JEFF ATWATER
President of the Senate



J.R. Kelly Public Counsel

STATE OF FLORIDA

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COMMISSION CLERK



Speaker of the

House of Representatives

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August 23, 2010

Ms. Ann Cole, Commission Clerk Office of Commission Clerk Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850

Re: Docket No. 100104-VVU

Dear Ms. Cole:

Enclosed for filing, on behalf of the Citizens of the State of Florida, are the original and 15 copies of the Direct Testimony of Andrew T. Woodcock.

Please indicate the time and date of receipt on the enclosed duplicate of this letter and return it to our office.

Sincerely,

Joseph a. McGlothlin

Associate Public Counsel

CLK

DOCUMENT NUMBER-DATE

FPSC-COMMISSION CLERE

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Application for Increase in Water)	Docket No. 100104-WU
System Rates in Franklin County by)	
Water Management Services, Inc.)	
)	FILED: August 23, 2010

DIRECT TESTIMONY

OF

ANDREW T. WOODCOCK

ON BEHALF OF THE CITIZENS OF THE STATE OF FLORIDA

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

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DIRECT TESTIMONY

OF

ANDREW T. WOODCOCK, P.E., MBA

On Behalf of the Office of Public Counsel

Before the

Florida Public Service Commission

Docket No. 100104-WU

I. <u>INTRODUCTION/BACKGROUND/SUMMARY</u>

- Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
- A. My name is Andrew T. Woodcock. My business address is 201 East Pine Street, Suite 1000, Orlando, FL 32801.
- Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.
- A. I graduated from the University of Central Florida in 1988 with a B.S. degree in Environmental Engineering and in 1989 with an M.S. degree in Environmental Engineering. In 2001, I graduated from Rollins College with an MBA degree. In 1990, I was hired at Dyer, Riddle, Mills and Precourt as an engineer. In May of 1991, I was hired at Hartman and Associates, Inc. which has since become Tetra Tech. My experience has been in the planning and design of water and wastewater systems with specific emphasis on utility valuation, capital planning, utility financing, utility mergers and acquisitions and cost of service rate studies. I have also

served as utility rate regulatory staff for St. Johns and Collier Counties in engineering matters. Exhibit ATW-1 provides additional details of my work experience.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN RATE PROCEEDINGS?

A. Yes. In 2002 I filed testimony on behalf of the St. Johns County Regulatory
Authority at a special hearing in an overearnings case against Intercoastal Utilities. I
have also filed testimony before the Kentucky Public Service Commission in 2007
on behalf of the Henry County Water District No. 2 (Case No. 2006-00191)
regarding system development charges.

Before the FPSC, I have filed testimony in the following proceedings, all on behalf of the Office of Public Counsel (OPC). In 2007, I filed testimony in the Aqua Utilities Florida, Inc. Rate Case (Docket No. 060368-WS). In 2008, I filed testimony regarding the Used and Useful Rule for Water Treatment Systems (Docket No. 070183-WS), the KW Resort Rate Case (Docket No. 070293-SU) and the Aqua Utilities Florida, Inc. Rate Case (Docket No. 080121-WS).

Q. ON WHOSE BEHALF ARE YOU FILING TESTIMONY IN THIS PROCEEDING?

A. I am testifying on behalf of the Florida Office of Public Counsel (OPC).

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. My testimony will address the used and usefulness of the Water Management Services (WMSI) system. In addition I will address the engineering aspects of the proposed pro forma adjustments to rate base.

O. PLEASE SUMMARIZE YOUR RECOMMENDATIONS IN THIS CASE.

- A. Based on my review of the Minimum Filing Requirements, the Direct Testimony filed by Frank Seidman and Gene Brown, system inspections and review of additional data provided by WMSI through discovery I have the following recommendations and opinions:
 - 1) WMSI's water treatment plant used and usefulness is 100%;
 - 2) WMSI's distribution system used and usefulness is 54.9%;
 - The proposed pro forma additions to rate base are planning level engineering estimates and do not have sufficient detail or accuracy for rate base purposes.

 I recommend these proposed projects not be included in rate base until they are supported by proper documentation such as invoices; and
 - 4) Notwithstanding the above, I am of the opinion that the estimate for the proforma plant addition for a new storage tank is overstated by at least \$191,492. The utility should reevaluate options to replace its on-site storage tank to determine the most cost effective alternative while providing quality service to the customers.

II. USED AND USEFUL

Q. BRIEFLY SUMMARIZE HOW YOU WENT ABOUT CALCULATING USED AND USEFUL FOR THE WMSI SYSTEM.

A. For the water treatment plant, I followed the procedures described in Florida Administrative Code (F.A.C.) Chapter 25-30.4325, Water Treatment Plant Used and Useful Calculations. I found that the water treatment plant is 100% used and useful. For the distribution system, I used the lot-to-lot method. From the system maps submitted by WMSI as part of the MFRs, I found a total of 3,311 lots adjacent to water lines in the service area. Of the total, 1,817 are shown as customer connections. According to the MFRs, there is negative projected growth for the service area, so I have not included an allowance for growth in the used and useful calculation. The calculated used and useful percentage for the WMSI service area is 1,817 divided by 3,311 or 54.9%.

III. PRO FORMA ADJSUTMENTS TO RATE BASE

Q. WHAT OVERALL ISSUES DO YOU HAVE WITH THE PRO FORMA ADJUSTMENTS TO RATE BASE?

A. My overall issues with the pro forma adjustments to rate base are that they are based on planning level engineering estimates. WMSI is requesting a total of \$2,202,481 in pro forma adjustments to rate base associated with the raw water transmission line, plant improvements, electrical system rehabilitation, and the distribution system. The supporting documentation for these adjustments is found in a report titled St. George Island Water System Evaluation, Final Report by PBS&J. The report consists of

seven Technical Memoranda and an Executive Summary. Each of the memoranda evaluates a different aspect of the WMSI system and provides various engineering recommendations and cost estimates. It is my opinion that these cost estimates are not sufficient documentation to support additions to plant-in-service, and therefore should not be included in rate base.

Q. EXPLAIN WHY YOU ARE OF THE OPINION THAT THE COST ESTIMATES DO NOT SUFFICIENTLY SUPPORT THE PRO FORMA ADDITIONS TO RATE BASE.

A. A rate base calculation relies upon plant-in-service amounts that are derived from the actual booked costs of assets in the utility system and are supported by invoices from contractors or equipment suppliers. The cost estimates submitted by WMSI in support of the pro forma additions are an engineer's preliminary opinion of what the recommended capital projects may cost, and may vary substantially from the actual installed cost.

Q. IN YOUR OPINION, WHAT WOULD REPRESENT SUFFICIENT DOCUMENTATION TO SUPPORT THE PRO FORMA ADJUSTMENTS?

A. As I stated above, I am of the opinion that actual invoices that document the full scope of the project and its final installed cost represent sufficient documentation to support the pro forma additions to rate base.

Q. WOULD ANY OTHER TYPE OF DOCUMENTATION BE SUFFICIENT?

A. Competitive bids from contractors or suppliers for a well defined project scope could be considered, but would still not be as accurate as the final installed cost.

O. PLEASE EXPLAIN WHY NOT?

- A. Competitive bids do not take into account anything that may happen during the construction of the project. For example, there may be an unforeseen site condition that increases the overall project cost. In that case, relying upon bids for adjustments to rate base would understate the actual project cost. Conversely, the scope of the project may be reduced after the bids are received, thereby reducing the actual project cost. In this case, relying upon bids would overstate the actual project cost. I am of the opinion that if competitive bids are accepted as documentation for proforma additions to rate base, then a subsequent true up should be conducted to reconcile the actual project costs to rate base.
- Q. EXPLAIN SPECIFICALLY WHY YOU ARE OF THE OPINION THAT

 COST ESTIMATES IN GENERAL ARE NOT SUFFICIENT

 DOCUMENTATION TO SUPPORT THE PRO FORMA ADDITIONS TO

 RATE BASE.
- A. Cost estimates prepared by engineers are sometimes also referred to as estimates of probable cost. They can come in various levels of detail and accuracy, depending upon the amount of engineering detail and analysis conducted. One of the primary purposes of an engineering cost estimate is to inform the utility of the amount of funds necessary to complete the project. As a result, cost estimates are conservative

in nature. No engineer wants to provide a cost estimate to a utility that underestimates the cost of a project. If properly performed, a cost estimate is higher than the project cost that would be received from competitive bids.

As more engineering work is performed on a specific project, a cost estimate tends to get more refined and accurate. For example, a planning level cost estimate that does not have any design documentation is not as accurate as a cost estimate based on fully designed project drawings and specifications. For a given project, the cost estimate prepared in the planning phase will not be as accurate as the cost estimate prepared at the end of the final design phase.

Now, if the project drawings and specifications are given to contractors to prepare a competitive bid, the resulting costs would be a better indicator of the cost of a project, because it involves a knowledgeable third party analysis, can be secured by a contract to obtain the construction services for the quoted price, and reflects competitive market forces at the time of the bid. Therefore, cost estimates are not as accurate an indicator of a project cost as are competitive bids.

Q. WHAT LEVEL OF DETAIL IS IN THE ESTIMATES PROVIDED BY WMSI TO SUPPORT THE PRO FORMA ADDITIONS?

A. I would characterize the estimates provided by WMSI to support the pro forma plant additions as planning level estimates. They are based upon a study level of engineering analysis and do not rely upon any detailed project drawings, complete

specifications, or similar construction documents. The technical memoranda provide an analysis that documents the need for improvements and identifies the projects to address the needs. However, there is not any detail on the project design or materials to produce anything other than a planning level estimate.

- Q. WHAT INDICATIONS CAN YOU POINT TO REGARDING THE ACCURACY OF THE COST ESTIMATES FOR THE WMSI PRO FORMA ADJUSTMENTS?
- A. There are few, but one example concerns the additional property costs associated with installing the new ground storage tank (GST). A total of \$450,000 for property is included in the cost estimate, which is over 25% of the of the project cost. No supporting documentation was provided about how the value was obtained. Exhibit ATW-3 provides a summary table and supporting documentation on parcels around the water plant site obtained from the Franklin County Property Appraiser's website. The data shows adjacent lots selling for between \$7,500 and \$160,000 with the most recent in 2007 being \$95,000. Given the wide range of the prices of nearby sales and the nationwide collapse in the real estate market since 2007, it is difficult to tell if the estimated property value of \$450,000 is at all representative of what the actual cost to purchase the property may be.
- Q. IN SUMMARY TO THIS ISSUE, WOULD YOU PLEASE RESTATE YOUR POSITION REGARDING THE PRO FORMA ADJUSTMENTS?

A. In my opinion, the engineering estimates provided by WMSI do not have the level of detail or accuracy required to make pro forma adjustments to rate base. Therefore, it is my recommendation that the pro forma adjustment to rate base not be included at this time.

IV. CAPITAL IMPROVEMENTS

- Q. NOTWITHSTANDING YOUR OPINION REGARDING THE PRO FORMA
 ADJUSTMENTS ABOVE, DO YOU HAVE ANY SPECIFIC CONCERNS
 REGARDING THE CAPITAL PROJECTS REPRESENTED BY THE PRO
 FORMA ADJUSTMENTS?
- A. Yes. The capital projects are identified in the Executive Summary of the report as Raw Water Transmission Line, Plant Improvements, Electrical System Replacement/Rehabilitation and Distribution System. Based on my review of the documentation and my inspection of the utility's facilities, these projects would replace aging assets, improve the quality of service to the customers, or improve the safety and reliability conditions of the utility system. However, I do take exception to the analysis that led to the conclusion to locate a new ground storage tank (GST) on adjacent property.

Q. CAN YOU BE SPECIFIC?

A. Yes, Exhibit ATW-4 is an excerpt from Technical Memorandum 5 from the PBS&J engineering report. The memorandum evaluates four alternatives for addressing the observed structural issues of the GST. The recommended option (identified as

Alternative 2) is to construct a new GST on adjacent property, which brings the total cost of the plant improvement to \$1,706,330. Of this total, \$450,000 is associated with the purchase of additional land and closing costs. The next less costly option (identified as Alternative 3) is to demolish the existing storage tank and replace it with a new GST in the same location for \$708,188. A difference of almost \$1 million warrants an additional look at these two alternatives beyond the ranking methodology in the Technical Memorandum. Although the technical memorandum is lacking in many details, it appears that Alternatives 2 and 3 are not functionally identical. In other words, it is not an apples-to-apples comparison. The key differences between alternatives 2 and 3 are:

- a. Alternative 2 includes new high service pumping equipment located on the roof of the new tank so that they can operate in the event of a flood occurrence.
- b. Alternative 2 includes relocating the emergency generator.
- c. Alternative 2 has a higher cost for the tank, presumably due to a reinforced roof to support the pumping equipment and to provide a dual wall wet well.

Since all three of the above items add to the cost of Alternative 2 and provide additional benefits, I made similar adjustments to Alternative 3 to achieve an apples-to-apples comparison. Exhibit ATW-5 presents the estimate of probable cost for alternatives 2 and 3 as taken from the Technical Memorandum 5. Also included is a modified Alternative 3 that includes the costs associated with the additional functionality of Alternative 2 and excludes (because it would be unnecessary) the

additional cost of a land purchase. With these adjustments the estimate of probable cost of Alternative 3 (replacing the storage tank in its existing location) is \$1,514,838 which is \$191,492 less than Alternative 2, for which the utility is requesting a proforma adjustment.

Q. AFTER YOUR ANALYSIS, WHAT IS YOUR RECOMMENDATION REGARDING THE GST?

A. Based on my analysis of the documentation supporting the utility's decision to locate the GST on additional property, I am of the opinion that the customers would be equally served by installing a new tank on the existing GST site with a cost savings of \$191,492. I would encourage the utility to reevaluate this option as the project proceeds to the design phase.

Q. DO YOU HAVE ANY OTHER ISSUES IN THIS TESTIMONY?

A. OPC is in the process of conducting discovery on the subject of fire flow and water main improvements that were addressed by the Commission in Orders Nos. PSC-04-0791-AS-WU, issued August 12, 2004, and PSC-05-1156-PAA-WU, issued November 21, 2005, in WMSI's Limited Proceeding in Docket No. 000694-WU. Should responses to pending discovery requests reveal additional engineering issues, I will supplement my testimony as needed.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

CERTIFICATE OF SERVICE DOCKET NO. 100104-WU

I HEREBY CERTIFY that a true and correct copy of the foregoing Direct Testimony of Andrew T. Woodcock has been furnished by U.S. Mail to the following parties on this 23rd day of August, 2010.

Ralp Jaeger Eric Sayler Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850

Lisa C. Scoles Radey Thomas Yon Clark Post Office Box 10967 Tallahassee, FL 32302 Mr. Gene D. Brown Water Management Services, Inc. 250 John Knox Road, #4 Tallahassee, FL 32303-4234

Joseph A. McGlothlin

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 including planning, design, and permitting of both water and wastewater treatment facilities, wastewater collection systems, pipeline systems, pumping stations and effluent disposal systems. He has special expertise in utility due diligence investigations, utility valuations, financial feasibility analyses and business plans. He is also experienced in the preparation and review of capital improvement programs, master planning and water and wastewater impact fees.

EXPERIENCE

Mr. Woodcock's major design and planning experience includes the design, and permitting functions associated with several water and wastewater projects. Representative water projects include the Venice Gardens Utilities Center Road WTP 0.6 MGD RO facility expansion and the City of Port St. Lucie wellfield expansion. Wastewater design projects include the 0.5 MGD expansion to the Deltona Lakes WWTP and the 1.6 MGD expansion to the City of Sanibel's WWTP both of which include treatment to public access reuse standards.

Mr. Woodcock's water and wastewater utility planning experience includes several master plans and capital improvements programs. Recent planning projects include the City of Deltona Water and Wastewater Master Plans, the City of Bartow Water Master Plan, and the Marion County Utility Consolidation Program.

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 impact fees 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)

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:

20

Years with Tetra Tech:

19



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

Senior Project Manager

Utility Replacement Cost Study (2004)

Stormwater Utility Rate Study (2008)

Marion County Florida

Water and Wastewater Impact Fee Study (2005)

Utility Acquisition of Florida Water Services (2003)

Utility Acquisition of AP Utilities, Palm Bay Utilities, Oak Run Utilities, Pine Run Utilities, Quail Meadow Utilities

Consulting Engineering Report, Series 2003; Utility System Revenue Bonds, \$40.19 million

Consulting Engineers Report, Series 2001; Utility System Revenue Bonds, \$27.27 million

Water and Wastewater Utility Master Plan (2005)

City of Orlando, Florida - Research Park 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)

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)

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)

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

Utility Regulatory Services - KW Resort Utilities (2008)

Docket No. 100104-WU Andrew T. Woodcock, Exhibit ATW-1 Page 3 of 3 Resume



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

Senior Project Manager

PAPERS/PRESENTATIONS

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

EXHIBIT ATW-2 EXECUTIVE SUMMARY EXCERPT

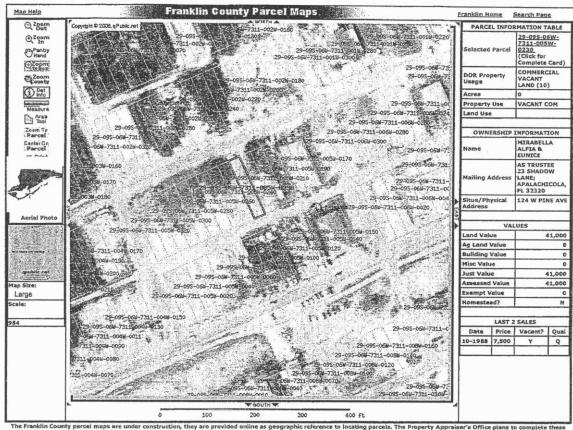
PRIORITY ITEM	DESCRITPION .	ESTIMATED COST
aw water transmission line	12- inch water main, pvc	\$70,000
aw water transferre	12 -inch gate valves	\$6,800
	well point dewatering	\$10,000
	tie-in connections	\$10,000
	Mobilization, site work, permitting	\$14,380
	Contractors bond, insurance	\$1,936
	Contractors OH&P	\$9,680
	Contingency	\$19,360
	Engineering	\$14,000
		\$156,156
Plant Improvements	Chlorine system manifolding	\$500
Tancimprovemente	Repalce cylinder mounted chlorinators	\$2,500
	Clearwell baffling	\$15,000
	Chlorine diffuser	\$4,000
	High service pumps	\$100,000
	Generator relocation	\$7,500
	Generator fuel containment	\$3,000
	Pumping and plant controls	\$93,500
	Ground storage tank installation	\$389,000
	Ground storge tank	\$326,000
	Engineering	\$61,500
	Mobilization, site work, permitting	\$24,525
	Electrical	\$61,500
	Contingency	\$12,300
	Yard piping	\$61,500
	Contractors bond, insurance	\$12,300
	Contactors OH&P	\$61,500
	subtota	\$1,236,125
	GST Property and closing costs	\$450,000
	tota	\$1,686,125
Electrical System .	SCADA/RTU contols for wells 1-4	\$252,000
Replacement/Rehabiltation	Well 3 genereator repairs	\$21,700
replace Hello to labitation	Well 4 new generator	\$64,000
	tota	al \$337,700
Distribution System	Chlorine chart recorder	\$7,000
Distribution System	Chlorine probe	\$7,500
*	Portable leak detection equipment	\$8,000
(A)	tota	al \$22,500
<u> </u>	Grand tota	\$2,202,481

PBSJ 2639 N Monroe St Bldg C Tallahassee, FL 32303 Phone (850) 575-1800 Fax (850) 575-1099 www.pbsj.com ES Page 7 of 8

EXHIBIT ATW-3 REAL ESTATE DATA

Docket No. 100104-WU Andrew T. Woodcock, Exhibit ATW-3 Page 1 of 11 Real Estate Data

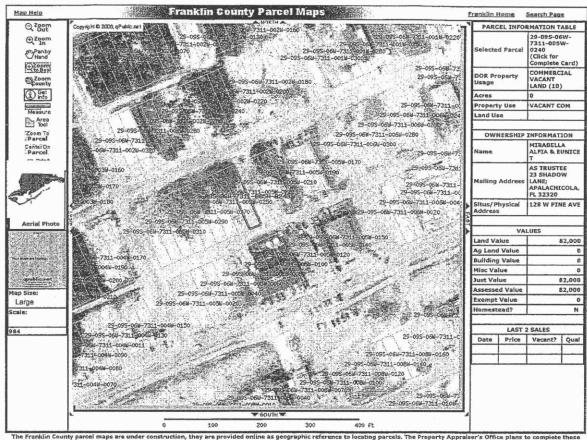
			Las	t Sale	!
Parcel	A	ssesed Value	Date	T	Price
29-09S-06W-7311-005W-0230	\$	41,000.00	Oct-88	\$	7,500.00
29-09S-06W-7311-005W-0240	\$	82,000.00			
29-09S-06W-7311-005W-0260	\$	41,000.00	Feb-80	\$	2,000.00
29-09S-06W-7311-005W-0270	\$	123,000.00	Jul-99	\$	137,500.00
29-09S-06W-7311-005W-0300	\$	41,000.00	May-99	\$	132,500.00
29-09S-06W-7311-005W-0310	\$	41,000.00	Jul-99	\$	16,000.00
29-09S-06W-7311-005W-0320	\$	41,000.00	Jul-99	\$	160,000.00
29-09S-06W-7311-005W-0050	\$	43,500.00	Jul-99	\$	160,000.00
29-09S-06W-7311-005W-0030	\$	82,000.00	Aug-07	\$	95,000.00
29-09S-06W-7311-005W-0010	\$	82,000.00	May-99	\$	132,500.00



maps within the next year.

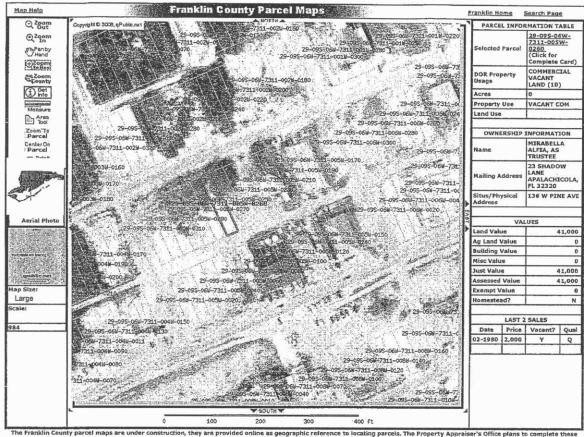
The Franklin County Property Appraiser's Office makes every effort to produce the most accurate information possible. No warranties, expressed or implied, are provided for the data herein, its use or interpretation. The assessment information is from the last certified taxroll. All data is subject to change before the next certified taxroll.

Franklin Home
Search Page
Website design by gpublic.net



The Franklin County Property Appraiser's Office makes every effort to produce the most accurate information possible. No warranties, expressed or Implied, are provided for the data herein, its use or interpretation. The assessment information is from the last certified taxroll. All data is subject to change before the next certified taxroll.

Franklin Home Search Page © Website design by gpublic.net



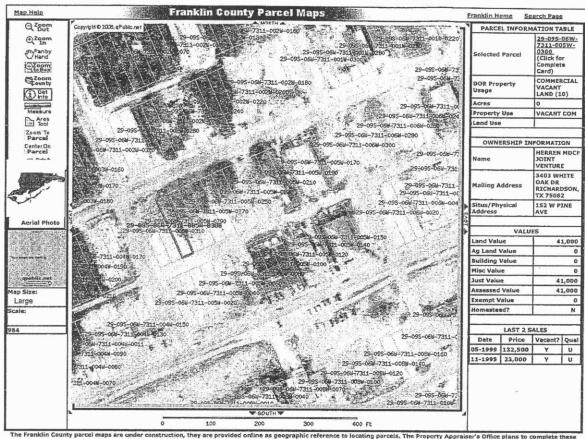
The Franklin County parcel maps are under construction, they are provided online as geographic reference to locating parcels. The Property Appraiser's Office plans to complete these maps within the next year.

The Franklin County Property Appraiser's Office makes every effort to produce the most accorded information possible. No warranties, expressed or implied, are provided for the data herein, its use or interpretation. The assessment information is from the latertified buscoils. All data is subject to change before the next certified taxroll.

Franklin Home Search Page © Website design by goublic.nets

Map Help	Franklin County Parcel Maps	Franklin Home S	earch Page
Q Zgom	Copyright © 2008, ePublic zer 903-958-7311-002N-0160	PARCEL INFOR	MATION TABLE
Zoom In Panby Hand Zoom to Bex	29-095 0 0380	Selected Parcel	29-095-06W 7311-005W 0270 (Click for Complete Card)
County Get Info	2-09S-06H-7311-002H-0180 . 29-09S-06H-7 -7311-002H-0200	DOR Property Usage	COMMERCIA VACANT LAND (10)
made depth of solve	29-09S-069-7311-00	Acres	D
Measure	29-09S-064-7311-0064-024	Property Use	VACANT CO
Area	29-095-064-7311-0064-0220	Land Use	
Zoom To Parcel	29-093-064-7311-0064-0280 29-095-064-7311-0064-0280	OWNERSHIP I	VEORMATTON
Center On Parcel	29-095-064-7311-0064-0300 29-095-064-7311-0004-0300 29-095-064-7311-0004-0170 29-095-064-7311-0004-0170	Name	HERREN ME JOINT VENTURE
	-95-064-7311-070-020 gt 29-055-064-7311-0	Mailing Address	3403 WHIT OAK DR RICHARDSO TX 75082
	25-05-064-7311-0054-005 25-05-064-7311-0054-0020 25-05-064-7311-0054-0020	Situs/Physical Address	140 W PIN
Aerial Photo	29-098-064-779:14-0054-09:00	A DIT	
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直接 法执法	29-095-609-7/11-00/9-0/40	Land Value	123,0
是,是6400000000000000000000000000000000000	98 908 7311-0049-0170 98 99 90 908 7311-0009-0120	Ag Land Value	
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	29-093-064-21-20-009	Misc Value	
qualic not	92-055-050-7311-003-5050 4	Just Value	123,0
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ile:	29-005-004PT	Homestead?	
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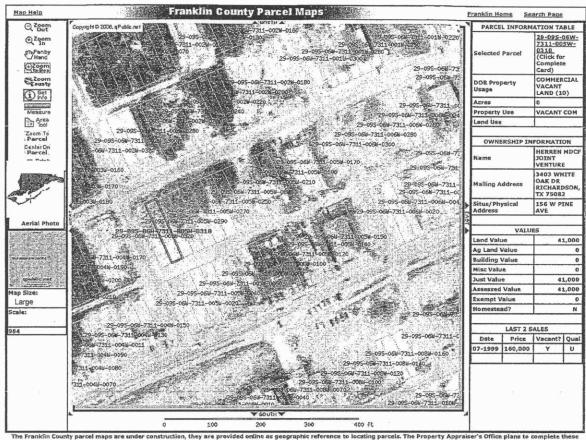
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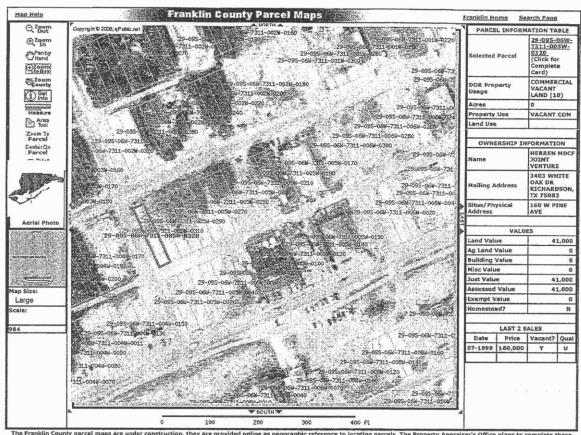
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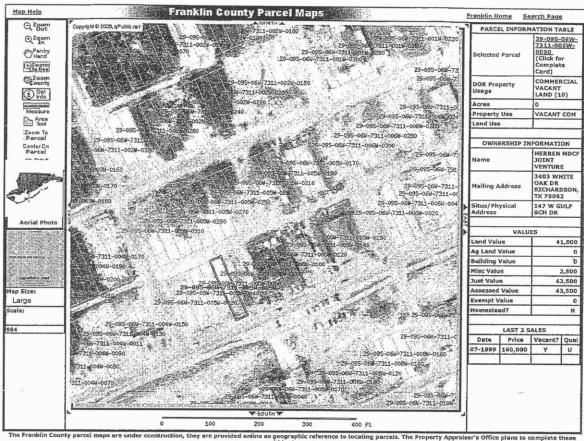
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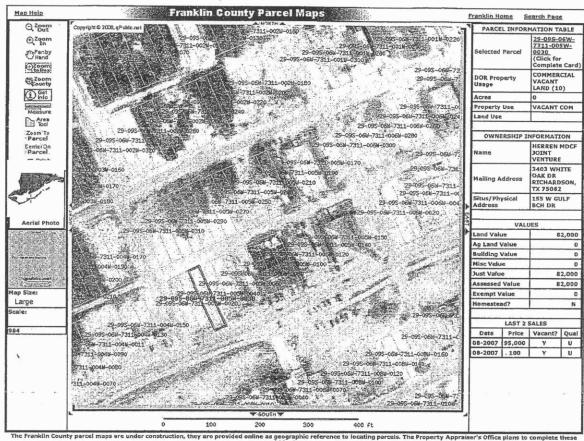
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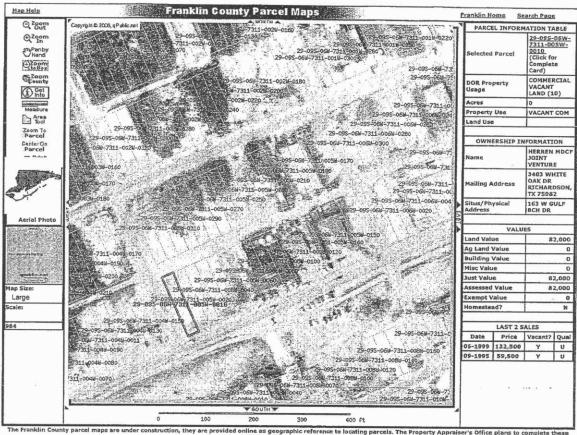
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EXHIBIT ATW-4 TECHNICAL MEMORANDUM 5

Docket No. 100104-WU Andrew T. Woodcock, Exhibit ATW-4 Page 1 of 1 Technical Memorandum 5

Table 3
Estimates of Probable Construction Costs*

£;	St. George Island , Florid	a Estimates of probable con	struction costs for GST optio	ins	
DESCRIPTION		ALTERNATIVE 1: New GST on Lots behind WTP and refurb existing GST into a new workshop, abandon : EST	ALTERNATIVE 2: New GST on Lots behind WTP, abandon existing GST and maintain EST	ALTERNATIVE 3: Construct new GST in current location, no new workshop and maintain EST	ALTERNATIVE 4: Remediation of existing GST, no new workshop and maintain EST
Demolition of existing GST (a:	ssume \$10/sf)	Washington Carlot Stroke	1.2 (1.4) " .1 (1.5) . 1 (1.1) A	\$40,960.00	第二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十
Refurbish existing GST into a	new workshop(\$40/sf)	\$169,000.00	14.5 14.5 12.5 14. AE AE	Artist, a properties only	CALANTA SOLVER
Construction of new 500 KG (\$744,000.00	The State of the sa	\$17.00 PARKET PRO	26年6年1月1日 中共
Construction of new 325 KG	GST with dual wetwell	10, 99 126 137 147 779s	\$715,000.00	Same the state of	多数是在产品。APA的内侧。
Construction of new 325 KG	GST with common wetwell	· 由于1980年1980年1980年1	and the land of	\$270,000.00	REPRESENT OF THE
Remediation of existing GST (Crom Estimate April 17, '09)plus contingency)	CONTRACT & Season	4 145 5 207 5 4	PROPERTY AND	\$124,740.00
New agrators		\$56,000.00	\$28,000.00	\$56,000.00	Jan 887 W. State St. St.
New Vertical turbine high se	rvice pumps; roof mounted	\$100,000,00	\$100,000.00	7 a 1 76 5 b 3 17 b 5	assource in the
New chlorine room (Approx \$		5, 74, \$77, 277, 277, 277	1000	\$3,000,00	\$3,000.00
Relocate generator and fuel s		\$7,500.00	\$7,500.00	Life AND Life And Annual Con-	A product of the second
New containment structure for		\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00
Temporary Operations Our)n	g Construction	·····································	application for the part	Commence of the control of	Market Comment
The San San San San State State State	temporary pumping (\$25K/month)	· / / / / / / / / / / / / / / / / / / /	TANGETT ST	\$50,000.00	\$25,000.00
	temporary chemical facility	2000年代数年1200	1971, 1944 14 15	\$2,000.00	\$2,000.00
18 10 / AC. (6 2 5)	yard piping modifications(3% of gst cost)	20 maily 20 graph 20 graph	10.00	\$8,100.00	\$3,742.20
	relocate aerators	a topological telephone	\$5,000.00	\$5,000.00	\$5,000.00
And the second	new pumping chamber	·····································		\$15,000.00	\$18,000.00
SPECIAL SECTION	miscellaneous	1、特殊X+4/4 由 25]	a the think is	\$30,000,00	\$30,000,00
Sub	total without property	\$1,081,500.00	\$860,500.00	\$485,050.00	\$213,482.20
Cost of four (4) lots with clo	sing cost	\$450,000.00	\$450,000.00	1000年1000年10日	和连续的原料。在中国的
Mobilization/Demobilization	(1%)	\$10,815.00	河童等38,605.00 异学学	\$4,850.50	SS-2,134.82
Site Work (2 %)		\$21,630.00	\$17,210.00	\$9,701.20	54,269.64
Contingency (20%)		\$216,300.00	\$172,100.00	\$97,012.00	542,696.44
		\$21,630.00	\$17,210.00	\$9,701.20	54,269.64
Contractor's Overhead and P	rofit (10%)	\$108,150.00	\$86,050.00	\$48,506.00	521;348.22
Permitting (2%)		\$10,815.00	58,605.00	\$4,850.60	#X#### SZ,134.82
Engineering (10%)		\$108,150.00	\$86,050.00	548,506.00	\$21,348.22
Estimated Project Total		\$2,028,990.00	\$1,706,330.00	\$708,187,60	\$311.684.01

* The cost estimates presented above where used to evaluate the options prior to the development of any priority CIP estimates. The values included in the table should not be confused with our final project cost estimate.

Estimated construction duration for Option 1 and 2 is estimated to be 6-months. The construction of the new ground storage tank will take approximately 2 months. Long lead items such as new vertical turbine pumps and motors set the critical path time for completion of construction.

Advantages of Options 1 and 2

- Flexibility -Dual storage chambers allows cleaning or maintenance while maintaining operation
- Reliability- All pumping equipment above storm water elevation
- Eliminates elevated storage tank maintenance and operation-Option 1 only
- · High quality, low maintenance option, with superb water tightness



EXHIBIT ATW-5 COMPARISON OF ALTERNATIVES

Docket No. 1000104--WU
Andrew T. Woodcock, Exhibit ATW-5
Page 1 of 1
Comparison of Alternatives

	Alternative 2	Alternative 3	Alternative 3 Adjusted
Demolition of Existing GST		\$ 40,960	\$ 40,960
Construction of 325 KG GST with dual wetwell	715,000		715,000
Construction of 325 KG GST with common wetwell	40 Section 6 Contractor	270,000	
New Aerators	28,000	56,000	56,000
Vertical turbine high service pumps; roof mounted	100,000		100,000
New Chlorine room		3,000	3,000
Relocate generator and fuel storage facilities	7,500		7,500
New containment structure for diesel fuel	5,000	5,000	5,000
Temporary operations during construction			
temporary pumping		50,000	50,000
temporary chemical facility		2,000	2,000
yard piping modifications		8,100	8,100
relocate aerators	5,000	5,000	5,000
new pumping chamber		15,000	15,000
miscellaneous		30,000	30,000
Subtotal without property	860,500	485,060	1,037,560
Cost of four lots with closing costs	450,000		
mobilization/Demobilization (1%)	8,605	4,851	10,376
Site Work (2%)	17,210	9,701	20,751
Contingency (20%)	172,100	97,012	207,512
Contractor's Bond and insurance (2%)	17,210	9,701	20,751
Contractor's Overhead and Profit (10%)	86,050	48,506	103,756
Permitting (1%)	8,605	4,851	10,376
Engineering (10%)	86,050	48,506	103,756
Total	1,706,330	708,188	1,514,838
	8 0.		

191,492