

**Aqua Utilities Florida, Inc.  
Exhibit No. 1.6**

**AQUA UTILITIES FLORIDA, INC.**

**DIRECT TESTIMONY**

**OF**

**JOHN F. GUASTELLA**

**(Docket No. 080121-WS)**

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FPSC-COMMISSION CLERK

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

AQUA UTILITIES FLORIDA, INC.

DIRECT TESTIMONY OF JOHN F. GUASTELLA

DOCKET NO. 080121-WS

Q. Please state your name and business address.

A. John F. Guastella, Guastella Associates, Inc., 6 Beacon Street, Suite 410, Boston, MA 02108.

Q. Please describe Guastella Associates, Inc.

A. Guastella Associates, Inc. provides utility management; valuation and rate consulting services to both regulated and unregulated utilities.

Q. Please describe your educational, professional and business background and experience.

A. I graduated from Stevens Institute of Technology in June of 1962, receiving a degree in Mechanical Engineering. I am a licensed professional engineer. I have completed courses in utility regulation sponsored by the National Association of Regulatory Utility Commissioners ("NARUC") and conducted by the University of Colorado, University of South Florida, Florida Atlantic University, the University of Utah, Florida State University, and the University of Florida.

I was employed by the New York State Public Service Commission for sixteen years from 1962 to 1978. With the exception of two years in which I was involved in the regulation of electric and gas utilities, my time with the New York Commission was devoted to the regulation of water utilities. After a series of promotions during the years

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1 1962 to 1970, attained through competitive examinations, I was promoted to Chief of  
2 Rates and Finance in the Commission's Water Division. In 1972, I was made Assistant  
3 Director of the Water Division. In 1974, I was appointed by the Chairman of the  
4 Commission as Director of the Water Division, a position I held until my resignation  
5 from the Commission in August of 1978.

6  
7 My duties with the Commission included the performance and supervision of various  
8 engineering and economic studies concerning valuation of utility property, financing,  
9 rates and service of electric, gas and water utilities. While in the Water Division, I either  
10 examined or supervised the examination of the books and records of literally hundreds of  
11 water utilities.

12  
13 As Director of the Water Division, I was responsible for the regulation of more than 450  
14 water companies in New York State, heading a professional staff consisting of 32  
15 engineers and three technicians. One of my primary duties was to advise the  
16 Commission during its adjudication of formal proceedings, as well as other matters. In  
17 the course of those deliberations, testimony, exhibits and briefs submitted in formal  
18 proceedings were reviewed and analyzed. My duties and responsibilities covered such  
19 subjects as the reasonableness of investments in utility plant, appropriate depreciation,  
20 contributions in aid of construction, advances in aid of construction, construction work in  
21 progress, working capital, amortizations, rate base, revenue level, operation and  
22 maintenance expenses, taxes, cost of capital, fundable capital, financing, capital structure,  
23 rate of return, rate design, rate structure, quality of service and, in general, all aspects of  
24 utility valuation, rate setting and service.

1  
2 Another major responsibility was the review of all proposed legislation affecting water  
3 utilities in New York and the subsequent preparation of recommendations for use by the  
4 governor or the legislature in considering such legislation. I also made legislative  
5 proposals and participated directly in drafting bills that were enacted: one expanded the  
6 New York Commission's jurisdiction with respect to the regulation of the service  
7 provided by small water companies and another dealt specifically with rate regulation and  
8 financing of developer-related water systems. During my employment with the New  
9 York Commission, I handled or supervised the handling of thousands of consumer  
10 complaints by individuals, corporations and municipal, governmental and political  
11 officials.

12  
13 In 1978, I formed Guastella Associates, Inc. Concurrently with my position as President  
14 of Guastella Associates, Inc., I served as President of Country Knolls Water Works, Inc.  
15 from 1987 to 1991, directing the management and operation of this utility which served  
16 some 5,000 customers.

17  
18 I have prepared appraisals and valuations of utility property, depreciation studies, rate  
19 analyses, cost allocation and rate design studies, and management and financial analyses.  
20 I have provided consulting services for municipal and investor-owned water and  
21 wastewater utilities, as well as gas utilities and solid waste collection and disposal  
22 companies.

23

1 Q. Have you previously presented expert testimony in proceedings involving regulatory  
2 agencies, municipal jurisdictions and court cases with respect to utility matters?

3 A. Yes.

4 Q. In what states were the utilities located?

5 A. My testimony was presented on behalf of utilities or regulatory agencies in the states of  
6 Alaska, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Maryland,  
7 Massachusetts, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico,  
8 New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Carolina, Texas, and  
9 Virginia.

10 Q. Briefly state your activities in connection with professional organizations and  
11 associations.

12 A. I served as Vice-Chairman of the Staff-Committee on Water of NARUC. While on that  
13 committee, I prepared a 95-page instruction manual entitled, "Model Record-Keeping  
14 Manual for Small Water Companies," which was published by the NARUC. The manual  
15 describes in detail the kinds of operating and accounting records that should be kept by  
16 small water utilities, with instructions on how to use those records in order to properly  
17 operate a water system and properly keep account of the cost of providing service.

18  
19 Since 1974, I have prepared the rate case study material, assisted in the coordination of  
20 the program and served as an instructor at the Annual Fall Seminar on Water Rate  
21 Regulation sponsored by the NARUC and conducted by the University of South Florida,  
22 Florida Atlantic University, University of Utah, Florida State University, the University  
23 of Florida, and currently Michigan State University. This seminar is recognized as being  
24 one of the best in the country for teaching rate-setting principles and methodology. It is

1 attended by representatives of regulatory agencies, utilities, and engineering, accounting,  
2 economic and law firms throughout the country. In 1980, as a special consultant to  
3 NARUC, I assisted in the establishment of another similar seminar, which has been held  
4 annually in the spring in the western United States.

5  
6 I served as an instructor and panelist in a seminar on water and sewer utility regulation  
7 conducted by the Independent Water and Sewer Companies of Texas. In 1998, I  
8 prepared and conducted a rate regulation seminar in Maine on behalf of the New England  
9 Chapter of the National Association of Water Company's ("NAWC"). In 2000 and 2001,  
10 I prepared and conducted a seminar for developer related and small water and sewer  
11 utilities in conjunction with Florida State University, and again in 2003 in conjunction  
12 with the University of Florida. This seminar provided instruction as to the financial  
13 structuring of utilities, rate setting, financing and valuation for market value  
14 determinations in preparation for negotiated sales or condemnations. It also identified the  
15 various problems faced by small utilities, the impact on their operations and potential  
16 solutions. In 2005, I prepared and conducted a special seminar on rate regulation for the  
17 newly formed Office of Regulatory Staff in South Carolina. In 2006 and 2007, I  
18 prepared and conducted seminars on rate regulation and valuation on behalf of the New  
19 York and New England Chapters of NAWC, respectively.

20  
21 As a member of the NAWC, I served on its Rates and Revenue Committee and Small  
22 Company Committee. I am a life-time member of the American Water Works  
23 Association ("AWWA") and served on its Water Rates Committee, assisting in the  
24 preparation of the AWWA Rates Manual, Third Edition. I am a life-time member of the

1 New England Water Works Association. I have also served on a joint committee on rate  
2 design composed of staff members of NARUC and NAWC. In connection with my  
3 serving on these committees, and in connection with cost allocation and rate design  
4 studies I have performed in the course of my work, I have participated in decisional  
5 meetings to determine proper engineering and construction criteria in relation to costs in  
6 the design of water and sewer systems.

7  
8 I have prepared and presented papers at a number of meetings of the National Association  
9 of Water Companies, the National Association of Regulatory Utility Commissioners, the  
10 New England Conference of Public Utilities Commissioners, the Mid-America  
11 Regulatory Conference, and at meetings of the Public Utility Law Section of the New  
12 Jersey Bar Association, the Pennsylvania Environmental Council, the Southeastern  
13 Association of Regulatory Utility Commissioners, the New Jersey Chapter of the  
14 American Water Works Association, and the Florida, New England, New Jersey and  
15 New York chapters of NAWC. I also participated in a special workshop conducted by  
16 the U.S. Environmental Protection Agency, State Revolving Fund Section, with respect  
17 to its Full Cost Pricing Initiative.

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

19 A. Guastella Associates, Inc. has been retained by Aqua Utilities, Florida ("AUF" or  
20 "Company") to provide consulting services with respect to the preparation of its rate  
21 filing. In addition to general assistance in the preparation of the MFRs, our specific  
22 assignment included the performance of used and useful analyses.

23

1 Q. What is the scope of work performed by Guastella Associates in connection with this  
2 assignment?

3 A. Mr. Gary C. White, Mr. John M. Guastella and I have examined the Company's  
4 operating and billing data, and we supervised an analysis of the maps of each system.  
5 Our work was also coordinated with that of the Company's staff as well as other  
6 consultants.

7 Q. Have you prepared or supervised the preparation of any schedules that comprise  
8 the Minimum Filing Requirements?

9 A. Yes, the following schedules of the Minimum Filing Requirements ("MFR") were  
10 prepared by me or under my direction: Schedules F-5, F-6, F-7, F-8, F-9 and F-10. The  
11 results of my used and useful analysis are also reflected in Schedules A-1, A-2, A-3, A-5,  
12 A-6, A-7, A-9, A-10, A-12, A-14, B-13 and B-14.

13 Q. Are schedules F-5 through F-10 all related to used and useful calculations?

14 A. Yes.

15 Q. Would you please explain what you mean by used and useful?

16 A. The term "used and useful" is simply a regulatory rate setting term that describes the cost  
17 of property that is included in a utility's rate base (net investment) upon which the utility  
18 is entitled to earn a rate of return. The balance of the cost of property that is excluded  
19 from rate base is referred to as "non used and useful" or "future use" plant.

20

21 The reason for performing this type of allocation study is to have existing customers pay  
22 rates based on the cost of plant necessary to provide safe and adequate service to them on  
23 a reasonably continuous basis, and therefore preclude any subsidization of future  
24 customers by existing customers.



1 **Q. Is there a prescribed method for performing used and useful analyses?**

2 A. The FPSC recently adopted Rule 25-30.4325 with respect to Water Treatment and  
3 Storage Used and Useful Calculations in Docket No. 070183-WS. In addition, Rule 25-  
4 30.432 provides for Wastewater Treatment Plant Used and Useful Calculations. Those  
5 rules require specific calculations as well as opportunity to apply judgment if variations  
6 of the specific formulas or input data are supported.

7 **Q. What was your approach in performing the used and useful calculations?**

8 A. With a few minor exceptions that I will address, I applied the provision of the FPSC rules  
9 to which I referred.

10 **Q. Are you able to summarize your used and useful determinations without discussing  
11 the individual calculations for each of the water and wastewater systems?**

12 A. Yes. The rate filing includes 57 water and 25 wastewater systems that are relatively  
13 small - - some very small - - and most have characteristics that have enabled an easy  
14 determination of used and useful, as described in the respective "F" schedules. The used  
15 and useful F schedules include specific calculations and, if appropriate, explanations of  
16 the proposed used and useful percentages.

17 **Q. Before summarizing your used and useful determinations, would you describe the  
18 source of the data you used?**

19 A. The data were obtained from the Company, as reflected in the various "F" schedules  
20 showing demands and capacities, and including operating and billing reports and maps.

21 **Q. Did you use a margin of reserve in your calculations?**

22 A. Yes, but in many instances the used and useful percentages were found to be 100%  
23 regardless of a margin reserve allowance.

24 **Q. Would you briefly describe margin reserve?**

1 A. Margin reserve is an allowance for growth in customers for a five-year period after the  
2 test year. The Company's revenue requirement is based on the 2007 test year, and the  
3 growth was projected to 2012. A margin reserve allowance recognizes that utilities must  
4 have capacity available to provide service to new customers so that both new and existing  
5 customers will in the future receive adequate service. Obviously, facilities must be  
6 installed and operational in order to provide service to customers in the future, and the  
7 utility must incur costs for those facilities that must be recognized in setting rates.

8 **Q. With respect to permanent rates, would you please describe your determination of**  
9 **the used and useful percentages of the water transmission and distribution mains?**

10 A. On the basis of our take-offs of the individual system maps, and review of the number of  
11 connected customers and related ERCs, I found that transmission and distribution mains  
12 of 39 water systems are 100% used and useful. Transmission and distribution water  
13 mains were determined to be 100% used and useful when the ratio of ERCs to total lots  
14 (lots with mains fronting the property) was found to be over 90% or greater, after an  
15 allowance for margin reserve, and when the system was fully developed as planned.  
16 Only 2 systems (Piney Woods/Spring Lake and Palm Port) were treated as 100% because  
17 the ratio of ERCs to lots on lines exceed 90%. There are 5 systems (Beecher's Point,  
18 Friendly Center, Hobby Hills, Silver Lake Estates/Western Shores and Village Water) for  
19 which the ratio of ERCs to lots on line were less than 100% but the used and useful  
20 percentage was treated as 100% because the systems are fully developed or built out.  
21 There are 32 systems for which transmission and distribution mains were found to be  
22 100% used and useful on the basis of the ratio of ERCs to lots on line. There are 18  
23 systems where the used and useful percentages for transmission and distribution mains

1 were found to be less than 100% and the calculated percentages were used without  
2 adjustment.

3 **Q. Why do you use ERCs as the numerator in the ratio of ERCs to lots on lines with**  
4 **respect to mains?**

5 A. Mains are not only designed to cover distance, but also to meet varying demands. A ratio  
6 of connected lots to total lots on lines would only consider distance; the ratio of ERCs to  
7 total lots on lines take into account both distance and demands, because ERCs reflect the  
8 higher demands of general service customers or customers with larger meters.

9 **Q. Would you please describe your determination of the used and useful percentages of**  
10 **the wastewater collection mains?**

11 A. The calculations of the used and useful percentages for the collection (gravity) mains are  
12 similar to those for the water mains. The number of connected customers and total lots  
13 fronting mains was obtained from the map take-offs of individual systems. The ratio of  
14 ERCs (adjusted for margin reserve) to total lots on lines determined the used and useful  
15 percentage, but adjusted to 100% if the ratio exceeded 90% or the system is fully  
16 developed. Although there are 2 systems in which that ratio exceeded 90%, those  
17 systems as well as 5 others are fully developed, and treated as 100% used and useful.  
18 There are 11 systems for which the ratio of ERCs to total lots on lines produced 100%  
19 used and useful, without adjustment. There are 7 wastewater systems for which the  
20 collection mains were found to be less than 100% used and useful; specifically, Holiday  
21 Haven, Leisure Lakes, Palm Port, Silver Lake Oaks, Sunny Hills, The Woods and Village  
22 Water.

23

1 **Q. Why are your calculations of used and useful only applicable to collection gravity**  
2 **mains?**

3 A. The recently adopted rules with respect to water treatment and storage facilities state that  
4 the Commission's used and useful evaluation will consider the prudence of the  
5 investment, economies of scale and other relevant factors. Those considerations are also  
6 applicable to used and useful evaluations of other components of utility systems, such as  
7 lift stations and force mains. There are no customers directly connected to force mains  
8 and they are not comprised of a grid of collection mains, as is the case of gravity mains.  
9 Typically, there is significantly less footage of force mains, and they serve the purpose of  
10 dealing with the elevations of the service area. Wastewater from multiple customers is  
11 collected by gravity mains into the receiving wells of lift stations and pumped towards  
12 the treatment facilities. The size and cost of lift stations and force mains would not  
13 significantly fluctuate if more or less customers are added to the gravity mains; nor would  
14 it be economically prudent or practical to construct and replace such facilities with  
15 slightly increasing capacities, particularly when the design must not only accommodate  
16 average wastewater flow but also peak periods of inflow and infiltration during heavy  
17 rainfalls -- a factor not taken into account in the ratio of ERCs to lots on lines.  
18 Accordingly, the ratio of ERCs to lots on lines is not similarly applicable to lift stations  
19 and force mains, and considerations of prudence and economies of scale reasonably  
20 support the use of 100% for the used and usefulness of lift stations and force mains.

21 **Q. Your testimony thus far regarding the used and useful percentages of water**  
22 **transmission and distribution mains and wastewater collection mains pertains to**  
23 **permanent rates. What are the respective percentages for interim rates?**

1 A. The used and useful percentages with respect to interim rates are the same as for  
2 permanent rates for both water mains and sewer mains, except that the calculated ratio of  
3 ERCs to lots on lines was not adjusted to 100% when the ratio exceeded 90% or when the  
4 system is fully developed.

5 **Q. Would you summarize the results of your used and useful determination for the**  
6 **water treatment plants?**

7 A. Yes. First, however, I would point out that for interim rates for both water and  
8 wastewater plants, our calculations followed the methods accepted by the Commission in  
9 the last rate decisions, as best as we could understand them.

10

11 For permanent rates, the calculations comply with the recently adopted Rule 25-30.4325.

12 The specific calculations are shown in the appropriate F schedules, and when a departure  
13 from those calculations was allowable under the under the rule, an explanation is  
14 provided in addition to the calculations. A spreadsheet analysis is also being provided as  
15 a work paper containing summaries of all source data and component calculations, by  
16 system.

17

18 With respect to water systems with storage, exclusive of hydropneumatic tanks, all  
19 storage facilities were determined to be 100% used and useful for both interim and  
20 permanent rates.

21

22 For interim rates, 17 of the 57 systems were calculated to be less than 100% used and  
23 useful. For permanent rates, only 5 systems have used and useful percentages that are

1 less than 100%, including Hermits Cove, Picciola Island, Sebring Lakes, Venetian  
2 Village and Welaka/Saratoga Harbour.

3 **Q. Did you vary from the Commission's new rule with respect to the calculation of**  
4 **water treatment plants?**

5 A. No. I would, however, note that for 10 water systems (Chuluota, Haines Creek, Hobby  
6 Hills, Lake Gibson Estates, Picciola Island, Piney Woods/Spring Lake, Pomona Park,  
7 Silver Lake Estates/Western Shores, Sunny Hills and Tangerine) the calculated lost and  
8 unaccounted for water is 10.6% to 12.2%. Although these percentages are above the  
9 10% figure as stated as excessive in the Rule, 25-30.4325, Section (1) (e), the rule also  
10 states in Section (10) that the Commission would consider (with respect to unaccounted  
11 for water) "whether a proposed solution is economically feasible." Only 2 of those 10  
12 systems are less than 100% used and useful. In any event, it is deemed reasonable not to  
13 make an adjustment to used and useful for unaccounted for water considering such small  
14 excesses in light of the economic feasibility of the cost to find and correct the losses,  
15 particularly when the determination of the level of unaccounted for water is not precise.

16 **Q. Would you summarize your used and useful determinations for the wastewater**  
17 **treatment plants?**

18 A. There are only 5 of the 21 wastewater treatment plants that are less than 100% used and  
19 useful, including Holiday Haven, Leisure Lakes, Silver Lake Oaks, Sunny Hills and  
20 Village Water. There are 4 systems that do not have treatment plants but purchase  
21 wastewater treatment (Beecher's Point, Lake Gibson Estates, Lake Suzy and Village  
22 Water). The capacities of the treatment plants are based on average annual permitted  
23 capacities except for 4 systems (Jasmine Lakes, Lake Suzy, Rosalie Oaks and The  
24 Woods) for which the permitted capacities are based on the average of the three

1 maximum consecutive months. The capacities of the treatment plants are the same as the  
2 capacities of the effluent treatment except in two instances, in which the lower capacity  
3 was used as the limiting factor.

4 **Q. Were adjustments made for excessive I&I?**

5 A. Yes, but only for 3 systems, Holiday Haven, Rosalie Oaks and Summit Chase. The level  
6 of excessive I&I was calculated according to a methodology used by the FPSC Staff.  
7 The acceptable infiltration is based on 500 gallons per day per inch foot per mile of  
8 gravity main. The inflow is based on 10% of water sold to wastewater customers. The  
9 inflow from customers is 80% of water use by residential wastewater customers and 96%  
10 of water use by commercial customers. Consideration was also made for systems where  
11 there were sewer customers who were not also water customers.

12 **Q. What are the primary plant accounts to which the used and useful percentages for**  
13 **water treatment plants were applied?**

14 A. The used and useful percentages were applied to Source of Supply, Wells and Springs  
15 and Pumping and Equipment, and to Water Treatment Structures and Improvements and  
16 Pumping Equipment. The intangible plant, land, source of supply structures (well  
17 housing) and power generation equipment are considered 100% used and useful. The  
18 water treatment equipment is also considered 100% used and useful because it relates to  
19 chemical feed equipment for which the cost does not fluctuate with demands.

20 **Q. What are the primary plant accounts for wastewater treatment plants to which the**  
21 **used and useful percentages were applied?**

22 A. The used and useful percentages were applied to Treatment and Disposal Plant,  
23 Structures and Improvements and Treatment and Disposal Equipment. The land, power  
24 generation equipment, plant sewers, outfall sewer lines and miscellaneous equipment

1 were considered 100% used and useful, because those costs do not fluctuate with  
2 demands.

3 **Q. Do you have general comments with respect to used and useful for multi-system**  
4 **utilities?**

5 A. Yes. The consolidation of many small systems under single ownership provides  
6 significant economies of scale in terms of common management, administration,  
7 accounting, operations and financing. It also provides each small system with levels of  
8 professional and technical staff and resources that would not be available at the same cost  
9 or at all, if the systems were owned and operated as single utilities. As single tariff  
10 pricing is established, the level of used and useful should be 100% if the dollar weighting  
11 of the used and useful percentages of all systems under single tariff pricing equals or  
12 exceeds 90%.

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

14 A. Yes.