BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Application for increase in water/)	Docket No. 100330-WS
wastewater rates in Alachua, Brevard, DeSoto,)	
Hardee, Highlands, Lake, Lee, Marion, Orange,)	FILED: September 22, 2011
Palm Beach, Pasco, Polk, Putnam,)	
Seminole, Sumter, Volusia, and Washington)	
Counties by Aqua Utilities Florida, Inc.)	
)	

DIRECT TESTIMONY

OF

ANDREW T. WOODCOCK PE, MBA

On Behalf of the Citizens of the State of Florida

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Attorney for the Citizens
Of the State of Florida

06879 SEP 22 = FPSC-COMMISSION CLERK

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I. INTRODUCTION/BACKGROUND/SUMMARY

2 Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?

- 3 A. My name is Andrew Woodcock. My business address is 201 East Pine St. Suite 1000,
- 4 Orlando, Florida, 32801.

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6 Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?

7 A. I am employed by Tetratech as a Professional Engineer and Senior Project Manager.

8

9 Q. WHAT IS YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE?

A. I graduated from the University of Central Florida in 1988 with a B.S. degree in 10 Environmental Engineering and in 1989 with an M.S. degree in Environmental 11 12 Engineering, In 2001, I graduated from Rollins College with an MBA degree. In 1990, I 13 was hired at Dyer, Riddle, Mills and Precourt as an engineer. In May of 1991, I was hired 14 at Hartman and Associates, which has since become Tetra Tech. My experience has been 15 in the planning and design of water and wastewater systems with specific emphasis on 16 utility valuation, capital planning, utility financing, utility mergers and acquisitions and 17 cost of service rate studies. I have also served as utility rate regulatory staff for St. Johns 18 and Collier Counties in engineering matters. Before the Florida Public Service 19 Commission (FPSC), I have provided testimony for Docket No. 070183-WU, regarding the Used and Useful Rule for Water Treatment Systems, Docket No. 070293-SU, KW 20 21 Resort Utilities Rate Case and Docket No. 100104-WU, Water Management Services, 22 Inc. Rate Case. In addition, with respect to AUF rate cases I provided testimony before 23 the FPSC in Dockets 060368-WS and 080121-WS. Exhibit ATW-1 provides additional 1 details of my work experience.

2

3 Q. WHAT ARE YOUR PROFESSIONAL AFFILIATIONS?

- 4 A. I am a member of the Florida Stormwater Association, American Water Works
- 5 Association and Water Environment Federation.

6

7 Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE A RATE REGULATORY

8 BODY AS AN ENGINEERING WITNESS?

- 9 A. Yes, I testified in 2002 for the St. Johns County Regulatory Authority at a special
- 10 hearing in an overearnings case against Intercoastal Utilities. In 2008, I testified before
- the FPSC on the Used and Useful Rule for Water Treatment Systems on behalf of the
- 12 Office of Public Counsel (OPC). Also, in 2008, I testified in Docket 070293-SU
- 13 regarding the used and usefulness of utility plant of KW Resort Utilities on behalf of
- 14 OPC. I also provided testimony regarding AUF in two previous rate cases, Docket
- 15 060368-WS in 2007, which was withdrawn by AUF, and in Docket 080121-WS. In 2010,
- 16 I testified before the FPSC in docket 100104-WU regarding used and useful and pro
- 17 forma adjustments to rate base for Water Management Services Inc.

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Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

- A. The purpose of my testimony is to offer used and useful (U&U) testimony on the
- 21 protested systems of Order No. PSC-11-0256-PAA-WS as shown in Exhibit ATW 2. I
- 22 will also provide testimony regarding the pro forma adjustments to rate base and AUF's
- compliance history with the Florida Department of Environmental Protection.

- 1 Q. WHAT DOCUMENTS HAVE YOU REVIEWED AND WHAT
- 2 INVESTIGATIONS AND ANALYSES HAVE YOU MADE IN PREPARATION
- **3 FOR YOUR TESTIMONY?**
- 4 A. I have studied the filings of AUF, including the Minimum Filing Requirements
- 5 (MFRs) and the direct Testimony of Troy Rendell and John Livarcik. I have reviewed
- 6 and studied many of AUF's responses to discovery requests. Also for purposes of service
- 7 area determination, I reviewed the property maps of several County Appraisers offices,
- 8 aerial photographs via Google Earth and contacted various utilities around the state.
- 9 In the summer of 2007, as part of a previous rate filing by AUF, I inspected all of
- 10 the systems with the exception of Breeze Hill, Peace River and Fairways. In the summer
- of 2008, as part of last rate filing by AUF, I re-inspected Arredondo Farms, Rosalie Oaks
- and South Seas among others systems that are not protested in this proceeding.
- 13 In the winter of 2011, I inspected Arredondo Farms, Breeze Hill, Fairways, Peace River,
- 14 Rosalie Oaks and South Seas systems among other systems that are not protested in this
- 15 proceeding.
- I also analyzed the system maps of each system as filed in the MFRs and
- 17 reviewed Staff's work papers for U&U.

19 II. USED AND USEFUL CALCULATIONS – GENERAL

- 21 Q. WHAT METHODOLOGY DID YOU USE TO CALCULATE THE U&U
- 22 PERCENTAGES?
- 23 A. I made my calculations based upon the requirements of the Commission's Rule 25-
- 24 30.4325, F.A.C., for water treatment plant. For wastewater treatment plant, I relied upon

- 1 Rule 25-30.432, F.A.C. I also relied upon Section 367.081, F.S., which sets forth
- 2 standards for U&U determinations. Section 367.081(2)(a)1., F.S., provides in part:
- The commission shall...fix rates which are just, reasonable, compensatory and not
- 4 unfairly discriminatory...In every such proceeding the commission shall
- 5 consider...operating expenses incurred...in the operation of all property used and
- 6 useful in public service; and a fair return on investment of the utility property
- 7 used and useful in the public service.

- 9 Section 367.081(2)(a)2.a., F.S., provides in part:
- For purposes of such proceedings, the commission shall consider utility
- property...to be used and useful in the public service if:
 - a. Such property is needed to serve current customers.

- In fixing just, reasonable, compensatory and not unfairly discriminatory rates,
- 15 Section 367.081, F.S., requires the Commission to provide a fair return on investment in
- 16 utility property and recovery of operating expenses incurred in the operation of utility
- 17 property which is needed to serve current customers and a statutorily allowed amount of
- customer growth, as prescribed by Section 367.081(2)(a) 2.b. and c., F.S. I am of the
- 19 opinion that many of the U&U percentages contained in the PAA Order are at odds with
- 20 these statutory provisions and result in unnecessarily high rates for the customers.
- 21 Q. IN THE COURSE OF PREPARING YOUR TESTIMONY, HAVE YOU
- 22 CHANGED YOUR OPINION REGARDING THE PROTESTED U&U
- 23 CALCUATIONS?
- 24 A. Yes. Having analyzed the systems in more detail, I have come to an agreement with
- 25 the following U&U calculations in the PAA Order that were originally protested by OPC.
- Water Treatment:
- 27 Fairways at 100% U&U.
- 28 Water Distribution:

- 1 Arredondo Farms at 88% U&U,
- 2 Fairways at 100% U&U,
- 3 Lake Josephine/Sebring Lakes at 55% U&U,
- 4 Tomoka at 100% U&U,
- 5 Valencia Terrace at 100% U&U,
- 6 Zephyr Shores at 100% U&U,
- 7 Wastewater Collection:
- 8 Fl Central Commerce Park at 100% U&U, and
- 9 Zephyr Shores at 100% U&U.

11 Q. CAN YOU SUMMARIZE YOUR GENERAL CONCERNS ABOUT THE PAA

- 12 ORDER'S TREATMENT OF USED AND USEFUL?
- 13 A. My primary concerns have to do with reliance on buildout and prior Commission
- orders as a justification for higher than calculated U&U percentages. In Exhibit ATW-3,
- 15 I present the calculated U&U for AUF and Staff, as well as my own calculations
- alongside the U&U used in the PAA Order for the protested systems.
- 17 In addition, I include a column that identifies the comments that were included in
- 18 the PAA Order Attachments. According to the comments provided in the Attachments,
- of the 79 protested U&U calculations, "prior order" is relied upon 38 times to justify a
- 20 U&U percentage that is higher than what Staff calculated. Also according to the PAA
- Order Attachments, buildout is used to justify a 100% U&U for 26 of the 79 protested
- 22 U&U calculations.
- What I see overall from this treatment is a race to increase U&U, with no real
- 24 justification for doing so. The only time the U&U percentage changes in the PAA Order

1 is when it increases. I find this to be an inaccurate means to define what portion of the

2 facilities are actually serving customers. The customers are bearing the full brunt of the

3 risk associated with stranded capacity in systems with little or no growth, declining

growth rates, and decreasing usage. The end result is higher rates for the customers who

5 have no control over these factors.

Q. CAN YOU TELL US WHY YOU BELIEVE THE U&U SHOULD BE

REEVALUATED FOR THE PROTESTED SYSTEMS?

It is my opinion, in order to provide a complete and thorough review of a utility during a rate case, U&U should be evaluated every time. Over time there are material changes in the growth of a service area, how the system is operated and in the usage patterns of the customer base. There also may be new or different information submitted in the MFRs that corrects inaccurate information from a prior rate case. It is unlikely that the company would bring such issues to light if it resulted in a decrease in U&U. Therefore, it is incumbent upon the other parties of the rate case to provide an independent review of U&U with every rate case. In this case there have been material changes to many of the systems since the last rate case that effects the U&U calculations.

The first change I want to discuss is the system growth. The growth allowance in the U&U calculation relies upon some projection of historical five year data (usually of single family homes or Equivalent Residential Connections ("ERCs")). Since the five year historical data will change, it is not unreasonable to expect that this growth allowance will change from rate case to rate case. This will sometimes increase the U&U and sometimes decrease the U&U; however, the change in system growth should be evaluated in every rate case and incorporated into the U&U calculation. If not, the

customers would be subject to a U&U that is not based upon the most accurate and definitive information.

The U&U established for many systems in Order PSC-09-0385-FOF-WS, which was the last rate case for most of the protested systems, included an adjustment for projected growth. Since that time, the Florida and US economy, particularly the housing market, has undergone a recession. Thus, it is reasonable to assume that these growth factors are no longer accurate for many of the protested systems. In Exhibit ATW-4, I present the protested systems and their available U&U growth factors from the 2008 Order and the 2010 staff work papers. Unfortunately, growth factors for 23 of the 79 protested calculations were not available. However, out of the remaining 56 calculations, where growth factors were available, a total of 23 have experienced a decline in the growth factor since the last rate case. I believe this change in growth rate to be a significant part of the U&U calculation and is sufficient justification to reevaluate the overall U&U of all systems.

Q. WHAT OTHER REASONS DO YOU HAVE FOR REEVALUATING THE

17 U&U FOR THE PROTESTED SYSTEMS?

- 18 A. I also believe that the fact that the system demand has declined in many cases is also
- an important factor for reevaluating the U&U of a system. Rule 25-30.4325 (2), F.A.C.,
- 20 which provides guidance on the U&U calculation for water treatment and storage states,
- 21 in part:
- The Commission's used and useful evaluation of water treatment system and storage facilities will consider...whether flows have decreased due to conservation or to a reduction in the number of customers.

Similarly, for wastewater systems, Rule 25-30.432, F.A.C., which provides guidance on

the U&U calculation for wastewater treatment, states in part:

In determining the used and useful amount, the Commission will also consider other factors such as...whether the flows have decreased due to conservation or a reduction in the number of customers.

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- 6 These rules require that U&U be reevaluated for systems where the flows have decreased.
- 7 Historically, Staff has relied upon these rules as a means not to adjust flows down to
- 8 generate a U&U that was lower than a previous order. In other words, the U&U
- 9 consideration for a decline in flows is zero. I am of the opinion that the consideration for
- such reduction in flows should be 100%. Ignoring a decline in system flow does not
- effectively capture the portion of the system that is actually serving customers. Capacity
- that is not used as a result of a decline in customer usage is not providing service to the
- customers and should not be considered in the U&U calculation. Ignoring a decrease in
- 14 flows due to customer loss inappropriately shifts the costs of non-U&U facilities onto
- 15 customers and leads to unnecessarily higher rates.

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Q. WHAT ARE YOUR THOUGHTS ON BUILDOUT AND USING 100% U&U?

- 18 A. Rule 25-30.4325 (4), F.A.C., provides:
- A water treatment system is considered 100 percent used and useful if the service
- 20 territory the system is designed to serve is built out and there is no apparent
- 21 potential for expansion of the service territory...

- 23 I believe Staff has stretched the interpretation of this rule beyond its reasonable limits
- resulting in determinations of 100% U&U when systems are not actually built out.
- 25 The rule specifically states that a water treatment system would be 100% if the service
- 26 territory the system is designed to serve is built out. Historically, it appears Staff has
- 27 assumed that the certificated service area is equivalent to the design service area. This

- assumption is not supported, however, by any review of the original design criteria of the
- 2 treatment facilities. I recognize that given the age of most of the systems in this rate case
- 3 obtaining original design calculations would be costly, if they are even available at all.
- 4 However, before such a broad assumption of 100% U&U is made for these facilities,
- 5 some level of reasonableness against the actual U&U calculations should be considered.
- 6 Another portion of Rule 25-30.4325, F.A.C., has to do with the "...and no apparent
- 7 potential for expansion of the service territory...". It is important to note that this is a
- 8 two part test, both the design service area must be built out AND there must be no
- 9 potential for expansion. Before any U&U treatment determination of buildout is made,
- 10 the area surrounding the certificated service area must be considered for potential
- 11 expansion.
- 12 If there is undeveloped property contiguous to or in close proximity to the current service
- territory that can be served in the future by the stranded capacity, a potential for growth
- exists. Under these circumstances, Rule 25-30.4325 (4), F.A.C., precludes such a system
- from being considered 100% U&U.

16 Q. WHAT OTHER CONCERNS DO YOU HAVE WITH DETERMINATIONS OF

17 100% USED AND USEFUL?

- A. Occasionally, the Staff has considered older systems with little to no growth over the
- previous five years as 100% U&U, or for systems that are 95% U&U, simply rounded
- them up to 100%. I have never agreed with this methodology. While Staff has used this
- 21 methodology in the past, it is not supported in any U&U rule. Given the recent recession
- 22 and down turn in the housing market, many more systems will be experiencing little or no
- 23 growth simply as a consequence of factors in the overall state and national economy.
- 24 Continuing with this unsupported policy will only result in more systems being

- 1 considered 100% U&U when, in fact, a portion of the facilities are not providing service
- 2 to the customers. This results in higher rate bases and ultimately higher rates for the
- 3 customers.

III. WATER TREATMENT USED AND USEFUL

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7 Q. WHAT ARE YOUR FINDINGS WITH RESPECT TO WATER TREATMENT

- 8 USED AND USEFUL FOR THE PROTESTED SYSTEMS?
- 9 In ATW-5, I present my U&U analysis of the protested water treatment systems. I
- 10 followed the requirements of Rule 25-30.4325, F.A.C. In most cases, I agreed with the
- information presented in the MFRs. However, there were a few instances where the
- 12 flows as reported in the monthly operating reports (MORs) submitted to FDEP did not
- match what was reported in the MFRs. In these cases, I tended to rely upon the MORs,
- unless it seemed like the MOR data was an anomaly. In a few other cases, subsequent
- discovery changed some of the data I used. Despite my U&U calculations being similar
- to AUF's and Staff's, in many cases the U&U that was ultimately included in the PAA
- 17 Order was higher.

- 19 Q. CAN YOU DISCUSS YOUR OPINIONS ON THE U&U OF THE
- 20 TREATMENT SYSTEMS THAT ARE CONSIDERED BY THE COMMISSION
- 21 TO BE 100% U&U DUE TO BUILDOUT?
- 22 A. Yes, I will start with Arredondo Estates. From Exhibit ATW 3, my calculations agree
- 23 with Staff's at setting the U&U for the treatment system at about 80%. However, the
- U&U in the PAA Order is set at 100% due to buildout. In order to confirm the buildout, I

- went to the U&U calculation for the Arredondo Estates distribution system and found
- 2 that Staff had calculated the U&U at 46.84%, while I had calculated the U&U at 89.53%.
- Now, regardless of the differences in our actual percentages, it is apparent by both sets of
- 4 calculations that the Arredondo Estates service area is not built out. In other words, the
- 5 requirements of Rule 25-30.4325 (4), F.A.C., have not been met and the system should
- 6 not be considered 100% U&U.

- 8 Q. THE PAA ORDER STATES THAT THE ARREDONDO ESTATES WATER
- 9 DISTRIBUTION SYSTEM IS 100% U&U AND DOES NOT USE THE STAFF
- 10 CALCULATION. PLEASE EXPLAIN WHY?
- 11 A. The PAA Order assigns a 100% U&U to the water distribution system due to reliance
- on a prior order on U&U. I researched the prior order and found that both the water
- treatment U&U and the water distribution U&U for Arredondo Estates were considered
- 14 100% because the system is old and there was minimal growth over the previous five
- 15 years. As I have already testified, this conclusion is not supported by the current U&U
- rules and only serves to arbitrarily increase the U&U of utility systems as the impact of
- 17 the recession continues to impact growth. Moreover, Staff's own calculations showed
- that over 50% of the lots are available for new customers. Therefore, the reliance on the
- prior order 100% U&U, which is not supported by the U&U rules, should not be allowed
- to support a finding of buildout condition and a 100% U&U for treatment.

- 22 Q. SO WHAT IS YOU OPINION OF THE U&U FOR THE ARREDONDO
- 23 ESTATES TREATMENT?
- A. My opinion is that the Arredondo Estates water treatment facilities are 80% which is

in agreement with Staff's calculation.

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1

3 Q. WHAT IS YOUR NEXT CONCERN WITH THE WATER TREATMENT

4 U&U?

A. My next concern is with Arredondo Farms. As with Arredondo Estates, my U&U calculations are in line with Staff's calculations at about 61%. However, the PAA has 100% U&U based on buildout. A review of the water distribution system U&U in the PAA shows that the U&U for Arredondo Farms is 88%. Despite 12% of the water distribution system being available for new connections according to the PAA Order, somehow water treatment U&U of the system was considered built out and therefore

13 U&U.

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Q. WHAT IS YOUR NEXT CONCERN WITH THE WATER TREATMENT

considered 100% U&U. I find this to be completely incongruous and unreasonable. I

recommend that the U&U of the water treatment facilities should be found to be 61%

16 U&U?

17 A. Since we are discussing water treatment facilities that are considered by the PAA to be 18 100% U&U due to buildout, the next example to consider is East Lake Harris/Friendly 19 Center. Like the two systems above, Staff's U&U calculations match my own at about 20 41% U&U, yet the PAA Order sets the U&U at 100% based on buildout. What sets this 21 system apart from the Arredondo systems is that I agree with staff that the service area is 22 built out. Nevertheless, referring back to Rule 25-30.4325 (4), F.A.C., both the design 23 service area must be built out and there must be no potential for service area expansions. 24 While there is some question as to whether the certificated service area is the design

- 1 service area, I checked to determine if the existing service area could be expanded.
- 2 Exhibit ATW 6 presents an aerial photograph of the service area and the surrounding
- 3 properties obtained from Google Earth. Based on this Exhibit, it is apparent that there is
- 4 significant developable property adjacent to the service area available for potential
- 5 expansion. There also does not appear to be any other utilities in the area that could easily
- 6 provide service to this property. Based on my analysis, the second part of the 100%
- 5 buildout test has not been met since there is the ability for the utility to expand its service
- 8 area. As a result, I am of the opinion that the East Lake Harris/Friendly Center water
- 9 treatment facilities should be considered 41% U&U.

11

Q. WHAT IS THE NEXT SYSTEM YOU WISH TO ADDRESS?

- 12 A. I found that the following systems appear to meet the requirements of Rule 25-
- 13 30.4325 (4), F.A.C., in that they are 100% built out and there is no apparent room for
- 14 expansion inside or outside the service territory:
- 15 Fairways Treatment U&U 78%;
- 16 Tomoka Treatment U&U 43%; and
- 17 Zephyr Shores- Treatment U&U 25.93%.
- 18 While I am unable to determine the exact nature of the original design service areas, it
- does appear that these facilities are serving an almost completely developed service area.
- 20 In addition, I have determined that these systems either have no adjacent developable
- 21 land (Fairways) or are adjacent to other utility systems (Ormond Beach for Tomoka and
- 22 Pasco County for Zephyr Shores). Further, it is likely that these other systems would
- provide service to the adjacent undeveloped properties.

1 Q. SO YOUR RECOMMENDATION FOR THESE FACILITIES IS THAT THEY

- 2 SHOULD BE CONSIDERED 100% U&U PER RULE 25-30.4325 (4), F.A.C.?
- 3 A. For the Fairways system, I would agree that 100% U&U may be appropriate. While it
- 4 is not 100% U&U, it is more than 75% U&U. In my opinion, that is the low end of
- 5 variability between capacity and demand that I would expect in a buildout condition.

6

7 Q. PLEASE EXPLAIN?

- 8 A. I recognize that there are differences that can occur between initial design conditions
- 9 and final buildout of a service area. I am of the opinion that a swing of 25% is an
- appropriate figure to use to account for incremental sizing of facilities, and differences
- between design estimates and actual usages without putting an undue burden on the
- 12 customers for capacity that will not be used. So in a case where the service area appears
- to be truly built out and there is no apparent opportunity to expand the service, I would
- 14 recommend permitting the application of 100% U&U for treatment facilities, provided
- that the calculated U&U is greater than 75%.

16

17

Q. WHAT ABOUT THE TREATMENT FACILITIES WITH A CALCULATED

18 **U&U LESS THAN 75%?**

- 19 A. I find that such a difference goes beyond the expected variability of planning and
- 20 design. There could be a number of reasons for this variability. It is possible that the
- 21 facilities were originally designed to serve a larger service area than what is certificated,
- or the land use within the service area changed from the original concept, or the facilities
- 23 could have been over-designed, or the customer base could be requiring far less service
- 24 than originally contemplated. In most cases, given the age of these systems it would be

- difficult to find the specific reason for such a discrepancy. However, the fact remains
- 2 that there are large amounts of stranded capacity in these systems that will never be used
- 3 by the customers. It is my opinion that this should be addressed in the U&U analysis.
- 4 For example, with Zephyr Shores, 74% of the facilities do not provide service to the
- 5 customers even though the service area is built out and there is no room for service area
- 6 expansion.
- 7 Therefore, in my opinion, in the Tomoka and Zephyr Shores systems where there
- 8 is excessive capacity beyond a reasonably expected variability level, the calculated U&U
- 9 percentages should be used.

11 Q. WHAT OTHER COMMENTS DO YOU HAVE ABOUT WATER

- 12 TREATMENT U&U?
- 13 A. Interlachen/Park Manor is similar to Arredondo Farms in that the water distribution
- system that the treatment facilities serve is not considered 100% U&U by the PAA Order.
- 15 In my opinion, the U&U for this system should be 76%, as calculated by Staff.
- Hobby Hills is similar to East Lake Harris/Friendly Estates. Although the Hobby
- Hills service area is built out, there appears to be developable property adjacent to the
- service area that could be served and there are no other utilities nearby that may be able
- 19 to provide service (see Exhibit ATW 7). Therefore, it is my opinion that the U&U for the
- water treatment facilities for Hobby Hills should remain as calculated by Staff at 41%.

21

22 Q. WHAT IS YOUR OPINION OF U&U FOR THOSE WATER SYSTEMS THAT

- 23 RELY UPON A PRIOR ORDER DETERMINATION IN THE PAA ORDER?
- 24 A. As I mentioned previously, many systems have experienced changes in either growth

- 1 rate or system flows from the 2008 rate case that affected the U&U calculation. While
- 2 Staff and AUF have adjusted for these changes where the U&U would be adjusted up,
- 3 they made no such corrections where the U&U would be adjusted down. I found five
- 4 systems in the PAA in which the U&U percentages rely upon the prior order where the
- 5 growth rate has dropped. They are as follows:
- 6 Carlton Village whose U&U growth factor dropped from 1.25 in the 2008 rate case to
- 7 1.19;
- 8 Hobby Hills whose U&U growth factor dropped from 1.04 in the 2008 rate case to 1.00;
- 9 Lake Josephine/Sebring whose U&U growth factor dropped from 1.06 and 1.25 for the
- separate systems in the 2008 rate case to 1.00;
- Silver Lake Estates whose U&U growth factor dropped from 1.06 in the 2008 rate case to
- 12 1.00; and
- 13 Venetian Village whose U&U growth factor dropped from 1.14 in the 2008 rate case to
- 14 1.08.
- 15 These changes in growth affect the U&U calculation. It is my opinion that the new
- 16 calculations for U&U should be used for these systems. For Carlton Village and
- 17 Venetian Village, I agree with Staff's calculation of U&U at 91% and 62% respectively. I
- 18 have discussed the Hobby Hills system previously in my testimony. For Silver Lake
- 19 Estates, my U&U calculation differs from Staff's due to fire flow which I will discuss
- 20 later in my testimony. Finally, I address the water treatment U&U for Lake
- 21 Josephine/Sebring Lakes later in my testimony.
- In two systems, Picciola Island and Welaka, the growth rate actually increased
- 23 since the last rate case; however, customer usage declined to the extent that the calculated
- 24 U&U for this proceeding is less than what was contained in the 2008 rate case. As I have

- 1 mentioned previously, I am of the opinion that changes in customer flows should be
- 2 given full and equal consideration by increasing or decreasing the U&U calculation.
- 3 Thus, in my opinion, based on the U&U rule, the U&U for water treatment for these two
- 4 systems should be revised to the U&U percentages that both Staff and myself calculated
- 5 at 56% U&U for Picciola Island and 74% U&U for Welaka.

- 7 Q. WHAT IS YOUR RECOMMENDATION FOR THE U&U OF THE
- 8 REMAINING SYSTEM THAT RELIES UPON A PRIOR ORDER, LAKE
- 9 **JOSEPHINE/SEBRING?**
- 10 A. The Lake Josephine/Sebring system was handled differently by Staff in this
- proceeding than in 2008. In the last rate case, Staff and AUF treated them as separate
- 12 systems. In this proceeding, Staff and AUF both treated the systems as interconnected,
- which is similar to my methodology in the 2008 rate case. Such a modification
- represents a major change in how the system is operated and drastically affects the U&U
- 15 calculation. As an interconnected system, there are significant changes to the firm
- 16 reliable capacity of the water treatment system which has a direct impact on the
- 17 denominator of the U&U calculation. Staff's attempt to try to present a composite U&U
- 18 percentage based on the prior order ignores this fundamental change and completely
- overstates the U&U of the treatment facilities. Staff's actual calculation of U&U for the
- 20 combined system is 32% U&U, as compared to the 85% U&U provided in the PAA
- 21 Order.

- Q. WHAT IS YOUR OPINION OF THE WATER TREATMENT U&U FOR THE
- 24 LAKE JOSEPHINE/SEBRING SYSTEM?

- 1 A. My methodology is similar to Staff's; however, we have a slightly different firm
- 2 reliable capacity number. Staff includes the full impact of fire flow in the system
- 3 whereas I do not. My opinion of the water treatment U&U for the Lake
- 4 Josephine/Sebring system is 25%.

- 6 Q. YOU HAVE TWICE MENTIONED FIRE FLOW AS HAVING AN IMPACT
- 7 ON YOUR CALCULATIONS AS COMPARED TO STAFF'S. WILL YOU
- 8 EXPLAIN?
- 9 A. Rule 25-30.4325, F.A.C., allows for fire flow to be included in the U&U calculation
- 10 for water treatment, if it is provided. Historically, it has been Staff's position that fire
- 11 flow should be included in the U&U calculation if hydrants are included in the service
- area regardless of the number of hydrants or ability of the lines to actually provide fire
- service to the entire service area. Staff maintains the same position in this proceeding.
- 14 Conversely, in my testimony in previous cases, I have argued against including fire flow
- in the water treatment U&U calculation if there are not sufficient hydrants in the system
- 16 to provide complete coverage or the lines are undersized to provide fire flow. My
- 17 reasoning is that, if all customers do not benefit from the provision of fire flow, the
- 18 capacity cannot be said to be used and useful for all customers. This issue affects the
- 19 water treatment U&U for two systems, Silver Lake Oaks and Lake Josephine/Sebring
- 20 Lakes, and is the primary difference between my and Staff's calculations. As a result, my
- 21 opinion of U&U for the water treatment facilities for Silver Lake Oaks is 74% versus
- 22 Staff's 77%, and my opinion for the Lake Josephine/Sebring system is 25% versus Staff's
- 23 32%.

1 Q. WHY ARE SOME OF THE ONE-WELL SYSTEMS PROTESTED WHEN

- 2 RULE 25-30.4325, F.A.C., STATES THAT SYSTEMS WITH ONE WELL ARE
- 3 CONSIDERED 100% U&U?
- 4 A. Similar to my position in the 2008 rate case, I found that even though some systems
- 5 were served by a single well, the calculated U&U numbers are quite low. In these
- 6 instances, I am of the opinion that, pursuant to Rule 25-4325 (3), F.A.C., an alternative
- 7 approach to U&U is necessary. In defining my criteria for further consideration, I looked
- 8 at both the calculated U&U and the size of the supply well. If the well is greater than 150
- 9 gallons per minute ("gpm") and the calculated U&U is less than 75%, I believe further
- 10 evaluation of the U&U is appropriate.

11

12

Q. HOW DID YOU DETERMINE THESE CRITERIA?

- 13 In deviating from the requirements of the one well rule, I wanted to be sure that I was
- only considering systems where a further analysis would have a significant impact. I
- 15 generated these criteria to provide a conservative basis for isolating special cases to the
- one well rule. For the U&U criterion, I wanted to make sure that I was not including
- facilities that would be close to 100% U&U without consideration of the one well rule. I
- set 75% U&U as a threshold so that there would be a significant difference for deviating
- 19 from the one well rule.
- With respect to the well pumps, I wanted to conservatively eliminate smaller
- 21 capacity pumps where a small change in demand could have a large percentage impact on
- 22 U&U. This recognizes the fact that a smaller well pump could easily approach 100%
- 23 U&U with only a few additional customers. Whereas, a larger well serving the same
- 24 customer base would not see as high of a U&U increase. Based on my review of the

systems, I believe that 150 gpm is a conservative threshold to account for this.

2

3 Q. WHAT SYSTEMS WERE AFFECTED BY THESE CRITIERA?

- 4 A. I found four systems with one well that meet the above criteria and should be
- 5 evaluated for U&U on a calculated basis. The systems are as follows:
- 6 the Breeze Hill system which has a single 177 gpm pump and a calculated U&U of
- 7 26%;
- 8 the Fern Terrace system which has a single 180 gpm pump and a calculated U&U of
- 9 68%;
- the Rosalie Oaks system which has a single well of 250 gpm and a calculated U&U of
- 11 12%; and
- 12 the Twin Rivers system which has a single well of 268 gpm and a calculated U&U of
- 13 24%.

14

15 IV. WASTEWATER TREATMENT USED AND USEFUL

16

17 O. DESCRIBE YOUR USED AND USEFUL METHODOLOGY FOR

- 18 WASTEWATER TREATMENT SYSTEMS?
- 19 A. I followed the methodology stated in Rule 25-30.432, F.A.C. My analysis consisted
- 20 of a review of the test year Discharge Monitoring Reports (DMRs) that are required to be
- 21 filed monthly with FDEP. For some systems, I found that the DMR flows do not match
- 22 with what is found in the MFRs. However, in most cases, it did not appear to be a
- 23 significant difference. In my calculations, I used the flows that were presented in the
- 24 DMRs.

The appropriate basis for the calculation was then determined from the system permits. In instances where the permit delineated two permitted capacities, one for treatment and one for effluent disposal, two separate used and useful percentages were produced. For these cases, I used the larger of the two used and useful values. Exhibit ATW-8 provides my wastewater treatment used and useful calculations.

6

7 Q. WHAT IS YOUR OPINION OF THE WASTEWATER TREATMENT U&U

8 FOR THE PROTESTED SYSTEMS?

- 9 A. I disagree with the reliance upon buildout conditions and prior orders that show a
- 10 higher than calculated U&U. I recommend that the actual calculated U&U percentages
- be relied on for rate setting. I think it is important to note that in some cases I agree with
- both Staff's and AUF's percentages, and in some cases, my U&U is higher.

13

14

Q. CAN YOU SHOW SOME EXAMPLES WHERE RELIANCE ON BUILDOUT

15 CONDITIONS OVERSTATES THE WASTEWATER TREATMENT U&U?

- 16 A. The first system I want to discuss is The Woods. Staff calculates the wastewater
- 17 treatment U&U at 75%, but, the PAA Order recommends 100% due to buildout.
- 18 However, the wastewater collection system for the Woods is shown in the PAA as only
- 19 71% built out. So there are available lots for new growth in the system and it is clearly
- 20 not built out; therefore, the wastewater treatment U&U should be as calculated at 61%.

21

22

Q. WHAT OTHER EXAMPLES DO YOU HAVE?

- 23 A. The next examples I would cite are systems where the treatment U&U is considered
- 24 100% when the wastewater collection system is deemed to be 100% U&U, even though

the actual collection system calculations support a lower U&U percentage.

The Peace River system is considered to have a 100% U&U collection system even though the actual calculations show that it is 80%. Nevertheless, the wastewater treatment plant is considered 100% U&U due to buildout, when the actual calculations show that it is only 59% U&U.

The Jungle Den wastewater collection system is considered 100% U&U, when the actual calculations show that it is 87% U&U by my calculations, and 141% by Staff. Despite our differences in U&U percentage, which is likely the result of how staff counted connections in the service area, there are available lots for new service in the service area. The wastewater treatment facilities are considered 100% U&U due to buildout when the calculated U&U percentage by both myself and Staff is 37%.

The Rosalie Oaks wastewater collection system is considered100% U&U, when the actual calculations show that it is 93% U&U by my calculations, and 79% by Staff. The wastewater treatment facilities are then considered 100% due to buildout even though the U&U calculations show it to be 52% U&U.

The Fairways system has a collection system that is considered 100% U&U in the PAA Order when the U&U calculation shows that it is 99%. This is a close distinction; however, it is important because considering the system 100% U&U is used as justification for considering the wastewater treatment plant 100% U&U when the actual calculations show it as 42%.

- 22 Q. ARE THERE ANY SYSTEMS WHERE YOU DO AGREE THAT THE
- 23 WASTEWATER TREATMENT FACILITIES PROVIDE SERVICE TO A
- 24 SERVICE AREA THAT IS BUILT OUT AND HAS NO POTENTIAL FOR

1 EXPANSIONS?

- 2 A. Yes, after careful consideration of the service areas, surrounding properties adjacent to
- 3 the service areas, and a survey of utility systems in the area of the utilities, I agree that the
- 4 following wastewater treatment systems are serving built out service areas and have no
- 5 potential for expansion:
- 6 Arredondo Farms Treatment U&U 66%;
- 7 Florida Central Commerce Park Treatment U&U 41%;
- 8 Kings Cove Treatment U&U 46%;
- 9 Morningview Treatment U&U 33%;
- 10 South Seas Treatment U&U 40%;
- 11 Summit Chase Treatment U&U 36%;
- 12 Valencia Terrace Treatment U&U 40%; and
- 13 Venetian Village Treatment U&U 49%.

15 Q. SO FOR THESE SYSTEMS THE WASTEWATER TREATMENT U&U

16 **SHOULD BE 100%?**

- 18 A. No, that is not my opinion. In each of these cases, there is a very low U&U for
- wastewater treatment. With the exception of 2 systems, the U&U is less than 50%.
- 20 Clearly, there is a large portion of the treatment system that is not providing service to the
- 21 customers.

14

17

- 23 Q. HOW WOULD YOU CHARACTERIZE THE NATURE OF THE
- 24 DIFFERENCE BETWEEN THE LOW U&U AND THE BUILT OUT SERVICE

AREA?

1

2 A. As I mentioned previously regarding water treatment, there could be a number of 3 reasons. It is possible that the facilities were originally designed to serve a larger service 4 area than what is certificated, or the land use within the service area changed from the original concept, or the facilities could have been over designed, or the customer base 5 6 could be requiring far less service than originally contemplated. Given the age of these 7 systems, it would be difficult to find the specific reason for such a discrepancy. 8 However, the fact remains, that there is a large amount of stranded capacity in these 9 systems that will never be used by the customers. It is my opinion that this extra capacity 10 should be accounted for by the U&U analysis. I am willing to accept a 25% allowance in U&U to account for reasonable mismatches between design and actual conditions and 11 12 incremental capacity issues. Therefore, my opinion is that if the calculated U&U is 75% or greater, a U&U 100% is appropriate. However, for the systems that the calculated 13 14 U&U percentages are less than 75%, then the calculated U&U should be used.

15

16 Q. WHAT OTHER ISSUES DO YOU HAVE REGARDING WASTEWATER

17 TREATMENT U&U?

- 18 A. I have several objections to reliance on the prior order to justify a higher than
- 19 calculated U&U. I found five instances where the calculated U&U was less than a prior
- 20 order as a result of lower flows or lower growth, and it is my opinion that the calculated
- 21 U&U percentages are the most accurate for use in this rate proceeding.

22

23 V. WATER DISTRIBUTION AND WASTWATER COLLECTION USED

24 AND USEFUL

2 Q. DESCRIBE YOUR U&U METHODOLOGY FOR WATER DISTRIBUTION

3 AND WASTEWATER COLLECTION SYSTEMS?

- 4 A. For the most part, I used the lot to lot methodology based on counts of customers and
- 5 lots adjacent to service lines as counted from the service area maps as provided by AUF
- 6 in the MFRs. Exhibit ATW-9 presents my calculations of the water distribution and
- 7 wastewater collection U&U.

8

9 Q. WHAT ARE THE RESULTS OF YOUR U&U ANALYSIS OF THE

10 **PROTESTED SYSTEMS?**

- 11 A. In many cases, my U&U calculations are similar to what was determined by AUF and
- 12 Staff. However, as with water treatment, I found that the PAA Order includes higher
- than calculated U&U numbers based on buildout conditions and reliance on prior orders.
- 14 I have already stated previously in my testimony why such blanket determinations result
- in inaccurate U&U determinations.

16

17 O. PLEASE EXPLAIN WHY YOU DO NOT AGREE WITH THE SYSTEMS IN

18 THE PAA THAT ARE CONSIDERED 100% U&U DUE TO BUILDOUT?

- 19 A. Staff has historically assumed that systems that are 95% built out with little or no
- 20 growth to be considered 100% U&U. I find this to be an inappropriate rounding practice
- 21 that only serves to overstate the U&U of the distribution system. This is a particularly
- 22 sensitive issue because in some cases a 100% U&U water distribution or wastewater
- 23 collection system also is used to justify a higher than calculated U&U percentage for
- treatment systems, many of which have very low calculated U&U percentages.

I am of the opinion that rounding to a single percentage point is an appropriate level of accuracy that neither favors the customers or AUF. The U&U stands as calculated which in some cases may be 99%. This methodology avoids overstating, and in some cases grossly overstating, the U&U percentage of treatment facilities.

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Q. WHAT IS YOUR OPINION CONCERNING SYSTEMS WHERE THE U&U IS 6

STATED AS 100% IN THE PAA ORDER AS THE RESULT OF A PRIOR 7

ORDER? 8

9 A. As I mentioned previously, U&U should always be reevaluated in a new rate case. As 10 a result of relying on prior orders, many line U&U percentages are overstated. For example, Rosalie Oaks is considered 100% U&U based on a prior order when all three 12 parties have calculated the actual U&U to be 80%. My opinion is that the calculated

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O. ARE THERE ANY PARTICULAR U&U DIFFERENCES YOU WISH TO

16 **COMMENT ON?**

U&U number should be used.

A. Yes. For the most part, the systems consist of a residential customer base, and a direct comparison of lot to lot is an accurate and appropriate means of determining U&U for water distribution and wastewater collection. There are a few systems, however, where there is either a large portion of multifamily connections on a single lot or commercial customers where a direct lot to lot calculation is not accurate. It appears that this methodology is generally agreed to by all parties. However, I found one case for the Jungle Den wastewater collection system where my methodology generated a different U&U percentage than Staff or AUF. From Staff work papers, an actual U&U of 140 is

- 1 calculated by comparing the number of customers to the number of lots in the service
- 2 area. In my approach, I compared the number of customers to the number of potential
- 3 customers in the service area based on the service area maps provided with the MFRs.
- 4 My U&U calculations indicated a U&U of 87%.

6 VI. PRO FORMA ADJUSTMENTS TO RATE BASE

7

8 Q. PLEASE EXPLAIN YOUR POSITION REGARDING THE PRO FORMA

9 PLANT ADDITIONS TO THE LAKE JOSEPHINE/SEBRING LAKES AND

10 LEISURE LAKES SYSTEMS?

- 11 A. I am concerned that there is no assurance that the improvements requested by the
- 12 Company will be placed into service. The PAA approves a total of \$276,392 in pro
- 13 forma adjustments for the Lake Josephine/Sebring Lakes systems that have not been
- installed or placed into service for the benefit of the customers. Also for Leisure Lakes,
- the PAA Order approves \$93,700 in pro forma adjustments that have not been installed or
- placed into service for the benefit of the customers.
- As part of my initial investigations in this case, I inspected several systems where
- 18 there were large adjustments to rate base. Both Lake Josephine/Sebring Lakes and
- 19 Leisure Lakes were on my list; however, during the time of my inspections in the winter
- 20 of 2011, I was told that the systems were under design and there were no facilities to
- 21 inspect. In addition, over the course of discovery, several status updates were sent by
- 22 AUF that corroborated what I was told in the field. Recently, the Testimony of Mr.
- 23 Luitweiler in this case stated that bids for the construction of the pro forma improvement
- 24 to the Lake Josephine/Sebring Lakes system are expected on September 5, 2011, and bids

- 1 for the construction of the Leisure Lakes pro forma improvements are expected on
- 2 November 7, 2011.

- 4 Q. WHAT IN YOUR OPINION WOULD CONSTITUTE REASONABLE
- 5 ASSURANCE THAT THE PRO FORMA IMPROVEMENTS WILL BE PLACED
- 6 INTO SERVICE FOR THE BENEFIT OF THE CUSTOMERS?
- 7 A. I am of the opinion that at a minimum secured bids and construction underway would
- 8 be reasonable assurance. My concern is that, even though the equipment for these
- 9 improvements has been purchased, they still may not be actually be installed and placed
- 10 into operation. Even though the projects may be bid out to a contractor to install, there
- 11 may be other reasons that could delay or prevent the project from being completed. I
- believe once construction is under way there is a high likelihood that the facilities will be
- 13 completed.

14

- 15 Q. IN MR. LUITWIELLER'S TESTIMONY, IT APPEARS THAT SEVERAL
- 16 PRO FORMA PROJECTS WILL BE BID FOR CONTRUCTION AS THIS RATE
- 17 CASE PROGRESSES. WHAT IS YOUR OPINION OF THE CHANGING
- 18 NATURE OF THE STATUS OF THESE PROJECTS?
- 19 A. I would consider a Notice to Proceed to the contractor and verification that physical
- 20 construction has started to be reasonable evidence that the projects should be placed into
- 21 rate base and I am willing to change my opinion if this occurs by the end of this rate
- 22 proceeding.

23

24 Q. WHAT ARE YOUR FINDINGS ABOUT THE COMPLIANCE STATUS OF

THE AUF SYSTEMS WITH ENVIRONMENTAL REGULATIONS?

- 2 A. I reviewed information regarding AUF's systems provided by FDEP from their
- 3 compliance database and present a summary of that information in ATW-10. This data
- 4 base provided information regarding various FDEP compliance issues with AUF systems
- 5 from January 2001 through July 2011.

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- The first page of ATW-10 presents a listing by AUF system of water violations.
- 7 Since 2007, there have been a total of 26 primary water quality violations, 20 total
- 8 coliform violations, 15 secondary violations and 15 violations for late or not reported
- 9 parameters (shown as MNR in the Exhibit). Since 2010, there have been total of 3
- primary water quality violations, 6 total coliform violations, 2 secondary violations and 1
- violation for late or not reported parameters.
- Exhibit ATW-10 also shows the number of compliance issues regarding the AUF
- wastewater systems. Since 2007, the AUF wastewater treatment plants have been found
- 14 to have minor out of compliance notices 96 times and significant out of compliance
- issues 39 times. Since 2010, these same systems have been found to have minor out of
- 16 compliance issues 40 times and significant out of compliance issues 11 times.
- 17 Finally, Exhibit ATW-10 shows the number of notices sent to AUF water
- systems. Since 2007, AUF water systems have had 5 boil water precautionary notices, 11
- 19 formal consent orders, 12 formal warning letters and 22 instances where the consumer
- 20 confidence reports received were not in compliance. Since 2010, AUF water systems
- 21 have had 1 boil water notice, 2 formal consent orders, 2 formal warning letters and 11
- 22 instances where consumer confidence reports received were not in compliance.

23 Q. DOES THIS COMPLETE YOUR TESTIMONY?

A. Yes it does.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was furnished by e-mail and

U.S. Mail this 22nd day of September, 2011 to:

Ralph Jaeger Caroline Klancke Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee, Florida 32399-0850

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Patricia A. Christensen

EXHIBIT ATW-1 RESUME OF ANDREW T. WOODCOCK



Andrew T. Woodcock, P.E., M.B.A.

Senior Project Manager

Mr. Woodcock has been involved with many different facets of environmental engineering. He has special expertise in utility master planning, due diligence investigations, utility valuations, financial feasibility analyses and business plans. Mr. Woodcock's skills include assisting utilities prepare operating and capital programs and supporting those programs with a series of rates and charges to provide for their successful implementation. He is also experienced in conducting economic and feasibility analyses and serves as an expert witness on utility rate regulatory matters.

EXPERIENCE

Mr. Woodcock's water and wastewater utility planning experience includes several master plans, and capital improvements programs that include water, wastewater and reclaimed water utilities. Recent planning projects include the City of Deltona Water and Wastewater Master Plans, the City of Bartow Water Master Plan, and the City of Naples Integrated Water Supply Study. As part of the planning process Mr. Woodcock has conducted numerous economic, present value and feasibility analyses that evaluate the financial impacts of utility programs and provide useful decision criteria for capital planning.

Mr. Woodcock has participated in over 60 water and wastewater utility valuations and acquisitions for utility systems located throughout the Southeast United States. The acquisition projects cover a wide range of utility system configurations and sizes and include engineering due diligence inspections, valuations, and financing activities associated with the transactions. Major projects include the City of Peachtree City GA acquisition of Georgia Utilities Company, the City of Winter Haven FL acquisition of Garden Grove Water Company and the acquisition of the Deltona and Marion County systems from Florida Water Services Corp.

Additionally, Mr. Woodcock has experience in the review and analysis of water and wastewater utility rates, charges and impact fees. His experience also extends to providing financial feasibility documentation in support of revenue bonds. and utility financial feasibility studies in support of capital funding including studies for the Cities of Apopka, Naples, and Bartow, Pasco County and the Tohopekaliga Water Authority.

Specific Recent Project Experience Includes:

Deltona, Florida

Utility Acquisition of Florida Water Services Corp (2003)

Consulting Engineers Report, Series 2003; Utility System Revenue Bonds, \$81.72 million.

Water and Wastewater Impact Fee Study (2005)

Water and Wastewater Rate Study (2006)

Utility Replacement Cost Study (2004)

Stormwater Utility Rate Study (2008)

Project Role:

Senior Project Manager

Education:

B.S.E., University of Central Florida, 1988

M.S.E., University of Central Florida, 1989

M.B.A., Rollins College, 2001

Registrations/Certifications:

Professional Engineer, Florida, No. 47118

Professional Engineer, Louisiana, No. 34145

Professional Engineer, Alabama, No. 30585

Professional Affiliations:

Water Environment Federation

American Water Works Association

Florida Stormwater Association

Office

Orlando, Florida

Years of Experience:

21

Years with Tetra Tech:



Andrew T. Woodcock, P.E., M.B.A.

Senior Project Manager

Water and Wastewater Master Plans (2006)

Marion County Florida

Water and Wastewater Impact Fee Study (2005)

Utility Acquisition of Florida Water Services (2003)

Water and Wastewater Utility Master Plan (2005)

City of Orlando, Florida - Research Park Reuse Economic Impact Evaluation (2005)

Collier County, Florida - Utility Regulatory Services - Orangetree Utilities (2004)

St. Johns County, Florida - Utility Regulatory Services - Intercoastal Utilities (2002, 2005)

Pasco County, Florida

Acquisition Feasibility Program (2001)

Acquisition of East Pasco Utilities and Forrest Hills Utilities (2002)

Utility Valuation of Lindrick Utilities and Hudson Utilities (2004)

Comprehensive Water, Wastewater and Reclaimed Water Rate and Charge Study (2003, 2007, 2011)

Reclaimed Water Rate Study (2005)

Water, Wastewater, and Reclaimed Water Impact Fee Review (2005)

Series 2006 Water and Sewer Refunding Revenue Bonds, \$71.16 million

Series 2008 Water and Sewer Revenue Bonds, \$182 million

City of Naples Florida

Reclaimed Water Project Assessment and Funding Program (2006)

Comprehensive Water, Wastewater and Reclaimed Water Rate Study (2007)

Stormwater Utility Financial Review (2007)

Integrated Water Supply Study (2009)

City of Minneola, Florida

Water Impact Fee Update (2006)

Stormwater Utility Rate Study (2006)

State of Florida - Office of Public Counsel

Utility Regulatory Services – Aqua America Utilities (2007, 2008, 2011)

Utility Regulatory Services - Water Used and Useful Rule (2008)

Utility Regulatory Services - Water Management Services, Inc. (2010)

Utility Regulatory Services - KW Resort Utilities (2008)

City of Punta Gorda, Florida

Water Treatment cost Analysis Report (2010)

Docket No. 100330-WS Resume Exhibit ATW-1 Page 3 of 3



Andrew T. Woodcock, P.E., M.B.A. Senior Project Manager

City of Hunstville, Alabama Alternative Water Supply Study (2008)

PAPERS/PRESENTATIONS

"Water and Wastewater Impact Fees: An Overview" Alabama Water Pollution Control Association, July 28, 2008.

EXHIBIT ATW 2 LIST OF PROTESTED SYSTEMS

EXHIBIT ATW-2 PROTESTED SYSTEMS

Water Treatment

Arredondo Estates Arredondo Farms Breeze Hill Carlton Village

EastLake Harris/Friendly Center

Fairways Fern Terrace Hobby Hills

Interlachen/Park Manor Lake Josephine/Sebring Lakes

Picciola Island Rosalie Oaks

Silver Lakes Estates/Western Shores

Tomoka View Twin Rivers Venetian Village Welaka

Zephyr Shores

Water Distribution

Arredondo Estates Arredondo Farms Beecher's Point Breeze Hill Fairways Gibsonia Estates

Interlachen/Park Manor Lake Josephine/Sebring Lakes

Kingswood Oakwood

Orange Hill/Sugar Creek Palms Mobile Home Park

Palm Port Peace River Piney Woods Ravenswood River Grove Rosalie Oaks

Silver Lakes Estates/Western Shores

Silver Lakes Oaks

Skycrest Stone Mountian Sunny Hills Tomoka Veiw Twin Rivers Valencia Terrace Venetian Village Village Water

Welaka Wootens The Woods

Zephyr Shores

Wastewater Treatment

Arredondo Farms Breeze Hill **Fariways**

Florida Central Commerce Park

Holiday Haven Jungle Den Kings Cove Leisure Lakes Morningview Palm Port Peace River Rosalie Oaks Silver Lake Oaks South Seas Summit Chase Sunny Hills Valencia Terrace Venetian Village Village Water The Woods

Wastewater Colleciton

Beecher's Point Breeze hill Fairways

Florida Central Commerce Park

Holiday Haven Jungle Den Peace River Rosalie Oaks Silver Lake Oaks Sunny Hills Village Water The Woods Zephyr Shores

EXHIBIT ATW-3

COMPARISON OF U&U CALCULATIONS AND PAA ORDER RECOMMENDATIONS

EXHIBT ATW-3
COMPARISON OF U&U CALCULATIONS AND PAA ORDER RECOMMENDATIONS

System	AUF	Staff	OPC	PAA	PAA
	Calc	Calc		Rec	Comments
WATER TREATMENT					
Arredondo Estates	19.81				Built Out
Arredondo Farms	60.56	60.55			Built Out
Breeze Hill	(1)	(1)	26%		One Well
Carlton Village	76.72	91.3	91%	95	Prior Order
East Lake Harris/Friednly Center	0	41.24	41%	100	Built Out
Faiways at Mt. Plymouth	78.09	78.08	100%	100	Built Out
Fern Terrace	(1)	(1)	68%	100	One Well
Hobby Hills	41.12	41.12	41%	100	Built Out
Interlachen - Park Manor	76.26	76.25	76%	100	Built Out
Lake Josephine/Sebring	35.97	32.29	25%	85	Weighted Ave U&U
Picciola Island	52.73	55.9	56%	75	Prior Order
Rosalie Oaks	(1)	(1)	12%	100	One Well
Silver Lakes Estates	77.16		74%	94	Prior Order
Tomoka	42.02	42.02	43%	100	Built Out
Twin Rivers	(1)	(1)	24%		One Well
Venetian Village	57.72				Prior Order
Welaka Saratgoa Harbour	73.78				Prior Order
Zephyr Shores	26.16				Built Out
Zepilyi Shores	20.10	25.72	2070	100	
WATER DISTRIBUTION					
Arredondo Estates	46.8	46.84	90%	100	Prior Order
Arredondo Farms	88.44	88.44	87%	88	U&U Calc
Beechers Point	55.9	55.91	58%	100	Prior Order
Breeze Hill	97	96.97	92%	100	Built Out
Fariways	98.8	98.77	100%	100	Built Out
Gibsonia Estates	98.1	98.06	84%	100	Prior Order
Interlachen/Park Manor	77.9		79%	83	Prior Order
Kingswood	100				Prior Order
Lake Josephine/Sebring Lakes	55.4				
Oakwood	83.9				Built Out
Orange Hill/Sugar Ck	90.1				Prior Order
Palms MHP	81				Prior Order
Palm Port	90.8				Prior Order
Peace River	81.7				Built Out
Piney Woods	84.5				Prior Order
Ravenswood	85.2				Prior Order
River Grove	99.1				Prior Order
Rosalie Oaks	80				Prior Order
Silver Lakes Estates	80.5				Prior Order
Silver Lakes Oaks	86.8				
Skycrest Skycrest	90.4				Prior Order
DRYOTOST	70.4	70.57	7570	. 100	TITOL OLUOI

System	AUF Calc	Staff Calc	OPC	PAA Rec	PAA Comments
	Cuic				V 1
Stone Mountain	45.5	45.45	48%	_	Prior Order
Sunny Hills	10.3	10.32	11%	- -	Prior Order
Tomoka	99.5	99.49	100%	100	Prior Order
Twin Rivers	97.5	97.5	98%	100	Prior Order
Valencia Terrace	99.4	99.45	100%	100	Prior Order
Venetian Village	84.79	84.82	81%	85	;
Village Water	86.4	86.36	68%	100	Prior Order
Welaka	51.5	51.64	51%	52	2
Wootens	42.6	42.59	43%	66	Prior Order
The Woods	75.5	75.47	70%	76	•
Zephry Shores	99.8	99.81	100%	100	Prior Order
WASTEWATER TREATMENT					
Arredondo Farms	67.47	67.47	66%	100	Built Out
Breeze Hill	95.86	51.08	24%	56	ó
Fairways at Mt. Plymouth	39.95		42%	100	Built Out
FL Central Commerce Park	43.43			100	Built Out
Holiday Haven	62.12			75	Prior Order
Jungle Den	72.16		37%	100	Built Out
Kings Cove	47.05		46%	100	Built Out
Leisure Lakes	32.26			39	Prior Order
Morningveiw	32.97				Built Out
Palm Port	103.34				Prior Order
Peace Rvier	54.43				Built Out
Rosalie Oaks	56.72				Built Out
Silver Lake Oaks	27.87				2 Prior Order
South Seas	39.29) Built Out
Summit Chase	36,47				Built Out
Sunny Hills	23.24				Prior Order
Valencia Terrace	41.03	=			Built Out
Venetian Village	49.57				Built Out
Village Water	78.93				U&U Calc
The Woods	74.98				Built Out
The Woods	,, 0	, , , , , ,	0170	20.	
WASTEWATER COLLECTION					
Beecher's Point	37	36.96	45	100	Prior Order
Breeze Hill	96.2	96.21	94	100)
Fairways	98.4	98.36	99	100)
Fl. Central Commerce Park	108.3	108.3			Prior Order
Holiday Haven	68.5	68.52	69	7:	Prior Order
Jungle Den	104.2	2 140.2	. 87		Prior Order
Peace River	80) Built Out
Rosalie Oaks	79.2				Prior Order
Silver Lake Oaks	86.8			_	7 U&U Calc
Sunny Hills	55.3				U&U Calc
Village Water	57.6				3 U&U Calc
The Woods	70.9				U&U Calc
Zephyr Shores	100	100	100	100	Prior Order

EXHIBIT ATW-4

COMPARISON OF U&U GROWTH FACTORS 2008 RATE CASE TO PAA ORDER

EXHIBIT ATW-4 COMPARISON OF U&U GROWTH FACTORS 2008 RATE CASE TO PAA ORDER

System	Growth Factor Prior Rate Case	Growth Factor Current Rate Case
Water Treatment		
Arredondo Estates	1.00	1.00
Arredondo Farms	1.00	1.00
Breeze Hill	NA	1.00
Carlton Village	1.25	1.19
EastLake Harris/Friendly Center	1.00	1.00
Fairways	NA	1.00
Fern Terrace	1.00	NA
Hobby Hills	1.04	1.00
Interlachen/Park Manor	1.00	1.00
Lake Josephine/Sebring Lakes	1.06/1.25	1.00
Picciola Island	1.03	1.06
Rosalie Oaks	1.00	
Silver Lakes Estates/Western Shores	1.06	1.00
Tomoka View	1.00	1.00
Twin Rivers	1.00	
Venetian Village	1.14	1.08
Welaka	1.00	1.00
Zephyr Shores	1.00	1.00
Water Distribution		
Arredondo Estates	1.00	1.00
Arredondo Farms	1.00	1.00
Beecher's Point		1.00
Breeze Hill	NA	1.00
Fairways	NA	1.00
Gibsonia Estates	1.05	1.00
Interlachen/Park Manor	1.05	1.00
Lake Josephine/Sebring Lakes	1.12	1.00
Kingswood	1.00	1.00
Oakwood	NA	1.00
Orange Hill/Sugar Creek	1.00	1.00
Palms Mobile Home Park	1.00	1.00
Palm Port	1.00	1.00
Peace River	NA	1.00
Piney Woods	1.02	1.00
Ravenswood	1.07	1.00
River Grove	1.01	1.00
Rosalie Oaks	1.00	1.00
Silver Lakes Estates/Western Shores	1.06	1.00
Silver Lakes Oaks	NA	1.00
Skycrest	1.01	1.00

	,	
System	Growth Facto	
	Prior Rate Ca	
Stone Mountian	NA	1.00
Sunny Hills	NA	1.14
Tomoka Veiw	1.0	
Twin Rivers	1.0	
Valencia Terrace	1.0	
Venetian Village	1.1	
Village Water	1.0	
Welaka	NA	1.08
Wootens	1.1	
The Woods	NA	1.00
Zephyr Shores	1.0	1.00
Wastewater Treatment		
Arredondo Farms	1.0	1.00
Breeze Hill	NA	1.00
Fariways	NA	1.00
Florida Central Commerce Park	1.0	1.00
Holiday Haven	1.0	1.00
Jungle Den	1.0	1.00
Kings Cove	1.0	1.00
Leisure Lakes	1.0	1.00
Morningview	1.0	00 1.14
Palm Port	1.0	1.00
Peace River	NA	1.00
Rosalie Oaks	1.0	00 1.00
Silver Lake Oaks	1.0	00 1.00
South Seas	1.0	00 1.00
Summit Chase	1.0	
Sunny Hills	1.0	
Valencia Terrace	1.0	
Venetian Village	1.0	
Village Water	NA NA	1.06
The Woods	1.0	
Wastewater Colleciton		
Beecher's Point	1 (00 1.00
	1.0	
Breeze hill	NA	1.00
Fairways	NA	1.00
Florida Central Commerce Park	1.0	
Holiday Haven	NA	1.00 1.00
Jungle Den Peace River	1.0 1.0	
Rosalie Oaks	1.0	
Silver Lake Oaks	NA	1.00
	NA NA	1.00
Sunny Hills Village Water	NA NA	
Village Water The Woods	NA NA	1.06 1.00
Zephyr Shores	NA 1.0	
Lepityi Silotes	1.0	1.00

EXHIBIT ATW-5 WATER TREATMENT U&U CALCULATIONS

Arredondo Estates

Total Gallons Pumped/Purchased (1,000 gal)

Firm Capacity (gpm) Peak Hour Flow (gpm) Calculated Used and Useful

U&U Treatment U&U Storage

Maximum Day Flow (gpd) Calculated Peak Hour Flow (gpd)	,/	71,000 142,000	Matches MFRs
Peak Factor		2	
Maximum Day Flow (gpm)		49.31	
Calculated Peak Hour Flow (gpm)		98.61	
Peak Factor		2	
Unaacounted for Water Adjustment			
UAW	16.1%		From MFRs
Excess	6.1%		
Adjustment (gpm)		1.5	
Adjusted Flows			
Maximum Day Flow (gpm)		47.76	
Calculated Peak Hour Flow (gpm)		95.52	
GROWTH ADJUSTMENT			
2009 SFR Cust		215.0	From MFRs
2014 SFR Cust Trended		215.0	From MFRs
Growth Factor		1.00	
Adjusted Flows			
Maximum Day Flow (gpm)		47.76	
Calculated Peak Hour Flow (gpm)		95.52	
Required Fire Flow (gpm)		0	
Wells			
120 gpt 120 gpt			Doesn't match MFR Aqua agreed to these values in Resp. to PSC Sixth data rec Doesn't match MFR Aqua agreed to these values in Resp. to PSC Sixth data rec
Total 240			
Firm 120			
Treatment Used and Useful			
A CONTRACTOR OF THE CONTRACTOR			

120 96 79.60%

79.60% 0.00% 13,320

From MFRs

Arredondo Farms

Total Gallons Pumped/Purcha Maximum Day Flow (gpd) Calculated Peak Hour Flow (g Peak Factor		gal)	20,353 109,000 218,000 2	From MFRs Matches MFRs
Maximum Day Flow (gpm) Calculated Peak Hour Flow (g Peak Factor	pm)		75.69 151.39 2	
Unaacounted for Water Adjus UAW Excess	tment	7.3% 0.0%		From MFRs
Adjustment (gpm)			0.0	
Adjusted Flows Maximum Day Flow (gpm) Calculated Peak Hour Flow (g	pm)		75.69 151.39	
GROWTH ADJUSTMENT 2009 SFR Cust 2014 SFR Cust Trend Growth Factor	ded		351.0 351.0 1.00	From MFRs From MFRs
Adjusted Flows Maximum Day Flow (gpm) Calculated Peak Hour Flow (g	pm)		75.69 151.39	
Required Fire Flow (gpm)			0	
Total Firm	250 gpm 300 gpm 550 250			from Sanitary Survey from Sanitary Survey
Treatment Used and Useful	230			
Firm Capacity (gpm) Peak Flow (gpm) Calculated Used and Useful		250 151 60.56%		
U&U Treatment U&U Storage		60.56% 0.00%		

Breeze Hill

Total Gallons Pumped/Purchased (1,000 ga Maximum Day Flow (gpd) Calculated Peak Hour Flow (gpd) Peak Factor	1)	4,137 33,500 67,000 2	From MFRs Matches MFRs
Maximum Day Flow (gpm) Calculated Peak Hour Flow (gpm) Peak Factor		23.26 46.53 2	
UNACCOUNTED FOR WATER ADJUST	MENT		
UAW	16.1%		From MFRs
Excess	6.1%		
UAW Adjustment (gpm)		0.5	
Adjusted Flows			
Maximum Day Flow (gpm)		22.784	
Calculated Peak Hour Flow (gpm)		45.568	
GROWTH ADJUSTMENT			
2009 SFR Cust		122.0	From MFRs
2014 SFR Cust Trended		122.0	From MFRs
Growth Factor		1.00	
Adjusted Flows		22.70	
Maximum Day Flow (gpm)		22.78 45.57	
Calculated Peak Hour Flow (gpm)		45.57	
Required Fire Flow (gpm)		0	
Wells			
177 gpm gpm		from MFRs ne	ed to verify in field
Total 177			
Firm 177			
Treatment Used and Useful			
Firm Capacity (gpm)	177		
Peak Hour Flow (gpm)	46		
Caculated Used and Useful	25.74%		
U&U Treatment	25.74%		
U&U Storage	0.00%		

Carlton Village

Total Gallons Pumped/Purchas Maximum Day Flow (gpd) Calculated Peak Hour Flow (gp Peak Factor)	18,678 110,480 220,960 2	From MFRs Matches MFRs
Maximum Day Flow (gpm) Calculated Peak Hour Flow (gp Peak Factor	om)		76.72 153.44 2	
UNACCOUNTED FOR WATE UAW Excess	ER ADJUSTI	7.2% 0.0%		From MFRs
UAW Adjustment (gpm)			0.0	
Adjusted Flows Maximum Day Flow (gpm) Calculated Peak Hour Flow (gp	om)		76.722 153.444	
GROWTH ADJUSTMENT 2009 SFR Cust 2014 SFR Cust Trend Growth Factor	ed		255.0 304.0 1.19	From MFRs From MFRs
Adjusted Flows Maximum Day Flow (gpm) Calculated Peak Hour Flow (gp	om)		91.46 182.93	
Required Fire Flow (gpm)			0	
Wells	200 gpm 200 gpm			From Sanitary Survey From Sanitary Survey
Total Firm	400 200			Trom bantary burvey
Treatment Used and Useful				
Firm Capacity (gpm) Peak Hour Flow (gpm) Caculated Used and Useful		200 183 91.46%		
U&U Treatment U&U Storage		91.46% 0.00%		

East Lake Harris - Friendly Center

Treatment Used and Useful

Firm Capacity (gpm) Peak Hour Flow (gpm)

Used and Useful

U&U Treatment U&U Storage

Total Gallons Pum	ped/Purchased (1,000 ga	1)	5,637	From MFRs
Maximum Day Flo	w (gpd)		29,500	Matches MFRs
Calculated Peak H	our Flow (gpd)		59,000	
Peak Factor			2	
Maximum Day Flo	w (gpm)		20.49	
Calculated Peak H	our Flow (gpm)		40.97	
Peak Factor			2	
UNACCOUNTED	FOR WATER ADJUST	MENT		
UAW		-4.2%		From MFRs
Excess		0.0%		
UAW Adjustment	(gpm)		0.0	
Adjusted Flows				
Maximum Day Flo	w (gpm)		20.49	
Calculated Peak H	our Flow (gpm)		40.97	
GROWTH ADJUS	STMENT			
2009 SFI	R Cust		200	From MFRs
2014 SFI	R Cust Trended		200	From MFRs
Growth I	Factor		1.00	
Adjusted Flows				
Maximum Day Flo	w (gpm)		20.49	
Calculated Peak H	our Flow (gpm)		40.97	
Required Fire Flov	v (gpm)		0	
Wells				
	100 gpm			From Sanitary Survey Friendly Center does not match MFRs
	200 gpm			From Sanitary Survey East Lake Harris
Total	300			
Firm	100			

100 41 40.97%

40.97%

0.00%

Fairways at Mt. Plymouth

Total Gallons Pumped/ Maximum Day Flow (g Calculated Peak Hour Peak Factor	(pd)	2	45,688 253,000 506,000 2	From MFRs Matches MFRs
Maximum Day Flow (g Calculated Peak Hour Peak Factor			175.69 351.39 2	
UNACCOUNTED FOR	R WATER ADJUSTN	MENT		
UAW	1	1.4%		From MFRs
Excess	(0.0%		
UAW Adjustment (gpm	n)		0.0	
Adjusted Flows Maximum Day Flow (g			175.69	
Calculated Peak Hour			351.39	
Calculated Feak Hour	riow (gpiii)		331.39	
GROWTH ADJUSTM	ENT			
2009 SFR Ct	ıst		238.0	From MFRs
2014 SFR Ct	ist Trended		238.0	From MFRs
Growth Factor	or		1.00	
Address of Flores				
Adjusted Flows Maximum Day Flow (g	(mm)		175.69	
Calculated Peak Hour			351.39	
Calculated Feak Hour	riow (gpin)		331.37	
Required Fire Flow (g)	om)		0	
Wells	450			F C '. C
	450 gpm			From Sanitary Survey
T-4-1	450 gpm 900			From Sanitary Survey
Total Firm	450			
FIRM	450			
Treatment Used and U	seful			
Firm Capacity (gpm)		450		
Peak Hour Flow (gpm)		351		
Used and Useful		09%		
U&U Treatment	78.	09%		
U&U Storage	0.	.00%		

Fern Terrace

U&U Treatment U&U Storage

Total Gallons Pumped// Maximum Day Flow (g Calculated Peak Hour I Peak Factor	pd)	10,410 87,967 175,934 2	From MFRs Matches MFRs
Maximum Day Flow (g Calculated Peak Hour l Peak Factor		61.09 122.18 2	
UNACCOUNTED FOR	R WATER ADJUSTMENT		
UAW	1.3%		From MFRs
Excess	0.0%		
UAW Adjustment (gpm		0.0	
Adjusted Flows			
Maximum Day Flow (g	pm)	61.09	
Calculated Peak Hour l	Flow (gpm)	122.18	
GROWTH ADJUSTM	ENT		
2009 SFR Cu	st	122.0	From MFRs
2014 SFR Cu	st Trended	122.0	From MFRs
Growth Facto	r	1.00	
Adjusted Flows			
Maximum Day Flow (g	pm)	61.09	
Calculated Peak Hour		122.18	
Required Fire Flow (gp	om)	0	
Wells			
Wells	180 gpm		From Sanitary Survey
	gpm		110111 0411111111 7 0411 1 0
Total	180		
Firm	180		
Treatment Used and Us	seful		
Firm Capacity (gpm)	180		
Peak Hour Flow (gpm)	122		
Used and Useful	67.88%		

67.88% One well system; but well is greater than 150 gpm and U&U is less than 75% 0.00%

Hobby Hills

Total Gallons Pumped/Purchased (1,000 gal Maximum Day Flow (gpd) Calculated Peak Hour Flow (gpd) Peak Factor	6,216 From MFRs 44,410 Matches MFRs 88,820 2
Maximum Day Flow (gpm) Calculated Peak Hour Flow (gpm) Peak Factor	30.84 61.68 2
	MENT 4% From MFRs 0%
UAW Adjustment (gpm)	- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Adjusted Flows Maximum Day Flow (gpm) Calculated Peak Hour Flow (gpm)	30.84 61.68
GROWTH ADJUSTMENT 2009 SFR Cust 2014 SFR Cust Trended Growth Factor	97.0 From MFRs 97.0 From MFRs 1.00
Adjusted Flows Maximum Day Flow (gpm) Calculated Peak Hour Flow (gpm)	30.84 61.68
Required Fire Flow (gpm)	0
Wells	From Sanitary Survey From Sanitary Survey
Treatment Used and Useful Test 1 Firm Capacity (gpm) Peak Flow (gpm)	50
Used and Useful 41.1	
Max Day (gpm) Fire Flow (gpm) Peak Flow (gpm)	150 31 0 31 111%
U&U Treatment 41.1 U&U Storage 0.0	2% 10%

Interlachen - Park Manor

Total Gallons Pumped/Purchased (1 Maximum Day Flow (gpd) Calculated Peak Hour Flow (gpd) Peak Factor	,000 gal)	12,437 131,900 263,800 2	From MFRs Matches MFRs		
UNACCOUNTED FOR WATER AN UAW Excess	DJUSTMENT 10.4% 0.4%		From MFRs		
UAW Adjustment (gpd)		136			
Adjusted Flows Maximum Day Flow (gpd)		131,764			
Calculated Peak Hour Flow (gpd)		263,527			
GROWTH ADJUSTMENT					
2009 SFR Cust		274.0	From MFRs		
2014 SFR Cust Trended		274.0	From MFRs		
Growth Factor		1.00			
9 S94 SECTION					
Adjusted Flows		100 000			
Maximum Day Flow (gpd)		131,764			
Calculated Peak Hour Flow (gpd)		263,527			
Required Fire Flow (gpm)		0			
Wells				Storage	
				Volume	25,000 gals
180 gpm			From Sanitary Survey	Adjust	0.9
180 gpm			From Sanitary Survey	Usable Volume	22,500 gals
0 gpm			110111 24111411 / 241114		, ,
0 gpm				Max Day (gal)	131,764 gals
Total 360				Factor	1
Firm 180				Max Day Volume	131,764 gals
11111				Fire Flow	0 gpm
				Fire Flow Duration	2 hrs
Adjusted Firm Capacity(16 hrs)(gpd)		172,800		Fire Volume	0 gals
riajusted i iiii capacity (10 iiis) (gpd)		172,000			
Treatment Used and Useful				Total	131,764 gals
Firm Capacity (gpd)	172,800				
Max Day (gpd)	131.764		Used and Useful	100.00%	
Fire Flows (gpd)	0		Cook and Cookin		
Adjusted Max Day	131,764				
Used and Useful	76.25%				
Cook and Cookin	10.2370				
U&U Treatment	76.25%				
U&U Storage	100.00%				
ow o Storage	100.0070				

Picciola Island

Total Gallons Pumped/Purchased (1,000 ga	12,640	From MFRs
Maximum Day Flow (gpd)	56,950	Matches MFRs
Calculated Peak Hour Flow (gpd)	113,900	
Peak Factor	2	
Maximum Day Flow (gpm)	39.55	
Calculated Peak Hour Flow (gpm)	79.10	
Peak Factor	2	
UNACCOUNTED FOR WATER ADJUSTN	MENT	
UAW 8.4%		From MFRs
Excess 0.0%		
UAW Adjustment (gpm)		
Adjusted Flows		
Maximum Day Flow (gpm)	39.55	
Calculated Peak Hour Flow (gpm)	79.10	
GROWTH ADJUSTMENT		
2009 SFR Cust	147.0	From MFRs
2014 SFR Cust Trended	156.0	From MFRs
Growth Factor	1.06	
Adjusted Flows		
Maximum Day Flow (gpm)	41.97	
Calculated Peak Hour Flow (gpm)	83.94	
	•	
Required Fire Flow (gpm)	0	
Wells		
		From Conitors Cursos
175 gpm		From Sanitary Survey
150 gpm Total 325		
Total 325		

Treatment Used and Useful

Firm Capacity (gpm)	150
Peak Flow (gpm)	84
Used and Useful	55.96%
U&U Treatment	55.96%
U&U Storage	0.00%

150

Rosalie Oaks

Total Gallons Pumped/Purchased (1,000 gal) Maximum Day Flow (gpd)	2,009 15,500	From MFRs Matches MFRs
Calculated Peak Hour Flow (gpd)	31,000	iviatories ivii its
Peak Factor	2	
T Car I actor	2	
Maximum Day Flow (gpm)	10.76	
Calculated Peak Hour Flow (gpm)	21.53	
Peak Factor	2	
UNACCOUNTED FOR WATER ADJUSTMEN	T	
UAW 10.49	/o	From MFRs
Excess 0.49	6	
UAW Adjustment (gpm)	0.0	
Adjusted Flows		
Maximum Day Flow (gpm)	10.75	
Calculated Peak Hour Flow (gpm)	21.50	
GROWTH ADJUSTMENT		T
2009 SFR Cust	93.0	From MFRs
2014 SFR Cust Trended	93.0	From MFRs
Growth Factor	1.00	
Adjusted Flows		
Maximum Day Flow (gpm)	10.75	
Calculated Peak Hour Flow (gpm)	21.50	
Required Fire Flow (gpm)	0	
Wells		
177 gpm		doesn't match 2008 rate case; or current MFRs
gpm		
Total 177		
Firm 177		
Treatment Used and Useful		
Test 1		
Firm Capacity (gpm) 177	7	
Peak Flow (gpm) 21		
Used and Useful 12.159		
Cook and Cookin 12.107		
U&U Treatment 12.159	% One well system	m, but well is greater than 150 gpm and U&U is less than 75%.
U&U Storage 0.009	and the same of th	CA.

Sebring Lakes

Total Gallons Pumped/Purchased (1,0 Maximum Day Flow (gpd) Calculated Peak Hour Flow (gpd) Peak Factor	000 gal) 63,643 398,760 797,520 2	From MFRs Matches MFRs		
UNACCOUNTED FOR WATER AD UAW Excess	5.0% 0.0%	From MFRs		
UAW Adjustment (gpm)	0			
Adjusted Flows Maximum Day Flow (gpd) Calculated Peak Hour Flow (gpd)	398,760 797,520			
GROWTH ADJUSTMENT 2009 SFR Cust 2014 SFR Cust Trended Growth Factor	623.0 623.0 1.00	From MFRs From MFRs		
Adjusted Flows Maximum Day Flow (gpd) Calculated Peak Hour Flow (gpd)	398,760.00 797,520.00			
Required Fire Flow (gpm)	0			
Wells			Storage Volume	63,000 gals
830 gpm 830 gpm 400 gpm	Confirmed by A	UF response to staff first data request UF response to staff first data request UF response to staff first data request	Adjust Usable Volume	0.9 56,700 gals
Total 2460 gpm	Confirmed by A	UF response to staff first data request	Max Day (gal) Factor	398,760 gals
Firm 1630			Max Day Allowance Fire Flow Fire Flow Duration	398,760 gals 0 gpm 2 hrs
Adjusted Firm Capacity	1,564,800		Fire Volume	0 gals
Treatment Used and Useful			Total	398,760 gals
Firm Capacity (gpd) Max Day (gpd) Fire Flow (gpd) Adjusted Max Day Used and Useful	1,564,800 398,760 0 398,760 25,48%		Used and Useful	100.00%
U&U Treatment U&U Storage	25.48% 100.00%			

Silver Lake Estates - Western Shores

Calculated Peak Hour Flow (gpd) Peak Factor		1,440,100 2,880,200 2	Matches MFRs					
UNACCOUNTED FOR WATER A	ADJUSTMENT							
UAW Excess	9.9% 0.0%		From MFRs					
UAW Adjustment (gpd)								
Adjusted Flows								
Maximum Day Flow (gpd)		1,440,100						
Calculated Peak Hour Flow (gpd)		2,880,200						
GROWTH ADJUSTMENT								
2009 SFR Cust		1,600.0	From MFRs					
2014 SFR Cust Trended		1,600.0	From MFRs					
Growth Factor		1.00						
Adjusted Flows								
Maximum Day Flow (gpd)		1,440,100						
Calculated Peak Hour Flow (gpd)		2,880,200						
Required Fire Flow (gpm)		0						
Wells					V	torage Volume	50,000	
1425 gpm		From Sanitary Sur				djust	0.9	
1425 gpm		From Sanitary Sur			U	Jsable Vo	45,000	gals
600 gpm		From Sanitary Sur	vey Western Shore	es	Λ.	Inv Doy (1,440,100	gale
Total 3450						actor	1,440,100	gais
Firm 2025							1,440,100	gals
11111 2023						ire Flow		gpm
					F	ire Flow		hrs
Adjusted Firm Capacity(16hrs)(gpd)		1,944,000			F	ire Volun	0	gals
Treatment Used and Useful					Т	`otal	1,440,100	gals
Firm Capacity (gpd)	1,944,000							
Max Day (gpd)	1,440,100			Used and Useful	100.00%			
Fire Flow (gpd)	0							
Adjusted Max Day	1,440,100							
Used and Useful	74.08%							
U&U Treatment	74.08%							
	100.00%							

Tomoka

Total Gallons Pumpe	ed/Purchased (1,00	0 gal)	14,873	From MFRs				
Maximum Day Flow	(gpd)		113,100	Matches MFRs				
Calculated Peak Hou	r Flow (gpd)		226,200					
Peak Factor			2					
Unaacounted for Wa	ter Adjustment							
UAW		15.3%		From MFRs				
Excess		5.3%						
Adjustment (gpd)			2,160					
Adjusted Flows								
Maximum Day Flow	(gpd)		110,940					
Calculated Peak Hou	r Flow (gpd)		221,881					
GROWTH ADJUST	MENT							
2009 SFR	Cust		263.0	From MFRs				
2014 SFR	Cust Trended		263.0	From MFRs				
Growth Fa	ctor		1.00					
Adjusted Flows								
Maximum Day Flow			110,940					
Calculated Peak Hou	ir Flow (gpd)		221,881					
Required Fire Flow	(gpm)		0					
Wells						Storage		
77 6113						Volume	15,000	gals
	268 gpm			From Sanitary Survey		Adjust	0.9	
	275 gpm			From Sanitary Survey		Usable Vo	13,500	gals
	gpm							
	gpm					Max Day (110,940	gals
Total	543					Factor	1	
Firm	268					Max Day 1	110,940	gals
						Fire Flow	0	gpm
						Fire Flow]	2	hrs
Adjusted Firm Capaci	ty(16 hrs)(gpd)		257,280			Fire Volun	0	gals
Treatment Used and	Useful					Total	110,940	gals
Firm Capacity (gpd)		257,280						
Max Day (gpd)		110,940		Used and Useful	100.00%			
Fire Flow (gpd)		0						
Adjusted Max Day		110,940						
Used and Useful		43.12%						
U&U Treatment		43.12%						
U&U Storage		100.00%						

Twin Rivers

Total Gallons Pumped/Purchased (1, Maximum Day Flow (gpd) Calculated Peak Hour Flow (gpd) Peak Factor	000 gal)	7,400 61,800 123,600 2	From MFRs Matches MFRs			
Unaacounted for Water Adjustment UAW Excess	13.3% 3.3%		From MFRs			
Adjustment (gpd)		669				
Adjusted Flows Maximum Day Flow (gpd) Calculated Peak Hour Flow (gpd)		61,131 122,262				
GROWTH ADJUSTMENT 2009 SFR Cust 2014 SFR Cust Trended Growth Factor		263.0 263.0 1.00	From MFRs From MFRs			
Adjusted Flows Maximum Day Flow (gpd) Calculated Peak Hour Flow (gpd)		61,131 122,262				
Required Fire Flow (gpm)		0				
Wells 268 gpm gpm gpm gpm gpm gpm gpm 3268 Firm 268 Adjusted Firm Capacity(16 hrs)(gpd)		257,280	No data in Sanitary Survey	Storage Volume Adjust Usable Volume Max Day (gal) Factor Max Day Allowance Fire Flow Fire Flow Fire Flow Fore Volume	15,000 gals 0.9 13,500 gals 61,131 gals 1 61,131 gals 0 gpm 2 hrs 0 gals	Matches MFRs if combined with Tomoka
Treatment Used and Useful				Total	61,131 gals	
Firm Capacity (gpd) Max Day (gpd) Fire Flow (gpd) Adjusted Max Day Used and Useful	257,280 61,131 0 61,131 23.76%			Used and Useful	100.00%	
U&U Treatment U&U Storage	23.76% C 100.00%	ne well system	but well is a large pump and U&V	U is less than 75%.		

Venetian Village

Total Gallons Pumped/Purchased (1,000 gal) Maximum Day Flow (gpd)	8,981 41,560	From MFRs Matches MFRs
Calculated Peak Hour Flow (gpd)	83,120	
Peak Factor	2	
Maximum Day Flow (gpm)	28.86	
Calculated Peak Hour Flow (gpm)	57.72	
Peak Factor	2	
UNACCOUNTED FOR WATER ADJUSTMEN	Т	
UAW -3.2%		From MFRs
Excess 0.0%		
UAW Adjustment (gpm)	0.0	
Adjusted Flows		
Maximum Day Flow (gpm)	28.86	
Calculated Peak Hour Flow (gpm)	57.72	
GROWTH ADJUSTMENT		
2009 SFR Cust	157.0	From MFRs
2014 SFR Cust Trended	170.0	From MFRs
Growth Factor	1.08	
Adjusted Flows		
Maximum Day Flow (gpm)	31.25	
Calculated Peak Hour Flow (gpm)	62.50	
Required Fire Flow (gpm)	0	
Wells		
240 gpm		From Sanitary Survey
100 gpm		From Sanitary Survey
Total 340		
10(4)		

100 63 62.50%

62.50%

0.00%

100

Treatment Used and Useful

Firm Capacity (gpm)
Peak Flow (gpm)
Used and Useful

U&U Treatment

U&U Storage

Welaka - Saratoga Harbour

Total Gallons Pumped/Purchased (1,000 Maximum Day Flow (gpd)	gal)	5,595 49,940	From MFRs Matches MFRs
Calculated Peak Hour Flow (gpd)		99,880	11111011100111111111
Peak Factor		2	
reak racioi		2	
UNACCOUNTED FOR WATER ADJUS	STMENT		
UAW	0.8%		From MFRs
Excess	0.0%		
LACCSS	0.070		
UAW Adjustment (gpd)			
OAW Adjustment (gpu)			
Adjusted Flows			
Maximum Day Flow (gpd)		49,940	
Calculated Peak Hour Flow (gpd)		99,880	
Calculated Feak Hour Flow (gpd)		77,000	
GROWTH ADJUSTMENT			
2009 SFR Cust		149.0	From MFRs
2014 SFR Cust Trended		161.0	From MFRs
Growth Factor		1.08	Trom wires
Glowiii Factor		1.00	
Adjusted Flows			
Maximum Day Flow (gpd)		53,962	
Calculated Peak Hour Flow (gpd)		107,924	
Calculated Feak Hour Flow (gpd)		107,724	
Required Fire Flow (gpm)		0	
Wells			

Wells				Storage Volume	48,000 gals	
			\(\(\dagger\) \(\dagger\)		0.9	
	76 gpm		Matches MFRs	Adjust		** '0
	110 gpm		Matches MFRs	Usable Volume	43,200 gals	Verify
	gpm		Matches MFRs			
	gpm			Max Day (gal)	53,962 gals	
Total	186			Factor	1	
Firm	76		Only one Saratoga well with 2 pumps	Max Day Allowance	53,962 gals	
				Fire Flow	0 gpm	
				Fire Flow Duration	2 hrs	
Adjusted Firm Capacity	v(16 hrs)(gpd)		72,960	Fire Volume	0 gals	
Treatment Used and U	Jseful			Total	53,962 gals	
Firm Capacity (gpd)		72,960				
Max Day (gpd)		53,962		Used and Useful	100.00%	
Fire Flow (gpd)		0				
Adjusted Max Day		53,962				
Used and Useful		73.96%				
U&U Treatment		73.96%				
U&U Storage		100.00%				

Zephyr Shores

Total Gallons Pumpe	ed/Purchased (1,000 gal)	9,491	From MFRs
Maximum Day Flow		95,000	Matches MFRs
Calculated Peak Hou		190,000	111111111111111111111111111111111111111
Peak Factor	ii Flow (gpu)	2	
I cak ractor		-	
Maximum Day Flow	(gpm)	66	
Calculated Peak Hou		132	
Peak Factor	(81)	2	
2 0000 2 00000			
UNACCOUNTED F	OR WATER ADJUSTME	NT	
UAW	16.4%		From MFRs
Excess	6.4%		
UAW Adjustment (g	pm)	1.2	
Adjusted Flows			
Maximum Day Flow		64.8	
Calculated Peak Hou	ar Flow (gpm)	129.6	
CD CATIFICAL L D WICA	22 A F 22 A F 2		
GROWTH ADJUST		501.0	From MFRs
2009 SFR		501.0 501.0	From MFRs
	Cust Trended	1.00	From MFKS
Growth Fa	ictor	1.00	
Adjusted Flows			
Maximum Day Flow	(gnm)	65	
Calculated Peak Ho		130	
Calculated a cast aro	ar 11011 (Spin)		
Required Fire Flow	(gpm)	0	
Wells			
	530 gpm		From Sanitary Survey
	500 gpm		From Sanitary Survey
Total	1030		
Firm	500		
Treatment Used and	Useful		
Fi Cit-(500		
Firm Capacity (gpm)			
Peak Flow (gpm)	130		
Used and Useful	25.93%		
U&U Treatment	25.93%		
	0.00%		
U&U Storage	0.00%		

EXHIBIT ATW-6

AERIAL PHOTOGRAPH EAST LAKE HARRIS/FRIENDLY ESTATES SERVICE AREA



EXHIBIT ATW-7

ARIAL PHOTOGRAPH HOBBY HILLS SERVICE AREA



EXHIBIT ATW-8 WASTEWATER TREATMENT U&U CALCULATIONS

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Arredondo Farms

2009/10 T	est Year Flows		
	Annual Avg. (gpd)	39,667	Close to MFRs
	Max. Month (gpd)	45,000	
	Max. Three Mo.Avg (gpd)	42,667	from DMR analysis
Infiltration	n/Inflow Adjustment		
	Excess I&I	0.00%	
	Adjustment Factor	100.00%	
	Adjusted Flow	39,667	
Growth A	djustment		
	2009 SFR Cust	325.0	From MFRs
	2014 SFR Cust trend.	325.0	From MFRs
	Growth Factor	1.00	
	Adjusted Flow	39,667	
Permit			
	Flow Basis	Annual Average	
	Flow (gpd)	60,000	Matches MFRs
Used and Useful		66.11%	

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Breeze Hill

2009/10 7	Test Year Flows		
	Annual Avg. (gpd)	27,417	MFRs Use 38,344; sch F-2 shows 27,378
	Max. Month (gpd)	63,000	
	Max. Three Mo.Avg (gpd)	38,000	from DMR analysis
Infiltration	n/Inflow Adjustment		
	Excess I&I	65.40%	
	Adjustment Factor	34.60%	
	Adjusted Flow	9,486	· 13,148
Growth A	djustment		
	2009 SFR Cust	123.0	From MFRs
	2014 SFR Cust trend.	123.0	From MFRs
	Growth Factor	1.00	
	Adjusted Flow	9,486	13,148
Permit		Eff Disp	Plant
	Flow Basis	Annual Average	Three month max
	Flow (gpd)	40,000	40,000
Used and Useful		23.72%	32.87%

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Fairways at Mt. Plymouth

2009/10 T	Test Year Flows		
	Annual Avg. (gpd)	31,500	Close to MFRs
	Max. Month (gpd)	37,000	
	Max. Three Mo.Avg (gpd)	34,333	from DMR analysis
Infiltration	n/Inflow Adjustment		
	Excess I&I	0.00%	
	Adjustment Factor	100.00%	
	Adjusted Flow	31,500	
Growth A	djustment		
	2009 SFR Cust	238.0	From MFRs
	2014 SFR Cust trend.	238.0	From MFRs
	Growth Factor	1.00	
	Adjusted Flow	31,500	
Permit			
	Flow Basis	Annual Average	
	Flow (gpd)	75,000	Matches MFRs
IIl.	IIC-I	42.00%	
Used and Useful		42.00%	

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Florida Central Commerce Park

2009/10 Test Year Flows

Annual Avg. (gpd) 41,917 MFRs use 44,416

Max. Month (gpd) 50,000

Max. Three Mo.Avg (gpd) 47,333 from DMR Analysis

Infiltration/Inflow Adjustment

Excess I&I 7.10% Adjustment Factor 92.90%

Adjusted Flow 38,941

Growth Adjustment

 2009 ERUs
 54.0
 From MFRs

 2014 ERU trend.
 54.0
 From MFRs

Growth Factor 1.00

Adjusted Flow 38,941

Permit

Flow Basis Annual Average

Flow (gpd) 95,000 Matches MFRs

Used and Useful 40.99%

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Holiday Haven

2009/10 Test Year Flows

Annual Avg. (gpd) 19,758 MFRs use 19758

Max. Month (gpd) 111,000

Max. Three Mo.Avg (gpd) 51,333 from DMR Analysis

Infiltration/Inflow Adjustment

Excess I&I 21.39% Adjustment Factor 78.61%

Adjusted Flow 15,532

Growth Adjustment

 2009 SFR Cust
 102.0
 From MFRs

 2014 SFR Cust trend.
 102.0
 From MFRs

Growth Factor 1.00

Adjusted Flow 15,532

Permit

Flow Basis Annual Average

Flow (gpd) 25,000 Matches MFRs

Used and Useful 62.13%

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Jungle Den

2009/10 Test Year Flows

Annual Avg. (gpd) 15,083 Close to MRFs

Max. Month (gpd) 31,000

Max. Three Mo.Avg (gpd) 21,667 from DMR Analysis

Infiltration/Inflow Adjustment

Excess I&I 49.00% Adjustment Factor 51.00%

Adjusted Flow 7,693

Growth Adjustment

 2009 SFR Cust
 134.0
 From MFRs

 2014 SFR Cust trend.
 134.0
 From MFRs

Growth Factor 1.00

Adjusted Flow 7,693

Permit

Flow Basis Annual Avg

Flow (gpd) 21,000 Matches MFRs

Used and Useful 36.63%

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Kings Cove

2009/10 Test Year Flow	2009/10) Test	Year	Flows
------------------------	---------	--------	------	-------

Annual Avg. (gpd) 25,500 Close to MFRs

Max. Month (gpd) 30,000

Max. Three Mo.Avg (gpd) 28,000 from DMR Analysis

Infiltration/Inflow Adjustment

Excess I&I 0.00% Adjustment Factor 100.00%

Adjusted Flow 25,500

Growth Adjustment

 2009 SFR Cust
 195.0
 From MFRs

 2014 SFR Cust trend.
 195.0
 From MFRs

Growth Factor 1.00

Adjusted Flow 25,500

Permit

Flow Basis Annual Avg

Flow (gpd) 55,000 Matches MFRs

Used and Useful 46.36%

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Leisure Lakes

2009/10 Test Year Flows

Annual Avg. (gpd) 16,117 Close to MFRs

Max. Month (gpd) 21,000

Max. Three Mo.Avg (gpd) 19,133 from DMR Analysis

Infiltration/Inflow Adjustment

Excess I&I 0.00% Adjustment Factor 100.00%

Adjusted Flow 16,117

Growth Adjustment

2009 SFR Cust 282.0 From MFRs 2014 SFR Cust trend. 282.0 From MFRs

Growth Factor 1.00

Adjusted Flow 16,117

Permit

Flow Basis Annual Avg

Flow (gpd) 50,000 Matches MFRs

Used and Useful 32.23%

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Morningview

2009/10 Test Year Flows

Annual Avg. (gpd) 5,750 Clsoe to MFRs

Max. Month (gpd) 7,000

Max. Three Mo.Avg (gpd) 6,333 from DMR Analysis

Infiltration/Inflow Adjustment

Excess I&I 0.00% Adjustment Factor 100.00%

Adjusted Flow 5,750

Growth Adjustment

2009 SFR Cust 34.0 From MFRs 2014 SFR Cust trend. 39.0 From MFRs

Growth Factor 1.15

Adjusted Flow 6,596

Permit

Flow Basis Annual Avg

Flow (gpd) 20,000 Matches MFRs

Used and Useful 32.98%

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Palm Port

2009/10 Test Year Flows

Annual Avg. (gpd) 17,333 Close to response to staff's 6th data req

Max. Month (gpd) 23,000

Max. Three Mo.Avg (gpd) 20,667 from DMR Analysis

Infiltration/Inflow Adjustment

Excess I&I 11.85% Adjustment Factor 88.15%

Adjusted Flow 15,279

Growth Adjustment

 2009 SFR Cust
 105.0
 From MFRs

 2014 SFR Cust trend.
 105.0
 From MFRs

Growth Factor 1.00

Adjusted Flow 15,279

Permit

Flow Basis Annual avg
Flow (gpd) 30,000

Used and Useful 50.93%

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Peace River

2009/10 Test Year Flows

Annual Avg. (gpd) 28,083 Clsoe to MFRs

Max. Month (gpd) 36,000

Max. Three Mo.Avg (gpd) 34,333 from DMR Analysis

Infiltration/Inflow Adjustment

Excess I&I 19.73% Adjustment Factor 80.27%

Adjusted Flow 22,542 27,559

Growth Adjustment

2009 SFR Cust88.0From MFRs2014 SFR Cust trend.88.0From MFRs

Growth Factor 1.00

Adjusted Flow 22,542 27,559

Permit Plant Eff Disp
Flow Basis Three Month ADF Ann Avg

Flow Basis Three Month ADF Ann Avg
Flow (gpd) 40,000 40,000

Used and Useful 56.36% 68.90%

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Rosalie Oaks

2009/10 T	est Year Flows			
	Annual Avg. (gpd)	10,250 MFRs u	se 11,969; Sch F-2 shows 10,400	
	Max. Month (gpd)	12,000		
	Max. Three Mo.Avg (gpd)	11,333 from DN	MR Analysis	
Infiltration	n/Inflow Adjustment			
	Excess I&I	33.27%		
	Adjustment Factor	66.73%		
	Adjusted Flow	7,563	6,840	
Growth A	djustment			
	2009 SFR Cust	92.0	From MFRs	
	2014 SFR Cust trend.	92.0	From MFRs	
	Growth Factor	1.00		
	Adjusted Flow	7,563	6,840	
Permit		Plant	Effluent Disposal	
	Flow Basis	Three Month Avg.	Annual Avg	
	Flow (gpd)	15,000	15,000	
Used and	Useful	50.42%	45.60%	

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Silver Lake Oaks

2009/10 Test Year Flows

Annual Avg. (gpd) 4,417 Clsoe to MFRs

Max. Month (gpd) 7,000

Max. Three Mo.Avg (gpd) 5,500 from DMR Analysis

Infiltration/Inflow Adjustment

Excess I&I 7.68% Adjustment Factor 92.32%

Adjusted Flow 4,077

Growth Adjustment

2009 SFR Cust 38.0 From MFRs 2014 SFR Cust trend. 38.0 From MFRs

Growth Factor 1.00

Adjusted Flow 4,077

Permit

Flow Basis Annual Avg

Flow (gpd) 12,000 MFRs use 15,000

Used and Useful 33.98%

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South Seas

2009/10 Test Year Flows

Annual Avg. (gpd) 104,917 Close to MFRs
Max. Month (gpd) 125,000 MFRs use 32,000
Max. Three Mo.Avg (gpd) 125,000 from DMR Analysis

Infiltration/Inflow Adjustment

Excess I&I N/A

Adjustment Factor 100.00%

Adjusted Flow 104,917

Growth Adjustment

 2009 ERUs
 706
 From MFRs

 2014 ERU trend.
 706
 From MFRs

Growth Factor 1.00

Adjusted Flow 104,917

Permit

Flow Basis Annual Avg

Flow (gpd) 264,000 Matches MFRs

Used and Useful 39.74%

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Summit Chase

Annual Avg. (gpd) 19,333 Clsoe to MFRs

Max. Month (gpd) 23,000

Max. Three Mo.Avg (gpd) 22,333 from DMR analysis

Infiltration/Inflow Adjustment

Excess I&I 0.00% Adjustment Factor 100.00%

Adjusted Flow 19,333

Growth Adjustment

2009 SFR Cust 211.0 From MFRs 2014 SFR Cust trend. 211.0 From MFRs

Growth Factor 1.00

Adjusted Flow 19,333

Permit

Flow Basis Annual Avg

Flow (gpd) 54,000 Matches MFRs

Used and Useful 35.80%

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Sunny Hills

2009/10 Test Year Flows

Annual Avg. (gpd) 11,583 Clsoe to MFRs
Max. Month (gpd) 13,000 MFRs use 32,000
Max. Three Mo.Avg (gpd) 13,000 from DMR analysis

Infiltration/Inflow Adjustment

Excess I&I 0.00% Adjustment Factor 100.00%

Adjusted Flow 11,583

Growth Adjustment

 2009 SFR Cust
 167.0
 From MFRs

 2014 SFR Cust trend.
 167.0
 From MFRs

Growth Factor 1.00

Adjusted Flow 11,583

Permit

Flow Basis Annual Average

Flow (gpd) 50,000 Matches MFRs

Used and Useful 23.17%

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Valencia Terrace

2009/10 Test Year Flows

Annual Avg. (gpd) 30,333 Clsoe to MFRs
Max. Month (gpd) 39,000 Matches MFRs
Max. Three Mo.Avg (gpd) 33,667 from DMR analysis

Infiltration/Inflow Adjustment

Excess I&I 0.00% Adjustment Factor 100.00%

Adjusted Flow 30,333

Growth Adjustment

 2009 ERUs
 432.0
 From MFRs

 2014 ERU trend.
 460.0
 From MFRs

Growth Factor 1.06

Adjusted Flow 32,299

Permit

Flow Basis Annual Avg

Flow (gpd) 80,000 Matches MFRs

Used and Useful 40.37%

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Venetian Village

2009/10 Test Year Flows

Annual Avg. (gpd) 28,667 Clsoe to MFRs

Max. Month (gpd) 40,000

Max. Three Mo.Avg (gpd) 33,000 from DMR analysis

Infiltration/Inflow Adjustment

Excess I&I 38.55% Adjustment Factor 61.45%

Adjusted Flow 17,616

Growth Adjustment

2009 SFR Cust 94.0 From MFRs 2014 SFR Cust trend. 94.0 From MFRs

Growth Factor 1.00

Adjusted Flow 17,616

Permit

Flow Basis Annual Avg

Flow (gpd) 36,000 Matches MFRs

Used and Useful 48.93%

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Village Water

2009/10 Test Year Flows

Annual Avg. (gpd) 45,667 MFRs use 55,828; Sch F-2 shows 45712

Max. Month (gpd) 59,000

Max. Three Mo.Avg (gpd) 54,667 from DMR analysis

Infiltration/Inflow Adjustment

Excess I&I 0.00% Adjustment Factor 100.00%

Adjusted Flow 45,667

Growth Adjustment

 2009 ERUs
 34.0
 From MFRs

 2014 ERU trend.
 36.0
 From MFRs

Growth Factor 1.06

Adjusted Flow 48,353

Permit

Flow Basis Three Month ADF effluent disposal limited to 45,000 AADF

Flow (gpd) 75,000 Matches MFRs

Used and Useful 64.47%

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The Woods

Annual Avg. (gpd) 10,000 MFRs use 12,000; Sch F-2 shows 9,920

Max. Month (gpd) 15,000

Max. Three Mo.Avg (gpd) 12,000 from DMR analysis

Infiltration/Inflow Adjustment

Excess I&I 7.59% Adjustment Factor 92.41%

Adjusted Flow 9,241

Growth Adjustment

2009 SFR Cust 167.0 From MFRs 2014 SFR Cust trend. 167.0 From MFRs

Growth Factor 1.00

Adjusted Flow 9,241

Permit Plant Effluent Disposal

Flow Basis Three Month Avg Annual Average
Flow (gpd) 15,000 15,000 Matches MFRs

Used and Useful 61.61% 61.61%

EXHIBIT ATW-9

WATER DISTRIBUTION AND WASTEWATER COLLECTION U&U CALCULATIONS

EXHIBT ATW-9 WATER DISTRIBUTION U&U CALCULATIONS

	Lots	Map Count		2014		
	Fronting	Customers	Growth	ERCs		
System	Mains		Factor	Total	U&U	Notes
Arredondo Estates	277	248	1.00	248	89.53%	
Arredondo Farms	443	386	1.00	386	87.13%	
Beechers Point	84	49	1.00			No oth. cust. shown on map; current oth.
				49	58.33%	cust. counted
Breeze Hill	133	123	1.00	122	92.48%	
		0.40	1.00	123	92.48%	
Fariways	244	243	1.00	243	83.54%	
Gibsonia Estates	237	198	1.00	198	79.02%	
Interlachen/Park Manor	367	290	1.00	290		
Kingswood	66	65	1.00	65	98.48%	
Lake Josephine/Sebring	1012	566	1.00	566	55.93%	No oth, cust, shown on map; current oth.
Oakwood	261	255	1.00	255	07 709/	cust. counted
	250	242	1.00	243	94.19%	cust. counted
Orange Hill/Sugar Ck	258	243		64	79.01%	
Palms MHP	81	64	1.00		93.97%	
Palm Port	116	109	1.00	109		
Peace River	131	103	1.00	103	78.63%	
Piney Woods	200	178	1.00	178	89.00%	
Ravenswood	52	46	1.00	46	88.46%	
River Grove	113	112	1.00	112	99.12%	
Rosalie Oaks	123	98	1.00	98	79.67%	
Silver Lakes Estates	1787	1576	1.00	1,576	88.19%	
Silver Lakes Oaks	53	44	1.00	44	83.02%	
Skycrest	131	122	1.00	122	93.13%	
Stone Mountain	21	10	1.00	10	47.62%	
Sunny Hills	6268	593	1.14	676	10.79%	
Tomoka	197	196	1.00	196	99.49%	
Twin Rivers	80	78	1.00	78	97.50%	
Valencia Terrace	360	359	1.00	359	99.72%	
Venetian Village	221	166	1.08	179	81.12%	
Village Water	260	178	1.00	178	68.46%	
Welaka	340	160	1.08			No oth. cust. shown on map; current oth.
				173		cust. counted
Wootens	53		1.00	23	43.40%	
The Woods	113		1.00	79	69.91%	
Zephry Shores	525	523	1.00	523	99.62%	

EXHIBT ATW-9 WASTEWATER COLLECTION U&U CALCULATIONS

System	Lots Fronting Mains	Map Count Customers	Growth Factor	2014 ERCs Total	U&U	Notes
Beecher's Point	38	17	1.00	17.00	44.74%	
Breeze Hill	133	125	1.00	125.00	93.98%	
Fairways	244	241	1.00	241.00	98.77%	
Fl. Central Commerce	81	81	1.00	81.00	100.00%	
Holiday Haven	160	110	1.00	110.00	68.75%	
Jungle Den	157	137	1.00	137.00	87.26%	used connecitons instead of lots
Peace River	125	99	1.00	99.00	79.20%	
Rosalie Oaks	106	99	1.00	99.00	93.40%	
Silver Lake Oaks	53	44	1.00	44.00	83.02%	
Sunny Hills	510	184	1.00	184.00	36.08%	
Village Water	88	35	1.06	37.10	42.16%	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
The Woods	120	73	1.00	73.00	60.83%	
Zephyr Shores	515	514	1.00	514.00	99.81%	

EXHIBIT ATW-10 SUMMARY OF FDEP COMPLIANCE DATABASES

EXHIBIT ATW-10 SUMMARY OF FDEP COMPLIANCE DATABASES Water System Compliance January 2001 to July 2011

	F	rimary Violatio	ns		TCR Violations		Sec	ondary Violat	ions		MNR Violation	s		Other Violation	15
	Total	T		Total			Total	Since 2007	Since 2010	Total	Since 2007	Since 2010	Total	Since 2007	Since 2010
System	Reported	Since 2007	Since 2010	Reported	Since 2007	Since 2010	Reported	Since 2007	Since 2010	Reported	3111CE 2007	5	Reported		0
ARREDONDO ESTATES				2	1	0							2	2	0
BEECHER'S POINT S/D					1								2		
CHULUOTA WATER SYSTEM	13	9	0	2	1	0	3	1	0				1	1	0
EAST LAKE HARRIS ESTATES							1	0	0				<u> </u>		
FAIRWAYS AT MOUNT PLYMOUTH	1			2	1	0	1	0	0	90	0	0	2	0	0
FORTY-EIGHT ESTATES			· ·				1	0	0	2	0	0	1	0	0
FRIENDLY CENTER SUBDIVISION							1	1	0						
GIBSONIA ESTATES WATER SYSTEM	+						1	0	0	1	0	0			
GRAND TERRACE SUBDIVISION	1						1	0	0			ļ			
HAINES CREEK MOBILE HOME PARK		 	-				1	0	0	2	0	0	2	0	0
HARMONY HOMES	1			1	0	0	1	0	0						
HERMITS COVE WATER SYSTEM	1	0	0	2	1	0	3	0	0	1	0	0	3	0	0
HOBBY HILL SUBDIVISION	 -	 		1	0	0								<u> </u>	<u> </u>
		+	 	1	0	0		i		ſ			3	0	0
HOLIDAY HAVEN (CONSEC.)	-	1	 	1	0	0	1	0	0						
IMPERIAL TERRACE WEST	1	 	 	1	1	0	1	1	0	2	0	0	1	0	0
INTERLACHEN LAKE ESTATES	1		0	2	2	1	2	0	0				1	0	0
JASMINE LAKES UTL	 	 	 	├ ─	4			<u> </u>	1				2	1	1
Jungle Den	-}	· · · · · · · · · · · · · · · · · · ·	╂	2	0	0	 	 	<u> </u>		1		1	0	0
KINGSWOOD MANOR(CONSEC.TO MIMS		 	<u> </u>	 	 	 	1	0	0	2	0	0			
LAKE GIBSON ESTATES		 	 	2	0	-	1	0	0	3	1	1	1	0	0
LAKE JOSEPHINE HEIGHTS	-l				1	0	 	 	 				4	2	1
LAKE OSBORNE (AQUA UTILITIES)				2	0	0			+		 	1		<u> </u>	ļ
LAKE SUZY SUBDIVISION				3		1	3	1 0	0	-	 		3	0	0
LEISURE LAKES		ļ		3	1	 	1	0	0	27	0	0	 		
MORNINGVIEW SUBDIVISION	ļ			 	.\		∦ -		 	2	0	0	2	1	0
OCALA OAKS SUBDIVISION (2 WPS)	1 1	0	0	2	1	0	1	0	0	 		 	 		
ORANGE HILL - SUGAR CREEK				1	0			+	 	2	2	 0	2	0	0
PALM PORT SUBDIVISION			<u> </u>	4	0	0			1		-	+ -	╫╌		
PALM TERRACE GARDENS			<u> </u>	5	0	0				19	1	0	1	1	1
PEACE RIVER HEIGHTS	. 3	3	3	5	1	1	<u> </u>	 	0	19	+		1 1	0	0
PINEY WOODS SUBDIVISION - 2 WTPS	_l			2	0	0	1	0	1 0	2	0	0	1	1	0
POMONA PARK WATER SYSTEM					<u> </u>		11	0			ļ	 	<u> </u>	 	
QUAIL RIDGE ESTATES				ļ			1	0	0	 	 	 -	 	 	
RAVENSWOOD WATER SYSTEM							1	0	0	ļ <u>.</u>	 		1	0	0
RIVERGROVE SUBDIVISON WTP			<u> </u>				3	2	0	4	2	0	1	 - '	1
ROSALIE OAKS				4	1	0	1	0	0		 	 		 	0
SARATOGA HARBOR				1	11	0			 	2	2	0	2	1	0
SEBRING LAKES WATER	2	0	0	1	0	0	1	0	0		ļ		3	0	
SILVER LAKE OAKS MHV	. 5	4	0	5	5	3	11	0	0	106	3	0	1 1	1	1
SKYCREST SUBDIVISION				1	1	0	11	0	0	ļ		1	 		
STONE MOUNTAIN ESTATES					1		1	0	0		_	1	2		0
SUMMIT CHASE VILLAS				1	0	0					 		1	_	
TANGERINE WATER COMPANY							2	1	1	ļ	J		 		1
THE WOODS	12	6	0	1	0	0	3	0	0	<u> </u>		↓	-		
TOMOKA VIEW ESTATES	12	4	0	1	1	0	10	8	0	2	0_	0	9	4	11
VALENCIA TERRACE SUBDIVISION			1	T			1	0	0				1	1.	
VENETIAN VILLAGE			1		1		1	0	0	2	2	0			
VILLAGE WATER	1	1	1	1	0	0						J	2	0	0
WOOTEN'S MHP	3	0	0	1			2	0	0	3	1	0	4	0	0
ZEPHYR SHORES MOBILE HOME EST	 	-	<u> </u>	1	1		2	1	1	1	1	0	1	1	0
VELLULY PUONES MODIFE HOME FOR	53	26	3	62	20	6	58	15	2	275	15	1	61	18	5

EXHIBIT ATW-10 SUMMARY OF FDEP COMPLIANCE DATABASES Wastewater System Compliance January 2001 to July 2011

		In Compliance			Min	or Out Compli	ance	Significant Out Compliance		
	Beginning Date	Total	Since 2007	Since 2010	Total	Since 2007	Since 2010	Total	Since 2007	Since 2010
System	13-Feb-02	5	1	0	8	4	2	1	0	0
Lake Suzy Utility WWTP	05-Jan-01	8	5	3	13	7	6	8	3	0
Fruitville WWTP	08-Nov-02	7	4	1	1	0	0	0	0	0
Sunny Hills WWTP	09-Aug-01	5	2	0	6	4	3	0	0	0
Summit Chase Villas	11-Jun-02	6	2	0	3	2	1	0	0	0
Venetian Village S/D		3	1	0	7	4	2	0	0	0
Kings Cove S/D	09-Aug-01	7	3	1	5	3	1	0	0	0
Valencia Terrace	24-May-01	- 6	1	0	3	3	1	0	0	0
Morningview WWTF	25-Oct-01	1	1	0	11	6	3	1	0	0
Holiday Haven	20-Sep-01	5	0	0	9	6	1	0	0	0
Breeze Hill MHP WWTP	08-Mar-01	5	2	1	3	1	1	2	1	0
Rosalie Oaks S/D WWTP	08-Mar-01	3	3	2	9	3	1	0	0	0
Chuluota WWTF	27-Apr-01	4————	0	0	11	5	2	0	0	0
Florida Central Commerce Park	17-Jan-01	0	4	0	9	3	1	0	0	0
Jungle Den	27-Sep-01	5	0	0	15	7	1	1	0	0
Blairs Jungle Den	20-Mar-01	0	ļ	0	8	5	1	4	2	1
Arredondo Farms Mobile Home Park WWTF	14-Aug-01	3	2	2	3	1	1 0	0	0	0
Park Manor WWTF	04-Jun-02	11	9	2 2	4	3	0	1	0	0
Silver Lake Oaks Mobile Home Park WWTF	19-Jun-01	11	7		8	3	2	1	1	1
Peace River Heights WWTP	11-Jun-02	2	2	1	9	6	3	9		1 1
Jasmine Lakes S/D	31-May-01	5	3	3		2	0	12	11	3
Palm Terrace Gardens	31-May-01	2	0	0	5		3	8	6	1 - 1
Village Water Ltd	07-Aug-01	3	0	0	5	3	1 3	0	0	1 0
Woods S/D	04-Jun-02	4	2	2	6	3			1 0	
Leisure Lakes Utitilies AKA Covered Bridge	07-Mar-01	6	1	11	5	4	1		2	0
Calusa Cove WWTP FKA Shady Acres Mobile Home Sd	02-May-01	7	3	3	3	11	1	2 4	1	0
Fountain Lakes WWTP	19-Jul-01	2	2	1	7	0	0	$\frac{4}{7}$	1 4	4
South Seas Plantation	14-Feb-01	16	16	0	6	2	0	<u> </u>	0	0
Fairways At Mt Plymouth	30-Apr-02	2	1	0	9	5	3	0		
TOTAL		140	77	23	191	96	40	61	39	11

EXHIBIT ATW-10 SUMMARY OF FDEP COMPLIANCE DATABASES Water System Notifications January 2001 to July 2011

SYSTEM	BOIL WATER-PI	RECAUTIONARY	FORMAL CONSENT	ORDER TO FACILITY	FORMAL WA	RNING LETTER	CONSUMER CONFIDENCE REPORT REC'D NOT OK		
3,3,4	Since 2007	Since 2010	Since 2007	Since 2010	Since 2007	Since 2010	Since 2007	Since 2010	
BREEZE HILL MOBILE HOME PARK							1	1	
CHULUOTA WATER SYSTEM		1	1	0	1	0			
GIBSONIA ESTATES WATER SYSTEM							2	1	
INTERLACHEN LAKE ESTATES	1	0	1	0			1	1	
JASMINE LAKES UTL							11	0	
JUNGLE DEN			1	1	11	1			
LAKE GIBSON ESTATES							1	0	
LAKE OSBORNE (AQUA UTILITIES)	2	1	1	0	11	0	<u> </u>		
MORNINGVIEW SUBDIVISION			1	0	1	00			
ORANGE HILL - SUGAR CREEK							2	1	
PALM PORT SUBDIVISION	1	0							
PALM TERRACE GARDENS							2	1	
PEACE RIVER HEIGHTS					2	1	5	3	
RIVERGROVE SUBDIVISON WTP	1	0							
ROSALIE OAKS							1	1	
SILVER LAKE OAKS MHV			1	0	1	0	1	1	
SUNNY HILLS UTILITIES			1	1	2	0			
THE WOODS			1	0			4	1 1	
TOMOKA VIEW ESTATES			2	0	11	0			
ZEPHYR SHORES MOBILE HOME EST			1	0	2	0	1	0	
TOTAL	5	1	11	2	12	2	22	11	

#REF!