



MANAGEMENT AUDIT OF
Aquarina Utilities, Inc.

AUGUST 2017

BY AUTHORITY OF
The Florida Public Service Commission
Office of Auditing and Performance Analysis

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1.0 Executive Summary

1.1 Introduction and Audit Purpose

Aquarina Utilities, Inc. (Aquarina or Company) is a Class B utility that serves approximately 296 water, 311 wastewater, and 107 non-potable irrigation customers in Brevard County. Aquarina's potable water system obtains water from two wells which draw ground water from the aquifer that is then treated by a Reverse Osmosis system. Aquarina's separate non-potable irrigation and fire protection system is supplied by one well and a 1.25 million gallon non-potable water tank.

On January 2, 2015, Aquarina filed for a staff assisted rate case. A customer meeting was held on March 10, 2016, to receive customer questions and comments concerning the company's rate case and quality of service. During the November 1, 2016 Florida Public Service Commission (FPSC or Commission) agenda conference, the Aquarina rate case was considered. Aquarina customers spoke at the agenda conference and provided new information and allegations regarding quality of service concerns including:

- ◆ Inadequate fire suppression supply
- ◆ Frequent water leaks
- ◆ Lengthy repairs
- ◆ Failure to provide boil water notices
- ◆ Missing equipment
- ◆ Use of a non-licensed operator
- ◆ Unsatisfactory communication with customers
- ◆ Incomplete complaint logs

After questions were posed by Commissioners, the Commission voted to find Aquarina's quality of service to be marginal. On December 29, 2016, by Order No. PSC-16-0583-PAA-WS, issued in Docket No. 150010-WS, the Commission approved Aquarina's application for an increase in rates and charges including pro forma items which must be completed within 12 months of Consummating Order No. PSC-17-0031-CO-WS, issued January 23, 2017. The pro forma items approved in the Order include the following:

- ◆ Replacement of the existing reverse osmosis skid
- ◆ New system maps of its infrastructure
- ◆ Replacement of the catwalks inside the wastewater treatment plant, sand filter air compressors, and wastewater treatment plant blowers
- ◆ Replacement of 20 potable and 20 non-potable water meters per year and purchase of protective gear

As part of its order, the Commission further directed the Office of Auditing and Performance Analysis to conduct a management audit of Aquarina to address the matters raised by customers and other matters routinely included in such audits. The Commission's management audit was initiated on December 16, 2016.

1.2 Audit Objectives and Scope

As authorized by Chapter 350.117 (2) and (3), F.S., management audits are conducted by staff to assess utility performance and the adequacy of operations and controls:

(2) The Commission may perform management and operation audits of any regulated company. The Commission may consider the results of such audits in establishing rates; however, the company shall not be denied due process as a result of the use of any such management or operation audit.

(3) As used in this section, “management and operation audit” means an appraisal of management performance, including a testing of adherence to governing policy and profit capability; adequacy of operating controls and operating procedures; and relations with employees, customers, the trade, and the public generally.

Commission audit staff evaluated company compliance with the following Commission rules governing water and wastewater utilities:

- ◆ 25-22.032 Customer Complaints
- ◆ 25-30.110 Records and Reports; Annual Reports
- ◆ 25-30.125 System Maps and Records
- ◆ 25-30.130 Record of Complaints
- ◆ 25-30.250 Continuity of Service
- ◆ 25-30.251 Record and Report of Interruptions
- ◆ 25-30.261 Meter Readings
- ◆ 25-30.311 Customer Deposits
- ◆ 25-30.320 Refusal or Discontinuance of Service
- ◆ 25-30.335 Customer Billing
- ◆ 25-30.433 Determination of Quality of Service

Upon completion of initial data gathering and analysis of broader issues, Commission audit staff identified and focused on key issues including effective communication with customers, fire suppression adequacy, recordkeeping, outage handling, and quality of service.

Commission audit staff also reviewed the following Florida Department of Environmental Protection (DEP) rules, Florida Statutes, and National Fire Protection Association (NFPA) Standards as they relate to Aquarina operations:

- ◆ 62-555.350 Operation and Maintenance of Public Water Systems
- ◆ 62-560.410 Public Notification – Primary Standards
- ◆ Chapter 633.312, F.S. Inspections of Fire Control systems, Fire Hydrants, and Fire Protection Systems
- ◆ NFPA 24 and 25

1.3 Audit Methodology and Standards

Information regarding Aquarina's business operations was gathered through responses to Commission audit staff document requests, on-site interviews with both the company and homeowners' association representatives, and review of documentation provided to the Commission in Docket No. 150010-WS. Specific information reviewed included:

- ◆ Meter reading logs and customer bills
- ◆ Maintenance records
- ◆ Customer payment delinquency reports
- ◆ Customer complaints and communication
- ◆ Records of hydrant inspections
- ◆ Emergency response plan
- ◆ DEP Inspection Reports

Commission audit staff's standard of review for internal controls is primarily the Institute of Internal Auditors' *Standards for the Professional Practice of Internal Auditing* and the *Internal Control - Integrated Framework* developed by the Committee of Sponsoring Organizations (COSO) of the Treadway Commission. Internal controls assessments focus on the COSO framework's five key elements of internal control: control environment, risk assessment, control activities, information and communication, and monitoring. Staff's audit work is performed in compliance with Institute of Internal Auditors Performance Standards 2000 through 2500.

In assessing Aquarina's current management and operational processes, Commission audit staff relied in part upon a National Regulatory Research Institute (NRRI) study regarding small water utility management.¹ This study states that effective management of small water companies requires the following:

- ◆ Compliance with regulatory requirements
- ◆ Attracting and retaining quality personnel
- ◆ Providing effective employee training and education
- ◆ Providing excellent customer service
- ◆ Displaying good public relations
- ◆ Employing a strategic business plan

This NRRI study identifies the attributes and practices of successful small systems. By definition, small water utilities have few customers over which to spread fixed costs. Challenges facing small utilities typically include deteriorating infrastructure, maintaining an awareness of regulatory requirements, providing adequate customer service, management training, implementing proper accounting practices, and general lack of financial resources.

The study notes that small systems are more likely to succeed when management maintains proper focus on company operations, especially when providing water is the owner's primary or

¹The National Research Regulatory Institute identified the attributes and practices of successful small systems in a February 7, 2008, report titled "Small Water Systems: Challenges and Recommendations."

only business focus. It notes that where the water system is not the owner's top priority, there is risk that problems will go unnoticed and necessary maintenance will be deferred. Most successful small systems have an owner with a passion for the business, one who recognizes and values the utility's public interest obligation.

1.4 Overall Opinion

Commission audit staff believes that Aquarina is in substantial compliance with applicable rules and regulations of the FPSC that were examined. Commission audit staff believes that if implemented, the following recommended actions will positively impact the customer service and Commission Rule compliance issues identified in this management audit.

Observation 1: Aquarina currently does not include the rate schedule on its bills as required by Rule 25-30.335(1), F.A.C., *Customer Billing*.

Recommended Action

Commission audit staff recommends that the company include the applicable rate schedules in its monthly bills.

Observation 2: Aquarina does not keep maintenance books and logs up to date as required by Rule 25-30.110, F.A.C., *Records and Reports; Annual Reports*.

Recommended Action

Commission audit staff recommends that the company's maintenance books and logs be kept current to record maintenance work to provide the company a tracking system for documenting and planning both as-needed repairs and preventative maintenance activities.

Observation 3: Aquarina does not have written policies and procedures regarding maintenance, repair, or complaint handling activities.

Recommended Action

Commission audit staff recommends the company develop written policies and procedures for complaint handling, maintenance work, and repairs.

Observation 4: Aquarina does not maintain records of emailed or verbal complaints.

Recommended Action

Commission audit staff recommends that although Aquarina records and responds to written complaints in accordance with present Commission rules, routinely recording all complaints, including emailed and verbal complaints, would be beneficial.

Observation 5: Commission audit staff believes that Aquarina's service reliability and continuity are acceptable.

Observation 6: Commission audit staff believes that Aquarina management’s response to maintenance and repair events is acceptable.

Observation 7: Commission audit staff believes Aquarina’s basic emergency plan does not fully address all issues related to utility operation during emergency conditions.

Recommended Action

Commission audit staff recommends that the company establish a more detailed emergency plan prior to major weather events such as tropical storms and hurricanes.

Observation 8: Commission audit staff notes that some customers believe the Aquarina plant capacity and condition are inadequate.

Recommended Action

Commission audit staff found no specific areas of concern. However, Commission audit staff recommended that a Florida Rural Water Association (FRWA) assessment of the utility’s plant be completed.

Observation 9: Commission audit staff notes that some customers believe Aquarina management is not providing adequate notification of all unplanned outages.

Recommended Action

Commission audit staff recommends that the company send out notifications for all unplanned and emergency outages affecting 10% or more of customers.

Observation 10: Commission audit staff notes Aquarina made several improvements to communication with customers such as implementing a public notification mechanism, providing an option for automatic debit payments, and creating a website.

Recommended Action

Commission audit staff believes that with some effort on behalf of both parties, communications between Aquarina and the community can be improved. Commission audit staff recommends that the company consider additional improvements to customer relations in seeking to provide excellent customer service.

Observation 11: Aquarina does not currently inspect its fire hydrants as required by NFPA 25.

Recommended Action

Commission audit staff recommends that the company increase the frequency of fire hydrant inspections from biennially to annually as required by NFPA 25.

Observation 12: Aquarina does not maintain and document fire hydrant maintenance activities.

Recommended Action

Commission audit staff recommends that the company maintain up-to-date records of all fire hydrant maintenance and provide the documents to Brevard County Fire Rescue.

Observation 13: Commission audit staff notes that though some customers believe they are not receiving their desired amount of non-potable water, Commission audit staff has determined that the customers are using close to the maximum amount of non-potable water allowed by Aquarina's Consumptive Use Permit.

Observation 14: Commission audit staff notes that the Aquarina golf course and homeowners are separate competing demands that together drive the drawdown of the one million available non-potable gallons.

Recommended Action

Commission audit staff recommends that the golf course and residential irrigation customers coordinate efforts to allocate available non-potable water and adhere to all voluntary St. John's River Water Management District water restrictions.

2.0 Background and Perspective

2.1 Company History

The company began providing service in 1984 when it was known as Aquarina Developments, Inc. In 1989, the Commission granted the company its certification. In 2008, a foreclosure action was brought against the utility which was then known as Service Management Systems, Inc. In 2011, the company was sold out of receivership to current Aquarina management.

Since taking over operation of the facilities in February 2011, Aquarina completed over \$500,000 in repairs and improvements including the following:

- ◆ New pump motors and variable speed drive for the non-potable system
- ◆ New wiring and auto-call system for the Reverse Osmosis plant
- ◆ 275 new meters
- ◆ Upgraded lift station

2.1.1 Owners and Staff

The current owner of Aquarina does not draw any salary from Aquarina Utilities, Inc. The utility is managed and operated by the owner's son and daughter-in-law.

The owner's son serves as director of operations and is in charge of decisions regarding treatment, compliance issues, maintenance and other operational areas. He is a double "A" certified operator and also holds his distribution license. According to Aquarina, the director of operations works 40 hours per week for Aquarina Utilities.

The owner's daughter-in-law is the account manager, in charge of billing, customer service, material acquisition, accounting, and all other office functions. She is a double-certified "C" water and wastewater operator who operates the plant as needed. According to Aquarina, the account manager works 40 to 60 hours per week for Aquarina Utilities and has no other employment.

Currently, Aquarina also employs a full-time maintenance employee in charge of completing work orders. He is an operator trainee who has completed the DEP water operator's course and is currently working on the wastewater course. He is scheduled for his water exam for certification. Aquarina also employs two part-time double certified "C" water and wastewater operators who operate the plant up to four days a week or as needed. A part-time contracted worker is responsible for opening, posting, and depositing customer payments.

2.1.2 Affiliated Company

Aquarina Waterworks, Inc. is a separate utility management company owned by the account manager. It has four full-time employees and one part-time operator who are currently contracted to operate Polk City Utilities. It operates three water plants and one wastewater plant, installs meters, repairs breaks, and performs all other functions as required by Polk City's Utility Director. Aquarina Utilities Inc.'s director of operations serves as a consultant for Aquarina

Waterworks in its Polk City Utilities operations and management. He is present at Polk City an average of four or fewer hours per week and is not compensated by Aquarina Waterworks for his consulting work.

2.2 Aquarina Homeowners' Association and Golf Course

The Aquarina community is comprised of 18 individual communities with most having their own individual homeowners' associations. These are all represented by the Aquarina Community Services Association which has been active since 2005. In 2008, the Aquarina Community Services Association became solely responsible for the operation and maintenance of the amenities and common facilities. Additionally, the Aquarina Community Services Association cooperates with developers planning additional development within the community. In 2010, the Aquarina Community Services Association purchased the golf course for \$1.75 million.

During 2010 and 2011, the Board of Directors of the Aquarina Community Services Association made an unsuccessful attempt to buy the water utility. Although the original developer envisioned 1,600 units, the Planned Unit Development is approved for 640 units. Of these units, 360 have been built and occupied. 150-200 new homes are currently planned to be built in the next 5 years.

During the November 1, 2016 and December 1, 2016 agenda conferences, members of the Aquarina Community Services Association appeared before the Commission and raised concerns over the capability of the current Aquarina Utilities management and quality of service provided.

3.0 Compliance and Quality of Service

3.1 Commission Compliance

3.1.1 Meters

Rule 25-30.261(1), F.A.C, *Meter Readings*, requires Aquarina to read its service meters at regular intervals and, insofar as practicable within regularly scheduled work days on the corresponding day of each meter reading period. The company must also read the register of each meter in the same units that the company uses for billing purposes.

Meter reading is performed manually using the reader route sheets printed from the billing software. The account manager and the maintenance worker read the meters together on a monthly basis. Meter reading is performed by the company on or around the 18th of every month. Commission audit staff performed an analysis of Aquarina's meter reading log for the months of October 2016 through December 2016. Commission audit staff found that four percent of the total bills for October, November, and December 2016 did not match the meter reading log. Most of these errors were due to transposition and hard to read meter reading logs. Commission audit staff believes that the error rate is small and reasonable.

Meter testing is handled on a case-by-case basis according to customer inquiries. In the past two years, the company reports it has received one request for meter testing. Meters are replaced every 10 years or sooner if there is a problem due to the environmental stresses of salt-spray conditions on the island.

Pending replacement of meters that are not working properly, the company states that it charges only the monthly base facility charge. Aquarina has incorporated a proactive meter replacement program into its maintenance program. Commission Order No. PSC-16-0583-PAA-WS approved the replacement of 40 meters per year at an estimated cost of \$2,800 per year. The company's plans include replacement of approximately 20 potable and 20 non-potable water meters per year. During 2017, Aquarina has replaced 9 meters, 4 potable and 5 non-potable, as of publication date.

Aquarina has stated that meter readers sometimes have problems getting to the customer's meter because of overgrowth of residents' lawn and landscaping. Rule 25-30.320(2)(f), F.A.C., *Refusal or Discontinuance of Service*, provides that a utility may refuse or discontinue service for neglect or refusal to provide reasonable access to the company for the purpose of reading meters or inspection and maintenance of equipment owned by the company. The customer must be given written notice and allowed a reasonable time to comply with any rule or remedy any deficiency. To date, the company has not exercised this option with any of its customers.

3.1.2 Billing and Collection

Rule 25-30.335(1), F.A.C., *Customer Billing*, provides that a company shall render bills to customers at regular intervals, and each bill must indicate the billing period covered, the applicable rate schedule, beginning and ending meter reading, the amount of the bill, the

delinquent date or the date after which the bill becomes past due, and any authorized late payment charge.

Aquarina's billing is completed once per month based on monthly manual meter readings. These meter readings are manually entered into a billing program, and any errors are manually detected. Adjustments are made prior to printing a billing report and paper bills. Email bills are issued for those customers electing this service instead of paper bills.

Payments are received by mail, credit card payment, and direct debit of customer bank accounts. The payment envelopes are processed using the billing software. The account manager reports that any correspondence included in the payment envelopes (changes of address, complaints and concerns) is immediately answered or applied to accounts. Credit card payments are posted directly to customer accounts by an intermediary website. In its staff assisted rate case, Aquarina requested that a Direct Debit Charge be approved to cover the costs of Aquarina's bank debiting the bank account of a customer for the customer's utility bill. The Commission subsequently approved a Direct Debit Charge of \$1.36, which is the company's cost. Aquarina requires renters to sign up for direct debit.

Rule 25-30.335(1), F.A.C., *Customer Billing*, requires Aquarina to include the applicable rate schedule in their monthly bills. Aquarina currently does not include the rate schedule on its bills. The company states that its billing software does not allow it to include the rate schedule on its bills.

Rule 25-30.335(4), F.A.C., *Customer Billing*, provides that Aquarina may not consider a customer delinquent in paying his or her bill until the 21st day after the company has mailed or presented the bill for payment. In 2016, Aquarina moved its billing date from the 25th to the 20th of each month, and the due date was changed from the 15th to the 10th of the month. The change in billing dates was made to aid the company in maintaining proper cash flow due to a large percentage of late-paying customers. In 2016, according to Aquarina, an average of 16.5 percent of customers per month paid their bills late. This constitutes an average of 16.1 percent of the utility's monthly revenue. In 2016, \$69,105.95 was paid late, but only \$340.20 remained uncollected. In 2014, by Order No. PSC-14-0105-TRF-WS, the Commission approved a \$7.00 late payment charge for Aquarina customers who pay their bill late. Despite the late fee, some customers still habitually pay late.

Commission audit staff obtained and examined customer bills from October 2016 through December 2016. Commission audit found that the company had three usage calculation errors in the bills from October, November, and December 2016, which amounted to less than one percent of the total bills. Additionally, 14 bills did not match the previous month's bills when looking at the starting meter reading. This amounted to one percent of all total bills during this period. Commission audit staff believes that the error rate is small and reasonable.

Rule 25-30.320(2)(g), F.A.C., *Refusal or Discontinuance of Service*, provides that a company may discontinue service for nonpayment of bills after the 21st day after the company has mailed or presented the bill for payment by providing at least five working days' written notice to the customer. The company states that it allows a significant amount of latitude to customers who

fail to pay their bill on time, and a grace period of two days is allowed following the true payment deadline before application of late fees. Customers do not receive a cut-off notice until their combined past-due account balances exceed \$100.00. While a cut-off notice allows five days for payment, Aquarina states it generally allows seven days and does not suspend services on Mondays or Fridays.

If on-site collection is necessary, the account manager personally performs the collection. All habitual late-payers are individually encouraged to avail themselves of the direct debit option for bill payment. All customers are reminded of all payment options in the yearly water quality report provided by the company. In the event that collection is unsuccessful, the meter is locked off until the customer contacts the company to make payment.

Observation

- 1) **Aquarina currently does not include the rate schedule on its bills as required by Rule 25-30.335(1), F.A.C., *Customer Billing*.**

Recommended Action

Commission audit staff recommends that the company include the applicable rate schedules in its monthly bills.

3.1.3 Customer Deposits

Rule 25-30.311, F.A.C., *Customer Deposits*, allows the company to require an initial deposit to establish credit for service before rendering water service. As allowed in Aquarina's tariff, the company may require an applicant for service to satisfactorily establish credit but such establishment of credit shall not relieve the customer from complying with the company's rules for prompt payment. Under Rule 25-30.311(7), F.A.C., the company may require a new deposit, where previously waived or returned, or an additional deposit in order to secure payment of current bills provided.

Currently, the company has not required an initial or additional deposit from any customers.

3.1.4 Maintenance and Repair Records

Per Rule 25-30.110, F.A.C., *Records and Reports; Annual Reports*, Aquarina must preserve its records in accordance with the National Association of Regulatory Utility Commissioners *Regulations to Govern the Preservation of Records of Electric, Gas, and Water Utilities*. The company is required to maintain its records at its office and keep those records open for inspection during business hours by Commission staff. The company is obligated to furnish to the Commission the results of any required tests, summaries of any required records, and any information concerning Aquarina's facilities or operation that the Commission may request and require for determining rates or judging the practices of the company.

The company states that though maintenance books are kept, they are sometimes not completed daily as required of the operator or the maintenance person. The account manager states she normally retroactively fills out the log books. She also tracks incidents and repairs on a paper calendar. However, the company affirms that DEP mandatory books are completed as required and signed and dated, and no current DEP violations for record keeping exist. Additionally,

company management states that no written policies and procedures regarding any maintenance, repair, or complaint handling activity exist.

Observation

- 2) **Aquarina does not keep maintenance books and logs up to date as required by Rule 25-30.110, F.A.C., *Records and Reports; Annual Reports.***

Recommended Action

Commission audit staff recommends that the company's maintenance books and logs be kept current to record maintenance work to provide the company a tracking system for documenting and planning both as-needed repairs and preventative maintenance activities. The company states that it will begin to require the maintenance person and part-time operators to regularly fill out the maintenance log books.

Observation

- 3) **Aquarina does not have written policies and procedures regarding maintenance, repair, or complaint handling activities.**

Recommended Action

Commission audit staff recommends the company develop written policies and procedures for complaint handling, maintenance work, and repairs. These procedures should include maintenance activities such as valve maintenance and repairs, leak repairs, hydrant maintenance, outages, and tank maintenance.

3.1.5 Customer Complaints

Pursuant to Rule 25-30.130, F.A.C., *Record of Complaints*, Aquarina is required to maintain a record of each signed, written complaint received by the company from any of its customers. By rule, the record is to include the name and address of the complainant, the nature of the complaint, the date received, the result of the investigation, the disposition of the complaint, and the date of the disposition. Rule 25-22.032, F.A.C., *Customer Complaints*, requires that the company also provide Commission staff a written response to the customer's complaint within 15 working days after the Commission staff sends the complaint to the company.

Aquarina maintains that complaints received from the Commission are answered in writing, either by email or letter, depending on how the customer prefers to be answered. The company states that these responses include a thorough examination of the complaint and a response appropriate to the complaint, usually immediately upon receipt of the notification, and within the deadline prescribed by the Commission. Company management encourages customers to file complaints through email so the company has a written record. Aquarina keeps a paper file for each complaint that comes to the Commission. According to the company, all customer concerns and inquiries are answered and responded to as soon as possible, regardless of format.

Aquarina states that customer communication comes in various forms. Email contacts are maintained in the company's email archives. Customers sometimes contact the company by phone, generally concerning billing questions. Other customer communications include direct contacts during meter reading, site visits, notes and letters in payment envelopes, etc. These are addressed immediately upon receipt.

Commission audit staff reviewed the Commission Complaint Activity Tracking System to determine the number of complaints filed with the Commission over the last six years since current management took over the utility. There were eight complaints received at the FPSC which involved four billing issues, three repair issues, and one quality of service complaint involving air in the lines causing a loud bang at one building. All complaints were responded to within the 15 day requirement.

Observation

4) Aquarina does not maintain records of emailed or verbal complaints.

Recommended Action

Commission audit staff recommends that although Aquarina records and responds to written complaints in accordance with present Commission rules, routinely recording all complaints, including emailed and verbal complaints, would be beneficial. Both customers and the company would benefit from the logging of all complaints and service-related inquiries. This would allow the company to see trends of types of complaints for specific customers or trends of complaints over time.

3.1.6 Outages and Repairs

Pursuant to Rule 25-30.250, F.A.C., *Continuity of Service*, Aquarina must make all reasonable efforts to provide continuous service. Should interruption in service occur, the company is required to reestablish service with the shortest delay consistent with the safety of its customers and the general public. Any necessary interruptions in service must be at a time anticipated to cause the least inconvenience to its customers, and the company is required to notify its customers prior to scheduled interruptions.

Aquarina affirms that equipment failures are addressed and repaired as quickly as possible. Service outages for the potable system are reported according to DEP regulations. In the case of large outages or changes in service, public notices are also circulated in accordance with DEP regulation. Service outages for the non-potable system are addressed as soon as they are reported or discovered. In cases of prolonged outages that involve the fire protection system, the fire authorities are notified. An exception to this happens when the non-potable water tank is drawn down to the reserve level of 250,000 gallons and the pump is automatically shut off for fire protection services, and the company receives no notification due to current lack of telemetry.

In the event of a planned outage, the company notifies the customers in writing with fliers posted to their doors and mailboxes at least three days prior to the outage. This occurred in 2003 when the company shut down the water plant for routine potable water storage tank cleaning and inspection. In the case of an unplanned outage, the company follows similar procedures. Company management posts notifications as soon as the need is identified. However, during an emergency situation, Aquarina may opt for oral notification to those involved rather than a formal written notification. According to the company, Aquarina has only had three unplanned potable outages in six years of operation and one major outage after Hurricane Matthew.

After several complaints of timeliness of repairs, the company has purchased an excavator to more quickly respond to leaks in the system which require excavating. Management believes a

need for quicker access to contractors with excavating equipment drove some repairs that triggered recent complaints.

Observation

- 5) **Commission audit staff believes that Aquarina’s service reliability and continuity are acceptable.** Since 2011, Aquarina has had very few major service interruptions.
- 6) **Commission audit staff believes that Aquarina management’s response to maintenance and repairs events is acceptable.** Company management has acquired additional tools and equipment to expedite maintenance and repair activities.

3.1.7 Emergency Preparedness

DEP Rule 62-555.350(15), F.A.C., *Operation and Maintenance of Public Water Systems*, requires that Community Water Systems serving 350 or more persons or 150 or more service connections develop a written Disaster-Specific Preparedness/Response Plan (a.k.a. Emergency Response Plan) and update and implement the plan as necessary. The suppliers of water must coordinate with their Local Emergency Planning Committee and their Florida Department of Law Enforcement Regional Security Task Force when developing their emergency plan.

DEP Rule 62-555.320(14), F.A.C., *Design and Construction of Public Water Systems, Standby Power*, provides that each community water system serving, or designed to serve, 350 or more persons or 150 or more service connections shall provide standby power for operation of that portion of the system’s water source, treatment, and pumping facilities necessary to deliver drinking water meeting all applicable primary or secondary standards at a rate at least equal to the average daily water demand for the system.

In 2011, Aquarina completed a basic emergency plan which was developed with the assistance of the Florida Rural Water Association. It contains information such as a communication chart showing the water system chain of command and lines of authority, an emergency notification list, written agreements with other agencies, utilities, or response organizations, a disaster-specific preparedness and response plan, standby power requirements, and location of drinking water treatment chemicals and disinfectants. Pre-hurricane and post-hurricane preparedness and recovery procedures are included in Aquarina’s emergency plan. The emergency plan is available at the company’s office.

Aquarina owns and maintains a standby generator and fuel for emergencies. Most recently, it was used when Hurricane Matthew hit Melbourne Beach on October 7, 2016. When Hurricane Matthew struck, company management was unable to get to the island for two days due to the official closure the Melbourne Causeway during the hurricane. Management stated that they were on the list of essential workers allowed to cross the bridge during emergencies, but the weather would not allow them to. The reverse osmosis skid was down due to water-related computer damage from the storm. However, the generator kept the pump to the potable water tank supplied so the customers had water. Once that was drained, the director of operations manually pumped chlorinated water to supply service without interruption. A precautionary boil water notice was issued until the next day when the reverse osmosis skid was repaired.

Observation

- 7) **Commission audit staff believes Aquarina’s basic emergency plan does not fully address all issues related to utility operation during emergency conditions.**

Recommended Action

Commission audit staff recommends that the company establish a more detailed emergency plan prior to major weather events such as tropical storms and hurricanes. This would allow company management, or another licensed operator to be present at Aquarina to take care of any emergencies at the site. The company states that it intends to amend its emergency preparedness plan.

3.1.8 System Maps

Rule 25-30.125, F.A.C., *System Maps and Records*, requires Aquarina to maintain at its office suitable maps, drawings and/or records of its system and facilities to show size, location, character, date of installation and installed cost of major items of plant and extension of facilities.

While some Aquarina system maps are available, the coverage is incomplete. When the system was purchased, the company did not receive adequate records indicating the location of its current distribution and collection systems. The maps and plans in the possession of the company do not represent up-to-date modifications and changes to the systems. Aquarina states that plans and diagrams are needed to delineate its three systems (potable, non-potable, and wastewater). The maps and plans will also allow the company to respond to 811 Florida One-Call.

By Order No. PSC-16-0583-PAA-WS, the Commission approved Aquarina’s request for Geographic Information System mapping of its plant. The GIS mapping will allow the company to provide accurate information regarding its distribution system. The company plans to award the GIS mapping contract as soon as the company’s cash flow improves as a result of the increase in rates. Absent an extension, this must be completed within the 12-month timeframe of the consummating order date. The company has received an updated quote from a GIS mapping company but is in the process of getting a competing quote.

3.2 Quality of Service

Pursuant to Rule 25-30.433(1), F.A.C., *Determination of Quality of Service*, during water and wastewater rate cases, the Commission must determine the overall quality of service provided by the company by evaluating the quality of the company’s product, the operating conditions of the company’s plant and facilities, and the company’s effectiveness to address customer satisfaction. The Rule provides that the following must be considered: sanitary surveys; outstanding citations; and, violations and consent orders for the preceding three year period that are on file with the DEP and the county health department. Additionally, Section 367.0812(1)(c), F.S., *Rate fixing; quality of water service as criterion*, requires that the Commission consider the extent to which the company provides water service that meets secondary water quality standards as established by the DEP.

3.2.1 Plant Conditions

During the staff-assisted rate case and in correspondence with the Commission, customers have expressed their concerns over the capability of the potable and non-potable systems to meet the water needs of the community. In particular, the Homeowner's Association is concerned with the non-potable water system's ability to provide the community and golf course with enough water for their irrigation needs. In its May 25th letter to the utility and the Commission, the Homeowner's Association provided a list of dates detailing when the golf course has experienced difficulty watering the course due to no water.

The customers have specifically shown concern over the company's water pump variable frequency drives that caused a prolonged outage in January 2017. The customers were concerned that the golf course irrigation and the fire suppression/residential irrigation system were both down. However, as shown in **Exhibit 2** in Section 3.3, the non-potable water system has three variable frequency drives. If the drive that serves the golf course is down, the fire suppression and residential irrigation system is unaffected.

The company states that there are no problems with its plant, and that its system is capable of providing the community with the non-potable water it needs for its irrigation.

By Order No. PSC-16-0583-PAA-WS, the Commission approved a pro forma plant repair for the potable water system and two repairs for the wastewater treatment plant. Aquarina requested replacement of its reverse osmosis skid due to its age. The utility indicated that the unit has been in operation since 1984, it is fully depreciated and replacement parts are becoming scarce. The Commission approved Aquarina's request for a new reverse osmosis skid. The reverse osmosis bid provided in the utility's SARC was \$52,232. Aquarina has since gotten an updated bid, which has increased to \$79,500. The utility plans on using the existing reverse osmosis skid as a backup once the new reverse osmosis skid is installed. The Commission also approved replacement of catwalks inside the wastewater treatment plant and the replacement of the wastewater sand filter air compressors and blowers.

Pro forma plant must be completed within 12 months of Consummating Order No. PSC-17-0031-CO-WS, issued January 23, 2017. The company has not completed all pro forma as yet, because it asserts that they have cash flow problems caused by customers' late payment. As shown in **Exhibit 1**, revenues have increased in the last six months since the implementation of the new rates in January 2017. If this trend continues, Commission audit staff believes the company will have the ability to complete the pro forma plant replacements within the 12 months allotted.

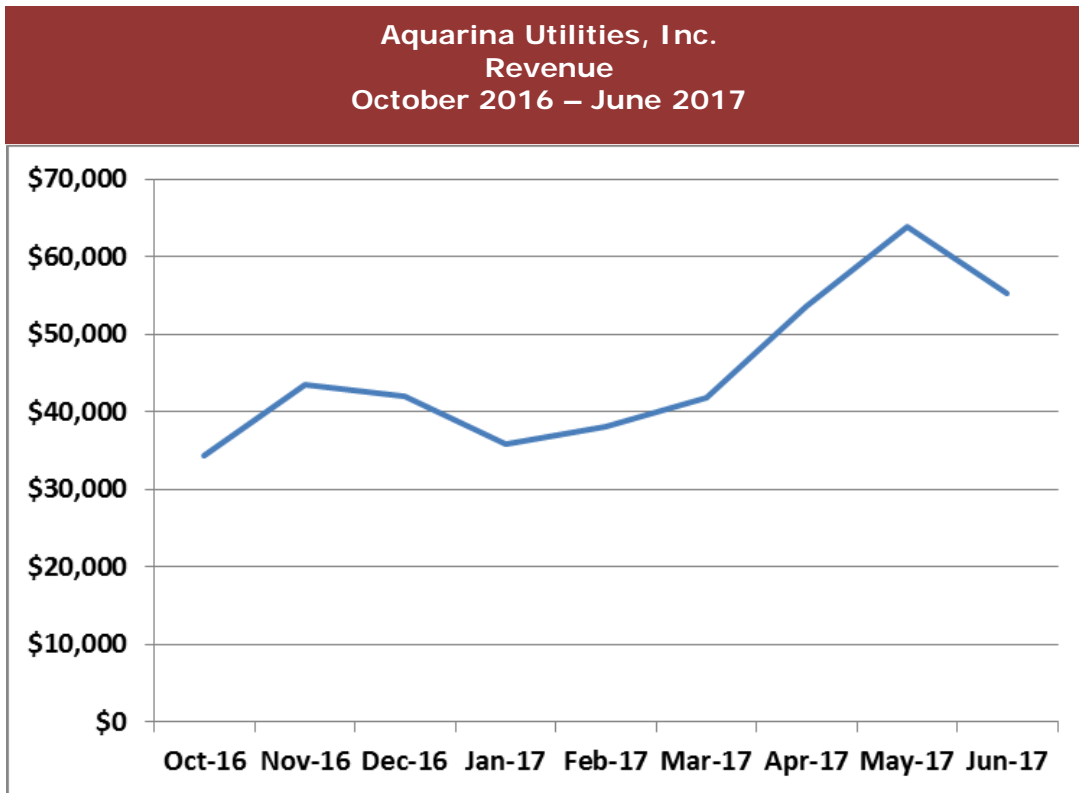


Exhibit 1

Source: Document Request Response 1.14b and Supplemental Emails

Observation

- 8) Commission audit staff notes that some customers believe the Aquarina plant capacity and condition are inadequate.

Recommended Action

Commission audit staff found no specific areas of concern. However, Commission audit staff recommended that a Florida Rural Water Association (FRWA) assessment of the utility’s plant be completed. The company agreed with the recommendation, and an initial analysis was conducted by the FRWA circuit rider on June 6, 2017. This initial visit was followed up by a review by an FRWA professional engineer on August 10. As a result of this review, the FRWA engineer advised Commission audit staff that FRWA will be working to provide an evaluation of the water, wastewater, and irrigation wells, consumptive use permit, water, wastewater, and irrigation plants, etc. Next, FRWA will provide recommendations to the company’s owners for developing a 5 to 10-year plan for the utility. Commission audit staff recommends that Aquarina continue to work with and respond to FRWA findings and report this to customers.

3.2.2 Department of Environmental Protection Inspections

DEP conducts sanitary surveys of the Aquarina water treatment plant every three years. The most recent survey was performed on January 14, 2014. Three deficiencies were found, but they have been corrected as of February 28, 2014. More recently, DEP conducted a Wastewater Compliance Inspection Report on July 12, 2016. Four deficiencies were found and were

corrected by July 19, 2016. During the rate case, the Commission staff reviewed chemical analyses of 2012 and 2015 water samples. They showed that the company was in compliance with DEP primary and secondary water quality standards. As of report publication, Aquarina states it did not have any outstanding violations with the DEP and that its water and wastewater systems are currently in compliance with DEP rules and regulations.

3.2.3 Boil Water Notices

By Rule 62-560.410(1)(a)1., F.A.C., *Public Notification-Primary Standards*, DEP requires public water systems experiencing violations, exceedances, situations, or failures that may pose an acute risk to human health to issue a notice advising customers to boil water no later than 24 hours after the system learns of the violation, exceedance, situation, or failure. Additionally, the Florida Department of Health (DOH) *Guidelines for the Issuance of Precautionary Boil Water Notices* states that the boil water notices shall be issued via telephone, hand-delivery, radio, or television no later than 24 hours after the water system learns of the violation, exceedance, situation or failure.

According to the DOH *Guidelines for the Issuance of Precautionary Boil Water Notices*, these notices should be issued in a prudent manner and only when there is sufficient justification for this emergency action. Excessive issuance of the notices will cause needless alarm and may result in the public paying less attention to future notices. Per DEP and DOH guidelines, types of incidents that would warrant a boil water notice include:

- ◆ Microbiological contamination
- ◆ Zero or negative pressure
- ◆ Water pressure below 20 psi
- ◆ Water main breaks or interruptions
- ◆ Flooding of wells

If a boil water notice is required, Aquarina generates and posts a boil water notice either on customers' doors, in their mail boxes, or on the community notice boards. In the case of condominium buildings, the company states that it posts the notice on the elevators, entry doors, and bulletin boards. A stack of notices are also left in the condominium building lobby for customers to take. Distribution is reported to the DEP, DOH, and the FPSC.

During the November 1, 2016 Agenda conference and at an interview with the Homeowners' Association, several customers alleged that the company is not notifying them of all outages and situations that should in their opinion be required. During an emergency isolation valve replacement, the system experienced low water pressure, and customers contacted Commission audit staff questioning the lack of a boil water notice. The company maintains that the pressure never dipped below 20 psi during the repair, so no boil water notice was required. Some customers complained that they did not receive any sort of notification during or after the incident; others experienced debris in their water after the repair. Due to the short nature of the incident and repair, the company states that no system wide notification was possible. Further, since no low pressure occurred, no notice was necessary.

Observation

- 9) **Commission audit staff notes that some customers believe Aquarina management is not providing adequate notification of all unplanned outages.**

Recommended Action

Commission audit staff recommends that the company send out notifications for all unplanned and emergency outages affecting 10% or more customers. While it might not always be possible to notify the affected customers during an unplanned outage, it would improve the communication between the company and the customers if customers affected received a notification specifying the details of the outage after the fact.

In an effort to improve customer relations, the company states that in the first quarter of 2017, it began to use phone and email notifications as part of its public alert system. Aquarina management input all of the customers' phone numbers and emails into the third party system. Customers may choose to log into the system and verify their contact information enabling them to receive notifications of boil water notices or any other outage. This new system will make outage notifications easier for the company and provide the customers with a more immediate method of communication from the utility. As the company moves from a paper notification system to an electronic notification system, the company and the customers must make every effort to have all contact information verified. The company plans to include reminders in the company's water quality report and the next several billings.

During a recent outage on May 8, 2017, Aquarina was able to utilize the public alert system to notify customers of the emergency outage. All customers were notified through phone and email alerts.

3.2.4 Company and Customer Communication

Residential Customers

During the audit, customers expressed that communications between Aquarina and the community could be improved. They stated that keeping customers informed is key to reducing the frustration that accompanies any service issue. Customers expressed their frustration about not being able to reach company employees by phone stating that even after leaving a voice message, call backs are slow and delayed. They also state that Aquarina management is rude when they try to contact them.

The company states that customers are rude when company management answers calls or tries to troubleshoot problems. The company claims that customers have trespassed onto its property and have caused damages to the facilities. Consequently, the company no longer allows customers within the utility property. These communication issues go back to the prior water utility management before Aquarina Utilities took over.

According to the previously cited 2008 NRRI study, a utility should have a reputation of working cooperatively with the community it services. The company should provide timely, accurate information about service outages, water quality issues, watering restrictions and other matters that affect the community. In Commission audit staff meetings with the company and homeowners, both expressed a desire to improve communications with each other. Commission

audit staff agrees that improved communication is needed. Distrust on both sides has regrettably reduced civility and impeded problem-solving.

Golf Course

Aquarina and the Aquarina Beach and Country Club have had continuing miscommunication issues. Since the golf course is one of Aquarina's largest customers and is owned by the Homeowner's Association, the irrigation for the golf course has become a contentious and reoccurring problem. Issues associated with the golf course include the water supply, location of the golf course meter, an automated fertilizer system, and alleged equipment failures.

Most recently, the golf course and Aquarina have had concerns over the golf course meter. Golf course management would like access to the meter to track water consumption for required reporting to the St. John's Water Management District as well as to help calibrate their computerized irrigation system. Aquarina management has offered to read the golf course meter daily and send a picture via text to golf course personnel. The golf course would be able to receive these readings five days a week while the Aquarina maintenance person is on site.

Company management states that it would relocate the golf course meter and management of the irrigation pump to the golf course property if the golf course agrees to pay. Aquarina has procured a bid for moving the golf course meter inside the golf course property. Commission audit staff believes that these options are reasonable and are a step towards a more cooperative working partnership.

Observation

10) Commission audit staff notes Aquarina made several improvements to communication with customers such as implementing a public notification mechanism, providing an option for automatic debit payments, and creating a website.

Recommended Action

Commission audit staff believes that with some effort on behalf of both parties, communications between Aquarina and the community can be improved. Commission audit staff recommends that the company consider additional improvements to customer relations in seeking to provide excellent customer service. The company, in discussion with Commission audit staff, has agreed to implement improved communication methods and practices in several areas. Aquarina has implemented the following in their effort to improve customer communications:

- ◆ Aquarina has initiated a public alert text and internet notification system to keep company customers informed. See section 3.2.3.
- ◆ Aquarina has recently launched a website² for easier accessibility for customers. This was suggested during the November 1, 2016 Commission agenda conference.
- ◆ Aquarina management states that the account manager is planning to increase her presence on site and be available at the Aquarina office trailer. The company notes that she is available via phone from nine to one Monday through Friday.

² <http://aquarinautilities.ourlocalview.com//HomeTown/>

- ◆ Aquarina prepares and sends an annual Water Quality Report that includes DEP water quality results, bill payment options, and other announcements.
- ◆ Aquarina continues to push customers to use the Direct Debit option of bill payment. See Section 3.1.2.
- ◆ Aquarina has positively engaged customers to come up with solutions to problems such as the golf course meter.

Allegations were made by some customers that the Aquarina director of operations and Aquarina equipment may be being used to benefit affiliated companies. Commission audit staff found no other evidence of personnel or assets being shared aside from the four hours of consultant work performed by Aquarina’s director of operations. In addition, an assertion was made by customers that there was some missing Aquarina equipment. In discussions with the company and homeowner’s association, Commission audit staff determined that this piece of equipment did not exist and therefore is not missing.

Commission audit staff also notes the key role that customers and their homeowner associations play in maintaining effective and civil communication with Aquarina. However, the Commission’s ability to influence individual behavior is limited. Commission audit staff remains optimistic after meeting with the Homeowner’s Association leaders and frankly discussing the need for patience and civility.

3.3 Fire Protection

At the November 1, 2016, Commission Agenda conference, a key service quality issue raised by customers was the adequacy of fire flow including low water pressure for fire suppression, irrigation use limiting water availability for fire suppression, and inspection of hydrants.

3.3.1 Fire Hydrant Inspections and Operations

Section 633.312(2), F.S., *Inspection of fire control systems, fire hydrants, and fire protection systems*, requires that fire hydrants and fire protection systems installed in public and private properties, except one-family or two-family dwellings, shall be inspected following procedures established in NFPA 24 and NFPA 25. NFPA 25 requires that hydrants be tested annually to ensure proper functioning, opened fully and flushed until all foreign material has cleared, and lubricated annually to ensure that all parts are in proper operating condition.

Fire protection for the Aquarina communities is provided through thirty-seven company-owned fire hydrants located throughout the community. Aquarina has stated that hydrants are flushed, oiled, and flow-tested every two years. The company reports that repairs are made as necessary following inspection. The company claims that it performed fire hydrant maintenance in 2015. However, company management has been unable to produce 2015 maintenance records. The most recent records provided by the company are for 2011 maintenance.

Brevard County Fire Rescue has concerns with the Aquarina fire protection since there have been system outages that the Aquarina management did not appear to know about, and Brevard County Fire Rescue was not notified. This situation could cause Brevard County Fire Rescue to

arrive at a fire scene and discover the fire hydrant is not providing fire flow. The delay of locating Aquarina personnel and starting the pump would be critical.

Rule 25-30.250(3), F.A.C., *Continuity of Service*, provides that where public fire protection is provided by the mains affected by an interruption in service, Aquarina must notify the Fire Chief or any other public official responsible for fire protection, that an interruption has occurred or will occur. Additionally, the company must notify that person regarding when service is or is anticipated to be restored.

The Brevard County fire marshal has stated that the Brevard County Fire Rescue needs to be made aware immediately when the fire protection system is shutdown or otherwise off to try and make available additional firefighters and alternative water supplies. Brevard County Fire Rescue has a fire station adjacent to Aquarina which has one fire engine which carries 700 gallons of water. In addition, because of the possible lack of fire protection due to dry hydrants in the Aquarina development, Brevard County Fire Rescue has deployed a 3,000 gallon tanker to this fire station to supplement fire protection for the Aquarina communities. The next closest responding fire station to aid in backup is approximately 10 miles away. This is enough water for a residential fire, but will not be enough water if one of the three mid-rise condominium buildings is burning, or if multiple residences experience a fire.

On July 15, 2016, the Brevard County fire marshal was informed that during routine maintenance and testing of the sprinkler system at Ocean Dunes Condominiums, it was discovered that there was no water to the buildings for the life safety fire suppression system and that the hydrants on site were dry as well. An immediate follow-up on-site inspection by Brevard County fire marshal showed the water pressure had been restored. Aquarina determined that a construction contractor working on Mantilla Reef, a new development, turned off a valve which controlled the fire flow to one of the hydrants in the Ocean Dunes Condominium area. While another hydrant was available and operational for Ocean Dunes' use, the fire system contractor inspected the non-operational hydrant.

A Brevard County fire marshal inspection completed August 23, 2016, showed violations of Fire Protection System Sections 13.1.2, 13.1.5, and 13.1.8 of the National Fire Protection Association requirements which have been adopted by Brevard County. A Notice of Violation was issued for the following violations.

- ◆ 13.1.2 The property owner shall be responsible for the proper testing and maintenance of the equipment and systems.
- ◆ 13.1.5 Detail records documenting all system and equipment testing and maintenance shall be kept by the property owner and shall be made available upon request for review by the Authority Having Jurisdiction.
- ◆ 13.1.8 The Authority Having Jurisdiction shall be notified when any fire protection system is out of service and on restoration of service.

In a September 1, 2016 letter, the company advised the fire marshal's office that it believes it is not required to provide fire flow to the condominium hydrants and therefore the fire marshal has no jurisdiction over the fire protection system owned by Aquarina.

On October 27, 2016, the Brevard County fire marshal tested the fire hydrants at the Tidewater Condominiums and found some water flow, but with severely compromised pressure with large pockets of air, and was “unusable for fire fighting.” Aquarina determined that maintenance work, during a recent repair of a main line, had allowed air to enter the line and had not yet had an opportunity to flush the air from the system. There was water in the hydrant, but its flow was momentarily sporadic as air was cleared from the system.

On October 28, 2016, the Brevard County fire marshal requested the local fire station crew test some hydrants to make sure the system was operating. The crew tested three locations and the water flow and pressure appeared to be adequate.

A Brevard County fire marshal reinspection on January 26, 2017, indicated the same violations occurring as was described in the August 23, 2016 inspection. This Notice of Violation indicated that failure to correct the violations by February 24, 2017, may result in possible fines of up to \$1,000 per day and referral to a special magistrate of the Brevard County Courts for resolution. The company again responded that it believes the Fire Department does not have jurisdiction over its fire hydrants and fire flow.

On April 10, 2017, the Brevard County fire marshal sent the company a reinspection report clearing all outstanding violations noted in the August 23, 2016 inspection above. However, the reinspection noted that the Brevard County fire marshal was starting a process with the county attorneys regarding operation of Aquarina’s fire suppression system. The Brevard County fire marshal will continue to monitor Aquarina’s hydrants and fire system water supply.

Jurisdictional Issues

Currently, Aquarina and the Brevard County fire marshal do not agree about jurisdiction of the fire protection system in Aquarina. Brevard County Fire Rescue believes that it has jurisdiction over Life Safety issues including fire hydrants and water supply to the hydrants. According to the company’s attorney, the Brevard County fire marshal’s office is attempting to enforce laws and guidelines that pertain to private commercial fire protection systems for *buildings*. Aquarina believes these regulations and guidelines do not apply to *privately-owned public water systems*.

Commission audit staff notes that in 2002, a Brevard County Code Enforcement Special Master Order³ found that the Aquarina property fire protection system was subject to the provisions of the Code of Brevard County, Florida, Section 2-173(b).⁴ The Order stated that the Aquarina development and the utility, known at that time as Service Management Systems, Inc., violated the Fire Protection Code by not maintaining the fire protection system according to the cited code. Specifically, all fire hydrants in the subdivision were out of service, and the Brevard

³2002 Brevard County Code Enforcement Special Master Order
<http://web1.brevardclerk.us/oncoreweb/showdetails.aspx?id=4064819&rn=23&pi=1&ref=search>

⁴ Section 2-173(b) requires that if a violation of the codes or ordinances is found, the code inspector shall notify the respondent of the violation and give the respondent a reasonable time, in light of the nature of the violation, to correct the violation. Should the violation continue beyond the time specified for correction, the code inspector shall set a hearing before the special magistrate and notify the respondent of the hearing pursuant F.S. § 162.12.
https://library.municode.com/fl/brevard_county/codes/code_of_ordinances?nodeId=PTIICOOR_CH2AD_ARTVIB_OCOAU_DIV4UNADBO_S2-213GEPR.

County fire marshal was not notified of the water supply outage. Since the violations were cured by the time of the hearing, no fine was imposed by Brevard County.

The Florida Public Service Commission addressed this issue in the company's 2002 staff assisted rate case. In Order No. PSC-03-1342-PAA-WS,⁵ the Commission stated that other than St. Johns Water Management District's regulation of irrigation water use, all other regulation of the fire-flow/irrigation system is under the jurisdiction of the Office of the Brevard County Fire Rescue. The Commission ordered the utility to meet the NFPA requirements⁶ within 180 days of the Consummating Order.

Observation

11) Aquarina does not currently inspect its fire hydrants as required by NFPA 25.

Recommended Action

Commission audit staff recommends that the company increase the frequency of fire hydrant inspections from biannually to annually as required by NFPA 25.

Observation

12) Aquarina does not maintain and document fire hydrant maintenance activities.

Recommended Action

Commission audit staff also recommends that the company maintain up-to-date records of all fire hydrant maintenance and provide the documents to Brevard County Fire Rescue. The company states that it intends to keep better records of hydrant flushing and oiling.

3.3.2 Non-Potable Water Usage

The main fire flow concern relates to the impact of heavy irrigation use of the non-potable water system. Aquarina's fire flow and irrigation use the same dedicated non-potable system. **Exhibit 2** illustrates the flow of the non-potable water system. The non-potable system is fed by one well that pumps water into a 1.25 million gallon tank. The tank feeds both the golf course pump and two additional pumps that supply fire flow and residential irrigation.

⁵ <\\fp3\filings\psc\library\filings\2003\11955-2003\11955-2003.PDF>

⁶NFPA requirements Section 7-54.1 (proper maintenance of fire service mains) and Section 7-54.2 (inspection, testing, and maintenance).

Aquarina Utilities, Inc.
Flow of the Non-Potable Water System

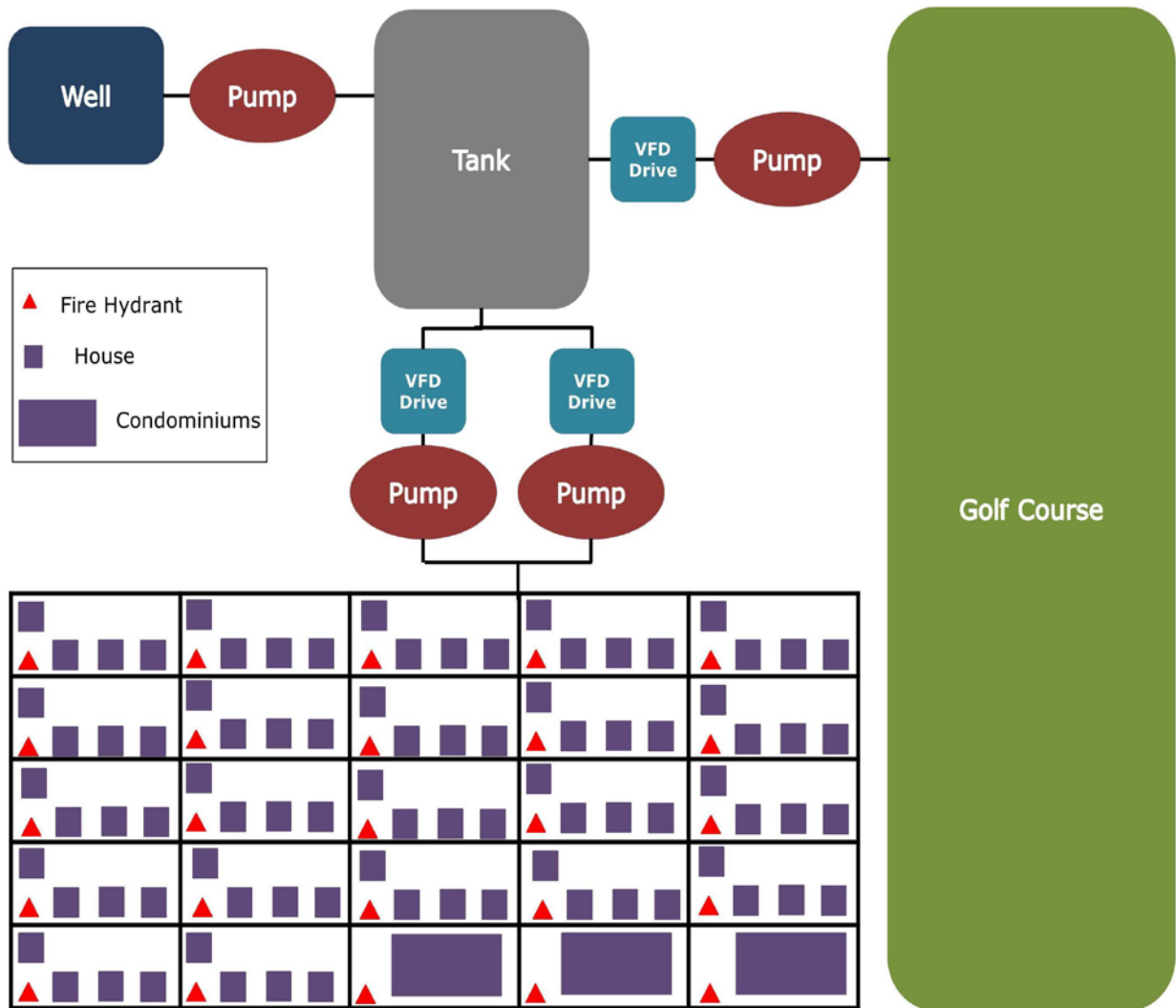


Exhibit 2

Source: Conference Calls and Supplemental Emails

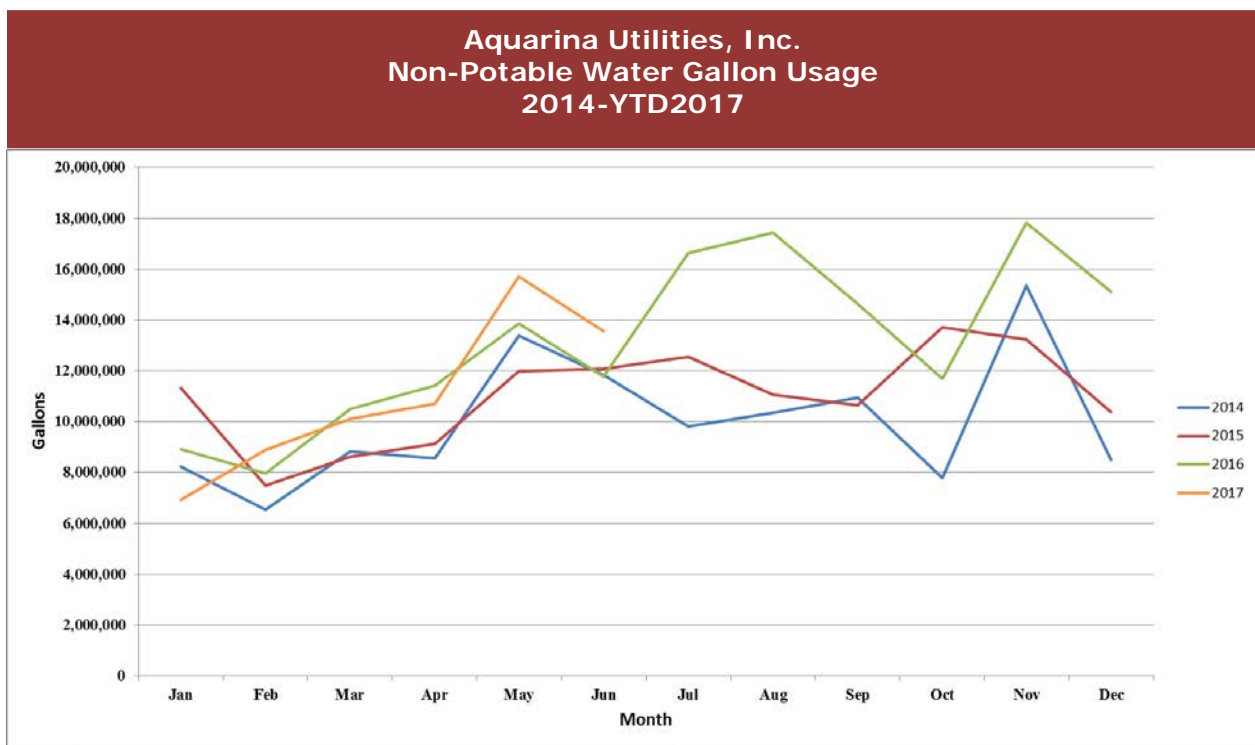
When the 1.25 million gallon non-potable irrigation and fire protection tank is drawn down to 250,000 gallons, the pump automatically shuts off to preserve water for fire protection. After about an hour, the tank refills to 300,000 gallons triggering the pump to automatically restart.

The company notes that the automatic shutdowns at 250,000 gallons affecting the Aquarina fire protection usually occur during drought season frequently during the night-time irrigation. The company reports that the one million gallons can be used for irrigation by the golf course and residents during a single night during drought conditions. According to the homeowner’s association, there were eight instances so far in 2017 in which the non-potable water tank was drawn down to 250,000 gallons and an automatic shutdown occurred overnight.

However, if the tank is at 250,000 gallons, the pump must be manually turned back on. Should a fire be detected while the pump is off, the fire department has no direct access the 250,000 gallons left in the tank. In case of a fire, it may take from ten minutes during business hours to 45 minutes during non-business hours for an available operator to manually restart the pump. The time delay could cause loss of life or serious property damage.

The company states that the residential customers and the Homeowner’s Association have been using an unusual amount of water for irrigation during 2016 and 2017 leading to more frequent drawdowns.

Exhibit 3 shows the total number of gallons of non-potable water pumped monthly by Aquarina during the period January 2014 to June 2017. As shown, the residents used more water in 2016 and YTD 2017 than the previous two years.



Notes: 1) Hurricane Matthew occurred in October 2016.
 2) New SARC rates effective January 31, 2017.

Exhibit 3 Source: 2014-2016 St. John Water Management District Water Use Pumpage Report and DR4. 1a

Aquarina Utilities’ Consumptive Use Permit (CUP), issued by the St. Johns River Water Management District, regulates the maximum amount of groundwater that the company can withdraw. Aquarina’s CUP states that it can withdraw a maximum of 83.3 million gallons (230,000 gallons daily average) of water for the golf course and 88.98 million gallons (240,000 gallons daily average) for landscape irrigation. In total, the company can pump up to 172.28 million gallons annually for the non-potable system.

Aquarina requested that the Florida Rural Water Association (FRWA) conduct a non-potable water usage assessment. Aquarina reports show a daily average usage of 552,425 gallons per day non-potable water usage from January 2017 through May 2017, well over the consumption use

permit of 470,000 gallons per day. The monthly average usage decreased to 452,266 gallons per day in June, and 444,399 gallons per day in July, both months below the consumption use permit of 470,000 gallons per day. FRWA notes that this decrease in the June and July usage could be due to the abundance of rain experienced in those months.

Exhibit 3 shows the total amount of non-potable water that was pumped for the years 2014 to date. The golf course and the residents have been steadily increasing their non-potable water consumption. From 2014 to 2016, non-potable water consumption increased by 31.3%. As seen in **Exhibit 4**, the amount of non-potable water pumped has been nearing the maximum allowed under the Aquarina CUP, 172.28 million gallons. Aquarina pumped almost 1.5 million more gallons of non-potable water during the first six months of 2017 compared to the first six months of 2016.

Aquarina Utilities, Inc. Yearly Non-Potable Water Gallon Usage 2014-2016		
Year	Gallons	% of CUP Limit
2014	120,190,739	70%
2015	132,255,718	77%
2016	157,838,768	92%

Exhibit 4 Source: 2014-2016 St. John Water Management District Water Use Pumpage Report and DR4.1a

On May 9, 2017, the St. John’s Water Management District invoked voluntary water restrictions to reduce water use and increase awareness of the need for water conservation. On May 16, 2017, the St. John’s Water Management District sent letters to all homeowners associations in its district asking for their support to promote water conservation with specific attention to how water is used outdoors. Watering restrictions are in effect from the 2nd Sunday in March to the 1st Sunday in November. These restrictions establish the time and days each resident can water their property. Since Florida has experienced a drought⁷ for much of 2016 and 2017, it is important for customers to follow these restrictions. Commission audit staff notes that during the period of the voluntary restrictions, Aquarina non-potable water customers have actually used substantially more water.

FRWA noted that in the months of January through May 2017, the Melbourne area was going through a dry spell explaining the increased water usage by the Aquarina customers. Aquarina has informed its customer of the voluntary water restrictions set forth by St. John’s Water Management District, and FRWA recommended that Aquarina customers be kept informed regarding customer irrigation usage to avoid any St. John Water Management District permit violation.

As shown in **Exhibit 5**, Aquarina customers’ non-potable water usage correlates to the amount of rainfall. Irrigation usage increases in months when the rainfall is lower. During 2016 and the

⁷The Florida Division of Emergency Management defines a drought as a period of unusually dry weather that persists long enough to cause serious problems such as crop damage and/or water supply shortages. The severity of the drought depends upon the degree of moisture deficiency, the duration and the size of the affected area.

first half of 2017, Florida experienced drought conditions, which could have contributed to the increased water usage. Months of increased water usage experienced drawdowns of the 1.25 million gallon tank.

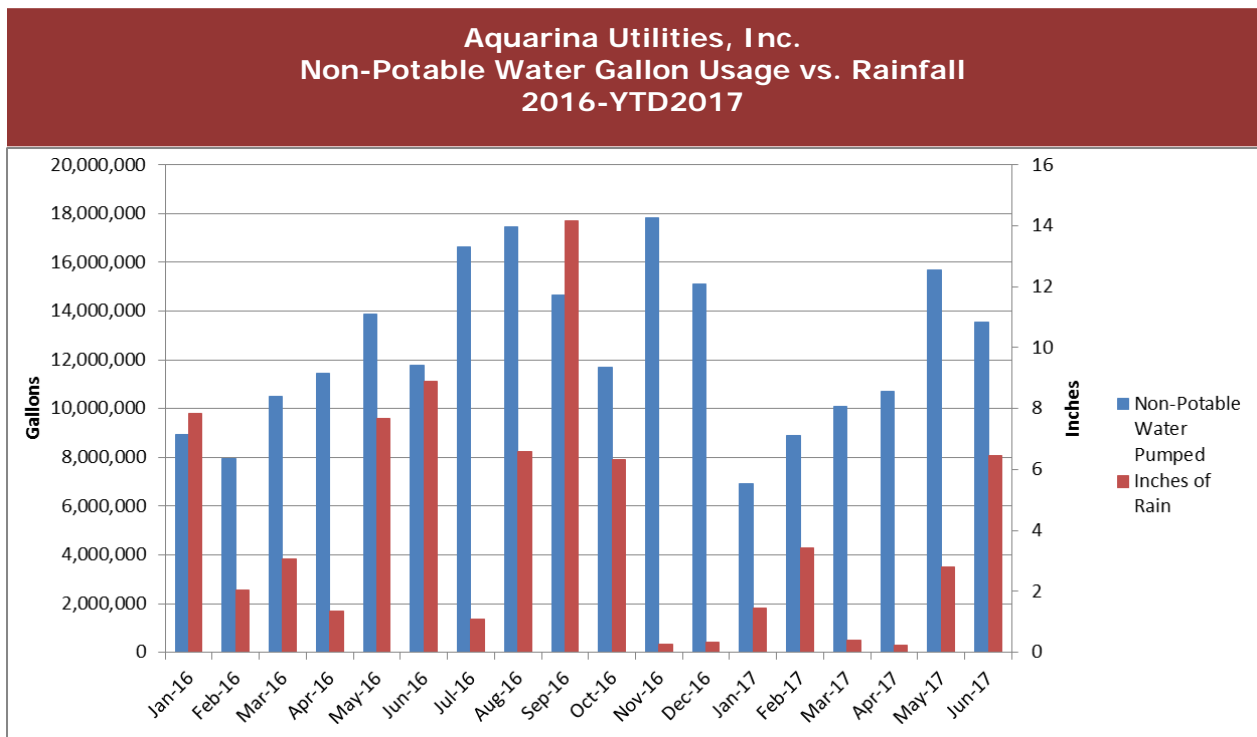


Exhibit 5 Source: 2016 St. John Water Management District Water Use Pumpage Report, DR4.1a, and National Weather Service Supplemental East Central Florida Climate Data

Observation

13) Commission audit staff notes that though some customers believe they are not receiving their desired amount of non-potable water, Commission audit staff has determined that the customers are using close to the maximum amount of non-potable water allowed by Aquarina’s Consumptive Use Permit.

Observation

14) Commission audit staff notes that the Aquarina golf course and homeowners are separate competing demands that together drive the drawdown of the one million available non-potable gallons.

Recommended Action

Commission audit staff recommends that the golf course and residential irrigation customers coordinate efforts to allocate available non-potable water and adhere to all voluntary St. John’s River Water Management District water restrictions. The golf course and homeowners should recognize the interrelation between the two uses. This will limit the number of drawdowns that the 1.25 million gallon tank experiences.

4.0 Company Comments

4.1 Aquarina Comments

Observation 1: Aquarina currently does not include the rate schedule on its bills as required by Rule 25-30.335(1), F.A.C., *Customer Billing*.

Aquarina Comments: Aquarina Utilities does include the complete rate schedule on its bills as of the 10 August 2017 billing. As the limitations of the billing software available to the utility did not include this as an option and very few other small utilities provide this information, the utility did not include the rate schedule until it was made aware of the requirement. Aquarina Utilities currently bills on the 10th of each month; the bills are due on the 1st of the following month. The rate schedule is now printed on the back of each bill.

Observation 2: Aquarina does not keep maintenance books and logs up to date as required by Rule 25-30.110, F.A.C., *Records and Reports; Annual Reports*.

Aquarina Comments: This rule pertains only to records of a financial nature as pertaining to the production of the annual report. It does not state any regulations having to do with the maintenance or compilation of maintenance logs or equipment. With regard to “Regulations to Govern the Preservation of Records of Electric, Gas, and Water Utilities” as issued by the National Association of Regulatory Utility Commissions, revised 1985, this document is not available on the FPSC website, nor can it be found with an internet search. Please provide a copy of the document, and the utility will make every effort to comply with its regulations.

Observation 4: Aquarina does not maintain records of email or verbal complaints.

Aquarina Comments: Aquarina does, in fact, maintain a record of all emailed complaints. They are archived in our email account. Customers who call with verbal complaints are asked to email their concerns to us so that a record can be maintained.

Observation 9: Commission audit staff notes that some customers believe Aquarina management is not providing adequate notification of all unplanned outages.

Aquarina Comments: Aquarina Utilities has implemented a “Public Alert” program which requires all customers to update their contact information at www.public-alert.com to ensure that they are contacted in case of any emergency outage, planned outage, or boil water notice. This program was used on 8 May 2017 to notify customers that an unplanned outage occurred. It was implemented in February 2017. To date, exactly 7 private homeowners have updated their contact information. Despite the fact that Public Alert information was sent to all HOA management companies, not one condo association resident has supplied emergency contact information. Also, a request has been sent to each management agency no less than 3 times requesting emergency contact information for the various HOAs, and of the six condo associations, and twelve other associations, only one HOA has provided emergency notification

information. It is impossible for the utility to comply with requests for notification if contact information is not provided.

Observation 10: Commission audit staff notes Aquarina made several improvements to communication with customers such as implementing a public notification mechanism, providing an option for automatic debit payments, and creating a website.

Aquarina Comments: Aquarina Utilities makes every effort to treat every customer, employee, and visitor with the utmost decency and respect. As a family-run business, the utility has a strict policy against foul language and rude behavior. We do not tolerate this behavior among our representatives, nor will we tolerate it from our customers, vendors, or visitors. No employee will be expected to tolerate rude or abusive language under any circumstances and our policy is to disconnect from callers or simply walk away from individuals who display such bad manners until such time as they regain control of themselves and can behave civilly. The utility will not be drawn into a situation in which our employees might be threatened, abused, or badgered into lowering their standards of behavior. Aquarina Utilities welcomes communication and cooperation with the community, but demands the respect and decency that should be a part of all business relationships.

Observation 11: Aquarina does not currently inspect its fire hydrants as required by NFPA 25.

Aquarina Comments: NFPA 25 does not now nor ever has applied to privately-owned utility fire hydrants. Please see attached correspondence from Aquarina Utilities' lawyer, Mr. Martin Friedman. The utility is under no obligation to comply with this regulation.

While Part II of Chapter 633, F.S. primarily regulates fire suppression systems it does purport to set forth certain requirements for the testing of fire hydrants in Section 633.312(2) which may be applicable to Aquarina Utilities, Inc. However, nowhere in Chapter 633, F.S., does it grant the Fire Marshal the authority over such hydrants, including the right to inspect them. Unquestionably, there is no right for the Fire Marshal to test hydrants without the Utility's consent. Apparently the Commission, when this utility system was owned by a prior owner, ordered compliance with NFPA 25. However, such compliance does not grant any rights to the Fire Marshal.

The dispute in August 2016 over a Notice of Violation issued by the Brevard County Fire Marshal's office that appears to be continuing, involved the Fire Marshal's attempt to apply fire suppression system requirements to fire hydrants owned by Aquarina Utilities, Inc. Almost a year ago, Aquarina Utilities' attorney requested the Brevard County Fire Marshal to provide legal authority for its position, and to date it has failed to do so.

The draft management audit mischaracterizes Aquarina Utilities attorney's response in stating that Aquarina Utilities "is not required to provide fire flow to the condominium hydrants." Attached is a copy of that letter, which makes the distinction between fire suppression equipment required for buildings and hydrants.



September 1, 2016
Certified Return Receipt Requested

Mr. Jeff Krupinsky
Office of the Fire Marshall
1040 South Florida Ave.
Rockledge, FL 32955

RE: Aquarina Utilities, Inc. / Notice of Violation
Our File No. 45052.02

Dear Mr. Krupinsky:

This law firm represents Aquarina Utilities, Inc., and has been asked to address the undated Notice of Violation, with an inspection date of 8/23/16. I have thoroughly reviewed the Florida Fire Protection Code, specifically the three provisions you cite as authority to require the specific "Action Required." Those provisions are applicable to buildings that are required to have fire protection systems. The building which you identify at 235 Aquarina Boulevard, Melbourne Beach is not required by the Fire Protection Code to have a fire protection system. That fact is tacitly admitted where you demand certain action wholly unrelated to a fire protection system for a particular building.

The Office of Fire Marshall has no regulatory jurisdiction over Aquarina Utilities, Inc. and no authority to require it to "Provide detail of your water system, potable and non potable. How it is supplied, storage capacities, and safe guards in place to keep system on line and reliable for the life safety system including system alerts when critical low levels are reached. Complete overview of system is requested." If you have some legal authority to the contrary please have your attorney contact me. Otherwise, Aquarina Utilities, Inc. has no intent to provide that information.

Very truly yours,

A handwritten signature in black ink, appearing to read "Martin S. Friedman".

MARTIN S. FRIEDMAN
For the Firm

MSF/

cc: Ms. Holly Burge (via e-mail)