

STATE OF NEW HAMPSHIRE

BEFORE THE

PUBLIC UTILITIES COMMISSION

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.

DOCKET NO. DW 20-184

DIRECT TESTIMONY OF

JOHN F. GUASTELLA

GUASTELLA ASSOCIATES, LLC.

ON BEHALF OF

AQUARION WATER COMPANY OF NEW HAMPSHIRE

December 18, 2020

1 **Q. Please state your name and business address.**

2 A. John F. Guastella, Guastella Associates, LLC, 775 N. Highway A1A, Suite B103, Jupiter,
3 Florida 33477.

4 **Q. Please describe Guastella Associates, LLC.**

5 A. Guastella Associates provides utility management, valuation and rate consulting services
6 on behalf of both regulated and unregulated utilities.

7 **Q. What has been your experience in utility regulation and rate setting?**

8 A. My entire professional career has been in the field of utility regulation and rate setting;
9 first as a regulator and then as a consultant.

10 **Q. Is Appendix A attached to this testimony a summary statement of your**
11 **qualifications and experience?**

12 A. Yes.

13 **Q. What is the nature of your involvement in this proceeding?**

14 A. Guastella Associates, Inc. has been retained by the Aquarion Water Company of New
15 Hampshire (“Aquarion” or “Company”) to conduct a cost of service and rate design
16 study, to be used in conjunction with its application to the New Hampshire Public
17 Utilities Commission for a rate increase.

18 **Q. What is the cost basis for your study?**

19 A. My study is based on the pro forma revenue requirement that the Company has used to
20 support its rate increase.

1 **Q. Would you briefly describe your scope of work?**

2 A. Yes. All source data was obtained from the Company. We examined financial and
3 operating data, including detailed asset, revenue and expense schedules as well as
4 production data. We examined billing data in order to develop a billing analysis. We had
5 numerous telephone discussions with Company representatives in order to compile data
6 and confirm that no significant changes in the operation of the utility have occurred that
7 would significantly impact the study.

8 **Q. Have you prepared an exhibit containing the results of your cost of service study?**

9 A. Yes. The cost of service study is set forth in Exhibit JFG-1.

10 **Q. What method did you use to perform the cost allocation study?**

11 A. The cost allocation study is based on the Base-Extra Capacity method. This method,
12 which is described and illustrated in the American Water Works Association (“AWWA”)
13 Water Rates Manual (M-1), identifies and classifies the various cost components which
14 comprise the revenue requirement, functionalizes those cost components according to the
15 general design criteria and operation of a water utility, and allocates the functionalized
16 costs to the customer classes. It also incorporates a fire service allocation within the
17 format of the study.

18 **Q. How did you classify and functionalize costs?**

19 A. Aquarion’s investment in utility plant in service was analyzed according to the primary
20 plant accounts of the prescribed Uniform System of Accounts, which classify different
21 components of the utility system. Those components are then functionalized according to
22 the design and use of the system in meeting the demands of the customers. The functions
23 used in the base-extra-capacity method are: Base, Extra Capacity Maximum Day, Extra

1 Capacity Peak Hour and Customer (Meters/Services and Billing and Accounting) costs.
2 Base costs are those that tend to vary according to average use.
3 Extra Capacity costs, Maximum Day and Peak Hour, are costs that tend to vary according
4 to the maximum day or peak hour demands on the system.
5 Customer costs for such items as billing, accounting and collecting (also referred
6 to as commercial costs) do not vary with either average or maximum demands but instead
7 according to the number of bills. Similarly, customer costs for meters and services tend
8 to vary according to the equivalent number of such units. After costs have been classified
9 and functionalized, they are allocated to the various customer classes according to the
10 relative average, maximum day and peak hour demands of each class, and the relative
11 bills and equivalent meters of each class.

12 **Q. Is the base-extra capacity cost allocation method you described set forth in**
13 **Exhibit JFG-1?**

14 A. Yes.

15 **Q. Would you please describe Schedule 1?**

16 A. Schedule 1 summarizes the allocation of the revenue requirement by functional
17 classification to the customer classes. In other words, it quantifies the portion of the
18 revenue requirement that should be recovered through rates for service from each class of
19 customer. As shown, the customer classes include Residential, Commercial, Industrial,
20 Public Authority, Seasonal and Fire Service.

21 **Q. Is Schedule 1 used as the cost basis to develop the rate design?**

22 A. Yes. Schedule 1 shows the revenues to be generated by each class of customer through
23 rates. Subsequent schedules show the specific calculation of rates.

1 **Q. Would you please explain how you “functionalized” the costs that are**
2 **reflected in Schedule 1?**

3 A. Yes. The allocation of cost components to the functions of Base, Extra Capacity
4 Maximum Day, Extra Capacity Peak Hour, Customer and Hydrants, is accomplished as
5 shown on Schedules 2 through 9.

6 **Q. Before proceeding with an explanation of your schedules in numerical order, how**
7 **did you establish the total system demands used for the cost allocation?**

8 A. As a first step, analyses were made of the total system water demands. Based on these
9 analyses, system demand ratios of 1.70 and 2.70 were established from maximum day
10 and peak hour demands in relation to the average day demand, respectively. Schedule 9
11 sets forth the average day, maximum day and peak hour system demands in million
12 gallons per day and the ratio of each to the average day. Also shown on Schedule 9 is the
13 fire demand, which has been established at 4,500 gallons per minute (gpm). The 4,500
14 gpm fire demand equates to a rate of flow of 6.48 million gallons per day (mgd). The fire
15 demand is based on a review of guidelines established by the Insurance Service
16 Organization (and its predecessor, the National Board of Fire Underwriters), and
17 judgment as to the size and characteristics of the service area. It is noted that while a fire
18 demand that is even higher appears warranted, we believe it is appropriate to use 4,500
19 gpm in order to mitigate the impact of fire demands for a relatively small water system.

20 **Q. Would you please explain Schedule 2?**

21 A. Schedule 2 summarizes the allocation of the various revenue requirement components to
22 functional classifications and is supported by Schedules 3 through 8. The numerical
23 “Code” next to each revenue requirement component references explanations of the
24 allocations, which are found on Schedule 8, pages 1 through 4. Schedule 8, page 1,
25 provides a summary listing of each allocation code and percentage. Pages 2 through 4 of
26 this schedule provide explanations and, where warranted, calculations of the code.

1 Schedule 3 sets forth the allocation of the pro forma rate base, by component. The
2 results were used to allocate utility operating income and income taxes on Schedule 2.
3 Schedule 4 sets forth the allocation of utility plant, the results of which were carried
4 forward on Schedule 3. The utility plant allocation was also used to allocate property
5 taxes on Schedule 2. The accumulated depreciation allocation is shown on Schedule 5,
6 and the results carried forward on Schedule 3, and were also used to allocate deferred
7 taxes on that schedule. Schedule 6 sets forth the allocation of pro forma operation and
8 maintenance expenses, the results of which were carried forward to Schedule 2 and
9 were also used to allocate cash working capital on Schedule 3. Pro forma annual
10 depreciation expense is allocated on Schedule 7, and the results carried forward to
11 Schedule 2.

12 **Q. Would you please describe Schedule 10, which summarizes the customer class**
13 **allocation factors?**

14 A. Yes. Schedule 10 sets forth estimated non-coincidental water demands by customer
15 classes. Customer demands were determined by using typical customer demand ratios
16 and by taking into consideration the volume of water use by each customer class, the
17 overall system demands, other consumption and demand data and the results of other
18 studies, and judgment. Also included on Schedule 10, are the average day, maximum day
19 demands and the demand for fire service which total annual use is estimated 1% of total
20 system average day. The maximum day fire demand is based on a coincidental fire
21 demand of 4,500 gpm for 4 hours duration, which equals 1.08 mg. The peak hour fire
22 demand is the 4,500 gpm or a rate of 3.24 mgd on the basis of a 12-hour day in order to
23 recognize that for smaller systems the fire demands are disproportionately higher than the
24 general service demands. Accordingly, without such an adjustment, the fire service rates
25 would be higher than that of a "typical" water rate structure. This adjustment is made in
26 order to temper the impact on the fire service rates. The demands shown on of Schedule
27 10 are non-coincidental, indicative of the maximum day and peak hour demands that
28 could be anticipated without diversity of demand among customer classes. The billing
29 information by customer group shown on Schedule 10 is detailed on Schedule 11. The

1 allocation percentages for each customer class shown on Schedule 10 are used to allocate
2 the dollar amount of functionalized costs from Schedule 2 (Base, Maximum Day, Peak
3 Hour, Customer-Meter/Service and Customer-Commercial) to the customer classes, as
4 reflected on Schedule 1.

5 **Q. Having allocated the revenue requirements to customer classes, how did you**
6 **then calculate the proposed rates needed to yield the allocated costs?**

7 A. With respect to general metered rates, the first step was to establish the “Customer”
8 charges, by size meter, as shown at the top half of Schedule 12. The customer charges
9 are designed to recover the costs allocated to the “Customer” function. The charge
10 for a 5/8-inch meter is calculated by dividing the number of equivalent 5/8-inch meters
11 served into the total cost allocation to the “Meters and Services and Billing and
12 Accounting” function. The customer charges for other meter sizes are based on the meter
13 capacity relationships to the charge for a 5/8-inch meter, similar to the existing
14 relationships among the various size meters in order to maintain the customer charge
15 structure. For designing the Customer Charge Rates, the ERC’s are based on capacity
16 ratios.

17 **Q. How did you calculate the proposed metered rates for each customer class?**

18 A. First, the calculated customer charge revenues to be generated from each customer class
19 were subtracted from the total costs allocated to each customer class in order to establish
20 the required usage revenues. We then established conservation rates using two tier
21 blocks for both the year-round and seasonal single-family residential customers. With
22 respect to the multi-family customers that are year-round and seasonal, it was judged that
23 the diversity and nature of their demands reflect load or demand factors that are better
24 than the single-family customers. Therefore, the conservation, two tier rates were only
25 applicable to single-family residential customers. The consumption applicable to the
26 first block rate is estimated on the basis of non-weather sensitive water use, primarily
27 indoor use during winter months, or the first six (6) hundred cubic feet (ccf) of monthly

1 water use. The second block rate is applicable to all water consumption in excess of 6
2 ccf, with a rate that is 25% higher than the first block rate in order to send a price signal
3 that encourages conservation. In anticipation that this conservation effort will actually
4 result in some reduction in water use, the consumption levels in the second blocks were
5 adjusted downward by a modest one percentage point for each ten percentage point
6 increase in the first block rate. Specifically, the consumption was reduced by 2.5% (25%
7 divided by 10). This is a modest adjustment for price elasticity in terms of magnitude, as
8 well as there is no downward adjustment for price elasticity related to the overall
9 percentage increase in revenue requirement.

10 The multi-family single-block usage rates were established at a level that is 10% greater
11 than the single-family first block rate, also to reflect a price signal, but without a
12 reduction in consumption.

13 All non-residential rates were established by dividing the revenue requirement allocated
14 to usage by the total usage of each class.

15 **Q. How did you calculate fire service rates?**

16 A. The cost allocation to public fire service includes the cost of public fire hydrants
17 plus the capacity cost for the potential fire flow demands throughout the water system.
18 Similarly, the cost allocation to private fire service includes the cost of service
19 connections maintained by the Company plus the capacity costs to meet the potential fire
20 flow demands of the private fire service connections. The capacity costs allocated to fire
21 service include a portion of the capital costs related to the water system facilities that
22 meet the various water demands of all customers, as well as a portion of operating
23 expenses. The allocation of capacity costs is based on the potential water demands of
24 both public and private fire flow requirements in relation to the total demands on the
25 water system. Schedule 13 shows the allocation of capacity costs between private and
26 public fire service. This schedule also summarizes the public fire service costs
27 (capacity, hydrants and billing) and the private fire service costs (capacity, services and
28 billing). The public hydrant charge is calculated by dividing the total costs allocated to
29 public fire service by the number of public hydrants. The costs assigned to fire service

1 are taken from Schedule 1. The capacity costs allocated to total fire service were
2 assigned to public and private fire service on the basis of the relative fire flow capacities
3 of the various sizes of private fire service connections and public hydrants. The billing
4 costs are allocated to each size connection according to the number of bills. The sum of
5 all three cost components is the basis for determining the rates for public and private fire
6 service.
7 Schedule 14, sets forth the rates for public hydrants and private fire service connections.

8 **Q. Have you prepared schedules showing a comparison of present and proposed rates**
9 **and revenues?**

10 A. Yes. Schedules 15 and 16 contain billing analyses under the proposed and private rates
11 and revenues for general metered customers, respectively. Schedule 17 shows a
12 comparison of present and proposed revenues for all customer classes, along with the
13 percentage increases. Schedule 18 contains a range of typical bill comparisons under
14 present and proposed rates, by customer class.

15 **Q. Are the variations in the percentage increases for the various customer classes**
16 **reasonable, in your opinion?**

17 A. Yes. The proposed rates reflect the cost of service results, which is generally considered
18 the starting point of rate design, and also Company policy with respect to conservation.

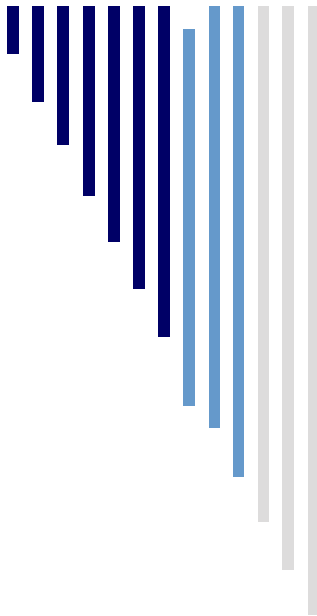
19 **Q. Does that conclude your testimony at this time?**

20 A. Yes.

Appendix A

Guastella Associates, LLC

Qualifications & Experience



**Rate Setting
Valuation
Management
Consulting**

...SERVING REGULATED AND UNREGULATED WATER AND WASTEWATER UTILITIES SINCE 1978

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INTRODUCTION
GUASTELLA ASSOCIATES, LLC

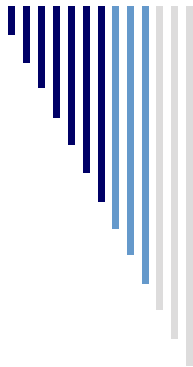
Guastella Associates, LLC (“formerly John F. Guastella Associates, Inc.”) is a consulting firm that specializes in providing utility rate setting, valuation and management services for public and privately-owned water and wastewater utilities.

John F. Guastella established Guastella Associates in 1978. Previously, Mr. Guastella was Director of the Water Division of the New York Public Service Commission. The Water Division provided the New York Commission with technical assistance in regulating the rates and service provided by approximately 450 privately-owned utilities. During the period from 1987 through 1991, Mr. Guastella also managed a 5,500 customer water utility in New York State. In 1989, Guastella Associates acquired the rates and valuation section of Coffin & Richardson, Inc., a general consulting firm that also provided a full range of services to water and wastewater utilities. Since 2009, Guastella Associates has served as the general manager of Daufuskie Island Utility Company, Inc. (“DIUC”), responsible for its day-to-day operations, billing, bookkeeping, financing, capital improvement projects and regulatory relations. DIUC provides water and wastewater service to some 550 connected customers and 600 availability customers located on Daufuskie Island, South Carolina. Guastella Associates also manages the Kiawah River Utility Company which provides wastewater services to a new development in South Carolina.

Key staff members have many years of combined experience in virtually every aspect of utility rate setting and valuation. The technical expertise of key staff, combined with their former employment by real estate and utility companies, a regulatory agency, and the management of water utilities, provides a total perspective towards addressing the rates and valuation needs of today’s water and wastewater utilities.

Guastella Associates has assisted the largest privately-owned utilities with respect to the most challenging issues, performing complex studies and providing expert testimony in administrative hearings as well as court proceedings. In addition, our client base has included hundreds of small water and wastewater utilities - - obtaining rate increases that turn operating losses into profits, posturing them for financing, correcting record keeping errors and, for some, negotiating their sale at multiples of their original cost net investment rate base. Some of our most successful assignments have been to help establish new developer-related water and wastewater utilities, applying the correct principles at the outset in order to develop fully compensatory initial rates, record keeping procedures and asset management, so they are structured to become self-sustaining utilities that will achieve the highest possible profit and ultimate market value.

Our wide-range of experience and expertise has enabled us to successfully address the special needs of large investor-owned utilities in rate cases and condemnation proceedings.



OUTLINE OF SERVICES GUASTELLA ASSOCIATES, LLC

Guastella Associates, LLC ("formerly John F. Guastella Associates, Inc.") is a consulting firm specializing in utility management, valuation, appraisals and rate determinations. Guastella Associates has been providing professional services to regulated and unregulated utilities since 1978.

Specific areas of expertise includes:

I. RATE ANALYSIS

A. Revenue Requirements

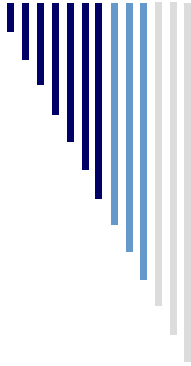
1. Examination of books and records -- revenues, expenses and capital investment.
2. Determination of the cost of providing service (revenue requirement) -- normalize historical data, establish known changes and perform projections.

B. Rate Design

1. Perform cost allocation studies to establish cost of service for residential, commercial, industrial, wholesale and fire protection customers, and for other special users.
2. Develop rate structures -- combine billing analyses and cost allocations to form usage rates, flat rates, minimum service and facilities charges, and such other special charges as connection fees, availability rates, etc.

C. Reports

1. Investor-owned utilities -- prepare complete rate filings for submission to regulatory agencies; prepare testimony, exhibits, and assist in all aspects of adjudication process.
2. Municipal utilities -- prepare detailed rate reports in support of rate increases for use by municipal officials and presentation at municipal hearings.



OUTLINE OF SERVICES

GUASTELLA ASSOCIATES, LLC

II. VALUATIONS

A. Appraisals

1. Eminent domain condemnation proceedings, negotiations for sale of utilities, damage claims for insurance and ad valorem tax and management purposes.
2. Determinations of original cost, replacement cost, reproduction cost and market value, including going concern value.
3. Calculation of the present value of cash flow under the income approach to market value determinations.
4. Analyses of market data under the sales comparison approach.

B. Depreciation

1. Actuarial studies using retirement rate or simulated plant balances methods to determine average service lives of physical property, theoretical depreciation reserve requirements and depreciation rates.
2. Establish affordable depreciation rates on the basis of comparative analyses of similar property of other utilities and practices of regulatory agencies and association

C. Feasibility Studies

1. Utility acquisitions by investors and municipalities.
2. Economic studies to establish extension of service costs and policy -- inside and outside service area.
3. Main extension agreements, guaranteed revenue contracts, refund provisions.

D. Financial Planning

1. Establish financing requirements for capital improvements.
2. Determine revenue and rate needs for various combinations of debt and equity financing.
3. Assist certain utilities in securing financing.
4. Establish financing needs, initial rates and regulatory approval of proposed new utilities.

III. MANAGEMENT

A. Operations

1. Provides general management of water and wastewater utilities.
2. Assist in day-to-day decisions as to utility accounting and related impact on rates.
3. Solve problems as to record keeping in accordance with regulatory requirements and prescribed systems of accounts.
4. Establish general policy and tariff provisions for customer service, billing, collecting, meter testing, complaint handling, and customer and regulatory relations.

B. Administrative

1. Coordinate activities with regulatory agencies to assure compliance with rules, regulations and orders.
2. Negotiations for purchase or sale of utility property and special contracts.

C. Training

1. On-the-job training for employees while working on various projects.
2. Special educational seminars on all aspects of utility rate settings, financing, valuation and rules.

PROFESSIONAL QUALIFICATIONS AND EXPERIENCE
of
JOHN F. GUASTELLA

B.S., Mechanical Engineering, Stevens Institute of Technology, 1962

Member:

American Water Works Association, Lifetime Member
National Association of Water Companies
New England Water Works Association, Lifetime Member

Committees:

AWWA, Water Rates Committee (Water Rates Manual M-1, 1983 Edition)
National Association of Regulatory Utility Commissioners (NARUC) and NAWC, Joint-Committee on Rate Design
NAWC, Rates and Revenues Committee
NAWC, Small Water Company Committee

Mr. Guastella is President of Guastella Associates, LLC ("formerly John F. Guastella Associates, Inc.") which provides management, valuation and rate consulting services for municipal and investor-owned utilities, as well as regulatory agencies. His clients include utilities in the states of Alaska, Arizona, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Missouri, Michigan, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Carolina, Texas, and Virginia. He has provided consulting services that include all aspects of utility regulation and rate setting, encompassing revenue requirements, revenues, operation and maintenance expenses, depreciation, taxes, return on investment, cost allocation and rate design. He has performed depreciation studies for the establishment of average service lives and depreciation rates of utility property. He has performed appraisals of utility companies for management purposes and in connection with condemnation proceedings. He has also negotiated the sale of utility companies. He directs the general management of a water and wastewater utility in South Carolina.

Mr. Guastella served for more than four years as President of Country Knolls Water Works, Inc., a water utility that served some 5,500 customers in Saratoga County, New York. He also served as a member of the Board of Directors of the National Association of Water Companies.

Mr. Guastella has qualified and testified as an expert witness before regulatory agencies and municipal jurisdictions in the states of Alaska, Arizona, California, Connecticut, Delaware, Florida, Georgia, Illinois, Kentucky, Indiana, Maryland, Massachusetts, Missouri, Montana, Nevada, New Hampshire, New Mexico, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Carolina, Texas and Virginia.

Prior to establishing his own firm, Mr. Guastella was employed by the New York State Public Service Commission for sixteen years. For two years he was involved in the regulation of electric and gas utilities, with the remaining years devoted to the regulation of water utilities. In 1970, he was promoted to Chief of Rates and Finance in the Commission's Water Division. In 1972, he was made Assistant Director of the Water Division. In 1974, he was appointed by Alfred E. Kahn, then Chairman of the Commission, to be Director of the Water Division, a position he held until he resigned from the Commission in August 1978.

At the Commission, his duties included the performance and supervision of engineering and economic studies concerning rates and service of many public utilities. As Director of the Water Division, he was responsible for the regulation of more than 450 water companies in New York State and headed a professional staff of 32 engineers and three technicians. A primary duty was to attend Commission sessions and advise the Commission during its decision making process. In the course of that process, an average of about fifty applications per year would be reviewed and analyzed. The applications included testimony, exhibits and briefs

involving all aspects of utility valuation and rate setting. He also made legislative proposals and participated in drafting Bills that were enacted into law: one expanded the N.Y. Public Service Commission's jurisdiction over small water companies and another dealt specifically with rate regulation and financing of developer-related water systems.

In addition to his employment and client experience, Mr. Guastella served as Vice-Chairman of the Staff-Committee on Water of the National Association of Regulatory Utility Commissioners (NARUC). This activity included the preparation of the "Model Record-Keeping Manual for Small Water Companies," which was published by the NARUC. This manual provides detailed instruction on the kinds of operation and accounting records that should be kept by small water utilities, and on how to use those records.

Each year since 1974 he has prepared study material, assisted in program coordination and served as an instructor at the Eastern Annual Seminar on Water Rate Regulation sponsored over the years by the NARUC in conjunction with the University of South Florida, Florida Atlantic University, the University of Utah, Florida State University, the University of Florida and currently Michigan State University. In 1980 he was instrumental in the establishment of the Western NARUC Rate Seminar and has annually served as an instructor since that time. This course is recognized as one of the best available for teaching rate-setting principles and methodology. More than 8,000 students have attended this course, including regulatory staff, utility personnel and members of accounting, engineering, legal and consulting firms throughout the country.

Mr. Guastella served as an instructor and panelist in a seminar on water and wastewater regulation conducted by the Independent Water and Sewer Companies of Texas. In 1998, he prepared and conducted a seminar on basic rate regulation on behalf of the New England Chapter of the National Association of Water Companies. In 2000 and 2001, Mr. Guastella developed and conducted a special seminar for developer related water and wastewater utilities in conjunction with Florida State University, and again in 2003 in conjunction with the University of Florida. It provided essential training for the financial structuring of small water and wastewater utilities, rate setting, financing and the establishment of their market value in the event of a negotiated sale or condemnation. In 2004, he prepared and conducted a special workshop seminar on behalf of the Office of Regulatory Staff of South Carolina, covering rate setting, valuation and general regulation of water and wastewater utilities. In 2006, he participated in an expert workshop on full cost pricing conducted by the U. S. Environmental Protection Agency in coordination with the Institute of Public Utilities, Michigan State University. In 2006 and again in 2013, he prepared and conducted a special seminar on rate setting and valuation on behalf of the New York Chapter of the NAWC. In 2007 and again in 2015, he prepared and conducted a special seminar on rate setting and valuation on behalf of the New England Chapter of NAWC.

Mr. Guastella has made presentations on a wide variety of rate, valuation and regulatory issues at meetings of the National Association of Regulatory Utility Commissioners, the American Water Works Association, the New England Water Works Association, the National Association of Water Companies, the New England Conference of Public Utilities Commissioners, the Florida, New England, New Jersey and New York Chapters of NAWC, the Mid-America Regulatory Conference, the Southeastern Association of Regulatory Utility Commissioners, the Pennsylvania Environmental Conference, the Public Utility Law Section of the New Jersey Bar Association, the U.S. Environmental Protection Agency Expert Workshop, the NAWC Water Utility Executive Council, and the National Drinking Water Symposium.

John F. Guastella
List of Proceedings in which
Expert Testimony was Presented

Year	Client	State	Regulatory Docket/Case Number
1966	Sunhill Water Corporation	New York	23968
1967	Amagansett Water Company	New York	24210
1967	Worley Homes, Inc.	New York	24466
1968	Amagansett Water Company	New York	24718
1968	Amagansett Water Company	New York	24883
1968	Sunhill Water Corporation	New York	23968
1968	Worley Homes, Inc.	New York	Supreme Court
1969	Amagansett Water Supply	New York	24883
1969	Citizens Water Supply Co.	New York	25049
1969	Worley Homes, Inc.	New York	24466/24992
1970	Brooklyn Union Gas Company	New York	25448
1970	Consolidated Edison of New York	New York	25185
1971	Hudson Valley Water Companies	New York	26093
1971	Jamaica Water Supply Company	New York	26094
1971	Port Chester Water Works, Inc.	New York	25797
1971	U & I Corp. - Merrick District	New York	26143
1971	Wanakah Water Company	New York	25873
1972	Spring Valley Water Company	New York	26226
1972	U & I Corp. - Woodhaven District	New York	26232
1973	Citizens Water Supply Company	New York	26366
1978	Rhode Island DPU&C (Bristol County)	Rhode Island	1367A
1979	Candlewick Lake Utilities Co.	Illinois	76-0218
1979	Candlewick Lake Utilities Co.	Illinois	76-0347
1979	Candlewick Lake Utilities Co.	Illinois	78-0151
1979	Jacksonville Suburban Utilities	Florida	770316-WS
1979	New York Water Service Corporation	New York	27594
1979	Salem Hills Sewerage Disposal Corp. v. V. of Voorheesville	New York	Supreme Court

John F. Guastella
List of Proceedings in which
Expert Testimony was Presented

Year	Client	State	Regulatory Docket/Case Number
1979	Seabrook Water Corporation	New Jersey	7910-846
1979	Southern Utilities Corporation	Florida	770317-WS
1979	Township of South Brunswick	New Jersey	Municipal
1979	Westchester Joint Water Works	New York	Municipal
1979	Woodhaven Utilities Corporation	Illinois	77-0109
1980	Crestwood Village Sewer Company	New Jersey	BPU 802-78
1980	Crestwood Village Water Company	New Jersey	BPU 802-77
1980	Gateway Water Supply Corporation	Texas	Municipal
1980	GWW-Central Florida District	Florida	800004-WS
1980	Jamaica Water Supply Company	New York	27587
1980	Rhode Island DPU&C (Newport Water)	Rhode Island	1480
1981	Briarcliff Utilities, Inc.	Texas	3620
1981	Candlewick Lake Utilities Co.	Illinois	81-0011
1981	Caroline Water Company, Inc.	Virginia	810065
1981	GDU, Inc. - Northport	Florida	Municipal
1981	GDU, Inc. - Port Charlotte	Florida	Municipal
1981	GDU, Inc. - Port Malabar	Florida	80-2192
1981	Hobe Sound Water Company	Florida	8000776
1981	Lake Buckhorn Utilities, Inc.	Ohio	80-999
1981	Lake Kiowa Utilities, Inc.	Texas	3621
1981	Lakengren Utilities, Inc.	Ohio	80-1001
1981	Lorelei Utilities, Inc.	Ohio	80-1000
1981	New York Water Service Corporation	New York	28042
1981	Rhode Island DPU&C (Newport Water)	Rhode Island	1581
1981	Shawnee Hills Utility Company	Ohio	80-1002
1981	Smithville Water Company, Inc.	New Jersey	808-541
1981	Spring Valley Water Company, Inc.	New York	27936
1981	Spring Valley Water Company, Inc.	New York	27936
1981	Sunhill Water Corporation	New York	27903

John F. Guastella
List of Proceedings in which
Expert Testimony was Presented

Year	Client	State	Regulatory Docket/Case Number
1981	Swan Lake Water Corporation	New York	27904
1982	Chesterfield Commons Sewer Company	New Jersey	822-84
1982	Chesterfield Commons Water Company	New Jersey	822-83
1982	Crescent Waste Treatment Corp.	New York	Municipal
1982	Crestwood Village Sewer Company	New Jersey	821-33
1982	Crestwood Village Water Company	New Jersey	821-38
1982	Salem Hills Sewerage Disposal Corp.	New York	Municipal
1982	Township of South Brunswick	New Jersey	Municipal
1982	Woodhaven Utilities Corporation	Illinois	82-0167
1983	Country Knolls Water Works, Inc.	New York	28194
1983	Heritage Hills Water Works Corp.	New York	28453
1984	Crestwood Village Sewer Company	New Jersey	8310-861
1984	Crestwood Village Water Company	New Jersey	8310-860
1984	Environmental Disposal Corp.	New Jersey	816-552
1984	GDU, Inc. - Port St. Lucie	Florida	830421
1984	Heritage Village Water (water/sewer)	Connecticut	84-08-03
1984	Hurley Water Company, Inc.	New York	28820
1984	New York Water Service Corporation	New York	28901
1985	Deltona Utilities (water/sewer)	Florida	830281
1985	J. Filiberto Sanitation, Inc.	New Jersey	8411-1213
1985	Sterling Forest Pollution Control	New York	Municipal
1985	Water Works Enterprise, Grand Forks	North Dakota	Municipal
1986	GDU, Inc. - Port Charlotte	Florida	Municipal
1986	GDU, Inc. - Sebastian Highlands	Florida	Municipal
1986	Kings Grant Water/Sewer Companies (settled)	New Jersey	WR8508-868
1986	Mt. Ebo Sewage Works, Inc.	New York	Municipal
1986	Sterling Forest Pollution Control	New York	Municipal
1987	Country Knolls Water Works, Inc.	New York	29443
1987	Crestwood Village Sewer Co. (settled)	New Jersey	WR8701-38

John F. Guastella
List of Proceedings in which
Expert Testimony was Presented

Year	Client	State	Regulatory Docket/Case Number
1987	Deltona Utilities – Marco Island	Florida	85151-WS
1987	Deltona Utilities, Inc. - Citrus Springs (settled)	Florida	870092-WS
1987	First Brewster Water Corp. v. Town of Southeast (settled)	New York	Supreme Court
1987	GDU, Inc. - Silver Springs Shores	Florida	870239-WS
1987	Ocean County Landfill Corporation	New Jersey	SR-8703117
1987	Palm Coast Utility Corporation	Florida	870166-WS
1987	Sanlando Utilities Corp. (settled)	Florida	860683-WS
1987	Township of South Brunswick	New Jersey	Municipal
1987	Woodhaven Utilities Corp. (settled)	Illinois	87-0047
1988	Crescent Estates Water Co., Inc.	New York	88-W-035
1988	Elizabethtown Water Co.	New Jersey	OAL PUC3464-88
1988	Heritage Village Water Company	Connecticut	87-10-02
1988	Instant Disposal Service, Inc.	New Jersey	SR-87080864
1988	J. Filiberto Sanitation v. Morris County Transfer Station	New Jersey	01487-88
1988	Ohio Water Service Co.	Ohio	86-1887-WW-CO1
1988	St. Augustine Shores Utilities	Florida	870980-WS
1989	Elizabethtown Water Co.	New Jersey	BPU WR89020132J
1989	GDU (FPSC generic proceeding as to rate setting procedures)	Florida	880883-WS
1989	Gordon's Corner Water Co.	New Jersey	OAL PUC479-89
1989	Heritage Hills Sewage Works	Connecticut	Municipal
1989	Heritage Village Water Company	Connecticut	87-10-02
1989	Palm Coast Utility Corporation	Florida	890277-WS
1989	Southbridge Water Supply Co.	Massachusetts	DPU 89-25
1989	Sterling Forest Water Co.	New York	PSC 88-W-263
1990	American Utilities, Inc. - United States Bankruptcy Court	New Jersey	85-00316
1990	City of Carson City	Nevada	Municipal
1990	Country Knolls Water Works, Inc.	New York	90-W-0458
1990	Elizabethtown Water Company	New Jersey	WR900050497J

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Year	Client	State	Regulatory Docket/Case Number
1990	Kent County Water Authority	Rhode Island	1952
1990	Palm Coast Utility Corporation	Florida	871395-WS
1990	Southern States Utilities, Inc.	Florida	Workshop
1990	Trenton Water Works	New Jersey	WR90020077J
1990	Waste Management of New Jersey	New Jersey	SE 87070552
1990	Waste Management of New Jersey	New Jersey	SE 87070566
1991	City of Grand Forks	North Dakota	Municipal
1991	Gordon's Corner Water Co.	New Jersey	OAL PUC8329-90
1991	Southern States Utilities, Inc.	Florida	900329-WS
1992	Elizabethtown Water Co.	New Jersey	WR 91081293J
1992	General Development Utilities, Inc. - Port Malabar Division	Florida	911030-WS
1992	General Development Utilities, Inc. - West Coast Division	Florida	911067-WS
1992	Heritage Hills Water Works, Inc.	New York	92-2-0576
1993	General Development Utilities, Inc. - Port LaBelle Division	Florida	911737-WS
1993	General Development Utilities, Inc. - Silver Springs Shores	Florida	911733-WS
1993	General Waterworks of Pennsylvania - Dauphin Cons. Water Supply	Pennsylvania	R-00932604
1993	Kent County Water Authority	Rhode Island	2098
1993	Southern States Utilities - FPSC Rulemaking	Florida	911082-WS
1993	Southern States Utilities - Marco Island	Florida	920655-WS
1994	Capital City Water Company	Missouri	WR-94-297
1994	Capital City Water Company	Missouri	WR-94-297
1994	Elizabethtown Water Company	New Jersey	WR94080346
1994	Elizabethtown Water Company	New Jersey	WR94080346
1994	Environmental Disposal Corp.	New Jersey	WR94070319
1994	General Development Utilities - Port Charlotte	Florida	940000-WS
1994	General Waterworks of Pennsylvania	Pennsylvania	R-00943152

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Year	Client	State	Regulatory Docket/Case Number
1994	Hoosier Water Company - Mooresville Division	Indiana	39839
1994	Hoosier Water Company - Warsaw Division	Indiana	39838
1994	Hoosier Water Company - Winchester Division	Indiana	39840
1994	West Lafayette Water Company	Indiana	39841
1994	Wilmington Suburban Water Corporation	Delaware	94-149 (stld)
1995	Butte Water Company	Montana	Cause 90-C-90
1995	Heritage Hills Sewage Works Corporation	New York	Municipal
1996	Consumers Illinois Water Company	Illinois	95-0342
1996	Elizabethtown Water Company	New Jersey	WR95110557
1996	Palm Coast Utility Corporation	Florida	951056-WS
1996	PenPac, Inc.	New Jersey	OAL-00788-93N
1996	Southern States Utilities, Marco Island	Florida	950495-WS
1997	Crestwood Village Water Company	New Jersey	BPU 96100739
1997	Indiana American Water Co., Inc.	Indiana	IURC 40703
1997	Missouri-American Water Company	Missouri	WR-97-237
1997	South County Water Corp	New York	97-W-0667
1997	United Water Florida	Florida	960451-WS
1998	Consumer Illinois Water Company	Illinois	98-0632
1998	Consumers Illinois Water Company	Illinois	97-0351
1998	Heritage Hills Water Company	New York	97-W-1561
1998	Missouri-American Wastewater Company	Missouri	SR-97-238
1999	Consumers Illinois Water Company	Illinois	99-0288
1999	Environmental Disposal Corp.	New Jersey	WR99040249
1999	Indiana American Water Co., Inc.	Indiana	IURC 41320
2000	South Haven Sewer Works, Inc.	Indiana	Cause: 41410
2000	Utilities Inc. of Maryland	Maryland	CAL 97-17811
2001	Artesian Water Company	Delaware	00-649
2001	Citizens Utilities Company	Illinois	01-0001
2001	Elizabethtown Water Company	New Jersey	WR-0104205

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Year	Client	State	Regulatory Docket/Case Number
2001	Kiawah Island Utility, Inc.	South Carolina	2001-164-W/S
2001	Placid Lakes Water Company	Florida	011621-WU
2001	South Haven Sewer Works, Inc.	Indiana	41903
2001	Southlake Utilities, Inc.	Florida	981609-WS
2002	Artesian Water Company	Delaware	02-109
2002	Consumers Illinois Water- Grant Park	Illinois	02-0480
2002	Consumers Illinois Water- Village Woods	Illinois	02-0539
2002	Valencia Water Company	California	02-05-013
2003	Consumers Illinois Water - Indianola	Illinois	03-0069
2003	Elizabethtown Water Company	New Jersey	WR-030-70510
2003	Golden Heart Utilities, Inc.	Alaska	U-02-13, 14 & 15
2003	Utilities, Inc. – Georgia	Georgia	CV02-0495-AB
2004	Aquarion Water Company	Connecticut	04-02-14
2004	Artesian Water Company	Delaware	04-42
2004	El Dorado Utilities, Inc.	New Mexico	D-101-CU-2004-
2004	Environmental Disposal Corp.	New Jersey	DPU WR 03 070509
2004	Heritage Hills Water Company	New York	03-W-1182
2004	Sun Valley Water & Washoe County Dept. of Water Revenues	Nevada	TMWA Municipal
2004	Jersey City MUA	New Jersey	Municipal
2004	Rockland Electric Company	New Jersey	EF02110852
2005	Aquarion Water Company	New Hampshire	DW 05-119
2005	Intercoastal Utilities, Inc.	Florida	04-0007-0011-0001
2005	Haig Point Utility Company, Inc.	South Carolina	2005-34-W/S
2005	South Central Connecticut Regional Water Auth.	Connecticut	Municipal
2006	Pennichuck Water Works, Inc.	New Hampshire	DW-04048
2006	Village of Williston Park	New York	Municipal
2006	Jersey City MUA	New Jersey	Municipal
2006	Groton Utilities	Connecticut	Municipal

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Year	Client	State	Regulatory Docket/Case Number
2006	Connecticut Water Company	Connecticut	06-07-08
2006	Birmingham Utilities, Inc.	Connecticut	06-05-10
2006	Aqua Florida Utilities, Inc.	Florida	060368-WS
2007	Aquarion Water Company of CT	Connecticut	07-05-19
2007	Pennichuck Water Works, Inc.	New Hampshire	DW 04-048
2007	Aqua Indiana - Utility Center	Indiana	43331
2007	Environmental Disposal Corp.	New Jersey	WR 04 080760
2007	Aqua Florida Utilities, Inc.	Florida	07-0183
2007	Aqua Illinois, Inc. - Hawthorn Woods, Willowbrook & Vermilion	Illinois	07-0620/07-0621/08-0067
2008	Aqua Florida Utilities, Inc.	Florida	080121-WS
2008	Aquarion Water Company of MA	Massachusetts	D.P.U. 08-27
2008	Haig Point Utility Company, Inc.	South Carolina	2007-414-WS
2009	R.M.V. Land & C.M. Livestock, L.C.C.	New Jersey	EM02050313
2010	City of Griffin	Georgia	Civil Action No. 09V-2866
2010	Connecticut Water Company	Connecticut	09-12-11
2010	Montville WPCA	Connecticut	1400012464
2010	Milford Water Company	Massachusetts	DPU 10-78
2010	Arizona American Water Company	Arizona	W-01303A-10-0448
2011	Aqua Illinois	Illinois	ICC Docket (Consolidated)
2011	Artesian Water Company	Maryland	MPSC Case 9252
2011	Artesian Water Company	Delaware	PSC 11-207
2011	Kiawah Island Utility, Inc.	South Carolina	2011-317-WS
2012	Washington Gas Light	Maryland	Senate SB541
2012	Washington Gas Light	Maryland	House HB662
2012	Daufuskie Island Utility	South Carolina	2011-229-W/S
2012	Milford Water Company	Massachusetts	DPU 12-86
2013	Artesian Water Company	Pennsylvania	2:10-CV-07453-JP
2013	Aquarion Water Company - Oxford	Massachusetts	CA 09-00592E

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List of Proceedings in which
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Year	Client	State	Regulatory Docket/Case Number
2013	Water Management Services	Florida	110200-WU
2013	City of Fernandina Beach	Florida	Civil Action No. 13CA000485AXYX
2013	City of Elizabeth	New Jersey	Docket Nos. UNN-L-0556-10 and UNN-L-2608-11
2014	Daufuskie Island Utility Company, Inc.	South Carolina	Case No. 2013-CP-7-02255
2014	Artesian Water Company	Delaware	Docket No. PSC 14-132
2014	Aquarion Water Company - Hingham	New Hampshire	SUCU 2013-03159-BLS2
2015	EPCOR	Arizona	ACC Docket # WS-01303A-14-0010
2015	Mountain Water Company	Montana	Case # DV-14-352
2015	Daufuskie Island Utility Company, Inc.	South Carolina	Docket No. 2014-346-WS
2015	Housatonic Water Works	Massachusetts	D.P.U. 15-179
2016	Epcor Water Arizona	Arizona	Docket No. W501303A-16-0145
2016	Community Utilities of Indiana	Indiana	Case No. 44724
2016	Utilities Inc. of Florida	Florida	Docket No. 16101-WS
2017	Epcor Water Arizona	Arizona	Docket No. W10303A-17-0141
2017	Aquarion Water Company of Massachusetts	Massachusetts	D.P.U. 17-90
2017	Milford Water Company	Massachusetts	D.P.U. 17-107
2018	Water Services Corp. of Kentucky	Kentucky	Case No. 2018-00208
2018	Epcor Water New Mexico, Inc.	New Mexico	Case No. 18_00124-UT
2019	Daufuskie Island Utility Company, Inc.	South Carolina	Docket No. 2018-364
2020	Epcor-Johnson Utilities, LLC	Arizona	Docket No. WS-02987A-20
2020	Valley Water Systems, Inc.	Connecticut	Docket No. 20-11-14

John F. Guastella
Papers and Presentations

Year	Title	Forum
1974 through 2020	1. Basics of Rate Setting 2. Cost Allocation and Rate Design 3. Revenue Requirements	Semi-annual seminars on utility rate regulation, National Association of Regulatory Utility Commissioners, sponsored by the University of South Florida, the University of Utah, Florida State University, The University of Florida and Michigan State University, and currently the NARUC Water Committee.
1974	Rate Design Studies: A Regulatory Point-of- View	Annual convention of the National Association of Water Companies, New Haven, Connecticut
1976	Lifeline Rates	Annual convention of the National Association of Water Companies, Chattanooga, Tennessee
1977	Regulating Water Utilities: The Customers' Best Interest	Annual symposium of the New England Conference of Public Utilities Commissioners, Mystic Seaport, Connecticut
1978	Rate Design: Preaching v. Practice	Annual convention of the National Association of Water Companies, Baton Rouge, Louisiana
1979	Small Water Companies	Annual symposium of the New England Conference of Public Utilities Commissioners, Newport, Rhode Island
1979	Rate Making Problems Peculiar to Private Water and Sewer Companies	Special educational program sponsored by Independent Water and Sewer Companies of Texas, Austin, Texas
1980	Water Utility Regulation	Annual meeting of the National Association of Regulatory Utility Commissioners, Houston, Texas
1981	The Impact of Water Rates on Water Usage	Annual Pennsylvania Environmental Conference, Harrisburg, Pennsylvania
1981	A Realistic Approach to Regulating Water Utilities	Mid-America Regulatory Conference, Clarksville, Indiana
1982	Issues in Water Utility Regulation	Annual symposium of the New England Conference of Public Utilities Commissioners, Rockport, Maine
1982	New Approaches to the Regulation of Water Utilities	Southeastern Association of Regulatory Utility Commissioners, Asheville, North Carolina
1983	Allocating Costs and Revenues Fairly and Effectively	Maryland Water and Sewer Finance Conference, Westminster, Maryland
1983	Lifeline and Social Policy Pricing	Annual conference of the American Water Works Association, Las Vegas, Nevada (published)
1984	The Real Cost of Service: Some Special Considerations	Annual New Jersey Section AWWA Spring Meeting, Atlantic City, New Jersey
1987	Margin Reserve: It's Not the Issue	Florida Waterworks Association Newsletter, April/May/June 1987 issue

**John F. Guastella
Papers and Presentations**

Year	Title	Forum
1987	A "Current" Issue: CIAC	NAWC - New England Chapter November 6, 1987 meeting
1988	Small Water Company rate Setting: Take It or Leave It	NAWC - New York Chapter June 14, 1988 meeting
1989	The Solution to all the Problems of Good Small Water Companies	NAWC Quarterly magazine, Winter issue
1989	Current Issues Workshop - Panel	New England Conference of Public Utilities Commissioners, Kennebunkport, Maine
1991	Alternative Rate Structures	New Jersey Section 1991 Annual Conference, AWWA, Atlantic City, New Jersey
1994	Conservation Impact on Water Rates	New England NAWC and New England AWWA, Sturbridge, Massachusetts
1996	Utility Regulation - 21st Century	NAWC Annual Meeting, Orlando, Florida
1997	Current Status Drinking Water State Revolving Fund	NAWC Annual Meeting, San Diego, California
1998	Small Water Companies - Problems and Solutions	NAWC Annual Meeting, Indianapolis, Indiana
1998	Basic Rate Regulation Seminar	New England Chapter - NAWC, Rockport, Maine
2000	Developer Related Water and Sewer Utilities Seminar	Florida State University, Orlando, Florida
2001	Developer Related Water and Sewer Utilities Seminar	Florida State University, Orlando, Florida
2002	Regulatory Cooperation - Small Company Education	New England Chapter - NAWC, Annual Meeting
2003	Developer Related Water and Sewer Utilities Seminar	University of Florida, Orlando, Florida
2004	Basic Regulation & Rate Setting Training Seminar	Office of Regulatory Staff, Columbia, South Carolina
2005	Municipal Water Rates	Nassau-Suffolk Water Commissioners Association, Franklin Square, New York
2005	Innovations in Rate Setting and Procedures	NAWC New York Chapter, West Point, New York

John F. Guastella
Papers and Presentations

Year	Title	Forum
2006	Basics of Rate Setting	The Connecticut Water Company, Clinton, Connecticut
2006	Innovations in Rate Setting and Procedures	NAWC New York Chapter, Catskill, New York
2006	Best Practices as Regulatory Policy	NAWC New England Chapter, Ogunquit, Maine
2006	Rate and Valuation Seminar	NAWC New York Chapter
2006	Full Cost Pricing	U.S. Environmental Protection Agency Expert Workshop, Lansing, Michigan
2006	Innovations in Rate Setting	NAWC New England Chapter, Portsmouth, New Hampshire
2007	Weather Sensitive Customer Demands	NAWC Water Utility Executive Council, Half Moon Bay, California
2007	Basics of Rate Setting and Valuation Seminar	NAWC New England Chapter, Ogunquit, Maine
2007	Small Company Characteristics	National Drinking Water Symposium, La Jolla, California
2013	Rate and Valuation Seminar	NAWC New York Chapter
2015	Rate and Valuation Seminar	NAWC New England Chapter

Docket No. DW 20-184

Exhibit 13

Exhibit JFG - 1
J.F. GUASTELLA

Aquarion Water Company of New Hampshire

COST OF SERVICE STUDY

December 18 2020

Aquarion Water Company of New Hampshire

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Aquarion Water Company of New Hampshire

FUNCTIONAL ALLOCATION TO CUSTOMER CLASSES

Function	Total	Residential	Commercial	Industrial	PA	Seasonal	Fire Service	
							Capacity	Hydrants
Base	\$ 2,959,430	\$ 1,984,328	\$ 736,573	\$ 5,505	\$ 64,131	\$ 139,241	\$ 29,653	\$ -
Extra Capacity:								
Maximum Day	\$ 1,045,824	\$ 512,067	\$ 126,681	\$ 941	\$ 11,033	\$ 59,873	\$ 335,228	\$ -
Peak Hour	\$ 2,336,670	\$ 806,081	\$ 224,414	\$ 1,869	\$ 19,721	\$ 84,844	\$ 1,199,740	\$ -
Customer:								
Meters / Services	\$ 1,620,462	\$ 1,216,708	\$ 230,025	\$ 1,070	\$ 22,233	\$ 150,428	\$ -	\$ -
Billing & Accounting	\$ 726,008	\$ 665,176	\$ 49,594	\$ 116	\$ 3,449	\$ 5,256	\$ 2,418	\$ -
Hydrants	\$ 73,513	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 73,513
Total	\$ 8,761,908	\$ 5,184,359	\$ 1,367,285	\$ 9,501	\$ 120,567	\$ 439,643	\$ 1,567,039	\$ 73,513

Aquarion Water Company of New Hampshire

ALLOCATION OF PRO FORMA REVENUE REQUIREMENT TO FUNCTIONAL CLASSIFICATIONS

Description	Total Amount	Code	Base	Extra - Capacity		Customer		Hydrants
				Maximum Day	Peak Hour	Meters and Services	Billing and Accounting	
UTILITY OPERATING INCOME	\$ 2,893,039	31	\$ 1,053,793	\$ 266,618	\$ 1,209,496	\$ 344,772	\$ 3,071	\$ 15,288
OPERATION & MAINTENANCE	3,281,139	64	1,008,759	436,312	281,271	792,148	729,902	32,749
DEPRECIATION	1,310,407	71	445,258	219,271	314,957	317,916	-	13,005
PROPERTY TAXES	860,716	41	293,492	76,851	357,238	121,693	-	11,442
PAYROLL TAXES	87,976	62	32,393	22,678	1,852	19,744	11,309	-
INCOME TAX	556,294	31	202,631	51,267	232,570	66,295	591	2,940
TOTAL OPERATING REVENUE	\$ 8,989,571	21	\$ 3,036,326	\$ 1,072,998	\$ 2,397,384	\$ 1,662,567	\$ 744,872	\$ 75,423
LESS:								
Late fee revenues	(36,762)	21	(12,417)	(4,388)	(9,804)	(6,799)	(3,046)	(308)
Antenna rental income	(163,511)	21	(55,228)	(19,517)	(43,606)	(30,240)	(13,548)	(1,372)
Misc. charge	(27,389)	21	(9,251)	(3,269)	(7,304)	(5,065)	(2,269)	(230)
REVENUE FROM SALES	\$ 8,761,908	21	\$ 2,959,430	\$ 1,045,824	\$ 2,336,670	\$ 1,620,462	\$ 726,008	\$ 73,513
PERCENTS	100.00%	21	33.78%	11.94%	26.67%	18.49%	8.29%	0.84%

Docket No. DW 20-184
Exhibit 13

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Schedule 3
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Aquarion Water Company of New Hampshire

ALLOCATION OF RATE BASE ELEMENTS TO FUNCTIONAL CLASSIFICATIONS

Description	Total Amount	Code	Base	Extra - Capacity		Meters and Services	Billing and Accounting	Hydrants
				Maximum Day	Peak Hour			
UTILITY PLANT	\$ 56,033,346	41	\$ 19,106,599	\$ 5,003,047	\$ 23,256,479	\$ 7,922,309	\$ -	\$ 744,913
ACCUMULATED DEPRECIATION	\$ (13,570,348)	51	\$ (3,888,633)	\$ (1,350,946)	\$ (4,991,666)	\$ (2,900,551)	\$ -	\$ (438,552)
CONTRIBUTIONS IN AID OF CONSTRUCTION	\$ (2,431,613)	3	\$ (900,670)	\$ -	\$ (1,530,944)	\$ -	\$ -	\$ -
ADVANCES	\$ (652,006)	3	\$ (241,503)	\$ -	\$ (410,503)	\$ -	\$ -	\$ -
MATERIALS & SUPPLIES	\$ 163,416	41	\$ 55,723	\$ 14,591	\$ 67,825	\$ 23,105	\$ -	\$ 2,172
DEFERRED TAXES	\$ (3,736,572)	51	\$ (1,070,729)	\$ (371,981)	\$ (1,374,447)	\$ (798,662)	\$ -	\$ (120,755)
CASH WORKING CAPITAL	\$ 172,196	64	\$ 52,940	\$ 22,898	\$ 14,761	\$ 41,572	\$ 38,306	\$ 1,719
PREPAYMENTS	\$ 89,815	41	\$ 30,626	\$ 8,019	\$ 37,277	\$ 12,699	\$ -	\$ 1,194
DEFERRED DEBITS (Tank Painting)	\$ 17,710	5	-	-	17,710	-	-	-
TOTALS	\$ 36,085,944	31	\$ 13,144,353	\$ 3,325,629	\$ 15,086,494	\$ 4,300,471	\$ 38,306	\$ 190,692
PERCENTS	100.00%	31	36.43%	9.22%	41.81%	11.92%	0.11%	0.53%

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Exhibit JFG - 1
Schedule 4
J.F. GUASTELLA

Aquarion Water Company of New Hampshire

ALLOCATION OF UTILITY PLANT TO FUNCTIONAL CLASSIFICATIONS

Account No.	Description	Total Amount	Code	Base	Extra - Capacity		Customer		Hydrants
					Maximum Day	Peak Hour	Meters and Services	Billing and Accounting	
301	<u>Intangible Plant</u> Organization	\$ 17,700	1	17,700	-	-	-	-	-
310	<u>Source of Supply Plant</u> Land & Land Rights (Supply)	\$ 635,643	1	635,643	-	-	-	-	-
311	Structures & Improvements	\$ 642,550	2	377,948	264,602	-	-	-	-
314	Wells & Springs	\$ 4,401,622	2	2,589,034	1,812,588	-	-	-	-
316	Supply Mains	\$ 137,490	2	80,872	56,618	-	-	-	-
317	Other Water Source Plant	\$ 1,723,261	2	1,013,622	709,639	-	-	-	-
321	<u>Pumping Plant</u> Structures & Improvements	\$ 1,392,388	4	515,699	360,990	515,699	-	-	-
325	Electric Pumping Equipment	\$ 940,101	4	348,185	243,730	348,185	-	-	-
328	Other Pumping Equipment	\$ 32,076	4	11,880	8,316	11,880	-	-	-
331	<u>Water Treatment Plant</u> Structures & Improvements	\$ 1,068,822	2	628,681	440,141	-	-	-	-
332	Water Treatment Equipment	\$ 2,177,877	2	1,281,027	896,850	-	-	-	-
340	<u>Transmission and Distribution Plant</u> Land & Land Rights (T & D)	\$ 314,551	5	-	-	314,551	-	-	-
341	Structures & Improvements	\$ 32,894	42	8,773	-	17,379	6,162	-	579
342	Distribution Reservoirs & Standpipes	\$ 2,708,344	5	-	-	2,708,344	-	-	-
343	Transmission & Distribution Mains	\$ 29,021,554	3	10,749,583	-	18,271,970	-	-	-
345	Services	\$ 5,731,679	6	-	-	-	5,731,679	-	-
346	Meters	\$ 1,620,461	6	-	-	-	1,620,461	-	-
347	Meter Installation	\$ 198,719	6	-	-	-	198,719	-	-
348	Hydrants	\$ 709,986	8	-	-	-	-	-	709,986
349	Other T & D Plant	\$ 178,436	42	47,590	-	94,275	33,429	-	3,143
390	<u>General Plant</u> Structures & Improvements	\$ 566,029	41	193,008	50,539	234,929	80,028	-	7,525
391	Office Equipment Electronics	\$ 6,650	41	2,268	594	2,760	940	-	88
391H	Computer Hardware	\$ 241,906	41	82,487	21,599	100,402	34,202	-	3,216
391S	Computer Software	\$ 419,295	41	142,974	37,438	174,027	59,282	-	5,574
392	Transportation Equipment	\$ 644,403	41	219,733	57,537	267,458	91,109	-	8,567
393	Stores Equipment	\$ 331	41	113	30	137	47	-	4
394	Tools, Shop & Garage Equipment	\$ 87,849	41	29,955	7,844	36,462	12,421	-	1,168
396	Power Operated Equipment	\$ 109,715	41	37,411	9,796	45,537	15,512	-	1,459
397	Communications Equipment	\$ 51,553	41	17,579	4,603	21,397	7,289	-	685
398	Miscellaneous Equipment	\$ 219,461	41	74,833	19,595	91,087	31,029	-	2,918
	TOTALS	\$ 56,033,346	41	\$ 19,106,599	\$ 5,003,047	\$ 23,256,479	\$ 7,922,309	\$ -	\$ 744,913
	PERCENTS	100.00%	41	34.10%	8.93%	41.50%	14.14%	0.00%	1.33%

Docket No. DW 20-184
Exhibit 13

Exhibit JFG - 1
Schedule 5
J.F. GUASTELLA

Aquarion Water Company of New Hampshire

ALLOCATION OF ACCUMULATED DEPRECIATION TO FUNCTIONAL CLASSIFICATIONS

Account No.	Description	Total Amount	Code	Base	Extra - Capacity		Customer		Hydrants
					Maximum Day	Peak Hour	Meters and Services	Billing and Accounting	
	<u>Intangible Plant</u>								
301	Organization	\$ 9,085	2	\$ 5,343.80	\$ 3,741.20	\$ -	\$ -	\$ -	\$ -
303	Miscellaneous Intangible Plant	\$ (15,221)	2	(8,952.99)	(6,268.01)	-	-	-	-
	<u>Source of Supply Plant</u>								
311	Structures & Improvements	\$ 236,615	2	139,177	97,438	-	-	-	-
314	Wells & Springs	\$ 1,092,889	2	642,837	450,052	-	-	-	-
316	Supply Mains	\$ 47,489	2	27,933	19,556	-	-	-	-
317	Other Water Source Plant	\$ 949,236	2	558,341	390,895	-	-	-	-
	<u>Pumping Plant</u>								
321	Structures & Improvements	\$ 818,385	4	303,106	212,174	303,106	-	-	-
325	Electric Pumping Equipment	\$ (2,091)	4	(774)	(542)	(774)	-	-	-
326	Diesel Pumping Equipment	\$ 5,202	4	1,927	1,349	1,927	-	-	-
328	Other Pumping Equipment	\$ 29,058	4	10,762	7,534	10,762	-	-	-
	<u>Water Treatment Plant</u>								
331	Structures & Improvements	\$ (56,160)	2	(33,033)	(23,127)	-	-	-	-
332	Water Treatment Equipment	\$ 73,919	2	43,479	30,440	-	-	-	-
	<u>Transmission and Distribution Plant</u>								
341	Structures & Improvements	\$ 31,234	52	6,162	-	14,570	9,123	-	1,379
342	Distribution Reservoirs & Standpipes	\$ 1,124,468	5	-	-	1,124,468	-	-	-
343	Transmission & Distribution Mains	\$ 4,566,798	3	1,691,542	-	2,875,256	-	-	-
345	Services	\$ 2,284,927	6	-	-	-	2,284,927	-	-
346	Meters	\$ 32,560	6	-	-	-	32,560	-	-
347	Meter Installation	\$ 187,135	6	-	-	-	187,135	-	-
348	Hydrants	\$ 378,689	8	-	-	-	-	-	378,689
349	Other T & D Plant	\$ 91,531	52	18,057	-	42,696	26,736	0	4,042
	<u>General Plant</u>								
390	Structures & Improvements	\$ 101,931	51	29,209	10,147	37,494	21,787	-	3,294
391	Office Equipment Electronics	\$ 13,811	51	3,958	1,375	5,080	2,952	-	446
391H	Computer Hardware	\$ 261,346	51	74,890	26,017	96,133	55,861	-	8,446
391S	Computer Software	\$ 430,887	51	123,472	42,895	158,496	92,099	-	13,925
392	Transportation Equipment	\$ 557,492	51	159,751	55,499	205,066	119,159	-	18,016
393	Stores Equipment	\$ 4,810	51	1,378	479	1,769	1,028	-	155
394	Tools, Shop & Garage Equipment	\$ 56,417	51	16,166	5,616	20,752	12,059	-	1,823
395	Laboratory Equipment	\$ (508)	51	(146)	(51)	(187)	(109)	-	(16)
396	Power Operated Equipment	\$ 97,089	51	27,821	9,665	35,713	20,752	-	3,138
397	Communications Equipment	\$ 68,257	51	19,559	6,795	25,107	14,589	-	2,206
398	Miscellaneous Equipment	\$ 93,068	51	26,669	9,265	34,234	19,893	-	3,008
	TOTALS	\$ 13,570,348	51	\$ 3,888,633	\$ 1,350,946	\$ 4,991,666	\$ 2,900,551	\$ -	\$ 438,552
	PERCENTS	100.00%	51	28.66%	9.96%	36.78%	21.37%	0.00%	3.23%

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Aquarion Water Company of New Hampshire

ALLOCATION OF PRO FORMA OPERATION AND MAINTENANCE EXPENSES TO FUNCTIONAL CLASSIFICATIONS

Account No.	Description	Total Amount	Code	Base	Extra - Capacity		Customer		Hydrants
					Maximum Day	Peak Hour	Meters and Services	Billing and Accounting	
	<u>Source of Supply</u>								
601	Operation Labor & Expenses - Labor	\$ 130	2	77	54	-	-	-	-
603	Merchandise Expenses	\$ 70,268	2	41,332	28,936	-	-	-	-
604	Rent Expense	\$ 22,650	2	13,323	9,327	-	-	-	-
611	Maint of Structures & Improvemnt	\$ 706	2	415	291	-	-	-	-
612	Maint of Supply Eqmt	\$ 35,929	2	21,133	14,796	-	-	-	-
614	Maint. Of Wells & Springs	\$ 5,286	2	3,109	2,177	-	-	-	-
	<u>Pumping</u>								
620	Supervision & Engineering - Labor	\$ 947	4	351	245	351	-	-	-
623	Power Purchased for Pumping	\$ 232,482	1	232,482	-	-	-	-	-
624	Pumping Labor and Expenses	\$ 138,844	4	51,424	35,997	51,424	-	-	-
626	Misc Expenses	\$ 11,656	4	4,317	3,022	4,317	-	-	-
631	Maint of Structures & Improvemnt	\$ 16,445	4	6,091	4,263	6,091	-	-	-
632	Maint of Power Production Eqmt	\$ 8,147	4	3,017	2,112	3,017	-	-	-
633	Maint of Pumping Equipmt	\$ 15,283	4	5,660	3,962	5,660	-	-	-
	<u>Treatment</u>								
640	Supervision & Engineering - Labor	\$ 4,741	2	2,789	1,952	-	-	-	-
641	Chemicals	\$ 57,619	1	57,619	-	-	-	-	-
642	Treatment Labor and Expenses	\$ 84,613	2	49,770	34,844	-	-	-	-
643	Misc. Expense	\$ 12,658	2	7,445	5,212	-	-	-	-
651	Maint of Structures & Improvemnt	\$ 5,414	2	3,184	2,229	-	-	-	-
652	Maint of Treatment Eqmt	\$ 26,751	2	15,735	11,016	-	-	-	-
	<u>Transmission & Distribution</u>								
662	T&D Lines Expense	\$ 36,114	3	13,377	-	22,738	-	-	-
663	Meter Expense	\$ 38,602	6	-	-	-	38,602	-	-
664	Customer Installations Expense	\$ 32,173	6	-	-	-	32,173	-	-
665	Misc Expenses	\$ 106,236	61	14,210	-	24,623	62,526	-	4,877
670	Maint Supervision & Engineering	\$ 600	61	80	-	139	353	-	28
671	Maint of Structures & Improvemnt	\$ 59,662	61	7,980	-	13,828	35,115	-	2,739
672	Maint of Storage	\$ 1,436	5	-	-	1,436	-	-	-
673	Maint of Mains	\$ 81,462	3	30,174	-	51,289	-	-	-
675	Maint of Services	\$ 139,766	6	-	-	-	139,766	-	-
676	Maint of Meters	\$ 19,686	6	-	-	-	19,686	-	-
677	Maint of Hydrants	\$ 14,945	8	-	-	-	-	-	14,945
678	Maint of Other T&D	\$ 21,141	61	2,828	-	4,900	12,443	-	970
	<u>Customer Accounting</u>								
902	Meter Reading	\$ 18,428	7	-	-	-	-	18,428	-
903	Records and Collection	\$ 258,707	7	-	-	-	-	258,707	-
904	Uncollectible Accounts	\$ 10,875	7	-	-	-	-	10,875	-
905	Allocated Customer Acct Expense	\$ 110,823	7	-	-	-	-	110,823	-
906	Information Technology	\$ 182,338	63	28,146	15,161	17,943	64,407	54,452	2,227
	<u>Administration & General</u>								
920	Administrative & General Salaries	\$ 434,631	62	160,034	112,039	9,148	97,540	55,870	-
921	Office Supplies & Expense	\$ 70,290	63	10,850	5,845	6,917	24,829	20,991	859
923	Outside Services	\$ 307,273	63	47,432	25,550	30,238	108,538	91,763	3,753
924	Insurance	\$ 1,226	63	189	102	121	433	366	15
925	Injuries & Damages	\$ 65,350	63	10,088	5,434	6,431	23,084	19,516	798
926	Employee Benefits	\$ 392,865	62	144,656	101,273	8,269	88,167	50,501	-
928	Regulatory Commission Exp	\$ 27,070	63	4,179	2,251	2,664	9,562	8,084	331
930	Misc General Expense	\$ 51,229	63	7,908	4,260	5,041	18,096	15,299	626
931	Rents	\$ 109,667	63	16,929	9,119	10,792	38,738	32,750	1,339
932	Maintenance of General Plant	\$ (62,025)	63	(9,574)	(5,157)	(6,104)	(21,909)	(18,523)	(758)
	SUBTOTAL	\$ 3,281,139	64	\$ 1,008,759	\$ 436,312	\$ 281,271	\$ 792,148	\$ 729,902	\$ 32,749
	PERCENTS	100.00%	64	30.74%	13.30%	8.57%	24.14%	22.25%	1.00%

Aquarion Water Company of New Hampshire

ALLOCATION OF DEPRECIATION EXPENSE TO FUNCTIONAL CLASSIFICATIONS

Account Number	Description	Total Amount	Code	Base	Extra - Capacity		Customer		Hydrants
					Maximum Day	Peak Hour	Meters and Services	Billing and Accounting	
303	<u>Intangible Plant</u> Miscellaneous Intangible Plant	\$ 885	2	\$ 521	\$ 364	\$ -	\$ -	\$ -	\$ -
	<u>Source of Supply Plant</u>								
311	Structures & Improvements	\$ 14,457	2	8,504	5,953	-	-	-	-
314	Wells & Springs	\$ 159,779	2	93,982	65,797	-	-	-	-
316	Supply Mains	\$ 3,327	2	1,957	1,370	-	-	-	-
317	Other Water Source Plant	\$ 75,148	2	44,202	30,946	-	-	-	-
	<u>Pumping Plant</u>								
321	Structures & Improvements	\$ 22,557	4	8,354	5,848	8,354	-	-	-
325	Electric Pumping Equipment	\$ 77,277	4	28,621	20,035	28,621	-	-	-
328	Other Pumping Equipment	\$ 2,537	4	940	658	940	-	-	-
	<u>Water Treatment Plant</u>								
331	Structures & Improvements	\$ 33,774	2	19,866	13,908	-	-	-	-
332	Water Treatment Equipment	\$ 145,482	2	85,573	59,909	-	-	-	-
	<u>Transmission & Distribution Plant</u>								
341	Structures & Improvements	\$ 46	72	9	-	18	19	-	1
342	Distribution Reservoirs & Standpipes	\$ 46,313	5	-	-	46,313	-	-	-
343	Transmission & Distribution Mains	\$ 354,063	3	131,145	-	222,918	-	-	-
345	Services	\$ 129,536	6	-	-	-	129,536	-	-
346	Meters	\$ 161,074	6	-	-	-	161,074	-	-
347	Meter Installation	\$ 4,451	6	-	-	-	4,451	-	-
348	Hydrants	\$ 12,070	8	-	-	-	-	-	12,070
349	Other T & D Plant	\$ 4,407	72	817	-	1,677	1,838	-	75
	<u>General Plant</u>								
390	Structures & Improvements	\$ 28,981	71	9,864	4,759	7,177	6,900	-	282
391	Office Equipment Electronics	\$ 112	71	38	18	28	27	-	1
391H	Computer Hardware	\$ 19,503	71	6,638	3,202	4,830	4,643	-	190
391S	Computer Software	\$ 10,215	71	3,477	1,677	2,530	2,432	-	99
392	Transportation Equipment	\$ 6,380	71	2,171	1,048	1,580	1,519	-	62
394	Tools, Shop & Garage Equipment	\$ 2,457	71	836	403	608	585	-	24
396	Power Operated Equipment	\$ 1,997	71	680	328	495	475	-	19
397	Communications Equipment	\$ 5,155	71	1,755	846	1,277	1,227	-	50
398	Miscellaneous Equipment	\$ 13,399	71	4,560	2,200	3,318	3,190	-	130
	Less: CIAC Amortization	\$ (24,975)	3	(9,251)	-	(15,724)	-	-	-
	TOTAL	\$ 1,310,407	71	\$ 445,258	\$ 219,271	\$ 314,957	\$ 317,916	\$ -	\$ 13,005
	PERCENTS	100.00%	71	33.98%	16.73%	24.04%	24.26%	0.00%	0.99%

Aquarion Water Company of New Hampshire

SUMMARY OF ALLOCATION FACTORS

Description	Code	Base	Extra - Capacity		Customer		Hydrants
			Maximum Day	Peak Hour	Meters and Services	Billing and Accounting	
BASE	1	1.000000					
BASE / MAXIMUM DAY	2	0.588200	0.411800				
BASE / PEAK HOUR	3	0.370400		0.629600			
BASE / MAXIMUM DAY / PEAK HOUR	4	0.370370	0.259259	0.370370			
PEAK HOUR	5			1.000000			
CUSTOMER - METERS & SERVICES	6				1.000000		
CUSTOMER - BILLING & ACCOUNTING	7					1.000000	
HYDRANTS	8						1.000000
TOTAL OPERATING REVENUE	21	0.337761	0.119360	0.266685	0.184944	0.082860	0.008390
RATE BASE	31	0.364251	0.092159	0.418071	0.119173	0.001062	0.005284
UTILITY PLANT IN SERVICE	41	0.340986	0.089287	0.415047	0.141386	0.000000	0.013294
UTILITY PLANT IN SERVICE - T&D OTHER	42	0.266704	0.000000	0.528339	0.187342	0.000000	0.017615
ACCUMULATED DEPRECIATION	51	0.286554	0.099551	0.367836	0.213742	0.000000	0.032317
ACCUMULATED DEPRECIATION - T&D OTHER	52	0.197274	0.000000	0.466463	0.292099	0.000000	0.044164
OPERATION & MAINTENANCE - T&D OTHER	61	0.133761	0.000000	0.231775	0.588561	0.000000	0.045903
LABOR	62	0.368207	0.257780	0.021047	0.224420	0.128545	0.000000
O&M - EXCL POWER, CHEM & PURCH WATER	63	0.154364	0.083150	0.098407	0.353231	0.298635	0.012214
TOTAL OPERATING EXPENSE	64	0.307442	0.132976	0.085724	0.241425	0.222454	0.009981
DEPRECIATION EXPENSE	71	0.339786	0.167331	0.240351	0.242608	0.000000	0.009924
DEPRECIATION EXPENSE - T&D OTHER	72	0.185362	0.000000	0.380535	0.417043	0.000000	0.017060

Aquarion Water Company of New Hampshire

EXPLANATION OF FUNCTIONAL ALLOCATION FACTORS

- 1 Applicable to items considered to be related to "Base" or average day system demands, and allocable to all customers. Allocated 100% to base.
- 2 Applicable to items considered to be related to meeting the maximum day system demands. The calculation of the factors is as follows:

	Ratio	%
Maximum Day Demand	1.70	100.00%
Average Day Demand	1.00	58.82%
Extra Capacity / Maximum Day:	0.70	41.18%

- 3 Applicable to mains, considered to be related to meeting the peak hour system demands. The calculation of the factors is as follows:

	Ratio	%
Peak Hour Demand	2.70	100.00%
Average Day Demand	1.00	37.04%
Extra Capacity/Peak Hour	1.70	62.96%

- 4 Applicable to pumping plant, considered to be related to meeting the max day and peak hour system demands. The calculation of the factors is as follows:

	Ratio	%
Peak Hour Demand	2.70	
Max Day Demand	1.70	
Excess Peak Hour over Max Day	1.00	37.04%
Extra Capacity / Maximum Day:	0.70	25.93%
Average Day Demand	1.00	37.04%

- 5 Applicable to items considered to be related entirely to meeting peak hour system demands. Allocated 100% to Extra-Capacity/Peak Hour.
- 6 Applicable to items considered to be related entirely to meters and services. Allocation 100% to "Meters and Services".
- 7 Applicable to items considered to be entirely related to customer billing and accounting. Allocated 100% to "Billing and Accounts".
- 8 Applicable to items considered to be related entirely to Company owned fire hydrants. Allocated 100% to "Hydrants".
- 21 Applicable to miscellaneous & sales for resale revenue. Factors are based on the overall weighted allocation of revenue requirement.
- 31 Applicable to items considered to be related to the Rate Base. Factors are based on the overall weighted allocation of all elements of the rate base.

Docket No. DW 20-184
Exhibit 13

Exhibit JFG - 1
Schedule 8
Page 3 of 4

Aquarion Water Company of New Hampshire

EXPLANATION OF FUNCTIONAL ALLOCATION FACTORS

- 41 Applicable to utility plant considered to be of an overhead nature, and related expenses. Factors are based on the overall weighted allocation of all items of utility plant, also applicable to property taxes, insurance.
- 42 Applicable to Other Transmission and Distribution plant. Factors are based on the overall weighted allocation of Storage, Mains, Meters, Services and Hydrant plant.
- 51 Resulting overall weighted factors for Accumulated Depreciation.
- 52 Applicable to Other Transmission and Distribution Accumulated Depreciation. Factors are based on the overall weighted allocation of Storage, Mains, Meters, Services and Hydrant Accumulated Depreciation.
- 61 Applicable to Other Transmission and Distribution Expense. Factors are based on the overall weighted allocation of Storage, Mains, Meters, Services and Hydrants expense.

Description	Total Amount	Code	Base	Extra - Capacity		Customer		Hydrants
				Maximum Day	Peak Hour	Meters and Services	Billing and Accounting	
T&D - Storage, Mains, Meters Services & Hydrants								
TOTAL	\$ 325,583	61	\$ 43,550	\$ -	\$ 75,462	\$ 191,625	\$ -	\$ 14,945
PERCENT	100.00%		13.38%	0.00%	23.18%	58.86%	0.00%	4.59%

Aquarion Water Company of New Hampshire

EXPLANATION OF FUNCTIONAL ALLOCATION FACTORS

- 62 Applicable to employee benefit and labor administration and general expenses, considered to be of an overhead nature. Factors are based on the overall weighted allocation of all other labor expenses.

Description	Total Amount	Code	Base	Extra - Capacity		Customer		Hydrants
				Maximum Day	Peak Hour	Meters & Services	Billing and Accounting	
TOTAL	\$ 143,362	62	\$ 52,787	\$ 36,956	\$ 3,017	\$ 32,173	\$ 18,428	\$ -
PERCENT	100.00%		36.82%	25.78%	2.10%	22.44%	12.85%	0.00%

- 63 Applicable to operation and maintenance expenses considered to be of an overhead nature. Factors are based on the overall weighted allocation of all other operation and maintenance expenses except power, chemicals and purchased water.

Description	Total Amount	Code	Base	Extra - Capacity		Customer		Hydrants
				Maximum Day	Peak Hour	Meters & Services	Billing and Accounting	
TOTAL	\$ 1,300,170	63	\$ 200,700	\$ 108,109	\$ 127,946	\$ 459,260	\$ 388,276	\$ 15,880
PERCENT	100%		15.44%	8.31%	9.84%	35.32%	29.86%	1.22%

- 64 Resulting overall weighted allocation of all operation and maintenance expenses. Applicable to cash working capital.
- 71 Resulting overall weighted factors for Depreciation Expense.
- 72 Applicable to Other Transmission and Distribution Depreciation Expense. Factors are based on the overall weighted allocation of Storage, Mains, Meters, Services and Hydrant Depreciation Expense.

Aquarion Water Company of New Hampshire

SUMMARY OF SYSTEM WATER DEMANDS

Description	Factor	Quantity	Unit
Average Day	1.00	2.17	MGD
Maximum Day	1.70	3.68	MGD
Peak Hour	2.70	5.85	MGD
Fire Demand		4,500	GPM
Maximum Day Fire Use		1.080	MG
Max Day Plus Fire Demand		10.16	MGD
Less: Peak hour		4.32	MGD

Aquarion Water Company of New Hampshire

CUSTOMER CLASS ALLOCATION FACTORS

Customer Class	Base Average Consumption			Maximum Day				Peak Hour				Customer			
	Annual MG	MGD	%	Ratio	MGD	Extra MGD	%	Ratio	MGD	Extra MGD	%	Meters and Services		Billing and Accounting	
												Number of ERC's	%	Number of Bills	%
METERED SERVICE:															
Residential	395.4	1.083	67.05	2.50	2.708	1.625	48.96	3.00	3.249	2.166	34.50	8,074.3	75.09	90,549	91.62
Commercial	146.8	0.402	24.89	2.00	0.804	0.402	12.11	2.50	1.005	0.603	9.60	1,526.4	14.20	6,751	6.83
Industrial	1.2	0.003	0.19	2.00	0.006	0.003	0.09	2.50	0.008	0.005	0.08	7.1	0.07	16	0.02
Public Authority	12.7	0.035	2.17	2.00	0.070	0.035	1.06	2.50	0.088	0.053	0.84	147.5	1.37	469	0.48
Seasonal	27.7	0.076	4.71	3.50	0.266	0.190	5.73	4.00	0.304	0.228	3.63	998.3	9.28	716	0.72
Subtotal	583.6	1.599	99.00		3.854	2.255	67.95		4.654	3.055	48.66	10,753.6	100.00	98,501	99.67
FIRE SERVICE		0.016	1.00		1.080	1.064	32.05		3.240	3.224	51.34		0.00	329	0.33
Total		1.615	100.00		4.934	3.319	100.00		7.894	6.279	100.00	10,753.6	100.00	98,830	100.00

Aquarion Water Company of New Hampshire

CALCULATION OF ERC's

		Monthly Billing																			
		Residential			Commercial			Industrial			Public Auth			Seasonal			Total				
Monthly	Factor	Bills	Customers	ERCs	Bills	Customers	ERCs	Bills	Customers	ERCs	Bills	Customers	ERCs	Bills	Customers	ERCs	Bills	Customers	ERCs		
5/8"	1.0	87,993.0	7,332.8	7,332.8	4,081.0	340.1	340.1	1.0	0.1	0.1	200.0	16.7	16.7				92,275.0	7,689.6	7,689.6		
3/4"	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1"	2.5	1,927.0	160.6	401.5	1,112.0	92.7	231.7	-	-	-	60.0	5.0	12.5				3,099.0	258.3	645.6		
1 1/2"	5.0	317.0	26.4	132.1	336.0	28.0	140.0	12.0	1.0	5.0	84.0	7.0	35.0				749.0	62.4	312.1		
2"	8.0	312.0	26.0	208.0	1,222.0	101.8	814.7	3.0	0.3	2.0	125.0	10.4	83.3				1,662.0	138.5	1,108.0		
3"	15.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4"	22.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
6"	37.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
8"	75.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
10"	120.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		90,549.0	7,545.8	8,074.3	6,751.0	562.6	1,526.4	16.0	1.3	7.1	469.0	39.1	147.5	716.0	716.0	998.3	97,785.0	8,148.8	9,755.3		

Aquarion Water Company of New Hampshire

CALCULATION OF DESIGNED CUSTOMER CHARGE AND USAGE RATE

Customer Charge Cost Component	ERC's/Bills	Allocated Cost	Cost Per ERC/Bill
Meters & Services	10,753.6	\$ 1,620,462	
Billing & Accounting	0	723,590	
Total		\$ 2,344,053	\$ 217.98

Customer Charge Design:

Size	Factors	Bills	SC ERC's	ERC \$	Service Charge
Monthly					
5/8"	1.0	92,275	7,689.6	\$ 18.16	\$ 18.16
3/4"	1.5	-	-	\$ 27.25	\$ 27.25
1"	2.5	3,099	645.6	\$ 45.41	\$ 45.41
1 1/2"	5.0	749	312.1	\$ 90.82	\$ 90.82
2"	8.0	1,662	1,108.0	\$ 145.32	\$ 145.32
Seasonal					
5/8"	15.0	683	853.8	\$ 272.47	\$ 272.47
3/4"	22.6	-	-	\$ 410.52	\$ 410.52
1"	37.6	27	84.6	\$ 683.00	\$ 683.00
1 1/2"	75.0	-	-	\$ 1,362.36	\$ 1,362.36
2"	120.0	6	60.0	\$ 2,179.78	\$ 2,179.78
Total		98,501	10,753.6		

Usage Rate Design	Total	Residential	Commercial	Industrial	PA	Seasonal
Revenue Requirement	\$ 7,121,356	\$ 5,184,359	\$ 1,367,285	\$ 9,501	\$ 120,567	\$ 439,643
Service Charge Revenue	\$ (2,344,053)	\$ (1,881,884)	\$ (279,618)	\$ (1,186)	\$ (25,681)	\$ (155,684)
Adjustments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Revenue Needed From Usage Rates	\$ 4,777,303	\$ 3,302,476	\$ 1,087,667	\$ 8,315	\$ 94,886	\$ 283,959
All CCF except Sgl Fam Res)	235,878	18,701	196,168	1,584	16,933	2,492
Block 1	364,117	335,980				28,137
Block 2	175,665	169,490				6,175
Rate per CCF	775,660	524,171	196,168	1,584	16,933	36,804
SF-Res Block 1		\$ 5.810				\$ 7.358
SF-Res Block 2		\$ 7.263				\$ 9.199
Non-SF Res All Usage		\$ 6.391	\$ 5.546	\$ 5.250	\$ 5.606	\$ 8.094
Usage Revenue	\$ 4,777,762	\$ 3,302,568	\$ 1,087,948	\$ 8,316	\$ 94,926	\$ 284,003
All Other					\$ -	\$ -
Total Usage Revenue	\$ 4,777,762	\$ 3,302,568	\$ 1,087,948	\$ 8,316	\$ 94,926	\$ 284,003
SC Revenue	\$ 2,344,053	\$ 1,881,884	\$ 279,618	\$ 1,186	\$ 25,681	\$ 155,684
Other Adjustments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Designed Rate Revenue	\$ 7,121,815	\$ 5,184,452	\$ 1,367,566	\$ 9,502	\$ 120,608	\$ 439,687
Revenue Requirement	\$ 7,121,356	\$ 5,184,359	\$ 1,367,285	\$ 9,501	\$ 120,567	\$ 439,643
Difference	\$ 459	\$ 93	\$ 281	\$ 1	\$ 41	\$ 44
Percent	0.01%	0.00%	0.02%	0.01%	0.03%	0.01%

Exhibit JFG - 1
Schedule 13
J.F. GUASTELLA

Aquarion Water Company of New Hampshire

ALLOCATION OF FIRE TO PUBLIC AND PRIVATE

Capacity Allocation:

Description	Units	Capacity Ratio	Weighted Unit	Allocated Cost	Unit Cost
Private Fire Hydrant	0	1.000	-	\$ -	
Private Fire Service					
3" or smaller	96	0.25	24.0	51,313	\$ 534.51
4"	74	0.40	29.6	63,286	\$ 855.22
6"	137	1.00	137.0	292,912	\$ 2,138.04
8"	19	1.80	34.2	73,121	\$ 3,848.48
10"	0	2.80	-	-	
12"	3	4.00	12.0	25,657	\$ 8,552.33
Public Fire Demands	495	1.000	495.0	1,058,332	\$ 2,138.04
Total Capacity			731.8	\$ 1,564,621	

Summary:

Fire Allocation Description	Public	Private	Total
Capacity	\$ 1,058,332	\$ 506,289	\$ 1,564,621
Billing	29	2,389	2,418
Hydrants	73,513		73,513
Total	\$ 1,131,875	\$ 508,678	\$ 1,640,552

Aquarion Water Company of New Hampshire

DESIGN OF FIRE RATES

Private

Description	Hydrants		Bills		Capacity	Total Rate
	Units	Rate	Units	Rate	Rate	
Private Fire Hydrant	495		0	\$ 7.26	\$ -	\$ 7.26
Private Fire Service:						
3" or smaller			96	7.26	534.51	\$ 541.77
4"			74	7.26	855.22	\$ 862.48
6"			137	7.26	2,138.04	\$ 2,145.30
8"			19	7.26	3,848.48	\$ 3,855.74
10"			0	7.26	5,986.54	\$ 5,993.80
12"			3	7.26	8,552.20	\$ 8,559.46
Total			329			

Public

Description	Units	Rate	Amount
Revenue Required			\$ 1,131,875
Individually Billed Hydrants	495	\$ 2,286.62	\$ -
Total Annual Public Charge			\$ 1,131,875

Aquarion Water Company of New Hampshire

DETAILED BILL ANALYSIS - PROPOSED RATES

Revenue From Rates	Proposed	Residential		Commercial		Industrial		Public Authority		Seasonal		Total	
		Service Charge	Rate	Units	Revenue	Units	Revenue	Units	Revenue	Units	Revenue	Units	Revenue
Monthly	5/8"	\$ 18.16		87,993	\$ 1,597,952.88	4,081	\$ 74,110.96	1	\$ 18.16	200	\$ 3,632.00	-	
	3/4"	\$ 27.25		-	\$ -	-	\$ -	-	\$ -	-	\$ -	92,275	\$ 1,675,714.00
	1"	\$ 45.41		1,927	\$ 87,505.07	1,112	\$ 50,495.92	-	\$ -	60	\$ 2,724.60	3,099	\$ 140,725.59
	1 1/2"	\$ 90.82		317	\$ 28,789.94	336	\$ 30,515.52	12	\$ 1,089.84	84	\$ 7,628.88	749	\$ 68,024.18
	2"	\$ 145.32		312	\$ 45,339.84	1,222	\$ 177,581.04	3	\$ 435.96	125	\$ 18,165.00	1,662	\$ 241,521.84
Seasonal	5/8"	\$ 272.47		-	\$ -	-	\$ -	-	\$ -	683	\$ 186,097.01	683	\$ 186,097.01
	3/4"	\$ 410.52		-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -
	1"	\$ 683.00		-	\$ -	-	\$ -	-	\$ -	27	\$ 18,441.00	27	\$ 18,441.00
	1 1/2"	\$ 1,362.36		-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -
	2"	\$ 2,179.78		-	\$ -	-	\$ -	-	\$ -	6	\$ 13,078.68	6	\$ 13,078.68
Subtotal SC				90,549	\$ 1,759,587.73	6,751	\$ 332,703.44	16	\$ 1,543.96	469	\$ 32,150.48	716	\$ 217,616.69
<u>Residential Usage</u>	CCF												
Monthly - Single Family	0-6 ccf Usage	\$ 5.810		335,980.0	\$ 1,952,043.80							335,980.0	\$ 1,952,043.80
	Over 6 ccf	\$ 7.263		169,490.1	\$ 1,231,006.60							169,490.1	\$ 1,231,006.60
Monthly - Multi Family	All Usage	\$ 6.391		18,701.0	\$ 119,518.09							18,701.0	\$ 119,518.09
<u>Commercial Usage</u>													
Monthly	All Usage	\$ 5.546				196,168.0	\$ 1,087,947.73					196,168.0	\$ 1,087,947.73
<u>Industrial Usage</u>													
Monthly	All Usage	\$ 5.250						1,584.0	\$ 8,316.00			1,584.0	\$ 8,316.00
<u>Public Authority Usage</u>													
Monthly	All Usage	\$ 5.606								16,933.0	\$ 94,926.40	16,933.0	\$ 94,926.40
<u>Seasonal Residential Usage</u>													
Monthly	0-6 ccf Usage	\$ 7.358										9,698.0	\$ 71,357.88
	Over 6 ccf	\$ 9.199										6,174.7	\$ 56,800.84
Monthly - Multi Family	All Usage	\$ 8.094										2,492.0	\$ 20,170.25
<u>Seasonal Non-Residential Usage</u>													
Monthly	All Usage	\$ 7.358										18,439.0	\$ 135,674.16
Subtotal Usage				524,171.1	\$ 3,302,568.49	196,168.0	\$ 1,087,947.73	1,584.0	\$ 8,316.00	16,933.0	\$ 94,926.40	36,803.7	\$ 284,003.13
Total					\$ 5,062,156.22		\$ 1,420,651.17		\$ 9,859.96		\$ 127,076.88		\$ 501,619.82
													\$ 7,121,364.04

Docket No. DW 20-184

Exhibit 13

Exhibit JFG - 1
Schedule 16
J.F. GUASTELLA

Aquarion Water Company of New Hampshire

DETAILED BILL ANALYSIS - PRESENT RATES

Revenue Present Rates

Present

		Residential		Commercial		Industrial		Public Authority		Seasonal		Total		
Service Charge	Rate	Units	Revenue	Units	Revenue	Units	Revenue	Units	Revenue	Units	Revenue	Units	Revenue	
Monthly	5/8"	\$ 15.60	87,993	\$ 1,372,690.80	4,081	\$ 63,663.60	1	\$ 15.60	200	\$ 3,120.00		92,275	\$ 1,439,490.00	
	3/4"	\$ 23.40	-	\$ -	-	\$ -	-	\$ -	-	\$ -		-	\$ -	
	1"	\$ 39.01	1,927	\$ 75,172.27	1,112	\$ 43,379.12	-	\$ -	60	\$ 2,340.60		3,099	\$ 120,891.99	
	1 1/2"	\$ 78.05	317	\$ 24,741.85	336	\$ 26,224.80	12	\$ 936.60	84	\$ 6,556.20		749	\$ 58,459.45	
	2"	\$ 124.87	312	\$ 38,959.44	1,222	\$ 152,591.14	3	\$ 374.61	125	\$ 15,608.75		1,662	\$ 207,533.94	
Seasonal	5/8"	\$ 234.00									683	\$ 159,822.00	683	\$ 159,822.00
	3/4"	\$ 351.00									-	\$ -	-	\$ -
	1"	\$ 585.15									27	\$ 15,799.05	27	\$ 15,799.05
	1 1/2"	\$ 1,170.75									-	\$ -	-	\$ -
	2"	\$ 1,873.05									6	\$ 11,238.30	6	\$ 11,238.30
Subtotal SC			90,549	\$ 1,511,564.36	6,751	\$ 285,858.66	16	\$ 1,326.81	469	\$ 27,625.55	716	\$ 186,859.35	98,501	\$ 2,013,234.73
Residential Usage		CCF												
Monthly	All Usage	\$ 4.536	528,517.0	\$ 2,397,353.11								528,517.0	\$ 2,397,353.11	
Commercial Usage														
Monthly	All Usage	\$ 4.536		196,168.0	\$ 889,818.05							196,168.0	\$ 889,818.05	
Industrial Usage														
Monthly	All Usage	\$ 4.536				1,584.0	\$ 7,185.02					1,584.0	\$ 7,185.02	
Public Authority Usage														
Monthly	All Usage	\$ 4.536						16,933.0	\$ 76,808.09			16,933.0	\$ 76,808.09	
Seasonal														
Monthly	All Usage	\$ 5.619								36,961.0	\$ 207,683.86	36,961.0	\$ 207,683.86	
Subtotal Usage			528,517.0	\$ 2,397,353.11	196,168.0	\$ 889,818.05	1,584.0	\$ 7,185.02	16,933.0	\$ 76,808.09	36,961.0	\$ 207,683.86	780,163.0	\$ 3,578,848.13
Total				\$ 3,908,917.47		\$ 1,175,676.71		\$ 8,511.83		\$ 104,433.64		\$ 394,543.21		\$ 5,592,082.86

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Aquarion Water Company of New Hampshire

COMPARISON OF PRESENT AND PROPOSED RATES AND REVENUES

Description		Bills/Usage	Present		Proposed		Percent Increase				
			Rates	Revenue	Rates	Revenue					
Service Charge:											
Monthly	5/8"	92,275	\$	15.60	\$	1,439,490	\$	18.16	\$	1,675,714	16.4%
	3/4"	-	\$	23.40	\$	-	\$	27.25	\$	-	16.5%
	1"	3,099	\$	39.01	\$	120,892	\$	45.41	\$	140,726	16.4%
	1 1/2"	749	\$	78.05	\$	58,459	\$	90.82	\$	68,024	16.4%
	2"	1,662	\$	124.87	\$	207,534	\$	145.32	\$	241,522	16.4%
Seasonal											
	5/8"	683	\$	234.00	\$	159,822	\$	272.47	\$	186,097	16.4%
	3/4"	-	\$	351.00	\$	-	\$	410.52	\$	-	17.0%
	1"	27	\$	585.15	\$	15,799	\$	683.00	\$	18,441	16.7%
	1 1/2"	-	\$	1,170.75	\$	-	\$	1,362.36	\$	-	16.4%
	2"	6	\$	1,873.05	\$	11,238	\$	2,179.78	\$	13,079	16.4%
Subtotal SC		98,501			\$	2,013,235			\$	2,343,602	16.4%
<u>Residential Usage</u>		ccf									
Monthly - Single Family	0-6 ccf Usage	335,980	\$	4.536	\$	2,397,353	\$	5.810	\$	1,952,044	37.8%
	Over 6 ccf	169,490	\$	4.536		N/A	\$	7.263	\$	1,231,007	
Monthly - Multi Family	All Usage	18,701	\$	4.536		N/A	\$	6.391	\$	119,518	
<u>Commercial Usage</u>											
Monthly	All Usage	196,168	\$	4.536	\$	889,818	\$	5.546	\$	1,087,948	22.3%
<u>Industrial Usage</u>											
Monthly	All Usage	1,584	\$	4.536	\$	7,185	\$	5.250	\$	8,316	15.7%
<u>Public Authority Usage</u>											
Monthly	All Usage	16,933	\$	4.536	\$	76,808	\$	5.606	\$	94,926	23.6%
<u>Seasonal Residential Usage</u>											
Monthly	0-6 ccf Usage	9,698	\$	5.619	\$	104,075.12	\$	7.358	\$	71,358	42.5%
	Over 6 ccf	6,175	\$	5.619		N/A	\$	9.199	\$	56,801	
Monthly - Multi Family	All Usage	2,492	\$	5.619		N/A	\$	8.094	\$	20,170	
<u>Seasonal Non-Residential Usage</u>											
Monthly	All Usage	18,439	\$	5.619	\$	103,609	\$	7.358	\$	135,674	30.9%
Subtotal UC		775,660			\$	3,578,848			\$	4,777,762	33.5%
Total GMS						\$	5,592,083		\$	7,121,364	27.3%
Private Services											
	3"	96	\$	441.12	\$	42,348	\$	541.77	\$	52,010	22.8%
	4"	74	\$	751.68	\$	55,624	\$	862.48	\$	63,824	14.7%
	6"	137	\$	1,793.28	\$	245,679	\$	2,145.30	\$	293,906	19.6%
	8"	19	\$	3,188.64	\$	60,584	\$	3,855.74	\$	73,259	20.9%
	10"	-	\$	4,983.72	\$	-	\$	5,993.80	\$	-	20.3%
	12"	3	\$	7,041.24	\$	21,124	\$	8,559.46	\$	25,678	21.6%
Total Private		329			\$	425,359			\$	508,677	19.6%
Public Fire Charge		495	\$	1,740.41			\$	2,286.62			
Annual Public Charge By System											
	Hampton	280			\$	475,132			\$	640,254	34.8%
	North Hampton	149			\$	259,321			\$	340,706	31.4%
	Rye Beach	24			\$	41,770			\$	54,879	31.4%
	Jenness Beach	42			\$	73,097			\$	96,038	31.4%
Total Public Fire		495			\$	849,320			\$	1,131,877	33.3%
Total Fire					\$	1,274,679			\$	1,640,554	28.7%
Total Revenue From Rates						\$	6,866,762		\$	8,761,918	27.6%
WICA Surcharge						\$	515,007			N/A	
Other Revenue							221,871			227,663	2.6%
						\$	7,603,640		\$	8,989,581	18.2%

Aquarion Water Company of New Hampshire

TYPICAL BILL COMPARISON

		Size	Usage	Present	Proposed	Increase
Residential	Monthly	5/8"				
Sgle-Fam			6 \$	42.82 \$	53.02 \$	24%
			10 \$	60.96 \$	82.07 \$	35%
			25 \$	129.00 \$	191.02 \$	48%
Multi-Fam	Monthly	5/8"				
			6 \$	42.82 \$	56.51 \$	32%
			10 \$	60.96 \$	82.07 \$	35%
			25 \$	129.00 \$	177.94 \$	38%
Commercial	Monthly	5/8"				
			25 \$	129.00 \$	156.81 \$	22%
			50 \$	242.40 \$	295.46 \$	22%
			100 \$	469.20 \$	572.76 \$	22%
Industrial	Monthly	2"				
			25 \$	238.27 \$	276.57 \$	16%
			50 \$	351.67 \$	407.82 \$	16%
			100 \$	578.47 \$	670.32 \$	16%
Public Authority	Monthly	2"				
			25 \$	238.27 \$	285.47 \$	20%
			50 \$	351.67 \$	425.62 \$	21%
			100 \$	578.47 \$	705.92 \$	22%
Res. Seasonal	Avg 7 Mo. Seasonal	5/8"				
Sgle-Fam			42 \$	470.00 \$	581.51 \$	24%
			70 \$	627.33 \$	839.08 \$	34%
			175 \$	1,217.33 \$	1,804.97 \$	48%
			350 \$	2,200.65 \$	3,414.80 \$	55%
Multi-Fam	Avg 7 Mo. Seasonal	5/8"				
			42 \$	470.00 \$	612.42 \$	30%
			70 \$	627.33 \$	839.05 \$	34%
			175 \$	1,217.33 \$	1,688.92 \$	39%
			350 \$	2,200.65 \$	3,105.37 \$	41%
Non-Res. Seasonal	Avg 7 Mo. Seasonal	5/8"				
			42 \$	470.00 \$	581.51 \$	24%
			70 \$	627.33 \$	787.53 \$	26%
			175 \$	1,217.33 \$	1,560.12 \$	28%
			350 \$	2,200.65 \$	2,847.77 \$	29%