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#### BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for an increase in water and wastewater rates in Charlotte, Highlands, Lake, Lee, Marion, Orange, Pasco, Pinellas, Polk, and Seminole Counties by Utilities, Inc. of Florida

Docket No. 160101-WS

#### DIRECT TESTIMONY

OF

JOHN F. GUASTELLA

on behalf of

Utilities, Inc. of Florida



1	Q.	Please state your, name, profession and address.
2	A.	My name is John F. Guastella. I am President of Guastella Associates, LLC. My business
3		address is 725 N. Highway A1A, Suite B103, Jupiter, Florida 33477.
4	Q.	State briefly your educational background and experience.
5	A.	I have been involved in all aspects of utility regulation, rate setting, valuation and
6		management as a utility regulator and a consultant. Exhibit JFG-1 is a statement of my
7		qualifications, including my educational background and experience.
8	Q.	Have you previously appeared and presented testimony before any regulatory
9		bodies?
10		I have prepared and presented expert testimony in 25 states before regulatory agencies,
11		including the Florida Public Service Commission, municipalities and in court proceedings.
12		The subject matter of my testimony included issues regarding rate setting, valuation,
13		accounting, engineering, used and useful, and rate design.
14	Q.	On whose behalf are you presenting this testimony?
15	A.	I am presenting this testimony and appearing on behalf of Utilities, Inc. of Florida. (UIF),
16		the applicant for rate increase in the present docket.
17	Q.	What is the purpose of your direct testimony?
18	Α.	The purpose of my direct testimony is to present information supporting the consolidated
19		single tariff rate schedules.
20	Q.	Are you sponsoring any exhibits?
21	A.	Yes, I am sponsoring 5 exhibits. As mentioned previously, JFG-1 is a statement of my
22		qualifications and experience. The rate design schedules developing the water consolidated
23		single tariff pricing (STP) rates are found in Exhibit JFG-2. The rate design schedules
24		developing the sewer consolidated single tariff pricing rates are found in Exhibit JFG-3.
25		Exhibit JFG-4 contains Schedule W-A a table showing the single tariff water rates 2

compared to the rates of individual water systems under proforma revenue requirements,
 and Schedule W-B showing a table comparing average bills at current water rates, at rates
 of individual systems under proforma revenue requirements and at proposed consolidated
 single tariff pricing rates. Exhibit JFG-5 shows the same rate and average bill comparisons
 for the UIF sewer divisions. As shown on Schedule S-A and Schedule S-B, respectively.

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## Q. Would you please tell us how you approached the issue of consolidated or single tariff pricing in general terms?

8 Yes. Single tariff pricing may be defined as the establishment of a single rate structure A. 9 applicable to all customers of a utility which serves two or more separate service areas. 10 Single tariff pricing is a rate design issue, not a revenue requirement issue. Once a utility's 11 revenue requirement is established, the utility will not receive more or less revenue if its 12 rate structure is based on single tariff pricing or individual system pricing. Single tariff 13 pricing is, therefore, an issue which may be resolved strictly in terms of what is in the best 14 interest of the customers. With this in mind, I have considered consolidated or single tariff 15 pricing in terms of general regulatory policy, cost and economic principles, and the 16 application of equitable rate design policies and judgement.

## Q. Would you please explain how you considered general regulatory policy with respect to single tariff pricing?

A. The public interest aspect of utility service is the basis for the creation of utility regulatory
agencies which are given the responsibility to assure that utilities provide safe and adequate
service at just and reasonable rates. Carrying out that responsibility, in my opinion, requires
recognition that all customers are entitled to receive an adequate level of utility service.
The entitlement to a reasonably equal level of service at similar rates among all customers
(existing and new, regardless of location) has been well-established by regulatory agencies,
including the Florida Public Service Commission, regarding such other utility services as

1	electric, gas and communication. In other words, customers should pay the same rates for
2	the same service. Such entitlement is taken for granted with respect to those utility services.
3	For a little historical background that I think is of interest, I note that in a 1929 speech,
4	Franklin D. Roosevelt stated, in part:
5	"Now, I am sorry to say that the principle of reasonably
6	equal service at reasonably equal cost to all the people of
7	the State has not been carried out with regard to the two
8	latest forms of public servicethe telephone and
9	electricity.
10	It is, of course, well known that the cost of the telephone
11	to the farmer, for example, depends very largely on what
12	county and even more on what particular road he happens
13	to live.
14	If he happens to be born on a farm on a highway away
15	from neighbors, he has to shoulder practically the entire
16	original cost and upkeep of his telephone line, whereas,
17	if he happens to live close to many neighbors the cost of
18	the very essential telephone is enormously reduced, both
19	for service and installation charges.
20	By the same token the service given by the telephone
21	company is as a matter of public knowledge vastly better
22	in some localities than in others. In other words, the
23	practical use of the great utility known as the telephone is
24	dependent on cost and usefulness in too many cases on the
25	place where a man's house happens to be located. $4$

1	The other example, and one which is even more glaring
2	in its unfairness, is that of the use of electricity in the
3	homes
4	Why should families in one section be so grossly
5	penalized over families in another section?
6	"During recent years the small local company furnishing
7	electric light has been rapidly absorbed into larger
8	companies. There may have been some reason for
9	differences of rates in the earlier days when each company
10	stood on its own earning power. Today, however, things
11	are far different."

Q. Aside from a rate setting concept that utility customers are entitled to equal service
 at equal rates, are there other significant considerations for which consolidated or
 single tariff pricing has been recognized by regulators for water and wastewater
 utilities?

Yes. It has been my experience that the smaller water and wastewater utilities are least 16 A. able to provide safe and adequate service simply because of their size. They are unable to 17 maintain a professional staff of administrators, accountants and engineers in order to handle 18 the increasingly complex financial, operational and environmental requirements necessary 19 to provide adequate service. The smaller systems are unable to attract capital at a 20 21 reasonable cost, if at all. One of the most effective solutions that regulators have found is 22 the acquisition of small utilities by larger companies. Single tariff pricing has been 23 recognized as one of the incentives which should be offered to these utilities to encourage their acquisition of small water companies. The relatively slow progress the water and 24 wastewater industry has experienced in merging large and small systems may be the reason 25

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this industry has lagged behind the electric, gas and communication industries with respect
to single tariff pricing. In relatively recent years, however, regulators, including the Florida
PSC, have recognized that single tariff pricing is appropriate for functionally integrated
water systems, regardless of whether they are physically connected. The water and
wastewater industry is increasingly providing the opportunity for all customers of a multioperational utility to have equal level of service at equal rates.

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**Q**.

## Mr. Guastella, do you believe that single tariff pricing is inconsistent with traditional cost of service principles?

No. Single tariff pricing is basically an averaging process. All of the revenue 9 A. requirement components or all of the costs of providing service are totaled for all 10 operations, and when applied to the total billing units in terms of numbers of bills or units 11 of consumption, the resulting rates represent an average rate per service among all of the 12 operations. Traditional rate setting principles have always recognized a similar averaging 13 process with respect to rate setting. For example, all utilities are required to charge new 14 customers the same rates as existing customers; the rates contained in the utility's filed 15 tariff schedule. The new customers are not charged a higher rate related to the higher 16 current cost of the more recent plant additions compared with the lower historical cost of 17 the older plant. Regulatory agencies have rejected the concept of vintage rates. 18 Accordingly, all customers, new and existing, pay the same rates for service based on an 19 averaging of all costs, both capital and operating costs. It simply has not mattered that 20 there may be a difference in the cost to serve new and existing customers. Another example 21 of the averaging process in the traditional rate setting is reflected in the fact that customers 22 close to the source of supply are charged the same rates as customers far from the source 23 of supply. It hasn't mattered that the cost of providing service on an individual basis to 24 each of those customers may be significantly different -- the rates are averaged. Yet another 25

1 example is a utility with a single system, but in which some sections are older than others. 2 Under traditional rate setting, the costs are averaged, and all customers pay the same rates 3 for service regardless of location. Traditional rate setting principles, as well as regulatory law, recognize that rates are reasonable if they are not unduly discriminatory. There is no 4 regulatory requirement that rates must reflect the precise cost of providing service to each 5 6 and every customer or each and every group of customers at different locations. In my 7 opinion, single tariff pricing is simply another averaging process that does not produce 8 unduly discriminatory rates, particularly in light of the many advantages that are directly 9 attributable to single tariff pricing.

Mr. Guastella, would you briefly describe some of the major advantages with respect

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**Q**.

### to single tariff pricing?

12 A. As I previously stated, single tariff pricing is one of the incentives regulators are using to 13 encourage large utilities to acquire small utilities. Regulators have recognized the 14 economies of scale attributable to large utilities with respect to combined operations, 15 personnel, purchasing and cost of capital. Large utilities generally are more capable of 16 meeting environmental requirements, because of in-house expertise, resources and ability 17 to finance improvements. The increasing environmental requirements and need to make 18 capital improvements and replace aging plant are widening the gap between small and large 19 companies in terms of their ability to provide safe and adequate service. The smaller 20 operations which are part of large utilities automatically receive these benefits. I would 21 note that the larger operations within the multi-operational utility also automatically 22 receive these benefits. Another advantage of single tariff pricing is the significant cost 23 savings associated with rate filings. The instant case is a good example. The cost would 24 be much higher if separate rates cases and rate applications were made for each individual 25 system. In the future, rate case savings will be even much greater if under a consolidated 1 single tariff there would only be a need for a single set of MFRs. Another important 2 advantage of single tariff pricing is rate stability. Eventually all operations will require 3 significant capital improvements either to install new plant for new environmental 4 requirements or to replace existing lower-cost assets with newer higher-cost assets. On an 5 individual system basis, those swings in capital requirements would require significant rate 6 changes. Sooner or later, the customers who might object to single tariff pricing because 7 their rates might now be lower on an individual system basis, would likely at some point 8 in time welcome single tariff pricing (average rates) when the system serving them is the 9 one requiring major capital improvements and commensurate rate increases.

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**Q**.

## or single tariff pricing as a general regulatory policy?

Mr. Guastella, would you summarize your conclusion with respect to consolidated

12 Yes. In my opinion, a general regulatory policy which encourages single tariff pricing is A. 13 in the best interest of the customers. Single tariff pricing is consistent with the regulatory 14 goal of assuring safe and adequate service to all customers at a reasonably equal price. It 15 is consistent with traditional cost of service principles. It does not produce unduly 16 discriminatory rates. It encourages the acquisition of small utilities by large utilities (which 17 has thus far been the single most successful solution to the problems caused by small 18 companies). It reflects the economies of scale that are automatically enjoyed by the individual operations of a large utility. It produces specific cost savings in terms of 19 20 regulatory rate proceedings. It stabilizes rates which not only protect customers from the 21 impact of severe rate shock, but also provides for stabilized earnings and the ability to 22 attract lower cost capital.

## Q. Mr. Guastella, has the Florida PSC recognized the benefits of consolidated or single tariff pricing?

A. Yes, I believe so. I have reviewed the PSC's Order No. PSC-09-0385-WS in Docket No.

1 080121-WS, and find recognition of the benefits of single tariff pricing. The PSC also 2 addressed its concerns about the impact of converting to single tariff pricing on the 3 customers' bills.

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Q.

## Do you agree that the impact of single tariff pricing on customers' bills is a valid consideration?

6 A. Yes. It should also be recognized, however, that the differences between single tariff rates 7 and rates calculated for individual systems do not reflect an accurate comparison between 8 consolidated single tariff rates and rates for "stand alone" systems. The MFRs and 9 proforma revenue requirements for individual systems reflect built in economies of scale of the multi-system utility in which the individual systems benefit by sharing only a portion 10 11 of such allocated corporate costs as professional supervisory and administrative staff, 12 engineers, accountants, common structures and equipment, billing and accounting, and 13 financing. If the individual systems were truly stand-alone, their costs and rates would be 14 higher and/or the adequacy of service would be at a lower standard.

# Q. Mr. Guastella you have identified exhibits you are sponsoring. Was a rate design analysis performed by you or under your direction to develop consolidated or single tariff pricing rates?

18 A. Yes.

## 19 **Q.** 20

## Would you briefly describe the schedules, calculations, and process reflected in your exhibits?

A. The rate design schedules developing the water and sewer single tariff rates are contained in Exhibit JFG-2 and JFG-3, respectively. Within these Exhibits, Schedule W-1 and Schedule S-1 show the rate development calculations. Schedule W-2 and S-2 contain the summary tables of the individual systems' revenues generated by their current rates. Schedule W-3 and Schedule S-3 reflect the summary tables showing the number of bills issued during the test year. Schedule W-4 and Schedule S-4 reflect the detailed metered
usage by system and customer groups. The existing water and sewer rates are shown on
Schedules W-5 and S-5, respectively. Schedule W-6 and W-7, within Exhibit JFG-1,
provide the calculation of the repression impacts the rates will have on UIF's two largest
water system (Sanlando and Lake Utility Services, Inc.).

The compilation and consolidation of the information was required for the 6 7 development of the single tariff pricing or consolidated rates. The first step was to compile the billing unit data of each of the respective individual water and sewer systems to be 8 9 consolidated under the single tariff rate structure. This step was performed by tabulated the number of test year bills issued, the metered usage information and the current tariff 1011 rates for each system under consideration. The sources of this information were primarily 12 the E-1 rate schedules, E-2 billing analyses and the E-14 consolidated factor analyses 13 presented in UIF's minimum filing requirements. The summary information for the water 14systems is detailed on Schedules W-3 (Bills), W-4 (Usage), and W-5 (Rates) within Exhibit JFG-2. The similar information for the sewer systems is shown on Schedules S-3 (Bills), 15 S-4 (Usage) and S-5(Rates) within Exhibit JFG-2. To insure that the test year billing units 16 and information were compiled correctly, the W-2 and S-2 schedules reference the three 17 previously mentioned schedules and bringing that information forward to calculate 18 revenues for each system. These amounts were checked against the E-2 annualized test 19 20 year revenues as shown at the bottom of the W-2 and S-2 schedules.

The single tariff rate design takes the consolidated billing data for both water and sewer and develops rates that will recover the cost of providing service for UIF's consolidated water systems and sewer systems across the State. The development of the single tariff water rates are shown on Exhibit JFG-2, Schedule W-1 and the single tariff sewer rates on Exhibit JFG-3, Schedule S-1. 1

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## Q. Please explain the rate design components and calculations shown on Exhibit JFG-2 Schedules W-1, and Exhibit JFG-3, Schedule S-1, in greater detail.

A. The W-1 and S-1 schedules bring forward the test year number of bills from Schedules W3 and S-3 and the volumetric billed usage from Schedules W-4 and S-4. Meter factors are
applied to the number of bills to produce factored bills. The meter factors used on both
Schedule W-1 and S-1 are consistent with the meter factors of the existing water and sewer
rates.

The consolidated water revenue requirement of \$16,370,621 was reduced by any 8 anticipated miscellaneous revenues to produce the revenue to be recovered by the 9 customers' monthly water service bills. The total amount of \$16,276,725 to be recovered 10 through the rate structure was then allocated at 35% to be recovered by the base service 11 charge, related to fixed costs; 64.9% to be recovered by the usage rates, and 0.1% fire 12 service related costs. These allocations are based on typical ratios and judgement on the 13 basis of comprehensive cost allocation studies of other utilities. The resulting water base 14 service revenue requirement was then divided by the factored bills to produce the factor 1 15 monthly water rate and the rates for the various meter sizes were determined by the various 16 meter factors. 17

18 The sewer revenue recoverable through monthly customer sewer bills was 19 developed in the same way as the water. The amount billed for sewer service of 20 \$19,775,438 was allocated based on the consolidated current test year revenue ratios of 21 51.8% base and 48.2% usage related costs. Similarly, the resulting sewer base service 22 revenue requirement was then divided by the factored bills to produce the factor 1 monthly 23 sewer rate and the rates for the various meter sizes (based on their water meter sizes) were 24 determined by the various meter factors.

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The residential conservation block rate usage factors shown on Schedule W-1

reflect the average factors used in the current rate structures of the four water division that 1 2 currently have a three-tiered block rate structure. The basis for the first block containing 3 the first 8 thousand gallons of water usage, the second block containing the next 8 thousand gallons of water usage and the third block representing all water used over 16 thousand 4 gallons per month is the current Sanlando rate structure. Sanlando was used as the basis 5 because it is the division with the second highest number of customers, the customers with 6 the highest water consumption, and the division most impacted by the proposed single tariff 7 rates. The general service usage factor reflects the approximate average factor of the two 8 largest water divisions representing approximately 82% of the consolidated number of 9 general service water customers and is similar to the 1.50 usage factor of Block 2 residential 10 11 usage rates.

12 The Schedule S-1 general service usage factor of 1.15 times the residential factor 13 reflects the average factor of the current water rate structures. The bulk service factor of 14 .95 reflects that of the current bulk service tariff rates and the reuse service factor of .30 15 reflects the approximate average of three current reuse rates.

## Q. Was any consideration made for the potential pricing impacts the single tariff volumetric rates may have on consumption?

Yes. An analysis of the rate impacts were performed for the two largest divisions, Sanlando 18 A. and Lake Utility Services. (LUSI). These analyses are shown in Exhibit JFG-2 on 19 Schedules W-6 and W-7, respectively. As expected, because Sanlando's current usage 20 rates are relatively very low and about 72% of the water use is billed at the third block or 21 22 usage exceeding 16,000 gallons per month, there is potentially a substantial impact on their overall water usage. The repression analysis on Schedule W-6 shows an overall reduction 23 24 of 11.67% of the water used over the 8,000 per month block 1 usage, representing essential domestic monthly water use which would not be significantly sensitive to pricing. On the 25

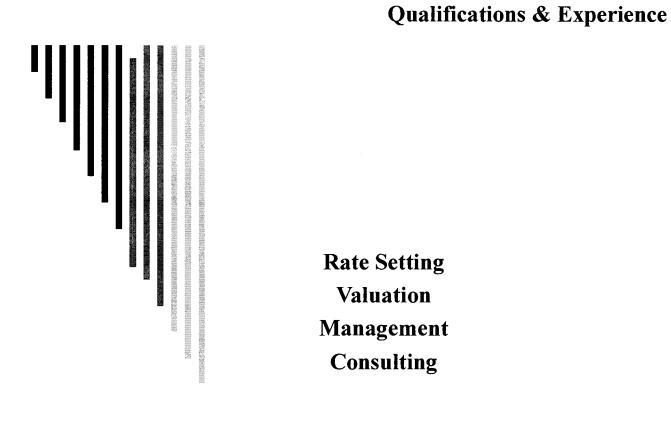
1		other hand, LUSI whose current rates and bills will vary little under the proposed single
2		tariff rates will show insignificant impacts on water usage.
3	Q.	As a result, were your water use projections for Sanlando changed from those shown
4		for the test year?
5	A.	Yes. As shown on Schedule W-4 the second block usage was decreased by 95.2 thousand
6		gallons and the third block usage by 112.7 thousand gallons which is an 11.67% reduction
7		of Sanlando's test year usage.
8	Q.	Mr. Guastella do the water and sewer rates developed in your exhibit and shown on
9		Schedule W-1 and Schedule S-1 recover the appropriate and corresponding revenue
10		requirement components?
11	A.	Yes.
12	Q.	In your opinion, are the rates developed fair and reasonable?
13	A.	Yes. Exhibits JFG-4 and JFG-5 contain water and sewer rates and bill comparisons. These
14		tables are self-explanatory and provide the impact that consolidated STP rates will have on
15		the individual systems. There is a wide range of revenues because most of the systems are
16		relatively small, with revenues at about \$1.0 million or less, and many less than \$500,000
17		in revenues. Although Sanlando would have revenues that primarily support single tariff
18		pricing, its current rates are relatively very low and it will benefit under single tariff pricing
19		when, as expected, significant capital improvements are made to its system. In any event,
20		the proposed single tariff rate structure on a consolidated basis meets the criteria I discussed
21		in general, and it accomplishes the major goal of having the customers of all of the systems
22		paying the same rates for the same service.
23	Q.	Does that conclude your testimony at this time?
24	A.	Yes.

## Utilities, Inc. of Florida

Florida Public Service Commission Docket No. 160101 - WS

## **EXHIBIT JFG-1: QUALIFICATION AND EXPERIENCE**

Development of Single Tariff Pricing Consolidated Rates



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

725 N. Highway A1A, Suite B103, Jupiter FL 33477 (561)-7479867 www.guastella.com

## 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.

As can be seen from the following qualifications and experience, 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. Reports

1. Investor-owned utilities -- prepare complete rate filings for submission to regulatory agencies; prepare testimony, exhibits, and assist in all aspects of adjudication process.

2. Municipal utilities -- prepare detailed rate reports in support of rate increases for use by municipal officials and presentation at municipal hearings.



## OUTLINE OF SERVICES GUASTELLA ASSOCIATES, LLC

### II. <u>VALUATIONS</u>

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

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, Maine, Maryland, Massachusetts, Missouri, Michigan, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Pennsylvania, South Carolina, Texas, Rhode Island 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, 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 7,500 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, and the NAWC Water Utility Executive Council.

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	Regulatory Docket/Case Number
1979	Seabrook Water Corporation	New Jersey	7910-846
1979	Southern Utilities Corporation	Florida	770317-WS
1979	Township of South Brunswick	New Jersey	Municipal
1979	Westchester Joint Water Works	New York	Municipal
1979	Woodhaven Utilities Corporation	Illinois	77-0109
1980	Crestwood Village Sewer Company	New Jersey	BPU 802-78
1980	Crestwood Village Water Company	New Jersey	BPU 802-77
1980	Gateway Water Supply Corporation	Texas	Municipal
1980	GWW-Central Florida District	Florida	800004-WS
1980	Jamaica Water Supply Company	New York	27587
1980	Rhode Island DPU&C (Newport Water)	Rhode Island	1480
1981	Briarcliff Utilities, Inc.	Texas	3620
1 <b>981</b>	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
1 <b>98</b> 1	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
1 <b>98</b> 4	Crestwood Village Sewer Company	New Jersey	8310-861
19 <b>8</b> 4	Crestwood Village Water Company	New Jersey	8310-860
19 <b>8</b> 4	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
1 <b>98</b> 6	GDU, Inc Port Charlotte	Florida	Municipal
1986	GDU, Inc Sebastian Highlands	Florida	Municipal
19 <b>8</b> 6	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
19 <b>8</b> 7	GDU, Inc Silver Springs Shores	Florida	870239-WS
1987	Ocean County Landfill Corporation	New Jersey	SR-8703117
1987	Palm Coast Utility Corporation	Florida	870166-WS
1987	Sanlando Utilities Corp. (settled)	Florida	860683-WS
1987	Township of South Brunswick	New Jersey	Municipal
1987	Woodhaven Utilities Corp. (settled)	Illinois	87-0047
1988	Crescent Estates Water Co., Inc.	New York	88-W-035
1988	Elizabethtown Water Co.	New Jersey	OAL PUC3464-88
1988	Heritage Village Water Company	Connecticut	87-10-02
1988	Instant Disposal Service, Inc.	New Jersey	SR-87080864
1988	J. Filiberto Sanitation v. Morris County Transfer Station	New Jersey	01487-88
1988	Ohio Water Service Co.	Ohio	86-1887-WW-CO1
1988	St. Augustine Shores Utilities	Florida	870980-WS
1989	Elizabethtown Water Co.	New Jersey	BPU WR89020132J
1989	GDU (FPSC generic proceeding as to rate setting procedures)	Florida	880883-WS
1989	Gordon's Corner Water Co.	New Jersey	OAL PUC479-89
1989	Heritage Hills Sewage Works	Connecticut	Municipal
1989	Heritage Village Water Company	Connecticut	87-10-02
1989	Palm Coast Utility Corporation	Florida	890277-WS
1989	Southbridge Water Supply Co.	Massachusetts	DPU 89-25
1989	Sterling Forest Water Co.	New York	PSC 88-W-263
1990	American Utilities, Inc United States Bankruptcy Court	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

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Year	Client	State	Regulatory Docket/Case Number
1990	Kent County Water Authority	Rhode Island	1952
1990	Palm Coast Utility Corporation	Florida	871395-WS
1990	Southern States Utilities, Inc.	Florida	Workshop
1990	Trenton Water Works	New Jersey	WR90020077J
1990	Waste Management of New Jersey	New Jersey	SE 87070552
1990	Waste Management of New Jersey	New Jersey	SE 87070566
1991	City of Grand Forks	North Dakota	Municipal
1991	Gordon's Corner Water Co.	New Jersey	OAL PUC8329-90
1991	Southern States Utilities, Inc.	Florida	900329-WS
1992	Elizabethtown Water Co.	New Jersey	WR 91081293J
1992	General Development Utilities, Inc Port Malabar Division	Florida	911030-WS
1992	General Development Utilities, Inc West Coast Division	Florida	911067-WS
1992	Heritage Hills Water Works, Inc.	New York	92-2-0576
1993	General Development Utilities, Inc Port LaBelle Division	Florida	911737-WS
1993	General Development Utilities, Inc Silver Springs Shores	Florida	911733-WS
1993	General Waterworks of Pennsylvania - Dauphin Cons. Water Supply	Pennsylvania	R-00932604
1993	Kent County Water Authority	Rhode Island	2098
1993	Southern States Utilities - FPSC Rulemaking	Florida	911082-WS
1993	Southern States Utilities - Marco Island	Florida	920655-WS
1 <b>994</b>	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

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### Papers and Presentations By John F. Guastella

Year	Title	Forum
1974 through 2016	<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 currently Michigan State University
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
1 <b>98</b> 1	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
19 <b>82</b>	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)
1 <b>98</b> 4	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

Papers and Presentations - JFG

## Papers and Presentations By John F. Guastella

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
199 <b>8</b>	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

## Papers and Presentations By John F. Guastella

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

## Utilities, Inc. of Florida

Florida Public Service Commission Docket No. 160101 - WS

## **EXHIBIT JFG-2: WATER RATE DESIGN**

Development of Single Tariff Pricing Consolidated Rates Utilities, Inc. of Florida Single Tariff Pricing Water Rate Development Docket No. 160101 -WS Exhibit JFG-2 Schedule W-1

BASE SERVICE	CHARGE	CALCULATION:	

1) Metered Service		Meter	Factored		Produced
Meter size	Bills	Factor	Bills	Rates	Revenue
5/8"	318,784	1.0	318,784	\$ 11.54	\$ 3,678,767
3/4"	0	1.5	0	\$ 17.31	\$ -
1"	49,788	2.5	124,470	\$ 28.84	\$ 1,435,886
1.5"	2,314	5.0	11,570	\$ 57.69	\$ 133,495
2"	2,043	8.0	16,340	\$ 92.30	\$ 188,523
3"	284	16.0	4,544	\$ 184.59	\$ 52,424
4"	169	25.0	4,225	\$ 288.43	\$ 48,745
6"	47	50.0	2,350	\$ 576.86	\$ 27,112
8"	122	80.0	9,760	\$ 922.97	\$ 112,602
10"	12	145.0	1,740	\$ 1,672.89	\$ 20,075
—	373,563		493,783		\$ 5,697,628
Revenue Requirement			5,696,854		
Rate for Factor 1.0			\$ 11.54		
2) Deiveta Fire Comica					
2) Private Fire Service 1.5"	74	1.0	24	\$ 2.26	\$ 54
1.5 2"	24		24	\$ 2.20 3.61	\$ 563
	156	1.6			
4"	276	5.0	1,380	\$ 11.29	\$ 3,116
6"	360	10.0	3,600	\$ 22.59	\$ 8,132
8"	60	16.0	960	\$ 36.14	\$ 2,168
10"	0	23.0	0	\$ 51.95	\$ -
12"	0	43.0	0	\$ 97.12	\$ -
			6,214		\$ 14,034
Revenue Requirement			14,034		
Rate for Factor 1.0			\$ 2.26		

#### **VOLUMETRIC RATE CALCULATION:**

		1,000	Usage	Factored			Produced
		Gallons	Factor	Usage	P	lates	Revenue
Residential Usage							
Block 1 Gallons	0-8k	1,782,061	1.00	1,782,061	\$	1.97	\$ 3,510,660
Block 2 Gallons	8-16k	639,916	1.50	959,874	\$	2.95	\$ 1,887,751
Block 3 Gallons	+16k	887,109	2.00	1,774,218	\$	3.93	\$ 3,486,338
		3,309,086		4,530,189			
General Service Usage							
All Gallons		563,590	1.50	845,385	\$	2.98	\$ 1,679,498
				5,375,574			\$ 10,564,247
Revenue Requirement				10,565,837			
Rate for Factor 1.0				\$ 1.97			

Total Revenues \$ 16,275,910

Revenue Requirement \$ 16,276,725

Difference \$ (815)

Utilities, Inc. of Florida

Water Revenue at Current Rates

Revenue Check

355,650

303,918

69,139

5,422,378

380,496

4,644,119

998,550

13,491,877

												2	chequie w-z
			Lake	(Incl MRS)					Pasco	Pasco			
RESIDENTIAL	Cypress	Labrador	Placid	LUSI	Pennbrke	Sanlando	Marion	Orange	Orangewd	Smmrtree	Pinellas	Seminole	
Meter size		2	3	4	5	6	7	8	9	10	11	12	UIF Total
5/8"	125,016	144,852	20,339	1,146,146	80,906	329,746	4,470	31,789	238,066	157,376	67,492	258,819	2,605,016
3/4"	0	0	0	0	0	0	0	0	0	0	0	0	0
1"	0	0	0	14,292	0	455,692	43,198	256	709	0	2,756	3,846	520,749
1.5"	0	0	0	1,730	0	4,292	0	0	0	0	0	0	6,022
2"	0	0	0	884	0	0	0	0	0	0	0	0	884
3"	0	0	0	0	0	0	0	0	0	0	0	0	0
4"	0	0	o	0	0	0	0	0	0	0	0	0	0
6"	0	0	0	0	0	0	0	0	0	0	0	0	0
8"	0	0	0	39,782	0	0	0	0	0	0	0	0	39,782
10"	0	0	0	0	0	0	0	0	0	0	0	o	0
10	125,017	144,854	20,342	1,202,834	80,911	789,735	47,675	32,053	238,784	157,386	70,259	262,677	3,172,453
	123,017	144,004	20,542	1,202,034	80,511	/05,/55	47,075	52,055	230,784	197,900	10,200	202,011	3,212,133
Usage - Block 1	105 101	117.000	14.000	1 105 (32	74,769	544,274	92,503	53,287	300,807	136,385	73,090	509,527	3,267,353
•	185,101	117,909	14,068	1,165,632		544,274	92,303		300,807	130,383	73,090		185,333
Block 1A					53,529	606.653		6,648				125,156	
Block 2	13,010			747,051	70,336	696,652		12,670				73,976	1,613,694
Block 3	6,631			1,943,651	53,914	1,709,107		8,007					3,721,309
	204,742	117,909	14,068	3,856,334	252,549	2,950,032	92,503	80,612	300,807	136,385	73,090	708,659	8,787,690
GENERAL SERVICE													
Meter size													
5/8"	676	165	1,833	9,399	2,138	9,267	844	197	4,134	403	273	699	30,026
3/4"	0	0	0	0	0	0	0	0	0	0	0	0	0
1"	897	1,239	1,394	14,892	0	29,584	722	256	2,953	671	341	1,414	54,363
1.5"	1,690	0	0	18,547	298	35,255	444	0	2,125	0	0	499	58,859
2"	2,702	0	0	15,297	4,678	54,896	0	0	6,139	1,073	3,272	1,596	89,654
3"	0	0	0	1,845	2,863	16,106	0	0	0	0	0	1,597	22,410
4"	0	0	14,342	8,649	1,462	8,089	1,203	0	0	0	0	0	33,746
6"	0	8,262	0	0	0	7,865	0	0	0	0	0	0	16,126
8"	ů o	0,202	0	24,215	0	17,257	0	0	0	0	0	0	41,472
10"	0	0	0	16,720	0	1,,25,	0	0	0	0	0	0	16,720
10	5,964	9,666	17,570	109,565	11,438	178,318	3,214	453	15,351	2,147	3,886	5,805	363,378
	5,964	9,000	17,570	109,565	11,436	1/6,516	5,214	455	13,331	2,147	3,880	3,805	303,370
Usage Revenue	19,928	31,491	17,162	253,645	35,604	714,406	15,400	1,207	31,752	5,067	9,643	21,422	1,156,726
IRRIGATION													
Base Revenue		0											
Usage Revenue		0											
PRIVATE FIRE													
1.5"						45							45
2"						468							468
4"				o		2,583							2,583
4 6"				0		6,739							6,739
8"				0		1,798							1,798
						1,758							1,758
10"				0									0
12"						11 (22	0	0	0	0	0	0	11,633
	0	0	0	0	0	11,633	U	U	0	U	U	U	11,035
REVENUE AT CURRENT RATES	6 (Sum of comp	onents above)											
System-Base	130,981	154,518	37,909	1,312,399	92,344	968,048	50,881	32,498	254,126	159,523	74,134	268,469	3,535,831
System-Usage	224,669	149,400	31,230	4,109,979	288,153	3,664,438	107,903	81,819	332,559	141,451	82,733	730,081	9,944,415
System-Fire	0	0	0	0	0	11,633	0	0	0	0	0	0	11,633
Total Metered Revenue	355,650	303,918	69,139	5,422,378	380,497	4,644,119	158,784	114,317	586,685	300,975	156,867	998,550	13,491,879
£-2 Total	358,029	305,242	69,370	5,484,612	382,225	4,632,114	161,079	117,092	586,685	316,147	158,115	1,015,063	13,585,773
			231			-12,005	2,295	2,775	0	15,173	1,248	16,513	93,896
Less: Misc. & Adj.	2,379	1,324	69 139	<u>62,234</u> 5 422 378	1,729	-12,005	158 784	114 317	586 685	300 974	156 867	998 550	13 491 877

114,317

586,685

300,974

156,867

158,784

Number of Water Bills												Docket N	Exhibit JFG-2
RESIDENTIAL Meter size 5/8" 3/4"	Cypress 1 17,758	Labrador 2 10,527	Lake Placid <u>3</u> 1,276	LUSI 4 119,266	Pennbrke 5 15,895	Sanlando <u>6</u> 73,440	Marion 7 1,208	Orange <u>8</u> 3,718	Pasco Orangewd 9 20,158	Pasco Smmrtree 10 14,064	Pinellas 11 5,936	Seminole 12 31,108	Schedule W-3 TOTALS 314,354
1" 1.5" 2" 3" 4"				595 36 12		40,542 191	4,665	12	24		97	185	0 46,120 227 12 0 0
6" 8" 10"				46									0 46 0
	17,758	10,527	1,276	119,955	15,895	114,173	5,873	3,730	20,182	14,064	6,033	31,293	360,759
GENERAL SERVICE Meter size 5/8"	96	12	115	978	420	2,064	228	23	350	36	24	84	4,430
3/4" 1"	51	26	35	630		2 6 2 2	70		100				0
1.5"	48	36	35	620 386	12	2,632 1,569	78 24	12	100 36	24	12	68 12	3,668 2,087
2"	48			199	120	1,527	24		65	12	36	24	2,087
3"				12	36	224						12	284
4"			36	36	12	72	13						169
6"		12				35							47
8"				28		48							76
10"				12	<u> </u>								12
	243	60	186	2,271	600	8,171	343	35	551	72	72	200	12,804
IRRIGATION 2"													0 0
2		<u>0</u> 0								Water 5ales Bills			0 373,563
PRIVATE FIRE										Water Sales bin.	,		
1.5"						24							24
2"						156							156
4"				0		276							276
6"				0		360							360
8"				0		60							60
10"				0									0
12"				<u>0</u>		876				Fire Constant D'			0
				U		6/0				Fire Service Bills			876

Utilities, Inc. of Florida

Docket No. 160101 -WS

Water Usage (tg)

RESIDENTIAL	Cypress (1)	Labrador (2)	Lk Placid (3)	LU5I (4)	Pennbrke (5)	Sanlando (6)	Marion (7)	Orange (8)	Orangewd (9)	5mmrtree (10)	Pinellas (11)	Seminole (12)		
	38,244 0-6k	All	All	493,912 0-5K	39,771 0-3k	572,920 0-6k	All	15,401 0-6k	All	All	All	137,710 0-8k		
	93.92%			39.71%	34.80%	32.16%		73.73%				82.96%		
	1,792 6-12k			273,645 5-10K	27,035 3-6k	487,169 6-15k		1,857 6-8k				19,374 8-16k		
	98.32%			61.70%	58.46%	59.51%		82.62%				94.64%		
	685 +12k			476,385 +10K	28,945 6-12k	721,142 +15k		2,355 8-16k				8,902 +16k		
	100.00%			100.00%	83.79%	100.00%		93.90%				100.00%		
					18,527 +12k			1,275 +16k						
		<u> </u>			100.00%			100.00%						
	40,721	13,584	2,078	1,243,942	114,278	1,781,231	41,296	20,888	55,194	26,380	11,367	165,986		
GENERAL SERVICE	3,877	3,628	2,535	79,017	15,824	438,286	6,875	304	5,826	980	1,502	4,936		
Proposed Blocks														
Residential Usage	Cypress (1)	Labrador (2)	Lk Placid (3)	LUSI (4)	Descholes (E)	Caralanda (C)	M (7)	0 (0)	0		<b>D</b> : (1.443)			anlando
0-8k		13,444 99.0%	2,060 99.1%	675,727 54.3%	Pennbrke (5)	Sanlando (6)	Marion (7)	Orange (8)	Orangewd (9)	5mmrtree (10)	Pinellas (11)	Seminole (12)	·	pression Adj. Usage
8-16k	1,080 2.7%	13,444 59.0% 54 0.4%	18 0.9%	284,838 22.9%	79,557 69.6% 24,554 21.5%	707,849 39.7% 391,757 22.0%	23,178 56.1% 7,300 17.7%	17,258 82.6% 2,355 11.3%	49,545 89.8% 3,216 5.8%	25,587 97.0% 376 1.4%	10,832 95.3%	137,770 83.0%	1,782,061 50.7%	- 1,782,061
+16k	387 1.0%	86 0.6%	- 0.0%	283,377 22.8%	10,167 8.9%	681,625 38.3%	10,818 26.2%	2,333 11.3% 1,275 6.1%	2,433 4.4%	417 1.6%	257 2.3% 278 2.4%	19,313 11.6%	735,118 20.9%	(95,202) 639,916
100	40,721	13,584	2,078	1,243,942	114,278	1,781,231	41,296	20,888	55,194	26,380	<u>278</u> 2.4% 11,367	8,903 5.4% 165,986		(112,657) 887,109
	40,722	10,004	2,070	1,243,342	114,270	1,/01,231	41,250	20,000	55,154	20,380	11,367	103,980	3,516,945	(207,859) 3,309,086
IRRIGATION					Res. Irrig							Res. Irrig		
0-8k					6,564							771		
8-16k					2,661							302		
+16k					1,326							161		
					10,551							1,234		
					Included							Included		
					above							above		

Current Water Rates	per wonth																Exhibit Schedu	
				Lake								_		Pasco	Pasco	<b>.</b>	<b>C</b>	
RESIDENTIAL	Cypress	Lá	abrador	Placid	LUSI		Pennbrke		Sanlando		Marion	Orange		Orangewd	Smmrtree	Pinellas	Seminole	
Meter size	1		2	3	4		5		6		7	8	-	9	10	<u>    11</u> 11.37	<u>12</u> 8.32	-
5/8"	7.04		13.76	15.94	\$9.61		5.09		\$4.49		3.70	8.55		11.81	11.19	11.37	8.32	
3/4"	10.55		20.66	23.92	40.4.00		7.41		\$6.75		0.26	21.20		17.72 29.53	16.78 27.96	28.41	20.79	
1"	17.58		34.42	39.84	\$24.02		12.19		\$11.24		9.26	21.36		29.53 59.03	55.91	56.81	41.58	
1.5"	35.20		68.84	79.68	\$48.05		24.82		\$22.47		18.52 29.62	42.73 68.35		94.45	89.45	90.90	66.52	
2"	56.30		110.16	127.49	\$76.87		38.98		\$35.95					94.45 188.90	178.91	181.90	133.06	
3"	112.60		220.32	254.98	\$153.75		79.53		\$71.90		59.24	136.70 213.61		295.17	279.55	284.07	207.89	
4"	175.96		344.24	398.40	\$240.25		121.84		\$112.35		92.57			590.33	549.02	568.13	415.79	
6"	351.87		688.48	796.80	\$480.47		248.11		\$224.70 \$359.52		185.13	427.23		590.55	545.02	500.15	413.75	
8" 10"					\$864.83				\$359.52									
10.					\$1,393.36													
	\$4.84	0-6k	\$8.68	\$6.77	\$2.36	0-5K	\$1.88	0-3k	\$0.95	0-6k	\$2.24	\$3.46		\$5.45	\$5.17	\$6.43	\$3.70	
	\$7.26	6-12k			\$2.73	5-10K	\$1.98	3-6	\$1.43	6-15k		\$3.58	6-8k				\$6.46	
	\$9.68	+12k			\$4.08	+10K	\$2.43	6-12	\$2.37	+15k		\$5.38	8-16k				\$8.31	
							\$2.91	+12	¢ (			\$6.28	+16k					
SENERAL SERVICE																		
Meter size																		_
5/8"	7.04		13.76	15.94	\$9.61		5.09		\$4.49		3.70	8.55		11.81	11.19	11.37	8.32	1
3/4"	10.55		20.66	23.92			7.41		\$6.75					17.72	16.78			
1"	17.58		34.42	39.84	\$24.02		12.19		\$11.24		9.26	21.36		29.53	27.96	28.41	20.79	
1.5"	35.20		68.84	79.68	\$48.05		24.82		\$22.47		18.52	42.73		59.03	55.91	56.81	41.58	
2"	56.30		110.16	127.49	\$76.87		38.98		\$35.95		29.62	68.35		94.45	89.45	90.90	66.52	
3"	112.60		220.32	254.98	\$153.75		79.53		\$71.90		59.24	136.70		188.90	178.91	181.90	133.06	
4"	175.96		344.24	398.40	\$240.25		121.84		\$112.35		92.57	213.61		295.17	279.55	284.07	207.89	
6"	351.87		688.48	796.80	\$480.47		248.11		\$224.70		185.13	427.23		590.33	549.02	568.13	415.79	1
8"					\$864.83				\$359.52									
10"					\$1,393.36													
All	\$5.14		\$8.68	\$6.77	\$3.21		\$2.25		\$1.63		\$2.24	\$3.97		\$5.45	\$5.17	\$6.42	\$4.34	
% of Resid.	106%		100%	100%	136%		120%		172%		100%	115%		100%	100%	100%	117%	5
RRIGATION																		
2"			110.16															
All			\$8.68															
PRIVATE FIRE					Annual													
1.5"					\$242.00				\$1.87									
2"					\$387.20				\$3.00									
4"					\$1,210.00				\$9.36									
6"					\$2,420.00				\$18.72									
8"					\$3,872.00				\$29.96									
10"					\$5,565.00													
10					\$10,405,00													

12" \$10,405.00

### Utilities, Inc. of Florida - Sanlando Water Rate Development Schedule Test Year Ending 12/31/15 Repression Analysis

Usage Residential <u>Block</u>	-	tg Within		Bill Within		Average Use Within Block	Consolid Factor I	
Tier 1	0-8 tg	226,105.0	12.7%	53,955.0	47.3%	4.19	707,849.0	39.7%
Tier 2	next 8 tg	275,485.0	15.5%	25,842.0	22.6%	10.66	391,757.0	22.0%
Tier 3	Over 16 tg	1,279,641.0	71.8%	34,376.0	30.1%	37.22	681,625.0	38.3%
TOTAL:		1,781,231.0	100.0%	114,173.0	100.0%	15.60	1,781,231.0	100.0%
Usage Rate		\$0.95	\$1.97	\$1.42	\$2.95	\$2.36	\$3.93	
		Tier	· 1	Tier	2	Tie	r 3	
		Present	Proposed	Present	Proposed	Present	Proposed	
Base Chg		\$4.49	\$ 11.54	\$4.49	\$11.54	\$4.49	\$11.54	
Usage Chg		\$3.98	\$8.26	\$11.38	\$23.61	\$69.05	\$122.77	
		\$8.47	\$19.80	\$15.87	\$35.15	\$73.54	\$134.31	
Increase			133.7%		121.5%		82.6%	
Repression Fac	ctor		26.7%		24.3%		16.5%	

(Based on 10% increase in rates causes 2% reduction in usage.)

### **Conservation Usage Calculation:**

	Sch. E-12W			Test Year						
	Consol.	Repression	Usage	Pro Forma Co	nsolidated					
	Factor Use	Factor	Reduction	Factor I	Jse					
Tier 1	707,849.0	0.0%	0.0	707,849.0	45.0%					
Tier 2	391,757.0	24.3%	95,202.3	296,554.7	18.8%					
Tier 3	681,625.0	16.5%	112,657.2	568,967.8	36.2%					
TOTAL:	1,781,231.0		207,859.5	1,573,371.5	100.0%					

11.67%

### Utilities, Inc. of Florida - LUSI Water Rate Development Schedule Test Year Ending 12/31/15 Repression Analysis

Residential	Usage Block		tg Within				Bill Within			rage Use hin Block	Consolic Factor	
Tier 1	0-8 tg	29	90,271.0	2	3.3%	7	1,773.0	59.8%		4.04	675,727.0	54.3%
Tier 2	next 8 tg	29	97,334.0	2	3.9%	2	4,872.0	20.7%		11.95	284,838.0	22.9%
Tier 3	Over 16 tg	65	56,337.0	5	2.8%	2	3,310.0	19.4%		28.16	283,377.0	22.8%
TOTAL:		1,24	13,942.0	10	0.0%	11	9,955.0	100.0%		10.37	1,243,942.0	100.0%
Usage Rate		\$	2.36	\$	1.97	\$	2.73	\$2.95	\$	4.08	\$3.93	
			Tier	r 1			Tier	· 2		Tie	r 3	
		Pr	esent	Propo	osed	Pr	resent	Proposed	P	resent	Proposed	
Base Chg			\$4.49	<b>\$</b> 1	1.54		\$4.49	\$11.54		\$4.49	<b>\$1</b> 1.54	
Usage Chg			\$9.54	\$	7.97		\$29.68	\$27.43		\$90.32	\$87.14	
			\$14.03	\$1	9.51		\$34.17	\$38.97		\$94.81	\$98.68	
Increase				3	9.0%			14.0%			4.1%	
Repression Fac	ctor				7.8%			2.8%			0.8%	

(Based on 10% increase in rates causes 2% reduction in usage.)

### Conservation Usage Calculation:

	Sch. E-12W			Test Year							
	Consol.	Repression	Usage	Pro Forma Co	nsolidated						
	Factor Use	Factor	Reduction	Factor l	Jse						
Tier 1	675,727.0	0.0%	0.0	675,727.0	54.8%						
Tier 2	284,838.0	2.8%	8,003.4	276,834.6	22.4%						
Tier 3	283,377.0	0.8%	2,311.3	281,065.7	22.8%						
TOTAL:	1,243,942.0		10,314.7	1,233,627.3	100.0%						

0.83%

Florida Public Service Commission Docket No. 160101 - WS

### **EXHIBIT JFG-3: SEWER RATE DESIGN**

Development of Single Tariff Pricing Consolidated Rates Utilities, Inc. of Florida Single Tariff Pricing Sewer Rate Development

### BASE SERVICE CHARGE CALCULATION:

1) Monthly Metered Service		Meter	Factored		Produced
Meter size	Bills	Factor	Bills	 Rates	 Revenue
Residential (all Sizes)	231,250	1.0	231,250	\$ 25.47	\$ 5,889,938
General Service					
5/8"	2,701	1.0	2,701	\$ 25.47	\$ 68,794
3/4"	-	1.5	-	\$ 38.21	\$ -
1"	1,350	2.5	3,375	\$ 63.68	\$ 85,968
1.5"	1,789	5.0	8,945	\$ 127.37	\$ 227,865
2"	1,720	8.0	13,760	\$ 203.79	\$ 350,519
3"	360	16.0	5,760	\$ 407.57	\$ 146,725
4"	108	25.0	2,700	\$ 636.83	\$ 68,778
6"	59	50.0	2,950	\$ 1,273.66	\$ 75,146
8"	36	80.0	2,880	\$ 2,037.86	\$ 73,363
10"	12	145.0	1,740	\$ 3,693.62	\$ 44,323
Bulk Service (all Sizes)	12	33.6	403	\$ 855.90	\$ 10,271
Reuse Service (all Sizes)	8,206	0.30	2,462	\$ 7.64	\$ 62,694
Residential Flat Rate	36,867	1.40	51,614	\$ 35.66	\$ 1,314,677
General Service Flat Rate	6,372	1.75	11,151	\$ 44.58	\$ 284,064
2) Bi-Monthly Metered Service					
Meter size					
Residential (all Sizes)	12,374	2.0	24,748	\$ 50.95	\$ 630,455
General Service					
5/8"	12	2.0	24	\$ 50.95	\$ 611
3/4"	-	3.0	-	\$ 76.42	\$ -
1"	1,164	5.0	5,820	\$ 127.37	\$ 148,259
1.5"	136	10.0	1,360	\$ 254.73	\$ 34,643
2"	434	16.0	6,944	\$ 407.57	\$ 176,885
3"	6	32.0	192	\$ 815.14	\$ 4,891
4"	6	50.0	300	\$ 1,273.66	\$ 7,642
6"	55	100.0	5,500	\$ 2,547.32	\$ 140,103
8"	-	160.0	-	\$ 4,075.72	\$ -
10"	-	290.0	-	\$ 7,387.24	\$ -
Residential Flat Rate	5,670	2.80	15,876	\$ 71,33	\$ 404,441
General Service Flat Rate		3.50		\$ 89.16	
	305,029		402,455		\$ 10,251,055
Revenue Requirement			10,251,823		
Rate for Factor 1.0			\$ 25.47		

VOLUMETRIC RATE CALCULATION:

		1,000	Usage	Factored			Produced
		Gallons	Factor	Usage	F	Rates	 Revenue
Residential Usage	-						
Monthly Max Usage	0-8k	1,087,046	1.00	1,087,046	\$	4.91	\$ 5,337,396
Bi-Monthly Max Usage	0-16k	103,650	1.00	103,650	\$	4.91	\$ 508,922
General Service Usage							
All Gallons - Monthly		373,150	1.15	429,123	\$	5.65	\$ 2,108,298
All Gallons - BiMonthly		242,305	1.15	278,651	\$	5.65	\$ 1,369,023
Bulk Service Usage							
All Gallons		1,986	0.95	1,887	\$	4.66	\$ 9,255
Reuse Service Usage							
All Gallons		132,247	0.30	39,674	\$	1.45	\$ 191,758
	-	1,940,384		1,940,030			\$ 9,524,651
Revenue Requirement				9,523,615			
Rate for Factor 1.0				\$ 4.91			

Total Revenues \$ 19,775,706

Revenue Requirement \$ 19,775,438 Difference \$ 268

ilities, Inc. of Florida ver Revenue at Current Ra															Docket	No. 160101 -W Exhibit JFG- Schedule S-
IDENTIAL	Cypress 1	Bi-Mo Eagle Rdg 2	Labrador 3	Lk Placid	Longwd S	LUSI 6	Bi-Mo Mid-Cty 7	Pennbrke 8	Sandalhvn 9	Sanlando 10	Bi-Mo T. Verde 11	Marion 12	Orangewd 13	Smmrtree 14	Seminole 1S	UIF Total
All Sizes	372,918	222,712	289,808	15,427		905,45 <b>9</b>	401,908	214,131	415,639	1,453,106	-	26,159	18,662	177,628	218,551	4,732,10
Res-Flat Rate		293,220		793	694,489	-	702			161,096	550,564	<u> </u>	876	<u> </u>		1,701,74
	372,918	515,932	289,808	16,220	694,489	905,459	402,610	214,131	415,639	1,614,201	550,564	26,159	19,538	177,628	218,551	6,433,847
Capped Usage	270,768	239,491	261,472	11,313	-	1,010,509	367,103	288,144	282,810	1,290,260	-	5,082	25,076	270,857	578,138	4,901,02
NERAL SERVICE																
Meter size		Bi-Mo					Bi-Mo				Bi-Mo					
S/8"	756	2,752	330	991	9,845	5,655		698	11,816	18,988	745	316	-	-	314	53,20
3/4"	-	-	-	-	-	-	-	-	-	-	-	•	-	-	-	
1"	630	11,685	826	1,089	4,878	8,033	76,654		2,616	28,660	37,852	-	-	757	1,178	174,8 209,2
1.S"	1,260	51,122	-	-	6,853	2,794	-	859	15, <b>91</b> 4	88,295 147,452	42,198 110,706	2,532	•	- 1,211	- 1,257	437,7
2"	-	65,433	-	-	1,799	2,235	70,316 4,500	1,359	33,485 58,598	147,432 51,501	-	2,352	-	-	2,514	131,05
3" 4"	-	1,558	-		12,383	-	4,500			27,330	9,308	-		-	-	47,52
4 6"	-	-	- 16,514	10,886		-	125,988	-	52,320	17,460	40,335	_	-		-	252,61
8"	-	-	16,514	-		50,288	125,566	-	52,520	14,576		-	-		-	64,86
10"	-	-		-	_	40,486	-	-	•	-	-	-		-		40,48
10						40,400										
GS-Flat Rate										167,074	-	<u> </u>				167,07
	2,647	132,550	17,670	12,966	35,758	109,490	277,459	2,916	174,749	561,336	241,144	2,849		1,968	5,263	1,578,76
All Usage	11,360	274,457	69,497	16,486	68,875	103,168	740,724	11,491	320,278	579,835	204,504	13,895		11,504	34,587	2,460,66
LK SERVICE																
Base				4,870												4,87
Usage				10,625												10,62
JSE Base						51,505				5,767						57,27
Usage						116,499				12,379						128,87
Usage VENUE AT CURRENT RATE	5 /Sum of com	nonants shove				116,499				12,379						

REVENUE AT CURRENT RATE	ES (Sum of comp	ionents above)															
System-Base	375,565	648,482	307,478	34,056	730,247	1,066,454	680,068	217,046	590,388	2,181,304	791,708	29,008	19,538	179,596	223,813	8,074,752	
System-Usage	282,127	513,949	330,969	38,424	68,875	1,230,176	1,107,827	299,635	603,087	1,882,474	204,504	18,976	25,076	282,361	612,724	7,501,185	
Total Sales Revenue	657,692	1,162,430	638,448	72,480	799,122	2,296,629	1,787,895	516,681	1,193,475	4,063,778	996,212	47,984	44,614	461,958	836,538	15,575,937	
E-2 Total	660,639	1,164,165	639,372	72,690	808,813	2,305,689	1,790,020	518,122	1,196,788	4,075,541	996,212	48,279	44,614	464,124	840,136	15,625,204	
Less: Misc. & Adj.	2,946	1,735	924	210	9,691	9,074	2,125	1,440	3,313	11,763	-	295		2,166	3,600	49,282	
Revenue Check	657,693	1,162,430	638,448	72,480	799,122	2,296,615	1,787,895	516,682	1,193,475	4,063,778	996,212	47,984	44,614	461,958	836,536	15,575,922	
			,														

Utilities,	Inc.	of	Florida
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Number of Sewer Bills

																	Schedule S-3
							Bi⊢Mo				Bi-Mo						
RESIDENTIAL	Cypress	Eagle Rdg	Labrador	Lk Placid	Longwd	LUSI	Mid-Cty	Pennbrke	Sandalhvn	Sanlando	T. Verde	Marion	Orangewd	Smmrtree	Seminole	Totals	Totals
Meter size	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Monthly	<b>Bi-Monthly</b>
S/8"	17,758	9,172				38,911	· · ·									6S,841	-
1"		12														12	-
All Sizes			10,527	1,276			12,374	14,727	9,533	95,662		992	1,920	14,064	16,696	165,397	12,374
	17,758	9,184	10,527	1,276	-	38,911	12,374	14,727	9,533	95,662	-	992	1,920	14,064	16,696	231,250	12,374
							Bi-Mo				Bi-Mo						
Res-Flat Rate		10,860		36	18,639		11			7,296	5,659		36			36,867	5,670
GENERAL SERVICE																	
Meter size							Bi-Mo				Bi-Mo						
S/8"	36	113	12	82	610	243		48	271	1,250	12	12			24	2,701	12
3/4"	-															-	-
1"	12	192	12	36	121	138	920		24	755	244			24	36	1,350	1,164
1.S"	12	420			85	24		12	73	1,163	136					1,789	136
2"		336			14	12	211	12	96	1,214	223	12		12	12	1,720	434
3"		4			48		6		84	212	-				12	360	6
4"				36						72	6					108	6
6"			12				42		24	23	13					59	55
8"						24				12						36	-
10"						12			<u> </u>							12	<u> </u>
	60	1,065	36	154	878	453	1,179	72	572	4,701	634	24	-	36	84	8,135	1,813
GS-Flat Rate										6,372						6,372	
GS-Fidt Rate										6,372						0,372	-
BULK SERVICE																	
All Sizes				12												12	-
711 51265																	
REUSE																	
All Sizes						6,979				1,227						8,206	-
51665						-,				_,/						0,200	

### Docket No. 160101 -WS Exhibit JFG-3

Utilities, Inc. of Flori Sewer Usage based on M															Doc	ket No. 160101 -WS Exhibit JFG-3 Schedule S-4
RESIDENTIAL	Cypress (1)	Eagle Ridge (2)	Labrador (3)	Lk Placid (4)	Longwd (5)	LUSI (6)	Bi-Mo Mid-Cty (7)	Pennbrke (8)	Sandalhvn (9)	Sanlando (10)	Bi-Ma T.Verde (11)	Marion (12)	Orangewd (13)	Smmrtree (14)	Seminole (15)	Totals
REJUENTINE	38,244 0-6k	43,074 0-10k	13,471 0-10k	2,031 0-6k	Flat Rate	238,891 0-10k	110,241 0-20k	61,438 0-6k	17,234 0-6k	682,677 0-10k	Flat Rate	1,802 0-10k	3,478 0-6k	25,243 0-6k	71,287 0-8	1,309,111
GENERAL SERVICE	1,338	41,025	2,984	2,468	22,882	20,229	Bi-Mo 185,181	2,041	16,266	255,434	<b>Bi-Mo</b> 57,124	4,123		809	3,551	Мо. 373,150 Вімо 242,305
BULK SERVICE				1,986												1,986
REUSE						105,908				26,339						132,247
Proposed Maximum Monthly Residential 0-8k Bi-monthly 0-16k	Cypress (1) 39,254 96.40%	Eagle Ridge (2) 39,879 69.24%	Labrador (3) 13,444 98.97%	Lk Placid (4) 2,060 99.13%	Longwd (5) N/A	LUSI (6) 212,250 60.79%	Mid-Cty (7) 103,650 79.23%	Pennbrke (8) 72,993 70.37%	Sandalhvn (9) 18,074 89.60%	Sanlando (10) 586,958 43.18%	T.Verde (11)	Marion (12) 1,773 88.03%	Orangewd (13) 3,487 96.01%	Smmrtree (14) 25,587 97.00%	Seminole (15) 71,287 88.169	Totals 1,087,046 103,650

Utilities, Inc. of F Current Sewer Rates (														Docke	et No. 160101 -WS Exhibit JFG-3 Schedule S-5
		Eagle		Lake							Tierra		Pasco	Pasco	
RESIDENTIAL	Cypress	Ridge	Labrador	Placid	Longwd	LUSI	Mid-Cty	Pennbrke	Sandalhvn	Sanlando	Verde	Marion	Orangewd	Smmrtree	5eminole
Meter size	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Base							Bi-Monthly								
All Sizes	\$21.00	\$24.25	\$27.53	\$12.09		\$23.27	\$32.48	\$14.54	\$43.60	\$15.19		\$26.37	\$9.72	\$12.63	\$13.09
	\$7.08 0-6k	\$5.56 0-10	k \$19.41 0-10k	\$5.57 0-6	۲	\$4.23 0-10	Bi-Monthly \$3.33 0-20	k \$4.69 0-6k	\$16.41 0-8k	\$1.89 0-1	l nk	\$2.82 0-10k	\$7.21 0-6k	\$10.73 0-6	k \$8.11 0-8k
	\$7.08 U-BK	\$3.30 0-10	K 315.41 0-10K	JJ.J7 0-0	'K	J4.23 0-10	Bi-Monthly	K 94.05 0 0K	010111 0 04		Bi-Monthly		•		
Res-Flat Rate		\$27.00		\$22.03	\$37.26		\$63.84			\$22.08	\$97.29		\$24.32		
nes nut nute		111%		182%	007120		197%			145%			250%		
GENERAL SERVICE															
Meter size							<b>Bi-Monthly</b>				<b>Bi-Monthly</b>				
5/8"	\$21.00	\$24.35	\$27.53	\$12.09	\$16.14	\$23.27	\$32.48	\$14.54	\$43.60	\$15.19	\$62.06	\$26.37		\$12.63	\$13.09
3/4"	\$31.49		\$41.29	\$18.15				\$21.44		\$22.77				\$18.92	
1"	\$52.54	\$60.86	\$68.81	\$30.24	\$40.31	\$58.21	\$83.32	\$35.40	\$109.00	\$37.96	\$155.13	\$65.95		\$31.54	\$32.72
1.5"	\$105.04	\$121.72	\$137.61	\$60.47	\$80.62	\$116.40	\$187.46	\$71.55	\$218.00	\$75.92	\$310.28	\$131.88		\$63.08	\$65.46
2"	\$168.07	\$194.74	\$220.19	\$96.76	\$128.53	\$186.25	\$333.25	\$113.26	\$348.80	\$121.46	\$496.44	\$211.02		\$100.92	\$104.74
3"	\$336.15	\$389.49	\$440.38	\$193.54	\$257.97	\$372.50	\$750.02	\$229.20	\$697.60	\$242.93	\$992.89	\$422.03		\$201.83	\$209.48
4"	\$525.23	\$608.57	\$688.07	\$302.40		\$582.03	\$1,333.02	\$353.95	\$1,090.00	\$379.58	\$1,551.36	\$659.44		\$315.38	\$327.31
6"	\$1,050.45	\$1,217.15	\$1,376.14	\$604.80		\$1,164.08	\$2,999.72	\$715.76	\$2,180.00	\$759.15	\$3,102.73	\$1,318.88		\$630.77	\$654.61
8"			\$2,201.84			\$2,095.32				\$1,214.65					
10"						\$3,373.83									
All	\$8.49	\$6.69	\$23.29	\$6.68	\$3.01	\$5.10	\$4.00	\$5.63	\$19.69	\$2.27	\$3.58	\$3.37		\$14.22	\$9.74
GS-Flat Rate										\$26.22					
BULK SERVICE				Placid		LUSI		Pennbrke		Sanlando					
Base-All Sizes				\$405.84											
All Usage				\$5.35											
REUSE															
Base-All Sizes						\$7.38		\$0.00		\$4.70					
All Usage						\$1.10		\$0.96		\$0.47					

Florida Public Service Commission Docket No. 160101 - WS

## **EXHIBIT JFG-4: WATER RATE & BILL COMPARISON**

Development of Single Tariff Pricing Consolidated Rates

### Water Rate Comparison

#### **BASE SERVICE CHARGE** STP Pro Forma Proposed Rates - Individual System Filings 1) Metered Service Rates Labrador L. Placid LUSI Pnbrooke Sanlando Marion Orange Orgwood Smrtree Cypress Meter size 5/8" \$ \$ 16.79 \$ 19.10 \$ \$ 7.26 \$ 4.47 \$ 6.40 \$ 27.92 \$ 16.21 \$ 15.35 11.54 \$ 6.92 9.68

5/8" \$ 11.54 \$ 6.92 \$ 16.79 \$ 19.10 \$ 9.68 \$ 7.26 \$ 4.47 \$ 6.40 \$ 27.92 \$ 16.21 \$ 15.35 \$ 23.70	\$ 22.06
3/4" \$ 17.31 \$ 10.38 \$ 25.19 \$ 28.66 \$ - \$ 10.57 \$ 6.72 \$ - \$ - \$ 24.32 \$ 23.02 \$ -	\$-
1" \$ 28.84 \$ 17.29 \$ 41.98 \$ 47.73 \$ 24.20 \$ 17.38 \$ 11.18 \$ 16.01 \$ 69.75 \$ 40.52 \$ 38.37 \$ 59.21	\$ 55.15
1.5" \$ 57.69 \$ 34.62 \$ 83.95 \$ 95.46 \$ 48.42 \$ 35.40 \$ 22.35 \$ 32.02 \$ 139.54 \$ 81.00 \$ 76.72 \$ 118.41	\$ 110.30
2" \$ 92.30 \$ 55.38 \$ 134.32 \$ 152.75 \$ 77.45 \$ 55.60 \$ 35.79 \$ 51.23 \$ 223.20 \$ 129.60 \$ 122.74 \$ 189.46	\$ 176.48
3" \$ 184.59 \$ 110.75 \$ 251.85 \$ 305.49 \$ 154.92 \$ 113.43 \$ 71.58 \$ 102.47 \$ 446.40 \$ 259.21 \$ 245.50 \$ 379.12	\$ 352.96
4" \$ 288.43 \$ 173.07 \$ 419.75 \$ 477.32 \$ 242.08 \$ 173.78 \$ 111.85 \$ 160.10 \$ 697.50 \$ 405.03 \$ 383.60 \$ 592.07	\$ 551.50
6" \$ 576.86 \$ 346.10 \$ 839.50 \$ 954.65 \$ 484.12 \$ 353.88 \$ 223.70 \$ 320.21 \$ 1,395.13 \$ 810.05 \$ 753.37 \$ 1,184.11	\$ 1,103.00
8" \$ 922.97 \$ 871.40 \$ 357.92	
10" \$ 1,672.89 \$ 1,403.95	
2) Private Fire Service	
1.5" \$ 2.26 \$ 1.86	
2" \$ 3.61 \$ 2.99	
4" \$ 11.29 \$ 9.32	
6" \$ 22.59 \$ 18.65	
8" \$ 36.14 \$ 29.84	
10" \$ 51.95	
12" \$ 97.12	
VOLUMETRIC RATE	
Rate per Thousand Gallons	
Residential Usage	
Block 1a Gallons \$ 2.68 \$ 11.30	
Block 1 Gallons \$ 1.97 \$ 4.76 \$ 10.59 \$ 8.11 \$ 2.38 \$ 2.82 \$ 0.95 \$ 3.88 \$ 11.69 \$ 7.48 \$ 7.09 \$ 13.40	\$ 9.80
Block 2 Gallons \$ 2.95 \$ 7.14 \$ 10.59 \$ 8.11 \$ 2.75 \$ 3.47 \$ 1.42 \$ 3.88 \$ 17.57 \$ 7.48 \$ 7.09 \$ 13.40	\$ 17.13
	Ş 17.12

General Service Usage All Gallons \$

2.98

\$

5.06

\$ 10.59

\$ 8.11

\$

3.23

Base Service Change over Current:	Cypress	Labrador	L. Placid	LUSI	Pnbrooke	Sanlando	Marion	Orange	Orgwood	Smrtree	Pinellas	Seminole
Proposed System Increase	-1.7%	22.0%	19.8%	0.7%	42.6%	-0.4%	73.0%	226.5%	37.3%	37.2%	108.4%	165.1%
Proposed STP Increase	63.9%	-16.1%	-27.6%	20.1%	133.6%	157.0%	211.9%	35.0%	-2.3%	3.1%	1.5%	38.7%

\$ 3.21

\$ 1.62

\$ 3.88

\$

12.96

\$ 7.48

\$ 7.09

\$

13.38

\$

11.50

Seminole

Pinellas

Utilities, Inc.	of Florida	
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Residential - Monthly Water Bill Comparison

Schedule W-B

		5/8" BFC								Usa	ge Rates			Avg Res	. Bill based on	Avg TG		
		Pro Fo	orma	Avg TG		Tie	ers				Pro F	orma	1		Pro F	orma	STP (	Change from
	Current	Individual	STP	Per Bill		Current	STP		urrent	Inc	lividual		STP	Current	Individual	STP	Cu	rrent Rates
<b>Cypress</b> STP - % Change	\$ 7.04	\$ 6.92	\$ 11.54	2.9	Blk 1	0 - 6 tg	0 - 8 tg	\$	4.84	\$	4.76	\$	1.97	\$ 20.99 -18.0%	\$ 20.63 -16.6%	\$ 17.22	\$	(3.77)
Labrador STP - % Change	\$ 13.76	\$ 16.79	\$ 11.54	2.1	Blk 1	All	0 - 8 tg	\$	8.68	\$	10.59	\$	1.97	\$ 31.70 -50.8%	\$ 38.68 -59.6%	\$ 15.61	\$	(16.09)
L. Placid STP - % Change	\$ 15.94	\$ 19.10	\$ 11.54	2.6	Blk 1	All	0 - 8 tg	\$	6.77	\$	8.11	\$	1.97	\$ <b>33.66</b> -50.4%	\$ 40.32 -58.6%	\$ 16.70	\$	(16.96)
LUSI STP - % Change	\$ 9.61	\$ 9.68	\$ 11.54	10.6	Blk 1 Blk 2 Blk 3	0 - 5 TG 5 - 10 TG +10 tg	0 - 8 tg 8-16 tg	\$ \$ \$	2.36 2.73 4.08	\$ \$ \$	2.38 2.75 4.11	\$ \$	1.97 2.95	\$ 37.65 -6.8%	\$ 37.94 -7.6%	\$ 35.08	\$	(2.58)
Pennbrooke	\$ 5.09	\$ 7.26	\$ 11.54	7.7	Bik 1 Bik 2 Bik 3	0-3 TG 3-6 TG 6-12 tg	0 - 8 tg 8-16 tg	\$ \$ \$	1.88 1.98 2.43	\$ \$ \$	2.68 2.82 3.47	\$ \$	1.97 2.95	\$ 20.72	\$ 29.54	\$ 26.64	\$	5.92
STP - % Change						-								28.6%	-9.8%			
Sanlando	\$ 4.49	\$ 4.47	\$ 11.54	15.6	Bik 1 Bik 2 Bik 3	0 - 6 tg 6-15 tg +15 tg	0 - 8 tg 8-16 tg	\$ \$ \$	0.95 1.43 2.37	\$ \$ \$	0.95 1.42 2.36	\$ \$	1.97 2.95	\$ 24.48	\$ 24.37	\$ 49.72	\$	25.24
STP - % Change						-								103.1%	104.0%			
Marion STP - % Change	\$ 3.70	\$ 6.40	\$ 11.54	7.0	Blk 1	All	0 - 8 tg	\$	2.24	\$	3.88	\$	1.97	\$ 19.45 30.5%	\$ 33.68 -24.6%	\$ 25.39	\$	5.94
Orange STP - % Change	\$ 8.55	\$ 27.92	\$ 11.54	5.6	Blk 1	0 - 6 tg	0 - 8 tg	\$	3.46	\$	11.30	\$	1.97	\$ 2 <b>7.93</b> -19.2%	\$ 91.20 -75.3%	\$ 22.57	\$	(5.35)
Orangewood STP - % Change	\$ 11.81	\$ 16.21	\$ 11.54	3.6	Bik 1	All	0 - 8 tg	\$	5.45	\$	7.48	\$	1.97	\$ <b>31.31</b> -40.6%	\$ 42.98 -56.7%	\$ 18.59	\$	(12.72)
Summertree STP - % Change	\$ 11.19	\$ 15.35	\$ 11.54	2.5	Blk 1	All	0 - 8 tg	\$	5.17	\$	7.09	\$	1.97	\$ 24.05 -31.6%	\$ 32.99 -50.2%	\$ 16.44	\$	(7.61)
Pinellas STP - % Change	\$ 11.37	\$ 23.70	\$ 11.54	2.6	Blk 1	All	0 - 8 tg	\$	6.43	\$	13.40	\$	1.97	\$ 28.23 -40.8%	\$ 58.84 -71.6%	\$ 16.71	\$	(11.53)
Seminole STP - % Change	\$ 8.32	\$ 22.06	\$ 11.54	5.6	Bik 1	0 - 8 tg	0 - 8 tg	\$	3.70	\$	9.80	\$	1.97	\$ 29.00 -22.2%	\$ 76.83 -70.6%	\$ 22.55	\$	(6.45)

Florida Public Service Commission Docket No. 160101 - WS

### **EXHIBIT JFG-5: SEWER RATE & BILL COMPARISON**

Development of Single Tariff Pricing Consolidated Rates

#### Sewer Rate Comparison

#### BASE SERVICE CHARGE

Residential (all Sizes) \$ General Service 5/8" \$ 3/4" \$ 1" \$ 1.5" \$ 1 2" \$ 2 3" \$ 4 4" \$ 6 6" \$ 1,2 8" \$ 2,0 10" \$ 3,6 Reuse Service (all Sizes) \$ Residential Flat Rate \$ General Service Flat Rate \$	5TP Rates 25.47 38.21 63.68 127.37 203.79 407.57 636.83 1,273.66 2,037.86 3,693.62 855.90 7.64 35.66 44.58	Cypress \$ 23.86 \$ 35.79 \$ 59.71 \$ 119.37 \$ 190.99 \$ 382.00 \$ 596.87 \$ 1,193.73	E. Ridge \$ 25.59 \$ 25.70 \$ - \$ 64.23 \$ 128.46 \$ 205.53 \$ 411.07 \$ 642.28 \$ 1,284.58 \$ 1,284.58	Labrador \$ 26.62 \$ 39.93 \$ 66.55 \$ 133.10 \$ 212.96 \$ 399.30 \$ 665.50 \$ 1,331.00 \$ 2,129.60 \$ 514.65	L. Placid \$ 15.24 \$ 22.88 \$ 38.11 \$ 76.22 \$ 121.96 \$ 243.95 \$ 381.14 \$ 762.29	Longwood n/a \$ 16.83 \$ - \$ 42.03 \$ 84.06 \$ 134.02 \$ 268.99	LUSI \$ 28.75 \$ 28.75 \$ 28.75 \$ 71.91 \$ 143.79 \$ 230.07 \$ 460.15 \$ 718.98 \$ 1,437.95	Mid	County	<pre>kates = individu. Phbrooke \$ 13.60 \$ 25.47 \$ 38.21 \$ 63.68 \$ 127.37 \$ 203.79 \$ 407.57</pre>	al System Filing: Sdlhaven \$ 56.80 \$ - \$ 142.01 \$ 284.01 \$ 454.42	Sanlando \$ 24.10 \$ 36.13 \$ 60.25 \$ 120.50 \$ 192.80	T. Verde n/a	Marion \$ 47.27 \$ 47.27 \$ - \$ 118.21 \$ 236.39 \$ 378.24	Orgwood \$ 12.65	Smrtree \$ 16.43 \$ 16.43 \$ 24.62 \$ 41.04 \$ 82.07	Seminole \$ 12.68 \$ 12.68 \$ - \$ 31.68 \$ 63.38
Residential (all Sizes)\$General Service5/8"\$3/4"\$3/4"\$1"\$1.5"\$12"\$\$23"\$44"\$6"4"\$\$6"\$1.28"\$2,010"\$3,6Bulk Service (all Sizes)\$\$8Reuse Service (all Sizes)\$\$8Residential Flat Rate\$\$\$General Service Flat Rate\$\$\$	25.47 38.21 63.68 127.37 407.57 636.83 1,273.66 2,037.86 3,693.62 855.90 7.64 35.66 44.58	\$ 23.86 \$ 23.86 \$ 35.79 \$ 59.71 \$ 119.37 \$ 190.99 \$ 382.00 \$ 596.87	\$ 25.59 \$ 25.70 \$ - \$ 64.23 \$ 128.46 \$ 205.53 \$ 411.07 \$ 642.28 \$ 1,284.58	\$ 26.62 \$ 39.93 \$ 66.55 \$ 133.10 \$ 212.96 \$ 399.30 \$ 665.50 \$ 1,331.00 \$ 2,129.60	\$ 15.24 \$ 15.24 \$ 22.88 \$ 38.11 \$ 76.22 \$ 121.96 \$ 243.95 \$ 381.14	n/a \$ 16.83 \$ - \$ 42.03 \$ 84.06 \$ 134.02	\$ 28.75 \$ 28.75 \$ 28.75 \$ 71.91 \$ 143.79 \$ 230.07 \$ 460.15 \$ 718.98 \$ 1,437.99		county	\$ 13.60 \$ 25.47 \$ 38.21 \$ 63.68 \$ 127.37 \$ 203.79	\$ 56.80 \$ 56.80 \$ - \$ 142.01 \$ 284.01 \$ 454.42	\$ 24.10 \$ 24.10 \$ 36.13 \$ 60.25 \$ 120.50		\$ 47.27 \$ 47.27 \$ - \$ 118.21 \$ 236.39	-	\$ 16.43 \$ 16.43 \$ 24.62 \$ 41.04	\$ 12.68 \$ 12.68 \$ - \$ 31.68
General Service 5/8" \$ 3/4" \$ 1" \$ 1.5" \$ 1 2" \$ 2 3" \$ 4 4" \$ 6 6" \$ 1,2 8" \$ 2,0 10" \$ 3,6 Bulk Service (all Sizes) \$ Reuse Service (all Sizes) \$ Residential Flat Rate \$ General Service Flat Rate \$	25.47 38.21 63.68 127.37 407.57 636.83 1,273.66 2,037.86 3,693.62 855.90 7.64 35.66 44.58	\$ 23.86 \$ 35.79 \$ 59.71 \$ 119.37 \$ 190.99 \$ 382.00 \$ 596.87	\$ 25.70 \$ - \$ 64.23 \$ 128.46 \$ 205.53 \$ 411.07 \$ 642.28 \$ 1,284.58	\$ 26.62 \$ 39.93 \$ 66.55 \$ 133.10 \$ 212.96 \$ 399.30 \$ 665.50 \$ 1,331.00 \$ 2,129.60	\$ 15.24 \$ 22.88 \$ 38.11 \$ 76.22 \$ 121.96 \$ 243.95 \$ 381.14	\$ 16.83 \$ - \$ 42.03 \$ 84.06 \$ 134.02	\$ 28.75 \$ 28.75 \$ 71.91 \$ 143.79 \$ 230.07 \$ 460.15 \$ 718.98 \$ 1,437.95			\$ 25.47 \$ 38.21 \$ 63.68 \$ 127.37 \$ 203.79	\$ 56.80 \$ - \$ 142.01 \$ 284.01 \$ 454.42	\$ 24.10 \$ 36.13 \$ 60.25 \$ 120.50	n/a	\$ 47.27 \$ - \$ 118.21 \$ 236.39	\$ 12.65	\$ 16.43 \$ 24.62 \$ 41.04	\$ 12.68 \$ - \$ 31.68
5/8" \$ 3/4" \$ 1" \$ 1.5" \$ 1 2" \$ 2 3" \$ 4 4" \$ 6 6" \$ 1,2 8" \$ 2,0 10" \$ 3,6 Bulk Service (all Sizes) \$ Reuse Service (all Sizes) \$ Residential Flat Rate \$ General Service Flat Rate \$	38.21 63.68 127.37 203.79 407.57 636.83 1,273.66 2,037.86 3,693.62 855.90 7.64 35.66 44.58	\$ 35.79 \$ 59.71 \$ 119.37 \$ 190.99 \$ 382.00 \$ 596.87	\$ - \$ 64.23 \$ 128.46 \$ 205.53 \$ 411.07 \$ 642.28 \$ 1,284.58	\$ 39.93 \$ 66.55 \$ 133.10 \$ 212.96 \$ 399.30 \$ 665.50 \$ 1,331.00 \$ 2,129.60	\$ 22.88 \$ 38.11 \$ 76.22 \$ 121.96 \$ 243.95 \$ 381.14	\$ - \$ 42.03 \$ 84.06 \$ 134.02	\$ 28.75 \$ 71.91 \$ 143.79 \$ 230.07 \$ 460.15 \$ 718.98 \$ 1,437.99			\$ 38.21 \$ 63.68 \$ 127.37 \$ 203.79	\$ - \$ 142.01 \$ 284.01 \$ 454.42	\$ 36.13 \$ 60.25 \$ 120.50		\$ - \$ 118.21 \$ 236.39		\$ 24.62 \$ 41.04	\$ - \$ 31.68
3/4" \$ 1" \$ 1.5" \$ 1 2" \$ 2 3" \$ 4 4" \$ 6 6" \$ 1,2 8" \$ 2,0 10" \$ 3,6 Bulk Service (all Sizes) \$ Reuse Service (all Sizes) \$ Residential Flat Rate \$ General Service Flat Rate \$	38.21 63.68 127.37 203.79 407.57 636.83 1,273.66 2,037.86 3,693.62 855.90 7.64 35.66 44.58	\$ 35.79 \$ 59.71 \$ 119.37 \$ 190.99 \$ 382.00 \$ 596.87	\$ - \$ 64.23 \$ 128.46 \$ 205.53 \$ 411.07 \$ 642.28 \$ 1,284.58	\$ 39.93 \$ 66.55 \$ 133.10 \$ 212.96 \$ 399.30 \$ 665.50 \$ 1,331.00 \$ 2,129.60	\$ 22.88 \$ 38.11 \$ 76.22 \$ 121.96 \$ 243.95 \$ 381.14	\$ - \$ 42.03 \$ 84.06 \$ 134.02	\$ 28.75 \$ 71.91 \$ 143.79 \$ 230.07 \$ 460.15 \$ 718.98 \$ 1,437.99			\$ 38.21 \$ 63.68 \$ 127.37 \$ 203.79	\$ - \$ 142.01 \$ 284.01 \$ 454.42	\$ 36.13 \$ 60.25 \$ 120.50		\$ - \$ 118.21 \$ 236.39		\$ 24.62 \$ 41.04	\$ - \$ 31.68
1" \$ 1.5" \$ 1 2" \$ 2 3" \$ 4 4" \$ 6 6" \$ 1,2 8" \$ 2,0 10" \$ 3,6 Bulk Service (all Sizes) \$ Reuse Service (all Sizes) \$ Residential Flat Rate \$ General Service Flat Rate \$	63.68 127.37 203.79 407.57 636.83 1,273.66 2,037.86 3,693.62 855.90 7.64 35.66 44.58	\$ 59.71 \$ 119.37 \$ 190.99 \$ 382.00 \$ 596.87	\$ 64.23 \$ 128.46 \$ 205.53 \$ 411.07 \$ 642.28 \$ 1,284.58	\$ 66.55 \$ 133.10 \$ 212.96 \$ 399.30 \$ 665.50 \$ 1,331.00 \$ 2,129.60	\$ 38.11 \$ 76.22 \$ 121.96 \$ 243.95 \$ 381.14	\$ 42.03 \$ 84.06 \$ 134.02	\$ 71.91 \$ 143.79 \$ 230.07 \$ 460.15 \$ 718.98 \$ 1,437.99			\$ 63.68 \$ 127.37 \$ 203.79	\$ 142.01 \$ 284.01 \$ 454.42	\$ 60.25 \$ 120.50		\$ 118.21 \$ 236.39		\$ 41.04	\$ 31.68
1.5" \$ 1 2" \$ 2 3" \$ 4 4" \$ 6 6" \$ 1,2 8" \$ 2,0 10" \$ 3,6 Bulk Service (all Sizes) \$ 8 Reuse Service (all Sizes) \$ Residential Flat Rate \$ General Service Flat Rate \$	127.37 203.79 407.57 636.83 1,273.66 2,037.86 3,693.62 855.90 7.64 35.66 44.58	\$ 119.37 \$ 190.99 \$ 382.00 \$ 596.87	\$ 128.46 \$ 205.53 \$ 411.07 \$ 642.28 \$ 1,284.58	\$ 133.10 \$ 212.96 \$ 399.30 \$ 665.50 \$ 1,331.00 \$ 2,129.60	\$ 76.22 \$ 121.96 \$ 243.95 \$ 381.14	\$84.06 \$134.02	\$ 143.79 \$ 230.07 \$ 460.15 \$ 718.98 \$ 1,437.99			\$ 127.37 \$ 203.79	\$284.01 \$454.42	\$ 120.50		\$ 236.39		•	
2" \$ 2 3" \$ 4 4" \$ 6 6" \$ 1,2 8" \$ 2,0 10" \$ 3,6 Bulk Service (all Sizes) \$ Reuse Service (all Sizes) \$ Residential Flat Rate \$ General Service Flat Rate \$	203.79 407.57 636.83 1,273.66 2,037.86 3,693.62 855.90 7.64 35.66 44.58	\$ 190.99 \$ 382.00 \$ 596.87	\$ 205.53 \$ 411.07 \$ 642.28 \$ 1,284.58	\$ 212.96 \$ 399.30 \$ 665.50 \$ 1,331.00 \$ 2,129.60	\$ 121.96 \$ 243.95 \$ 381.14	\$ 134.02	\$ 230.07 \$ 460.15 \$ 718.98 \$ 1,437.99			\$ 203.79	\$ 454.42	•				\$ 82.07	¢ 62.20
3" \$ 4 4" \$ 6 6" \$ 1,2 8" \$ 2,0 10" \$ 3,6 Bulk Service (all Sizes) \$ 8 Reuse Service (all Sizes) \$ Residential Flat Rate \$ General Service Flat Rate \$	407.57 636.83 1,273.66 2,037.86 3,693.62 855.90 7.64 35.66 44.58	\$ 382.00 \$ 596.87	\$ 411.07 \$ 642.28 \$ 1,284.58	\$ 399.30 \$ 665.50 \$ 1,331.00 \$ 2,129.60	\$ 243.95 \$ 381.14		\$ 460.15 \$ 718.98 \$ 1,437.99					\$ 192.80		\$ 378.24			
4" \$ 6 6" \$ 1,2 8" \$ 2,0 10" \$ 3,6 Bulk Service (all Sizes) \$ 8 Reuse Service (all Sizes) \$ Residential Flat Rate \$ General Service Flat Rate \$	636.83 1,273.66 2,037.86 3,693.62 855.90 7.64 35.66 44.58	\$ 596.87	\$ 642.28 \$ 1,284.58	\$ 665.50 \$ 1,331.00 \$ 2,129.60	\$ 381.14	\$ 268.99	\$718.98 \$1,437.99			¢ 407.57						\$ 131.31	\$ 101.42
6" \$ 1,2 8" \$ 2,0 10" \$ 3,6 Bulk Service (all Sizes) \$ 8 Reuse Service (all Sizes) \$ Residential Flat Rate \$ General Service Flat Rate \$	1,273.66 2,037.86 3,693.62 855.90 7.64 35.66 44.58		\$ 1,284.58	\$ 1,331.00 \$ 2,129.60			\$ 1,437.99			Ş 407.57	\$ 908.83	\$ 385.60		\$ 756.46		\$ 262.60	\$ 202.02
8" \$ 2,C 10" \$ 3,6 Bulk Service (all Sizes) \$ 8 Reuse Service (all Sizes) \$ Residential Flat Rate \$ General Service Flat Rate \$	2,037.86 3,693.62 855.90 7.64 35.66 44.58	\$ 1,193.73		\$ 2,129.60	\$ 762.29					\$ 636.83	\$ 1,420.05	\$ 602.50		\$ 1,182.00		\$ 410.34	\$ 316.93
10"\$3,6 Bulk Service (all Sizes)\$8 Reuse Service (all Sizes)\$ Residential Flat Rate\$ General Service Flat Rate\$	3,693.62 855.90 7.64 35.66 44.58		\$ 28.50				+			\$ 1,273.66	\$ 2,840.10	\$ 1,205.00		\$ 2,364.00		\$ 820.69	\$ 633.86
Bulk Service (all Sizes) \$ 8 Reuse Service (all Sizes) \$ Residential Flat Rate \$ General Service Flat Rate \$	855.90 7.64 35.66 44.58		\$ 28.50	\$ 514.65			\$ 2,588.35					\$ 1,927.29					
Reuse Service (all Sizes) \$ Residential Flat Rate \$ General Service Flat Rate \$	7.64 35.66 44.58		\$ 28.50	\$ 514.65			\$ 4,167.69										
Reuse Service (all Sizes) \$ Residential Flat Rate \$ General Service Flat Rate \$	7.64 35.66 44.58		\$ 28.50														
General Service Flat Rate \$	44.58		\$ 28.50				\$ 9.12					\$ 7.46					
General Service Flat Rate \$					\$ 27.77	\$ 38.85						\$ 35.03			\$ 31.64		
												\$ 41.60					
<ol><li>Bi-Monthly Metered Service</li></ol>																	
Meter size																	
Residential (all Sizes) \$	50.95							\$	41.06								
General Service																	
5/8" \$	50.95							\$	41.06				\$ 68.77				
	76.42							Ś	-				\$ -				
								Ś	105.32				\$ 171.93				
	254.73								236.97				\$ 343.85				
	407.57								421.26				\$ 550.16				
	815.14							•	948.10				\$ 1,100.33				
	1,273.66							-	,685.07				\$ 1,719.25				
	2,547.32								,791.95				\$ 3,438.50				
	4,075.72							¢ 0,	,				+ -,				
	7,387.24																
	71.33							\$	80.70				\$ 107.82				
	89.16							÷	80.70				<i>¥</i> 107.82				
VOLUMETRIC RATE Rate per Thousand Gallons Residential Usage																	
Max Usage \$	4.91	\$ 8.05	\$ 5.87	Ś 18.77	\$ 7.02	n/a	\$ 5.23	\$	4.21	\$ 4.39	\$ 21.38	\$ 3.00	n/a	\$ 5.05	\$ 9.38	\$ 13.96	\$ 7.85
General Service Usage All Gallons \$	5.65	\$ 9.65	\$ 7.06	\$ 22.52	\$ 8.42	\$ 3.14	\$ 6.30		S.06	\$ 5.27	\$ 25.65	\$ 3.60	\$ 3.97	\$ 6.04	,	\$ 18.50	\$ 9.43
Bulk Service Usage	2.02	÷ 5.05	÷ 7.00	÷ 22.72	- 0. <del>4</del> 2	Ş 3.14	y 0.30	Ŷ	5.00	y J.21	÷ 20.00	φ 3.00	÷ 3.27	÷ 0.04		÷ 10.50	φ J.+J
All Gallons \$	4.66				\$ 6.74												
Reuse Service Usage					¥		4										
All Gallons \$	1.45						\$ 1.36			\$ 0.90		\$ 0.75					
Base Service Change over Current:		Cypress	E. Ridge	Labrador	L. Placid	Longwood	LUSI	Mid	County	Pnbrooke	Sdlhaven	5anlando	T. Verde	Marion	Orgwood	Smrtree	Seminole
Proposed System In	Increase	13.6%	5.5%	-3.3%	26.1%	4.3%	23.5	6	26.4%	-6.5%	30.3%	58.7%	10.8%	79.3%	30.1%	30.1%	-3.1%
Proposed STP In	Increase	21.3%	5.0%	-7.5%	110.7%	-4.3%	9.5	6	56.9%	75.2%	-41.6%	67.7%	-26.7%	-3.4%	162.0%	101.7%	94.6%

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	Base Charge							Usage Rates		Avg Res					
			orma	Avg TG		Tiers			Pro F	orma		Pro F	Pro Forma		hange from
	Current	Individual	STP	Per Bill		Current	STP	Current	Individual	STP	Current	Individual	STP	Curi	rent Rates
Cypress STP - % Change	\$ 21.00	\$ 23.86	\$ 25.47	2.9	Max Use	6 tg	8 tg	\$ 7.08	\$ 8.05	\$ 4.91	\$ 41.53 -4.4%	\$ 47.21 -15.9%	\$ 39.71	\$	(1.82)
Eagle Ridge STP - % Change Flat Rate	\$ 24.25	\$ 25.59	\$ 25.47	6.8	Max Use	All	8 tg	\$ 5.56	\$ 5.87	\$ 4.91	\$ 62.20 -5.2% \$ 27.00	\$ 65.66 -10.2% \$ 28.50	\$ 58.98 \$ 35.66	\$ \$	(3.22) 8.66
STP - % Change											32.1%	25.1%			
Labrador STP - % Change	\$ 27.53	\$ 26.62	\$ 25.47	2.1	Max Use	10 tg	8 tg	\$ 19.41	\$ 18.77	\$ 4.91	\$ 68.29 -47.6%	\$ 66.04 -45.8%	\$ 35.78	\$	(32.51)
Lk. Placid STP - % Change	\$ 12.09	\$ 15.24	\$ 25.47	2.6	Max Use	Ali	8 tg	\$ 5.57	\$ 7.02	\$ 4.91	\$ 26.57 43.9%	\$ 33.49 14.2%	\$ 38.24	\$	11.66
Flat Rate 5TP - % Change											\$ 22.03 61.9%	\$ 27.77 28.4%	\$ 35.66	\$	13.63
Longwood Flat Rate STP - % Change											\$ 37.26 -4.3%	\$ 38.85 -8.2%	\$ 35.66	\$	(1.60)
LUSI STP - % Change	\$ 23.27	\$ 28.75	\$ 25.47	10.6	Max Use	10 tg	8 tg	\$ 4.23	\$ 5.23	\$ 4.91	\$ 65.57 -1.3%	\$ 81.05 -20.1%	\$ 64.75	\$	(0.82)
Pennbrooke 5TP - % Change	\$ 14.54	\$ 13.60	\$ 25.47	7.7	Max Use	6 tg	8 tg	\$ 4.69	\$ 4.39	\$ 4.91	\$ 42.68 48.3%	\$ 39.94 58.4%	\$ 63.28	\$	20.60
Sandalhaven STP - % Change	\$ 43.60	\$ 56.80	\$ 25.47	3.3	Max Use	6 tg	8 tg	\$ 16.41	\$ 21.38	\$ 4.91	\$ 98.39 -57.5%	\$ 128.18 -67.3%	\$ 41.86	\$	(56.52)
Sanlando <sup>STP - % Change</sup> Flat Rate	\$ 15.19	\$ 24.10	\$ 25.47	15.6	Max Use	8 tg	8 tg	\$ 1.89	\$ 3.00	\$ 4.91	\$ 30.31 113.6% \$ 22.08	\$ 48.10 34.6% \$ 35.03	\$ 64.75 \$ 35.66	\$ \$	34.44 13.58
STP - % Change											61.5%	1.8%			
Marion STP - % Change	\$ 26.37	\$ 47.27	\$ 25.47	7.0	Max Use	10 tg	8 tg	\$ 2.82	\$ 5.05	\$ 4.91	\$ 46.11 29.8%	\$ 82.62 -27.6%	\$ 59.84	\$	13.73
Orangewood STP - % Change	\$ 9.72	\$ 12.65	\$ 25.47	3.6	Max Use	6 tg	8 tg	\$ 7.21	\$ 9.38	\$ 4.91	\$ 35.68 20.9%	\$ 46.42 -7.0%	\$ 43.15	\$	7.47
Summertree STP - % Change	\$ 12.63	\$ 16.43	\$ 25.47	2.5	Max Use	6 tg	8 tg	\$ 10.73	\$ 13.96	\$ 4.91	\$ 39.46 -4.3%	\$ 51.33 -26.5%	\$ 37.75	\$	(1.71)
Seminole STP - % Change	\$ 13.09	\$ 12.68	\$ 25.47	5.6	Max Use	8 tg	8 tg	\$ 8.11	\$ 7.85	\$ 4.91	\$ 58.51 -9.5%	\$ 56. <b>64</b> -6.5%	\$ 52.97	\$	(5.54)
<u>BI-Monthly Billing Cyc</u> Mid County <sup>STP - % Change</sup>		\$ 41.06	\$ 50.95	11.0	Max Use	20 tg	16 tg	\$ 3.33	\$ 4.21	\$ 4.91	\$ 69.26 51.9%	\$ 87.56 20.1%	\$ 105.18	\$	35.92
Tierra Verde Flat Rate sTP-% Change											\$ 97.29 -26.7%	\$ 107.82 -33.8%	\$ 71.33	\$	(25.96)