



North Carolina Department of Environment and Natural Resources

Division of Water Quality

Coleen H. Sullins

Director

Beverly Eaves Perdue  
Governor

Dee Freeman  
Secretary

May 18, 2009

WILLIAM MUMFORD – ASSISTANT SECRETARY  
BRIAR CHAPEL UTILITIES, LLC  
16 WINDY KNOLL CIRCLE  
CHAPEL HILL, NORTH CAROLINA 27516

Subject: Permit No. WQ0028552  
Briar Chapel Development  
Wastewater Treatment, Irrigation  
and Non-Conjunctive Reclaimed  
Water Utilization System  
Chatham County

Dear Mr. Mumford:

In accordance with your permit modification request received April 23, 2009, and subsequent additional information received May 7, 2009, we are forwarding herewith Permit No. WQ0028552, dated May 18, 2009, to Briar Chapel Utilities, LLC for the continued operation of the Phase A wastewater treatment plant, 5-day upset pond and main wet weather storage pond, and the construction and operation of the remaining subject wastewater treatment, wastewater irrigation and non-conjunctive reclaimed water utilization facilities.

The subject modification is to add approximately 9.5 acres of non-conjunctive reclaimed utilization area along the existing parkway between US 15-501 and the bridge at Pokeberry Creek. This additional utilization area shall be known as Phase 1C.

This permit shall be effective from the date of issuance until March 31, 2010, shall void Permit No. WQ0028552 issued May 22, 2008, 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.

Please note this permit contains two new permit conditions since the last permit issuance. Please review these conditions carefully:

- Condition I.3. – This condition requires the Permittee to abandon water supply well WSW-38 prior to operation of Phase 1C spray heads that throw within 100 feet of the aforementioned well.

AQUIFER PROTECTION SECTION

1636 Mail Service Center, Raleigh, North Carolina 27699-1636

Location: 2726 Capital Boulevard, Raleigh, North Carolina 27604

Phone: 919-733-3221 \ FAX 1: 919-715-0588; FAX 2: 919-715-6048 \ Customer Service: 1-877-623-6748

Internet: [www.ncwaterquality.org](http://www.ncwaterquality.org)

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- Condition II.17. – This condition requires the Permittee to aerate those areas in Phase 1C affected by significant compaction prior to any utilization of reclaimed water on those sites.

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 or [nathaniel.thornburg@ncdenr.gov](mailto:nathaniel.thornburg@ncdenr.gov).

Sincerely,

  
Coleen H. Sullins

cc: Chatham County Health Department  
Raleigh Regional Office, Aquifer Protection Section  
Mark P. Ashness, PE – CE Group  
Technical Assistance and Certification Unit  
APS Central Files  
LAU Files

**NORTH CAROLINA**  
**ENVIRONMENTAL MANAGEMENT COMMISSION**  
**DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**  
**RALEIGH**

**WASTEWATER TREATMENT, WASTEWATER IRRIGATION AND NON-CONJUNCTIVE  
RECLAIMED WATER UTILIZATION SYSTEM PERMIT**

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

PERMISSION IS HEREBY GRANTED TO

**Briar Chapel Utilities, LLC**  
Chatham County

FOR THE

operation of a wastewater treatment, wastewater irrigation and non-conjunctive reclaimed water utilization facility consisting of the:

continued operation of a 250,000 gallon per day (GPD) extended aeration wastewater treatment plant (i.e., Phase A) consisting of: dual static screens for grit removal (serving Phases A, B and C); a manually cleaned bar screen; a 75,400 gallon aerated flow equalization basin with two (2) 225 gallon per minute (GPM) variable speed pumps each with an influent flow meter and one (1) 7.5 horsepower (hp) aerator; two (2) 31,500 gallon anoxic chambers each with two (2) 3 hp mixers; two (2) 189,000 gallon aeration basins each with two (2) 10 hp aerators; two (2) 31,500 gallon clarifiers each with one (1) variable speed sludge return pump; a 75,400 gallon sludge holding basin with one (1) variable speed decanting pump and one (1) 7.5 hp aerator; a 10,730 gallon chlorine contact chamber with two (2) variable speed chlorine injection pumps; a 16,800 gallon mudwell with two (2) 200 GPM return pumps; two (2) 90 square foot (ft<sup>2</sup>) tertiary filters; a 13,800 gallon clearwell with four (4) 675 GPM backwash pumps (pumps serve Phases A, B and C); dual banks of ultraviolet (UV) modules each with 10 bulbs; a 6,850 gallon dechlorination chamber with two (2) air diffusers; an effluent flow measuring device (serving Phases A, B and C); an effluent turbidimeter (serving Phases A, B and C); a permanent auxiliary generator (serving Phases A, B and C); and all associated piping, valves and appurtenances; the

continued operation of: a 3.5 million gallon (MG) clay lined five day upset pond with a 400 GPM dual submersible pumps station and audible/visual alarms; and a 21.3 MG clay lined central storage pond with dual 2,000 GPM flooded suction pumps; the

construction and operation of two additional 250,000 GPD extended aeration wastewater treatment plants to be constructed (i.e., Phases B and C) with each phase consisting of: a manually cleaned bar screen; a 75,400 gallon aerated flow equalization basin with two (2) 225 GPM variable speed pumps each with an influent flow meter and one (1) 7.5 hp aerator; two (2) 31,500 gallon anoxic chambers each with two (2) 3 hp mixers; two (2) 189,000 gallon aeration basins each with two (2) 10 hp aerators; two (2) 31,500 gallon clarifiers each with one (1) variable speed sludge return pump; a 75,400 gallon sludge holding basin with one (1) variable speed decanting pump and one (1) 7.5 hp aerator; a 10,730 gallon chlorine contact chamber with two (2) variable speed chlorine injection pumps; a 16,800 gallon mudwell with two (2) 200 GPM return pumps; two (2) 90 ft<sup>2</sup> tertiary filters; dual banks of ultraviolet (UV) modules each with 10

bulbs; a 6,850 gallon dechlorination chamber with two (2) air diffusers; and all associated piping, valves and appurtenances; the

construction and operation of a 253,027 GPD reclaimed water utilization system (Phase 1A: Fields C-1A through E-4C) consisting of: thirty-five (35) irrigation zones comprising approximately 82.2 acres; a 14.1 MG clay lined east storage pond with dual 1,200 GPM vertical turbine pumps serving nine (9) irrigation zones consisting of approximately 42.1 acres; and all associated piping, valves and appurtenances; the

construction and operation of a 51,499 GPD wastewater irrigation system (Phase 1B: Fields B-1A through B-9C) consisting of: sixteen (16) irrigation zones comprising approximately 22.0 acres; and all associated piping, valves and appurtenances; and the

construction and operation of a 21,749 GPD non-conjunctive reclaimed water utilization system (Phase 1C) consisting of: one (1) irrigation zone comprising approximately 9.48 acres; and all associated piping, valves and appurtenances; and the

to serve the Briar Chapel Development, with no discharge of wastes to the surface waters, pursuant to the application received April 23, 2009, and subsequent additional information received by the Division of Water Quality (Division), and in conformity with the project plan, specifications, and other supporting data subsequently filed and approved by the Department of Environment and Natural Resources and considered a part of this permit.

This permit shall be effective from the date of issuance until March 31, 2010, shall void Permit No. WQ0028552 issued May 22, 2008, and shall be subject to the following specified conditions and limitations:

## **I. SCHEDULES**

1. Upon completion of construction and prior to operation of this permitted facility, a certification (see attached form) 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 including the location of all monitoring wells as applicable. 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 Aquifer Protection Section, Division of Water Quality, 1636 Mail Service Center, Raleigh, NC 27699-1636.
2. The Raleigh Regional Office, telephone number (919) 791-4200, shall be notified at least forty-eight (48) hours in advance (excluding weekends and holidays) of operation of the installed facilities so that an in-place inspection can be made. Such notification to the regional supervisor shall be made during the normal office hours from 8:00 a.m. until 5:00 p.m. on Monday through Friday, excluding State Holidays.
3. Prior to operation of any Phase 1C spray heads that throw within 100 feet of water supply well WSW-38, said well shall be permanently abandoned. Within thirty (30) days of abandonment, a Well Abandonment Record (GW-30 form) that lists this permit number and the appropriate well identification number shall be completed for each well abandoned and mailed to N.C. Division of Water Quality, Aquifer Protection Section, 1636 Mail Service Center, Raleigh, N.C. 27699-1636. The well shall be abandoned by a North Carolina Certified Well Contractor according to the North Carolina Well Construction Standards (15A NCAC 02C .0113) and local county rules.

4. No later than six months prior to the expiration of this permit, the Permittee shall request renewal of this permit on official Division forms. Upon receipt of the request, the Division will review the adequacy of the facilities described therein, and if warranted, will renew the permit for such period of time and under such conditions and limitations as it may deem appropriate. Please note that Rule 15A NCAC 02T .0105(d) requires an updated site map to be submitted with the permit renewal application.
5. Prior to commencement of irrigation, an updated soil scientist site evaluation shall be submitted for all areas that have been significantly impacted during construction or altered by grading, cutting or filling. This report shall specifically address, but not be limited to, soil features such as soil compaction and saturated hydraulic conductivity of the least permeable layer, as well as any other properties that might impact the soil's ability to accept irrigation water. The report shall certify that the disturbed areas are capable of accepting the designed annual hydraulic loading rate. The requested information must be received and acknowledged in writing by the Aquifer Protection Section, 1628 Mail Service Center, Raleigh, NC 27699-1628, prior to any irrigation of wastewater.

## **II. PERFORMANCE STANDARDS**

1. The wastewater irrigation and non-conjunctive 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 contravention of groundwater or surface water standards. In the event that the facilities fail to perform satisfactorily, including the creation of nuisance conditions due to improper operation and maintenance, 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, such as the construction of additional or replacement wastewater treatment and disposal facilities.
2. The issuance of this permit shall not relieve the Permittee of the responsibility for damages to ground or surface waters resulting from the operation of this facility.
3. Effluent limitations shall not exceed those specified in Attachment A.
4. Application rates, whether hydraulic, nutrient, or other pollutant shall not exceed those specified in Attachment B.
5. The compliance and review boundaries for the specified reclaimed utilization areas (i.e., Phase 1A) are established at the property boundary. Any exceedance of standards at the Compliance or Review Boundary shall require action in accordance with 15A NCAC 02L .0106.
6. The compliance and review boundaries for the specified reclaimed utilization areas (i.e., Phase 1C) and the wastewater irrigation areas complying with 15A NCAC 02T .0506(c) (i.e., Phase 1B) are established at the irrigation/utilization area boundaries. Any exceedance of standards at the Compliance or Review Boundary shall require action in accordance with 15A NCAC 02L .0106.
7. The Permittee shall apply for a permit modification prior to any sale or transfer of property that affects a compliance boundary to establish a new compliance boundary.
8. In accordance with 15A NCAC 02L .0107(d), no wells, other than monitoring wells, shall be constructed within the compliance boundary except as provided by 15A NCAC 02L .0107(g).

9. Except as provided for in 15A NCAC 02L .0107(g), the Permittee shall ensure that any landowner who owns land within the compliance boundary, but who is not the Permittee, shall execute and file with the Register of Deeds in the county in which the land is located an easement running with the land that contains the following items:
- A notice of the permit and number or other description as allowed in 15A NCAC 02L .0107(f)(1);
  - Prohibits construction and operation of water supply wells within the compliance boundary; and
  - Reserves the right of the Permittee or the State to enter the property within the compliance boundary for purposes related to the permit.

The Director may terminate the easement when its purpose has been fulfilled or is no longer needed.

10. The facilities permitted herein must be constructed according to the following setbacks:

- a. The setbacks for reclaimed utilization sites (Phase 1A & Phase 1C) shall be as follows (all distances in feet):

i. Surface waters not classified SA:	25
ii. Surface waters classified SA:	100
iii. Any well with exception to monitoring wells	100

- b. The setbacks for the wastewater irrigation sites (Phase 1B) shall be as follows (all distances in feet):

a. Any habitable residence or place of public assembly under separate ownership:	400
b. Any habitable residence or place of public assembly owned by the Permittee:	200
c. Any private or public water supply source:	100
d. Surface waters:	100
e. Groundwater lowering ditches:	100
f. Surface water diversions:	25
g. Any well with exception of monitoring wells:	100
h. Any property line:	150 *
i. Top of slope of embankments or cuts of two feet or more in vertical height:	15
j. Any water line from a disposal system:	10
k. Subsurface groundwater lowering drainage systems:	100
l. Any swimming pool:	100
m. Public right of way:	50
n. Nitrification field:	20
o. Any building foundation or basement:	15

\* Setback may be reduced to zero in accordance with 15A NCAC 2T .0506(c).

- c. The setbacks for treatment and storage units shall be as follows (all distances in feet):

i. Any habitable residence or place of public assembly under separate ownership:	100
ii. Any private or public water supply source:	100
iii. Surface waters:	50
iv. Any well with exception of monitoring wells:	100
v. Any property line:	50

11. The following shall be requirements for the reclaimed water distribution, storage, and utilization facilities (at a minimum Phase 1A & Phase 1C, but may include Phase 1B at the Permittee's discretion):
  - a. All reclaimed water valves, storage facilities, and outlets shall be tagged or labeled to warn the public or employees that the water is not intended for drinking. Where appropriate, such warning shall inform the public or employees to avoid contact with the water.
  - b. All reclaimed water piping, valves, outlets, and other appurtenances shall be color-coded, taped, or otherwise marked to identify the source of the water as being reclaimed water.
    - i. All reclaimed water piping and appurtenances shall be either colored purple (i.e., Pantone 522) and embossed or integrally stamped or marked "CAUTION: RECLAIMED WATER – DO NOT DRINK" or be installed with a purple (i.e., Pantone 522) identification tape or polyethylene vinyl wrap. The warning shall be stamped on opposite sides of the pipe and repeated every three feet or less.
    - ii. Identification tape shall be at least three inches wide and have white or black lettering on purple (i.e., Pantone 522) field stating "CAUTION: RECLAIMED WATER – DO NOT DRINK." Identification tape shall be installed on top of reclaimed water pipelines, fastened at least every 10 feet to each pipe length and run continuously the entire length of the pipe.
  - c. All reclaimed water valves and outlets shall be of a type, or secured in a manner, that permits operation by authorized personnel only.
  - d. Above-ground hose bibs (i.e., spigots or other hand-operated connections) shall not be present. Hose bibs shall be located in locked below-grade vaults that shall be clearly labeled as being of non-potable quality. As an alternative to the use of locked below-grade vaults with standard hose bibs services, hose bibs, which can only be operated by a special tool or connected to a special hose connection, may be placed in non-lockable underground services boxes clearly labeled as non-potable water.
12. The Permittee shall maintain an active cross-connection control program that shall have the following minimum requirements (at a minimum Phase 1A & Phase 1C, but may include Phase 1B at the Permittee's discretion):
  - a. No direct cross-connections shall be allowed between the reclaimed water and potable water systems.
  - b. A reduced pressure principle backflow preventer, an approved air gap separation, or other device approved by the Division of Environmental Health shall be installed at the potable water service connection to the use area where both reclaimed water and potable water are supplied to a reclaimed water use area. The installation of the reduced pressure principle backflow prevention device shall allow proper testing.
  - c. An air gap separation, approved and regularly inspected by the Permittee shall be provided between the potable water and reclaimed water systems where potable water is used to supplement a reclaimed water system.
13. Reclaimed water distribution lines (at a minimum Phase 1A & Phase 1C, but may include Phase 1B at the Permittee's discretion) shall be located 10 feet horizontally from and 18 inches below any water line where practicable. Where these separation distances cannot be met, the piping and integrity testing procedures shall meet water main standards in accordance with 15A NCAC 18C.
14. Reclaimed water distribution lines (at a minimum Phase 1A & Phase 1C, but may include Phase 1B at the Permittee's discretion) shall not be less than 100 feet from a well unless the piping and integrity testing procedures meet water main standards in accordance with 15A NCAC 18C, but no case shall they be less than 25 feet from a private well or 50 feet from a public well.

15. Reclaimed water distribution lines (at a minimum Phase 1A & Phase 1C, but may include Phase 1B at the Permittee's discretion) shall meet the separation distances to sewer lines in accordance with Rule .0305 of Subchapter 02T.
16. The wastewater irrigation and reclaimed water utilization systems shall be connected to a rain or moisture sensor that shall indicate when reclaimed water application is not appropriate in accordance with Condition III.4. and III.5. of this permit.
17. Areas in Phase 1C affected by significant compaction shall be identified and the soil aerated prior to any irrigation in Zone C with reclaimed water.

### **III. OPERATION AND MAINTENANCE REQUIREMENTS**

1. The facilities shall be properly maintained and operated at all times. 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. The Permittee shall maintain an Operation and Maintenance Plan pursuant to 15A NCAC 02T .0507 & .0913 including operational functions, maintenance schedules, safety measures, and a spill response plan.
2. Upon classification of the wastewater treatment, wastewater irrigation and non-conjunctive reclaimed water utilization 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 08G .0200. The ORC shall visit the facilities in accordance with 15A NCAC 08G .0200 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 such that crop health is optimized, allows for even distribution of effluent, and allows inspection of the wastewater irrigation and non-conjunctive reclaimed water utilization systems.
4. Adequate measures shall be taken to prevent wastewater ponding or runoff from the wastewater irrigation and non-conjunctive reclaimed water utilization sites.
5. Wastewater irrigation and non-conjunctive reclaimed water utilization shall not be performed during inclement weather or when the ground is in a condition that will cause ponding or runoff.
6. All waste application equipment must be tested and calibrated at least once per permit cycle. Records of the calibration must be maintained for five years.
7. No type of wastewater other than that from the Briar Chapel Development shall be applied to the wastewater irrigation and non-conjunctive reclaimed water utilization sites.
8. An automatically activated standby power source shall be on site and operational at all times capable of powering all essential treatment units. If a generator is employed as an alternate power supply, it shall be tested weekly by interrupting the primary power source.
9. No traffic or equipment shall be allowed on the wastewater irrigation and non-conjunctive reclaimed water utilization sites except while installation occurs or while normal maintenance is being performed.
10. Public access to the land application sites shall be controlled.
11. The residuals generated from these treatment facilities must be disposed / utilized in accordance with 15A NCAC 02T .1100. The Permittee shall maintain a residual management plan pursuant to 15A NCAC 02T .0508 & .0914.



12. Diversion or bypassing of the untreated wastewater from the treatment facilities is prohibited.
13. Freeboard in the five-day upset pond, central storage pond and east storage pond shall not be less than two (2) feet at any time.
14. Gauges to monitor waste levels in the five-day upset pond, central storage pond and east storage pond shall be provided. These gauges 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 the lowest point on top of the dam elevations.
15. A protective vegetative cover shall be established and maintained on all earthen basin embankments (outside toe of embankment to maximum allowable temporary storage elevation on the inside of the embankment), 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.
16. 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.
17. The permitted wastewater treatment facility shall treat domestic strength wastewater only. The wastewater treatment plant shall not accept any wastewater from commercial facilities deemed industrial (i.e., from processes of trade or business, Laundromats, or vehicle/equipment washes) per Regulation 15A NCAC 2T .0103(20).

#### **IV. MONITORING AND REPORTING REQUIREMENTS**

1. Any monitoring (including groundwater, surface water, soil or plant tissue analyses) deemed necessary by the Division to ensure surface and ground water protection will be established and an acceptable sampling reporting schedule shall be followed.
2. All laboratory analyses for effluent, ground waters, or surface waters shall be made by a laboratory certified by the Division for the required parameter(s) under 15A NCAC 02H .0800.
3. Flow through the treatment facility shall be continuously monitored and daily flow values shall be reported on Form NDMR.

The Permittee shall install and maintain an appropriate flow measurement device consistent with approved engineering and scientific practices to ensure the accuracy and reliability of 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, and
  - c. Percent from true flow.
4. The effluent from the subject facilities shall be monitored by the Permittee at the frequencies and locations for the parameters specified in Attachment A.

5. The Permittee tracking the amount of wastewater irrigation and non-conjunctive reclaimed water utilization shall maintain adequate records. These records shall include, but are not necessarily limited to, the following information:
  - a. Date of wastewater irrigation and non-conjunctive reclaimed water utilization,
  - b. Volume of wastewater irrigated and reclaimed water utilized,
  - c. Field irrigated/utilized,
  - d. Length of time field is irrigated/utilized,
  - e. Continuous weekly, monthly, and year-to-date hydraulic (inches/acre) loadings for each field,
  - f. Continuous monthly and year-to-date loadings for any non-hydraulic parameter specifically limited in Attachment B for each field,
  - g. Weather conditions, and
  - h. Maintenance of cover crops.
6. Freeboard (waste level to the lowest elevation on the top of the embankment) in the 5-day upset pond, central storage pond and east storage pond shall be recorded weekly.
7. 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.
8. A maintenance log shall be maintained at this facility including but not limited to the following items:
  - a. Visual observations of the plant and plant site.
  - b. Record of preventative maintenance (i.e., changing of equipment, adjustments, testing, inspections and cleanings, etc.).
  - c. Date of calibration of flow measurement device.
  - d. Date and results of power interruption testing on alternate power supply.
9. Three (3) copies of all monitoring data [as specified in Conditions IV.3. and IV.4.] on Form NDMR for each PPI and three (3) copies of all operation and disposal records [as specified in Conditions IV.5 and IV.6.] on Form NDAR-1 for every field shall be submitted on or before the last day of the following month. If no activities occurred during the monitoring month, monitoring reports are still required documenting the absence of the activity. All information shall be submitted to the following address:
 

Division of Water Quality  
 Information Processing Unit  
 1617 Mail Service Center  
 Raleigh, North Carolina 27699-1617
10. An annual representative soils analysis (Standard Soil Fertility Analysis) shall be conducted on each wastewater irrigation field (i.e., Phase 1B) and the results maintained on file by the Permittee for a minimum of five years. The Standard Soil Fertility Analysis shall include, but is not necessarily limited to, the following parameters:

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

## 11. Noncompliance Notification:

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

- a. Any occurrence at the wastewater treatment facility which results in the treatment of significant amounts of wastes which are abnormal in quantity or characteristic, such as the dumping of the contents of a sludge digester; the known passage of a slug of hazardous substance through the facility; or any other unusual circumstances including ponding in the wastewater irrigation or reclaimed utilization areas or runoff from the wastewater irrigation or reclaimed utilization areas.
- 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 disposal system resulting in a by-pass directly to receiving waters.
- d. Any time that self-monitoring information indicates that the facility has gone out of compliance with its permit limitations including, but not limited to, freeboard measurements, effluent limitations, exceedances of groundwater standards, or overloading of any irrigation or utilization area.

For any emergency that requires immediate reporting (e.g., discharges to surface waters, imminent failure of a storage structure, etc.) outside normal business hours must 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.

## V. INSPECTIONS


1. Adequate inspection and maintenance shall be provided by the Permittee to ensure 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 five 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. 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.
2. 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.
3. This permit is effective only with respect to the nature and volume of wastes described in the application and other supporting data. No variances to applicable rules governing the construction and / or operation of the permitted facilities are granted unless specifically requested and granted in this permit.
4. 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) that have jurisdiction. Of particular concern to the Division are applicable river buffer rules in 15A NCAC 02B .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 02B .0200 and 02H .0500.
5. 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 on official Division form(s), 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. The Permittee of record shall remain fully responsible for compliance until a permit is issued to the new owner.
6. The Permittee shall retain a set of approved plans and specifications for the life of the facilities permitted herein.
7. The Permittee shall maintain this permit until all permitted facilities herein are properly closed or permitted under another permit issued by the appropriate permitting authority.
8. The Permittee must pay the annual fee within thirty (30) days after being billed by the Division. Failure to pay the fee accordingly may cause the Division to initiate action to revoke this permit pursuant to 15A NCAC 02T .0105(e).

Permit issued this the 18<sup>th</sup> day of May 2009

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

  
for Coleen H. Sullins, Director  
Division of Water Quality  
By Authority of the Environmental Management Commission

Permit Number WQ0028552

Permit No. WQ0028552  
May 18, 2009

**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 \_\_\_\_\_

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# ATTACHMENT A - LIMITATIONS AND MONITORING REQUIREMENTS

Permit Number: WQ0028552

Version: 1.3

## PPI 001 – WWTF Effluent

EFFLUENT CHARACTERISTICS	EFFLUENT LIMITS						MONITORING REQUIREMENTS		
	Monthly Average		Monthly Geometric Mean		Daily Minimum		Daily Maximum	Measurement Frequency	Sample Type
Parameter Description - PCS Code	10		mg/l		15		mg/l	2 x Month	Composite
BOD, 5-Day (20 Deg. C) - 00310								3 x Year <sup>2</sup>	Composite
Chloride (as Cl) - 00940								5 x Week	Grab
Chlorine, Total Residual – 50060								2 x Month <sup>1</sup>	Grab
Coliform, Fecal MF, M-FC Broth, 44.5C - 31616	14		#/100ml		25		#/100ml	Continuous	Recording
Flow, in conduit or thru treatment plant - 50050	316,412 <sup>3</sup>		GPD		6		mg/l	2 x Month	Composite
Nitrogen, Ammonia Total (as N) - 00610	4		mg/l					2 x Month	Composite
Nitrogen, Nitrate Total (as N) - 00620					6		s.u.	5 x Week	Grab
pH – 00400								3 x Year <sup>2</sup>	Composite
Solids, Total Dissolved - 70300	5		mg/l		10		mg/l	2 x Month	Composite
Solids, Total Suspended - 00530 - Summer					10		ntu	Continuous	Recording
Turbidity, HCH Turbidimeter – 00076									

1. Monthly average for Fecal Coliform shall a geometric mean.
2. 3 x Year monitoring shall be conducted in March, July & November.
3. The monthly average daily flow is limited to 316,412 GPD due to available wet weather storage capacity.

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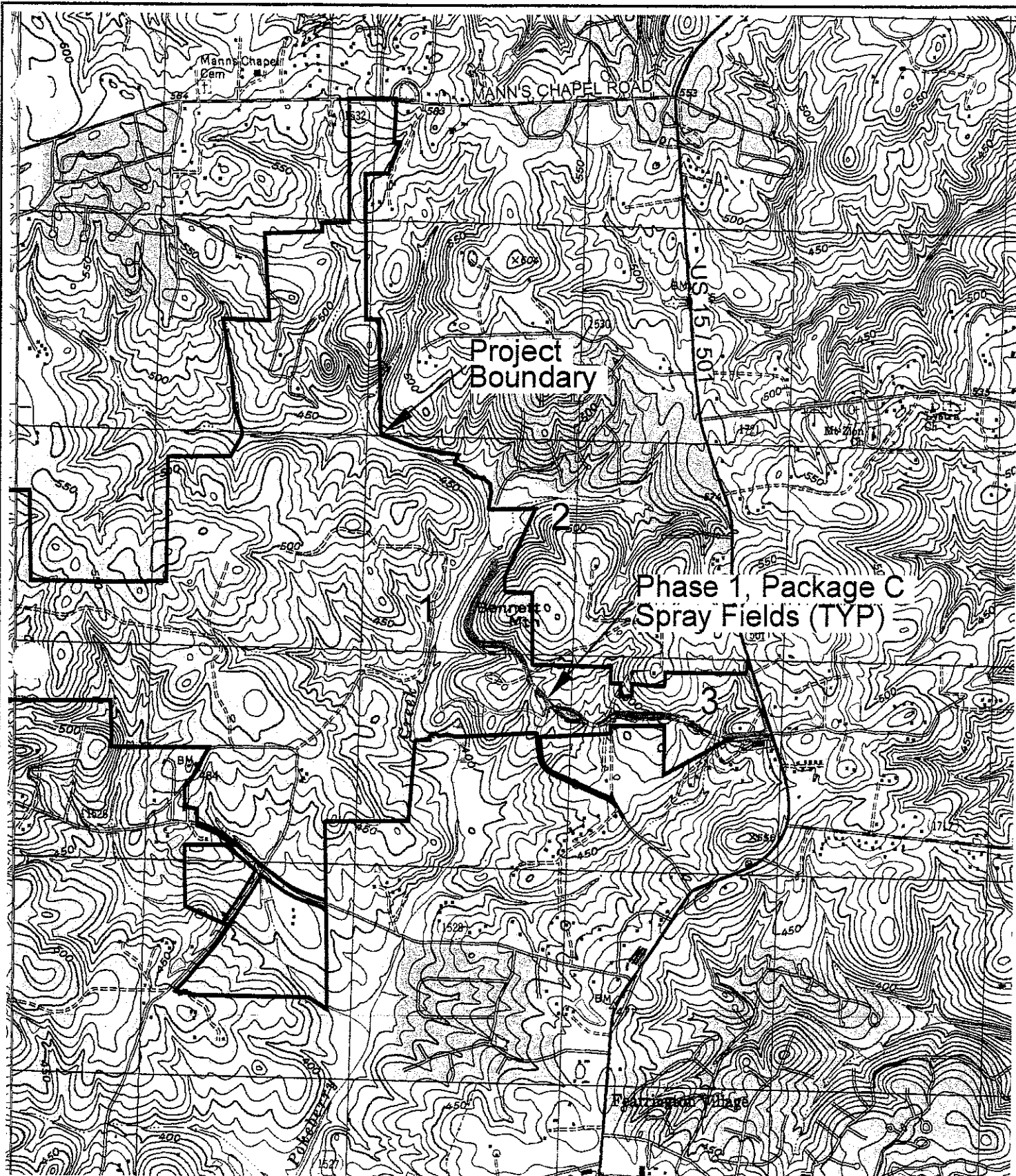


## Briar Chapel Utilities, LLC – Briar Chapel Development

IRRIGATION / UTILIZATION AREA INFORMATION							APPLICATION LIMITATIONS			
Field	Owner	County	Latitude	Longitude	Net Acreage	Dominant Soil Series	Parameter	Hourly Rate	Yearly Max	Units
B-1A	Briar Chapel Utilities LLC	Chatham	35° 49' 28"	-79° 05' 58"	9.90	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-1B	Briar Chapel Utilities LLC	Chatham	35° 49' 25"	-79° 06' 05"	1.70	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
B-2A	Briar Chapel Utilities LLC	Chatham	35° 49' 22"	-79° 06' 15"	0.30	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
B-3B	Briar Chapel Utilities LLC	Chatham	35° 49' 36"	-79° 06' 11"	0.20	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-3C	Briar Chapel Utilities LLC	Chatham	35° 49' 41"	-79° 06' 11"	0.20	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-4A	Briar Chapel Utilities LLC	Chatham	35° 49' 42"	-79° 06' 17"	0.60	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-5A	Briar Chapel Utilities LLC	Chatham	35° 49' 07"	-79° 06' 34"	0.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-6A	Briar Chapel Utilities LLC	Chatham	35° 49' 07"	-79° 06' 31"	1.10	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-7A	Briar Chapel Utilities LLC	Chatham	35° 49' 59"	-79° 06' 28"	2.30	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-7B	Briar Chapel Utilities LLC	Chatham	35° 50' 16"	-79° 06' 32"	0.60	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-8A	Briar Chapel Utilities LLC	Chatham	35° 50' 14"	-79° 06' 26"	0.10	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-8B	Briar Chapel Utilities LLC	Chatham	35° 50' 32"	-79° 06' 27"	1.90	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-8D	Briar Chapel Utilities LLC	Chatham	35° 50' 25"	-79° 06' 25"	0.70	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
B-8E	Briar Chapel Utilities LLC	Chatham	35° 50' 37"	-79° 06' 22"	0.50	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
B-9A	Briar Chapel Utilities LLC	Chatham	35° 50' 42"	-79° 06' 26"	1.10	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
B-9C	Briar Chapel Utilities LLC	Chatham	35° 50' 41"	-79° 06' 20"	0.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-1A	Briar Chapel Utilities LLC	Chatham	35° 48' 35"	-79° 06' 47"	8.00	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-2A	Briar Chapel Utilities LLC	Chatham	35° 48' 45"	-79° 06' 38"	1.40	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-2B	Briar Chapel Utilities LLC	Chatham	35° 48' 44"	-79° 06' 35"	0.90	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-2C	Briar Chapel Utilities LLC	Chatham	35° 48' 38"	-79° 06' 35"	6.10	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-2D	Briar Chapel Utilities LLC	Chatham	35° 48' 41"	-79° 06' 36"	1.80	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-3A	Briar Chapel Utilities LLC	Chatham	35° 48' 52"	-79° 06' 55"	0.90	Wedowee	01284 - Application Surface Irrigation	0.10	19.95	inches
C-3B	Briar Chapel Utilities LLC	Chatham	35° 48' 50"	-79° 06' 50"	0.80	Wedowee	01284 - Application Surface Irrigation	0.10	19.95	inches
C-3C	Briar Chapel Utilities LLC	Chatham	35° 48' 47"	-79° 06' 49"	0.40	Wedowee	01284 - Application Surface Irrigation	0.10	19.95	inches

C-3D	Briar Chapel Utilities LLC	Chatham	35° 48' 43"	-79° 06' 46"	0.40	Wedowee	01284 - Application Surface Irrigation	0.10	19.95	inches
C-3E	Briar Chapel Utilities LLC	Chatham	35° 48' 50"	-79° 06' 53"	9.80	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-3F	Briar Chapel Utilities LLC	Chatham	35° 48' 42"	-79° 06' 44"	3.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-5A	Briar Chapel Utilities LLC	Chatham	35° 49' 05"	-79° 06' 25"	4.10	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-6A	Briar Chapel Utilities LLC	Chatham	35° 49' 10"	-79° 06' 01"	0.50	Rion	01284 - Application Surface Irrigation	0.10	19.95	inches
C-6B	Briar Chapel Utilities LLC	Chatham	35° 49' 10"	-79° 06' 54"	0.10	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-6C	Briar Chapel Utilities LLC	Chatham	35° 49' 13"	-79° 06' 58"	0.20	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-6D	Briar Chapel Utilities LLC	Chatham	35° 49' 10"	-79° 06' 58"	0.70	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-9A	Briar Chapel Utilities LLC	Chatham	35° 49' 21"	-79° 07' 11"	4.20	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-9B	Briar Chapel Utilities LLC	Chatham	35° 49' 15"	-79° 07' 09"	3.20	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-12A	Briar Chapel Utilities LLC	Chatham	35° 49' 29"	-79° 07' 23"	2.00	Rion	01284 - Application Surface Irrigation	0.10	19.95	inches
C-12B	Briar Chapel Utilities LLC	Chatham	35° 49' 28"	-79° 07' 12"	2.60	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-12C	Briar Chapel Utilities LLC	Chatham	35° 49' 25"	-79° 07' 19"	3.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-12D	Briar Chapel Utilities LLC	Chatham	35° 49' 18"	-79° 07' 15"	0.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-13A	Briar Chapel Utilities LLC	Chatham	35° 49' 26"	-79° 07' 00"	0.40	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-13B	Briar Chapel Utilities LLC	Chatham	35° 49' 29"	-79° 06' 59"	1.00	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-13C	Briar Chapel Utilities LLC	Chatham	35° 49' 33"	-79° 07' 03"	1.10	Rion	01284 - Application Surface Irrigation	0.10	19.95	inches
C-13D	Briar Chapel Utilities LLC	Chatham	35° 49' 36"	-79° 06' 59"	1.00	Rion	01284 - Application Surface Irrigation	0.10	19.95	inches
C-13E	Briar Chapel Utilities LLC	Chatham	35° 49' 31"	-79° 06' 59"	2.70	Pacolet	01284 - Application Surface Irrigation	0.10	37.31	inches
C-13F	Briar Chapel Utilities LLC	Chatham	35° 49' 28"	-79° 07' 03"	6.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-15A	Briar Chapel Utilities LLC	Chatham	35° 49' 32"	-79° 06' 46"	3.50	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-15B	Briar Chapel Utilities LLC	Chatham	35° 49' 38"	-79° 06' 40"	0.90	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-15C	Briar Chapel Utilities LLC	Chatham	35° 49' 25"	-79° 06' 38"	0.90	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-15D	Briar Chapel Utilities LLC	Chatham	35° 49' 32"	-79° 06' 50"	0.90	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-15E	Briar Chapel Utilities LLC	Chatham	35° 49' 40"	-79° 06' 45"	1.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-16A	Briar Chapel Utilities LLC	Chatham	35° 49' 25"	-79° 06' 26"	6.20	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-20A	Briar Chapel Utilities LLC	Chatham	35° 49' 48"	-79° 07' 00"	0.40	Helena	01284 - Application Surface Irrigation	0.10	37.31	inches
E-1A	Briar Chapel Utilities LLC	Chatham	35° 49' 21"	-79° 06' 01"	10.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
E-2A	Briar Chapel Utilities LLC	Chatham	35° 49' 16"	-79° 06' 49"	9.00	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches

E-3A	Briar Chapel Utilities LLC	Chatham	35° 49' 13"	-79° 05' 30"	0.80	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
E-3B	Briar Chapel Utilities LLC	Chatham	35° 49' 11"	-79° 05' 22"	2.20	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
E-3C	Briar Chapel Utilities LLC	Chatham	35° 49' 10"	-79° 05' 27"	3.50	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
E-3D	Briar Chapel Utilities LLC	Chatham	35° 49' 12"	-79° 05' 39"	0.90	Rion	01284 - Application Surface Irrigation	0.10	37.31	inches
E-4A	Briar Chapel Utilities LLC	Chatham	35° 49' 16"	-79° 05' 35"	3.10	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
E-4B	Briar Chapel Utilities LLC	Chatham	35° 49' 18"	-79° 05' 18"	2.90	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
E-4C	Briar Chapel Utilities LLC	Chatham	35° 49' 16"	-79° 05' 26"	9.30	Rion	01284 - Application Surface Irrigation	0.10	37.31	inches
Phase 1C	Briar Chapel Utilities LLC	Chatham	35° 49' 14"	-79° 05' 46"	9.48	Wedowee	01284 - Application Surface Irrigation	0.10	30.84	inches
<b>TOTAL</b>					<b>155.68</b>					



0 2000' 4000'



SCALE: 1" = 2000'



NORTH

FARRINGTON, NC

1993

NIMA 6155 I SE-SERIES V842





North Carolina Department of Environment and Natural Resources

Division of Water Quality  
Coleen H. Sullins  
Director

Beverly Eaves Perdue  
Governor

Dee Freeman  
Secretary

August 31, 2009



Mr. William S. Mumford  
NNP – Briar Chapel, LLC  
16 Windy Knoll Circle  
Chapel Hill, NC 27516

Re: Briar Chapel, Chatham County  
DWQ Project # 20050732, Ver. 13; USACE Action ID. No. 200121252  
**APPROVAL of 401 Water Quality Certification with Additional Conditions - MODIFICATION**

Dear Mr. Mumford:

Attached hereto is a copy of Certification No. 3567 issued to Mr. William S. Mumford of NNP- Briar Chapel, LLC, Inc., dated August 31, 2009. **This Certification replaces the Certification issued to you on January 11, 2008, July 21, 2009, and July 24, 2009.** In addition, you should get any other federal, state or local permits before you go ahead with your project including (but not limited to) Solid Waste, Sediment and Erosion Control, Stormwater, Dam Safety, Non-discharge and Water Supply Watershed regulations.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

Coleen Sullins

CHS/cbk/ijm

Attachments: Certificate of Completion

cc: Becky Fox, EPA, 1307 Firefly Road, Whittier, NC 28789  
U.S. Army Corps of Engineers, Raleigh Regulatory Field Office, Wilmington District  
Lauren Witherspoon, DWQ Raleigh Regional Office  
DLR, Raleigh Regional Office  
File Copy  
Nicole Thomson, S&EC, P.A., 11010 Raven Ridge Road, Raleigh, NC 27614

Filename: 050732Ver13BriarChapel(Chatham)401\_IC\_MOD2\_Revised



**NORTH CAROLINA 401 WATER QUALITY CERTIFICATION**

**THIS CERTIFICATION** is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality (DWQ) Regulations in 15 NCAC 2H, Section .0500 to Mr. William S. Mumford of NNP- Briar Chapel, LLC to fill 0.4374 acres of 404/wetland (permanent impact), 0.197 acres 404/wetland (temporary impact), 2,154 linear feet of perennial stream (permanent impact), 612 linear feet of perennial stream (temporary impact), 83 linear feet of intermittent stream (permanent impact), and 22 linear feet of intermittent stream (temporary impact), in the Cape Fear River Basin, to construct the Briar Chapel residential and mixed use development at the site. The site is located west of U.S. Highway 15-501, and north of Andrew's Store Road (SR 1528), and south of Mann's Chapel Road (SR 1532), approximately 5 miles south of Chapel Hill, in Chatham County, North Carolina, pursuant to a permit application dated May 8, 2009, and received by the DWQ on May 8, 2009, by Public Notice issued by the USACE on May 22, 2009, and received by the DWQ on May 22, 2009, and by all additional correspondences received by the DWQ on May 20, 2009 and June 25, 2009.

The application and supporting documentation provides adequate assurance that the proposed work will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application, the supporting documentation, and conditions hereinafter set forth.

This approval is only valid for the purpose and design submitted in the application materials and as described in the Public Notice. If the project is changed, prior to notification a new application for a new Certification is required. If the property is sold, the new owner must be given a copy of the Certification and approval letter and is thereby responsible for complying with all conditions of this Certification. Any new owner must notify the Division and request the Certification be issued in their name. Should wetland or stream fill be requested in the future, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). If any plan revisions from the approved site plan result in a change in stream or wetland impact or an increase in impervious surfaces, the DWQ shall be notified in writing and a new application for 401 Certification may be required. For this approval to be valid, compliance with the conditions listed below is required.

**Conditions of Certification:****1. Impacts Approved**

The following impacts are hereby approved as long as all of the other specific and general conditions of this Certification (or Isolated Wetland Permit) are met. No other impacts are approved including incidental impacts:

<b>Type of Impact</b>	<b>Amount Approved (Units)</b>	<b>Plan Location or Reference</b>
404/401 Wetlands	0.4374 (acres) – permanent impact	Table 2, Application, and Public Notice
404/401 Wetlands	0.197 (acres) – temporary impact	Table 2, Application, and Public Notice
Stream (perennial)	2,154 (linear feet) – permanent impact	Table 2, Application, and Public Notice
Stream (perennial)	612 (linear feet) – temporary impact	Table 2, Application, and Public Notice
Stream (intermittent)	83 (linear feet) – permanent impact	Table 2, Application, and Public Notice
Stream (intermittent)	22 (linear feet) – temporary impact	Table 2, Application, and Public Notice

Sediment and Erosion Control:

2. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:
  - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
  - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
3. No waste, spoil, solids, or fill of any kind shall occur in wetlands, waters, or riparian areas beyond the footprint of the impacts depicted in the 404/401 Permit Application. All construction activities, including the design, installation, operation, and maintenance of sediment and erosion control Best Management Practices, shall be performed so that no violations of state water quality standards, statutes, or rules occur;
4. Sediment and erosion control measures shall not be placed in wetlands or waters without prior approval from the Division. If placement of sediment and erosion control devices in wetlands and waters is unavoidable, design and placement of temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or stream beds or banks, adjacent to or upstream and down stream of the above structures. All sediment and erosion control devices shall be removed and the natural grade restored within two (2) months of the date that the Division of Land Resources or locally delegated program has released the project.
5. Protective Fencing - The outside buffer, wetland or water boundary and along the construction corridor within these boundaries approved under this authorization shall be clearly marked with orange warning fencing (or similar high visibility material) for the areas that have been approved to infringe within the buffer, wetland or water prior to any land disturbing activities.

Continuing Compliance:

6. Mr. William S. Mumford and NNP- Briar Chapel, LLC shall conduct construction activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with section 303(d) of the Clean Water Act) and any other appropriate requirements of State law and federal law. If the Division determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the Division may reevaluate and modify this Certification to include conditions appropriate to assure compliance with such standards and requirements in accordance with 15A NCAC 2H.0507(d). Before modifying the Certification, the Division shall notify Mr. William S. Mumford and NNP- Briar Chapel, LLC and the US Army Corps of Engineers, provide public notice in accordance with 15A NCAC 2H.0503 and provide opportunity for public hearing in accordance with 15A NCAC 2H.0504. Any new or revised conditions shall be provided to Mr. William S. Mumford and NNP- Briar Chapel, LLC in writing, shall be provided to the United States Army Corps of Engineers for reference in any Permit issued

pursuant to Section 404 of the Clean Water Act, and shall also become conditions of the 404 Permit for the project;

7. Construction Stormwater Permit NCG010000

Upon the approval of an Erosion and Sedimentation Control Plan issued by the Division of Land Resources (DLR) or a DLR delegated local erosion and sedimentation control program, an NPDES General stormwater permit (NCG010000) administered by DWQ is automatically issued to the project. This General Permit allows stormwater to be discharged during land disturbing construction activities as stipulated by conditions in the permit. If your project is covered by this permit [applicable to construction projects that disturb one (1) or more acres], full compliance with permit conditions including the sedimentation control plan, self-monitoring, record keeping and reporting requirements are required. A copy of this permit and monitoring report forms may be found at [http://h2o.enr.state.nc.us/su/Forms\\_Documents.htm](http://h2o.enr.state.nc.us/su/Forms_Documents.htm).

Mitigation:

8. Compensatory Mitigation

Compensatory stream mitigation shall be accomplished by using 2,127 linear feet of stream mitigation credit at the Harpers Crossroads stream mitigation site and the remaining 27 linear feet of required stream credit (10:1 ratio = 270 linear feet) from the 63,412 linear feet of available onsite stream preservation. These mitigation efforts shall be protected through use of conservation easement written to satisfy the US Army Corps of Engineers. Uses which may be allowable in the protected stream buffers include water dependent activities and greenway trails upon additional written approval of the Division of Water quality and the US Army Corps of Engineers. These provisions should be explicitly reflected in the conservation easements, or similar mechanisms, written to satisfy the USACE.

The Permittee shall provide stream restoration in accordance with the plan entitled 'Harpers Crossroads Stream Restoration Plan,' dated September 2005. The restoration site, which was authorized with a separate DA nationwide permit (USACE Action Id No. 200420489) has already been constructed. The as-built report dated June 12, 2006 states the total stream restoration generated by the project as 2,127 linear feet. Within 90 days of the USACE's determination that the Harpers Crossroads Stream Restoration Project has met the success criteria outlined in the 'Harpers Crossroads Stream Restoration Plan,' the permittee shall arrange for the transfer of the existing conservation easements to a third-party grantee, subject to approval by the USACE.

Type of Impact	Compensatory Mitigation Required	River and Sub-basin Number
Stream (perennial)	2,154 (linear feet)	Cape Fear/03030002

9. Stormwater Management Plan Implementation Procedures (No Further Approval Needed)

- The approved SMP must be constructed and operational before any permanent building or other structure is occupied at the site. If a development is phased, then the approved SMP for each future phase must be constructed and operational before any permanent building or other structure associated with that phase is occupied.
- The approved SMP as well as drainage patterns must be maintained in perpetuity.
- The SMP may not be modified without prior written authorization from the SMP approval authority. If the SMP falls under another state stormwater program, then a copy of the approval letter and the modified SMP must be submitted to the 401 Oversight/Express Unit prior to the commencement of the modifications.



## 10. Culvert Installation

All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual ([http://www.ncdot.org/doh/operations/BMP\\_manual/download/BMP\\_Manual.pdf](http://www.ncdot.org/doh/operations/BMP_manual/download/BMP_Manual.pdf))

such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.

Culverts required for this project shall be installed in such a manner that the original stream profiles are not altered. Existing stream dimensions (including the cross section dimensions, pattern, and longitudinal profile) must be maintained above and below locations of each culvert. Culverts shall be designed and installed to allow for aquatic life movement as well as to prevent head cutting of the streams. If any of the existing pipes are or become perched, the appropriate stream grade shall be re-established or, if the pipes installed in a perched manner, the pipes shall be removed and re-installed correctly.

Culvert(s) shall not be installed in such a manner that will cause aggradation or erosion of the stream up or down stream of the culvert(s). Existing stream dimensions (including the cross section dimensions, pattern and longitudinal profile) shall be maintained above and below locations of each culvert.

Placement of culverts and other structures in waters, streams, and wetlands must be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in disequilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium shall be maintained if requested in writing by DWQ.

The establishment of native, woody vegetation and other soft stream bank stabilization techniques must be used where practicable instead of rip rap or other bank hardening methods. If rip-rap is necessary, it shall not be placed in the stream bed, unless specifically approved by the Division of Water Quality.

Installation of culverts in wetlands must ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions.

Upon completion of the project, the Applicant shall complete and return the enclosed "Certificate of Completion" form to notify NCDWQ when all work included in the §401 Certification has been completed. The responsible party shall complete the attached form and return it to the 401/Wetlands Unit of the NC Division of Water Quality upon completion of the project. *Please send photographs upstream and downstream of each culvert site to document correct installation along with the Certificate of Completion form.*

## 11. Certificate of Completion

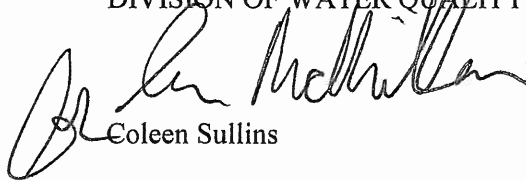
Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return the attached certificate of completion to the 401/Wetlands Unit, North Carolina Division of Water Quality, 1650 Mail Service Center, Raleigh, NC, 27699-1650.

**Also, this approval to proceed with your proposed impacts or to conduct impacts to waters as depicted in your application shall expire upon expiration of the 404 or CAMA Permit.**

August 31, 2009

If this Certification is unacceptable to you, you have the right to an adjudicatory hearing upon written request within sixty (60) days following receipt of this Certification. 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, N.C. 27699-6714. If modifications are made to an original Certification, you have the right to an adjudicatory hearing on the modifications upon written request within sixty (60) days following receipt of the Certification. Unless such demands are made, this Certification shall be final and binding.

This the 31<sup>st</sup> day of August 2009  
DIVISION OF WATER QUALITY



Coleen Sullins

CHS/cbk/ijm

3567



DEPARTMENT OF THE ARMY  
WILMINGTON DISTRICT, CORPS OF ENGINEERS  
69 DARLINGTON AVENUE  
WILMINGTON, NORTH CAROLINA 28403-1343

REPLY TO  
ATTENTION OF

August 21, 2009

Regulatory Division

Action ID. 200121252

Mr. William S. Mumford  
NNP – Briar Chapel, LLC  
16 Windy Knoll Circle  
Chapel Hill, North Carolina 27516

Dear Mr. Mumford:

Reference the Department of the Army (DA) permit issued on October 2, 2006, to Mitch Barron of Newland Communities for impacts associated with the Briar Chapel Development. Also reference the modification to this permit approved in December, 2007. This development is approximately 1,589 acres in size and is located west of US Highway 15-501, north of Andrew's Store Road (SR 1528), and south of Mann's Chapel Road (SR 1532), approximately 5 miles south of Chapel Hill, in Chatham County, North Carolina. Coordinates (in decimal degrees) for the site are 35.8251 ° North, 79.1059 ° West. The site contains several unnamed tributaries and adjacent wetlands of Pokeberry Creek and Wilkinson Creek, in the Cape Fear River Basin (8-Digit Cataloging Unit 03030002).

Permanent impacts authorized by this permit and the subsequent 2007 modification totaled 1,666 linear feet of stream channel and 0.4422 acre of wetland, and temporary impacts totaled 359 linear feet of stream channel and 0.156 acre of wetlands. Mitigation was implemented for the unavoidable impacts by: a) Payment into the North Carolina Ecosystem Enhancement Program for the restoration of 0.6655 acre of riparian wetlands; b) Restoration of 2,127 linear feet of stream channel at the Harpers Crossroads Mitigation Site; and c) On-site preservation of 59.3 acres of wetlands and 63,412 linear feet of stream channel.

Also reference your permit modification request received by the Corps on May 8, 2009. This modification was to address impact amounts and location changes associated with roadway crossings in and near the development. Also included within the requested modification were impacts associated with restoration to streams and wetlands as required to satisfy an existing on-site Clean Water Act violation. On May 22, 2009, a Public Notice was issued detailing this modification request which would bring total impacts associated with Briar Chapel to: 2,237 linear feet of permanent stream channel, 634 linear feet of temporary stream channel, 0.4374 acre of permanent wetland impact,

and 0.197 acres of temporary wetland impact. Please note the attached Tables 1, 2, and 3; originally created by your consultant S&EC, which describe the impact history by site number and amount. No additional mitigation was proposed due to the relatively large amount of preservation mitigation required within the original permit.

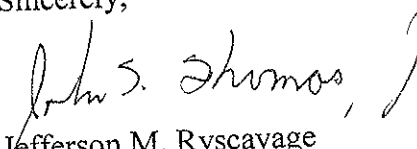
The Corps has completed the evaluation of your request and concurs with your request for a change in impacts associated with your referenced DA permit including the change to plans as requested. No additional mitigation is required for this modification.

Special condition 1 of your permit is hereby modified to read:

"All work authorized by this permit must be performed in strict compliance with the attached plans, Exhibit A, Exhibit E, and/or Exhibit F which are a part of this permit. These plans reflect the original proposal, Exhibit A; and the modifications as depicted within the January 26, and the revised June 7, 2007, proposals as shown in Exhibit E, and the modification request of May 8, 2009, as shown in Exhibit F. Only the attached modification plans reflect approved changes to the original plans, therefore any additional deviations from the original plans are not approved per this modification and any further modification to the plans must be approved by the US Army Corps of Engineers (USACE) prior to implementation. The temporary impacts as identified on Exhibit E shall be removed by May 1, 2008, or the project shall be considered non-compliant with this condition. In addition, the following time deadlines are hereby established for work considered authorized under this 2009 permit modification: all impacts, both temporary and permanent, as shown in the stream repair and stabilization document received with the modification application on May 8, 2009, must be completed prior to April 15, 2010; and all additional temporary impacts, not requested within the stream repair and stabilization document but requested and authorized under this 2009 modification, shall be removed within 30 days of the completion of each respective crossing. Proper documentation of permit compliance for this 2009 modification shall be submitted to the Corps of Engineers Regulatory Representative via email on or before April 15, 2010, or at the time of each temporary impact removal, respectively. "

Please note that all other permit conditions and exhibits remain in effect as written. Should you have questions, contact Mr. Monte Matthews, Raleigh Regulatory Field Office at telephone (919) 554-4884, Extension 30.

Sincerely,

  
for/ Jefferson M. Ryscavage  
Colonel, U.S. Army  
District Commander

Attachments

Copy Furnished (w/o attachment)

Ms. Cyndi Karoly  
Division of Water Quality  
North Carolina Department of Environment  
and Natural Resources  
2321 Crabtree Boulevard, Suite 250  
Raleigh, NC 27604

Copy Furnished (w/attachment)

Ms. Nicole Thomson  
Soil & Environmental Consultants  
11010 Raven Ridge Road  
Raleigh, NC 27614



North Carolina Department of Environment and Natural Resources  
Division of Water Quality

Beverly Eaves Perdue  
Governor

Charles Wakild, P.E.  
Director

Dee Freeman  
Secretary

June 26, 2012

Bill Mumford, Assistant Vice President  
NNP Briar Chapel, LLC  
16 Windy Knoll Circle  
Chapel Hill, NC 27516

Subject: Permit No. WQ0036015  
Briar Chapel Phase 6 North  
Wastewater Collection System Extension  
Chatham County

Dear Mr. Mumford:

In accordance with your permit application received July 29, 2011, we are forwarding herewith Permit No. WQ0036015 dated June 26, 2012, to NNP Briar Chapel, LLC, for the construction and operation of the subject wastewater collection system 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. This cover letter shall be considered a part of this permit and is, therefore, incorporated therein by reference.

**Please pay particular attention to:**

- a) **Permit Condition 3 that requires the wastewater collection facilities be properly operated and maintained in accordance with 15A NCAC 02T .0403 or any individual system-wide collection system permit issued to the Permittee, and**
- b) **Permit Condition 6 that requires Engineering Certification prior to operation of this collection system extension.**

Permitting of this project does not constitute an acceptance of any part of the project that does not meet 15A NCAC 2T; 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.

One  
North Carolina  
*Naturally*

North Carolina Division of Water Quality  
Internet: [www.ncwaterquality.org](http://www.ncwaterquality.org)

Raleigh Regional Office  
1628 Mail Service Center

Surface Water Protection  
Raleigh, NC 27699-1628

Phone (919) 791-4200  
FAX (919) 788-7159

Customer Service  
877-623-6748

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 NNP Briar Chapel, LLC, for the construction and operation of

- approximately 4,808 linear feet of 8-inch gravity sewer

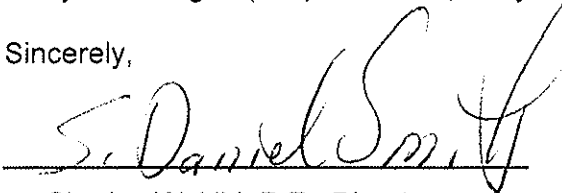
to serve 115 single family dwellings as part of the Briar Chapel Phase 6 North project, and the discharge of 28,750 gallons per day of collected domestic wastewater into the Briar Chapel Utilities' existing sewerage system, pursuant to the application received July 29, 2011, and in conformity with 15A NCAC 2T; the Division's 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 data subsequently filed and approved by the Department of Environment and Natural Resources and considered a part of this permit.

The sewage and wastewater collected by this system shall be treated in the Briar Chapel Utilities Wastewater Treatment Facility, Permit number WQ0028552, prior to being land applied by spray irrigation.

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.

If you have any questions regarding this permit or require any additional information, please contact Barry Herzberg at (919) 791-4200, or by e-mail to [barry.herzberg@ncdenr.gov](mailto:barry.herzberg@ncdenr.gov).

Sincerely,



for Charles Wakild, P.E., Director  
Division of Water Quality

by S. Daniel Smith  
Surface Water Quality Supervisor  
Raleigh Regional Office

cc: Chatham County Health Department  
RRO, SWP Files  
RRO, APS, Jay Zimmerman  
William O'Daniel, PE; John R. McAdams Company, 2905 Meridian Pkwy., Durham, NC 27713  
Central Files

NORTH CAROLINA  
ENVIRONMENTAL MANAGEMENT COMMISSION  
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES  
RALEIGH  
WASTEWATER COLLECTION SYSTEM EXTENSION 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 voidable unless the wastewater collection facilities are constructed in accordance with the conditions of this permit; 15A NCAC 2T; 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 shall be 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 2T .0403. If an individual permit is not required, the following performance criteria shall be met as provided in 15A NCAC 2T .0403:
  - 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.
  - e. High-priority sewer lines shall be inspected at least once per every six-month period of time, such that no more than 6 months elapses between inspections.
  - 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. **This permit shall not be transferable.** In the event there is a desire for the wastewater collection facilities to change ownership, or there is a name change of the Permittee, a formal permit request shall be submitted to the Division accompanied by documentation from the parties involved, and other supporting materials as may be appropriate. The approval of this request shall be considered on its merits and may or may not be approved.



5. Construction of the gravity sewers, pump stations, and force mains 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.
6. Per 15A NCAC 2T .0116, 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. **Gravity sewers installed below the minimum required slope per the Division's Gravity Sewer Minimum Design Criteria shall not be acceptable and shall not be certified until corrected.** If there is an unforeseen obstacle in the field where all viable solutions have been examined, a slope variance can be requested from the Division with firm supporting documentation. This shall be done through a permit modification with fee. Such variance requests will be evaluated on a case-by-case basis. Resolution of such request shall be evident prior to completing and submitting the construction certification.
7. A copy of the construction record drawings shall be maintained on file by the Permittee for the life of the wastewater collection facilities.
8. Failure to abide by the conditions and limitations contained in this permit; 15A NCAC 2T; 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.
9. In the event that the wastewater collection facilities fail to perform satisfactorily, including the creation of nuisance conditions, the Permittee shall take immediate corrective action, including those as may be required by this Division, such as the construction of additional or replacement facilities.
10. The issuance of this permit shall not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that 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 Ch. 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. 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 renders the facility incapable of adequate wastewater transport, such as mechanical or electrical failures of pumps, line blockage or breakage, etc.; or
- 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.

Initial voice mail messages or faxed information 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-

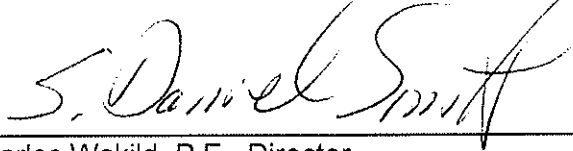
SSO (or the most current Division approved form), within five days following first knowledge of the occurrence. This report shall outline the actions taken or proposed to ensure that the problem does not recur. **The Director, Division of Water Quality, may take enforcement action for SSO's that are required to be reported to the Division unless it is demonstrated that:**

1. The discharge was caused by severe natural conditions and there were no feasible alternatives to the discharge; or
2. The discharge was exceptional, unintentional, temporary, and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

Permit issued this the 26<sup>th</sup> Day of June 2012.

**Permit Number WQ0036015**  
**NNP Briar Chapel, LLC**  
**Briar Chapel Phase 6 North**

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



for Charles Wakild, P.E., Director  
Division of Water Quality  
by Authority of the Environmental Management Commission

by S. Daniel Smith  
Surface Water Quality Supervisor  
Raleigh Regional Office

## FAST TRACK ENGINEERING CERTIFICATION

Permit No. WQ0036015  
NNP Briar Chapel, LLC  
Briar Chapel Phase 6 North  
June 26, 2012

Complete and submit this form (NO SUBSTITUTES) to the Raleigh Regional Office together with the following:

- One copy of the project record drawings (plan & profile views of sewer lines) of the wastewater collection system extension.
- Supporting design calculations (selected pumps, system curve, operating point, available storage if portable generator(s) or storage greater than longest past three year outage reliability option selected) for any pump stations permitted as part of this project

*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 the Division has received this Engineer's Certification and all required supporting documentation. It is highly recommended that this certification be sent in a manner that provides proof of receipt by the Division. The Division does not acknowledge receipt of Fast Track Engineering Certifications!**

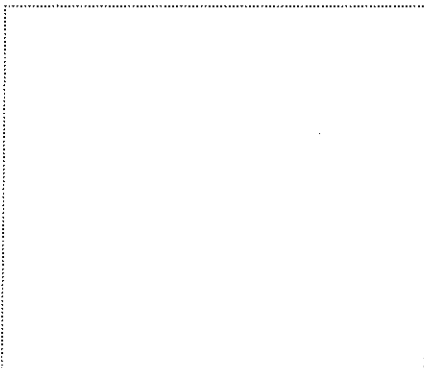
### ENGINEER'S CERTIFICATION

☐ 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 02T; 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**

**RALEIGH REGIONAL OFFICE  
1628 MAIL SERVICE CENTER  
RALEIGH NC 27699-1628**

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.

DWQ use only:  
Flow from this project is tributary to: Briar Chapel

## Sanchez, Mike

---

**From:** Lee Bowman [lbowman@newlandco.com]  
**Sent:** Tuesday, August 14, 2012 3:09 PM  
**To:** Sanchez, Mike  
**Subject:** FW: New Street Names for Briar Chapel

**Importance:** High

---

**From:** Lee Bowman  
**Sent:** Wednesday, July 11, 2012 11:42 AM  
**To:** Selina R Day  
**Subject:** Fw: New Street Names for Briar Chapel  
**Importance:** High

Lee Bowman  
Project Manager  
Newland Communities  
16 Windy Knoll Circle  
Chapel Hill, NC 27516  
T. 919.951.0712  
C. 919.697.1323  
F. 919.951.0711  
[lbowman@newlandco.com](mailto:lbowman@newlandco.com)  
[www.newlandco.com](http://www.newlandco.com)  
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**From:** Lesa Chavis [<mailto:lesa.chavis@chathamnc.org>]  
**Sent:** Wednesday, July 11, 2012 08:10 AM  
**To:** Lee Bowman  
**Cc:** Denise Suits <[denise.suits@chathamnc.org](mailto:denise.suits@chathamnc.org)>  
**Subject:** RE: New Street Names for Briar Chapel

Several of the road names are duplicates and cannot be used.

Thanks,

Lesla Chavis, E-911 Specialist  
Chatham County Emergency Operations

---

**From:** Lee Bowman [<mailto:lbowman@newlandco.com>]  
**Sent:** Friday, June 15, 2012 4:05 PM

**To:** Lesa Chavis

**Subject:** New Street Names for Briar Chapel

Lesa,

Below is a list of new street names that we'd like see if you begin reviewing. I've got a new plat that we'll be submitting for final in August or September and wanted to get that ball rolling.

Also, I look forward to getting together with you and the postmaster soon to discuss any of the logistical challenges that you all have recently encountered.

Below are the proposed street names for new roads:

Winding Way dup  
Woodland Drive dup  
Rosewood Drive dup  
Tanglewood Drive dup  
Surrey Lane dup  
Briarhill Court  
Schoolhouse Lane dup  
Yellow Brick Road dup  
Crooked Creek Drive dup  
Shady Creek Court dup  
Sunnycrest Road  
Candlewood Lane dup  
Carolina Colors Way  
Firefly Lane dup  
Greenleaf Drive  
Sleepy Ridge Way  
Stoneybrook Drive dup  
Weathersby Drive  
Idlewood Drive  
Antler Point Road dup  
Weathervane Road dup  
Preservation Way dup  
Wisteria Lane (had to try 😊)dup  
Bramble Lane  
Glen Mine Rd dup  
Horton Dr. dup  
Pitt Dr.  
Deep River Cir. dup  
Knob Creek Dr. dup  
Red Point Dr.  
Buttress Way Dr.  
Cannondale Dr.  
Fisher Ct.dup  
Rock Shock Dr.  
Oak Hills Lane dup  
Habersham Drive  
Tarwick Avenue  
Banbury Drive dup  
Torcross Drive  
Rush Road dup

Mirror Lake Drive  
Westlawn Ave  
Pinecrest Drive dup  
Kingswood Road dup  
Pine Valley Loop  
Edgewater Drive dup  
Foxhall Road  
Cliffdale Road  
Churchill Drive dup

**Lee Bowman**  
**Project Manager**  
**Newland Communities**  
16 Windy Knoll Circle  
Chapel Hill, NC 27516  
T. 919.951.0712  
C. 919.697.1323  
F. 919.951.0711  
[lb Bowman@newlandco.com](mailto:lb Bowman@newlandco.com)  
[www.newlandco.com](http://www.newlandco.com)  
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North Carolina Department of Environment and Natural Resources

Division of Water Quality

Beverly Eaves Perdue  
Governor

Charles Wakild, P. E.  
Director

Dee Freeman  
Secretary

July 30, 2012

DWQ Project # 05-0732v23  
Chatham County

Mr. Bill Mumford, Assistant Vice President  
NNP – Briar Chapel, LLC  
16 Windy Knoll Circle  
Chapel Hill, NC 27516

Subject Property: **Briar Chapel, Phase 6 North**

**APPROVAL OF MODIFIED STORMWATER MANAGEMENT PLAN**

Dear Mr. Mumford:

On January 11, 2008, the Division of Water Quality (DWQ) issued a revised 401 Water Quality Certification to temporarily impact 339 linear feet of stream and 0.157 acre of 404 wetlands and to permanently impact 1,666 linear feet of stream and 0.1590 acre of 404 wetland in order to construct the Briar Chapel Subdivision in Chatham County.

In order to meet Condition 10 of the 401 Certification for this project, a stormwater management plan for Briar Chapel – Phase 6 North, dated June 18, 2012, was received on June 19, 2012.

The DWQ approves the SMP as satisfying Condition 10 of the General Water Quality Certification. This approval is for the purpose and design that you described in your application. If you change your project, you must notify us and you may be required to send us a new SMP. **This approval requires you to follow the conditions listed in the General Water Quality Certification for the project and the following additional conditions listed below.**

1. The SMP approved by the DWQ consists of one (1) wet detention pond and all associated stormwater conveyances, inlet and outlet structures, and the grading and drainage patterns depicted on plan sheets dated June 8, 2012. The plans and specifications for Phase 6 North approved by DWQ are incorporated by reference into this approval and are enforceable by DWQ; provided, however, that any modification to the design of the stormwater management system that is accepted by DWQ shall take precedence over the original plans and specifications.

1617 Mail Service Center, Raleigh, North Carolina 27699-1617  
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604  
Phone: 919-807-6300 \ FAX: 919-807-6492 \ Customer Service: 1-877-623-6748  
Internet: [www.ncwaterquality.org](http://www.ncwaterquality.org)

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2. The maximum allowable drainage area for the approved wet detention pond shall be 901,260 square feet and the maximum allowable built-upon area within that drainage area shall be 446,930 square feet. Built-upon area includes, but is not limited to, roofed structures, asphalt, concrete, gravel, brick, slate, coquina and parking areas, but does not include raised, uncovered, open slat decking or the water surface of swimming pools. Any changes to these maximum areas shall require the applicant to submit and received approval for a revised stormwater management plan by the DWQ.
3. The footprint of all stormwater management devices as well as an additional 10-foot wide area on all sides of the devices shall be located in either public rights-of-way, dedicated common areas or recorded easement areas. The final plats for the project showing all such rights-of-way, common areas and easement areas shall be in accordance with the approved plans.
4. Maintenance activities for the wet detention pond shall be performed in accordance with the notarized O&M agreements signed by you on June 14, 2012. The O & M agreement must transfer with the sale of the land or transfer of ownership/responsibility for the BMP facility. DWQ must be notified promptly of every transfer.
5. The applicant and/or authorized agent shall provide a completed Certificate of Completion form to the DWQ within thirty (30) days of project completion (available at: <http://portal.ncdenr.org/web/wq/swp/ws/401/certsandpermits/apply/forms>).

Thank you for your attention to this matter. If you have any questions or wish to discuss these matters further please do not hesitate to contact me at 919-807-6381.

Sincerely,



Annette Lucas, PE  
Wetlands, Buffers and Stormwater Compliance and  
Permitting (Webscape) Unit

AML/aml

cc: Becky Fox, EPA  
USACE, Raleigh  
Lauren Witherspoon, DWQ Raleigh Regional Office  
Chatham County Public Works Dept., P.O. Box 1550, Pittsboro, NC 27312  
File Copy





North Carolina Department of Environment and Natural Resources  
Division of Water Resources

Beverly Eaves Perdue  
Governor

Thomas A. Reeder  
Director

Dee Freeman  
Secretary

August 13, 2012

Mr. Charlie Horne  
County Manager  
Chatham County  
12 East Street, Courthouse Annex  
Pittsboro, NC 27312

Re: Engineering Plans Approval  
Water Main Extension  
Chatham County Utilities & Water Division  
Briar Chapel, Phase 6 North  
Water System No: NC 03 19 126  
Chatham County—Serial Number: 12-00758

**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 Water Resources stamp of approval for the referenced project. These engineering plans and specifications are approved under serial number 12-00758, dated August 8, 2012.

Engineering plans prepared by William T. O'Daniel, P.E. call for the installation and construction of approximately 4,060 linear feet of 6-inch ductile iron pipe water main, 1,234 linear feet of 4-inch ductile iron pipe water main, eight fire hydrant assemblies, 115 domestic services, and other appurtenances. This information is shown on two plan sets titled "Briar Chapel Phase 6 North, Section 1 Construction Drawings" and "Briar Chapel Phase 6 North, Section 2 Construction Drawings", signed and sealed August 1, 2012.

**Please note that an "Authorization to Construct" requires both this approval of Engineering Plans and Specifications and submittal of a complete 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 cited 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.

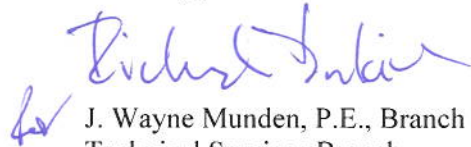
Mr. Charlie Horne  
Chatham County  
Briar Chapel, Phase 6 North  
August 13, 2012

page 2 of 2

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 Public Water Supply can be of further service, please call (919) 707-9100.

Sincerely,



J. Wayne Munden, P.E., Branch Head  
Technical Services Branch  
Public Water Supply Section

JWM/RJD/db

Enclosures: Approval Documents

cc: Michael Douglas, P.E., Raleigh Regional Office  
Chatham County Health Department  
William T. O'Daniel, P.E., The John R. McAdams Company, Inc.  
Leonard McBryde III, P.E., Public Utilities Director



North Carolina Department of Environment and Natural Resources  
Division of Water Resources

Beverly Eaves Perdue  
Governor

Thomas A. Reeder  
Director

Dee Freeman  
Secretary

August 14, 2012

CHARLIE HORNE  
CHATHAM COUNTY  
12 EAST STREET COURTHOUSE ANNEX  
PITTSBORO, NC 27312

Re: **Authorization to Construct**  
BRIAR CHAPEL PHASE 6, NORTH  
CHATHAM CO WATER SYSTEM  
CHATHAM COUNTY, NC0319126

**Authorization to Construct (This is not a Final Approval)**

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 **BRIAR CHAPEL PHASE 6, NORTH, Serial No. 12-00758**.

The Authorization to Construct is valid for 24 months from the **Issue Date** (refer to next page). Authorization to Construct may be extended if the Rules Governing Public Water Supplies and site conditions have not changed (see Rule .0305). 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.

Upon completion of the construction or modification, and prior to **placing the new construction or modification into service**, the applicant must submit an Engineer's Certification and Applicant Certification directly to RICHARD DICKIE, P.E. of this office.

- **Engineer Certification:** in accordance with Rule .0303 (a), the applicant shall submit a certification statement 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.
- **Applicant Certification:** in accordance with Rule .0303 (c), the applicant shall submit a signed certification statement indicating that the requirements for an Operation and Maintenance Plan and Emergency Management Plan have been satisfied in accordance with Rule .0307 (d) and (e) and that the system has a certified operator in accordance with Rule .1300. The "Applicant Certification" form is available at <http://www.deh.enr.state.nc.us/pws/> (click on Plan Review Forms, under Plan Review heading).

If this Authorization to Construct is for a new public water system, the owner must submit a completed **application for an Operating Permit** and the appropriate fee. For a copy of the application for an Operating Permit please call (919) 707-9085.

Once the certifications and permit application and fee, (if applicable), are received and determined adequate, the Department will issue a Final Approval letter to the applicant. In accordance with Rule .0309 (a), **no portion of this project shall be placed into service until the Department has issued Final Approval.**

If the Public Water Supply Section can be of further assistance, please call (919) 707-9100.

Sincerely,

J. Wayne Munden, P.E., Head  
Technical Services Branch

cc: Michael Douglas, P.E., REGIONAL ENGINEER  
THE JOHN R MCADAMS COMPANY INC-DURHAM



North Carolina Department of Environment and Natural Resources  
Division of Water Resources

Public Water System Authorization to Construct

Public Water System Name and Water System No.:	CHATHAM CO WATER SYSTEM NC0319126
Project Name:	BRIAR CHAPEL PHASE 6, NORTH
Serial No.:	12-00758
Issue Date:	08/08/2012
Expiration Date:	24 Months after Issue Date

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

THE JOHN R MCADAMS COMPANY INC-DURHAM  
2905 MERIDIAN PARKWAY

DURHAM NC 27713



Certificate of Sedimentation and Erosion Control Plan Approval and  
Land-Disturbing Permit  
For

Briar Chapel Phase 6 North  
Project Name and Location

2012-006  
Permit Number

The posting of this certificate certifies that an erosion and sedimentation control plan has been approved for this project by Chatham County, North Carolina in accordance with North Carolina General Statute 113A-57 (4) and 113A-54 (d)(4), the North Carolina Administrative Code, Title 15A, Chapter 4B.0007 (c) and as per applicable sections of the Chatham County Soil Erosion and Sedimentation Control Ordinance. This certificate must be posted at the primary entrance of the job site before construction begins and until establishment of permanent ground cover as required by North Carolina Administrative Code, Title 15A, Chapter 4B.0027 (b) and as per Chatham County's Erosion and Sediment Control Ordinance, Section 5 (i).

Responsible Person: Bill Mumford Phone: 951-0712

This plan was approved with "modifications" ☐ Yes ☒ No and / or  
"performance reservations" ☐ Yes ☒ No.

Reviewer: Rachael Thorn Date: 8/1/12

THE ORDINANCE REQUIRES THAT A COPY OF  
THE EROSION CONTROL PLAN  
MUST BE KEPT AVAILABLE AT THE JOB SITE  
AT ALL TIMES FOR INSPECTION