of pumps, line blockage or breakage, etc.
- b. Any failure of a pumping station or sewer line resulting in a by-pass directly to receiving waters without treatment of all or any portion of the influent to such station or facility.

Voice mail messages or faxed information is permissible but this shall not be considered as the initial verbal report. Overflows and spills occurring outside normal business hours may also be reported to the Division of Emergency Management at telephone number (800) 858-0368 or (919) 733-3300. Persons reporting any of the above occurrences shall file a spill report by completing Part I of Form CS-SSO (or the most current Division approved form), within five days following first knowledge of the occurrence. This report shall outline the actions taken or proposed to ensure that the problem does not recur. Per Condition 1(2), Part II of Form CS-SSO (or the most current Division approved form) can also be completed to show that the SSO was beyond control.

14. The Permittee shall maintain on hand for immediate installation a supply of spare, fully operational pump units of each type used in the pressure sewer system. The number of pumps on hand shall not be less than 10 percent of the number of installed units or one unit, whichever is greater.
15. Each pump station shall be clearly and conspicuously posted with the telephone number of the owner/operator of the pressure sewer system and instructions to call the number in the event of high water alarm activation.

Permit issued this the 5th day of October, 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 WQ0030680

Permit No. WQ0030680
October 5, 2006

System Description: approximately 2,071 linear feet of 8-inch gravity sewer and a pressure sewer collection system consisting of 53 – 2.4 HP pump stations with simplex pumps and on-site audible and visual high-water alarms, 6 – 3.5 HP pump stations with simplex pumps and on-site audible and visual high water alarms and approximately 4,976 linear feet of 2-inch pressure sewer, 1,257 linear feet of 3-inch pressure sewer, 3,710 linear feet of 4-inch pressure sewer, 3,866 linear feet of 6-inch pressure sewer, a 255 -GPM pump station with duplex pumps and on-site audible and visual high water alarms, a 140-GPM pump station with duplex pumps and on-site audible and visual high water alarms, approximately 3,614 linear feet of 6-inch force main, approximately 3,683 linear feet of 4-inch force main to serve 94 lots (35 by gravity) in Booth Mountain Phases 1A, 1B, & 1C, and the discharge of 33,840 GPD

Complete and submit this form to the permit issuing office as indicated below with the following:

- One copy of the project record drawings (plan & profile views of sewer lines) of the wastewater collection system extension
- Changes to the project should be clearly identified on the record drawings or in written summary form. Permit modifications are required for any changes resulting in non-compliance with this permit, regulations or minimum design criteria.

This project shall not be considered complete nor allowed to operate until this Engineer's Certification and all required supporting documentation have been received by the Division. **Therefore, it is highly recommended that this certification be sent in a manner that provides proof of receipt by the Division.**

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 subject project 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 of this permit; 15A NCAC 2H .0200; the Division of Water Quality's (Division) Gravity Sewer Minimum Design Criteria adopted February 12, 1996 as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 as applicable; and other supporting materials.

North Carolina Professional Engineer's seal, signature, and date:



**SEND THIS FORM & SUPPORTING DOCUMENTATION
WITH REQUIRED ATTACHMENTS
TO THE FOLLOWING ADDRESS**

**K MARIE DOKLOVIC, PE
PRETREATMENT, EMERGENCY RESPONSE & COLLECTION SYSTEMS UNIT
1617 MAIL SERVICE CENTER
RALEIGH NC 27699-1617**

The Permittee is responsible for tracking all partial certifications up until a final certification is received. Any wastewater flow made tributary to the wastewater collection system extension prior to completion of this Engineer's Certification shall be considered a violation of the permit and shall subject the Permittee to appropriate enforcement actions.



LAND USE EVALUATION
 CIVIL ENGINEERING
 CONSTRUCTION MANAGEMENT

Transmittal

TO: N.C.D.O.T.
300 Country Club Drive
Asheboro, N.C. 27204
ATTENTION Reuben Blakley, PE

DATE: 08/16/06
PROJECT NO: 275-05
Re: Booth Mountain – Phases 1A, 1B, 1C
Driveway permits and Widening for Turn
Lane on SR 1721, Chatham County


Quantity	Drawing No.	Description
5	sets	Driveway Permit Applications – SR 1721 (1A), SR 1717 (1B) and SR 1717 (1C)
5	C-1,EW1, RW-1,10,12	Construction Plans
5	sets	NCDOT Recommended Treatment for Turn Lanes Worksheets
5	sets	Right of Way Encroachment Agreement for Widening of SR 1721
5	sets	3-Party Right of Way Encroachment Agreement for utilities along SR 1721
1		Check for \$50 inspection fee

REMARKS Reuben, Please review. The proposed entrance road will be privately maintained.

Please note the application includes the widening of SR 1520 and utility crossings on each road.

Thank you.

CC:

Signed  CE Group, Inc.
 R. Stephen Rambeau, Jr.

11000 Regency Parkway, Suite 410, Cary, N.C. 27511 – voice (919) 367-8790 fax (919) 367-8791





CHATHAM COUNTY PUBLIC HEALTH DEPARTMENT
Division of Environmental Health
Soil Erosion and Sedimentation Control

August 30, 2006

LETTER OF APPROVAL

Over Jordan, LLC
Attn: Jerry Radman
201 Shannon Oaks Circle, Suite 201
Cary, NC 27511

RE: Project Name: Booth Mountain
Acres approved: 72.9
Total Acres: 299.344
Permit Number: 2006-004
Submitted By: CE Group, Mike Zaccardo
Date Received: 8-15-06

Dear Sir or Madam:

This office has reviewed the subject erosion and sedimentation control plan. We find the plan to be acceptable and hereby issue this Letter of Approval. The enclosed Certificate of Approval must be posted at the job site. This plan approval shall expire two (2) years following the date of approval, if no land-disturbing activity has been undertaken.

Section 6 (l) of the Chatham County Sedimentation and Erosion Control Ordinance requires that a copy of the approved erosion control plan be on file at the job site. Also, this letter gives the notice required by G.S. 113A-61.1(a) of our right of periodic inspection to insure compliance with the approved plan.

North Carolina's Sedimentation Pollution Control Act is performance-oriented, requiring protection of existing natural resources and adjoining properties. If, following the commencement of this project, the erosion and sedimentation control plan is inadequate to meet the requirements of the Chatham County Sedimentation and Erosion Control Ordinance, this office may require revisions to the plan and implementation of the revisions to insure compliance with the Act.

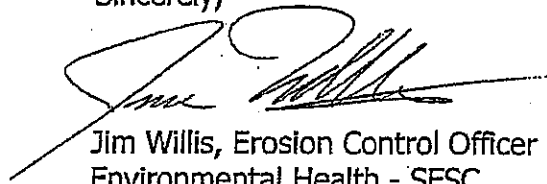
Acceptance and approval of this plan is conditioned upon your compliance with Federal and State water quality laws, regulations, and rules. In addition, local city or county ordinances or rules may also apply to this land-disturbing activity. This approval does not supersede any other permit or approval.

Please be aware that your project will be covered by the enclosed NPDES General Stormwater Permit NCGO1000 (Construction Activities). You should first become familiar with all of the requirements for compliance with the enclosed general permit.

Please note that this approval is based in part on the accuracy of the information provided in the Financial Responsibility Form, which you provided. You are requested to file an amended form if there is any change in the information included on the form. Please notify us when you would like to schedule a preconstruction conference. Notification shall be given at least 7 days prior to initiation of activity.

Your cooperation is appreciated.

Sincerely,



Jim Willis, Erosion Control Officer
Environmental Health - SESC

Enclosures: Certificate of Approval
NPDES Permit



Soil & Environmental Consultants, PA

11010 Raven Ridge Road • Raleigh, North Carolina 27614 • Phone: (919) 846-5900 • Fax: (919) 846-9467
www.SandEC.com

August 31, 2006
S&EC Project # 8126.W2

To: US Army Corps of Engineers
Raleigh Regulatory Field Office
Attn: Todd Tugwell
6508 Falls of Neuse Rd, Suite 120
Raleigh, N.C. 27615

NC Division of Water Quality
401 Oversight and Express Permits Unit
Attn: Cyndi Karoly
2321 Crabtree Boulevard, Suite 250
Raleigh, NC 27604-2260

From: Debbie Edwards
Soil & Environmental Consultants, P.A.
11010 Raven Ridge Road
Raleigh, NC 27614

Re: Booth Mountain
Pittsboro, Chatham County, NC

On behalf of the owners, MacGregor Development Company (Attn: Jerry Radman), please find attached a complete application and supplemental information requesting written concurrence from the U.S. Army Corps of Engineers (USACE) and the North Carolina Division of Water Quality (NC-DWQ) that the activities proposed below may precede utilizing Nationwide Permits 12 & 39. Please contact me at (919) 846-5900 if you have any questions or require additional information.

PROJECT SUMMARY

Project Name	Booth Mountain
Project Type	Residential Development
Owner / Applicant	MacGregor Development Company
County	Chatham
Nearest Town	Pittsboro
Waterbody Name	Herndon Creek
Basin / Sub-basin	03-06-05
Index Number	16-41-4-1-(0.5)
Class	WS-IV; NSW

IMPACT SUMMARY

Stream Impact (acres):	0.0314
Wetland Impact (acres):	0.249
Open Water Impact (acres):	0
Total Impact to Waters of the U.S. (acres):	0.2804
Total Stream Impact (linear feet):	369*

*Please Note that only 94 linear feet of important/perennial stream is proposed to be permanently impacted

Attachments:

- Pre-construction Notification (PCN) Application Form
- Agent Authorization
- USGS Vicinity Map
- Wake County Soil Survey
- Impervious Calculations
- Data sheets
- Impact Maps & Overall Site Plan
- \$475.00 Water Quality Certification Fee

Charlotte Office:
236 LePhillip Court, Suite C
Concord, NC 28025
Phone: (704) 720-9405
Fax: (704) 720-9406

Greensboro Office:
3817-E Lawndale Drive
Greensboro, NC 27455
Phone: (336) 540-8234
Fax: (336) 540-8235

SUBDIVISION: Westfall Crossing

DIRECTIONS: Jack Bennett Road, ± 0.8 miles west of the intersection of Jack Bennett Road and Big Woods Road

DEVELOPER: Over Jordan LLC PHONE NUMBER: 919-465-3312

Major Development: X Minor Development: _____
Development with acreage of 10 acreage of 10 acres or more: _____

Proposed road names	OK to submit	DUPLICATED Do not Submit
<u>Herndon Creek Way</u>	_____	_____
<u>Timber Creek Path</u>	_____	_____
<u>Millers Gap Court</u>	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

DATE SUBMITTED TO EOC: October 6, 2006

SUBMITTED BY: CE Group, Inc.

EOC OFFICER: _____

DATE ROADS APPROVED: _____

DATE FINAL PLAT RECEIVED: _____

DATE GIVEN TO 911: _____

DATE CONTACT MADE WITH NUMBERS: _____

SURROUNDING COUNTY CONTACTED: _____

PERSON SPOKEN WITH: _____

COMMENTS: _____

revised 4/19/02



SUBDIVISION: Westfall Village

DIRECTIONS: Jack Bennett Road, ± 0.6 miles west of the intersection of Jack Bennett Road and Big Woods Road

DEVELOPER: Over Jordan LLC PHONE NUMBER: 919-367-8790

Major Development: X Minor Development: _____
Development with acreage of 10 acreage of 10 acres or more: _____

Proposed road names	OK to submit	DUPLICATED Do not Submit
<u>Wood Laurel Lane</u>	_____	_____
<u>Farnleigh Drive</u>	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

DATE SUBMITTED TO EOC: October 6, 2006

SUBMITTED BY: CE Group, Inc.

EOC OFFICER: _____

DATE ROADS APPROVED: _____

DATE FINAL PLAT RECEIVED: _____

DATE GIVEN TO 911: _____

DATE CONTACT MADE WITH NUMBERS: _____

SURROUNDING COUNTY CONTACTED: _____

PERSON SPOKEN WITH: _____

COMMENTS: _____

revised 4/19/02



October 13, 2006

Mr. Mike Zaccardo, PE
CE Group, Inc
11000 Regency Parkway, Suite 410
Cary, NC 27511

***Re: Approval for
The Legacy Phase 2 & 3 and
Booth Mountain Phase 1A, 1B & 1C***

Dear Mr. Zaccardo:

This letter is to confirm that we have received the Authorization to Construct from NCDEH regarding the Legacy and Booth Mountain, and that the plans have been approved by Chatham County Water Department. Before the projects begin, you will need to contact Michelle Ballard to schedule a pre-construction meeting.

The hydraulics for the Parks at Meadowview, Creekside and The Bluffs has been approved by Chatham County Water Department as well. You can proceed for submittals to planning. Please contact Thomas Bender, Chatham County Fire Marshall regarding the approval of the hydrant locations.

Also, please submit to our office the original mark-ups for both projects. If I can be of further assistance, please contact me at 919-542-8238.

Sincerely,

COUNTY OF CHATHAM

Roy Lowder
Utilities Director



LAND USE EVALUATION
 CIVIL ENGINEERING
 CONSTRUCTION MANAGEMENT

Transmittal

TO: Chatham County Public Works
Hand Delivery
ATTENTION: Roy Lowder

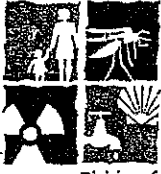
DATE: 04/27/06
PROJECT NO: 275-05
RE: Booth Mountain Subdivision Phases 1A, 1B & 1C
Water Distribution Submittal Package

Quantity	Drawing No.	Description
3 ea.	Dated 4/27/06	Application for Water System Approval
3 sets	Dated 4/21/06	Construction Drawings
3 ea.	Dated 4/27/06	Engineers Report

REMARKS Roy : Please call should you require additional information.

CC: Jerry Radman, MacGregor
 Bruce Herbert, MacGregor

Signed CE Group, inc.
 Mike Zaccardo, PE

**Division of Environmental Health**

Terry L. Pierce, Director

State of North Carolina

Michael F. Easley, Governor

Public Water Supply Section

Jéssica G. Miles, Section Chief

Department of Environment and
Natural Resources

William G. Ross, Secretary

September 8, 2006

CHARLIE HORNE
P O BOX 1550
PITTSBORO, NC 27312

Re: **Authorization to Construct**
BOOTH MOUNTAIN S/D,PH 1A,1B,1C
CHATHAM CO WATER SYSTEM
CHATHAM COUNTY NC0319126

Dear Applicant:

This letter is to confirm that a complete Engineer's Report and a Water System Management Plan have been received, and that engineering plans and specifications have been approved by the Department for **BOOTH MOUNTAIN S/D,PH 1A,1B,1C, DEH Serial No. 06-01130.**

The Authorization to Construct is valid for 24 months from the date of this letter. Authorization to Construct may be extended if the Rules Governing Public Water Supplies and site conditions have not changed. The Authorization to Construct and the engineering plans and specifications approval letter, shall be posted at the primary entrance of the job site before and during construction.

Approval must be secured from the Department before any construction or installation if:

- Deviation from the approved engineering plans and specifications is necessary; or
- There are changes in site conditions affecting capacity, hydraulic conditions, operating units, the function of water treatment processes, the quality of water to be delivered, or conditions imposed by the Department in any approval letters.

Upon completion of the construction or modification and in accordance with Rule .0303, the applicant shall submit a certification statement directly to HENRI OU of this office. This statement must be signed and sealed by a registered professional engineer stating that construction was completed in accordance with approved engineering plans and specifications, including any provisions stipulated in the Department's engineering plan and specification approval letter. Prior to Final Approval, the applicant shall submit a signed certification stating that the requirements in 15A NCAC 18C .0307 (d) and (e) have been satisfied and if applicable, a completed application for an Operating Permit and fee. Once the certification statements and operating permit application and fee, if applicable, are received and determined adequate, the Department will grant Final Approval in accordance with Rule .0309 (a). Therefore, no construction, alteration, or expansion of a water system shall be placed into service until Final Approval has been issued by the Department.

If we can be of further assistance, please call (919) 733-2321.

Sincerely,

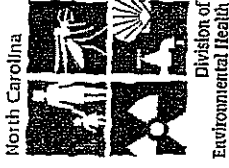
Tony C. Chen, P.E.
Technical Services Branch
Public Water Supply Section

TCC:H50

cc: MICHAEL L. DOUGLAS, P.E., REGIONAL ENGINEER
C E GROUP INC



State of North Carolina
 Department of Environment and Natural Resources
 Division of Environmental Health



Public Water System Authorization to Construct

Public Water System Name
 and PWSID No. (if available):

CHATHAM CO WATER SYSTEM
 NC0319126

Project Name:

BOOTH MOUNTAIN S/D, PH 1A, 1B, 1C

Serial No.

06-01130

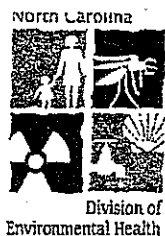
Issue Date:

9/8/2006

Expiration Date:

24 months after Issue Date

In accordance with NCAC 18C .0305, this Authorization to Construct must be posted for inspection at the primary entrance to the job site during construction.



Division of Environmental Health

Terry L. Pierce, Director

Public Water Supply Section

Jessica G. Miles, Section Chief

State of North Carolina
Michael F. Easley, Governor

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

September 6, 2006

Mr. Charlie Horne, County Manager
County of Chatham
Post Office Box 1550
Pittsboro, North Carolina 27312

Re: Engineering Plans and Specifications Approval
Water Main Extension
Chatham County Water System to serve
Booth Mountain Subdivision, Phase 1A, 1B and 1C
Chatham County
I.D. # 03-19-126

This is not an Authorization to Construct

Dear Mr. Horne:

Enclosed please find one copy of the "Application for Approval..." together with one copy of the referenced engineering plans and specifications bearing the Division of Environmental Health stamp of approval for the referenced project. These engineering plans and specifications are approved under Division of Environmental Health serial number 06-01130, dated September 1, 2006.

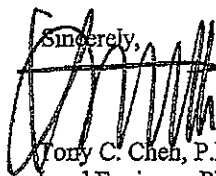
Engineering plans and specifications prepared by Michael V Zaccardo, P.E., call for the installation of approximately 9,895 feet of 8-inch and 2,519 feet of 2-inch water mains, valves, three (3) USC approved reduced pressure backflow preventers each on two pump stations and one wastewater treatment plant, and other related appurtenances along Spine Road, Road A, Road B, Road C, Road D, Road E, Road F, Road G, Road H, Road I, Road J, Road K, Road L, Road M and Road N to serve Booth Mountain Subdivision Phase 1A, 1B and 1C with 94 lots located between Lystra Road and Jack Bennet Road.

Please note that an "Authorization to Construct" requires both this approval of Engineering Plans and Specifications and submittal of a complete Engineer's Report and Water System Management Plan. No construction shall be undertaken, and no contract for construction, alteration, or installation shall be entered into until the Department issues an Authorization to Construct letter in accordance with 15A NCAC 18C .0305(a).

These plans and specifications in the foregoing application are approved insofar as the protection of public health is concerned as provided in the rules, standards and criteria adopted under the authority of Chapter 130A-317 of the General Statutes. This approval does not constitute a warranty of the design, construction or future operation of the water system.

One copy of each enclosed document is being forwarded to our Raleigh Regional Office. The third copy is being retained in our permanent files.

If we can be of further service, please call on us at (919) 733-2321.

Sincerely,


Tony C. Cheh, P.E.
Lead Engineer, Plan Review
Technical Services Branch

TCC/HSO/db

Enclosures: Approval Documents

cc: Michael L. Douglas, Regional Engineer
Chatham County Health Department
C.E. Group, Inc.

1634 Mail Service Center, Raleigh, North Carolina 27699-1634
Telephone 919-733-2321 ▲ Fax 919-715-4374 ▲ Lab Form Fax 919-715-6637
<http://ncdrinkingwater.state.nc.us/>

An Equal Opportunity / Affirmative Action Employer

One
North Carolina
Naturally

C E GROUP INC
11000 REGENCY PKWY
STE 410
CARY, NC 27518

BRADSHAW & ROBINSON, LLP

ATTORNEYS AND COUNSELORS AT LAW

HALL-LONDON HOUSE

128 HILLSBORO STREET

POST OFFICE BOX 607

PITTSBORO, NORTH CAROLINA 27312

PATRICKE E. BRADSHAW
NICOLAS P. ROBINSON
COURTNEY A. BOWEN
ANDREW T. SLAWTER

(919) 542-2400

FAX 542-0496

robinson@bradshawrobinson.com

October 10, 2006

Dr. Ann Y. Hart
Chatham County Schools
Post Office Box 128
Pittsboro, North Carolina 27312

RE: Roadways in Subdivisions

Dear Dr. Hart:

Enclosed are certain site plans enumerated below for comments by the Chatham County School system, if any, with regard to the roadways. The proposed plats submitted are for the following subdivisions:

1. The Parks at Meadowview, Phase 1B (72 lots);
2. Creekside Subdivision (30 lots);
3. The Bluffs Subdivision (Phase 1, 36 lots);
4. Booth Mountain, Phases 1A, 1B and 1C (94 lots).

Please let us know if you have any comments or concerns regarding the roadways shown on the enclosed proposed plats. We will be filing for plat approvals on October 16, 2006.

Very truly yours,



Nicolas P. Robinson

NPR:jbs

Enclosures

c: Keith Megginson

Nick Robinson

From: "Mark Ashness" <mark@cegrouppinc.com>
To: "Nick Robinson" <robinson@bradshawrobinson.com>
Sent: Wednesday, October 11, 2006 4:42 PM
Attach: Environmental report 6-23.pdf
Subject: FW: Boothe Mtn. Environmental report

From: Mark Ashness [mailto:mark@cegrouppinc.com]
Sent: Monday, July 03, 2006 10:46 AM
To: 'keith.megginson@ncmail.net'
Cc: 'Bruce Herbert'
Subject: FW: Boothe Mtn. Environmental report

Keith: Attached is S&EC's findings. Please let us know if you should require additional information.

Thanks

Mark Ashness, PE ASLA
CE Group, INC

1051 Pemberton Hill Road

Suite 201

Apex, NC 27502

(919) 367-8790 phone

(919) 367-8791 fax

(919) 606-7704 mobile

From: Bruce Herbert [mailto:BHerbert@macgregordev.com]
Sent: Wednesday, June 28, 2006 3:57 PM
To: Mark Ashness
Cc: Jerry Radman
Subject: Boothe Mtn. Environmental report

Mark,
Would you please forward this to Keith for us?

Thanks,
Bruce Herbert
MacGregor Development Company
201 Shannon Oaks Circle Suite 201
Cary, NC 27511

(919) 465-3312 (o) (919) 465 3383 (fax)



Soil & Environmental Consultants, PA

11010 Raven Ridge Road • Raleigh, North Carolina 27614 • Phone: (919) 846-5900 • Fax: (919) 846-9467
www.SandEC.com

June 23, 2006

S&EC Project No.:8126.W2

MacGregor Development
Attn: Bruce Herbert
201 Shannon Oaks Circle, Suite 201
Cary, North Carolina 27511

Re: Addendum: Environmental Status Report for Booth Mountain Property
Chatham County, North Carolina

This Addendum is to discuss the field survey of sweetpinesap (*Monotropsis odorata*).
Please see the protected species section below.

Dear Mr. Herbert:

The purpose of this report is to advise you on the plant community types and the potential for protected species on the Booth Mountain Project. The site is located on the northern side of Jack Bennet Road (S.R. 1717) approximately 2000 feet from its intersection with Big Woods Road (S.R. 1716). The subject property is approximately 314 acres in size.

Executive Summary

There are four federally listed in Chatham County, NC, none of which were observed onsite during the field survey. Of the thirty-three state listed species in Chatham County, none were observed on the property.

Introduction

Under the Endangered Species Act (ESA) (1973), species may be listed as either "endangered" or "threatened." Endangered means a species is in danger of extinction throughout all or a significant portion of its range. Threatened means a species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. All species of plants and animals, except pest insects and non-native species, are eligible for listing as endangered or threatened. For the purposes of the ESA, Congress defined species to include subspecies, varieties, and, for vertebrates, distinct population segments.

Section 4 of the ESA specifies that a species must be listed as endangered or

threatened solely on the basis of its biological status and threats to its existence. When evaluating a species for listing, five factors are considered: 1) damage to, or destruction of, a species' habitat; 2) overuse of the species for commercial, recreational, scientific, or educational purposes; 3) disease or predation; 4) the inadequacy of existing protection; and 5) other natural or human related threats to the species' survival. When one or more of these factors imperils the survival of a species, the United States Fish and Wildlife Service (FWS) takes action to protect it. To ensure the accuracy of the data, the FWS decides all listings using sound science and peer review.

Section 7 of the ESA requires federal agencies to use their legal authorities to promote the conservation purposes of the law. This section also requires federal agencies to consult with the FWS to ensure that actions they authorize, fund, or carry out will not jeopardize listed species. The consulting agency then receives a "biological opinion" on the proposed action. In the relatively few cases where the FWS or National Marine Fisheries Service (NMFS) determines that the proposed action will January 1998 jeopardize the species, they must offer "reasonable and prudent alternatives" about how the proposed action could be modified to avoid potential impacts to the protected species. It is very rare to withdraw or terminate projects because of jeopardy to a listed species, however conditions to, and modifications of projects are common.

Section 10 of the ESA provides relief to private landowners who want to develop land inhabited by listed species. Landowners can receive a permit for the take of a listed species that may occur incidental to otherwise legal activities, provided they have developed an approved Habitat Conservation Plan (HCP). HCPs include an assessment of the likely impacts on the species from the proposed action, the steps that will be taken to minimize and mitigate those impacts, and the funding available to carry out those steps. When the FWS approves the HCP, the landowner can apply for an "incidental take" permit, which allows them to proceed with the proposed action.

RECORDS REVIEW

The North Carolina Natural Heritage Program (NHP) records occurrences of rare plant and animal species, exemplary natural communities, and special animal habitats known to occur in North Carolina. An updated record check was performed in June 2006.

Chatham County Federally Listed species:

- 1) Bald Eagle (*Haliaeetus leucocephalus*)
- 2) Red-cockaded Woodpecker (*Picoides borealis*)
- 3) Cape Fear Shiner (*Notropis mekistocholes*)
- 4) Harperella (*Ptilimnium nodosum*).

Other state-listed species and/or Federal Species of Concern:

Aimophila aestivalis

Bachman's sparrow

NC-SC

US-FSC

<i>Lanius ludovicianus</i>	Loggerhead shrike	NC-SC	
<i>Phalacrocorax auritus</i>	Double-crested cormorant	NC-SR	
<i>Hemidactylium scutatum</i>	Four-toed salamander	NC-SC	
<i>Etheostoma collis</i> pop.2	Carolina darter	NC-SC	US-FSC
<i>Moxostoma</i> sp 2	Carolina redhorse	NC-SR	US-FSC
<i>Alasmidonta undulata</i>	Triangle floater	NC-T	
<i>Alasmidonta varicosa</i>	Brook floater	NC-E	US-FSC
<i>Fusconaia masoni</i>	Atlantic pigtoe	NC-E	US-FSC
<i>Lampsilis cariosa</i>	Yellow lampmussel	NC-E	US-FSC
<i>Strophitus undulatus</i>	Creepers	NC-T	
<i>Villosa constricta</i>	Notched rainbow	NC-SC	
<i>Villosa delumbis</i>	Eastern creekshell	NC-SR	
<i>Villosa vaughaniana</i>	Carolina creekshell	NC-E	US-FSC
<i>Cambarus davidi</i>	Carolina ladle crayfish	NC-SR	
<i>Choroterpes basalis</i>	a mayfly	NC-SR	
<i>Gomphus abbreviatus</i>	Spine-crowned clubtail	NC-SR	
<i>Gomphus quadricolor</i>	Rapids clubtail	NC-SR	
<i>Gomphus septima</i>	Septima's clubtail	NC-SR	US-FSC
<i>Neurocordulia virginensis</i>	Cinnamon shadowdragon	NC-SR	
<i>Tricorythodes robacki</i>	a mayfly	NC-SR	
<i>Allium cuthbertii</i>	Striped garlic	NC-SR-T	
<i>Baptisia albescens</i>	Thin-pod White Wild Indigo	NC-SR-P	
<i>Collinsonia tuberosa</i>	Piedmont horsebalm	NC-SR-P	
<i>Dichantherium annulum</i>	a witch grass	NC-SR-P	
<i>Fothergilla major</i>	Large witch-alder	NC-SR-T	
<i>Hexastylis lewisii</i>	Lewis's heartleaf	NC-SR-L	
<i>Isoetes virginica</i>	Virginia quillwort	NC-SR-L	US-FSC
<i>Monotropsis odorata</i>	Sweet pinesap	NC-SR-T	US-FSC
<i>Phacelia covillei</i>	Buttercup phacelia	NC-SR-T	US-FSC
<i>Porteranthus stipulatus</i>	Indian physic	NC-SR-P	
<i>Scutellaria nervosa</i>	Veined skullcap	NC-SR-P	
<i>Thermopsis mollis</i>	Appalachian golden-banner	NC-SR-P	

NC-SC: North Carolina Special concern
NC-SR: North Carolina Significantly Rare
NC-T: North Carolina Threatened
NC-E: North Carolina Endangered
US-FSC: US Special concern

"Endangered Species" (E) means any native species documented by biological research and inventory to be in danger of extirpation throughout all or a significant portion of its range within the state and to have no more than five occurrences in the state, and any species determined to be an "endangered species" pursuant to the federal Endangered Species Act.

"Threatened Species" (T) means any native species documented by biological research and inventory to be likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range within the state and to have no more than nine occurrences in the state, and any species determined to be a "threatened species" pursuant to the federal Endangered Species Act, except for such species determined to be endangered by the Commissioner in accordance with section 4 of this act.

"Species of Special Concern" (SC) means any native plant species or any native nonharvested wildlife species documented by scientific research and inventory to have a naturally restricted range or habitat in

the state, to be at a low population level, to be in such high demand by man that its unregulated taking would be detrimental to the conservation of its population or has been extirpated from the state.

"Significantly Rare" (SR) Species which are very rare in North Carolina, generally with 1-20 populations in the state, generally substantially reduced in numbers by habitat destruction (and sometimes also by direct exploitation or disease). These species are generally more common somewhere else in their ranges, occurring in North Carolina peripherally to their main ranges, mostly in habitats which are unusual in North Carolina. Also included are some species with 20-100 populations in North Carolina, if they also have only 50-100 populations rangewide and are declining.

The file review yielded no federally listed plant or animal species found within the project boundaries. The closest protected elemental occurrence, the bald eagle (*Haliaeetus leucocephalus*), was documented approximately 0.6 miles south of the site along Bush Creek. This species is currently federally protected as threatened however is a candidate for delisting. Just north of the site (approximately 600 feet), a federal plant species of concern, *Monotropsis odorata*, was documented.

A significant county feature (Herndon Creek Ravine) is found along Herndon Creek on the subject property and is discussed in a 1988 survey completed by Stephen Hall of the NC Natural Heritage Program and Marjorie Boyer of the NC Plant Conservation Program (see attached). Because of the sensitive nature of this area, a significant amount of time was spent evaluating the ravine for the presence of rare flora and/or fauna. This feature is characterized by mesophytic species along the steep north-facing slopes. However, this site contains a lower diversity of mesophytic species than typically found in similar settings, most likely due to logging activities and past disturbance.

FIELD SURVEY

Natural communities are recurring assemblages of plants and animals found in particular physical environments. Each type of natural community has a unique set of environmental conditions that support certain species that have adapted to those conditions. By examining natural community types a majority of species can be accurately located by eliminating unsuitable habitat for survey. Species-specific action was focused on rare species that occur in only a fraction of the community type that are their habitat. Known populations of listed species were observed for visual references and intense surveys of suitable habitat were conducted.

A field survey was conducted on August 24 and August 25, 2004. Additional site visits were conducted in **June 2006** for *M. odorata*. The purpose of this survey was to determine the plant community types on the property and to assess their potential as habitat for protected species. Transects were walked across the property, and aerial photos and various mapping resources were used to focus the search in areas that would most likely harbor sensitive species.

In order to accurately locate suitable habitat of sweetpinesap (*Monotropsis odorata*) we used Natural heritage Program EO_ID 18744 as a reference population. EO_ID 18744

was documented in a dry-mesic oak-hickory forest with granitic soils and thick leaf litter. Associated vegetation was *Vaccinium pallidum* and *Carex nigro-marginata*. These populations were last observed on February 25, 2002. EO_ID 15678 documented *M. odorata* in a steep ravine along the south side of Morgan Creek. These populations were last observed on July 11, 1988. In June, 2006 we conducted a field survey for *M. odorata* using these documented characteristics as guides. We also walked transects in order to search for *M. odorata* fruiting bodies.

RESULTS

Plant Communities

Mesic Mixed Hardwood Forest

This plant community type is found on the north-facing slopes along Herdon Creek, and extends somewhat onto lower slopes on the north side of the creek. This community is rich and varies in species throughout the growing season. Canopy species consists of red oak (*Quercus rubra*), American beech (*Fagus grandifolia*), tuliptree (*Liriodendron tulipifera*), sweetgum (*Liquidambar styraciflua*), and red maple (*Acer rubrum*). The subcanopy and shrub layer contain umbrella magnolia (*Magnolia tripetala*), witch-hazel (*Hamamelis virginiana*), maple-leaved viburnum (*Viburnum acerifolium*), downy arrowwood (*V. rafinesquianum*), and redbud (*Cercis canadensis*). Herbs are diverse and include round-lobed hepatica (*Hepatica americana*), wild ginger (*Asarum canadense*), heartleaf (*Hexastylis* spp.), iris (*Iris* sp.), trillium (*Trillium* sp.), Christmas fern (*Polystichum acrotichoides*), and ebony spleenwort (*Asplenium platyneuron*).

Oak-hickory Forest

This community type dominates the site (Figure 1). On the higher elevation slopes, the dry oak-hickory forest is more distinct. The dry oak-hickory forest blends into a more dry-mesic oak-hickory forest below about 450 feet. Evidence of past selective logging was observed on most of the site. At the higher elevation, white oak (*Quercus alba*) dominates with fewer mockernut hickory (*Carya tomentosa*), black gum (*Nyssa sylvatica*), red maple, and sweetgum (*Liquidambar styraciflua*). Shortleaf pine (*Pinus echinata*) is found throughout this community. The subcanopy and shrub layer was sparse and contained young red maple, tuliptree, and dogwood. The ground cover was unusual in that it was mostly muscadine grape (*Vitis rotundifolia*). In the dry-mesic oak-hickory forest there is more sweetgum, tuliptree, loblolly pine (*Pinus taeda*), and a variety of oaks (*Quercus* spp.). The more mesic sites have a richer shrub layer, dominated by seedlings of canopy trees.

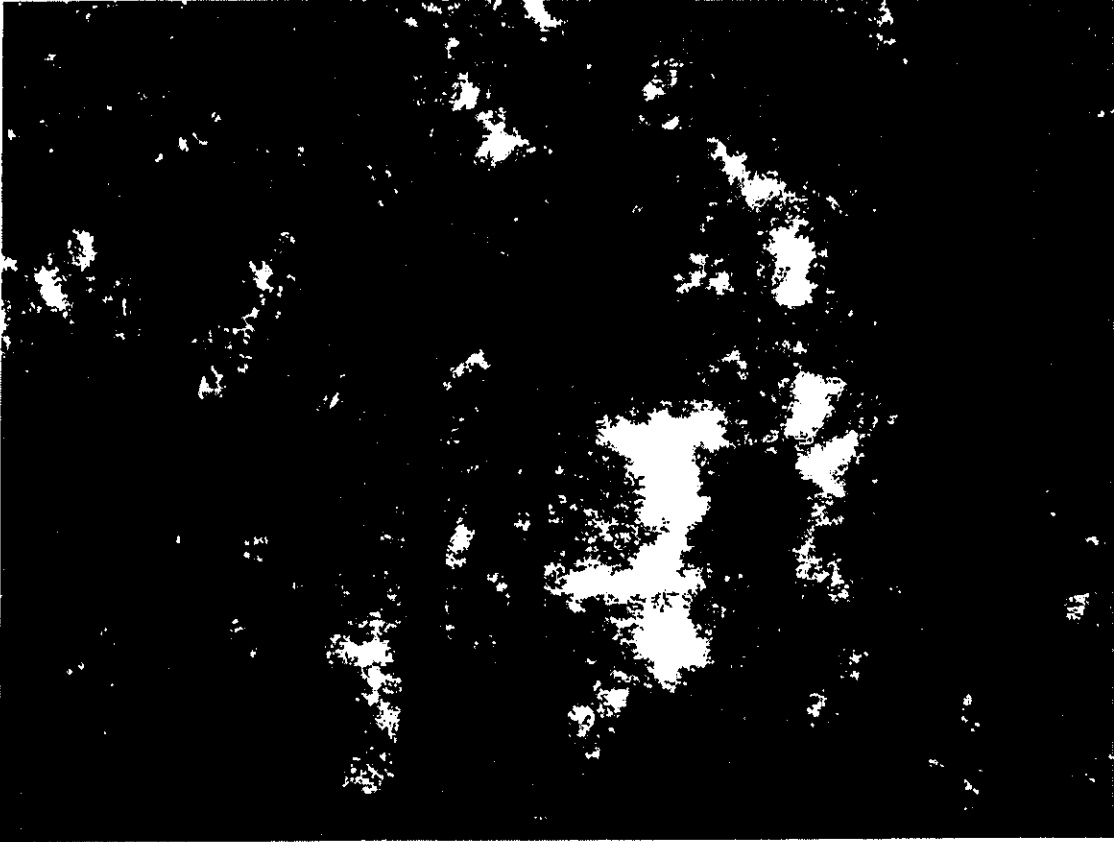


Figure 1. Oak-Hickory Forest at Boothe Hill, Chatham County, North Carolina.

Pine-Hardwood

This community type is used to describe areas in the past that were disturbed as a result of agriculture, abandoned pastures, intense logging and that have now partially reforested or are in the process of reforestation. These areas are composed of typical early successional species such as, loblolly pine, sweetgum, tuliptree, red maple, various oaks, and Eastern red cedar (*Juniperus virginiana*). Adjacent stands have various densities of pine and hardwoods.

Semipermanent Impoundment

This community lies along the lower portion of Herndon Creek. Beaver (*Castor canadensis*) have dammed the creek, raising the water level, and slowing its passage downstream. Most trees in the standing water have died with the exception of black willow (*Salix nigra*), sycamore (*Platanus occidentalis*), red maple, and black gum (*Nyssa biflora*). Wetland herbs include cottongrass bulrush (*Scirpus cyperinus*), cattail (*Typha latifolia*), soft rush (*Juncus effusus*), arrowhead (*Sagittaria* sp.), climbing hemlock (*Mikania scandens*), and mosquito fern (*Azolla caroliniana*).

Low Elevation Seep

This community is very small in extent and is found in several locations. There is usually a small but permanent source of water low on the side of a slope or in a small ravine. Shrubs include highbush blueberry (*Vaccinium corymbosum*) and winterberry (*Ilex verticillata*). Herbs include spotted touch-me-not (*Impatiens capensis*), lizard's tail (*Saururus cernuus*), jack-in-the-pulpit (*Ariseama triphyllum*), royal fern (*Osmunda regalis*), cinnamon fern (*Osmunda cinnomomea*), and several species of mosses.

Protected Species

After the survey of the property and examination of the plant and animal communities no listed species were found within the property boundaries. It was concluded that the required habitat for the terrestrial species that are listed as threatened or endangered in Chatham County does not exist. These are the Bald Eagle (*Haliaeetus leucocephalus*), Red-cockaded Woodpecker (*Picoides borealis*), Cape Fear Shiner (*Notropis mekistocholes*), and Harpersella (*Ptilimnium nodosum*).

There is possible habitat for several state sensitive species:

Four-toed Salamander

The four-toed salamander (*Hemidactylium scutatum*) (NC-SC) is documented from an egg mass observed under sphagnum in the Lessler Montmorillonite Forest (NHP EO ID 9662). *Hemidactylium scutatum* is a small, slender salamander is orange to grayish brown above, sometimes with small black and bluish speckles on the sides. The tail is

constricted (narrows) at its base, and there are only four toes on each hind foot (most salamanders have five toes). Adults are 2 to 4 inches (5 to 10 cm) long. Suitable

habitat is found throughout much of the state, but only where boggy ponds or spring fed creeks are available in or near damp wooded habitat. When not breeding, they take refuge under rotting logs and leaf litter. They eat insects and insect larvae, spiders, worms, and other small invertebrates. Suitable habitat for *H. scutatum* occurs on property, but no individuals were encountered in the field survey. Potential habitat for this species is found in several locations on site, however no individuals were observed.

Piedmont Horsebalm (*Collinsonia tuberosa*), significantly rare-peripheral, is found in rich hardwood forests or moist forests. This perennial herb flowers from late July through September.

Buttercup Phacelia (*Phacelia covillei*) [= *P. ranunculacea*], significantly rare-throughout, is found on bottomlands and rich lower slopes. This species is a delicate spring ephemeral. Potential habitat for these species exists on the site, no individuals were observed.

Large Witch-alder (*Fothergilla major*), significantly rare-throughout, is a shrub found on dry ridgetops and bluffs. There is marginal habitat for this species on site. However, no individuals were observed.

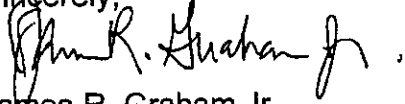
Sweet Pinesap (*Monotropsis odorata*), is significantly rare-throughout North Carolina. *Monotropsis odorata* is a very small plant that blooms in early spring, and is found in mixed deciduous woods. There is a known location of this species north of the site; therefore, we surveyed the site for associated habitat and vegetation. In order to accurately locate suitable habitat of sweetpinesap (*Monotropsis odorata*) we used Natural heritage Program EO_ID 18744 as a reference population. EO_ID 18744 was documented in a dry-mesic oak-hickory forest with granitic soils and thick leaf litter. Associated vegetation was *Vaccinium pallidum* and *Carex nigro-marginata*. These populations were last observed on February 25, 2002. EO_ID 15678 documented *M. odorata* in a steep ravine along the south side of Morgan Creek. These populations were observed on July 11, 1988. In June, 2006 we conducted a field survey for *M. odorata* using these documented characteristics as guides. We also walked transects in order to search for *M. odorata* fruiting bodies. Surveys indicated potential habitat for *Monotropsis odorata* occurs on site, but no individuals were observed.

CONCLUSION

No federally protected species were found on the property during the evaluation. Based on site observations it is unlikely that the development of this tract will have a negative impact on populations of endangered and/or threatened species known to occur in Chatham County provided threatened and endangered species are not encountered during the additional recommended surveys.

If you have any questions or need additional services please call us.

Sincerely,



James R. Graham Jr.
Biologist / Environmental scientist



David Gainey
Environmental scientist





LAND USE EVALUATION
 CIVIL ENGINEERING
 CONSTRUCTION MANAGEMENT

Transmittal

TO: Chatham County Planning Dept.
Post Office Box 54
Pittsboro, N.C. 27312-0054
ATTENTION: Keith Megginson

DATE: June 8, 2006
PROJECT NO: 275-05
RE: Stormwater Management Plan
Booth Mountain
Chatham County, NC

Quantity	Drawing No.	Description
2	sets	Stormwater Management Plans
2	Sealed 5/31/06	Water Quality Pond Calculations

REMARKS For review and approval. Please give me a call if you have any questions or need any additional information. Thank you.

CC: CE Group, inc.

Signed _____
 Mike Zaccardo, PE

11000 Regency Parkway, Suite 410 Cary, N.C. 27511 919-367-8790 voice 919-367-8791 fax