

SANFORD LAW OFFICE, PLLC
Jo Anne Sanford, Attorney at Law

September 1, 2021

Ms. Shonta Dunston
Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4325

Via Electronic Filing

Re: Aqua North Carolina, Inc.
Docket No. W-218, Sub 526A
Fifteenth Semi-Annual Report Concerning Secondary Water
Quality Concerns

Dear Ms. Dunston:

Enclosed please find for filing the referenced Fifteenth Semi-Annual Report Regarding Secondary Water Quality Concerns, jointly submitted by Aqua North Carolina, Inc. and the Public Staff. This Report is the latest in a series of reports filed pursuant to the Commission's Rate Case Order of October 26, 2020, in Docket No. W-218, Sub 526, at page 171 (Ordering Paragraph No. 19).

As always, thank you and your office for your assistance and please feel free to contact me if there are any questions.

Sincerely,

Electronically Submitted
/s/Jo Anne Sanford
State Bar # 6831

Attorney for Aqua North Carolina, Inc.

c: Parties of Record

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**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. W-218, SUB 526A

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of
Reporting Requirements from Docket No. W-218,) **FIFTEENTH**
Sub 526 - Application by Aqua North Carolina, Inc.,) **SEMI-ANNUAL REPORT**
202 MacKenan Court, Cary, North Carolina 27511,) **REGARDING**
for Authority to Adjust and Increase Rates for) **SECONDARY WATER**
Water and Sewer Utility Service in All of Its Service) **QUALITY CONCERNS**
Areas in North Carolina)

NOW COME Aqua North Carolina, Inc. (“Aqua” or “Company”) and the Public Staff – North Carolina Utilities Commission (“Public Staff”), by and through the undersigned counsel, to file this Fifteenth Semi-Annual Report Regarding Secondary Water Quality Concerns (“Fifteenth Semi-Annual Report”), as discussed below.

In support of this Fifteenth Semi-Annual Report, Aqua and the Public Staff state the following:

On October 26, 2020, the North Carolina Utilities Commission (“NCUC” or “Commission”) issued its *Order Approving Partial Settlement Agreement and Stipulation, Deciding Contested Issues, Granting Partial Rate Increase, and Requiring Customer Notice* (“2020 Rate Case Order”) in Docket No. W-218, Sub 526.

The Commission included the following reporting requirement in its Ordering Paragraph No. 19, at page 171 of the 2020 Rate Case Order:

That the Public Staff and Aqua NC are required to file a written report with the Commission, on March 1 and September 1 each year

in which the WSIC is in effect, on secondary quality concerns that are affecting its customers. If a particular secondary water quality concern has affected or is affecting 10% of the customers in an individual subdivision service area or 25 billing customers in an individual service area, whichever is less, the customers affected and the estimated expenditures that are necessary to eradicate to the extent practicable water quality issues related to iron and manganese through the use of projects that are eligible for recovery through the WSIC shall be detailed in the written report. The written report shall also contain a recommendation as to whether the Commission should order Aqua NC to pursue such corrective action and an underlying reason why the action should or should not be undertaken. If there are no secondary water issues or if the secondary water quality issues are below the 10%/25 threshold previously set forth, Aqua NC and the Public Staff shall so inform the Commission, but they need not report secondary water quality issues resolved by Aqua NC without the assistance or expectation of assistance of the WSIC.

On August 15, 2014, Aqua filed its First Semi-Annual Report on Secondary Water Quality Concerns in Docket No. W-218, Sub 363A. Thereafter, Aqua filed an additional 13 Reports, including its Fourteenth Semi-Annual Report Regarding Secondary Water Quality Concerns in Docket No. W-218, Sub 526A, which was filed on March 1, 2021.

DISCUSSION

Aqua initially determined that 11 systems potentially met either the 10 percent of customers or 25 billing customers per system reporting requirements for inclusion in this Semi-Annual Report. After thorough review, eight systems were removed as they were determined to not meet the required reporting criteria by either not being attributable to secondary water quality issues or anticipated to be resolved through WSIC funding. Seven systems were excluded for operation and maintenance issues (e.g., meter replacement, system flushing, and/or filter maintenance). The remaining

system was excluded as the customer complaints were related to a water main break.

Aqua ultimately determined that there were three subdivisions or service areas served by the Company where a particular secondary water quality concern affected either 10 percent of the customers or 25 billing customers during the six-month reporting period ending June 30, 2021, which is the period addressed by this Fifteenth Semi-Annual Report. The Aqua systems in question are listed below.

<u>Systems Located in Aqua’s Central Area</u>	<u>Systems Located in Aqua’s Western Area</u>	<u>Systems Located in Aqua’s Coastal Area</u>
None	Blue Water Cove Cabarrus Acres Spring Shores	None

SPECIFIC SERVICE AREA REPORTS

Blue Water Cove. The Blue Water Cove water system currently serves 20 connections and is permitted to serve 25 connections. There is one approved and active well on the system, and it is treated with sodium hypochlorite.

On January 27, 2021, Aqua submitted an Application for Approval to Implement a Secondary Water Quality System Improvement Project for Blue Water Cove Well #1. The Order Approving the Secondary Water Quality Improvement Project for Blue Water Cove Well #1 was issued by the Commission on March 16, 2021. The chem-free treatment system, which utilizes media that adjusts pH and also removes iron and manganese, was placed online at Well #1 on July 20, 2021.

The cartridge filter previously installed in April 2019 at Well #1 is no longer operational and will be removed and used at another location. Blue Water Cove also has one 5,000-gallon hydro-pneumatic storage tank in service, which was cleaned as part of the installation of the chem-free treatment system in July.

Aqua received four water quality complaints from three customers in the six-month reporting period which ended on June 30, 2021. Each of those customer complaints was received prior to installation of the chem-free treatment system at Well #1. Those four complaints were related to discolored water. One customer complaint was received during the previous reporting period, ending December 31, 2020.

Blue Water Cove's last Inorganic Chemical Analysis ("IOC"), which was taken August 9, 2018, showed the level for iron to be 1.27 mg/L, which is above the applicable Secondary Maximum Contaminant Level ("sMCL"). The IOC analysis for manganese showed a result below the applicable sMCL. The IOC analysis scheduled for 2021 will be taken in the third quarter of 2021.

The Blue Water Cove water system was flushed in July 2021. It is scheduled to be flushed semi-annually, and the next scheduled flushing is set for January 2022.

Public Staff Comments. Blue Water Cove previously appeared in the Fifth, Ninth, Tenth, and Twelfth Semi-Annual Reports. The Public Staff expects the treatment system installed at Well No. 1 will resolve the water quality issues and customer complaints. To confirm the treatment system is effectively improving the water quality, the Public Staff recommends that Aqua include an update on Blue Water Cove in the next Semi-Annual Report that at minimum provides the IOC

analysis results scheduled for the third quarter of 2021. The Public Staff has consistently stated that for well water quality filters to provide effective filtration, the system must be properly designed, installed, operated, and maintained.

Aqua Response to Public Staff Comments. Aqua agrees to provide a copy of the referenced IOC results scheduled for the third quarter 2021 to the Public Staff when those results become available.

Cabarrus Acres. The Cabarrus Acres water system currently serves 13 connections and could serve 49 connections at full build-out; however, no additional connections will be made as the system is paralleled by the City of Concord. Two approved wells (only one of which is active) and one 2,000-gallon hydro-pneumatic storage tank serve this system. Aqua adds polyphosphate to Well #1 for iron sequestration. The blend of polyphosphate was changed from OP37 to SeaQuest in 2014. Cartridge filtration was added to this well in November 2017.

Aqua received nine water quality complaints from five customers during the six-month reporting period ending June 30, 2021, and two water quality complaints from one customer were received in the previous six-month period. The nine secondary water quality complaints from customers during the current reporting period were primarily related to discolored water.

Cabarrus Acres' last IOC, which was taken February 3, 2021, showed the levels for iron to be 2.09 mg/L and manganese to be 0.215 mg/L, which are both above the applicable sMCLs.

The Cabarrus Acres water system was flushed in October 2020 and is scheduled to be flushed annually. The next scheduled flushing is set for October 2021.

Aqua operates and maintains a cartridge filter on this system. In addition to the scheduled flushings, the hydro-pneumatic storage tank was cleaned in September 2019 to minimize the secondary water quality concerns at Cabarrus Acres.

Aqua estimates that the addition of a secondary contaminant filtration system necessary to address the water quality from the existing two wells on this system would cost approximately \$175,000 - \$300,000. The water distribution system has been paralleled by the City of Concord and the remaining customers have the option to connect to a viable alternative water source. Aqua and the Public Staff are in ongoing discussions regarding the prudence of the alternatives available to address the water quality concerns for the remaining customers on this system. To further facilitate this discussion, Aqua will submit an executive summary to the Public Staff within the next 90 days that provides a comparison of two available options to address secondary water quality concerns in Cabarrus Acres – WSIC recovery of costs to install a manganese dioxide filtration system or recovery of all applicable costs related to connecting the 13 remaining customers to the City of Concord with Aqua retaining the net value of the Cabarrus Acres system in rate base. In the interim, Aqua will continue to address the water quality issues in this system operationally, as efficiently as possible.

Public Staff Comments. Cabarrus Acres previously appeared in the Fourth, Fifth, Sixth, Seventh, Eighth, Tenth, and Eleventh Semi-Annual Reports. Upon receipt, the Public Staff will review the executive summary in a timely manner and provide appropriate feedback to Aqua. At present, the Public Staff strongly believes there are more than two options available to address the issues at Cabarrus Acres. For example, the water system could be sold to the City of Concord, at a loss if necessary.

Aqua Response to Public Staff Comments. Aqua is willing to discuss the available options recommended and agrees that a third viable option could be to sell the system to the City of Concord, if the city is willing to take ownership, at a loss as long as the loss is recoverable by the Company.

Spring Shores. The Spring Shores water system currently serves 54 connections and is permitted to serve 100 connections. Two approved and active wells are on the system; both are treated with sodium hypochlorite and polyphosphate. A cartridge filter was installed at Well #1 in 2016, and a radium removal system was installed in September 2014. Well #2 is also serviced by a separate radium removal system. In March 2019, Well #2 was cleaned. Spring Shores also has one 5,400-gallon hydro-pneumatic storage tank in service at Well #2.

Aqua received eight water quality complaints from five customers in the six-month reporting period ending June 30, 2021. The recent complaints were related to discolored water. One customer complaint was received during the previous reporting period, ending December 31, 2020.

Spring Shores' last IOC, which was taken November 1, 2018 at Well #1, showed the levels for iron and manganese as non-detect for the applicable sMCLs. Wells #1 and #2 currently have radium treatment systems which reduce iron and manganese; however, the removal of iron and manganese reduces the operational efficiencies of the radium treatment systems to remove radium. The IOC analysis at Well #2 showed the levels for iron to be 0.534 mg/L and manganese to be 0.414 mg/L, which are both above the applicable sMCLs. The IOC analysis scheduled for 2021 on Well #2 will be taken in the fourth quarter of 2021.

On April 14, 2021, Aqua submitted an Application for Approval to Implement a Secondary Water Quality System Improvement Project for Spring Shores Well #2 for installation of a Hydrous Manganese Oxide ("HMO") filter. This Application has been reviewed by the Public Staff and is expected to be presented to the Commission for approval at an upcoming Staff Conference. Once approved by the Commission, the HMO filter is scheduled to be installed and operational in early-2022.

The Spring Shores water system was flushed in June 2021. Spring Shores is scheduled to be flushed quarterly with the next flushing in the third quarter of 2021.

Public Staff Comments. The Public Staff is in agreement with Aqua's plan of action to address discolored water complaints at Spring Shores and expects the new filtration system to be installed at Well No. 2 will resolve the water quality issues and customer complaints. The Public Staff has consistently stated that for well water quality filters to provide effective filtration, the system must be properly designed, installed, operated, and maintained. The application to implement the filter project

states the estimated date of completion is September 2022. The Public Staff filed its Secondary Water Quality Report and Recommendations addressing the proposed filter project at Spring Shores Well No. 2 and others on August 30, 2021. The Public Staff anticipates presenting its proposed order recommending the Commission approve implementation of this filter project at the Commission's Staff Conference on September 7, 2021.

The following Aqua appendices are attached to this Report:

<u>Appendix</u>	<u>System Name</u>
Appendix A	Blue Water Cove
Appendix B	Cabarrus Acres
Appendix C	Spring Shores

The Aqua appendices show:

- a. Simple map of system showing the location of each well, with wells identified; **FILED CONFIDENTIALLY**;
- b. Department of Environmental Health/Public Water Supply Section ("DEH/PWSS") approval letter for each well;
- c. Original inorganic analysis for each well submitted to DEH for well approval;
- d. All inorganic analyses from each well at the wellhead for the last six years;
- e. Copies of all iron and/or manganese analyses for soluble and insoluble the past three years – baseline (without treatment), well head (after treatment), and distribution system (after treatment);
- f. Copies of the Pump Status Reports for each well for the last two years;
- g. Original 24-hour pump test for each well; and

- h. Copies within the last six months of all Aqua NC emails to and from PWSS, letters to and from PWSS, reports to and from PWSS, and the recommendations of PWSS regarding water quality concerns on Aqua NC's water systems.

RECOMMENDATION

WHEREFORE, Aqua and the Public Staff request that the Commission review this Fifteenth Semi-Annual Report Regarding Secondary Water Quality Concerns and accept the corrective actions recommended herein as reasonable and appropriate to address the secondary water quality issues affecting the Company's service areas listed above.

Respectfully submitted, this the 1st day of September 2021.

ATTORNEYS FOR AQUA NORTH CAROLINA, INC. Electronically Submitted

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VERIFICATION

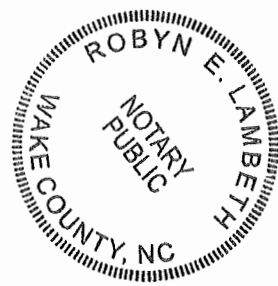
Shannon V. Becker, being duly sworn, deposes and says: that he is the President of Aqua North Carolina, Inc.; that he is familiar with the facts set out in this **FIFTEENTH SEMI-ANNUAL REPORT REGARDING SECONDARY WATER QUALITY CONCERNS** filed in Docket No. W-218, Sub 526A; that he has read the foregoing Fifteenth Semi-Annual Report and knows the contents thereof; and that the same is true of his knowledge except as to those matters stated therein on information and belief, and as to those he believes them to be true.

Shannon V. Becker
Shannon V. Becker

Sworn to and subscribed before me this
the 16th day of September 2021.

Robyn E. Lambeth
Robyn E. Lambeth
Notary Public

My Commission Expires: May 13 2026



CERTIFICATE OF SERVICE

I hereby certify that on this the 1st day of September 2021, a copy of the foregoing **FIFTEENTH SEMI-ANNUAL REPORT REGARDING SECONDARY WATER QUALITY CONCERNS** has been duly served upon all parties of record in Docket No. W-218, Sub 526A by electronic service, addressed as shown below:

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