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NORTH CAROLINA
Environmental Quality

April 18, 2019

SHANNON V. BECKER – PRESIDENT
AQUA NORTH CAROLINA, INC.
202 MACKENAN COURT
CARY, NORTH CAROLINA 27511

Subject: Permit No. WQ0022870
Chapel Ridge WWTP
Reclaimed Water Generation and
Non-Conjunctive Reclaimed
Water Utilization System
Chatham County

Dear Mr. Becker:

In accordance with your permit renewal request received March 21, 2017, and subsequent additional information received July 28, 2017, we are forwarding herewith Permit No. WQ0022870 dated April 18, 2019, to Aqua North Carolina, Inc. for the construction and operation of approximately 216 acres of non-conjunctive reclaimed utilization area, and the continued operation of the existing reclaimed water generation and non-conjunctive reclaimed water utilization facilities.

This permit shall be effective from the date of issuance until February 28, 2025, shall void Permit No. WQ0022870 issued October 23, 2008, and shall be subject to the conditions and limitations as specified therein. Please pay particular attention to the monitoring requirements listed in Attachments A, B, and C 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.

Please note the following permit conditions have been removed since the last permit issuance dated October 23, 2008:

- Old Condition II.2. – This condition has been removed because it is inherently covered under multiple permit conditions.
- Old Condition II.16. – This condition has been removed because the Permittee is not a developer or a homeowners association.
- Old Condition IV.5. – The requirement to sample surface waters has been removed.
- Old Condition VI.2. – This condition has been removed because the permit is not voidable.
- Attachment A – PPIs 002 through 007 have been removed.



North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000

Please note the following permit conditions are new since the last permit issuance dated October 23, 2008:

- Condition II.17. – This condition requires the Permittee to ensure that 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.
- Condition III.4. – This condition requires that an Operator be on call 24 hours per day.
- Condition III.9. – This condition requires that the turbidimeter be tested and calibrated annually.
- Condition III.11. – This condition requires that an automatically activated standby power source be on site and operational at all times.
- Condition III.12. – This condition requires that the public be prohibited access to the reclaimed water generation facilities and the 5-day upset pond.
- Condition III.19. – This condition requires that the Permittee develop and implement an education program to inform users (including employees) about the proper use of reclaimed water.
- Condition III.20. – This condition requires that the Permittee provide notification to the public and/or employees about the use of reclaimed water, and that reclaimed water is not intended for drinking.
- Condition VI.3. – This condition explains the flow reduction requirements.
- Condition VI.4. – This condition notes that the flow reduction approval shall be maintained for the life of the facility.
- Attachment A - Monitoring for Total Nitrogen, Total Kjeldahl Nitrogen, and Total Phosphorus has been added to the effluent monitoring requirements to be consistent with our Non-Discharge Effluent Monitoring for Domestic Wastewater guidelines.
- Attachment C – The groundwater monitoring frequency has been changed from four times per year to three times per year.

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.

If you need additional information concerning this permit, please contact Tessa Monday at (919) 707-3660 or tessa.monday@ncdenr.gov.

Sincerely,


Linda Culpepper, Director
Division of Water Resources

cc: Chatham County Health Department (Electronic Copy)
Raleigh Regional Office, Water Quality Regional Operations Section (Electronic Copy)
Laserfiche Files (Electronic Copy)
Digital Permit Archive (Electronic Copy)
Central Files

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NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF ENVIRONMENTAL QUALITY
RALEIGH

**RECLAIMED WATER GENERATION AND NON-CONJUNCTIVE RECLAIMED WATER
UTILIZATION SYSTEM PERMIT**

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

PERMISSION IS HEREBY GRANTED TO

Aqua North Carolina, Inc.
Chatham County

FOR THE

operation of a 500,000 gallon per day (GPD) reclaimed water generation and non-conjunctive reclaimed water utilization system consisting of the:

construction and operation of: approximately 216 acres of non-conjunctive reclaimed water utilization area divided into 149 acres of primary low spray areas (PLSA), 50 acres of primary high spray areas (PHSA), and 17 acres of secondary spray areas (SSA); and all associated piping, valves, controls, and appurtenances; the

continued operation of a 500,000 gallon per day (GPD) reclaimed water generation system consisting of: a manually cleaned bar screen; a 165,900 gallon equalization basin with a 15 horsepower (hp) aerator; a flow splitter box; two 370,200 gallon aeration basins each with two 15 hp aerators; two 63,000 gallon clarifiers each with two air lift pumps; a 130,800 sludge holding basin with two 10 hp aerators, and a variable water level air lift pump; four 100 square foot (ft²) tertiary filters; a 32,600 gallon clearwell with four 750 gallon per minute (GPM) pumps; a 38,200 gallon mudwell with two 200 GPM pumps; a 25,100 gallon chlorine contact chamber with two variable speed pumps; two ultraviolet (UV) disinfections systems each with 20 lamps; an optional-use 23,800 gallon dechlorination chamber; an ultrasonic effluent flow measuring device; an effluent composite sampler; continuous effluent turbidity monitoring and recording; a permanent standby generator with automatic transfer switch capable of powering all essential wastewater treatment units; a 2,860,825 gallon clay-lined 5-day upset pond with a pump station containing two 200 GPM pumps, and all associated piping, valves, controls, and appurtenances; and the

continued operation of a non-conjunctive reclaimed water utilization system consisting of: a 42,839,747 gallon clay-lined irrigation storage pond; a 7,300 gallon irrigation pump tank with three 600 GPM pumps; a 212 acre spray irrigation area consisting of common and golf course areas pursuant to an Effluent Easement and Irrigation Agreement between the Permittee and Jordan Lake Preserve Corporation, and all associated piping, valves, controls, and appurtenances

to serve the Chapel Ridge WWTP, with no discharge of wastes to the surface waters, pursuant to the application received March 21, 2017 and subsequent addition information received by the Division of Water Resources, and in conformity with the project plan, specifications, 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 February 28, 2025, shall void Permit No. WQ0022870 issued October 23, 2008, and shall be subject to the following specified conditions and limitations:

I. SCHEDULES

1. Upon completion of construction and prior to operation of the reclaimed water utilization facilities consisting of 216 acres (149 acres of primary low spray areas (PLSA), 50 acres of primary high spray areas (PHSA), and 17 acres of secondary spray areas (SSA)), 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, 1617 Mail Service Center, Raleigh, NC 27699-1617. [15A NCAC 02T .0116]
2. 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 the newly 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. [15A NCAC 02T .0108(b)(2)]
3. 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. [15A NCAC 02U .0106, 02U .0109]

II. PERFORMANCE STANDARDS

1. The subject reclaimed water 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 reclaimed water generation and utilization facilities. [G.S. 143-215.1, 143-213.3(a)]
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. [15A NCAC 02B .0200, 02L .0100]
3. All wells constructed for purposes of groundwater monitoring shall be constructed in accordance with 15A NCAC 02C .0108 (Standards of Construction for Wells Other than Water Supply), and any other jurisdictional laws and regulations pertaining to well construction. [15A NCAC 02C .0108]
4. Effluent limitations for generated reclaimed water shall not exceed those specified in Attachment A. [15A NCAC 02U .0300].
5. Application rates shall not exceed those specified in Attachment B. [15A NCAC 02U .0401(g), 02U .0402(m)]
6. The reclaimed water irrigation system 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. [15A NCAC 02T .0108(b)(1)]

7. The following shall be requirements for the reclaimed water distribution, storage, and utilization facilities:
 - a. All reclaimed water valves, storage facilities and outlets shall be tagged or labeled to warn the public or employees that 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 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.

[15A NCAC 02U .0403]

10. No direct cross-connections shall be allowed between reclaimed water and potable water systems, unless the Department has approved such connection pursuant to 15A NCAC 18C .0406. [15A NCAC 02U .0403(f)]
11. Reclaimed water distribution lines 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. [15A NCAC 02U .0403(h)]
12. Reclaimed water distribution lines 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. [15A NCAC 02U .0403(i)].
13. Reclaimed water distribution lines 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. [15A NCAC 02U .0403(j)]
14. The compliance and review boundaries 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. [15A NCAC 02H .0219(k)(1)(C)(i)(III)]
15. 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. [15A NCAC 02L .0107(c)]

16. No wells, excluding Division approved monitoring wells, shall be constructed within the compliance boundary except as provided for in 15A NCAC 02L .0107(g). [15A NCAC 02L .0107(d)]
17. 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.
[15A NCAC 02L .0107(f)]

18. The facilities herein were permitted per the following setbacks:
 - a. The reclaimed water irrigation sites were modified November 29, 2004. The setbacks for spray irrigation sites originally permitted or modified from June 1, 1996 to August 31, 2006 are as follows (all distances in feet):

i. Surface waters classified SA:	100
ii. Surface waters not classified SA:	25
iii. Each water supply well:	100
iv. Each non-potable well:	10
v. Each swimming pool:	25

[15A NCAC 02H .0219(k)(1)(C)(i)]

- b. The storage and treatment units were modified November 29, 2004. The setbacks for storage and treatment units originally permitted or modified from June 1, 1996 to August 31, 2006 are as follows (all distances in feet):

i. Each habitable residence or place of assembly under separate ownership:	100 ¹
ii. Each private or public water supply source:	100
iii. Surface waters:	50
iv. Each well with exception of monitoring wells:	100
v. Each property line:	50 ²
vi. Nitrification field:	20

¹ Habitable residences or places of assembly under separate ownership constructed after the facilities herein were originally permitted or subsequently modified are exempt from this setback.

² Setbacks to property lines are not applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels separated by the property line.

[15A NCAC 02H .0219(j)(5)]

19. The irrigation area soils contain high amounts of salt and clay, and are susceptible to compaction when wet. The Permittee shall prohibit activities within the irrigation areas that compact the soils. [15A NCAC 02T .0108(b)(1)]
20. Portions of the irrigation area contain soils that have a seasonal high water table that is within one foot of the soil surface. The Permittee shall monitor water table depth in these areas to ensure that reclaimed water is not irrigated when the vertical separation between the ground surface and the seasonal high water table is less than one foot. [15A NCAC 02T .0108(b)(1)]

III. OPERATION AND MAINTENANCE REQUIREMENTS

1. The reclaimed water generation and utilization facilities shall be properly maintained and operated at all times. The facilities shall be effectively maintained and operated as a reclaimed water system to prevent the discharge of any reclaimed water or partially treated effluent resulting from the operation of this facility. [15A NCAC 02T .0108(b)(1)]
2. The Permittee shall maintain an Operation and Maintenance Plan, 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.

[15A NCAC 02U .0801]

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. [15A NCAC 02U .0117]
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. [15A NCAC 02U .0401(e), 02U .0402(i)]
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. [15A NCAC 02T .0108(b)(1)]
6. Adequate measures shall be taken to prevent reclaimed water ponding in or runoff from the irrigation sites. [15A NCAC 02T .0108(b)(1)]
7. Irrigation shall not be performed during inclement weather or when the ground is in a condition that will cause ponding or runoff. [15A NCAC 02T .0108(b)(1)]
8. All 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. [15A NCAC 02T .0108(b)(1)]
9. The turbidimeter shall be tested and calibrated at a minimum of once per year. 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. [15A NCAC 02T .0108(b)(1)]
10. Only reclaimed water generated at the Chapel Ridge WWTP shall be utilized in accordance with this permit. [G.S. 143-215.1]

11. 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. [15A NCAC 02U .0402(h)]
12. Public access to the reclaimed water generation facilities and 2,860,825 gallon clay-lined five day upset pond shall be prohibited. [15A NCAC 02U .0402(f)]
13. Public access to reclaimed water utilization sites shall be controlled during active site use. Such controls may include the posting of signs showing the activities being conducted at each site. [15A NCAC 02U .0501]
14. Diversion or bypassing of untreated or partially treated wastewater from the treatment facilities is prohibited. [15A NCAC 02T .0108(b)(1)]
15. Freeboard in the 42,839,747 gallon clay-lined irrigation storage pond and the 2,860,825 gallon clay-lined five day upset pond shall not be less than two feet at any time. [15A NCAC 02T .0108(b)(1)]
16. Gauges to monitor water levels in the 42,839,747 gallon clay-lined irrigation storage pond and the and the 2,860,825 gallon clay-lined five day upset pond shall be provided. These gauges shall have readily visible permanent markings at inch or tenth of a foot increments. [15A NCAC 02T .0108(b)(1)]
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. [15A NCAC 02T .0108(b)(1)]
18. All effluent shall be routed to the five-day holding 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 holding pond shall be pumped back to the treatment plant headworks for re-treatment or treated in the five day upset holding pond prior to utilization. [15A NCAC 02U .0402(e)]
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. [15A NCAC 02U .0501(a)(4)]
20. The Permittee shall provide 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. [15A NCAC 02U .0501]
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. [15A NCAC 02T .1100, 02U .0802]

IV. MONITORING AND REPORTING REQUIREMENTS

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. [15A NCAC 02T .0108(c)]
2. A Division certified laboratory shall conduct all laboratory analyses for the required effluent, groundwater, or surface water parameters. [15A NCAC 02H .0800]
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.

[15A NCAC 02T .0105(k)]

4. The Permittee shall monitor the reclaimed water from the generating facility at the frequencies and locations for the parameters specified in Attachment A. [15A NCAC 02T .0108(c)]
5. The Permittee shall maintain adequate records tracking the amount of 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 reclaimed water utilization;
 - b. Volume of reclaimed water irrigated;
 - c. Site irrigated;
 - d. Length of time site is irrigated;
 - e. Continuous weekly, monthly, and year-to-date hydraulic (inches/acre) loadings;
 - f. Weather conditions; and
 - g. Maintenance of cover crops.

[15A NCAC 02T .0108(c)]

6. Freeboard (i.e., reclaimed water level to the lowest embankment elevation) in the 42,839,747 gallon clay-lined irrigation storage pond and the 2,860,825 gallon clay-lined five day upset 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. [15A NCAC 02T .0108(c)]

7. 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.

[15A NCAC 02T .0108(c)]

8. 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 of calibration of turbidimeter;
 - d. Date and results of power interruption testing on alternate power supply;
 - e. Record of preventative maintenance (e.g., changing/adjusting of equipment, pump and valve maintenance, cross connection control, testing, inspections, and cleanings, etc.; and
 - f. 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.

[15A NCAC 02T .0108(b)(1)]

9. Three copies of all effluent monitoring data and reclaimed water distribution data (as specified in Conditions IV.3. and IV.4.) shall be submitted on Form NDMR for each PPI listed in Attachment A. Reporting forms shall be submitted on or before the last day of the following month. If no reclaimed water distribution activities occurred during the monitoring month, monitoring reports documenting the absence of the activity are still required to be submitted. All effluent monitoring data shall be submitted to the following address: Division of Water Resources, Information Processing Unit, 1617 Mail Service Center, Raleigh, North Carolina, 27699-1617. [15A NCAC 02T .0105(l)]
10. Three copies of all operation and utilization records (as specified in Conditions IV.5. and IV.6. shall be submitted on Form NDAR-1 for every non-conjunctive utilization site listed in Attachment B. (Note: conjunctive use sites do not require NDAR-1 submission). Reporting forms shall be submitted on or before the last day of the following month. If no reclaimed water utilization activities occurred during the 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. [15A NCAC 02T .0105(l)]
11. Monitoring wells shall be sampled at the frequencies and for the parameters specified in Attachment C. All mapping, well construction forms, well abandonment forms and monitoring data shall refer to the permit number and the well nomenclature as provided in Attachment C and Exhibit 1.[15A NCAC 02T .0105(m)]

12. Two copies of the monitoring well sampling and analysis results shall be submitted on a Compliance Monitoring Form (GW-59), along with attached copies of laboratory analyses, on or before the last working day of the month following the sampling month. The Compliance Monitoring Form (GW-59) shall include this permit number, the appropriate well identification number, and one GW-59a certification form shall be submitted with each set of sampling results. 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. [15A NCAC 02T .0105(m)]

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. Treatment of wastes 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.8.f. 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. [15A NCAC 02T .0108(b)(1)]

V. INSPECTIONS

1. The Permittee shall provide adequate inspection and maintenance to ensure proper operation of the reclaimed water generation and utilization facilities. [15A NCAC 02T .0108(b)]
2. The Permittee or their designee shall inspect the reclaimed water generation 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. [15A NCAC 02T .0108(b)]
3. Any duly authorized Division representative may, upon presentation of credentials, enter and inspect any property, premises or place on or related to the reclaimed water generation 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. [G.S. 143-215.1]

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. [G.S. 143-215.6A to 143-215.6C]
2. 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). [G.S. 142-215.1]
3. Pursuant to the flow reduction request approved November 29, 2004, the Division accepts the data-based design flow rate of 250 gallons per day per residence (GPD/residence) for the users served by this facility. Regardless of the adjusted daily wastewater design flow rate, at no time shall wastewater flows exceed the limits defined in this permit for the subject facility, or exceed the sewer capacity downstream of any new sewer extension or service connection(s).

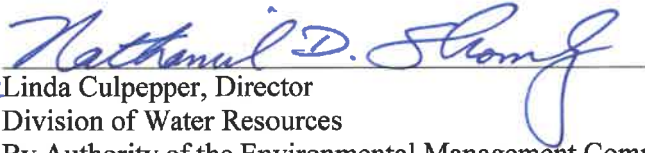
The Permittee shall report the actual (i.e., measured) monthly average amount of wastewater flow contributed per unit (GPD/residence) for the 12 months prior to permit renewal. If any of these actual monthly averages are within 20% of the approved value, the Permittee shall re-evaluate the approved value using the methodology applied to determine the approved flow rate of 250 GPD/residence, and submit this information within 18 months. The Division may change the daily wastewater design flow rate for connections to the system at that time, and upon each renewal cycle, pending an evaluation of the submitted flow information. [15A NCAC 02T .0114(f)]

4. The Permittee shall retain the Division's written approval of any authorized adjusted daily design flow rate for the life of the facility, and shall transfer said written approval to any future Permittee. [15A NCAC 02T .0114(f)(4)]
5. The issuance of this permit does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances, which may be imposed by other 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. [15A NCAC 02T .0105(c)(6)]
6. 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. [15A NCAC 02T .0104]
7. The Permittee shall retain a set of Division approved plans and specifications for the life of the facilities permitted herein. [15A NCAC 02T .0108(b)(1)]
8. 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. [15A NCAC 02T .0105(j)]
9. 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. [15A NCAC 02T .0110]

10. 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). [15A NCAC 02T .0120]
11. 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. [15A NCAC 02T .0105(e)(3)]

Permit issued this the 18th day of April 2019

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION


Linda Culpepper, Director
Division of Water Resources
By Authority of the Environmental Management Commission

Permit Number WQ0022870

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			NC PE Seal, Signature & Date
Engineering Firm			
Mailing Address			
City	State	Zip	
Telephone	E-mail		

THE COMPLETED ENGINEERING CERTIFICATION, INCLUDING ALL SUPPORTING INFORMATION AND MATERIALS, SHALL BE SENT TO THE FOLLOWING ADDRESS:

**NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER RESOURCES
WATER QUALITY PERMITTING SECTION
NON-DISCHARGE PERMITTING UNIT**

By U.S. Postal Service:
1617 MAIL SERVICE CENTER
RALEIGH, NORTH CAROLINA 27699-1617

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

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
00680	Carbon, Total Organic (TOC)	mg/L					3 x Year ¹	Composite
00940	Chloride (as Cl)	mg/L					3 x Year ¹	Composite
50060	Chlorine, Total Residual	mg/L					5 x Week	Grab
31616	Coliform, Fecal MF, M-FC Broth, 44.5 °C	#/100 mL		14		25	2 x Month	Grab
50050	Flow, in Conduit or thru Treatment Plant	GPD	270,000 ² 500,000 ³				Continuous	Recorder
00610	Nitrogen, Ammonia Total (as N)	mg/L	4			6	2 x Month	Composite
00625	Nitrogen, Kjeldahl, Total (as N)	mg/L					2 x Month	Composite
00620	Nitrogen, Nitrate Total (as N)	mg/L					2 x Month	Composite
00600	Nitrogen, Total (as N)	mg/L					2 x Month	Composite
00400	pH	su					5 x Week	Grab
00665	Phosphorus, Total (as P)	mg/L					2 x Month	Composite
70300	Solids, Total Dissolved – 180 °C	mg/L					3 x Year ¹	Composite
00530	Solids, Total Suspended	mg/L	5			10	2 x Month	Composite
00076	Turbidity, HCH Turbidimeter	NTU				10	Continuous	Recorder

- 3 x Year sampling shall be conducted in March, July, and November.
- Prior to certification and operation of the unconstructed 216 acres of reclaimed irrigation area, the permitted flow shall be limited to a monthly average of 270,000 GPD.
- Upon certification and operation of the remaining 216 acres of unconstructed reclaimed irrigation area, the permitted flow shall be 500,000 GPD.

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NON-CONJUNCTIVE LAND APPLICATION SITES

Aqua North Carolina, Inc. – Chapel Ridge WWTP

IRRIGATION AREA INFORMATION										APPLICATION PARAMETERS			
Zone	Area	Owner ¹	County	Latitude	Longitude	Net Acreage	Dominant Soil Series	Parameter	Hourly Rate	Yearly Max	Units		
CH	Club House	Chapel Ridge Property LLC	Chatham	35.783056°	79.227222°	1.34	Georgeville	01284 – Non-Discharge Application Rate	0.5	17.58	inches		
DR	Driving Range	Chapel Ridge Property LLC	Chatham	35.786389°	79.227222°	14.90	Goldston	01284 – Non-Discharge Application Rate	0.1	20.47	inches		
F-1	Golf Hole	Chapel Ridge Property LLC	Chatham	35.787222°	79.226389°	11.40	Nason	01284 – Non-Discharge Application Rate	0.1	20.47	inches		
F-10	Golf Hole	Chapel Ridge Property LLC	Chatham	35.784444°	79.231389°	5.76	Georgeville	01284 – Non-Discharge Application Rate	0.1	20.47	inches		
F-10B	Golf Hole	Chapel Ridge Property LLC	Chatham	35.786111°	79.231667°	5.69	Lignum	01284 – Non-Discharge Application Rate	0.1	7.43	inches		
F-11	Golf Hole	Chapel Ridge Property LLC	Chatham	35.789722°	79.235556°	4.69	Herndon	01284 – Non-Discharge Application Rate	0.1	20.47	inches		
F-11B	Golf Hole	Chapel Ridge Property LLC	Chatham	35.789444°	79.237222°	4.20	Georgeville	01284 – Non-Discharge Application Rate	0.1	20.47	inches		
F-11C	Golf Hole	Chapel Ridge Property LLC	Chatham	35.787778°	79.233333°	9.37	Lignum	01284 – Non-Discharge Application Rate	0.1	7.43	inches		
F-12	Golf Hole	Chapel Ridge Property LLC	Chatham	35.792222°	79.236389°	2.62	Georgeville	01284 – Non-Discharge Application Rate	0.1	20.47	inches		
F-12B	Golf Hole	Chapel Ridge Property LLC	Chatham	35.792500°	79.234167°	1.54	Cid	01284 – Non-Discharge Application Rate	0.1	7.43	inches		
F-13	Golf Hole	Chapel Ridge Property LLC	Chatham	35.792222°	79.227222°	8.49	Georgeville	01284 – Non-Discharge Application Rate	0.1	20.47	inches		
F-13B	Golf Hole	Chapel Ridge Property LLC	Chatham	35.791111°	79.226389°	2.20	Lignum	01284 – Non-Discharge Application Rate	0.1	7.43	inches		
F-14	Golf Hole	Chapel Ridge Property LLC	Chatham	35.792500°	79.231389°	9.91	Georgeville	01284 – Non-Discharge Application Rate	0.1	20.47	inches		
F-15	Golf Hole	Chapel Ridge Property LLC	Chatham	35.793889°	79.231667°	4.79	Nason	01284 – Non-Discharge Application Rate	0.1	20.47	inches		
F-16	Golf Hole	Chapel Ridge Property LLC	Chatham	35.793056°	79.235556°	9.05	Goldston	01284 – Non-Discharge Application Rate	0.1	20.47	inches		
F-17	Golf Hole	Chapel Ridge Property LLC	Chatham	35.788889°	79.237222°	5.37	Georgeville	01284 – Non-Discharge Application Rate	0.1	20.47	inches		
F-18	Golf Hole	Chapel Ridge Property LLC	Chatham	35.788056°	79.233333°	17.80	Georgeville	01284 – Non-Discharge Application Rate	0.1	20.47	inches		
F-2	Golf Hole	Chapel Ridge Property LLC	Chatham	35.788611°	79.236389°	5.56	Nason	01284 – Non-Discharge Application Rate	0.1	20.47	inches		
F-2B	Golf Hole	Chapel Ridge Property LLC	Chatham	35.788889°	79.234167°	4.22	Lignum	01284 – Non-Discharge Application Rate	0.1	7.43	inches		
F-3	Golf Hole	Chapel Ridge Property LLC	Chatham	35.791389°	79.222500°	10.66	Goldston	01284 – Non-Discharge Application Rate	0.1	20.47	inches		

F-3B	Golf Hole	Chapel Ridge Property LLC	Chatham	35.792500°	79.221111°	3.01	Cid	01284 – Non-Discharge Application Rate	0.1	7.43	inches
F-4	Golf Hole	Chapel Ridge Property LLC	Chatham	35.793333°	79.217500°	7.18	Herndon	01284 – Non-Discharge Application Rate	0.1	20.47	inches
F-5	Golf Hole	Chapel Ridge Property LLC	Chatham	35.790556°	79.215833°	13.22	Georgeville	01284 – Non-Discharge Application Rate	0.1	20.47	inches
F-6	Golf Hole	Chapel Ridge Property LLC	Chatham	35.786944°	79.213889°	4.94	Georgeville	01284 – Non-Discharge Application Rate	0.1	20.47	inches
F-7	Golf Hole	Chapel Ridge Property LLC	Chatham	35.787500°	79.216389°	16.48	Georgeville	01284 – Non-Discharge Application Rate	0.1	20.47	inches
F-8	Golf Hole	Chapel Ridge Property LLC	Chatham	35.786944°	79.213889°	4.06	Georgeville	01284 – Non-Discharge Application Rate	0.1	20.47	inches
F-9	Golf Hole	Chapel Ridge Property LLC	Chatham	35.787500°	79.216389°	10.11	Nason	01284 – Non-Discharge Application Rate	0.1	20.47	inches
OS-1	Common Area	Chapel Ridge Community Association, Inc.	Chatham	35.785556°	79.220000°	0.70	Georgeville	01284 – Non-Discharge Application Rate	0.1	20.47	inches
OS-2	Common Area	Jordan Lake Preserve Corporation	Chatham	35.784722°	79.224444°	1.65	Georgeville	01284 – Non-Discharge Application Rate	0.1	20.47	inches
OS-3	Common Area	Jordan Lake Preserve Corporation	Chatham	35.782778°	79.227500°	0.49	Georgeville	01284 – Non-Discharge Application Rate	0.1	20.47	inches
OS-4	Common Area	Jordan Lake Preserve Corporation	Chatham	35.783889°	79.232500°	2.71	Nason	01284 – Non-Discharge Application Rate	0.1	20.47	inches
OS-5	Common Area	Jordan Lake Preserve Corporation	Chatham	35.787500°	79.231111°	0.95	Nason	01284 – Non-Discharge Application Rate	0.1	20.47	inches
OS-6	Common Area	Jordan Lake Preserve Corporation	Chatham	35.782222°	79.230000°	1.29	Tatum	01284 – Non-Discharge Application Rate	0.1	20.47	inches
OS-6B	Common Area	Jordan Lake Preserve Corporation	Chatham	35.788056°	79.210833°	1.99	Cid	01284 – Non-Discharge Application Rate	0.1	7.43	inches
OS-7	Common Area	Jordan Lake Preserve Corporation	Chatham	35.788889°	79.210556°	3.83	Tatum	01284 – Non-Discharge Application Rate	0.1	20.47	inches
PHSA-1	Common Area	The Parks at Meadowview, LLC	Chatham	35.788889°	79.210556°	1.10	Cid	01284 – Non-Discharge Application Rate	0.1	15.86	inches
PHSA-2	Common Area	The Parks at Meadowview, LLC	Chatham	35.787778°	79.210556°	6.00	Goldston	01284 – Non-Discharge Application Rate	0.1	15.86	inches
PHSA-3	Common Area	Vanguard Properties of the Carolinas	Chatham	35.771944°	79.216667°	2.90	Goldston	01284 – Non-Discharge Application Rate	0.1	15.86	inches
PHSA-4	Common Area	Vanguard Properties of the Carolinas	Chatham	35.781667°	79.225000°	15.70	Cid	01284 – Non-Discharge Application Rate	0.1	15.86	inches
PHSA-5	Common Area	Vanguard Properties of the Carolinas	Chatham	35.781667°	79.228889°	9.70	Cid	01284 – Non-Discharge Application Rate	0.1	15.86	inches
PHSA-6	Common Area	Vanguard Properties of the Carolinas	Chatham	35.784167°	79.235556°	1.70	Tarrus	01284 – Non-Discharge Application Rate	0.1	15.86	inches

PHSA-7	Common Area	Vanguard Properties of the Carolinas	Chatham	35.784444	79.239167	13.60	Tarrus	01284 – Non-Discharge Application Rate	0.1	15.86	inches
PLSA-1	Common Area	The Parks at Meadowview, LLC	Chatham	35.786667	79.239444	5.10	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-10	Common Area	Vanguard Properties of the Carolinas	Chatham	35.792500	79.239167	7.20	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-11	Common Area	Vanguard Properties of the Carolinas	Chatham	35.770556	79.207500	12.60	Misenheimer	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-12	Common Area	Vanguard Properties of the Carolinas	Chatham	35.780833	79.229167	2.20	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-13	Common Area	Vanguard Properties of the Carolinas	Chatham	35.779167	79.231944	7.10	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-14	Common Area	Vanguard Properties of the Carolinas	Chatham	35.776944	79.231667	3.10	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-15	Common Area	Vanguard Properties of the Carolinas	Chatham	35.777500	79.237778	5.00	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-16	Common Area	Vanguard Properties of the Carolinas	Chatham	35.780000	79.236944	17.40	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-17	Common Area	Vanguard Properties of the Carolinas	Chatham	35.782222	79.238056	1.30	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-18	Common Area	Vanguard Properties of the Carolinas	Chatham	35.783333	79.240000	5.10	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-18	Common Area	Vanguard Properties of the Carolinas	Chatham	35.783333	79.240000	5.10	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-19	Common Area	Vanguard Properties of the Carolinas	Chatham	35.783333	79.240000	1.10	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-2	Common Area	The Parks at Meadowview, LLC	Chatham	35.781389	79.233056	6.20	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-20	Common Area	Vanguard Properties of the Carolinas	Chatham	35.784167	79.236667	1.40	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-21	Common Area	Vanguard Properties of the Carolinas	Chatham	35.783333	79.240000	5.30	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-22	Common Area	Vanguard Properties of the Carolinas	Chatham	35.782500	79.242778	9.40	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-24	Common Area	The Parks at Meadowview, LLC	Chatham	35.772222	79.208056	3.20	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-26	Common Area	Vanguard Properties of the Carolinas	Chatham	35.786389	79.239722	1.10	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-3	Common Area	The Parks at Meadowview, LLC	Chatham	35.771389	79.240000	16.90	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-4	Common Area	The Parks at Meadowview, LLC	Chatham	35.790278	79.239722	3.70	Misenheimer	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-5	Common Area	The Parks at Meadowview, LLC	Chatham	35.779167	79.223333	5.90	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-6A	Common Area	The Parks at Meadowview, LLC	Chatham	35.785556	79.240833	2.80	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-6B	Common Area	The Parks at Meadowview, LLC	Chatham	35.768611	79.212500	2.30	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-7	Common Area	The Parks at Meadowview, LLC	Chatham	35.772222	79.211944	17.90	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches

PLSA-8	Common Area	Vanguard Properties of the Carolinas	Chatham	35.770556°	79.217778°	3.80	Cid	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
PLSA-9	Common Area	The Parks at Meadowview, LLC	Chatham	35.772500°	79.215278°	1.70	Goldston	01284 – Non-Discharge Application Rate	0.1	13.53 ₂	inches
SSA-1	Common Area	The Parks at Meadowview, LLC	Chatham	35.773889°	79.219722°	1.10	Cid	01284 – Non-Discharge Application Rate	0.1	7 ³	inches
SSA-2	Common Area	The Parks at Meadowview, LLC	Chatham	35.773333°	79.222778°	3.30	Crawfordsville	01284 – Non-Discharge Application Rate	0.1	7 ³	inches
SSA-4	Common Area	The Parks at Meadowview, LLC	Chatham	35.781944°	79.218333°	5.60	Cid	01284 – Non-Discharge Application Rate	0.1	7 ³	inches
SSA-6	Common Area	Vanguard Properties of the Carolinas	Chatham	35.781389°	79.224167°	4.00	Cid	01284 – Non-Discharge Application Rate	0.1	7 ³	inches
SSA-8	Common Area	Vanguard Properties of the Carolinas	Chatham	35.771944°	79.218889°	3.40	Cid	01284 – Non-Discharge Application Rate	0.1	7 ³	inches
Totals						429.07					

Notes:

- Effluent Easement and Irrigation Agreement (Chatham County Register of Deeds Book 01141, Page 0656) assigns to Aqua North Carolina, Inc. (formerly Heater Utilities, Inc.) the right to irrigate reclaimed water within the effluent easement.
- Fields PLSA-1 through PLSA-26 shall only be irrigated from April 1 through November 30.
- Fields PHSA-1 through PHSA-7 shall only be irrigated from May 1 through October 31.

Monitoring wells: MW-1, MW-2, and MW-3

GROUNDWATER CHARACTERISTICS		GROUNDWATER STANDARDS		MONITORING REQUIREMENTS		
PCS Code	Parameter Description	Daily Maximum	Frequency Measurement	Sample Type	Footnotes	
00680	Carbon, Tot Organic (TOC)	mg/L	3 x Year	Grab	1, 4	
00940	Chloride (as Cl)	250	3 x Year	Grab	1	
31616	Coliform, Fecal MF, M-FC Broth, 44.5 °C	#/100 mL	3 x Year	Grab	1	
00610	Nitrogen, Ammonia Total (as N)	1.5	3 x Year	Grab	1	
00620	Nitrogen, Nitrate Total (as N)	10	3 x Year	Grab	1	
00400	pH	6.5-8.5	3 x Year	Grab	1, 2	
00665	Phosphorus, Total (as P)	mg/L	3 x Year	Grab	1	
70300	Solids, Total Dissolved - 180 °C	500	3 x Year	Grab	1	
82546	Water Level, Distance from measuring point	feet	3 x Year	Calculated	1, 2, 3	

1. 3 x Year sampling shall be conducted in March, July, and November.
2. The measurement of water levels shall be made prior to purging the wells. The depth to water in each well shall be measured from the surveyed point on the top of the casing. The measurement of pH shall be made after purging and prior to sampling for the remaining parameters.
3. The measuring points (top of well casing) of all monitoring wells shall be surveyed to provide the relative elevation of the measuring point for each monitoring well. The measuring points (top of casing) of all monitoring wells shall be surveyed relative to a common datum.
4. If TOC concentrations greater than 10 mg/L are detected in any downgradient monitoring well, additional sampling and analysis must be conducted to identify the individual constituents comprising this TOC concentration. If the TOC concentration as measured in the background monitor well exceeds 10 mg/L, this concentration will be taken to represent the naturally occurring TOC concentration. Any exceedances of this naturally occurring TOC concentration in the downgradient wells shall be subject to the additional sampling and analysis as described above.
5. Monitoring wells shall be reported consistent with the nomenclature and location information provided in Exhibit 1 and this attachment.

