



ROY COOPER  
*Governor*

MICHAEL S. REGAN

*Secretary*

S. JAY ZIMMERMAN

*Director*

September 8, 2017

Michael J. Myers, President  
Old North State Water Company, LLC  
4700 Homewood Court, Suite 108  
Raleigh, NC 27609

Subject: Permit No. WQ0039464  
Old North State Water Company, LLC  
Briar Chapel Phase 13 – Section 1 & 2  
Wastewater Collection System Extension Permit  
Chatham County

Dear Mr. Myers:

In accordance with your application received August 4, 2017, and additional information received on September 6, 2017, we are forwarding herewith Permit No. WQ0039464 dated September 8, 2017 to the Old North State Water Company, LLC (Permittee) for the construction and operation upon certification 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 This permit shall be effective from the date of issuance until rescinded and shall be subject to the conditions and limitations as specified therein.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 the following conditions contained within this permit:

- Condition II.1: This permit shall not be automatically transferable; a permit modification request for a name change must first be approved by this office.
- Condition II.4: Requires that the wastewater collection facilities be properly operated and maintained in accordance with 15A NCAC 2T .0403 or any individual system-wide collection system permit issued to the Permittee.

It shall be the responsibility of the Permittee to ensure that the as-constructed project meets the appropriate design criteria and rules. Failure to comply may result in penalties in accordance with North Carolina General Statute §143-215.6A through §143-215.6C, construction of additional or replacement wastewater collection facilities, and/or referral of the North Carolina-licensed Professional Engineer to the licensing board.

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

Old North State Water Company, LLC  
Permit No. WQ0039464

If you need additional information concerning this matter, please contact Ted Cashion at (919) 791-4254  
or via e-mail at ted.cashion@ncdenr.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Daniel Smith". The signature is fluid and cursive, with the first name "S. Daniel" written in a larger, more prominent script than the last name "Smith".

for S. Jay Zimmerman, P.G.  
Director, Division of Water Resources

by S. Daniel Smith, Regional Supervisor  
Water Quality Regional Operations Section  
Raleigh Regional Office  
Division of Water Resources, NCDEQ

cc: Gareth Avant, P.E., McKim & Creed, Inc., 1730 Varsity Drive, Suite 500, Raleigh, NC 27606  
Chatham County Health Department  
Raleigh Regional Office Files  
Water Resources Central Files

# North Carolina Department of Environmental Quality

STATE OF NORTH CAROLINA  
ENVIRONMENTAL MANAGEMENT COMMISSION  
DEPARTMENT OF ENVIRONMENTAL QUALITY

WASTEWATER COLLECTION SYSTEM EXTENSION 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 the

Old North State Water Company, LLC  
Chatham County

for the construction and operation of approximately 846 linear feet of 8-inch gravity sewer to serve 43 single family homes as part of the Briar Chapel Phase 13 – Section 1 & 2 project, and the discharge of 8,170 gallons per day of collected domestic wastewater into the Old North State Water Company, LLC's existing sewerage system, pursuant to the application received August 4, 2017, and additional information received on September 6, 2017 and in conformity with 15A NCAC 2T; the Division's Gravity Sewer Minimum Design Criteria adopted February 12, 1996 and updated in March 2008, as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 and updated March 2008, as applicable; and other supporting data subsequently filed and approved by the Department of Environmental Quality and considered a part of this permit.

This permit shall be effective from the date of issuance until rescinded and shall be subject to the specified conditions and limitations contained therein.



S. Jay Zimmerman, P.G.

Director, Division of Water Resources

By Authority of The Environmental Management Commission

**Permit Number:** WQ0039464  
**Permit Issued:** September 8, 2017

# SUPPLEMENT TO PERMIT COVER SHEET

**Old North State Water Company, LLC** is hereby authorized to:

Construct, and then operate upon certification the aforementioned wastewater collection extension. The sewage and wastewater collected by this system shall be treated in the Briar Chapel Utilities Wastewater Treatment Facility Phases A and B in accordance with Permit Number WQ0028552.

Permitting of this project does not constitute an acceptance of any part of the project that does not meet 15A NCAC 2T; the Division's Gravity Sewer Minimum Design Criteria adopted February 12, 1996 and updated March 2008, as applicable; and the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 and updated March 2008, 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.

Construction and operation is contingent upon compliance with the Standard Conditions and any Special Conditions identified below.

## I. SPECIAL CONDITIONS

NONE

## II. STANDARD CONDITIONS

1. 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. [15A NCAC 02T.0104; G.S 143-215.1(d3)]
2. 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's Gravity Sewer Minimum Design Criteria adopted February 12, 1996 and updated March 2008, as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 and updated March 2008, as applicable; and other supporting materials unless specifically mentioned herein. [15A NCAC 02T.0110]
3. This permit shall be effective only with respect to the nature and volume of wastes described in the application and other supporting data. [15A NCAC 02T .0110]
4. 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: [15A NCAC 02T .0108(b)]:

- a. The sewer system shall be effectively maintained and operated at all times to prevent discharge to land or surface waters, and to prevent any contravention of groundwater standards or surface water standards.
  - b. A map of the sewer system shall be developed and shall be actively maintained.
  - c. An operation and maintenance plan including pump station inspection frequency, preventative maintenance schedule, spare parts inventory and overflow response has been 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-months and inspections are documented.
  - f. A general observation of the entire sewer system shall be conducted at least once per year.
  - g. 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.
  - h. A Grease Control Program is in place as follows:
    1. For public owned collection systems, the Grease Control Program shall include at least biannual distribution of educational materials for both commercial and residential users and the legal means to require grease interceptors at existing establishments. The plan shall also include legal means for inspections of the grease interceptors, enforcement for violators and the legal means to control grease entering the system from other public and private satellite sewer systems.
    2. For privately owned collection systems, the Grease Control Program shall include at least bi-annual distribution of grease education materials to users of the collection system by the permittee or its representative.
    3. Grease education materials shall be distributed more often than required in Parts (1) and (2) of this Subparagraph if necessary to prevent grease-related sanitary sewer overflows.
  - i. Right-of-ways and easements shall be maintained in the full easement width for personnel and equipment accessibility.
  - j. Documentation shall be kept for Subparagraphs (a) through (i) of this Rule for a minimum of three years with exception of the map, which shall be maintained for the life of the system.
5. The Permittee shall report by telephone to a water resources staff member at the Raleigh Regional Office, telephone number (919) 791-4200, as soon as possible, but in no case more than 24 hours, 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 SSO and/or spill over 1,000 gallons; or
- c. Any SSO and/or spill, regardless of volume, that reaches surface water

Voice mail messages or faxed information is permissible, but this shall not be considered as the initial verbal report. Overflows and spills occurring outside normal business hours may also be reported to the Division of Emergency Management at telephone number (800) 858-0368 or (919) 733-3300. Persons reporting any of the above occurrences shall file a spill report by completing and submitting Part I of Form CS-SSO (or the most current Division approved form) within five 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. Part II of Form CS-SSO (or the most current Division approved form) can also be completed to show that the SSO was beyond control. [G.S. 143-215.1C(a1)]

6. 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. [15A NCAC 02T.0108(b)]
7. 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. 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.

**If the permit is issued to a private entity with an Operational Agreement, then a copy of the Articles of Incorporation, Declarations/Covenants/Restrictions, and Bylaws that have been appropriately filed with the applicable County's Register of Deeds office shall be submitted with the certification.**

A complete certification is one where the form is fully executed and the supporting documents are provided as applicable. Supporting documentation shall include the following:

- a. One copy of the project construction record drawings (plan & profile views of sewer lines & force mains) of the wastewater collection system extension. Final record drawings should be clear on the plans or on digital media (CD or DVD disk) and are defined as the design drawings that are marked up or annotated with after construction information and show required buffers, separation distances, material changes, etc.
- b. One copy of the supporting applicable design calculations including pipe and pump sizing, velocity, pump cycle times, and level control settings, pump station buoyancy, wet well storage, surge protection, detention time in the wet well, and force main, ability to flush low points in force mains with a pump cycle, and downstream sewer capacity analysis. If a portable power source or pump is dedicated to multiple stations, an evaluation of all the pump stations' storage capacities and the rotation schedule of the portable power source or pump, including travel timeframes, shall be provided.

- c. Changes to the project that do not result in non-compliance with this permit, regulations, or the Minimum Design Criteria should be clearly identified on the record drawings, on the certification in the space provided, or in written summary form.

**Prior to Certification** (Final or Partial): Permit modifications are required for any changes resulting in non-compliance with this permit (including pipe length increases of 10% or greater, increased flow, pump station design capacity design increases of 5% or greater, and increases in the number/type of connections), regulations, or the Minimum Design Criteria. Requested modifications or variances to the Minimum Design Criteria will be reviewed on a case-by-case basis and each on its own merit. Please note that variances to the Minimum Design Criteria should be requested and approved during the permitting process prior to construction. After-construction requests are discouraged by the Division and may not be approved, thus requiring replacement or repair prior to certification & activation. [15A NCAC 02T .0116]

8. Gravity sewers installed greater than ten percent 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. [ 15A NCAC 02T.0105(n)]
9. A copy of the construction record drawings shall be maintained on file by the Permittee for the life of the wastewater collection facilities. [15A NCAC 02T .0116]
10. 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 and updated March 2008, as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Station and Force Mains adopted June 1, 2000 and updated March 2008 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, construction of additional or replacement wastewater collection facilities, and/or referral of the North Carolina-licensed Professional Engineer to the licensing board. [15A NCAC 02T .0104; 15A NCAC 02T .0108(b-c)]
11. 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. [15A NCAC 02T .0110; 15A NCAC 02T .0108(b)]
12. 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 the Division any other Federal, State, or Local government agencies which have jurisdiction or obtaining other permits which may be required by the Division or any other Federal, State, of Local government agencies. [G.S. 143-215.1(b)]

**FAST TRACK SEWER ENGINEERING CERTIFICATION**

**PERMITTEE:** Old North State Water Company, LLC  
**PERMIT #:** WQ0039464  
**PROJECT:** Briar Chapel Phase 13 – Section 1 & 2  
**ISSUE DATE:** September 8, 2017

This project shall not be considered complete nor allowed to operate in accordance with Condition 7 of this permit until the Division has received this Certification and all required supporting documentation. It should be submitted in a manner that documents the Division's receipt. Send the required documentation the Regional Supervisor, Water Quality Regional Operations Section at the address at the bottom.

Any wastewater flow made tributary to the wastewater collection system extension prior to completion of this Certification shall be considered a violation of the permit and shall subject the Permittee to appropriate enforcement actions. The Permittee is responsible for tracking all partial certifications up until a final certification is received. A Final Certification shall be a complete set of record drawings and design calculations regardless of whether partials have been submitted.

**PERMITTEE'S CERTIFICATION**

I, the undersigned agent for the Permittee, hereby state that this project has been constructed pursuant to the applicable standards & requirements, the Professional Engineer below has provided applicable design/construction information to the Permittee, and the Permittee is prepared to operate & maintain the wastewater collection system permitted herein or portions thereof.

\_\_\_\_\_  
Printed Name, Title

\_\_\_\_\_  
Signature

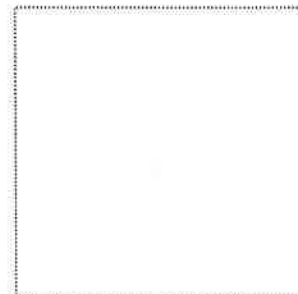
\_\_\_\_\_  
Date

**ENGINEER'S CERTIFICATION**

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 name and location as referenced above for the above 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 Resources' (Division) Gravity Sewer Minimum Design Criteria adopted February 12, 1996 and updated March 2008, as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 and updated March 2008, as applicable; and other supporting materials.

North Carolina Professional Engineer's Seal w/signature & date:

Final       Partial (include description)



**Certification Comments/Qualifiers (attach if necessary):**





North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

John E. Skvarla, III  
Secretary

September 12, 2014

William Mumford – Assistant Secretary  
Briar Chapel Utilities, LLC  
16 Windy Knoll Circle  
Chapel Hill, North Carolina 27516

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

Dear Mr. Mumford:

In accordance with your permit major modification request received June 2, 2014, and subsequent additional information received August 7, 2014 and August 28, 2014, we are forwarding herewith Permit No. WQ0028552 dated September 12, 2014, to Briar Chapel Utilities, LLC for the additional construction and continued operation of the subject facilities.

Modifications to the subject permit include an approval for construction of Package G; conjunctive reclaimed water utilization consisting of irrigation on additional residential lots and formal parks within Briar Chapel Development, and elimination of an existing non-conjunctive field (Phase 1-A, field C-5A). Please note that PPI 002 is deleted and WQ01parameter to report the total volume of reclaimed water used for conjunctive utilization is moved to PPI 001.

This permit shall be effective from the date of issuance until March 31, 2019, shall void Permit No. WQ0028552 issued October 7, 2013, and shall be subject to the conditions and limitations as specified therein. Please pay particular attention to the monitoring requirements listed in Attachments A and B for they may differ from the previous permit issuance. Failure to establish an adequate system for collecting and maintaining the required operational information shall result in future compliance problems.

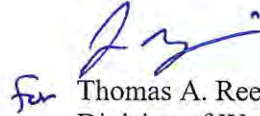
For your convenience, customized electronic copies of your facility's NDMR and NDAR-1 reporting forms are available for download at: <http://portal.ncdenr.org/web/wq/aps/lau/reporting>.

If any parts, requirements or limitations contained in this permit are unacceptable, the Permittee has the right to request an adjudicatory hearing upon written request within 30 days following receipt of this permit. This request shall 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 at 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made, this permit shall be final and binding.

Mr. Mumford  
September 12, 2014  
Page 2 of 2

One set of approved plans and specifications is being forwarded to you. If you need additional information concerning this matter, please contact Chonticha McDaniel at (919) 807-6337 or [chonticha.mcdaniel@ncdenr.gov](mailto:chonticha.mcdaniel@ncdenr.gov).

Sincerely,

  
for Thomas A. Reeder, Director  
Division of Water Resources

cc: Chatham County Health Department (Electronic Copy)  
Raleigh Regional Office, Water Quality Regional Operations Section  
Mark P. Ashness, PE – CE Group (Electronic Copy)  
Beth Buffington, PWSS – Protection and Enforcement Branch (Electronic Copy)  
Central Files  
Digital Permit Archive (Electronic Copy)

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

**RALEIGH**

**RECLAIMED WATER GENERATION, CONJUNCTIVE RECLAIMED WATER  
UTILIZATION, NON-CONJUNCTIVE RECLAIMED WATER UTILIZATION, &  
WASTEWATER IRRIGATION 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, non-conjunctive reclaimed water, conjunctive reclaimed water and wastewater irrigation 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 225 gallon per minute (GPM) variable speed pumps each with an influent flow meter and one 7.5 horsepower (hp) aerator; two 31,500 gallon anoxic chambers each with two 3 hp mixers; two 189,000 gallon aeration basins each with two 10 hp aerators; two 31,500 gallon clarifiers each with one variable speed sludge return pump; a 75,400 gallon sludge holding basin with one variable speed decanting pump and one 7.5 hp aerator; a 10,730 gallon chlorine contact chamber with two variable speed chlorine injection pumps; a 16,800 gallon mudwell with two 200 GPM return pumps; two 90 square foot (ft<sup>2</sup>) tertiary filters; a 13,800 gallon clearwell with four 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 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; a five day upset return pump station with two 400 GPM submersible pumps and audible/visual high-water alarms; and a 21.3 MG clay lined central storage pond with dual 2,000 GPM flooded suction pumps; the

continued operation of portions of the Phase 1-A non-conjunctive reclaimed water utilization system consisting of: portions of eight irrigation zones (E-1A, E-2A, E-3B, E-3C, E-3D, E-4A, E-4B and E-4C) and irrigation zone E-3A comprising approximately 31.9 acres with a hydraulic capacity of approximately 79,240 GPD; and all associated piping, valves and appurtenances; the

continued operation of portions of the Phase 1-C non-conjunctive reclaimed water utilization system consisting of: approximately 7.5 acres of the permitted 9.48 acre irrigation zone C-1 with a hydraulic capacity of approximately 17,195 GPD; and all associated piping, valves and appurtenances; the

continued operation of portions of the Phase 1-E conjunctive reclaimed water utilization system consisting of: three irrigation zones (E-1, E-2 and E-4) comprising 9.2 acres; and all associated piping, valves and appurtenances; the

continued operation of portions of the Phase 1-F conjunctive reclaimed water utilization system consisting of: portions of two irrigation zones (F-2 and F-3) and irrigation zone F-4 comprising approximately 3.84 acres; and all associated piping, valves and appurtenances; 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 225 GPM variable speed pumps each with an influent flow meter and one 7.5 hp aerator; two 31,500 gallon anoxic chambers each with two 3 hp mixers; two 189,000 gallon aeration basins each with two 10 hp aerators; two 31,500 gallon clarifiers each with one variable speed sludge return pump; a 75,400 gallon sludge holding basin with one variable speed decanting pump and one 7.5 hp aerator; a 10,730 gallon chlorine contact chamber with two variable speed chlorine injection pumps; a 16,800 gallon mudwell with two 200 GPM return pumps; two 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 air diffusers; and all associated piping, valves and appurtenances; the

construction and operation of the remaining portions of the Phase 1-A non-conjunctive reclaimed water utilization system consisting of: portions of eight irrigation zones (E-1A, E-2A, E-3B, E-3C, E-3D, E-4A, E-4B and E-4C), and 30 irrigation zones (C-1A through C-20A) comprising approximately 82.9 acres with a hydraulic capacity of approximately 205,686 GPD; a 14.1 MG clay lined east storage pond with dual 1,200 GPM vertical turbine pumps; a single 600 GPM temporary booster pump station and all associated piping, valves and appurtenances; the

construction and operation of the Phase 1-B wastewater irrigation system consisting of: 16 irrigation zones (B-1A through B-9C) comprising approximately 22.0 acres with a hydraulic capacity of approximately 55,508 GPD; and all associated piping, valves and appurtenances; the

construction and operation of the remaining portions of the Phase 1-C non-conjunctive reclaimed water utilization system consisting of: approximately 1.98 acres of irrigation zone C-1 with a hydraulic capacity of approximately 4,540 GPD; and all associated piping, valves and appurtenances; the

construction and operation of the Phase 1-D non-conjunctive reclaimed water utilization system consisting of: 22 irrigation zones (D-2 through D-26) comprising approximately 16.89 acres with a hydraulic capacity of approximately 35,527 GPD; and all associated piping, valves and appurtenances; the

construction and operation of portions of the Phase 1-E conjunctive reclaimed water utilization system consisting of: two irrigation zones (E-3 and E-5) comprising 2.8 acres; and all associated piping, valves and appurtenances;

construction and operation of the Phase 1-F conjunctive reclaimed water utilization system consisting of: one irrigation zone (F-1) and portions of two irrigation zones (F-2 and F-3) comprising 11.26 acres; and all associated piping, valves and appurtenances; and the

construction and operation of the Phase 1-G conjunctive reclaimed water utilization system consisting of: 9 irrigation zones (G-1 through G-9) comprising 26.4 acres; and all associated piping, valves and appurtenances;

to serve Briar Chapel Development, with no discharge of wastes to surface waters, pursuant to the application received June 2, 2014, and subsequent additional information received by the Division of Water Resources, and in conformity with the project plans, specifications, and other supporting data subsequently filed and approved by the Department of Environment and Natural Resources and considered a part of this permit.



This permit shall be effective from the date of issuance until March 31, 2019, shall void Permit No. WQ0028552 issued October 7, 2013, and shall be subject to the following specified conditions and limitations:

## **I. SCHEDULES**

1. Prior to commencing initial irrigation activities, 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. For conjunctive utilization areas, this report shall address soil compaction and the soil's ability to accept the designed hourly precipitation rate. For non-conjunctive utilization areas, 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 Raleigh Regional Office, 1628 Mail Service Center, Raleigh, NC 27699-1628.
2. The old farm gullies present in Phase 1-A, Field C-15C shall be properly filled with suitable soil material prior to its operation.
3. In accordance with 15A NCAC 02T .0116, upon completion of construction and prior to operation of any of the facilities permitted herein, a certification (attached) shall be submitted from a licensed North Carolina Professional Engineer certifying that the permitted facility has been installed in accordance with this permit, Division approved plans and specifications, and other supporting documentation, including the location of all monitoring wells as applicable. If this project is to be completed in phases and partially certified, the Permittee 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 Division of Water Resources, Water Quality Permitting Section, 1636 Mail Service Center, Raleigh, NC 27699-1636.
4. The Raleigh Regional Office, telephone number (919) 791-4200, shall be notified at least 48 hours in advance (excluding weekends and holidays) of operation of any installed facilities such that an in-place inspection can be made. Notification to the regional supervisor shall be made from 8:00 a.m. until 5:00 p.m. on Monday through Friday, excluding State Holidays.
5. 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 Rule 15A NCAC 02T .0105(d) requires an updated site map to be submitted with the permit renewal application.

## **II. PERFORMANCE STANDARDS**

1. The subject non-discharge facilities shall be effectively maintained and operated at all times so there is no discharge to surface waters, nor any contravention of groundwater or surface water standards. In the event the facilities fail to perform satisfactorily, including the creation of nuisance conditions due to improper operation and maintenance, or failure of the utilization areas to adequately assimilate the reclaimed water, the Permittee shall take immediate corrective actions including Division required actions, such as the construction of additional or replacement wastewater treatment, disposal, or utilization facilities.
2. This permit shall not relieve the Permittee of their responsibility for damages to groundwater or surface water resulting from the operation of this facility.
3. Effluent limitations shall not exceed those specified in Attachment A.

4. Application rates shall not exceed those specified in Attachment B.
5. The irrigation/utilization system (excluding conjunctive utilization sites) shall be connected to a rain or moisture sensor, which shall indicate when utilization is not appropriate in accordance with Conditions III.6 and III.7 of this permit.
6. The following shall be requirements for the reclaimed water distribution, storage, and utilization facilities (at a minimum Phases 1-A, 1-C, 1-D, 1-E, 1-F and 1-G, but may include Phase 1-B 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 reclaimed water is not intended for drinking. Where appropriate, such warning shall inform the public or employees to avoid contact with reclaimed 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 reclaimed water pipelines in a visible manner, fastened at least every 10 feet to each pipe length and run continuously the entire length of the pipe.
    - iii. Existing underground distribution systems retrofitted for the purpose of distributing reclaimed water shall be taped or otherwise identified as noted above. This identification need not extend the entire length of the distribution system, but shall be incorporated within 10 feet of crossing any potable water supply line or sanitary sewer line.
  - 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. Hose bibs shall be located in locked, below grade vaults that shall be labeled as being of non-potable quality. As an alternative to the use of locked vaults with standard hose bib services, other locking mechanisms such as hose bibs which can only be operated by a tool may be placed above ground and labeled as non-potable water.
7. No direct cross-connections shall be allowed between reclaimed water (at a minimum Phases 1-A, 1-C, 1-D, 1-E, 1-F, and 1-G but may include Phase 1-B at the Permittee's discretion) and potable water systems, unless such connection has been approved by the Department pursuant to 15A NCAC 18C .0406.
8. Reclaimed water distribution lines (at a minimum Phases 1-A, 1-C, 1-D, 1-E, 1-F, and 1-G but may include Phase 1-B at the Permittee's discretion) shall be located at least 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.
9. Reclaimed water distribution lines (at a minimum Phases 1-A, 1-C, 1-D, 1-E, 1-F, and 1-G but may include Phase 1-B 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 in no case shall they be less than 25 feet from a private well or 50 feet from a public well.

10. Reclaimed water distribution lines (at a minimum Phases 1-A, 1-C, 1-D, 1-E, 1-F, and 1-G but may include Phase 1-B at the Permittee's discretion) shall be located at least two feet horizontally from and 18 inches above any sewer 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.
11. The compliance and review boundaries for Phase 1-A non-conjunctive utilization areas 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.
12. The compliance and review boundaries for Phase 1-B [wastewater irrigation complying with 15A NCAC 02T .0506(c)], 1-C, 1-D, 1-E, 1-F, and 1-G 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.
13. The Permittee shall apply for a permit modification to establish a new compliance boundary prior to any sale or transfer of property affecting a compliance boundary.
14. In accordance with 15A NCAC 02L .0107(d), no wells, excluding Division approved monitoring wells, shall be constructed within the compliance boundary except as provided for in 15A NCAC 02L .0107(g).
15. Except as provided for in 15A NCAC 02L .0107(g), the Permittee shall ensure any landowner who is not the Permittee and owns land within the compliance boundary shall execute and file with the Chatham County Register of Deeds an easement running with the land containing the following items:
  - a. A notice of the permit and number or other description as allowed in 15A NCAC 02L .0107(f)(1);
  - b. Prohibits construction and operation of water supply wells within the compliance boundary; and
  - c. 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.

16. The facilities permitted herein shall be constructed according to the following setbacks:
  - a. The setbacks for the Phase 1-A, 1-C, 1-D, 1-E, 1-F and 1-G conjunctive reclaimed utilization sites 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 Phase 1-B wastewater irrigation sites shall be as follows (all distances in feet):
 

i. Any habitable residence or place of public assembly under separate ownership:	400
ii. Any habitable residence or place of public assembly owned by the Permittee:	200
iii. Any private or public water supply source:	100
iv. Surface waters:	100
v. Groundwater lowering ditches:	100
vi. Surface water diversions:	25
vii. Any well with exception of monitoring wells:	100
viii. Any property line:	0 <sup>1</sup>
ix. Top of slope of embankments or cuts of two feet or more in vertical height:	15



x. Any water line from a disposal system:	10
xi. Subsurface groundwater lowering drainage systems:	100
xii. Any swimming pool:	100
xiii. Public right of way:	50
xiv. Nitrification field:	20
xv. Any building foundation or basement:	15

<sup>1</sup> The Permittee is complying with 15A NCAC 02T .0506(c), therefore the setback to property lines is reduced from 150 feet to 0 feet.

- c. The setbacks for treatment 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  |

17. Areas in Phases 1-C and 1-D affected by significant compaction shall be identified and the soil aerated prior to any irrigation within these utilization sites listed in Attachment B.

### **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 reclaimed water or partially treated effluent resulting from the operation of this facility.
2. The Permittee shall maintain an Operation and Maintenance Plan pursuant to 15A NCAC 02U .0801, which at a minimum shall include the following:
  - a. Description of the system in sufficient detail to show what operations are necessary for the system to function and by whom the functions will be conducted;
  - b. A map of all distribution lines and record drawings of all utilization systems under the Permittee's control;
  - c. Description of anticipated maintenance activities;
  - d. Include provisions for safety measures including restriction of access to sites and equipment; and
  - e. Spill control provisions including response to upsets and bypasses including control, containment, remediation, and contact information for plant personnel, emergency responders and regulatory agencies.
3. Upon the Water Pollution Control System Operators Certification Commission's (WPCSOCC) classification of the subject non-discharge facilities, in accordance with 15A NCAC 08G .0200 the Permittee shall designate and employ a certified operator in responsible charge (ORC) and one or more certified operator(s) as back-up ORC(s). The ORC or their back-up shall visit the facilities in accordance with 15A NCAC 08G .0200, and shall comply with all other conditions specified in the previously cited rules.
4. An operator certified by the Water Pollution Control System Operators Certification Commission (WPCSOCC) of a grade equivalent or greater than the facility classification shall be on call 24 hours per day.



5. A suitable year round vegetative cover shall be maintained on irrigation sites at all times, such that crop health is optimized, allows for even distribution of reclaimed water, and allows inspection of the irrigation system.
6. Adequate measures shall be taken to prevent reclaimed water ponding in or runoff from the irrigation sites.
7. Irrigation shall not be performed during inclement weather or when the ground is in a condition that will cause ponding or runoff.
8. All wastewater irrigation and non-conjunctive reclaimed water irrigation equipment shall be tested and calibrated at least once per permit cycle. Calibration records shall be maintained at the facility for a period of no less than five years, and shall be made available to the Division upon request.
9. Only reclaimed water generated at Briar Chapel Development shall be irrigated/utilized in accordance with this permit.
10. An automatically activated standby power source capable of powering all essential treatment units shall be on site and operational at all times. If a generator is employed as an alternate power supply, it shall be tested weekly by interrupting the primary power source.
11. No automobiles or machinery shall be allowed on the wastewater irrigation site (Phase 1-B) except during equipment installation or while maintenance is being performed.
12. Public access to the wastewater irrigation sites (Phase 1-B), wastewater treatment facility, and five day upset pond shall be prohibited.
13. Public access to reclaimed water utilization sites (Phases 1-A, 1-C, 1-D, 1-E, 1-F, and 1-G) shall be controlled during active site use. Such controls may include the posting of signs showing the activities being conducted at each site.
14. Diversion or bypassing of untreated or partially treated wastewater from the treatment facilities is prohibited.
15. Freeboard in the five-day upset pond, central storage pond, and east storage pond shall not be less than two feet at any time.
16. A gauge to monitor waste levels in the five-day upset pond, central storage pond, and east storage pond shall be provided. This gauge shall have readily visible permanent markings at inch or tenth of a foot increments.
17. A protective vegetative cover shall be established and maintained on all earthen embankments (i.e., 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 dikes or embankments. Earthen embankment areas shall be kept mowed or otherwise controlled and accessible.
18. All effluent shall be routed to the five day upset pond should the limit for fecal coliform (e.g., daily maximum concentration of 25 colonies per 100 mL) or turbidity (e.g., instantaneous maximum of 10 NTU) be exceeded, until the problems associated with the wastewater treatment plant have been corrected. The wastewater in the five day upset pond shall be pumped back to the treatment plant headworks for re-treatment or treated in the five day upset pond prior to utilization.

19. The Permittee shall develop and implement an education program to inform users (including employees) about the proper use of reclaimed water. Educational material shall be provided to all residents and/or other facilities provided with reclaimed water, and these materials shall be maintained consistent with the reclaimed water uses. All educational materials shall be made available to the Division upon request.
20. In accordance with 15A NCAC 02U .0501, the Permittee shall provided notification to the public and/or employees about the use of reclaimed water, and that reclaimed water is not intended for drinking. Such notification shall be provided to employees in a language they can understand.
21. The residuals generated from the wastewater treatment facilities shall be disposed or utilized in accordance with 15A NCAC 02T .1100. The Permittee shall maintain a residual management plan pursuant to 15A NCAC 02U .0802.
22. The subject permitted wastewater treatment facility shall only treat domestic wastewater. 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) under 15A NCAC 02T .0103(20).

#### **IV. MONITORING AND REPORTING REQUIRMENTS**

1. Any Division required monitoring (including groundwater, plant tissue, soil and surface water analyses) necessary to ensure groundwater and surface water protection shall be established, and an acceptable sampling reporting schedule shall be followed.
2. Per 15A NCAC 02H .0800, a Division certified laboratory shall conduct all laboratory analyses for the required effluent, groundwater or surface water parameters.
3. Flow through the reclaimed water generating 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 to ensure the accuracy and reliability of flow measurement consistent with accepted engineering and scientific practices. Selected flow measurement devices shall be capable of measuring flows with a maximum deviation of less than ten percent from true flow; accurately calibrated at a minimum of once per year; and maintained to ensure the accuracy of measurements is consistent with the selected device's accepted capability. The Permittee shall maintain records of flow measurement device calibration on file for a period of at least five years. At a minimum, documentation shall include:

- a. Date of flow measurement device calibration,
  - b. Name of person performing calibration, and
  - c. Percent from true flow.
4. The Permittee shall monitor the reclaimed water from the generating facility at the frequencies and locations for the parameters specified in Attachment A.
  5. The Permittee shall maintain adequate records tracking the amount of conjunctive reclaimed water utilized. Records shall be maintained for a minimum of five years. At minimum, these records shall include the following information for each utilization site listed in Attachment B:
    - a. Date of reclaimed water distributed; and
    - b. Volume of reclaimed water distributed (monthly total).

Monthly tracking records for all conjunctive sites shall be summed and reported on Form NDMR (see Attachment A) under parameter WQ01 (Flow, Reclaimed Water Distributed). This value shall represent the total volume of reclaimed water distributed for conjunctive utilization that month.

6. The Permittee shall maintain adequate records tracking the amount of effluent irrigated / non-conjunctive reclaimed water utilized. Records shall be maintained for a minimum of five years. At a minimum, these records shall include the following information for each utilization site listed in Attachment B:
  - a. Date of irrigation / utilization;
  - b. Volume of effluent irrigated / reclaimed water utilized
  - c. Site irrigated/utilized;
  - d. Length of time site is irrigated/utilized;
  - e. Continuous weekly, monthly, and year-to-date hydraulic (inches/acre) loadings;
  - f. Continuous monthly and year-to-date loadings for any non-hydraulic parameter specifically limited in Attachment B;
  - g. Weather conditions; and
  - h. Maintenance of cover crops.
7. Freeboard (i.e., waste level to the lowest embankment elevation) in the five-day upset pond, central storage pond, and east storage pond shall be measured to the nearest inch or tenth of a foot, and recorded weekly. Weekly freeboard records shall be maintained at the facility for a period of no less than five years, and shall be made available to the Division upon request.
8. Three copies of all monitoring data (as specified in Conditions IV.3., IV.4. and IV.5.) on Form NDMR, and three copies of all operation and disposal/utilization records (as specified in Conditions IV.6. and IV.7.) on Form NDAR-1 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 Resources, Information Processing Unit, 1617 Mail Service Center, Raleigh, North Carolina, 27699-1617.
9. Pursuant to § 143-215.1C., the Permittee shall provide to its users and the Division of Water Resources an annual report summarizing the performance of the wastewater treatment and utilization facility and the extent to which the facility has violated this permit, or federal or State laws, regulations, or rules related to the protection of water quality. This report shall be prepared on either a calendar or fiscal year basis and shall be provided no later than 60 days after the end of the calendar or fiscal year. Two copies of the annual report provided to the Permittee's users shall be submitted to: Division of Water Resources, Water Quality Permitting Section, 1636 Mail Service Center, Raleigh, North Carolina 27699-1636.
10. A record shall be maintained of all residuals removed from this facility. This record shall be maintained at the facility for a period of no less than five years, and shall be made available to the Division upon request. At a minimum, this record shall include:
  - a. Name of the residuals hauler;
  - b. Non-Discharge permit number authorizing the residuals disposal, or a letter from a municipality agreeing to accept the residuals;
  - c. Date the residuals were hauled; and
  - d. Volume of residuals removed.



11. A maintenance log shall be maintained at this facility. This log shall be maintained at the facility for a period of no less than five years, and shall be made available to the Division upon request. At a minimum, this log shall include:
  - a. Visual observations of treatment plant and plant site;
  - b. Date of calibration of flow measurement device(s);
  - c. Date and results of power interruption testing on alternate power supply;
  - d. Record of preventative maintenance (e.g., changing/adjusting of equipment, pump and valve maintenance, cross connection control, testing, inspections and cleanings, etc.); and
  - e. Record of all unpermitted releases of reclaimed water to surface water or land surface including date of occurrence, estimated volume of release, cause, and corrective action taken.
  
12. An annual representative soils analysis (i.e., Standard Soil Fertility Analysis) shall be conducted on each wastewater irrigation field in Phase 1-B (See Attachment B). These results shall be maintained at the facility for a period of no less than five years, and shall be made available to the Division upon request. At a minimum, the Standard Soil Fertility Analysis shall include the following parameters:

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

**13. 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 facility resulting in the treatment of significant amounts of wastes that is abnormal in quantity or characteristic, including the known passage of a hazardous substance.
- b. Any process unit failure (e.g., mechanical, electrical, etc.), due to known or unknown reasons, rendering the facility incapable of adequate wastewater treatment.
- c. Any failure resulting in a discharge of reclaimed water directly to surface waters or any unpermitted release of reclaimed water to land surface greater than or equal to 5,000 gallons. Unpermitted releases less than 5,000 gallons to land surface shall be documented by the permittee in accordance with Condition IV.9, but do not require Regional Office notification.
- d. Any time self-monitoring indicates the facilities permitted herein have gone out of compliance with the limitations contained in this permit.
- e. Ponding in or runoff from the reclaimed water utilization sites.

Any emergency requiring immediate reporting (e.g., discharges to surface waters, imminent failure of a storage structure, etc.) outside normal business hours shall 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 days following first knowledge of the occurrence. This report shall outline the actions taken or proposed to be taken to ensure the problem does not recur.

## **V. INSPECTIONS**

1. The Permittee shall provide adequate inspection and maintenance to ensure proper operation of the wastewater treatment, irrigation, and utilization facilities.
2. The Permittee or their designee shall inspect the wastewater treatment, irrigation, and utilization facilities to prevent malfunction, facility deterioration and operator errors resulting in discharges, which may cause the release of wastes to the environment, a threat to human health or a public nuisance. The Permittee shall maintain an inspection log that includes, at a minimum, the date and time of inspection, observations made, and any maintenance, repairs, or corrective actions taken. The Permittee shall maintain this inspection log for a period of five years from the date of the inspection, and this log shall be made available to the Division upon request.
3. Any duly authorized Division representative may, upon presentation of credentials, enter and inspect any property, premises or place on or related to the wastewater treatment, irrigation, and utilization facilities permitted herein at any reasonable time for the purpose of determining compliance with this permit; may inspect or copy any records required to be maintained under the terms and conditions of this permit, and may collect groundwater, surface water or leachate samples.

## **VI. GENERAL CONDITIONS**

1. Failure to comply with the conditions and limitations contained herein may subject the Permittee to an enforcement action by the Division in accordance with North Carolina General Statutes 143-215.6A to 143-215.6C.
2. This permit shall become voidable if the permitted facilities are not constructed in accordance with the conditions of this permit, the Division approved plans and specifications, and other supporting documentation.
3. This permit is effective only with respect to the nature and volume of wastes described in the permit application, Division approved plans and specifications, and other supporting documentation. No variances to applicable rules governing the construction or operation of the permitted facilities are granted, unless specifically requested and approved in this permit pursuant to 15A NCAC 02T .0105(n).
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 jurisdictional government agencies (e.g., local, state, and federal). 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; any requirements pertaining to wetlands under 15A NCAC 02B .0200 and 02H .0500; National Pollutant Discharge Elimination System (NPDES) requirements under 15A NCAC 02H .0100, and documentation of compliance with Article 21 Part 6 of Chapter 143 of the General Statutes.
5. In the event the permitted facilities change ownership or the Permittee changes their name, a written permit modification request shall be submitted to the Division. This request shall be made on official Division forms, and shall include appropriate property ownership documentation and other supporting documentation as necessary. The Permittee of record shall remain fully responsible for maintaining and operating the facilities permitted herein until a permit is issued to the new owner.
6. The Permittee shall retain a set of Division 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 pursuant to 15A NCAC 02T .0105(j).

8. This permit is subject to revocation or unilateral modification upon 60 days notice from the Division Director, in whole or part for the requirements listed in 15A NCAC 02T .0110.
9. Unless the Division Director grants a variance, expansion of the permitted facilities contained herein shall not be granted if the Permittee exemplifies any of the criteria in 15A NCAC 02T .0120(b).
10. The Permittee shall pay the annual fee within 30 days after being billed by the Division. Failure to pay the annual fee accordingly shall be cause for the Division to revoke this permit pursuant to 15A NCAC 02T .0105(e)(3).

Permit issued this the 12<sup>th</sup> day of September 2014

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

*for*   
\_\_\_\_\_  
Thomas A. Reeder, Director  
Division of Water Resources  
By Authority of the Environmental Management Commission

**Permit Number WQ0028552**

Permit No. WQ0028552  
Briar Chapel Utilities, LLC  
Briar Chapel Development

Conjunctive, Non-Conjunctive, and Wastewater Irrigation System  
September 12, 2014  
Chatham County

**ENGINEERING CERTIFICATION**

Partial     Final

In accordance with 15A NCAC 02T .0116, I, \_\_\_\_\_,  
as a duly registered Professional Engineer in the State of North Carolina, having the Permittee's  
authorization to  periodically  weekly  fully observe the construction of the permitted facility,  
hereby state to the best of my abilities that due care and diligence was used in the observation of the  
construction, such that the facility was built within substantial compliance and intent of this permit, the  
Division approved plans and specifications, and other supporting documentation.

Any variation to this permit, the Division approved plans and specifications, and other supporting  
documentation has been documented in the attached as-built drawings, and shall serve as the  
Permittee's minor modification request to amend the permit accordingly.

Provide a brief narrative description of any variations: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Professional Engineer's Name		
Engineering Firm		
Mailing Address		
City	State	Zip
Telephone	E-mail	NC PE Seal, Signature & Date

**THE COMPLETED ENGINEERING CERTIFICATION, INCLUDING ALL SUPPORTING  
INFORMATION AND MATERIALS, SHALL BE SENT TO THE FOLLOWING ADDRESS:  
NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES  
DIVISION OF WATER RESOURCES  
WATER QUALITY PERMITTING SECTION  
NON-DISCHARGE PERMITTING UNIT**

By U.S. Postal Service:  
1636 MAIL SERVICE CENTER  
RALEIGH, NORTH CAROLINA 27699-1636

By Courier/Special Delivery:  
512 N. SALISBURY STREET  
RALEIGH, NORTH CAROLINA 27604

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PPI 001 - Reclaimed Water Generation System Effluent

EFFLUENT CHARACTERISTICS		EFFLUENT LIMITS					MONITORING REQUIREMENTS	
PCS Code	Parameter Description	Units of Measure	Monthly Average	Monthly Geometric Mean	Daily Minimum	Daily Maximum	Measurement Frequency	Sample Type
00310	BOD, 5-Day (20 °C)	mg/l	10			15	2 x Month	Composite
00940	Chloride (as Cl)	mg/l					3 x Year <sup>a</sup>	Composite
50060	Chlorine, Total Residual	mg/l					5 x Week	Grab
31616	Coliform, Fecal MF, M-FC Broth, 44.5 °C	#/100ml		14		25	2 x Month	Grab
50050	Flow, in conduit or thru treatment plant	gpd	329,548 <sup>b</sup>				Continuous	Recording
00610	Nitrogen, Ammonia Total (as N)	mg/l	4			6	2 x Month	Composite
00620	Nitrogen, Nitrate Total (as N)	mg/l					2 x Month	Composite
00400	pH	su			6	9	5 x Week	Grab
70300	Solids, Total Dissolved - 180 °C	mg/l					3 x Year <sup>a</sup>	Composite
00530	Solids, Total Suspended	mg/l	5			10	2 x Month	Composite
00076	Turbidity, HCH Turbidimeter	ntu				10	Continuous	Recording
WQ01	Flow, Reclaimed Water Distributed <sup>c</sup>	gallons					Monthly	Recording

- a. 3 x Year monitoring shall be conducted in March, July and November.
- b. The monthly average daily flow is limited to 329,548 GPD due to available wet weather storage capacity.
- c. Total volume of reclaimed water distributed for conjunctive utilization (Phases I-E, I-F, and I-G).

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## Briar Chapel Utilities, LLC – Briar Chapel Development

IRRIGATION / UTILIZATION AREA INFORMATION								APPLICATION LIMITATIONS			
Phase	Field	Owner	County	Latitude	Longitude	Net Acreage	Dominant Soil Series	Parameter	Hourly Rate	Yearly Max	Units
1-A	C-1A	Briar Chapel Utilities, LLC	Chatham	35° 48' 35"	-79° 06' 47"	8.00	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-2A	Briar Chapel Utilities, LLC	Chatham	35° 48' 45"	-79° 06' 38"	1.40	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-2C	Briar Chapel Utilities, LLC	Chatham	35° 48' 38"	-79° 06' 35"	5.90	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-2D	Briar Chapel Utilities, LLC	Chatham	35° 48' 41"	-79° 06' 36"	1.80	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-3A	Briar Chapel Utilities, LLC	Chatham	35° 48' 52"	-79° 06' 55"	0.90	Wedowee	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-3B	Briar Chapel Utilities, LLC	Chatham	35° 48' 50"	-79° 06' 50"	0.80	Wedowee	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-3C	Briar Chapel Utilities, LLC	Chatham	35° 48' 47"	-79° 06' 49"	0.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-3D	Briar Chapel Utilities, LLC	Chatham	35° 48' 43"	-79° 06' 46"	0.10	Wedowee	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-3E	Briar Chapel Utilities, LLC	Chatham	35° 48' 50"	-79° 06' 53"	9.80	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-3F	Briar Chapel Utilities, LLC	Chatham	35° 48' 42"	-79° 06' 44"	3.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-6A	Briar Chapel Utilities, LLC	Chatham	35° 49' 10"	-79° 06' 01"	0.30	Rion	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-6C	Briar Chapel Utilities, LLC	Chatham	35° 49' 13"	-79° 06' 58"	0.20	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-9A	Briar Chapel Utilities, LLC	Chatham	35° 49' 21"	-79° 07' 11"	4.20	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-9B	Briar Chapel Utilities, LLC	Chatham	35° 49' 15"	-79° 07' 09"	3.20	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-12A	Briar Chapel Utilities, LLC	Chatham	35° 49' 29"	-79° 07' 23"	2.00	Rion	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-12B	Briar Chapel Utilities, LLC	Chatham	35° 49' 28"	-79° 07' 12"	2.60	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-12C	Briar Chapel Utilities, LLC	Chatham	35° 49' 25"	-79° 07' 19"	3.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-12D	Briar Chapel Utilities, LLC	Chatham	35° 49' 18"	-79° 07' 15"	0.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-13A	Briar Chapel Utilities, LLC	Chatham	35° 49' 26"	-79° 07' 00"	0.40	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-13B	Briar Chapel Utilities, LLC	Chatham	35° 49' 29"	-79° 06' 59"	1.00	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-13C	Briar Chapel Utilities, LLC	Chatham	35° 49' 33"	-79° 07' 03"	1.10	Rion	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-13D	Briar Chapel Utilities, LLC	Chatham	35° 49' 36"	-79° 06' 59"	1.00	Rion	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-13E	Briar Chapel Utilities, LLC	Chatham	35° 49' 31"	-79° 06' 59"	2.70	Pacolet	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-13F	Briar Chapel Utilities, LLC	Chatham	35° 49' 28"	-79° 07' 03"	6.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-15B	Briar Chapel Utilities, LLC	Chatham	35° 49' 38"	-79° 06' 40"	0.90	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches

IRRIGATION / UTILIZATION AREA INFORMATION								APPLICATION LIMITATIONS			
Phase	Field	Owner	County	Latitude	Longitude	Net Acreage	Dominant Soil Series	Parameter	Hourly Rate	Yearly Max	Units
1-A	C-15C	Briar Chapel Utilities, LLC	Chatham	35° 49' 25"	-79° 06' 38"	1.30	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-15E	Briar Chapel Utilities, LLC	Chatham	35° 49' 40"	-79° 06' 45"	1.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-16A	Briar Chapel Utilities, LLC	Chatham	35° 49' 25"	-79° 06' 26"	3.20	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-20A	Briar Chapel Utilities, LLC	Chatham	35° 49' 48"	-79° 07' 00"	0.40	Helena	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	E-1A	Briar Chapel Utilities, LLC	Chatham	35° 49' 21"	-79° 06' 01"	10.40 / 8.50 <sup>1</sup>	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	E-2A	Briar Chapel Utilities, LLC	Chatham	35° 49' 16"	-79° 06' 49"	9.00 / 4.90 <sup>1</sup>	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	E-3A	Briar Chapel Utilities, LLC	Chatham	35° 49' 13"	-79° 05' 30"	0.80 <sup>2</sup>	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	E-3B	Briar Chapel Utilities, LLC	Chatham	35° 49' 11"	-79° 05' 22"	2.20 / 1.80 <sup>1</sup>	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	E-3C	Briar Chapel Utilities, LLC	Chatham	35° 49' 10"	-79° 05' 27"	3.50 / 2.50 <sup>1</sup>	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	E-3D	Briar Chapel Utilities, LLC	Chatham	35° 49' 12"	-79° 05' 39"	0.90 / 0.30 <sup>1</sup>	Rion	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	E-4A	Briar Chapel Utilities, LLC	Chatham	35° 49' 16"	-79° 05' 35"	3.10 / 2.00 <sup>1</sup>	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	E-4B	Briar Chapel Utilities, LLC	Chatham	35° 49' 18"	-79° 05' 18"	2.90 / 2.60 <sup>1</sup>	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	E-4C	Briar Chapel Utilities, LLC	Chatham	35° 49' 16"	-79° 05' 26"	9.30 / 8.50 <sup>1</sup>	Rion	01284 – Non-Discharge Application Rate	0.10	37.31	inches
<b>Total for 1-A (Non-Conjunctive Reclaimed Water Utilization)</b>						<b>114.8 / 31.9<sup>1</sup></b>					
1-B	B-1A	Briar Chapel Utilities, LLC	Chatham	35° 49' 28"	-79° 05' 58"	9.90	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-1B	Briar Chapel Utilities, LLC	Chatham	35° 49' 25"	-79° 06' 05"	1.70	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-B	B-2A	Briar Chapel Utilities, LLC	Chatham	35° 49' 22"	-79° 06' 15"	0.30	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-B	B-3B	Briar Chapel Utilities, LLC	Chatham	35° 49' 36"	-79° 06' 11"	0.20	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-3C	Briar Chapel Utilities, LLC	Chatham	35° 49' 41"	-79° 06' 11"	0.20	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-4A	Briar Chapel Utilities, LLC	Chatham	35° 49' 42"	-79° 06' 17"	0.60	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-5A	Briar Chapel Utilities, LLC	Chatham	35° 49' 07"	-79° 06' 34"	0.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-6A	Briar Chapel Utilities, LLC	Chatham	35° 49' 07"	-79° 06' 31"	1.10	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-7A	Briar Chapel Utilities, LLC	Chatham	35° 49' 59"	-79° 06' 28"	2.30	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-7B	Briar Chapel Utilities, LLC	Chatham	35° 50' 16"	-79° 06' 32"	0.60	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches



IRRIGATION / UTILIZATION AREA INFORMATION								APPLICATION LIMITATIONS			
Phase	Field	Owner	County	Latitude	Longitude	Net Acreage	Dominant Soil Series	Parameter	Hourly Rate	Yearly Max	Units
1-B	B-8A	Briar Chapel Utilities, LLC	Chatham	35° 50' 14"	-79° 06' 26"	0.10	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-8B	Briar Chapel Utilities, LLC	Chatham	35° 50' 32"	-79° 06' 27"	1.90	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-8D	Briar Chapel Utilities, LLC	Chatham	35° 50' 25"	-79° 06' 25"	0.70	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-B	B-8E	Briar Chapel Utilities, LLC	Chatham	35° 50' 37"	-79° 06' 22"	0.50	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-B	B-9A	Briar Chapel Utilities, LLC	Chatham	35° 50' 42"	-79° 06' 26"	1.10	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-B	B-9C	Briar Chapel Utilities, LLC	Chatham	35° 50' 41"	-79° 06' 20"	0.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
<b>Total for 1-B (Wastewater Irrigation)</b>						<b>22.0</b>					
1-C	C-1	Briar Chapel Utilities, LLC	Chatham	35° 49' 14"	-79° 05' 46"	9.48 / 7.5 <sup>1</sup>	Wedowee	01284 – Non-Discharge Application Rate	0.10	30.84	inches
<b>Total for 1-C (Non-Conjunctive Reclaimed Water Utilization)</b>						<b>9.48 / 7.5<sup>1</sup></b>					
1-D	D-2	Briar Chapel Utilities, LLC	Chatham	35° 49' 25"	-79° 06' 38"	0.37	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-3	Briar Chapel Utilities, LLC	Chatham	35° 49' 26"	-79° 06' 43"	0.47	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-D	D-4	Briar Chapel Utilities, LLC	Chatham	35° 49' 41"	-79° 06' 48"	0.26	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-5	Briar Chapel Utilities, LLC	Chatham	35° 49' 48"	-79° 06' 35"	1.02	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-6	Briar Chapel Utilities, LLC	Chatham	35° 49' 51"	-79° 06' 42"	0.63	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-7	Briar Chapel Utilities, LLC	Chatham	35° 49' 12"	-79° 07' 04"	1.83	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-D	D-8	Briar Chapel Utilities, LLC	Chatham	35° 49' 12"	-79° 06' 52"	2.62	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-D	D-9	Briar Chapel Utilities, LLC	Chatham	35° 49' 10"	-79° 06' 49"	0.15	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-D	D-10	Briar Chapel Utilities, LLC	Chatham	35° 49' 05"	-79° 06' 48"	0.06	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-11	Briar Chapel Utilities, LLC	Chatham	35° 49' 05"	-79° 06' 48"	0.04	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-12	Briar Chapel Utilities, LLC	Chatham	35° 49' 08"	-79° 06' 50"	2.12	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-13	Briar Chapel Utilities, LLC	Chatham	35° 49' 06"	-79° 06' 46"	0.62	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-15	Briar Chapel Utilities, LLC	Chatham	35° 49' 02"	-79° 06' 46"	0.25	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-16	Briar Chapel Utilities, LLC	Chatham	35° 48' 59"	-79° 06' 47"	0.31	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-17	Briar Chapel Utilities, LLC	Chatham	35° 49' 01"	-79° 06' 47"	0.03	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-18	Briar Chapel Utilities, LLC	Chatham	35° 48' 52"	-79° 06' 40"	1.56	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.10	19.95	inches

IRRIGATION / UTILIZATION AREA INFORMATION								APPLICATION LIMITATIONS			
Phase	Field	Owner	County	Latitude	Longitude	Net Acreage	Dominant Soil Series	Parameter	Hourly Rate	Yearly Max	Units
1-D	D-19	Briar Chapel Utilities, LLC	Chatham	35° 48' 51"	-79° 06' 35"	1.40	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-20	Briar Chapel Utilities, LLC	Chatham	35° 48' 49"	-79° 06' 34"	0.17	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-21	Briar Chapel Utilities, LLC	Chatham	35° 48' 52"	-79° 06' 32"	0.54	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-22	Briar Chapel Utilities, LLC	Chatham	35° 48' 56"	-79° 06' 33"	0.08	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-23	Briar Chapel Utilities, LLC	Chatham	35° 49' 57"	-79° 06' 33"	0.20	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-26	Briar Chapel Utilities, LLC	Chatham	35° 49' 11"	-79° 06' 57"	2.16	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
<b>Total for 1-D (Non-Conjunctive Reclaimed Water Utilization)</b>						<b>16.89</b>					
1-E	E-1 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 47"	-79° 06' 28"	1.0 <sup>2</sup>	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.25	N/A	inches
1-E	E-2 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 44"	-79° 06' 08"	4.9 <sup>2</sup>	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.25	N/A	inches
1-E	E-3 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 35"	-79° 06' 09"	1.0	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.15	N/A	inches
1-E	E-4 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 34"	-79° 06' 18"	3.3 <sup>2</sup>	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.25	N/A	inches
1-E	E-5 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 06"	-79° 06' 50"	1.8	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.15	N/A	inches
<b>Total for 1-E (Conjunctive Reclaimed Water Utilization<sup>3</sup>)</b>						<b>12.0 / 9.2<sup>1</sup></b>					
1-F	F-1 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 27"	-79° 06' 49"	4.1	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.25	N/A	inches
1-F	F-2 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 30"	-79° 06' 44"	4.1 / 0.51 <sup>1</sup>	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.25	N/A	inches
1-F	F-3 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 33"	-79° 06' 43"	4.3 / 0.73 <sup>1</sup>	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.25	N/A	inches
1-F	F-4 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 35"	-79° 06' 50"	2.6 <sup>2</sup>	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.25	N/A	inches
<b>Total for 1-F (Conjunctive Reclaimed Water Utilization<sup>3</sup>)</b>						<b>15.1 / 3.8<sup>1</sup></b>					
1-G	G-1 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 20"	-79° 07' 02"	3.5	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.30	N/A	inches
1-G	G-2 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 24"	-79° 07' 00"	2.2	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.30	N/A	inches
1-G	G-3 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 22"	-79° 06' 54"	4.2	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.30	N/A	inches
1-G	G-4 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 17"	-79° 06' 59"	4.0	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.30	N/A	inches
1-G	G-5 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 39"	-79° 06' 54"	1.2	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.30	N/A	inches
1-G	G-6 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 11"	-79° 06' 40"	3.1	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.30	N/A	inches

IRRIGATION / UTILIZATION AREA INFORMATION								APPLICATION LIMITATIONS			
Phase	Field	Owner	County	Latitude	Longitude	Net Acreage	Dominant Soil Series	Parameter	Hourly Rate	Yearly Max	Units
1-G	G-7 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 05"	-79° 06' 44"	2.5	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.30	N/A	inches
1-G	G-8 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 06"	-79° 06' 27"	3.1	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.30	N/A	inches
1-G	G-9 <sup>3</sup>	Briar Chapel Utilities, LLC	Chatham	35° 49' 13"	-79° 06' 27"	2.6	Fill <sup>4</sup>	01284 – Non-Discharge Application Rate	0.30	N/A	inches
<b>Total for 1-G (Conjunctive Reclaimed Water Utilization<sup>3</sup>)</b>						<b>26.4</b>					
<b>Total</b>						<b>212.57 / 52.4 <sup>2</sup></b>					

1. The second value represents portions of that field which are certified and operational.
2. This notation represents fields that are entirely certified and operational.
3. Records for conjunctive utilization sites are not required to be reported on Form NDAR-1. Instead, the total monthly flow distributed should be reported on Form NDMR for parameter WQ01.
4. Fields permitted with "Fill" as the dominant underlying soil shall be rototilled and amended with topsoil to a suitable depth to support growth of the intended vegetative cover and in no case less than six inches in depth.







**Division of Environmental Health**  
Terry L. Pierce, Director

State of North Carolina  
Michael F. Easley, Governor

**Public Water Supply Section**  
Jessica G. Miles, Section Chief

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

July 24, 2007

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

Re: Engineering Plans and Specifications Approval  
Water Main Extension  
Great Ridge Parkway Northeast  
Chatham County Water System  
Chatham County  
I.D. # 03-19-126

**This is not an Authorization to Construct**

Dear Mr. Horn:

Enclosed please find one copy of the "Application for Approval..." together with one copy of the referenced engineering plans and specifications bearing the Division of Environmental Health stamp of approval for the referenced project. These engineering plans and specifications are approved under Division of Environmental Health serial number 07-01051, dated July 24, 2007.

Engineering plans and specifications prepared by Richard J. Dickie, P.E., call for the installation of approximately 5,760 feet of 12-inch and 490 feet of 8-inch water mains, valves, hydrants and other related appurtenances along Great Ridge Parkway Northeast.

**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.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Tony C. Chen".

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

TCC/HSO/db  
Enclosures: Approval Documents  
cc: Michael L. Douglas, P.E., Regional Engineer  
Chatham County Health Department  
The John R. McAdams Company

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

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