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FINAL REPORT

PHASE I

IMPLEMENTATION OF WATER CONSERVATION RATE STRUCTURES

BY

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EXECUTIVE SUMMARY

This report presents the results of Task III, Phase I of the St. Johns River Water Management District (SJRWMD) project, Investigation of Alternative Water Supply Strategies, Water Conservation and Reuse of Reclaimed Water.

The purpose of Task III is to determine the potential impacts of water conservation rate structures on reducing potable water consumption and thereby extending the viability of current water supply sources. Phase I was undertaken to assess the availability of data, develop methodologies, and estimate the budget for performing the analysis to determine the potential impacts of water conservation rate structures. Actual data collection and analysis will be performed in Phase II.

The Phase I study determined that the WATERATE computer software, developed by the Southwest Florida Water Management District as part of an empirical study of the effects of water price on customers' demand for water, is an appropriate tool for estimating potential impacts of water conservation rate structures for utilities within SJRWMD. Based on information provided by a questionnaire sent to 25 utilities and on follow-up telephone calls, it was determined that the data required to perform the analysis could be obtained from 16 utilities, supplemented by property value data from property appraisers' offices and, in some cases, by sewer service rate data from other utilities serving the same customers.

The recommended Phase II approach involves conferences with SJRWMD staff to determine the various water conservation rate structures to be explored by the analysis. In addition, it is recommended that data be collected through various means, including questionnaire follow-up, site visits, and where necessary manual compilation of information from printed reports. The WATERATE model can be run for 16 to 23 utilities, depending on data availability.

At the conclusion of Phase II a report will be prepared that includes a full tabular summary of data, a tabular summary of modeled results

for each utility participating in the study, and an analysis of results for the entire group. The primary indicators of the effectiveness of water conservation rate structures will be the estimated percentage change in water consumption by customer class achieved through implementation of the rates, in the context of the resulting percentage change in the utility's total water revenue. The aggregate findings will be used to estimate the overall expected effectiveness of the use of water conservation rate structures in conserving water resources in the region.

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INTRODUCTION

BACKGROUND

St. Johns River Water Management District (SJRWMD) is responsible for managing ground water resources in a nineteen county area of northeastern Florida. Ground water aquifers are currently the primary sources of potable water supply in SJRWMD. The most dependable ground water source is the Floridan aquifer. However, the *Water Supply Needs and Sources Assessment* (Vergara 1994) projected shortfalls in available water supply in certain critical areas throughout SJRWMD boundaries by the year 2010. Areas with existing or 2010 projected water supply problems were designated as water resource caution areas (WRCAs).

As a result of the *Water Supply Needs and Sources Assessment* (Vergara 1994), SJRWMD embarked on an *Investigation of Alternative Water Supply Strategies*. Strategies being investigated include using lower quality water supplies, surface water, reclaimed water, aquifer recharge, aquifer storage and recovery, mitigation and avoidance, and various water conservation techniques.

SJRWMD contracted with Post, Buckley, Schuh & Jernigan, Inc. (PBS&J) to perform various tasks for the purpose of assessing water conservation and the reuse of reclaimed water as effective alternative water supply strategies. This report, prepared in association with Burton and Associates, Inc., specifically addresses Task III - Implementation of Water Conservation Rate Structures.

Water conservation rate structures are used by water utilities to moderate consumption through a pricing mechanism that increases the price of water as usage increases. This practice is based upon general economic theory, which holds that the quantity of a commodity demanded decreases as its price increases, supported by empirical research specifically related to water usage. Florida utilities generally employ conservation rate structures in an attempt to reduce *per capita* water consumption in response to regulatory requirements.

In 1993, Southwest Florida Water Management District (SWFWMD) published the results of a study designed to determine the precise relationship between water price and demand for a sample of utilities within its jurisdiction (Brown & Caldwell and Whitcomb 1993). Using these results, a computer model was developed and incorporated into software (WATERATE). The model is available to utilities for use in estimating the effect of specific rate structures on water demand and the resulting changes in revenue from water sales. When used for a number of utilities, the model can be used to assess the expected relative effectiveness of water conservation rate structures in an overall strategy for ensuring adequate future water supplies within a specific regulatory jurisdiction.

PURPOSE

The purpose of this study is to determine the potential impacts of water conservation rate structures for selected public supply utilities in SJRWMD. The study is divided into two phases:

- Phase I - Assess data availability, develop methodologies, and determine costs for collecting data and performing analyses required to achieve the purpose of the study.
- Phase II - Collect and analyze required data and project impacts of various pricing structures on water use.

This report documents the results of Phase I.

SCOPE OF WORK

Specific services performed were as follows:

1. Review the WATERATE model and evaluate its appropriateness for use in this study.
2. Assess the availability of data required for use in the WATERATE model through the distribution of a questionnaire

to 25 specified water utilities and appropriate telephone follow-up, and recommend sources of alternative or surrogate data, if needed.

3. Specify the tasks required to complete Phase II, including identification of staff who will perform the work and fees to be charged.

METHODS

REVIEW AND EVALUATION OF THE WATERATE MODEL

In order to determine the appropriateness of the WATERATE model for the purposes of this study, the *Water Price Elasticity Study* (Brown & Caldwell and Whitcomb 1993) was reviewed. In addition, the data requirements and computational results of the model were reviewed by running the software with the demonstration data included.

ASSESS THE AVAILABILITY OF DATA REQUIRED FOR USE IN THE WATERATE MODEL

A questionnaire (see Appendix A) was distributed based on the data input tables in the WATERATE model to the following 25 utilities:

Altamonte Springs	Mt. Dora	Sanlando
Apopka	New Smyrna	Seminole County
Casselberry	Ocoee	South States (Deltona)
Cocoa	Orange County	Titusville
Daytona Beach	Orlando Utilities	Village Center
Deland	Ormond Beach	Winter Park
Eustis	Oviedo	Winter Springs
Leesburg	Port Orange	
Maitland	Sanford	

The utilities were identified by SJRWMD and were selected because they represent over 90 percent of the water withdrawal within the WRCA. The returned questionnaires were evaluated for adequacy. If the data provided by the utility were inadequate or if the utility did not respond, attempts were made to contact utility officials by phone to determine the availability of additional data required and to obtain their agreement to participate in Phase II.

RECOMMEND SOURCES OF ALTERNATIVE OR SURROGATE DATA, IF NEEDED

Where data did not appear to be available from the utility, other potential sources were identified, such as public agencies, where the information could be obtained. For example, it was determined that information about housing prices could be obtained from county property appraisers.

In addition to the steps outlined above, a preliminary review of our findings with SJRWMD staff was conducted to determine acceptable approaches for Phase II.

Based on the results of these tasks, we developed cost estimates based on the time and expenses required to accomplish the objectives of Phase II.

DISCUSSION

REVIEW OF WATERATE MODEL

The WATERATE model is based on a recent study of price elasticity prepared for SWFWMD (*Water Price Elasticity Study*, Brown & Caldwell and Whitcomb, 1993). While the study covers both residential and commercial water customers, it focuses on single-family residential users. Using a multiple regression model, the authors identified variables that explained approximately 60 percent of the variance in water usage among 1,200 residential customers of ten utilities over a period of one year. Then, by holding others variables constant (such as weather, irrigation restrictions, well depth, and property values), the effect of price differences on water usage was isolated and used to determine price elasticity, measured in terms of expected percentage change in water usage for each percentage change in water price. A similar procedure was followed for nine commercial classes and for multi-family residential customers. To test the validity of the relationships determined from the cross-sectional analysis (analysis of water use differences among customers at the same point in time) when applied to a single utility over time, the authors compared average water usage in Winter Haven before and after a 27 percent rate increase.

The most salient conclusions of the study for purposes of this evaluation were:

- Elasticity varies significantly by property value, with customers residing in higher-value homes exhibiting more sensitivity to price changes. For this reason, the price elasticity factors incorporated into WATERATE are divided into high, medium, and low property value groups.
- Multi-family customers are generally price inelastic, probably because individual apartments are seldom metered.

- Estimates of elasticity for commercial classes are less reliable than those for residential, since the number of customers in the analysis is considerably smaller and the variance explained by the regression equation is generally much lower.
- The results of the longitudinal analysis for Winter Haven implied elasticity of demand factors by customer class reasonably close to those determined by the short term analysis. However, the authors caution that factors other than price could have affected the change in demand after the rate increase. More obviously, since in this aggregate analysis there is essentially only one observation (the unit of analysis being the utility), the results must be considered anecdotal in nature. However, it is important that the results did not *contradict* the cross-sectional analysis; this provides an additional element of strength to the elasticity estimates developed in the study.

DATA AVAILABILITY ASSESSMENT

To assess the availability of data required from each utility, the WATERATE model input requirements were reviewed. A questionnaire was developed, shown in Appendix A, which was mailed to the 25 utilities to be included in the study. Table 1 shows an analysis of the initial responses received. To summarize, out of 25 utilities solicited, 11 returned a substantive response. Of those, only four (Sanlando, Sanford, Port Orange, and New Smyrna) provided essentially all of the data required to run the WATERATE model without substantial further inquiry. The primary omission from questionnaires returned by the other seven respondents was bill frequency data -- the number of customers and consumption for each customer class, broken down by type of service received (both water and sewer or water only). Since the elasticity-of-demand estimates vary significantly by these groupings, such data are essential for the purposes of this study.

Attempts were made to contact officials at each utility not providing adequate data, including those not responding at all. Table 2 shows a

Discussions

Table 1: Analysis of Initial Responses to "WATERATE" Questionnaire

Respondent	Question (See Note)												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
1 Altamonte Springs	OK	OK	OK	Rate	Rate	Rate	Rate	No	No	No	NO	No	No
2 Apopka													
3 Casselberry													
4 Cocoa	OK	OK	OK	Rate	Rate	Rate	Rate	No	No	OK	OK	OK	OK
5 Daytona Beach													
6 Deland	OK	OK	OK	Rate	Rate	Rate	Rate	No	No	No	No	No	No
7 Eustis													
8 Leesburg	OK	OK	OK	Rate	No	Rate	Rate	No	No	No	No	No	No
9 Maitland	OK	OK	OK	Rate	Rate	Rate	Rate	No	No	OK	OK	OK	No
10 Mt. Dora													
11 New Smyrna	OK	OK	OK	OK	OK	OK	OK	No	No	Part	OK	No	No
12 Ocoee													
13 Orange County													
14 Orlando Utilities	OK	OK	OK	Rate	Rate	Rate	Rate	No	No	No	OK	No	No
15 Ormond Beach													
16 Oviedo													

Discussions

Table 1: Analysis of Initial Responses to "WATERATE" Questionnaire (Continued)

Respondent	Question (See Note)												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
17 Port Orange	OK	OK	OK	OK	OK	OK	OK	No	No	OK	OK	OK	OK
18 Sanford	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	No	No
19 Sanlando	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
20 Seminole County													
21 South States (Deltona)													
22 Titusville													
23 Village Center													
24 Winter Park	OK	OK	OK	Rate	Rate	Rate	Rate	Rate	Rate	No	No	No	No
25 Winter Springs	OK	OK	OK	Rate	Rate	Rate	Rate	Rate	Rate	No	No	No	No

Note: "OK" indicates all information provided as required to run WATERATE except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical informational is missing. "NO" indicates that the question was unanswered or that the information is unusable. Shaded utilities did not respond.

Discussions

Table 2: Summary of Follow-Up Results

Respondent	Call Made	Contact Made	Results of Follow-Up Contact	Probable Participant
1 Altamonte Springs	Yes	No		
2 Apopka	Yes	Yes	Willing to participate in Phase II	x
3 Casselberry	Yes	Yes	They believe they returned questionnaire, we have no record	x
4 Cocoa	No	No	Large number of customers on separate sewer - impractical	
5 Daytona Beach	Yes	No		
6 Deland	Yes	Yes	Will assess data availability and call back	
7 Eustis	Yes	No		
8 Leesburg	Yes	No		
9 Maitland	Yes	Yes	Willing to participate in Phase II	x
10 Mt. Dora	Yes	No		
11 New Smyrna	Yes	Yes	Willing to participate in Phase II	x
12 Ocoee	Yes	Yes	Billing statistics not available by customer class	x
13 Orange County	Yes	Yes	We have full billing statistics from recent rate study	x
14 Orlando Utilities	Yes	Yes	Willing to participate in Phase II	x
15 Ormond Beach	Yes	Yes	Willing to participate in Phase II	x

Discussions**Table 2: Summary of Follow-Up Results (Continued)**

Respondent	Call Made	Contact Made	Results of Follow-Up Contact	Probable Participant
16 Oviedo	Yes	Yes	Willing to participate in Phase II	x
17 Port Orange	N/A	N/A	Original data is complete	x
18 Sanford	N/A	N/A	Original data is essentially complete	x
19 Sanlando	N/A	N/A	Original data is complete	x
20 Seminole County	No	No	Letter sent indicates willingness to participate	x
21 South States (Deltona)	Yes	Yes	Willing to Participate in Phase II	x
22 Titusville	N/A	N/A	We have full billing statistics from recent rate study	x
23 Village Center	Yes	Yes	Willing to participate in Phase II	x
24 Winter Park	Yes	Yes	Willing to participate in Phase II	x
25 Winter Springs	Yes	Yes	Billing statistics not available by customer class	
			Total Probable Participants	16

summary analysis of the results of these efforts. A detailed explanation for each utility is found in Appendix B.

There is a high probability that 16 of the 25 utilities will be willing and able to participate in Phase II of the study. In addition, some of those with whom we have been unable to make additional contact may participate.

One of the factors used to evaluate probability of participation was availability of utility billing and financial information required by the WATERATE model. Our assessment of this factor was based upon telephone conversations with the utility. In our opinion each of the 16 identified as a probable participant will be able to provide these data. In some cases, however, a utility supplies water to customers receiving sewer service from another provider. In this case, the number of customers in this category must be identified and the appropriate sewer rates to use with that group determined.

There are two data elements for which the utility is dependent upon outside sources:

- 1) percentage of commercial customers by type of business, and
- 2) percentage of single-family homes in the low, medium and high value ranges as defined in the model.

Absent these data elements, the model provides default values. Use of default values increases the range of error in the modeled results, and does so in an unpredictable way.

As stated earlier in this report, the estimated elasticity factors for commercial classes of customers are not as strongly supported by the research design as those for residential customers. In addition, residential customers are normally the majority of users of a public water supply system. For these reasons, we do not believe that use of the default values for percentage of each business type within the commercial class significantly increases the estimation error inherent in the model.

Housing values, on the other hand, are critical to the study. Elasticity factors for single-family residential customers are closely related to this variable. Unfortunately, utilities do not maintain these data internally, since they have no use for it. In Florida, the source for information on property value is the property appraiser's office in each county. Since the property appraiser must certify taxable value annually to each taxing jurisdiction, this information is readily available for cities, counties, and special districts. However, utility systems often serve customers in only a portion of a taxing jurisdiction (for example, Orange County Public Utilities serves portions of unincorporated Orange County), or across multiple jurisdictions (for example, Winter Park serves customers inside the City and in unincorporated areas of Orange County). In such cases, an attempt must be made to correlate utility service area to some other geographic basis for which property records can be aggregated. This possibly can be accomplished satisfactorily in most cases using approximations based on census tract or some other unit. To maintain consistency with the study upon which the WATERATE model was derived, it is preferable to use property appraiser data; however, if these data cannot be aggregated appropriately, it may be possible to use census data for property values.

CONCLUSIONS

REVIEW OF WATERATE MODEL

Based on our evaluation, the WATERATE model provides an appropriate tool for evaluating the effectiveness of water conservation rate structures in moderating water consumption within the context of a strategic approach to regional water use regulation. At that level of decision-making, minor weaknesses in the underlying empirical research and the need to estimate certain data elements are judged to be immaterial. In determining the rate structures to be modeled, care must be taken not to specify structures that are too complicated to be supported by the model in general or by the precision of the data available for a specific utility. For example, the elasticity factors developed for commercial customers are not as strongly supported by empirical research. For this reason, water conservation rate structures that include commercial customers will produce modeled results that will be characterized by a greater range of estimation error than those including only residential customers.

DATA AVAILABILITY ASSESSMENT

Sufficient data will be available to run the model for approximately 16 utilities. In most cases, the utilities will be unable to provide a breakdown of commercial customers by specific business. In addition, in most cases property value data must be obtained from the county property appraiser and may need to be estimated where utility service areas are not consistent with taxing jurisdictions. Finally, where a utility provides water service to customers served by a separate sewer utility, sewer pricing data must be obtained from that utility.

RECOMMENDATIONS

We recommend that Phase II be structured as follows:

SUBTASK 1 - RESEARCH DESIGN

- 1.1 Determine, in consultation with SJRWMD staff and concerned utilities, the water conservation rate structures to be used as a basis for estimating consumption effects.

Because of weaknesses in both the underlying empirical research and data availability for commercial customers, we recommend that conservation rate structures be modeled only for residential customers. *Preliminarily*, we suggest the following general approaches to establishing the rate structures to be examined. These are presented as a basis for discussion, not as firm recommendations.

- Maintain existing rate structure with elimination of fixed charge.
- Maintain existing fixed charge, substituting two-block structure for existing structure.
- Maintain existing fixed charge, substituting three-block structure for existing structure.
- Maintain existing fixed charge, substituting four-block structure for existing structure.
- Reduce existing fixed charge, substituting three-block structure for existing structure.

In all, five different rate structures will be modeled for each utility.

1.2 Determine the primary modeled results to be reported.

For each rate structure evaluated, we suggest that the following results be used as primary indicators of effectiveness:

- Percentage change in water consumption by customer class.
- Percentage change in total water revenue.

SUBTASK 2 - DATA COLLECTION AND ANALYSIS

2.1 Continue follow-up with utilities not yet contacted to obtain participation in Phase II.

2.2 Collect data for participating utilities and run the WATERATE model.

The level of effort required varies by utility, depending on the amount of information obtained during Phase I as shown in the detailed estimates provided for each utility in Appendix B. In general, the following process will be used:

- Conduct an on-site visit to assist in data identification.
- Follow-up to obtain final data.
- Obtain housing value data from property appraiser
- Enter data in WATERATE model.
- Review initial WATERATE run to determine and correct data deficiencies.
- Follow-up to correct data deficiencies.
- Run WATERATE model for five alternative rate structures.

- Summarize modeled results.

SUBTASK 3 - REPORT PREPARATION

- 3.1 Prepare tabular summary of data.
- 3.2 Prepare tabular summary of modeled results
- 3.3 Prepare report in accordance with SJRWMD standards.

SUBTASK 4 - PROJECT PROGRESS MEETINGS

Prepare for and attend up to two project progress meetings with SJRWMD staff.

KEY STAFF ASSIGNMENTS

The key staff associated with this work in Phase II are noted in Table 4.

Table 3: Key Project Staff

Staff Member*	Project Role
Jo Ann Jackson, P.E., (PBS&J)	Project Manager
Robert Lockridge (B&A)	Financial Manager
Michael Burton (B&A)	Financial Review
Robert A. Morrell, P.E., (PBS&J)	Senior Technical Review

* PBS&J = Post, Buckley, Schuh & Jernigan, Inc.
B&A = Burton & Association

REFERENCES

Brown & Caldwell and John B. Whitcomb. 1993. *Water Price Elasticity Study*. Southwest Florida Water Management District. Brooksville, FL.

Vergara, Barbara (editor), 1994. *Water Supply Needs and Sources Assessment*. St. Johns River Water Management District. Palatka, FL.

APPENDIX A
QUESTIONNAIRE TO COLLECT DATA FOR "WATERATE" MODEL

**St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies**

QUESTIONNAIRE TO COLLECT DATA FOR "WATERATE" MODEL

Unless otherwise specified, all questions refer to Fiscal Year ended September 30, 1995.

1. Specify the customer classes identified in your billing system.

 Customer class	Is this class identified in system?		Do block rates apply to this class?	
	YES	NO	YES	NO
Single-family residential				
Multiple-family residential				
Commerical				
Industrial				
Public				
Irrigation				

Other (specify):

2A What is your billing unit for water usage?



Thousand gallons	
Hundred cubic feet	
Other (specify):	

2B. Do rates differ by season?



YES	
NO	

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies

QUESTIONNAIRE TO COLLECT DATA FOR "WATERATE" MODEL

Unless otherwise specified, all questions refer to Fiscal Year ended September 30, 1995.

3. Enter the fixed monthly charges and related data for each customer class.
Please copy this page and use for each customer class with a unique fixed charge.

✓ **Customer classes to which these charges apply (see Question 1):**

Single-family residential		Other (specify):	
Multiple-family residential			
Commerical			
Industrial			
Public			
Irrigation			

If the sewer usage charge is fixed, enter it here.

	Water	Sewer	Total	(If these charges are not defined separately for water & sewer, enter "Total")
Minimum monthly usage charge (in addition to those charges shown below)				
Fixed monthly charge per account				
Fixed monthly charge per ERC/ERU				

✓ **How are ERC's/ERU's defined?**

	By meter size (if so, enter factors)	ERC/ERU factor		Number of meters		
		Water	Sewer	Water only	Wtr & Swr	Size
(If ERC's/ERU's are determined on a basis other than meter size, please attach appropriate explanations / schedules)	Other method					5/8"
						3/4"
						1"
						1.5"
						2"
						3"
						4"
						6"
						8"
						10"
					12"	

3A. Estimate the growth rate in number of meters for years shown, using FY 1994/95 as a base.

FY 95/96		FY 96/97		FY 97/98	
	%		%		%

**St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies**

QUESTIONNAIRE TO COLLECT DATA FOR "WATERATE" MODEL

Unless otherwise specified, all questions refer to Fiscal Year ended September 30, 1995.

4. Enter the usage charges and related data for each customer class.

Please copy this page and use for each customer class with a unique rate structure.

✓ Customer classes to which these charges apply (see Question 1):

Single-family residential		Other (specify):
Multiple-family residential		
Commerical		
Industrial		
Public		
Irrigation		

If your data is aggregated for consumption ranges, circle the maximum for each range and enter aggregate data there.

Water Units Per Month (1)	Annual Bill Count		\$ Usage rate per unit (2)		Annual Totals:	
	Water only	Wtr & Swr	Water	Sewer (3)	Bill Count	Water Units
1						
2						
3						
4						
5						
6						
7						
8						
9						
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28						
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30						
>30						

- NOTES:**
- (1) As defined in your answer to Question 2.
 - (2) Enter ZERO for user charge within minimum charge bracket.
 - (3) If sewer is not billed based on water usage, enter zero and write a brief explanatory note below. Make sure any fixed sewer usage charge is shown as "minimum" charge for sewer in your answer to Question 3.

If there are different rates for consumption blocks over 30 water units per month, continue with 4a.

**St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies**

QUESTIONNAIRE TO COLLECT DATA FOR "WATERATE" MODEL

Unless otherwise specified, all questions refer to Fiscal Year ended September 30, 1995.

4a. To be used when there are different rates for consumption blocks > 30 water units per month.

✓ Customer classes to which these charges apply (see Question 1):

Single-family residential		Other (specify):
Multiple-family residential		
Commerical		
Industrial		
Public		
Irrigation		

If your data is aggregated for consumption ranges, circle the maximum for each range and enter aggregate data there.

Water Units Per Month (1)	Annual Bill Count		\$ Usage rate per unit (2)	
	Water only	Wtr & Swr	Water	Sewer (3)
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
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57				
58				
59				
60				
>60				

NOTES:

- (1) As defined in your answer to Question 2.
- (2) Enter ZERO for user charge within minimum charge bracket.
- (3) If sewer is not billed based on water usage, enter zero and write a brief explanatory note below. Make sure any fixed sewer usage charge is shown as "minimum" charge for sewer in your answer to Question 3.

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies

QUESTIONNAIRE TO COLLECT DATA FOR "WATERATE" MODEL

Unless otherwise specified, all questions refer to Fiscal Year ended September 30, 1995.

5. Enter the usage charges and related data for each customer class - FY 1993-94.

Please copy this page and use for each customer class with a unique rate structure.

✓ Customer classes to which these charges apply (see Question 1):

Single-family residential		Other (specify):	
Multiple-family residential			
Commerical			
Industrial			
Public			
Irrigation			

If your data is aggregated for consumption ranges, circle the maximum for each range and enter aggregate data there.

Water Units Per Month (1)	Annual Bill Count		\$ Usage rate per unit (2)		Annual Totals:	
	Water only	Wtr & Swr	Water	Sewer (3)	Bill Count	Water Units
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
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30						
>30						

- NOTES:**
- (1) As defined in your answer to Question 2.
 - (2) Enter ZERO for user charge within minimum charge bracket.
 - (3) If sewer is not billed based on water usage, enter zero and write a brief explanatory note below. Make sure any fixed sewer usage charge is shown as "minimum" charge for sewer in your answer to Question 3.

If there are different rates for consumption blocks over 30 water units per month, continue with 5a.

**St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies**

QUESTIONNAIRE TO COLLECT DATA FOR "WATERATE" MODEL

Unless otherwise specified, all questions refer to Fiscal Year ended September 30, 1995.

5a. To be used when there are different rates for consumption blocks > 30 water units per month - FY 1993-94.

✓ Customer classes to which these charges apply (see Question 1):

Single-family residential		Other (specify):	
Multiple-family residential			
Commerical			
Industrial			
Public			
Irrigation			

If your data is aggregated for consumption ranges, circle the maximum for each range and enter aggregate data there.

Water Units Per Month (1)	Annual Bill Count		\$ Usage rate per unit (2)	
	Water only	Wtr & Swr	Water	Sewer (3)
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
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56				
57				
58				
59				
60				
>60				

NOTES:

(1) As defined in your answer to Question 2.

(2) Enter ZERO for user charge within minimum charge bracket.

(3) If sewer is not billed based on water usage, enter zero and write a brief explanatory note below. Make sure any fixed sewer usage charge is shown as "minimum" charge for sewer in your answer to Question 3.

**St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies**

QUESTIONNAIRE TO COLLECT DATA FOR "WATERATE" MODEL

Unless otherwise specified, all questions refer to Fiscal Year ended September 30, 1995.

6. Compute WATER rate revenue requirements.

	\$AMOUNT	
Total WATER revenue requirements	<input type="text"/>	<i>Should be greater of cost requirements or actual revenue.</i>
Less: WATER revenues other than rates	<input type="text"/>	<i>Include only revenue available to offset total requirements.</i>
Revenue required from WATER rates	<input type="text"/>	
Less: WATER system costs that do not vary with changes in consumption	<input type="text"/>	<i>Should reflect all fixed costs.</i>
Variable WATER revenue requirements	<input type="text"/>	<i>Should correlate closely with total for chemicals, energy costs for plant and auxiliary pumping, and cost of purchased water. Include other variable costs of production as appropriate for your system.</i>

Note: You may determine variable revenue requirements either indirectly as shown above (total requirements less fixed requirements) or directly by identifying variable costs of production.

6A. Estimate the growth rate in water revenues for years shown, using FY 1994/95 as a base.

FY 95/96	FY 96/97	FY 97/98
%	%	%

7. Statistical data for use in price elasticity computations.

a. Percent of single-family homes falling within the following valuation ranges:

Value	Percent
<= \$55,000	
\$55,001 - \$81,300	
>\$81,300	
Total	100%

b. Percentage of commercial accounts represented by specific types of business:

Type of Business	Percent
Car washes	
Schools	
Hospitals	
Laundromats	
Hotels/Motels	
Nursing homes	
Offices	
Restaurants	
Other	
Total	100%

APPENDIX B
WATERATE MODEL DATA EVALUATION

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	1 Altamonte Springs
------------------------	---------------------

INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
	OK	OK	OK	RATE	RATE	RATE	RATE	NO	NO	NO	NO	NO	NO

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	NO	

EVALUATION OF DATA AVAILABILITY

This utility sent a copy of a summary rate schedule, but no other information.

We have been unable to establish contact to ascertain basic data availability and willingness to participate.

ESTIMATE OF PHASE II - TASK 2 WORK

Description of Task	Hours	Rate	Cost
On-site visit to assist in data identification	4.0	\$100	\$400
Associated travel	1.0	\$25	\$25
Follow-up to obtain final data	2.0	\$100	\$200
Obtain housing value data from property appraiser	8.0	\$100	\$800
Data entry in Waterrate model	4.0	\$50	\$200
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400
Run Waterrate for five alternative rate structures	5.0	\$100	\$500
Summarize modeled results	4.0	\$100	\$400
Altamonte Springs Totals	32.0		\$2,925

CONTACT INFORMATION

Glenn E. Forrest, P.E.
City of Altamonte Springs
225 Newburyport Avenue
Altamonte Springs, FL 32701-3697
(407)830-3857

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	2 Apopka
------------------------	----------

INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
DID NOT RESPOND													

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	YES	WILLING TO PARTICIPATE IN PHASE II

EVALUATION OF DATA AVAILABILITY

This utility did not return a completed questionnaire. In discussions with utility officials, we determined that their billing system likely can produce the data required by the model. In addition, they indicated a willingness to cooperate in Phase II. We believe a site visit will be necessary to ensure that our requirements are clearly understood and to obtain the data in a timely manner.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	CONTACT INFORMATION
On-site visit to assist in data identification	4.0	\$100	\$400	Bob Elmquist City of Apopka Utilities Department PO Box 1229 Apopka, FL 32704-1229 (407)889-1731
Associated travel	1.5	\$25	\$38	
Follow-up to obtain final data	2.0	\$100	\$200	
Obtain housing value data from property appraiser	8.0	\$100	\$800	
Data entry in Waterrate model	4.0	\$50	\$200	
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400	
Run Waterrate for five alternative rate structures	5.0	\$100	\$500	
Summarize modeled results	4.0	\$100	\$400	
Apopka Totals	32.5		\$2,938	

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	3 Casselberry
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INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
DID NOT RESPOND													

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	YES	THEY BELIEVE THEY RETURNED QUESTIONNAIRE, WE HAVE NO RECORD

EVALUATION OF DATA AVAILABILITY

We have no record of receiving a completed questionnaire from this utility. However, they believe that they returned one - although they did not keep a copy and could not be sure. We believe that the best way to proceed is to make a site visit in Phase II to initiate collection of the data.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	CONTACT INFORMATION
On-site visit to assist in data identification	4.0	\$100	\$400	Tony Segretto, PW Director VIA Pat Brant, Secretary City of Casselberry 95 Lake Triplet Drive Casselberry, FL 32707 (407)263-3930
Associated travel	0.5	\$25	\$13	
Follow-up to obtain final data	2.0	\$100	\$200	
Obtain housing value data from property appraiser	8.0	\$100	\$800	
Data entry in Waterrate model	4.0	\$50	\$200	
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400	
Run Waterrate for five alternative rate structures	5.0	\$100	\$500	
Summarize modeled results	4.0	\$100	\$400	
Casselberry Totals	31.5		\$2,913	

SOURCE: BURTON & ASSOCIATES

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07/11/96

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	4	Cocoa
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INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
	OK	OK	OK	RATE	RATE	RATE	RATE	NO	NO	OK	OK	OK	OK

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	NO	NO	LARGE NUMBER OF CUSTOMERS ON SEPARATE SEWER - IMPRACTICAL

EVALUATION OF DATA AVAILABILITY

This utility sent a copy of their rate schedule and attached billing statistics for September, 1995. These statistics do not distinguish between commercial and multi-family customers. In addition, Cocoa provides water to several surrounding communities which have their own sewer system. To collect data for Cocoa would be equivalent to including these sewer utilities in the study and correlating the data. This results in high data collection costs.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	CONTACT INFORMATION
On-site visit to assist in data identification	24.0	\$100	\$2,400	Donald W. Downs, Jr. Conservation/Public Relations Officer Utilities/Public Works Department 600 School Street Cocoa, FL 32911 (407)639-7671 FX(407)639-7663
Associated travel	5.0	\$25	\$125	
Follow-up to obtain final data	24.0	\$100	\$2,400	
Obtain housing value data from property appraiser	24.0	\$100	\$2,400	
Data entry in Waterrate model	10.0	\$50	\$500	
Initial review/correx, including phone follow-up if needed	8.0	\$100	\$800	
Run Waterrate for five alternative rate structures	5.0	\$100	\$500	
Summarize modeled results	5.0	\$100	\$500	
Cocoa Totals	105.0		\$9,625	

SOURCE: BURTON & ASSOCIATES

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07/11/96

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	5 Daytona Beach
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INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
DID NOT RESPOND													

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	NO	

EVALUATION OF DATA AVAILABILITY

This utility did not return a completed questionnaire.

We have been unable to establish contact to ascertain basic data availability and willingness to participate.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	Earl Gowen City of Daytona Beach PO Box 2451 Daytona Beach, FL 32115-2451 (904)258-3142
On-site visit to assist in data identification	4.0	\$100	\$400	
Associated travel	2.5	\$25	\$63	
Follow-up to obtain final data	2.0	\$100	\$200	
Obtain housing value data from property appraiser	8.0	\$100	\$800	
Data entry in Waterrate model	4.0	\$50	\$200	
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400	
Run Waterrate for five alternative rate structures	5.0	\$100	\$500	
Summarize modeled results	4.0	\$100	\$400	
Daytona Beach Totals	33.5		\$2,963	

SOURCE: BURTON & ASSOCIATES

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07/11/96

**St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures**

**APPENDIX B
WATERATE MODEL DATA EVALUATION**

NAME OF UTILITY	6 Deland
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INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
	OK	OK	OK	RATE	RATE	RATE	RATE	NO	NO	NO	NO	NO	NO

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
YES	YES	YES	WILL ASSESS DATA AVAILABILITY AND CALL BACK

EVALUATION OF DATA AVAILABILITY

*This utility sent a copy of a summary rate schedule, but no other information.
We have established contact, but have not yet received information regarding data availability.
We believe the utility will cooperate in Phase II, but need to confirm.*

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	John Jeffrey, Acting Utility Director Water Plant Utilities City of Deland PO Box 449 Deland, FL 32721-0449 (904)427-1361
On-site visit to assist in data identification	4.0	\$100	\$400	
Associated travel	2.0	\$25	\$50	
Follow-up to obtain final data	2.0	\$100	\$200	
Obtain housing value data from property appraiser	8.0	\$100	\$800	
Data entry in Waterrate model	4.0	\$50	\$200	
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400	
Run Waterrate for five alternative rate structures	5.0	\$100	\$500	
Summarize modeled results	4.0	\$100	\$400	
Deland Totals	33.0		\$2,950	

SOURCE: BURTON & ASSOCIATES

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07/11/96

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	7	Eustis
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INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
DID NOT RESPOND													

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	NO	

EVALUATION OF DATA AVAILABILITY

This utility did not return a completed questionnaire.

We have been unable to establish contact to ascertain basic data availability and willingness to participate.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	Irwin Gajentan Director of Water & Sewer Town of Eustis PO Drawer 68 Eustis FL 32727 (352)957-5618
On-site visit to assist in data identification	4.0	\$100	\$400	
Associated travel	1.5	\$25	\$38	
Follow-up to obtain final data	2.0	\$100	\$200	
Obtain housing value data from property appraiser	8.0	\$100	\$800	
Data entry in Waterrate model	4.0	\$50	\$200	
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400	
Run Waterrate for five alternative rate structures	5.0	\$100	\$500	
Summarize modeled results	4.0	\$100	\$400	
Eustis Totals	32.5		\$2,938	

SOURCE: BURTON & ASSOCIATES

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07/11/96

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	8 Leesburg
------------------------	------------

INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
	OK	OK	OK	RATE	NO	RATE	RATE	NO	NO	NO	NO	NO	NO

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	NO	

EVALUATION OF DATA AVAILABILITY

This utility sent a copy of a summary rate schedule, but no other information.

We have been unable to establish contact to ascertain basic data availability and willingness to participate.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	Mark Odell or Guy Ross City of Leesburg 223 South 5th Street Leesburg, FL 32748 (904)728-9840
On-site visit to assist in data identification	4.0	\$100	\$400	
Associated travel	2.0	\$25	\$50	
Follow-up to obtain final data	2.0	\$100	\$200	
Obtain housing value data from property appraiser	8.0	\$100	\$800	
Data entry in Waterrate model	4.0	\$50	\$200	
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400	
Run Waterrate for five alternative rate structures	5.0	\$100	\$500	
Summarize modeled results	4.0	\$100	\$400	
Leesburg Totals	33.0		\$2,950	

SOURCE: BURTON & ASSOCIATES

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07/11/96

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	9 Maitland
------------------------	------------

INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
	OK	OK	OK	RATE	RATE	RATE	RATE	NO	NO	OK	OK	OK	NO

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	YES	WILLING TO PARTICIPATE IN PHASE II

EVALUATION OF DATA AVAILABILITY

This utility provided financial data and rate information, but no billing statistics. We discussed the matter with the utility billing supervisor, and concluded that the required data is probably available from their system. They indicated a willingness to cooperate in Phase II.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost
On-site visit to assist in data identification	4.0	\$100	\$400
Associated travel	0.5	\$25	\$13
Follow-up to obtain final data	2.0	\$100	\$200
Obtain housing value data from property appraiser	8.0	\$100	\$800
Data entry in Waterrate model	4.0	\$50	\$200
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400
Run Waterrate for five alternative rate structures	5.0	\$100	\$500
Summarize modeled results	4.0	\$100	\$400
Maitland Totals	31.5		\$2,913

Michelle del Valle
City of Maitland
955 Stonewood Lane
Maitland, FL 32751
(407)539-6223

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	10 Mt. Dora
------------------------	-------------

INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
DID NOT RESPOND													

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	NO	

EVALUATION OF DATA AVAILABILITY

This utility did not return a completed questionnaire.

We have been unable to establish contact to ascertain basic data availability and willingness to participate.

ESTIMATE OF PHASE II - TASK 2 WORK

Description of Task	Hours	Rate	Cost
On-site visit to assist in data identification	4.0	\$100	\$400
Associated travel	0.5	\$25	\$13
Follow-up to obtain final data	2.0	\$100	\$200
Obtain housing value data from property appraiser	8.0	\$100	\$800
Data entry in Waterrate model	4.0	\$50	\$200
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400
Run Waterrate for five alternative rate structures	5.0	\$100	\$500
Summarize modeled results	4.0	\$100	\$400
Mt. Dora Totals	31.5		\$2,913

CONTACT INFORMATION

Rod Stroupe, Director of Utilities
City of Mt. Dora
PO Box 176
Mt. Dora, FL 32757
(407)735-7151

St. Johns River Water Management District
 Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	11 New Smyrna
------------------------	---------------

INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
	OK	OK	OK	OK	OK	OK	OK	NO	NO	PART	OK	NO	NO

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	YES	WILLING TO PARTICIPATE IN PHASE II

EVALUATION OF DATA AVAILABILITY

This utility sent very complete data from its last comprehensive rate study report. All that remains to complete the information is an estimate of fixed and variable costs for the water system and average housing values. Utility officials have agreed to assist us in developing this information in Phase II.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	Contact Information
On-site visit to assist in data identification	0.0	\$100	\$0	Peter A. Korelich, P.E., Chief Engineer Utilities Commission City of New Smyrna Beach PO Box 100 200 Canal St. New Smyrna Beach, FL 32170-0100 (904)427-1361
Associated travel	0.0	\$25	\$0	
Follow-up to obtain final data	2.0	\$100	\$200	
Obtain housing value data from property appraiser	4.0	\$100	\$400	
Data entry in Waterrate model	2.0	\$50	\$100	
Initial review/correx, including phone follow-up if needed	1.0	\$100	\$100	
Run Waterrate for five alternative rate structures	5.0	\$100	\$500	
Summarize modeled results	2.0	\$100	\$200	
<i>New Smyrna Totals</i>	16.0		\$1,500	

SOURCE: BURTON & ASSOCIATES

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07/11/96

**St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures**

**APPENDIX B
WATERATE MODEL DATA EVALUATION**

NAME OF UTILITY	12 Ocoee
------------------------	----------

INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
DID NOT RESPOND													

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	YES	BILLING STATISTICS NOT AVAILABLE BY CUSTOMER CLASS

EVALUATION OF DATA AVAILABILITY

This utility did not return a completed questionnaire.

Utility officials have informed us that billing statistics are not available by customer class. This precludes any meaningful analysis of elasticity of demand. We recommend that this utility be excluded from the study.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	
On-site visit to assist in data identification	0.0	\$100	\$0	Jim Shira Utilities Department City of Ocoee 150 N. Lakeshore Drive Ocoee, FL 34761 (407)656-2322 x142
Associated travel	0.0	\$25	\$0	
Follow-up to obtain final data	0.0	\$100	\$0	
Obtain housing value data from property appraiser	0.0	\$100	\$0	
Data entry in Waterrate model	0.0	\$50	\$0	
Initial review/correx, including phone follow-up if needed	0.0	\$100	\$0	
Run Waterrate for five alternative rate structures	0.0	\$100	\$0	
Summarize modeled results	0.0	\$100	\$0	
Ocoee Totals	0.0		\$0	

SOURCE: BURTON & ASSOCIATES

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07/11/96

St. Johns River Water Management District
 Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	13 Orange County
------------------------	------------------

INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
DID NOT RESPOND													

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	YES	WE HAVE FULL BILLING STATISTICS FROM RECENT RATE STUDY

EVALUATION OF DATA AVAILABILITY

We have complete rate and billing information from this utility from our recent rate study, now in final draft. Since this utility has a service area that is not equivalent to any single taxing jurisdiction, we expect difficulty in obtaining good estimates of housing values.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	CONTACT INFORMATION
On-site visit to assist in data identification	0.0	\$100	\$0	Fritz Goode, Rate Analyst Orange County Public Utilities Fiscal and Customer Service Department 109 East Church St., 4th Floor Orlando, FL 32801 (407)836-7285
Associated travel	0.0	\$25	\$0	
Follow-up to obtain final data	2.0	\$100	\$200	
Obtain housing value data from property appraiser	16.0	\$100	\$1,600	
Data entry in Waterrate model	2.0	\$50	\$100	
Initial review/correx, including phone follow-up if needed	1.0	\$100	\$100	
Run Waterrate for five alternative rate structures	5.0	\$100	\$500	
Summarize modeled results	2.0	\$100	\$200	
Orange County Totals	28.0		\$2,700	

SOURCE: BURTON & ASSOCIATES

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07/11/96

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	14 Orlando Utilities
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INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
	OK	OK	OK	RATE	RATE	RATE	RATE	NO	NO	NO	OK	NO	NO

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	YES	WILLING TO PARTICIPATE IN PHASE II

EVALUATION OF DATA AVAILABILITY

This utility sent a copy of a summary rate schedule, but no other information. Utility officials told us they would provide complete information for Phase II.

ESTIMATE OF PHASE II - TASK 2 WORK

Description of Task	Hours	Rate	Cost
On-site visit to assist in data identification	4.0	\$100	\$400
Associated travel	0.5	\$25	\$13
Follow-up to obtain final data	2.0	\$100	\$200
Obtain housing value data from property appraiser	8.0	\$100	\$800
Data entry in Waterrate model	4.0	\$50	\$200
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400
Run Waterrate for five alternative rate structures	5.0	\$100	\$500
Summarize modeled results	4.0	\$100	\$400
Orlando Utilities Totals	31.5		\$2,913

CONTACT INFORMATION

Ray Boyd
Orlando Utilities Commission
PO Box 3193
Orlando, FL 32802
(407)423-9195

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	15 Ormond Beach
------------------------	-----------------

INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
DID NOT RESPOND													

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	YES	WILLING TO PARTICIPATE IN PHASE II.

EVALUATION OF DATA AVAILABILITY

This utility did not return a completed questionnaire.

The utility director returned our call and indicated that adequate data was available and that they were "very interested" in participating in Phase II.

ESTIMATE OF PHASE II - TASK 2 WORK

Description of Task	Hours	Rate	Cost
On-site visit to assist in data identification	2.5	\$100	\$250
Associated travel	1.0	\$25	\$25
Follow-up to obtain final data	2.0	\$100	\$200
Obtain housing value data from property appraiser	8.0	\$100	\$800
Data entry in Waterrate model	4.0	\$50	\$200
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400
Run Waterrate for five alternative rate structures	5.0	\$100	\$500
Summarize modeled results	4.0	\$100	\$400
Ormond Beach Totals	30.5		\$2,775

CONTACT INFORMATION

Francis E. Soloducha, P.E.
Utilities Manager
City of Ormond Beach
501 North Orchard Street
Ormond Beach, FL 32175
(904)676-3436

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	16 Oviedo
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INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
DID NOT RESPOND													

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	YES	WILLING TO PARTICIPATE IN PHASE II

EVALUATION OF DATA AVAILABILITY

This utility did not return a completed questionnaire.

The utility billing supervisor indicated that the required data was available and that the City would participate in Phase II.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	CONTACT INFORMATION
On-site visit to assist in data identification	4.0	\$100	\$400	Sue Cavolo Utility Billing Administrator City of Oviedo 400 Alexandria Boulevard Oviedo, FL 32765 (407)977-6051
Associated travel	1.0	\$25	\$25	
Follow-up to obtain final data	2.0	\$100	\$200	
Obtain housing value data from property appraiser	8.0	\$100	\$800	
Data entry in Waterrate model	4.0	\$50	\$200	
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400	
Run Waterrate for five alternative rate structures	5.0	\$100	\$500	
Summarize modeled results	4.0	\$100	\$400	
Oviedo Totals	32.0		\$2,925	

SOURCE: BURTON & ASSOCIATES

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07/11/96

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	17 Port Orange
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INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
	OK	OK	OK	OK	OK	OK	OK	NO	NO	OK	OK	OK	OK

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	N/A	N/A	ORIGINAL DATA IS COMPLETE

EVALUATION OF DATA AVAILABILITY
This utility submitted complete information.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	
On-site visit to assist in data identification	0.0	\$100	\$0	Fred Griffith City of Port Orange 1000 City Center Circle Port Orange, FL 32127 (9094)756-5378
Associated travel	0.0	\$25	\$0	
Follow-up to obtain final data	1.0	\$100	\$100	
Obtain housing value data from property appraiser	0.0	\$100	\$0	
Data entry in Waterrate model	2.0	\$50	\$100	
Initial review/correx, including phone follow-up if needed	1.0	\$100	\$100	
Run Waterrate for five alternative rate structures	5.0	\$100	\$500	
Summarize modeled results	2.0	\$100	\$200	
Port Orange Totals	11.0		\$1,000	

SOURCE: BURTON & ASSOCIATES

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07/11/96

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	18 Sanford
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INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	NO	NO

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	N/A	N/A	ORIGINAL DATA IS ESSENTIALLY COMPLETE

EVALUATION OF DATA AVAILABILITY

This utility provided complete data except for housing values.

ESTIMATE OF PHASE II - TASK 2 WORK

Description of Task	Hours	Rate	Cost
On-site visit to assist in data identification	0.0	\$100	\$0
Associated travel	0.0	\$25	\$0
Follow-up to obtain final data	1.0	\$100	\$100
Obtain housing value data from property appraiser	4.0	\$100	\$400
Data entry in Waterrate model	2.0	\$50	\$100
Initial review/correx, including phone follow-up if needed	1.0	\$100	\$100
Run Waterrate for five alternative rate structures	5.0	\$100	\$500
Summarize modeled results	2.0	\$100	\$200
Sanford Totals	15.0		\$1,400

CONTACT INFORMATION

Bill Marcous, Project Coordinator
City of Sanford Utility Department
PO Box 1788
Sanford, FL 32772-1788
(407)330-5649

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	19 Sanlando
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INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	N/A	N/A	ORIGINAL DATA IS COMPLETE

EVALUATION OF DATA AVAILABILITY
This utility provided complete data.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	
On-site visit to assist in data identification	0.0	\$100	\$0	Jerry M. Salsano, P.E., Utility Engineer Sanlando Utilities Corporation PO Box 3884 Longwood, FL 32791 (407)788-3600 FX (407)788-3518
Associated travel	0.0	\$25	\$0	
Follow-up to obtain final data	1.0	\$100	\$100	
Obtain housing value data from property appraiser	0.0	\$100	\$0	
Data entry in Waterrate model	2.0	\$50	\$100	
Initial review/correx, including phone follow-up if needed	1.0	\$100	\$100	
Run Waterrate for five alternative rate structures	5.0	\$100	\$500	
Summarize modeled results	2.0	\$100	\$200	
Sanlando Totals	11.0		\$1,000	

SOURCE: BURTON & ASSOCIATES

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07/11/96

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	20 Seminole County
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INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
DID NOT RESPOND													

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	NO	NO	LETTER SENT INDICATES WILLINGNESS TO PARTICIPATE

EVALUATION OF DATA AVAILABILITY

This utility did not complete the questionnaire. However, they sent a letter stating that a rate study to be completed in November, 1995 would be provided upon request. We believe the utility will cooperate during Phase II. However, we believe a site visit will be necessary. In addition, the service area will be difficult to isolate for purposes of determining average housing values. We expect a difficult but not impossible task.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	CONTACT INFORMATION
On-site visit to assist in data identification	4.0	\$100	\$400	Roger M. Smith, P.E. Utilities Manager, Seminole County Public Works Department 3000a Southgate Drive Sanford, FL 32773-5407 (407)323-9615
Associated travel	1.0	\$25	\$25	
Follow-up to obtain final data	2.0	\$100	\$200	
Obtain housing value data from property appraiser	8.0	\$100	\$800	
Data entry in Waterrate model	4.0	\$50	\$200	
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400	
Run Waterrate for five alternative rate structures	5.0	\$100	\$500	
Summarize modeled results	4.0	\$100	\$400	
Seminole County Totals	32.0		\$2,925	

SOURCE: BURTON & ASSOCIATES

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07/11/96

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	21 Southern States (Deltona)
------------------------	------------------------------

INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
DID NOT RESPOND													

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	YES	WILLING TO PARTICIPATE IN PHASE II

EVALUATION OF DATA AVAILABILITY

This utility did not respond to the questionnaire. Discussions with officials indicate that it may have been misplaced after receipt. They indicated a willingness to participate in Phase II.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	
On-site visit to assist in data identification	4.0	\$100	\$400	Kirk Martin Southern States Utilities 1000 Color Place Apopka, FL 32703 (407)880-0058 FX'(407)880-1395
Associated travel	1.0	\$25	\$25	
Follow-up to obtain final data	2.0	\$100	\$200	
Obtain housing value data from property appraiser	8.0	\$100	\$800	
Data entry in Waterrate model	4.0	\$50	\$200	
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400	
Run Waterrate for five alternative rate structures	5.0	\$100	\$500	
Summarize modeled results	4.0	\$100	\$400	
Southern States (Deltona) Totals	32.0		\$2,925	

SOURCE: BURTON & ASSOCIATES

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07/11/96

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	22 Titusville
------------------------	---------------

INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
DID NOT RESPOND													

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	N/A	N/A	WE HAVE FULL BILLING STATISTICS FROM RECENT RATE STUDY

EVALUATION OF DATA AVAILABILITY

We have complete rate and billing information from this utility from our recent rate study. This type of information is very difficult to obtain from the City's billing system. We believe the data on file, though 2 years old, is adequate given the low growth rate. Housing values and financial data remain to be obtained.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost
On-site visit to assist in data identification	0.0	\$100	\$0
Associated travel	0.0	\$25	\$0
Follow-up to obtain final data	1.0	\$100	\$100
Obtain housing value data from property appraiser	4.0	\$100	\$400
Data entry in Waterrate model	2.0	\$50	\$100
Initial review/correx, including phone follow-up if needed	1.0	\$100	\$100
Run Waterrate for five alternative rate structures	5.0	\$100	\$500
Summarize modeled results	2.0	\$100	\$200
Titusville Totals	15.0		\$1,400

James L. Chaffee
City of Titusville
2836 Garden Street
Titusville, FL 32781
(407)268-6050

SOURCE: BURTON & ASSOCIATES

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07/11/96

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	23 Village Center
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INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
DID NOT RESPOND													

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	YES	

EVALUATION OF DATA AVAILABILITY

*Apparently the questionnaire was sent to a wrong address.
 Officials indicated a willingness to participate in Phase II.*

ESTIMATE OF PHASE II - TASK 2 WORK

Description of Task	Hours	Rate	Cost
On-site visit to assist in data identification	4.0	\$100	\$400
Associated travel	1.0	\$25	\$25
Follow-up to obtain final data	2.0	\$100	\$200
Obtain housing value data from property appraiser	8.0	\$100	\$800
Data entry in Waterrate model	4.0	\$50	\$200
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400
Run Waterrate for five alternative rate structures	5.0	\$100	\$500
Summarize modeled results	4.0	\$100	\$400
Village Center Totals	32.0		\$2,925

CONTACT INFORMATION

Russ Vaughan
 Villages of Lake Utilities
 501 Sunbelt Road
 Lady Lake, FL 32159
 (907)753-1756 or 753-6260

**St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures**

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	24 Winter Park
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INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
	OK	OK	OK	RATE	RATE	RATE	RATE	RATE	RATE	NO	NO	NO	NO

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	YES	WILLING TO PARTICIPATE IN PHASE II

EVALUATION OF DATA AVAILABILITY

This utility sent a copy of a summary rate schedule, but no other information. In discussions with the utility billing supervisor, we determined that the required statistical data is probably obtainable from their system with some effort. They indicated a willingness to participate in Phase II.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	
On-site visit to assist in data identification	6.0	\$100	\$600	Delsia Stone
Associated travel	0.0	\$25	\$0	Utility Billing Supervisor
Follow-up to obtain final data	4.0	\$100	\$400	City of Winter Park
Obtain housing value data from property appraiser	8.0	\$100	\$800	401 Park Avenue South
Data entry in Waterrate model	4.0	\$50	\$200	Winter Park, FL 32789-4386
Initial review/correx, including phone follow-up if needed	4.0	\$100	\$400	(407)623-3335
Run Waterrate for five alternative rate structures	5.0	\$100	\$500	
Summarize modeled results	4.0	\$100	\$400	
Winter Park Totals	35.0		\$3,300	

SOURCE: BURTON & ASSOCIATES

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07/11/96

St. Johns River Water Management District
Investigation of Alternative Water Supply Strategies - Evaluation of Water Conservation Rate Structures

APPENDIX B
WATERATE MODEL DATA EVALUATION

NAME OF UTILITY	25 Winter Springs
------------------------	-------------------

INITIAL RESPONSE TO QUESTIONNAIRE	QUESTION												
	1	2A	2B	3	3A	4	4A	5	5A	6	6A	7A	7B
	OK	OK	OK	RATE	RATE	RATE	RATE	RATE	RATE	NO	NO	NO	NO

Note: "OK" indicates all information provided as required to run Waterrate except for minimal follow-up; "RATE" indicates only information on rates was provided, and required statistical information is missing. "NO" indicates that the question was unanswered or that the information is unusable.

FOLLOW-UP CONTACT RESULTS	CALL MADE	CONTACT MADE	RESULTS OF FOLLOW-UP CONTACT
	YES	YES	BILLING STATISTICS NOT AVAILABLE BY CUSTOMER CLASS

EVALUATION OF DATA AVAILABILITY

This utility provided rate information, but no billing statistics or financial data.

We determined from discussions with utility officials that their billing system does not provide consumption information by customer class. Since this is critical for the Waterate analysis, we recommend that this utility be dropped from the study.

ESTIMATE OF PHASE II - TASK 2 WORK

CONTACT INFORMATION

Description of Task	Hours	Rate	Cost	
On-site visit to assist in data identification	0.0	\$100	\$0	Kipton Lockcuff
Associated travel	0.0	\$25	\$0	Public Works Department
Follow-up to obtain final data	0.0	\$100	\$0	City of Winter Springs
Obtain housing value data from property appraiser	0.0	\$100	\$0	1126 E. State Road 434
Data entry in Waterrate model	0.0	\$50	\$0	Winter Springs, FL 32708
Initial review/correx, including phone follow-up if needed	0.0	\$100	\$0	
Run Waterrate for five alternative rate structures	0.0	\$100	\$0	
Summarize modeled results	0.0	\$100	\$0	
Winter Springs Totals	0.0		\$0	

SOURCE: BURTON & ASSOCIATES

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07/11/96