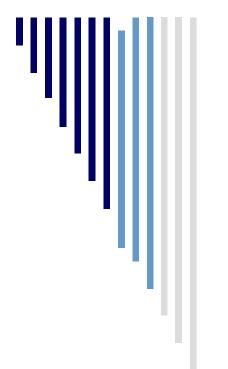
# Guastella Associates, LLC

# **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

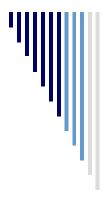
Guastella Associates, LLC ("formerly John F. Guastella Associates, Inc.") is a consulting firm that specializes in providing utility rate setting, valuation and management services for public and privately-owned water and wastewater utilities.

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. <u>Revenue Requirements</u>

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. <u>Reports</u>

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

#### A. <u>Appraisals</u>

II.

VALUATIONS

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.

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

Year	Client	State	<b>Regulatory Docket/Case Number</b>
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

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

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 Cour	t 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

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

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

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

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

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	<ol> <li>Basics of Rate Setting</li> <li>Cost Allocation and Rate Design</li> <li>Revenue Requirements</li> </ol>	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

Exhibit JFG - 1 J.F. GUASTELLA

# Aquarion Water Company of New Hampshire

COST OF SERVICE STUDY

December 18 2020

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Exhibit JFG - 1 Schedule 1 J.F. GUASTELLA

# Aquarion Water Company of New Hampshire

### FUNCTIONAL ALLOCATION TO CUSTOMER CLASSES

													Fire Se	ervic	е
Function	Total		Residential		Commercial		Industrial		PA		Seasonal		Capacity		lydrants
Base	\$ 2,959,43	0 \$	1,984,328	\$	736,573	\$	5,505	\$	64,131	\$	139,241	\$	29,653	\$	-
Extra Capacity: Maximum Day Peak Hour	\$ 1,045,82 \$ 2,336,67		512,067 806,081		,	\$ \$	941 1,869	\$ \$	11,033 19,721	\$ \$	59,873 84,844		335,228 1,199,740		-
Customer: Meters / Services	\$ 1,620,46	2 \$	1,216,708	\$	230,025	\$	1,070	\$	22,233	\$	150,428	\$	-	\$	-
Billing & Accounting	\$ 726,00	8 \$	665,176	\$	49,594	\$	116	\$	3,449	\$	5,256	\$	2,418	\$	-
Hydrants	\$ 73,51	3 \$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	73,513
Total	\$ 8,761,90	8 \$	5,184,359	\$	1,367,285	\$	9,501	\$	120,567	\$	439,643	\$	1,567,039	\$	73,513

### ALLOCATION OF PRO FORMA REVENUE REQUIREMENT TO FUNCTIONAL CLASSIFICATIONS

				Extra - (	Capacity	Cust	omer	
Description	Total Amount	Code	Base	Maximum Day	Peak Hour	Meters and Services	Billing and Accounting	Hydrants
· ·								
UTILITY OPERATING INCOME	\$ 2,893,039	31	\$ 1,053,793	\$ 266,618	\$ 1,209,496	\$ 344,772	\$ 3,071	\$ 15,288
OPERATION & MAINTENANCE DEPRECIATION PROPERTY TAXES PAYROLL TAXES INCOME TAX	3,281,139 1,310,407 860,716 87,976 556,294	64 71 41 62 31	1,008,759 445,258 293,492 32,393 202,631	436,312 219,271 76,851 22,678 51,267	281,271 314,957 357,238 1,852 232,570	792,148 317,916 121,693 19,744 66,295	729,902 - 11,309 591	32,749 13,005 11,442 - 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 Antenna rental income Misc. charge	(36,762) (163,511) (27,389)	21 21 21	(12,417) (55,228) (9,251)	( , ,	(43,606)	(30,240)	(13,548)	(1,372)
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%

Exhibit JFG - 1 Schedule 3 J.F. GUASTELLA

### Aquarion Water Company of New Hampshire

#### ALLOCATION OF RATE BASE ELEMENTS TO FUNCTIONAL CLASSIFICATIONS

				Extra - Capacity					
Description	Total Amount	Code	Base		Maximum Day	Peak Hour	Meters and Services	Billing and Accounting	Hydrants
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%

#### ALLOCATION OF UTILITY PLANT TO FUNCTIONAL CLASSIFICATIONS

						Extra -	Capacity	Customer			
								Meters	Billing		
Account			Total			Maximum	Peak	and	and		
No.	Description		Amount	Code	Base	Day	Hour	Services	Accounting	H	lydrants
	Intangible Plant										
301	Organization	\$	17,700	1	17,700	-	-	-	-		-
	Source of Supply Plant										
310	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	-	-	-		-
	Pumping Plant										
321	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	-	-		-
	Water Treatment Plant										
331	Structures & Improvements	\$	1,068,822	2	628,681	440,141	-	-	-		-
332	Water Treatment Equipment	\$	2,177,877	2	1,281,027	896,850	-	-	-		-
	Transmission and Distribution Diant										
340	Transmission and Distribution Plant Land & Land Rights (T & D)	\$	314,551	5		-	314,551				
340 341	Structures & Improvements	э \$	32.894	5 42	8.773	-	17,379	6.162	-		- 579
342	Distribution Reservoirs & Standpipes	э \$	2,708,344	42 5	0,773	-	2,708,344	0,102	_		579
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
	General Plant										
390	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 41	113	30	137	47	-	1	4
394	Tools, Shop & Garage Equipment Power Operated Equipment	\$ \$	87,849	41 41	29,955	7,844	36,462	12,421	-		1,168
396 397	Communications Equipment	\$ \$	109,715	41	37,411	9,796 4,603	45,537	15,512 7,289	-		1,459 685
397 398	Miscellaneous Equipment	\$ \$	51,553 219,461	41	17,579 74,833	4,603 19,595	21,397 91,087	7,289 31,029		1	685 2,918
390		φ	219,401	41	74,033	19,095	91,007	51,029	-		2,910
		1									
	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%

#### ALLOCATION OF ACCUMULATED DEPRECIATION TO FUNCTIONAL CLASSIFICATIONS

							Extra -	Capacity	Customer		Γ		
								Meters		B	illing		
Account			Total				Maximum	Peak	and		and		
No.	Description		Amount	Code		Base	Day	Hour	Services	Acc	ounting	ł	Hydrants
	Intangible Plant												
301	Organization	\$	9,085	2	\$	5,343.80	\$ 3,741.20	\$-	\$-	\$	-	\$	-
303	Miscellaneous Intangible Plant	\$	(15,221)	2		(8,952.99)	(6,268.01)	-	-		-		-
	Source of Supply Plant												
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	-	-		-		-
		·					,						
	Pumping Plant												
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	-		-		-
	Water Treatment Plant												
331	Structures & Improvements	\$	(56,160)	2		(33,033)	(23,127)	-	-		-		-
332	Water Treatment Equipment	\$	73,919	2		43,479	30,440	-	-		-		-
							-						
	Transmission and Distribution Plant												
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 6		-	-	-	2,284,927		-		-
346 347	Meters	\$	32,560	6		-	-	-	32,560		-		-
347	Meter Installation Hydrants	\$ \$	187,135 378,689	8		-	-	-	187,135		-		- 378.689
348	Other T & D Plant	э \$	91.531	52		- 18.057	-	42.696	26.736		- 0		4.042
545		Ψ	31,551	52		10,007	-	42,030	20,750		0		4,042
	General Plant												
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		-	1	155
394	Tools, Shop & Garage Equipment	\$	56,417	51		16,166	5,616	20,752	12,059		-	1	1,823
395	Laboratory Equipment	\$	(508)	51		(146)	(51)	(187)	(109)		-	1	(16)
396	Power Operated Equipment	\$	97,089	51		27,821	9,665	35,713	20,752		-	1	3,138
397 398	Communications Equipment Miscellaneous Equipment	\$ \$	68,257 93,068	51 51		19,559 26,669	6,795 9,265	25,107 34,234	14,589 19,893		-	1	2,206 3,008
390		à	93,008	51		20,009	9,265	34,234	19,893		-	1	3,008
	TOTALS	¢	13,570,348	51	6	3,888,633	\$ 1 350 046	\$ 4,991,666	¢ 2 000 EE1	¢		\$	438,552
		φ	13,370,340	51	φ	3,000,033	ψ 1,330,940	ψ <del>4</del> ,551,000	ψ 2,300,331	φ	-	φ	-30,332
	PERCENTS	1	100.00%	51		28.66%	9.96%	36.78%	21.37%		0.00%		3.23%

#### ALLOCATION OF PRO FORMA OPERATION AND MAINTENANCE EXPENSES TO FUNCTIONAL CLASSIFICATIONS

601 603 604 611 612	Description Source of Supply Operation Labor & Expenses - Labor	,	Total Amount			Extra - 0 Maximum	Peak	Meters and	Billing and	
No. 601 603 604 611 612	Source of Supply	,								
601 603 604 611 612				Code	Base	Day	Hour	Services	Accounting	Hydrants
601 603 604 611 612										
603   604   611   612		\$	130	2	77	54	-	-	-	-
604   611   612	Merchandise Expenses	\$	70,268	2	41,332	28,936	-	-	-	-
611   612	Rent Expense	\$	22,650	2	13,323	9,327	-	-	-	-
612	Maint of Structures & Improvemt	\$	706	2	415	291	-	-	-	-
	Maint of Supply Eqmt	\$	35,929	2	21,133	14,796	-	-	-	-
	Maint. Of Wells & Springs	\$	5,286	2	3,109	2,177	-	-	-	-
!	Pumping									
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	-	-	-
	Misc Expenses	\$	11,656	4	4,317	3,022	4,317	-	-	-
631	Maint of Structures & Improvemt	\$	16,445	4	6,091	4,263	6,091	-	-	-
632 I	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	-	-	-
	Treatment									
	Supervision & Engineering - Labor	\$	4,741	2	2,789	1,952	-	-	-	-
	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 & Improvemt	\$	5,414	2	3,184	2,229	-	-	-	-
652	Maint of Treatment Eqmt	\$	26,751	2	15,735	11,016	-	-	-	-
-	Transmission & Distribution									
662	T&D Lines Expense	\$	36,114	3	13,377	-	22,738	-	-	-
663 I	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	-	4,8
670 I	Maint Supervision & Engineering	\$	600	61	80	-	139	353	-	:
	Maint of Structures & Improvemt	\$	59,662	61	7,980	-	13,828	35,115	-	2,73
	Maint of Storage	\$	1,436	5	-	-	1,436	-	-	-
	Maint of Mains	\$	81,462	3	30,174	-	51,289	-	-	-
	Maint of Services	\$	139,766	6	-	-	-	139,766	-	-
	Maint of Meters	\$	19,686	6	-	-	-	19,686	-	-
	Maint of Hydrants	\$	14,945	8	-	-	-	-	-	14,9
	Maint of Other T&D	\$	21,141	61	2,828	-	4,900	12,443	-	9
ſ	Customer Accounting									
	Meter Reading	\$	18,428	7	-	-	-	-	18,428	-
	Records and Collection	\$	258,707	7	-	-	-	-	258,707	-
	Uncollectible Accounts	\$	10,875	7	-	-	-	-	10,875	-
	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	2,22
	Administration & General									
	Administrative & General Salaries	\$	434,631	62	160,034	112,039	9,148	97,540	55,870	
	Office Supplies & Expense	ъ \$	70,290	62	10,034	5,845	9,148 6,917	97,540 24,829	20,991	- 8
		э \$		63	47,432	5,845 25,550		24,829		
	Outside Services	\$ \$	307,273				30,238	1	91,763	3,7
	Insurance		1,226	63	189	102	121	433	366	
	Injuries & Damages	\$	65,350	63	10,088	5,434	6,431	23,084	19,516	7
	Employee Benefits	\$	392,865	62	144,656	101,273	8,269	88,167	50,501	-
	Regulatory Commission Exp	\$	27,070	63	4,179	2,251	2,664	9,562	8,084	3
	Misc General Expense	\$	51,229	63	7,908	4,260	5,041	18,096	15,299	6
	Rents	\$	109,667	63	16,929	9,119	10,792	38,738	32,750	1,3
932	Maintenance of General Plant	\$	(62,025)	63	(9,574)	(5,157)	(6,104)	(21,909)	(18,523)	(7
		-	0.007.107							
	SUBTOTAL PERCENTS	\$	3,281,139 100.00%	64 64	\$ 1,008,759 30.74%	\$ 436,312 13.30%	\$ 281,271 8.57%	\$ 792,148 24.14%	\$ 729,902 22.25%	\$ <u>32,7</u> 1.0

#### ALLOCATION OF DEPRECIATION EXPENSE TO FUNCTIONAL CLASSIFICATIONS

		1					Extra - Capacity		Cus			
							Exad - V	Sapaony	Meters	Billing	1	
Account			Total				Maximum	Peak	and	and		
Number	Description		Amount	Code		Base	Day	Hour	Services	Accounting	Hvo	drants
	Booonpalon	1	/	0000		2000	20)		00111000	riccounting	,	aranto
	Intangible Plant											
303	Miscellaneous Intangible Plant	\$	885	2	\$	521	\$ 364	\$-	\$ -	\$-	\$	-
		Ť		-	Ť	021	¢ 00.	Ŷ	÷	Ŷ	Ť	
	Source of Supply Plant											
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	-	-	-		-
	Pumping Plant											
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	-	-		-
	Water Treatment Plant											
331	Structures & Improvements	\$	33,774	2		19,866	13,908	-	-	-		-
332	Water Treatment Equipment	\$	145,482	2		85,573	59,909	-	-	-		-
	Transmission & Distribution Plant											
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
	General Plant											
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
		-			<u> </u>							
	Less: CIAC Amortization	\$	(24,975)	3		(9,251)	-	(15,724)	-	-		-
	TOTAL	\$	1,310,407	71	\$ 4	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%

#### SUMMARY OF ALLOCATION FACTORS

			Extra - Capacity		Cust	omer	
Description	Code	Base	Maximum Day	Peak Hour	Meters and Services	Billing and Accounting	Hydrants
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

Exhibit JFG - 1 Schedule 8 Page 2 of 4

#### 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	2.7	)
Max Day Demand	1.70	)
Excess Peak Hour over Max Day	1.0	37.04%
Extra Capacity / Maximum Day:	0.70	25.93%
Average Day Demand	1.0	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.

#### 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.

				Extra - 0	Capacity	Cust	omer	
						Meters	Billing	
	Total			Maximum	Peak	and	and	
Description	Amount	Code	Base	Day	Hour	Services	Accounting	Hydrants
T&D - Storage, Mains, Meters Services & Hydrants TOTAL PERCENT	\$ 325,583 100.00%		\$ 43,550 13.38%		\$	• • •		\$

#### 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.

						Extra - 0	Сара	acity	Cust	ome	er		
											Billing	i i	
		Total			1	Maximum		Peak	Meters &		and	i i	
Description	ŀ	Amount	Code	Base		Day		Hour	Services		Accounting	I	Hydrants
												i .	
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%	i.	0.00%
												n in the second s	

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.

				Extra - (	Capacity	Cust	omer	
							Billing	
	Total			Maximum	Peak	Meters &	and	
Description	Amount	Code	Base	Day	Hour	Services	Accounting	Hydrants
TOTAL	\$ 1,300,170	63	\$ 200,700			. ,		
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.

### Exhibit JFG - 1 Schedule 9 J.F. GUASTELLA

### 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

#### CUSTOMER CLASS ALLOCATION FACTORS

		Base											Custo	mer	
	Aver	age Consur	mption		Max	dimum Day			P	eak Hour		Meters and	d Servcies	Billing and A	Accounting
Customer Class	Annual					Extra				Extra		Number		Number	
	MG	MGD	%	Ratio	MGD	MGD	%	Ratio	MGD	MGD	%	of ERC's	%	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

#### CALCULATION OF ERC's

										Mont	hly 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

#### CALCULATION OF DESIGNED CUSTOMER CHARGE AND USAGE RATE

Customer Charge Cost Component	ERC's/Bills	Allocat Cost		-	Cost Per ERC/Bill
Meters & Services Billing & Accounting Total	10,753.6 0	72	20,462 23,590 44,053	\$	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
3/4"	1.5	-	-	\$ 27.25	\$	27
1"	2.5	3,099	645.6	\$ 45.41	\$	45
1 1/2"	5.0	749	312.1	\$ 90.82	\$	90
2"	8.0	1,662	1,108.0	\$ 145.32	\$	145
Seasonal					-	
5/8"	15.0	683	853.8	\$ 272.47	\$	272
3/4"	22.6	-	-	\$ 410.52	\$	410
1"	37.6	27	84.6	\$ 683.00	\$	683
1 1/2"	75.0	-	-	\$ 1,362.36	\$	1,362
2"	120.0	6	60.0	\$ 2,179.78	\$	2,179
Total	I F	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) Block 1 Block 2	235,878 364,117 175,665		18,701 335,980 169,490	196,168	1,584		16,933		2,492 28,137 6,175
	775,660		524,171	196,168	 1,584		16,933		36,804
Rate per CCF			5.040						7.050
SF-Res Block 1 SF-Res Block 2		9 4	5.810 7.263					\$ ¢	7.358 9.199
Non-SF Res All Usage		₽ \$	6.391	\$ 5.546	\$ 5.250	\$	5.606	\$	8.094
Usage Revenue AllOther	\$ 4,777,762	\$	3,302,568	\$ 1,087,948	\$ 8,316	\$ \$	94,926	\$ \$	284,003
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 Hydrants	29 73,513	2,389	2,418 73,513
Total	\$ 1,131,875	\$ 508,678	\$ 1,640,552

### DESIGN OF FIRE RATES

Private

Hydr	ants	Bills		Capacity		
Units	Rate	Units	Rate	Rate		Total Rate
495		0	\$ 7.26	\$-	\$	7.26
		96	7.26	534.51	\$	541.77
		74	7.26	855.22	\$	862.48
		137	7.26	2,138.04	\$	2,145.30
		19	7.26	3,848.48	\$	3,855.74
		0	7.26	5,986.54	\$	5,993.80
		3	7.26		\$	8,559.46
		329				
	Units		Units         Rate         Units           495         0           96         74           137         19           0         3	Units         Rate         Units         Rate           495         0         \$ 7.26           96         7.26           74         7.26           137         7.26           19         7.26           3         7.26	Units         Rate         Units         Rate         Rate           495         0         \$ 7.26         \$ -           96         7.26         \$ 534.51           74         7.26         855.22           137         7.26         2,138.04           19         7.26         3,848.48           0         7.26         5,986.54           3         7.26         8,552.20	Units         Rate         Units         Rate         Rate           495         0         \$ 7.26         \$ -         \$           96         7.26         \$ 534.51         \$           74         7.26         855.22         \$           137         7.26         2,138.04         \$           19         7.26         3,848.48         \$           0         7.26         5,986.54         \$           3         7.26         8,552.20         \$

#### Public

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

#### DETAILED BILL ANALYSIS - PROPOSED RATES

Revenue From Rates	Proposed																			
	•			R	eside	ential	Co	mme	ercial	I	ndus	trial	Pub	lic A	uthority	Sea	sonal	Т	otal	I.
	Service Charge		Rate	Units		Revenue	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	20	) \$	3,632.00	-		92,275	\$	1,675,714.00
	3/4"	\$	27.25	-	\$	-	-	\$	-	-	\$	-	-	\$	-	-		-	\$	-
	1"	\$	45.41	1,927	\$	87,505.07	1,112	\$	50,495.92	-	\$	-	6	) \$	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	8	4 \$	7,628.88	-		749	\$	68,024.18
	2"	\$	145.32	312	\$	45,339.84	1,222	\$	177,581.04	3	\$	435.96	12	5\$	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	1,362.36	-	\$	-	-	\$	-	-	\$	-	-	\$	-	-	\$-	-	\$	-
	2"	\$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	46	9 \$	32,150.48	716	\$ 217,616.69	98,501	\$	2,343,602.30
Residential Usage	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
Commercial Usage																				
Monthly	All Usage	\$	5.546				196,168.0	\$	1,087,947.73									196,168.0	\$	1,087,947.73
Industrial Usage																				
Monthly	All Usage	\$	5.250							1,584.0	\$	8,316.00						1,584.0	\$	8,316.00
Public Authority Usage																				
Monthly	All Usage	\$	5.606										16,933.	D \$	94,926.40			16,933.0	\$	94,926.40
Seasonal Residential Usage																				
Monthly	0-6 ccf Usage	\$	7.358														\$ 71,357.88	9,698.0		71,357.88
	Over 6 ccf	\$	9.199														\$ 56,800.84	6,174.7		56,800.84
Monthly - Multi Family	All Usage	\$	8.094													2,492.0	\$ 20,170.25	2,492.0	\$	20,170.25
Seasonal Non-Residential Usage																				
Monthly	All Usage	\$	7.358														\$ 135,674.16		\$	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	775,659.8	\$	4,777,761.74
	Total				\$	5,062,156.22		\$	1,420,651.17		\$	9,859.96		\$	127,076.88		\$ 501,619.82		\$	7,121,364.04

Exhibit JFG - 1 Schedule 16 J.F. GUASTELLA

#### Aquarion Water Company of New Hampshire

#### DETAILED BILL ANALYSIS - PRESENT RATES

Revenue Present Rates	Present																			
				Residential		Coi	Commercial			Industrial			olic A	uthority	Seasonal		То		al	
	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 Commercial Usage	All Usage	\$	4.536	528,517.0	\$	2,397,353.11												528,517.0	\$	2,397,353.11
Monthly	All Usage	\$	4.536				196,168.0	\$	889,818.05									196,168.0	\$	889,818.05
Industrial Usage Monthly		\$	4.536							1,584.0	¢	7 105 00						1,584.0	¢	7 195 00
Public Authority Usage	All Usage	φ	4.550							1,564.0	φ	7,185.02						1,564.0	φ	7,185.02
Monthly	All Usage	\$	4.536										16,933.0	\$	76,808.09			16,933.0	\$	76,808.09
<u>Seasonal</u> Monthly	All Usage	\$	5.619													36,961.0	\$ 207,683.86	36,961.0	\$	207,683.86
Subtotal Usage	Ũ			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		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

#### COMPARISON OF PRESENT AND PROPOSED RATES AND REVENUES

				Present				Pro	ed	Percent	
Description		Bills/Usage		Rates	Revenue			Rates		Revenue	Increase
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		-	17.09
	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	Ψ \$	2,179.78	\$	13,079	16.49
Subtotal SC	-	98,501	Ψ	1,010.00	\$	2,013,235	Ŷ	2,110.10	\$	2,343,602	16.4%
Residential Usage	ccf										
Monthly - Single Family	0-6 ccf Usage	335,980	\$	4.536	\$	2,397,353	\$	5.810	\$	1,952,044	37.8%
Monany Ongio Lanniy	Over 6 ccf	169,490	φ \$	4.536	Ψ	2,397,333 N/A	φ \$	7.263	φ \$	1,231,007	51.07
Monthly - Multi Family	All Usage	18,701		4.536		N/A	э \$	6.391	ф \$	119,518	
Commercial Usage	An Usaye	10,701	φ	4.000		IN/A	φ	0.591	φ	119,010	
Monthly		196,168	¢	4.536	\$	889,818	¢	5.546	\$	1 097 049	22.3%
Industrial Usage	All Usage	190,100	φ	4.550	φ	009,010	φ	5.540	φ	1,087,948	22.37
		4 504	¢	4 500	¢	7 405	¢	5 050	¢	0.040	45 70
Monthly	All Usage	1,584	Ф	4.536	\$	7,185	Ф	5.250	\$	8,316	15.7%
Public Authority Usage		40.000	•		•	70.000	•		•		
Monthly	All Usage	16,933	\$	4.536	\$	76,808	\$	5.606	\$	94,926	23.6%
Seasonal Residential Usage											
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	
Seasonal Non-Residential Usage											
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		00	•		•	40.040	•	E 4 4 7 7	•	50.040	00.00
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 Annual Public Charge By System		495	\$	1,740.41			\$	2,286.62			
Hampton		280			\$	475,132			\$	640,254	34.8%
North Hampton		149			\$	259,321			Ψ \$	340,706	31.4%
Rye Beach		24			φ \$	41,770			φ \$	54,879	31.49
Jenness Beach		42			э \$	73,097			ф \$	96,038	31.49
Total Public Fire		42			ֆ \$						
Total Public Fire		495			ծ \$	849,320 1,274,679			\$ \$	1,131,877 1,640,554	33.3% 28.7%
Total Revenue From Rates					\$	6,866,762			\$	8,761,918	27.6%
WICA Surcharge					ֆ \$	515,007			φ		21.07
5					φ	221,871				N/A 227,663	2.6%
Other Revenue											

### TYPICAL BILL COMPARISON

		Size	Usage	Present	F	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	Ū		42	\$ 470.00	\$	581.51	24%
C C			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"					
	Ū		42	\$ 470.00	\$	612.42	30%
			70	\$ 627.33	\$	839.05	34%
			175	\$ 1,217.33	\$	1,688.92	39%
			350	\$ 2,200.65	\$		41%
Non-Res. Seasonal	Avg 7 Mo. Seasonal	5/8"					
	0		42	\$ 470.00	\$	581.51	24%
			70	627.33		787.53	26%
			175			1,560.12	28%
				2,200.65		2,847.77	29%