# STATE OF NORTH CAROLINA UTILITIES COMMISSION RALEIGH 

DOCKET NO. W-218 SUB 573

APPENDIX 3
SCHEDULE 4

##  <br> Jun 302022

# STATE OF NORTH CAROLINA UTILITIES COMMISSION RALEIGH 

DOCKET NO. W-218, SUB 573

## BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

IN THE MATTER OF
APPLICATION BY AQUA NORTH CAROLINA, INC., 202 MACKENAN COURT, CARY, NORTH CAROLINA 27511, FOR AUTHORITY TO ADJUST AND INCREASE RATES FOR WATER AND SEWER UTILITY SERVICE IN ALL SERVICE AREAS IN NORTH CAROLINA

PREFILED DIRECT TESTIMONY OF<br>P. David Haddad<br>ON BEHALF OF AQUA NORTH CAROLINA, INC.

June 30, 2022
Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
A. My name is David Haddad, I am a consultant with Regulated Capital Consultants, LLC (RCC), and my business address is 4355 Cobb Parkway, Suite J255, Atlanta, GA 30339. My role in this case is to provide support to the Aqua North Carolina (Aqua North Carolina, ANC, or Company) finance team to manage delivery of all filing requirements associated with the North Carolina Utilities Commission (NCUC or Commission) Form W1 (Items 130). Specifically, I have worked with the Company to develop the rate case accounting model exhibits to satisfy the requirements of NCUC Rule R117A in relation to the Water System Improvement Plan (WSIP).

## Q. PLEASE BRIEFLY DESCRIBE YOUR BUSINESS EXPERIENCE.

A. My professional experience incorporates over 35 years in the energy/utility industry. Prior to joining RCC, I worked 27 years in various segments of the utility sector as regulatory compliance/policy professional. I started my career in 1986 working in the rate department of an interstate gas transmission \& storage company as a rate analyst and revenue accountant. I then moved to the local gas distribution business as a manager and then director of regulatory policy. In this role I served as the company liaison to the respective commission, staff and advocates. I also managed the utility regulatory process (rate cases, audits, gas cost recovery filings, etc.) with oversight of the company tariffs before the respective commissions. In 2014 I joined RCC as a consultant. In this role I have provided the following
services to clients:

- Project management
- Review and analysis of tax flow through and normalization policies
- Rate case management and revenue requirement modeling
- Technical and functional assistance, client support and remediation Clients that I have provided consulting services to include: American Water, Ameren Company, Atmos Energy, Central Hudson Gas \& Electric, Central Louisiana Electric Company, Dominion Energy, Duquesne Light Company, First Energy, Pepco Holdings Inc, Tucson Electric Power, We Energies, PPL Corporation, Southwest Gas Company and Upper Peninsula Power Company.
Q. PLEASE DISCUSS YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.
A. I am a graduate of West Virginia University Institute of Technology with a Bachelor of Science degree in Business Management.
Q. HAVE YOU EVER TESTIFIED BEFORE A REGULATORY COMMISSION BEFORE?
A. Yes. I have submitted testimony before the Pennsylvania Public Utility Commission in Docket Nos. C-20031302, et al., R-00038245, R-00049783, R-00050340, R-00072175, R-2008-2011621, and R-2009-2093219. I have also testified before the Maryland Public Service Commission in Case Nos. 9159, 8511 (aa) $8511(\mathrm{bb})$.


## Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to address certain financial aspects of the rate case. These are, specifically:

1) capital structure,
2) rate design,
3) the conservation pilot program, and
4) the Consumption Adjustment Mechanism.
Q. WHAT TEST YEAR PERIOD DOES YOUR TESTIMONY ADDRESS?
A. My testimony addresses the test year beginning January 1, 2021, through December 31, 2021, as well as certain adjustments that extend into the post-test year period (2022) and are pro forma in nature. The rate design periods under the proposed WSIP are calendar years 2023, 2024 and 2025 representing Rate Years 1 - 3, respectively.

## 1. CAPITAL STRUCTURE

Q. WHAT IS THE COMPANY'S PROPOSED CAPITAL STRUCTURE IN THIS RATE CASE?
A. The Company proposes a ratio of $50 \%$ equity and $50 \%$ long-term debt in the financing of its operations. This ratio is consistent with the structure approved by the Commission in prior rate cases. The proposed cost of debt used in the WSIP is $4.01 \%$. This rate was derived from the long-term borrowings of the Company as of May 2022. When including the proposed cost of equity rate of $10.40 \%$
supported by Company expert witness Dylan D'Ascendis, the resulting proposed overall rate of return is $7.21 \%$. Please see Mr. D'Ascendis' direct testimony for additional analysis related to capital structure.

## 2. RATE DESIGN

Q. WHAT DO YOU PROPOSE IN YOUR RATE DESIGN WITH RESPECT TO THE DISTRIBUTION BETWEEN BASE FACILITY CHARGES AND VOLUMETRIC RATES?
A. The Company proposes no modification to the fixed/variable ratio from that proposed by the Public Staff and approved by the Commission in the Company's last rate case (Docket No. W-218, Sub 526). That structure includes allocations of fixed charges (base facility charges (BFC)) and volumetric consumption charges for the average water customer as follows:

| Entity | Fixed/BFC | Volumetric |
| :--- | :---: | ---: |
| ANC | $41.4 \%$ | $58.6 \%$ |
| Brookwood | $41.0 \%$ | $59.0 \%$ |
| Fairways | $44.0 \%$ | $56.0 \%$ |

Similarly, the Company proposes no modification to the previously approved fixed/variable structure for its metered wastewater customers (the unmetered are subject to a flat rate charge).

| WW Rate <br> Division | Fixed/BFC | Volumetric | \% Of Metered <br> Customers |
| :--- | :---: | :---: | :---: |
| ANC | $80 \%$ | $20 \%$ | $58 \%$ |
| Fairways | $80 \%$ | $20 \%$ | $94 \%$ |

Q. DO YOU SPONSOR ANY EXHIBITS IN THIS CASE RELATED TO RATE DESIGN?
A. Yes. The billing determinants, proposed rates, and revenues are contained in the Company's application Exhibits F, H, and J. The historical data trends and proposed rate effects are contained in those exhibits. The direct testimony that follows will discuss the development of the data contained therein. These items take into consideration the WSIP being requested in this proceeding.
Q. PLEASE DESCRIBE THE BILLING DETERMINANTS INCLUDED IN THE PROPOSED RATE DESIGN.
A. Historical billing determinants consist of the number of bills and gallons used by customers by class by month over the test year and the two prior years. Billing determinants for the pro forma rate design years, Rate Years $1-3$, are projected as discussed below.

## Q. PLEASE DESCRIBE THE METHOD USED TO DEVELOP BILLING

 DETERMINANTS.A. Billing information was obtained covering three 12-month periods ending December 31, of 2019, 2020, and 2021. From those reports, the number of bills and consumption in each month of those three years was compiled
by tariff division, class of service, and meter size.
Q. HOW DID YOU VALIDATE THE ACCURACY OF THE TEST PERIOD BILLING DETERMINANTS?
A. The number of bills, consumption volumes, and dollar amounts charged in the test year were analyzed and compared to the base and usage rates in effect during the test year for the various meter sizes and rate groups. These test year charges were reconciled to the test year booked revenue to within less than one percent, thereby validating the accuracy of the developed billing determinants.
Q. IS A USAGE ADJUSTMENT INCLUDED IN DEVELOPMENT OF PRO FORMA DETERMINANTS?
A. Yes. Consistent with past practice, the average test year usage per bill was compared to the average usage per bill in the 3 -year period ending with the test year. A 3 -Year / Test Year factor was calculated, and that factor was applied to the test year usage volumes to obtain normalized average test year usage per bill.
Q. HOW WAS TEST PERIOD DATA ADJUSTED TO ACCOUNT FOR END-OF-PERIOD CUSTOMERS?
A. The customer count in the last month of the test period (December 2021) was normalized to an annual number of bills. In each category (tariff group, class, meter size) these normalized bill numbers were multiplied by the normalized average test year usage per bill to get normalized annual usage.
Q. IS A GROWTH ADJUSTMENT INCLUDED IN DEVELOPMENT OF PRO FORMA BILLED-MONTHS BILLING DETERMINANTS?
A. Yes, the Company is projecting growth of customers through calendar year 2025. These projections are based on recent growth history for each rate division. Additional bills and proportional additional usage were added to Pro Forma calculations in anticipation of that growth.
Q. DO YOU BELIEVE THAT THE LEVEL OF PRO FORMA REVENUES at present rates as shown on exhibit h is appropriate FOR SETTING RATES IN THIS CASE?
A. Yes, present rates were applied to the Pro Forma billing determinants for Rate Year 1 to calculate Pro Forma revenue at Present Rates, and I submit this is correct.
Q. HOW WERE THE PROPOSED RATES DEVELOPED?
A. Proposed base charges and volumetric rates were developed so that, when applied to the Pro Forma billing determinants, the rates would result in an expected revenue amount that matched the applied-for revenue requirements within an acceptable rounding margin of one tenth of a percent. This "proof of revenue" is shown in application Exhibit H in the column for proforma revenue at proposed rates.
Q. DID YOU MAKE ANY RATE STRUCTURE CHANGES IN PROPOSED RATES?
A. Yes, changes are proposed for the rate structures of Carolina Meadows and
for customers with sewer treatment purchased from Charlotte Water.

## Q. WHAT CHANGE WAS MADE FOR CAROLINA MEADOWS?

A. In settlement of the last Aqua rate case, to minimize rate shock, the Residential Equivalent Units (REUs) for rate design were set at 186 (i.e., $50 \%$ of the Public Staff's count of 372 REUs). The structure change in this case is to use fully calculated REUs for rate design.

## Q. WHAT CHANGE WAS MADE FOR CUSTOMERS USING SEWER TREATMENT FROM CHARLOTTE WATER?

A. Aqua experienced a significant number of billing complaints from its sewer customers in the Huntley Glen, Park South and Parkway Crossing subdivisions immediately following the approved rate changes per the Commission's Order of October 26, 2020, in Docket No. W-218 Sub 526. Aqua's sewer customers in these subdivisions (approx. 997) have treatment provided by Charlotte Water (the City). The City bills Aqua for sewer treatment. Aqua effectively "passes-through" the City's usage rate to these metered sewer customers by replacing Aqua's volumetric usage rate with the City's for customer billing purposes. Prior to the ruling in the last rate case, these pass-through customers paid a base facility charge at the same scale as Aqua's Monthly Metered Service (commercial) tariff customers; that base charge was about $36 \%$ of the flat rate charged to the ANC-Uniform sewer rate customers. In the last case, most ANC-Uniform sewer customers moved from a monthly flat rate to metered sewer usage rates
plus and a monthly base facility charge; $80 \%$ fixed and $20 \%$ volumetric. At that time, the Charlotte Water treatment customers also had their base charges aligned with the ANC-Uniform sewer rate customers, which increased their monthly base facility charge; however, their usage rate remained the same Charlotte Water usage pass-through rate, which was not reduced to adjust for the increase in the fixed component like the rest of the ANC-Uniform metered customers usage rates were. An unintended consequence of that rate structure ordered in the last case was that these metered residential sewer customers received a rate increase of a much higher percentage than other Aqua Sewer customers, and they have been paying higher bills than the ANC-Uniform sewer customers for comparative usage since then.

Aqua seeks to remedy the billing imbalance placed upon these customers by consolidating these customers and their related purchased sewer costs into the ANC sewer utility service tariff for "Monthly Metered Service (residential and commercial customers)", eliminating their pass-through billing, and including the purchased sewer costs with ANC Sewer O\&M expenses.

## 3. CONSERVATION PILOT PROGRAM (Pilot)

Q. PLEASE DESCRIBE THE PILOT WATER CONSERVATION TIERED RATE STRUCTURE.
A. In Docket No. W-218, Sub 526, the Commission authorized a pilot program
with inclining block tiered water rates in these ANC systems:

- Arbor Bay
- Bayleaf Master System
- Merion
- Pebble Bay

Blocks chosen for residential domestic service were:
Block 1 - 0 to 4,000 gallons
Block 2 - 4,001 to 8,000 gallons
Block $3-8,001$ to 15,000 gallons
Block 4 - 15,001 gallons or more
Rates were set so that the first 4,000 gallons in any month are billed at $65 \%$ of the single block usage rate of the non-tiered areas, the next 4,000 gallons at $97 \%$, the next 7,000 gallons at $146 \%$, and all above 15,000 gallons at $195 \%$.

Blocks chosen for irrigation service on separate irrigation meters were:
Block 1 - 0 to 15,000 gallons
Block 2-15,001 gallons or more
Rates for irrigation blocks 1 and 2 are the same as domestic blocks 3 and 4.

## Q. IS AQUA PROPOSING TO CONTINUE THE PILOT IN THIS CASE?

A. The Commission's Order of October 26, 2020, in Docket No. W-218, Sub 526, Finding of Fact No. 39, p. 12, calls for Aqua to analyze and apply the
results of a Conservation Rate Pilot Program (Pilot) to future rate structures and apply "at least two summer irrigation seasons but should conclude within three years of the implementation date or the effective date of new base rates in a general rate case application, whichever is earlier." The Pilot has only been in place for one full irrigation season and the results are insufficient to adequately utilize for the development of future rate structures at the time of this filing. While the Commission's Order of October 26, 2020, in Docket No. W-218, Sub 526, also indicates that the Pilot should conclude within three years of the implementation date, the Commission Order was not drafted with the knowledge that a WSIP would be in place that may provide for a projection of three prospective Rate Years and, therefore, conflict with the possibility to satisfactorily incorporate the impact of conservation rates into its rate design. For these reasons, Aqua requests that the previously approved Pilot be continued until Aqua's next rate case filing, along with its revenue reconciliation component based on average per customer consumption, so Aqua may use the results of its Pilot to inform future rate structures.

## Q. PLEASE COMMENT ON THE REVENUE RECONCILIATION MECHANISM ASSOCIATED WITH THIS CONSERVATION INCENTIVE?

A. In Docket No. W-218, Sub 526, the Company requested, and the Commission approved the implementation of such a mechanism in its

October 26, 2020, Order.
Aqua has implemented that mechanism. In 2021, the first year under tiered rates, tier customer usage revenue was higher than it would have been without tier rates, and bill credits are pending issuance in 2022. In Docket No. W-218, Sub 526A, the Commission recently heard different positions from Aqua and the Public Staff on the methodology for calculating the credits. Once the differences are resolved by Commission order, Aqua will make refunds to its customers in the pilot service areas in the manner prescribed by the Commission.

## 4. CONSUMPTION ADJUSTMENT MECHANISM

Q. WHAT IS A CONSUMPTION ADJUSTMENT MECHANISM (CAM)?
A. A CAM may be approved by the Commission as a mechanism to "track and true-up variations in average per customer usage from levels approved in the general rate case proceeding" pursuant to N.C.G.S. § 62-133.12A.
Q. IS AQUA ASKING THE COMMISSION TO APPROVE A CAM IN ADDITION TO THE WATER AND SEWER INVESTEMENT PLAN (WSIP)?
A. No. The statute authorizing the use of a Water and Sewer Investment Plan rate-making mechanism, N.C.G.S. § 62-133.1B(d), prohibits the use of a CAM during the pendency of a WSIP. It states that "Any rate adjustment mechanism authorized pursuant to G.S. 62-133.12 or G.S. 62133.12A shall be discontinued during the term of any Water and Sewer

Investment Plan." Because a CAM can only be authorized under N.C.G.S. § 62-133.12A, it may be approved for use only if a WSIP mechanism is not authorized by the Commission. The Company requests Commission approval of a WSIP in the present case; however, if the Commission rejects the WSIP, Aqua requests approval of a CAM for its water rate entities. A CAM would be a useful tool to cushion the impact of significant revenue swings resulting from consumption variations.

## CAM PRUDENCY AND VALUE

## Q. WHAT ARE BENEFITS OF A CAM?

A. The Company experiences notable fluctuations in annual average water consumption per customer. These fluctuations create revenue instability in comparison to the expected consumption levels used in rate designs to produce a specific approved revenue requirement. During periods of average per customer consumption increases (versus the levels set in a most recent rate case), the Company collects more revenue than was projected from those customers, while the opposite is true during periods of reduced average per customer consumption. A CAM ensures that no more or no less revenue is received than was intended from the number of customers included in the approved rate design and based on an average per customer usage. Because a CAM true-up is based on average per customer
usage, it is not meant to true up customer growth or total revenues. Water conservation is a policy that can be good for the environment, facilitate sustained water capacity, and incentivize our customers to reduce usage between rate cases to lower their bills. However, persistent consumption declines also contribute to the Company having to file additional rate cases to recover resulting revenue shortfalls from those used in rate design and based on historic averages. A CAM ensures the average per customer consumption revenues collected by the Company are consistent with those used in the calculation of rates. Its use would allow customers to make decisions about water use while blunting concerns about consumption changes causing excessive earnings for Aqua or causing inadequate earnings that drive more rate cases. Additionally, it would reduce the burden for regulators as balance and fairness in rates is supported by the mechanism, rather than requiring more frequent full rate case reviews.

See Exhibit 1 for trending of average customer consumption by rate entity.

## PROPOSED CAM STRUCTURE

## Q. WHAT IS AQUA'S INTENT FOR A CAM?

A. First, the intent of Aqua's CAM proposal for its water systems (CAM) is to comply with Rule R7-40 - "Consumption Adjustment Mechanism For

Water Utilities." Second, it is Aqua's intent to have a true-up to actual average per customer consumption, which is consistent with the calculation methodology approved by the Commission in the last rate case, Docket No. W-218, Sub 526, for the Conservation Pilot.
Q. TO WHICH CUSTOMER CLASSIFICATIONS AND RATE DIVISIONS WOULD THE CAM APPLY?
A. If the WSIP is not approved, Aqua proposes to incorporate a CAM for the following customer classifications located within each of its three water rate divisions as follows:

- Aqua North Carolina Water Systems = All Monthly Metered Service Customers with the same usage charge per 1000 gallons (residential and commercial)
- Brookwood and LaGrange Service Areas = All Monthly Metered Service Customers with the same usage charge per 1000 gallons (residential and commercial)
- Fairways and Beau Rivage Water Systems = All Monthly Metered Service Customers with the same usage charge per 1000 gallons (residential and commercial)

All unmetered or flat rate customers as well as those customers in systems with approved purchase water pass-through usage rates are excluded from a CAM in accordance with Rule R7-40. Also excluded are customers on any systems acquired after the date Aqua files its
application for a general rate case in the present proceeding.
Q. HAVE YOU PREPARED AN ANALYSIS THAT INCLUDES THREE YEARS OF SAMPLE BILLING DATA IN ACCORDANCE WITH RULE R7-40?
A. Yes. An analysis that includes three-years of customer billing data is provided as:

- Haddad Exhibit 4A - ANC Water Residential
- Haddad Exhibit 4B - ANC Water Irrigation
- Haddad Exhibit 4C - ANC Water Commercial
- Haddad Exhibit 5A - Brookwood Residential
- Haddad Exhibit 5B - Brookwood Irrigation
- Haddad Exhibit 5C - Brookwood Commercial
- Haddad Exhibit 6A - Fairways Water Residential
- Haddad Exhibit 6B - Fairways Water Irrigation
- Haddad Exhibit 6C - Fairways Water Commercial
Q. DOES YOUR PROPOSAL INCLUDE A "COLLAR" TO DETERMINE A THRESHOLD TO USE BEFORE A CUSTOMER REFUND OR SURCHARGE IS INITIATED?
A. Yes. We propose that a CAM refund or surcharge only be issued if the actual consumption for the true up period is greater than or less than $1 \%$ of the average customer consumption used in rate design. To reduce the need to make small refunds or surcharges, Aqua proposes no adjustments
be made for variances within the $1 \%$ threshold. (See Haddad Exhibit 2 for the estimated revenue impact for a $1 \%$ adjustment on each of Aqua's three water rate entities.)
Q. DO YOU OFFER AN EXHIBIT WHICH ILLUSTRATES THE CAM TRUE-UP CALCULATION?
A. Yes. Haddad Exhibit 3 reflects a sample CAM true-up calculation. This sample is not intended to show all possible scenarios; it is just illustrative for the assumptions used in the sample.
Q. ARE THERE ADDITIONAL CUSTOMERS NOT SPECIFICALLY IDENTIFIED IN RULES R7-40 THAT SHOULD ALSO BE EXCLUDED FROM THE CAM?
A. Yes. Customers currently included in the Conservation rate pilot (i.e., Bayleaf, Arbor Run, Merion and Pebble Bay) have a similar, but separate, revenue true-up mechanism already in place, which would continue separately from a CAM. For this reason, these customers should be excluded from the calculations and proposed CAM adjustments as long as they continue to be part of the Conservation Pilot Program.
Q. IS THIS TESTIMONY TRUE AND ACCURATE TO THE BEST OF YOUR KNOWLEDGE, INFORMATION, AND BELIEF?
A. Yes.
Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?
A. Yes.

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HADDAD EXHIBIT 1 Average Consumption by Water Rate Entity

| CONSOLIDATED |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Calendar Year | Annual Cust Monthly Avg | $\begin{gathered} \text { Prior* } \\ \text { 3YA } \end{gathered}$ | GPM <br> Pct Ch | $\begin{gathered} 3 \mathrm{YA} \\ \mathrm{Pct} \mathrm{Ch} \end{gathered}$ | Comp $\text { to } 3 \mathrm{YA}$ |
| 2012 | 5,385 | 5,728 |  |  | 94.0\% |
| 2013 | 4,997 | 5,666 | -7.2\% | -1.1\% | 88.2\% |
| 2014 | 5,103 | 5,349 | 2.1\% | -5.6\% | 95.4\% |
| 2015 | 5,201 | 5,160 | 1.9\% | -3.5\% | 100.8\% |
| 2016 | 5,227 | 5,101 | 0.5\% | -1.1\% | 102.5\% |
| 2017 | 5,085 | 5,178 | -2.7\% | 1.5\% | 98.2\% |
| 2018 | 4,965 | 5,171 | -2.4\% | -0.1\% | 96.0\% |
| 2019 | 5,111 | 5,091 | 2.9\% | -1.5\% | 100.4\% |
| 2020 | 4,935 | 5,054 | -3.5\% | -0.7\% | 97.6\% |
| 2021 | 5,096 | 5,003 | 3.3\% | -1.0\% | 101.9\% |
| CAGR | -0.61\% | -1.49\% |  |  |  |

Each year is being compared to the 3YA for the prior three years.

## ANC WATER

| Calendar Year | Annual Cust Monthly Avg | $\begin{gathered} \text { Prior}^{\star} \\ \text { 3YA } \end{gathered}$ | $\begin{gathered} \text { GPM } \\ \text { Pct Ch } \end{gathered}$ | $\begin{gathered} 3 \mathrm{YA} \\ \text { Pct Ch } \end{gathered}$ | $\begin{array}{r} \text { Comp } \\ \text { to } 3 \mathrm{YA} \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2012 | 5,128 | 5,459 |  |  | 93.9\% |
| 2013 | 4,727 | 5,408 | -7.8\% | -0.9\% | 87.4\% |
| 2014 | 4,839 | 5,085 | 2.4\% | -6.0\% | 95.2\% |
| 2015 | 5,024 | 4,895 | 3.8\% | -3.7\% | 102.6\% |
| 2016 | 5,054 | 4,865 | 0.6\% | -0.6\% | 103.9\% |
| 2017 | 4,927 | 4,974 | -2.5\% | 2.2\% | 99.1\% |
| 2018 | 4,779 | 5,001 | -3.0\% | 0.6\% | 95.6\% |
| 2019 | 4,927 | 4,919 | 3.1\% | -1.6\% | 100.2\% |
| 2020 | 4,777 | 4,878 | -3.0\% | -0.8\% | 97.9\% |
| 2021 | 4,926 | 4,828 | 3.1\% | -1.0\% | 102.0\% |
| CAGR | -0.45\% | -1.36\% |  |  |  |

*Rates are based on previous 3-year average
Each year is being compared to the 3YA for the prior three years.

| BROOKWOOD |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Calendar <br> Year | Annual Cust Monthly Avg | Prior* 3YA | $\begin{gathered} \text { GPM } \\ \text { Pct Ch } \end{gathered}$ | $\begin{gathered} 3 \mathrm{YA} \\ \text { Pct Ch } \end{gathered}$ | Comp $\text { to } 3 Y \mathrm{~A}$ |
| 2012 | 5,791 | 6,184 |  |  | 93.6\% |
| 2013 | 5,644 | 6,057 | -2.5\% | -2.1\% | 93.2\% |
| 2014 | 5,707 | 5,827 | 1.1\% | -3.8\% | 97.9\% |
| 2015 | 5,466 | 5,715 | -4.2\% | -1.9\% | 95.7\% |
| 2016 | 5,382 | 5,606 | -1.5\% | -1.9\% | 96.0\% |
| 2017 | 5,230 | 5,518 | -2.8\% | -1.6\% | 94.8\% |
| 2018 | 5,219 | 5,360 | -0.2\% | -2.9\% | 97.4\% |
| 2019 | 4,920 | 5,277 | -5.7\% | -1.5\% | 93.2\% |
| 2020 | 4,834 | 5,122 | -1.8\% | -2.9\% | 94.4\% |
| 2021 | 4,923 | 4,990 | 1.9\% | -2.6\% | 98.7\% |
| CAGR | -1.79\% | -2.36\% |  |  |  |

*Rates are based on previous 3-year average
Each year is being compared to the 3YA for the prior three years.

## FAIRWAYS

| Calendar Year | Annual Cust Monthly Avg | Prior* 3YA | $\begin{gathered} \text { GPM } \\ \text { Pct Ch } \end{gathered}$ | $\begin{gathered} \text { 3YA } \\ \text { Pct Ch } \\ \hline \end{gathered}$ | Comp |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2012 | 7,791 | 8,125 |  |  | 95.9\% |
| 2013 | 6,749 | 8,139 | -13.4\% | 0.2\% | 82.9\% |
| 2014 | 6,941 | 7,597 | 2.8\% | -6.7\% | 91.4\% |
| 2015 | 6,932 | 7,151 | -0.1\% | -5.9\% | 96.9\% |
| 2016 | 7,234 | 6,876 | 4.4\% | -3.8\% | 105.2\% |
| 2017 | 6,863 | 7,039 | -5.1\% | 2.4\% | 97.5\% |
| 2018 | 6,700 | 7,008 | -2.4\% | -0.4\% | 95.6\% |
| 2019 | 8,080 | 6,923 | 20.6\% | -1.2\% | 116.7\% |
| 2020 | 7,274 | 7,233 | -10.0\% | 4.5\% | 100.6\% |
| 2021 | 7,758 | 7,359 | 6.6\% | 1.7\% | 105.4\% |
| CAGR | -0.05\% | -1.09\% |  |  |  |

*Rates are based on previous 3-year average
Each year is being compared to the 3YA for the prior three years.





Approximate '21 Revenue
Approximate Usage Revenue \% Approximate Usage revenue \$ 1\% Variance

|  | ANC Water | BW Water | FW Water |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\$ 40,200,000$ | $\$ 6,600,000$ | $\$ 2,200,000$ |  |
|  | $60 \%$ | $60 \%$ | $60 \%$ |  |
| $\$$ | $24,120,000$ | $\$$ | $3,960,000$ | $\$$ |
| $\$$ | 241,200 | $\$$ | 39,600 | $\$$ |

\$2,200,000
60\%
$4,120,000$ \$ 3,960,000 \$ 1,320,000

BW Water
$\$ 6,600,000$
$60 \%$
$3,960,000$
39,600


W-218 SUB 573 HADDAD CAM EXHIBIT 3 SAMPLE CAM CALCULATION

[7] line 17 / line $9 \times 1,000$
[9] line $9 / 1,000 \times$ line 18
10] line $9 / 1,000 \times$ line 13
12] line 23 + line $24+$ line 25

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Haddad Exhibit 4A


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Jun 302022






Brookwood Water - Commercial





Jun 302022


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Haddad Exhibit 6C
Three-Year Billing Data Analysis


Fairways Water - Commercial



