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# **Affordability Analysis of Alternative Water Supply**



**St. Johns River Water Management District**

**Affordability Analysis of Alternative Water Supply**

**Technical Memorandum – February 9, 2004**



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**EXECUTIVE SUMMARY**

This Technical Memorandum Presents the results of the Affordability Analysis that Burton & Associates conducted for the St. Johns River Water Management District (the District) as part of the St. Johns River Water Supply Project (the Study). The St. Johns River Water Supply Project consisted of three elements, which were each conducted by different consultants, with extensive coordination among all three consultants during the completion of the Study.

The three elements of the Study were 1) the Treatability Element, conducted by CH2M HILL, 2) the Siting Element, conducted by HDR, and 3) the Water Demand and Affordability Element, conducted by Burton & Associates. The results of the Water Demand portion of the third element was published by Burton & Associates in a Technical memorandum on November 3, 2003 and this Technical Memorandum presents the results of the Affordability Analysis portion of the third element of the Study.

**A. BACKGROUND AND SCOPE OF THE STUDY**

Based upon extensive groundwater modeling, the District has determined that water demands in East/Central Florida will exceed the maximum sustainable groundwater withdrawal levels (MSGWLs) sometime during the next twenty years. Predicting the exact timing at which maximum sustainable groundwater withdrawals will be exceeded may be arguable; however, there is little argument that it is becoming critical to identify viable and affordable alternative water supply sources in order to allow for the time necessary to bring an alternative water supply source into production.

The St. Johns River Water Supply Project was conducted to determine the feasibility of using water from the St. Johns River as a potable water source as an alternative to groundwater. The Treatability and Siting Elements of the Study evaluated 1) the required/preferred treatment processes and the cost of those processes, and 2) viable sites for the river intake and treatment plant and the range of costs for those sites, including transmission and pumping costs associated with each site. The analysis presented in this Technical Memorandum was conducted to 1) determine the size and cost of required surface water treatment facilities as an alternative to groundwater to meet projected water demands in identified water Demand Centers in Seminole and Volusia Counties <sup>1</sup> assuming that surface water will be provided in 2011 (see note below), 2)

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<sup>1</sup> The scope of the Study was limited geographically to Seminole and Volusia Counties

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determine the effect of the cost of surface water upon the cost of water at the retail level, and 3) assess the affordability of the increased cost of water at the retail level.

Note: The determination of the exact time when maximum sustainable groundwater withdrawals will be exceeded in the identified demand centers is beyond the scope of this Study. Therefore, in order to present the most conservative affordability analysis, it was assumed that surface water would be provided in the identified demand centers as soon as possible. It was assumed that six years may be required to 1) organize the governance within which the surface water plant will be owned and operated, and 2) plan, design permit and construct the plant. Therefore, it was assumed that the surface water plant would be put into service at the end of 2010 and 2011 would be the first full year of operation.

**B. THE ANALYSIS**

The analysis presented in this Technical Memorandum was accomplished by modeling the financial dynamics of:

- 1) A water supply entity (WSE) that would be responsible for providing surface water from the St. Johns River to its member utilities when surface water is required, and
- 2) A typical local utility that, as a member of the above referenced WSE, will:
  - a. Purchase surface water from the WSE to meet its incremental water demands after surface water is required, and
  - b. Participate in a surface water surcharge program with all other member utilities to fund the costs of the WSE that can not be recovered through wholesale water sales.

The analysis included the identification of water Demand Centers within Seminole and Volusia Counties and the determination of the assumed timing and estimated size of a surface water plant to serve projected incremental water demands after 2010 in each Demand Center. Then, using capital and operations and maintenance (O&M) cost estimates provided by CH2M HILL and HDR, the analysis included determination of a logical rate program and rates by which a WSE could recover the costs of the surface water plant from benefiting local utilities in the Demand Center. Finally, the analysis included 1) determination of the impact of that cost of

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surface water, as it is born by the benefiting local utilities, upon the retail cost of water, and 2) an assessment of its affordability. The major elements of the analysis are described briefly in the following five sub-sections.

#### **1. Water Demand Centers**

In the previously published Population and Water Usage Projections Technical Memorandum, three population clusters were identified, 1) Northeast Volusia County, 2) Southwest Volusia County, and 3) Western Seminole County <sup>2</sup>. For the purposes of this Affordability Analysis, these population clusters were configured into water Demand Centers as follows:

1. Seminole County – Includes the Western Seminole population cluster
2. Volusia County – Includes both the Northeast and Southwest Volusia County population clusters
3. Seminole and SW Volusia – Includes both the Western Seminole and Southwest Volusia County population clusters.

#### **2. Timing and Sizing of Surface Water Facilities**

Water demand projections were compiled for each Demand Center from the water demand projections by population cluster developed in the aforementioned Population and Water Usage Projections Technical Memorandum. A model was developed for each Demand Center that projected annual water demands through 2024. The model calculates the size of the required surface water plant at the end of 2010 and the assumed in service date, based upon the projected water demands for the Demand Center through 2024. However, the surface water plant must have flows of approximately 50% of the plant capacity, even in the first year of operation <sup>3</sup>.

Therefore, at the end of 2010, when the surface water plant is assumed to be placed into service, the model converts water demands equal to 50% of the plant capacity from groundwater to surface water to provide the initial 50% load factor for the surface water plant. From 2011 through 2024 all incremental water demands are assumed to be met by the surface water plant.

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<sup>2</sup> Graphical representations of these population clusters are presented in Figures 1, 2 and 3 on pages 9, 10 and 11 of this technical memorandum.

<sup>3</sup> The sizing and 50% initial loading criteria were provided by CH2M HILL.

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**3. Cost of Surface Water Facilities**

Based upon the assumed timing and estimated size of the projected surface water plant, determined for each Demand Center as described in the previous section, CH2M HILL and HDR provided estimated capital and operations and maintenance (O&M) costs. These cost estimates included three treatment process/configuration scenarios and two sites for each Demand Center. The treatment process/configuration scenarios included:

- a. Intermittent source with aquifer storage and recovery
- b. Reliable source with aquifer storage and recovery
- c. Reliable source without aquifer storage and recovery

The capital and O&M costs provided assumed that the initial plant would include “backbone” facilities to serve its ultimate capacity but would only include “process equipment” facilities sufficient to serve demands to about 75% of ultimate capacity. Estimates were also provided for the incremental process equipment costs to serve the ultimate capacity, to be implemented when demands reach approximately 75% of capacity.

**4. The Water Supply Entity**

For the purposes of this analysis, it was assumed that surface water would be provided by a water supply entity (WSE). The WSE could be either an existing utility or a newly created entity. In either case the following assumptions were made regarding the structure, operation and rates of the assumed WSE.

- a. It is assumed that the WSE would be comprised of all of the local utilities, as member utilities, in the Demand Center being evaluated in each scenario.
- b. It is assumed that the WSE would plan, design, build and operate surface water facilities required to meet the projected demands of its member utilities.
- c. It is assumed that the WSE would fund the capital costs associated with new surface water facilities with current resources to the extent possible and capital



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costs not able to be funded with current resources will be funded with conventional revenue bond debt.

d. It is assumed that the WSE will implement a rate program that will consist of two rates as follows:

- 1) *A delivered water rate* – It is assumed that this rate will be charged to each member utility for all water purchased by each respective member utility. This rate is assumed to be imputed at a rate equivalent to the cost of groundwater facilities. Although this rate is held constant throughout the projection period in this analysis, it could be escalated throughout the projection period to approach a full cost recovery surface water rate by the end of the period.
- 2) *A surface water surcharge rate* - It is assumed that this rate will be charged to all member utilities based upon all water billed by the member utilities. The rate will include all costs of the WSE that are not recovered in the delivered water rate.

This rate program provides that each member utility will pay a reasonable rate for all water purchased during the transition to surface water and that the cost of the non used and useful plant will be born by all member utilities through the surface water surcharge rate. The surface water surcharge rate could be viewed as a surface water availability charge that all member utilities will pay. Assessing it based upon total water billed effectively allocates the costs to each member utility based upon the entire groups’ current and potential need for additional surface water and does not presume that all members will be required to connect. It is possible that a member will benefit with continued use of groundwater due to other members taking surface water.

**5. The Local Utility Analyzed**

The objective of this analysis was to assess the affordability of the cost impact of surface water at the retail level as an alternative to groundwater to meet incremental water demands in the identified Demand Centers. Therefore, it was necessary to model a typical local utility that would be a member utility of the WSE described in the previous section. For the purposes of

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this analysis the local utility analyzed was assumed to be a moderately sized water utility with approximately 8,000 water customers, which grows to approximately 13,000 water customers by the end of the twenty (20) year projection period. The parameters of the local utility were set up so that the financial performance of the utility over the projection period in the benchmark scenario (which assumes that groundwater would be available throughout the period) would not be influenced by unusual factors or “problems” such as consent decrees, major renewal and replacement requirements, etc.

#### C. RESULTS

This Technical memorandum presents a detailed evaluation of twenty one scenarios; three Demand Centers, one benchmark scenario for each Demand Center, which assumes that groundwater would be available throughout the projection period<sup>4</sup>, three treatment processes/configurations per demand Center and two sites per Demand Center. The following table demonstrates the seven (7) scenarios evaluated for each Demand Center, which result in twenty one (21) total scenarios when all three Demand Centers are considered.

<u>Scenario Number</u>	<u>Scenarios for Each Demand Center</u>
1	Benchmark Groundwater Scenario
2	Intermittent Source - ASR - Site 1
3	Intermittent Source - ASR - Site 2
4	Reliable Source - ASR - Site 1
5	Reliable Source - ASR - Site 2
6	Reliable Source - w/o ASR - Site 1
7	Reliable Source - w/o ASR - Site 2

The detailed results of each scenario are presented in the body of this Technical Memorandum, however, a summary of the results is discussed in the following sub-sections.

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<sup>4</sup> The groundwater scenario is not considered to be a realistic scenario in that the District’s groundwater modeling indicates projected water demands in all identified Demand Centers in Seminole and Volusia Counties will exceed assumed MSGWLs during the twenty (20) year projection period. It is included only as a benchmark scenario against which to compare the other surface water scenarios to quantify the magnitude of the cost impact of going from groundwater to surface water to meet incremental water demands.

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#### 1. Cost and Rate Impact

In summary, the results of the analysis show that the impact of the cost of meeting projected water demands after 2010 with surface water in the identified Demand Centers will result in the retail cost of water being from 35% to 67% greater at the end of the twenty (20) year projection period than it would otherwise be were groundwater available throughout the projection period.

Note: This is based upon 1) the results of the benchmark groundwater scenario which shows that a cumulative increase in rates of about 39% would be required over the projection period if groundwater could be used, compared to 2) the results of the least and most expensive surface water scenarios which show that a cumulative 88% and 132% increase in rates respectively will be required over the projection period if surface water is used for all incremental demands after 2010. Applying these cumulative percentage increases to the monthly cost of water for an average residential user, assumed to be \$25.00 per month<sup>5</sup> in 2004, results in a monthly cost of about \$34.71 per ERU in 2024 under the groundwater scenario and about \$47.00 and \$57.90 per month per ERU respectively for the lowest and highest cost scenarios in 2024 under the surface water scenario. Thus, the cost of water with surface water would be about 35% to 67% greater respectively for the lowest and highest cost scenarios than it would otherwise be were groundwater available throughout the projection period. These calculations can be seen in the following Table.

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<sup>5</sup> Discussions with a number of representatives from utilities in the Seminole and Volusia County region indicated that the current cost of potable water is within a range of from about \$15.00 to \$25.00 per month per ERU for most utilities in the study area. The higher cost was used in the affordability analysis in order to present the most conservative picture possible.

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	<i>Groundwater</i>	<i>Lowest Cost Surface Water Scenario *</i>	<i>Highest Cost Surface Water Scenario **</i>
<i>Assumed Current Water Cost per Equivalent Residential Unit (ERU)</i>	\$25.00	\$25.00	\$25.00
<i>Cumulative Increase in Rates Required over the Projection Period</i>	38.86%	88.00%	131.62%
<i>Water Cost per ERU at end of Projection Period</i>	\$35	\$47	\$58
<i>Percent That Surface Water is Greater than Groundwater</i>	NA	35%	67%

\* Seminole Demand Center, Reliable Source w ASR, Site B

\*\* Volusia Demand Center, Reliable Source w/o ASR, Site E

Also, in the year that surface water facilities are projected to be implemented, the typical local utility evaluated would require rate increases of from 43% to 96% (assuming the above referenced lowest and highest cost scenarios respectively). The analysis shows these “rate spikes” can be mitigated somewhat by either implementing equal annual rate increases of from about 4.0 % to about 7.2% per year or annual rate indexing (increases assumed to be at an inflationary level of 2.5%) in each of the years preceding the year that surface water must be implemented. The equal annual rate increases would eliminate the rate spikes by effectively smoothing the impact over the preceding years’ rate increases. The annual rate indexing would lessen the rate spikes to a range of from about 19% to about 65%, for the lowest and highest cost scenarios respectively, by also smoothing some of the impact over the preceding years’ rate increases in the form of rate indexing.

## **2. Affordability**

An assessment was also made as to the affordability of water after implementation of surface water. Although there is not a published standard for affordability of drinking water, the U.S. Environmental Protection Agency (USEPA), under provisions of the Safe Drinking Water Act Amendments of 1996, published information to assist the states in formulating affordability criteria. This information is available at <http://www.epa.gov/OGWDW/smallsys/afforddh.html#preface>.

Based upon a review of the above referenced information, it is concluded that 1) the most commonly accepted measure of affordability of drinking water is the relationship of the cost of water per household to median household income and 2) a household affordability ratio, or index

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of affordability, can be established as the cost of water per household divided by the median household income in the service area.

A number of studies are cited in the above referenced USEPA information that have established such ratios as thresholds for affordable drinking water. These thresholds of affordability generally range from 1.5% to 2%, that is if the cost of water is less than the threshold of from 1.5% to 2% of median household income, water is generally considered to be affordable.

The analyses presented in this Technical Memorandum show that even with the projected increase in the cost of water, the cost of water per household as a percent of median household income in the Demand Centers is projected to range from 0.61% to 1.17% after the implementation of surface water. Therefore, based upon this observation it can be concluded that water will still be within accepted thresholds of affordability after surface water is implemented.

However, notwithstanding the above conclusion regarding affordability, the implementation of surface water will result in the need for very large retail rate increases if no mitigation strategies are employed. The analysis presented herein shows that implementation of equal annual rate increases or annual inflationary rate indexing in the years prior to implementation of surface water can substantially mitigate the rate shock that would otherwise occur in the year that surface water is implemented.

#### **D. CONCLUSIONS**

Based upon the analyses presented in this Technical Memorandum, several conclusions can be made. The major conclusions of this analysis, based upon the evaluation of the typical local utility as defined in this analysis, are as follows<sup>6</sup>:

1. For the moderately sized local utility evaluated in this analysis, a large rate increase, or rate spike, of from about 43% to about 96% will be required when surface water is implemented if no mitigating rate adjustment strategies are adopted in advance of that time.

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<sup>6</sup> All ranges represent results for the lowest and highest cost scenarios which are the Seminole Demand Center, Reliable Source with ASR, Site B and the Volusia Demand Center, Reliable Source w/o ASR, Site E respectively.

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2. This will result in the cost of retail water per household being from 39% to 83% higher in 2014, three years after surface water is assumed to be implemented, than the cost would otherwise be if groundwater were available throughout the projection period.
3. This will also result in a cumulative rate increase of from about 88% to about 132% by the end of the projection period (compared to a projected cumulative increase if groundwater were available throughout the projection period of about 39%) causing the cost of retail water per household to be from about 35% to 67% higher by the end of the projection period than the cost would otherwise be if groundwater were available throughout the projection period. This reduction compared to groundwater is due to the growth in demand that allows the fixed costs of the surface water facilities to be spread over a larger base.
4. Adopting equal annual rate increases of from about 4.0% to about 7.2% during the years preceding the implementation of surface water will eliminate the large rate spikes mentioned in conclusion 1.
5. Adopting annual rate indexing at inflationary levels of approximately 2.5% will mitigate the rate spikes mentioned in conclusion 1 to a range of from about 19% to 65%
6. The cost impact of surface water is considerably larger in the Volusia scenario than in the Seminole scenario. This is due primarily to 1) the fact that the surface water plant size in the Volusia Demand Center (33.63 mgd) is about 35% larger than in the Seminole Demand Center (25.00 mgd), yet the base water demand over which the plant costs are spread in the blended rate plan described herein is about 22% smaller in the Volusia Demand Center (57.76 mgd in 2010) than in the Seminole Demand Center (74.03 mgd in 2010)<sup>7</sup>, thus resulting in a higher blended unit cost in the Volusia demand Center than in the Seminole demand Center , and 2) the larger transmission costs to deliver the raw water to the plant and the treated surface water to the two Volusia population clusters on the west and east of the County.

The difference in demand curves described in the footnote on this page causes the convention adopted for this Study of sizing the surface water plant to meet incremental

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<sup>7</sup> This happens because, even though the Volusia Demand Center has a smaller base level of water demand than does the Seminole Demand Center, the demand curve, or growth in water demand, is linear throughout the projection period in the Volusia demand Center; whereas, in Seminole County the demand curve flattens out considerably in 2015 as the County approaches build-out.

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water demands through 2024, to result in an initial facilities size and cost that is larger relative to overall water demands for the Volusia Demand Center than for the Seminole Demand Center. The higher pipeline costs exacerbate this impact, causing rather large rate spikes in 2011 in the Volusia demand Center.

In a situation such as this, the cost impact could be mitigated by phasing the plant. For instance, the initial plant in the Volusia Demand Center could be sized to meet 8 to 10 years of projected growth in demand above its initial 50% base load instead of the 14 years of projected growth in demand in the scenario evaluated herein. Reducing the plant sizing to meet 8 to 10 years of projected growth would reduce the rate increase in 2011 from about 96% to about 74%

7. The conclusions and observations in conclusion 4 demonstrate that the earlier that annual rate adjustment mitigation strategies are put in place, the more effective they will be in mitigating the rate shock that otherwise will accompany the implementation of surface water.
8. The affordability analysis presented in this Technical Memorandum, shows that the projected cost of water, including the impact of the projected cost of surface water facilities and operations, compared to the projected median household income for Seminole, and Volusia Counties is projected to be within generally accepted thresholds of affordability (less than 1.5% of median household income) for all years of the projection period, with an assumed current monthly water cost of \$25.00 per household<sup>8</sup>.
9. Although the effects of implementing surface water upon the cost of retail water are projected to be well within accepted measures of affordability, the large rate increases that are projected to be required may present the perception of unaffordable water rates and consequently may be politically difficult to implement. Therefore, it is concluded that it is extremely important for local utilities to begin to implement mitigating rate adjustment strategies well in advance of the time that surface water must be implemented.

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<sup>8</sup> Discussions with a number of representatives from utilities in the Seminole and Volusia County region indicated that the current cost of potable water is within a range of from about \$15.00 to \$25.00 per month per ERU for most utilities in the study area. The higher cost was used in the affordability analysis in order to present the most conservative picture possible.

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10. Given the timeframe in which surface water is likely to be required; the uncertainties as to the final levels of groundwater withdrawals that will be sustainable; the time required to organize a water supply governance structure; and the time required to plan, design and build the required surface water facilities and bring those facilities into service; it is critical that local utilities begin the process now.



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**I. INTRODUCTION**

**A. BACKGROUND**

Due to the cumulative effects of growth, local utilities throughout the State of Florida are facing the need to identify viable and economic sources of potable water as alternatives to groundwater, which serves as the primary water source for most of the State. However;

- 1) The cost of alternative water supplies will be substantially higher than the cost of groundwater.
- 2) The impact of the cost of providing potable water from alternative water sources upon the cost of delivered potable water for local utilities will be dependent upon the timing, sizing and cost of the alternative water supply, treatment and transmission facilities (alternative water facilities) required, and
- 3) Each local utility is different in terms of its existing groundwater treatment capacity, allowed/permitted groundwater withdrawals, projected growth, existing capital structure, operations and maintenance costs and other factors unique to each individual utility.

Therefore, in February of 2000, the District embarked upon a project to evaluate the St. Johns River as a viable alternative water supply source for Volusia and Seminole Counties in terms of the treatability of the water, available sites for a river water treatment plant, projected water demand and the affordability of river water relative to the impact of its cost upon retail water rates. This project consisted of three elements as discussed below:

Treatability Element – The District contracted with CH2M HILL to conduct a treatability analysis, which included the operation of a pilot water treatment plant on the St. Johns River in Sanford, Florida. Several alternative treatment processes were evaluated and the capital and operations and maintenance costs for preferred processes were developed. The results of this treatability element are available under separate cover in a Technical Memorandum prepared by CH2M HILL.

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Siting Element - The District contracted with HDR to conduct a siting analysis, which included identification of a short list of feasible sites for location of a water treatment intake structure and water treatment plant on the St. Johns River in a corridor adjacent to the river from the City of Deland to Sanford. The results of this Siting element are available under separate cover in a Technical Memorandum prepared by HDR.

Water Demand and Affordability Element – The District contracted with Burton & Associates to conduct 1) a projection of population and water demands in Volusia and Seminole Counties, and 2) an analysis of the affordability of surface water relative to the impact upon the cost of water at the retail level. A Technical Memorandum issued on November 3, 2003 by Burton & Associates presents the results of the population and water demand projections<sup>9</sup> and this Technical Memorandum presents the results of the affordability analysis.

#### **B. OBJECTIVE AND SCOPE**

The objective of this analysis was to determine the cost impact of using the St. Johns River as an alternative water supply source (compared to the current groundwater source) upon the cost of delivered potable water for typical local utilities in Volusia and Seminole Counties. The analysis included a projection of the cost of delivered water over a twenty-year period (the projection period). The geographic scope of the analysis was Volusia and Seminole Counties and Demand Centers were identified in those counties for alternative plant sizing and siting scenarios.

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<sup>9</sup> Population and water demand projections were projected in conjunction with the District's Water Supply Assessment (WSA) effort to be published under separate cover and are in all material respects consistent with the results of the WSA.

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It is understood that each local utility is unique and that this analysis will not replicate the exact financial dynamics of any specific utility. However, by examining the general cost of surface water from the St. Johns River as an alternative water supply source for a *typical* local utility, it was felt that the marginal cost of meeting the demands of growth with surface water compared to the cost of continuing with groundwater would be representative of the impact of using surface water as an alternative water supply when sustainable groundwater withdrawal limits are reached. For this analysis, it was assumed that the typical local utility is governmentally owned; therefore, the rate revenue requirements are determined using the cash needs approach. Evaluation of the structure of the water rates was not included in the scope of this analysis.

This analysis computes annual percentage increases in the cost of water over a twenty-year projection period. It also calculates the average monthly water cost per equivalent residential unit (ERU). It was determined that when surface water is required, the percentage increases projected for the local utility will reflect the effects in the retail rates of a blending of groundwater and surface water costs.

To the extent that a local utility's existing underlying financial and operational parameters cause its groundwater to be more costly than what is assumed for the *typical* utility in this analysis, the percentage increases may be smaller and the absolute cost per 1,000 gallons and the average monthly water cost per ERU of blended groundwater/surface water may be higher. Conversely, to the extent that a local utility's existing underlying financial and operational parameters cause its groundwater to be less costly than what is assumed for the *typical* utility in this analysis, the percentage increases may be larger and the absolute cost per 1,000 gallons and the average monthly water cost per ERU of blended groundwater/surface water may be lower.

For general planning purposes, it was felt that the results of this analysis:

- 1) Represent a reasonable estimate of the impact upon the cost of delivered potable water of using surface water as a source to meet water demands resulting from growth after 2010 compared to continuing to meet those increased water demands with groundwater, and

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- 2) Demonstrate the need for proactive planning for these increased costs and for the governance structure within which water from sources other than groundwater can be economically provided.

**C. STUDY PROCEDURES**

In order to perform the analysis required, it was determined that a dynamic model should be developed to determine the cost of water for a typical moderately sized utility in the Volusia/Seminole County area. The model needed to be dynamic so that it could automatically adjust the timing, sizing and cost of additional water supply, treatment and transmission facilities, and all of the resulting projections, as the underlying assumptions of the model are changed.

This dynamic model (the model) was developed and it incorporates the financial and operating parameters of what was defined as a “typical” moderately sized local utility. The model includes a twenty-year projection of the financial results of operations, including the annual percentage increases in rates that would be necessary to provide sufficient revenues to cover the utility’s costs. The delivered cost of potable water in dollars per 1,000 gallons and the average monthly water cost per ERU are also calculated in each year. The model also includes a WSE module that projects the financial dynamics of an assumed WSE over the twenty (20) year projection period.

The dynamic nature of the model provided the ability to evaluate a number of scenarios in terms of Demand Centers, or service areas for the surface water plant, treatment processes/configurations and sites. It was determined that three Demand Centers would be evaluated and that three treatment processes/configurations would be evaluated for each Demand Center. It was also determined that one primary site would be evaluated for each treatment process/configuration for each Demand Center, but that a sensitivity analysis would be performed for a second site for each Demand Center. This resulted in nine primary scenarios with a sensitivity analysis of the effects of alternative sites upon each of the nine primary scenarios. In addition, a benchmark groundwater scenario was developed for comparative purposes for each Demand Center. The scenarios evaluated for each demand Center are described in detail in Section II.A.1

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For each Demand Center, the timing of the need for surface water from the St. Johns River, and the size of the supply, treatment and transmission facilities required were determined by specific functionality developed in the model. This functionality includes assumptions as to annual customer growth and tracks usage and groundwater withdrawals each year. Also, the model assumes that surface water supply facilities will be provided at the end of 2010<sup>10</sup> and determines how large the capacity of the required surface water supply, treatment and transmission facilities must be to serve the projected water demands through 2024, which is the last year of the projection period.

The results regarding the assumed timing and estimated size of the required surface water treatment facilities for each Demand Center were provided to CH2M HILL and HDR. Based upon these timing and sizing requirements, CH2M HILL and HDR then determined the capital and O&M costs for the required facilities for each Demand Center under three treatment process/configuration alternatives and two site alternatives and provided those cost estimates to Burton & Associates for use in the affordability analysis presented in this Technical Memorandum.

Several interactive work sessions were held with District staff to review the preliminary results of the analysis. During these work sessions, the graphical output of the model was projected on a large viewing screen and alternative scenarios were evaluated. Changes to

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<sup>10</sup> The determination of the exact time when maximum sustainable groundwater withdrawals will be exceeded in the identified demand centers is beyond the scope of this Study. Therefore, in order to present the most conservative affordability analysis, it was assumed that surface water would be provided in the identified demand centers as soon as possible. It was assumed that six years may be required to 1) organize the governance within which the surface water plant will be owned and operated, and 2) plan, design, permit and construct the plant. Therefore, it was assumed that the surface water plant would be put into service at the end of 2010 and 2011 would be the first full year of operation.

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variables such as growth, cost escalation rates, etc. could be made during the work sessions and the implications seen immediately.

Based upon input from the workshops with District staff, the model was finalized and the results were documented in this Technical Memorandum.

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**II. ANALYSIS**

**A. OVERVIEW OF THE ANALYSIS**

A detailed description of each scenario evaluated is presented in the next sub-section, however, this section presents an overview of the analysis and the scenarios evaluated. A dynamic model (the model) was developed to determine the cost of potable water for what was defined as a typical moderately sized utility. The model produces a twenty-year projection of the financial results of operations, and determines the annual percentage increases in rates that would be necessary to provide sufficient revenue to cover the utility's costs in all years of the projection period. The delivered cost of potable water in dollars per 1,000 gallons and the average monthly water cost per ERU are also calculated in each year. The model also includes a WSE module that projects the financial dynamics of an assumed WSE over the twenty (20) year projection period.

For each scenario evaluated, the model projects annual water demand and sizes a surface water plant at the end of 2010 to meet the projected water demands through 2024, the last year of the projection period. Based upon input from CH2M HILL (the consultants performing the treatability element as described in the prior section), the surface water plant must operate at approximately 50% of its design capacity, even in its first year of operation. Therefore, the model assumes that when the surface water plant goes into service at the end of 2010, groundwater withdrawals equal to 50% of the plant capacity will be diverted to the surface water plant. The model assumes that after the surface water plant goes into service, all incremental water demand for the rest of the projection period will be met with the new surface water plant.

The model was used as described above to perform comparative analyses of alternative scenarios described in the following paragraphs.

**1. Scenarios Evaluated**

Nine primary scenarios were evaluated with a sensitivity analysis of each scenario relative to siting of the plant, and a benchmark groundwater scenario for each Demand Center evaluated – effectively twenty one total scenarios. The scenarios are comprised of combinations of 1) three Demand Centers (described in the following section), 2) one benchmark groundwater scenario per Demand Center, 3) three treatment processes/configurations per Demand Center, and 4) two sites per Demand Center. A description of the scenarios evaluated for each Demand Center is presented in Table 1 below:

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**Table 1 – Scenarios Evaluated for Each Demand Center**

<b><u>Scenario Number</u></b>	<b><u>Scenarios for Each Demand Center</u></b>
<b>1</b>	Benchmark Groundwater Scenario
<b>2</b>	Intermittent Source - ASR - Site 1
<b>3</b>	Intermittent Source - ASR - Site 2
<b>4</b>	Reliable Source - ASR - Site 1
<b>5</b>	Reliable Source - ASR - Site 2
<b>6</b>	Reliable Source - w/o ASR - Site 1
<b>7</b>	Reliable Source - w/o ASR - Site 2

The benchmark groundwater scenarios were necessary to provide a basis for comparison of all scenarios. These benchmark scenarios assume that the utility could continue to use groundwater throughout the twenty-year projection period (the projection period). This is not a viable scenario based upon the District’s assessment of available groundwater withdrawals in Volusia and Seminole Counties; however, these scenarios are presented for each Demand Center solely as a benchmark scenario for comparative analysis with all other surface water scenarios. The nine primary scenarios evaluated are described in Table 2 on the following page:



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**Table 2 – Primary Scenarios Evaluated**

<i>Scenario</i>	<i>Demand Center</i>	<i>Treatment Process (1)</i>	<i>Site (2)</i>
<b>1-A</b>	Seminole County	IS – w ASR	Highest Cost
<b>1-B</b>	Seminole County	RS – w ASR	Highest Cost
<b>1-C</b>	Seminole County	RS – w/o ASR	Highest Cost
<b>2-A</b>	Volusia County	IS – w ASR	Highest Cost
<b>2-B</b>	Volusia County	RS – w ASR	Highest Cost
<b>2-C</b>	Volusia County	RS – w/o ASR	Highest Cost
<b>3-A</b>	Seminole & SW Volusia	IS – w ASR	Highest Cost
<b>3-B</b>	Seminole & SW Volusia	RS – w ASR	Highest Cost
<b>3-C</b>	Seminole & SW Volusia	RS – w/o ASR	Highest Cost

(1) *Key to Treatment Process Codes:*

*IS – w ASR = Intermittent Source with Aquifer Storage and Recovery*

*RS – w ASR = Reliable Source with Aquifer Storage and Recovery*

*RS – w/o ASR = Reliable Source without Aquifer Storage and Recovery*

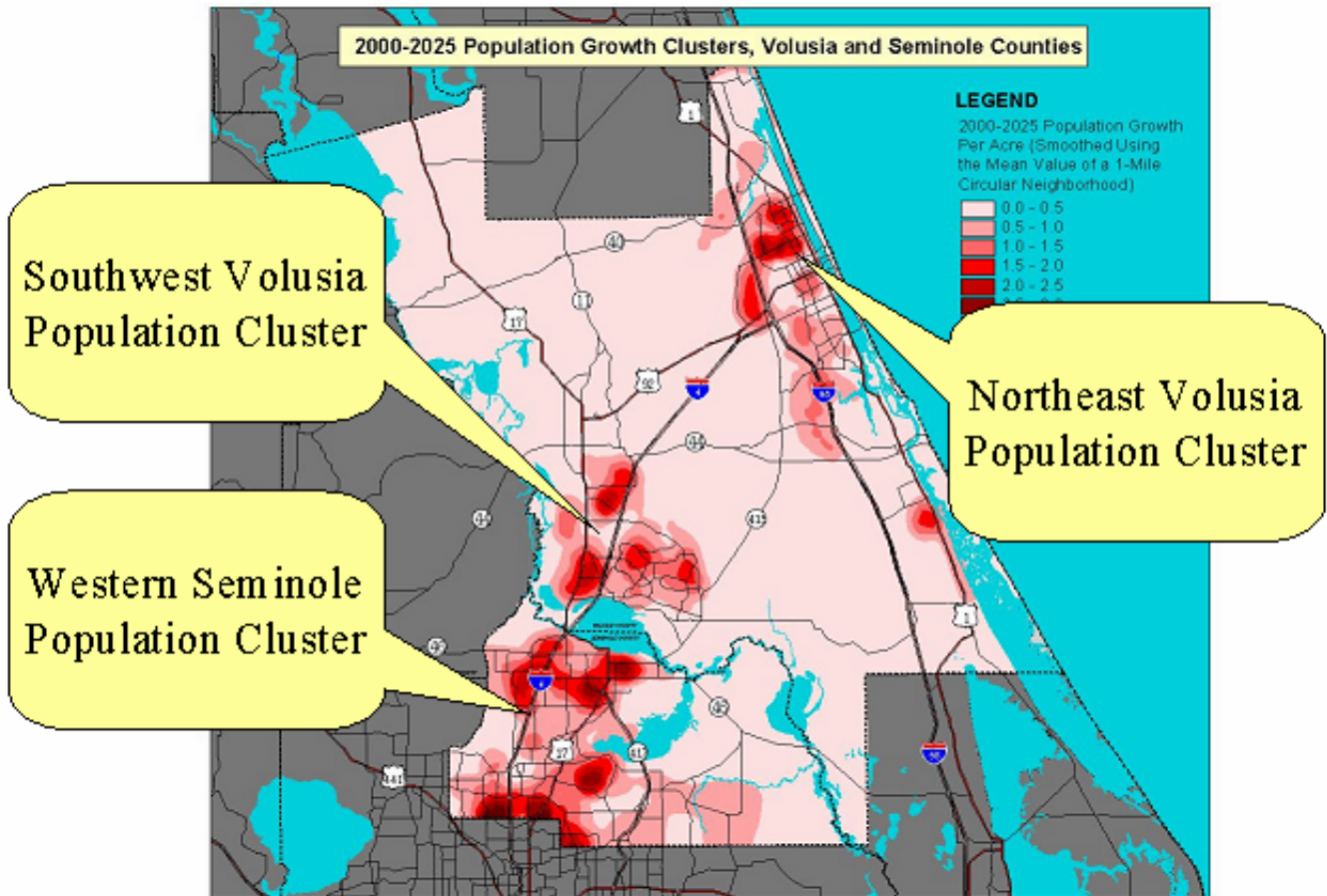
(2) *Sensitivity analyses were also conducted for the lowest cost site for each primary scenario.*

**2. Population Clusters and Water Demand Centers**

*a. Population Clusters* - Prior to completion of the affordability analysis presented in this Technical Memorandum, Burton & Associates completed a Population and Water Demand Projection, the results of which were presented in another Technical Memorandum dated November 3, 2003. During that element of work, population clusters were identified in Volusia and Seminole Counties. Three Population Clusters were identified; 1) Northeast Volusia County, 2) Southwest Volusia County, and 3) Western Seminole County. These Population Clusters are graphically depicted in Figures 1 through 4 on the following pages.

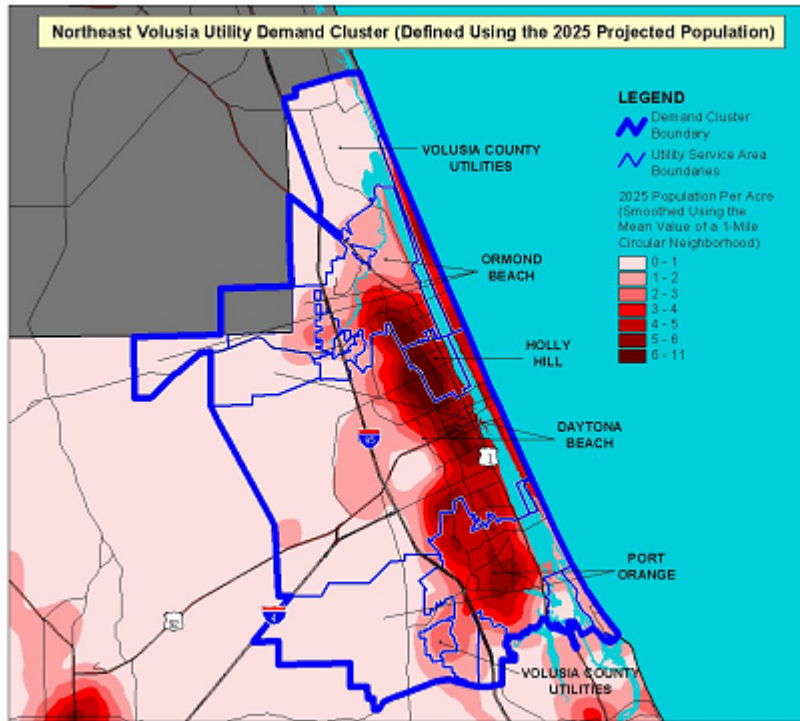
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***Figure 1 – Population Clusters***

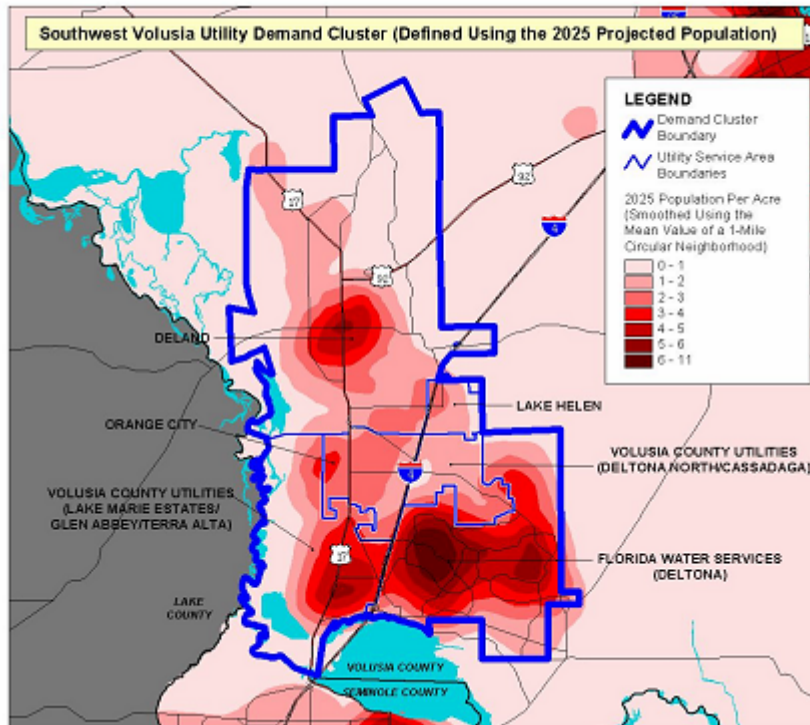


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***Figure 2 – Northeast Volusia Population Cluster***

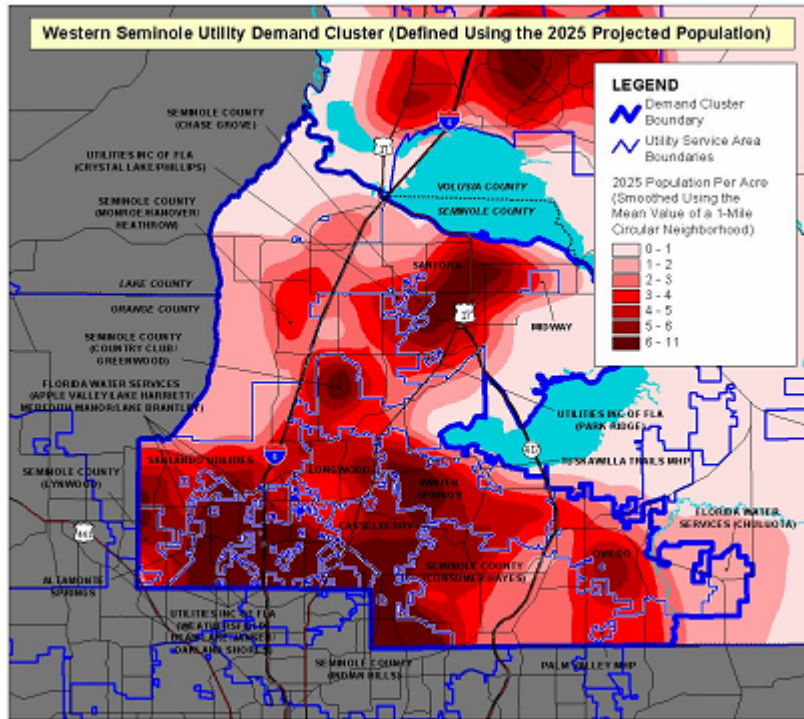


***Figure 3 – Southwest Volusia Population Cluster***



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***Figure 4 – Western Seminole Population Cluster***



b. Demand Centers - These Population Clusters were then combined into logical Demand Centers, or service areas, that could be served by feasible plant sites identified by HDR in the Siting Element of the St. Johns River Water Supply Project. The Demand Centers are presented in Table 2 below:

***Table 3 – Water Demand Centers***

<i>Number</i>	<i>Demand Center</i>	<i>Description</i>
Demand Center 1	Seminole County	Western Seminole Population Cluster
Demand Center 2	Volusia County	Northeast and Southwest Volusia Population Clusters
Demand Center 3	Seminole and Southwest Volusia	Western Seminole and Southwest Volusia Population Clusters

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Projected water usage by year was compiled for each of the identified Demand Centers and is presented in Figure 5 on the second following page.

Figure 5 contains the analysis that shows the assumed timing and determines the sizing of the required surface water plant for each Demand Center. Figure 6, following Figure 5, presents a graphical representation of the demand projections in Figure 5. For each year through 2024, for each Demand Center, Figure 5 determines the following:

1. Water demand projections
2. The year in which the surface water plant is assumed to be placed in service
3. Surface water demand
4. Capacity of surface water plant to serve demands through 2024
5. Surface water demand as a percent of plant size (capacity)

Year of implementation of surface water plan

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**Figure 5 – Demand Center Demand Projections, and Surface Water Plant Timing and Sizing**

### St. Johns River Water Management District St. Johns River Water Supply Project Demand Center Demand Projections, Surface Water Plant Sizing and Timing

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
<b>Volusia County Demand Center</b>																										
Demand Projections	47.07	48.24	49.42	50.59	51.77	52.94	54.15	55.35	56.56	57.76	58.97	60.26	61.54	62.83	64.11	65.40	66.70	68.00	69.29	70.59	71.89	72.86	73.84	74.81	75.79	
Year of Implementation of Surface Water Plant @ 50% of Capacity												Plant in Service - End of Year														
Surface Water Plant Capacity (mgd)												33.63														
Surface Water Demand (mgd)												16.82	18.10	19.39	20.67	21.96	23.25	24.54	25.84	27.14	28.44	29.74	30.71	31.68	32.66	33.63
Surface Water Demand as a Percent of Plant Capacity												50.0%	53.8%	57.6%	61.5%	65.3%	69.1%	73.0%	76.8%	80.7%	84.6%	88.4%	91.3%	94.2%	97.1%	100.0%
Groundwater Withdrawals (mgd)	47.07	48.24	49.42	50.59	51.77	52.94	54.15	55.35	56.56	57.76	42.15	42.15	42.15	42.15	42.15	42.15	42.15	42.15	42.15	42.15	42.15	42.15	42.15	42.15	42.15	
<b>Seminole County Demand Center</b>																										
Demand Projections	58.79	60.59	62.39	64.19	65.99	67.79	69.35	70.91	72.47	74.03	75.59	77.24	78.89	80.55	82.20	83.85	84.38	84.91	85.44	85.97	86.50	86.90	87.30	87.69	88.09	
Year of Implementation of Surface Water Plant @ 50% of Capacity												Plant in Service - End of Year														
Surface Water Plant Capacity (mgd)												25.00														
Surface Water Demand (mgd)												12.50	14.15	15.81	17.46	19.11	20.76	21.29	21.82	22.35	22.88	23.41	23.81	24.21	24.61	25.00
Surface Water Demand as a Percent of Plant Capacity												50.0%	56.6%	63.2%	69.8%	76.4%	83.0%	85.2%	87.3%	89.4%	91.5%	93.6%	95.2%	96.8%	98.4%	100.0%
Groundwater Withdrawals	58.79	60.59	62.39	64.19	65.99	67.79	69.35	70.91	72.47	74.03	63.09	63.09	63.09	63.09	63.09	63.09	63.09	63.09	63.09	63.09	63.09	63.09	63.09	63.09	63.09	
<b>Seminole and Southwest Volusia Demand Center</b>																										
Demand Projections	79.31	81.83	84.36	86.88	89.41	91.93	94.25	96.57	98.89	101.21	103.53	105.95	108.36	110.78	113.19	115.61	116.74	117.87	119.01	120.14	121.27	122.15	123.04	123.92	124.81	
Year of Implementation of Surface Water Plant @ 50% of Capacity												Plant in Service - End of Year														
Surface Water Plant Capacity (mgd)												42.55														
Surface Water Demand (mgd)												21.28	23.69	26.11	28.52	30.94	33.36	34.49	35.62	36.75	37.88	39.02	39.90	40.78	41.67	42.55
Surface Water Demand as a Percent of Plant Capacity												50.0%	55.7%	61.4%	67.0%	72.7%	78.4%	81.0%	83.7%	86.4%	89.0%	91.7%	93.8%	95.8%	97.9%	100.0%
Groundwater Withdrawals	79.31	81.83	84.36	86.88	89.41	91.93	94.25	96.57	98.89	101.21	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	

Source: Burton & Associates

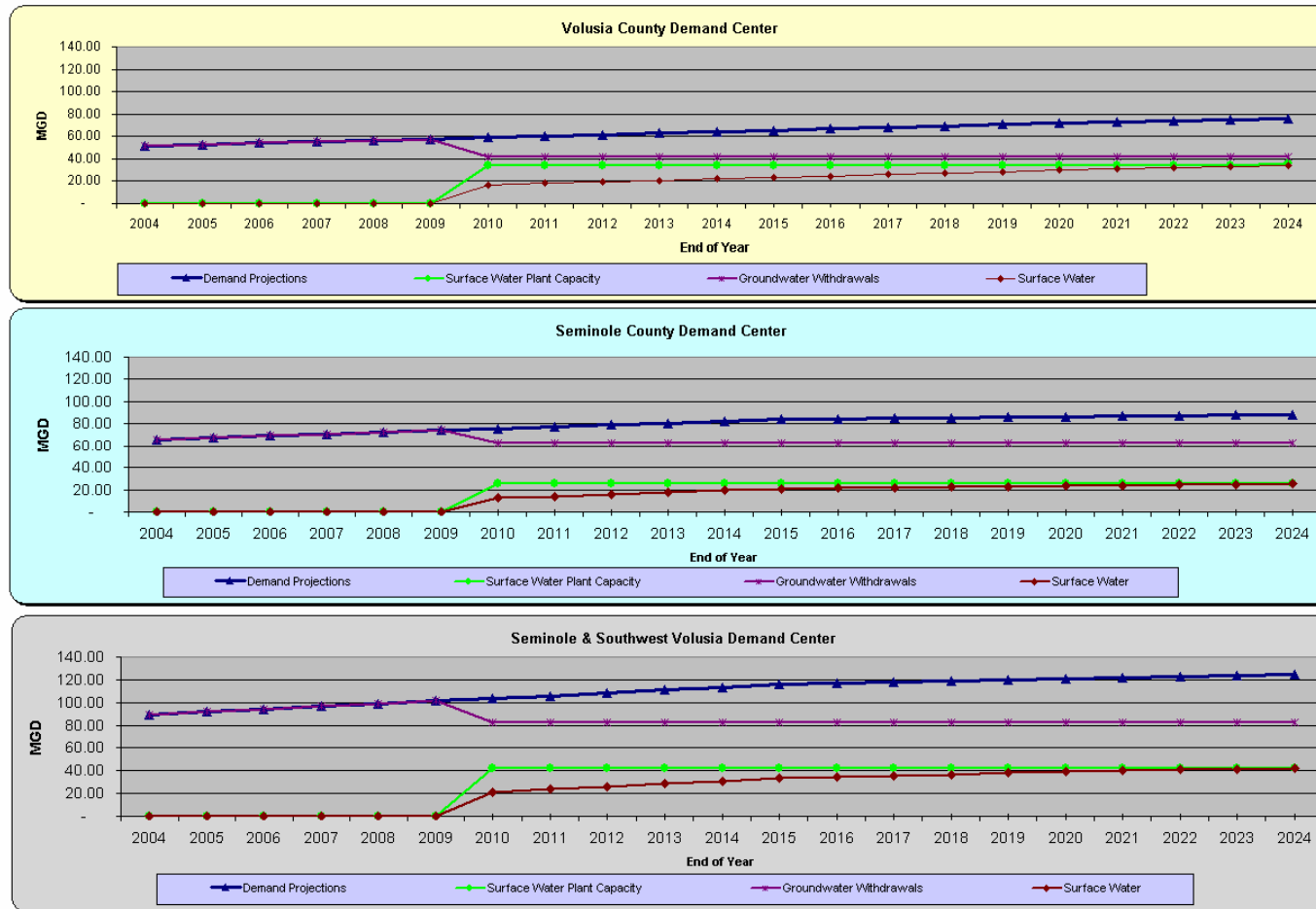
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# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS SECTION II – ANALYSIS

**Figure 6 – Graphical Display of Demand Center Demand Projections, and Surface Water Plant Timing and Sizing**

St. Johns River Water Management District  
St. Johns River Water Supply Project  
*Demand Center Projections*



Source: Burton & Associates

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**3. Water Supply Entity, Governance, Rate and Utility Assumptions**

In order to perform an analysis of the affordability of surface water in the Demand Centers identified in the previous sub-section, it was necessary to define the service delivery configuration for the provision of surface water to the local retail utilities in the Demand Centers being evaluated. Therefore, this section presents a description of the assumptions of the analysis relative to the WSE to provide surface water to the local retail utilities, the governance structure of the WSE and the local retail utilities, the rates to be charged by the WSE and assumptions regarding the local retail utility to be modeled relative to the impact of surface water upon the cost of water at the retail level.

*a. Water Supply Entity* - For each scenario evaluated, it is assumed that surface water will be provided at the end of 2010, or six years from 2004. The determination of the exact time when maximum sustainable groundwater withdrawals will be exceeded in the identified Demand Centers is beyond the scope of this Study. Therefore, in order to present the most conservative affordability analysis, it was assumed that surface water would be provided in the identified demand centers as soon as possible. It was assumed that six years may be required to 1) organize the governance within which the surface water plant will be owned and operated, and 2) plan, design, permit and construct the plant. Therefore, it was assumed that the surface water plant would be put into service at the end of 2010 and 2011 would be the first full year of operation.

At the end of 2010, when the surface water plant is assumed to be placed into service, the WSE would begin to deliver an amount of water equal to 50% of the plant capacity. It is assumed that this will be accomplished by converting that amount of usage from groundwater withdrawals to the surface water plant. From 2011 through 2024 all incremental water demands are assumed to be met by the surface water plant operated by the WSE. It is further assumed that the initial plant will initially include “backbone” facilities to serve its ultimate capacity but will only include “process equipment” facilities sufficient to serve demands to about 75% of ultimate capacity. It is assumed that incremental process equipment to serve the ultimate capacity will be implemented when demands reach approximately 75% of capacity.

It is assumed that the WSE could either be a new entity or an existing water utility. For the purposes of this analysis, it is assumed that the WSE be comprised of the utilities in the Demand Center service area and that all utilities in the Demand Center will participate as members of the WSE. It is assumed that the WSE will fund the capital costs of the surface water plant (including intake, treatment, effluent disposal, transmission and pumping facilities) with



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existing resources to the extent that they are available and that the remainder of the costs will then be funded with conventional revenue bond debt.

Since it is assumed that the WSE will have minimum resources at its inception, the first increment of surface water plant expenditures will be funded primarily with debt. However, as revenues are generated after the plant goes into service, excess revenues will be generated in the form of debt service coverage. It is assumed that these excess revenues will be deposited into a reserve fund and will be available to downsize the borrowing required for the incremental expenditures necessary to fund the process equipment necessary to provide the full plant capacity.

*b. Governance Structure* - The determination of ownership, funding and operational responsibility for the groundwater and surface water supply, treatment and transmission facilities that will be required over the projection period of this analysis will be potentially challenging from a governance perspective. It could be accomplished by interlocal agreements with an existing utility serving as the surface water supplier or by creation of an entity that would provide all of the groundwater and surface water to its members/customers. This would require that all parties reach agreement regarding ownership/leasing of existing groundwater facilities, operations and maintenance responsibilities, interconnects, rates, etc.

The evaluation of the governance structure within which surface water could be implemented is beyond the scope of this analysis and it is assumed that a structure can be implemented that would allow for a blended rate, as assumed in this analysis and described in the following sub-section. In any event, the governance structure must finally be decided upon by the local utilities and, therefore, can not be determined until interested local utilities take the initiative to structure a governance framework within which surface water can be provided.

*c. Assumed Rate Program of the Water Supply Entity* – It is assumed that 6 years prior to the projected in service date of the surface water plant, the WSE will be formed and will begin to incur administrative costs related to the planning, design and construction of the surface water plant. It is assumed that the WSE will begin administering a rate program upon its inception, and that the initial rate will recover all of its operating costs in a rate to be charged to its member utilities for all water billed by each utility. This rate will be referred to hereinafter as the *surface water surcharge rate* and it is not related to the delivery of surface water.

When the WSE places the surface water plant in service, it will begin providing surface water to one or more utilities that will convert demands being met with groundwater withdrawals

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to the surface water plant to provide the initial 50% load that is required for the surface water plant to operate effectively. It is assumed that the WSE will begin charging a rate for delivered water at that time. This rate will be referred to hereinafter as the *delivered water rate*.

It is further assumed that the delivered water rate will be imputed at a level approximately equivalent to the cost of producing groundwater. As the surface water plant becomes more fully utilized, the delivered water rate could be escalated annually to a level approaching full cost recovery of all of the costs of the WSE. During the period that the delivered water rate is less than a full cost recovery rate, the costs not recovered in the delivered water rate will be included in the surface water surcharge rate to be charged to the WSE's member utilities for all water billed by each utility. This rate structure allows 1) for member utilities that require surface water to pay reasonable rates for the water that they use during the transition to surface water, and 2) for all member utilities of the WSE to share proportionately in the funding of the "non used and useful" plant costs during the time that the surface water facilities are not utilized at full capacity.

The effect of this assumed rate program is that each member utility will include in its cost of service and retail rates the amounts paid to the WSE through the delivered water rate and the surface water surcharge rate. This will result in a *blended retail rate* that includes the cost of providing groundwater to meet the member utility's water demands up to the level of steady state groundwater withdrawals<sup>11</sup> and the cost of providing surface water for its incremental water demands.

The provision for both a surface water surcharge rate and a delivered water rate is to allow for the fact that individual utilities may require surface water at different levels in response to the varying growth that will occur in each member utility's service area. To the extent that growth in a member utility's service area is disproportionate to its historical water demands, the proposed rate program places more (or less) burden in terms of cost for delivered water on those utilities with higher (or lower) growth than their historical demands might suggest, while providing a mechanism to recover all costs through the surface water surcharge in a manner proportionate to the total water demands of each member utility. This assumed rate program would require that interlocal agreements be established between the WSE and each member utility/ customer.

*d. The Typical Utility Evaluated* - For the purposes of this analysis, it was assumed that the *typical* local utility evaluated in each scenario would be located in the Demand Center

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<sup>11</sup> Groundwater withdrawals that will continue after conversion to the surface water plant to meet incremental demands.

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associated with the scenario and that the WSE would ultimately serve all of the incremental water demands in the Demand Center. It is further assumed that the WSE will have the ability to set rates based upon the rate program described in the previous sub-section or a similar program that results in a blended groundwater/surface water rate effect.

It is recognized that the potential challenges in implementing either interlocal agreements and/or creating such a Demand Center-wide WSE might preclude such a Demand Center-wide approach to the provision of surface water. The Demand Center-wide assumption was made simply to evaluate the cost impact of the economies of scale, on a unit cost basis, of larger surface water facilities. It is recognized that if such a WSE is implemented, it might meet water demands for a sub-set of the assumed Demand Centers or across assumed Demand Center boundaries. This analysis included all water demand in each Demand Center identified strictly for demonstration purposes. If fewer utilities in each Demand Center opt to be included as members of a WSE, the size of the projected surface water facilities would be smaller, but the ultimate range of impact of surface water upon retail rates would be similar to that projected herein.

In all scenarios evaluated, groundwater withdrawals are assumed throughout the projection period up to the time that the surface water plant is assumed to be placed into service. It is further assumed that when the surface water plant is placed into service, groundwater equal to 50% of the plant capacity will be converted from groundwater withdrawals to the surface water plant. The surface water plant is sized to meet the cumulative incremental demand from the time it is placed into service through 2024, with a 50% initial loading.

In order to demonstrate the differential effects of the cost of surface water versus groundwater (all scenarios compared to the benchmark scenario), the financial and operational characteristics of the typical utility were set up so that minimal rate increases were required during the projection period under the benchmark groundwater scenario. This assumes a typical budget for annual capital improvements (other than additional water supply and treatment facilities) and renewal and replacement, and that no extraordinary repairs or replacements will be necessary during the projection period. The analysis also assumes that the utility begins the projection period with adequate revenues such that the need for rate increases does not emerge for several years, and rate increases prior to and after the years when additional water supply facilities are added are driven primarily by inflationary pressures upon costs.

Also, the utility was set up so that it is assumed to have sufficient groundwater capacity relative to its current and projected water usage, so that additional capacity would not be needed

# ST. JOHNS RIVER WATER SUPPLY PROJECT

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until the surface water plant is assumed to be placed into service. Also, it is assumed that the conversion of groundwater withdrawals to surface water to provide the initial 50% loading for the plant is spread proportionately to each utility in the Demand Center such that all utilities in the Demand Center would convert to surface water in the same year. To the extent that a local utility's capacity or allowed groundwater withdrawals are different than assumed, surface water may be needed sooner or later than projected in this analysis.

#### **4. The Model**

The analysis represented in the model used for this analysis is a twenty-year revenue sufficiency analysis for both the WSE and the representative local retail utility. The model for the WSE includes cost recovery from rates based upon the rate program described in Section II.A.3.c. Similarly, the model for the local retail utility assumes the cost of surface water based upon that same rate program.

*a. The Model for the Water Supply Entity* – The model for the WSE simulates the financial performance of the entity over a twenty-year projection period. It identifies the costs of operation, both operations and maintenance (O&M) and capital costs, for each year in the projection period. O&M and capital costs for the WSE were provided by CH2M HILL and HDR, the two firms conducting the treatability and siting elements respectively of the St. Johns River Water Supply Project. The cost input is Demand Center and scenario specific relative to the required capacity and costs of the surface water facilities.

The model projects revenue from the delivered water rate, described in Section II.A.3.c, and calculates the surface water surcharge rate, described in that same section, which is calculated based upon the annual costs not recovered in the delivered water rate spread over the total water billed by all utilities in the Demand Center being evaluated.

The assumed timing and estimated sizing of required additional water supply, treatment and transmission facilities are dynamically calculated by the model using several algorithms. For each year in the projection period, the model tracks water usage (as it increases due to projected population growth). At the end of 2010, the model calculates the plant size that if initially loaded at 50% of its capacity, will reach its capacity in 2024 based upon the projected incremental water demands in the Demand Center. This will allow the surface water plant to go into service with a 50% initial load and be able to accommodate fourteen (14) years of growth from that time. For groundwater facilities in the benchmark scenario, the sizing assumption

# ST. JOHNS RIVER WATER SUPPLY PROJECT

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(provided by CH2M HILL) is to provide sufficient capacity to serve seven years of incremental demands.

Estimates of initial capital and O&M costs for the new surface water facilities for each scenario were provided by CH2M HILL and HDR based upon the assumed timing and sizing parameters determined in the model. Initial cost estimates included “back-bone” facilities designed to serve the maximum plant capacity and “process equipment” cost estimates to provide capacity to last from the in service date with a 50% load factor, to approximately 75% of the maximum plant capacity. Incremental “process equipment” cost estimates were also provided for the additional equipment to serve the maximum capacity of the plant.

b. *The Model for the Local Retail Utility* – The model for the local retail utility simulates the financial performance of the utility over a twenty-year projection period. It is essentially a multi-year revenue sufficiency analysis that identifies annual rate revenue increases needed to provide sufficient funds to cover all of the projected expenses of the utility. It includes as operations costs the costs of purchased water from the WSE and the surface water surcharge from the WSE.

When incremental water demands must be met with surface water from the WSE, any financing costs associated with the existing groundwater facilities of the local retail utility remain in the cost basis of the utility model until the end of the financing term. Also, for the purposes of this analysis, the initial assumed debt service of the local retail utility, which may have funded items other than water supply and treatment facilities, is assumed to continue throughout the projection period.

The model also tracks unrestricted reserves and impact fees from new connections. Each year eligible capital projects are first funded from these sources and, if these sources are not sufficient, the remaining capital costs are assumed to be funded with 30-year term conventional revenue bond debt. The model identifies annual rate increases, if required, to ensure that sufficient revenues are generated each year to meet all of the utility’s financial obligations, including typical revenue bond covenants, such as debt service coverage requirements.

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**B. ASSUMPTIONS**

Table 4, on the following page, presents the assumptions regarding the *typical retail utility* that are applicable to all of the scenarios evaluated. Table 5, following Table 4, presents the surface water cost assumptions for each scenario evaluated that were provided by CH2M HILL and HDR.

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***Table 4 – Assumptions Regarding the Typical Utility Applicable to All Scenarios***

<i>Typical Utility Assumption</i>	<i>First Year Value</i>	<i>Adjustment</i>
Water Usage	2.38 mgd	Annual growth %
Number of Customers (ERUs)	7,917	Based upon annual growth
Maximum Sustainable Groundwater Withdrawal	Specific to Demand Center	NA
Annual Growth Percentage	NA	2.5% to 1.69%
Annual Rate Revenues	\$1,900,000	Annual growth % plus rate Increase
Annual O&M Expenses	\$974,025	Annual expense escalator plus impact of additional facilities
O&M Escalation Factor	NA	3.0 %
Unrestricted Reserves	\$2,729,000	Based upon cash flow
Minimum Working Capital Reserve Balance	Equal to 3 months O&M Expenses	Based upon O&M expense
Existing Debt Service	\$998,391	None
New Debt Service	NA	Based upon debt funding required for additional facilities, when required Term: 30 Years Interest Rate: 6.0%
Capital Improvement Program (Misc. capital and R&R)	\$970,000 Avg. Annual Amt.	Annual capital cost escalation factor
Capital Cost Escalation Factor	NA	3.0 %
Size of Initial Surface Water Plant	Specific to Demand Center	NA
Capital Costs – Supply & Treatment Initial Surface Water Plant	Specific to Demand Center	NA
Capital Costs – Transmission Initial Surface Water Plant	Specific to Demand Center	NA
Assumed Length of Transmission Line for Surface Water Facilities	Specific to Demand Center & Site	NA
Funding of Additional Facilities	NA	Impact fees and unrestricted reserves to the extent possible, with the rest funded with conventional 30 year term revenue bonds
Interest Earnings Rate on Invested Funds	1.50% 2004 & 2005	Escalated .50% per year to 3.5% by year 2009
Years of Growth Assumed in Additional Groundwater Capacity	NA	7 Years
Years of Growth Assumed in Additional Surface Water Capacity	NA	20 Years

# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### SECTION II – ANALYSIS

**Table 5 – Cost Assumptions for each Scenario Evaluated – Page 1 of 3**

**St. Johns River Water Supply Project  
Affordability Analysis  
Surface Water Cost Assumptions**

**Intermittent Source with Aquifer Storage and Recovery**

Demand Center	Initial Design		Ultimate Design		Ultimate Design	
			Site G		Site E	
<b>All Volusia</b>	ADF	26 mgd	ADF	34 mgd	ADF	34 mgd
	Max Day	34 mgd	Max Day	45 mgd	Max Day	45 mgd
<b>Capital Costs</b>						
Plant				\$204,082,896		\$204,082,896
Raw Water Pipeline				\$890,400		\$26,022,000
Finished Water Pipeline				\$55,836,000		\$59,517,600
Concentrate Disposal Pipeline				\$7,392,000		\$10,803,600
ASR				\$31,620,000		\$31,620,000
Plant Land Cost				\$510,000		\$750,000
Pipeline Land Cost				\$4,141,000		\$6,055,000
<b>Total Ultimate Design</b>				<b>\$304,472,296</b>		<b>\$338,851,096</b>
Less: Process Equip Capital Cost Increment				-\$6,570,136		-\$6,570,136
<b>Total Initial Design</b>				<b>\$297,902,160</b>		<b>\$332,280,960</b>
<b>Annual O&amp;M Cost (same for both sites)</b>		<b>\$20,814,083</b>		<b>\$28,708,952</b>		<b>\$28,708,952</b>
			Site B		Site K	
<b>Seminole</b>	ADF	19 mgd	ADF	25 mgd	ADF	25 mgd
	Max Day	25 mgd	Max Day	33 mgd	Max Day	33 mgd
<b>Capital Costs</b>						
Plant				\$155,551,638		\$155,551,638
Raw Water Pipeline				\$2,024,878		\$8,590,139
Finished Water Pipeline				\$46,631,791		\$50,313,345
Concentrate Disposal Pipeline				\$261,883		\$4,188,291
ASR				\$23,250,000		\$23,250,000
Plant Land Cost				\$1,300,000		\$0
Pipeline Land Cost				\$3,453,000		\$4,816,000
<b>Total Ultimate Design</b>				<b>\$232,473,190</b>		<b>\$246,709,414</b>
Less: Process Equip Capital Cost Increment				-\$4,778,271		-\$4,778,271
<b>Total Initial Design</b>				<b>\$227,694,920</b>		<b>\$241,931,143</b>
<b>Annual O&amp;M Cost (same for both sites)</b>		<b>\$14,022,893</b>		<b>\$18,600,835</b>		<b>\$18,600,835</b>
			Site K		Site E	
<b>Seminole and South Volusia</b>	ADF	32 mgd	ADF	43 mgd	ADF	43 mgd
	Max Day	42 mgd	Max Day	57 mgd	Max Day	57 mgd
<b>Capital Costs</b>						
Plant				\$248,485,006		\$248,485,006
Raw Water Pipeline				\$10,625,833		\$28,841,679
Finished Water Pipeline				\$144,966,427		\$144,966,427
Concentrate Disposal Pipeline				\$5,275,636		\$12,529,204
ASR				\$39,990,000		\$39,990,000
Plant Land Cost				\$0		\$750,000
Pipeline Land Cost				\$8,840,000		\$10,680,000
<b>Total Ultimate Design</b>				<b>\$458,182,903</b>		<b>\$486,242,316</b>
Less: Process Equip Capital Cost Increment				-\$9,168,187		-\$9,168,187
<b>Total Initial Design</b>				<b>\$449,014,716</b>		<b>\$477,074,129</b>
<b>Annual O&amp;M Cost (same for both sites)</b>		<b>\$26,123,295</b>		<b>\$37,585,862</b>		<b>\$37,585,862</b>
Construction Markups:			Capital Mark-ups:		Design Flow Factors:	
Overhead 10%			Permitting 3%		Max Day 1.32 * ADF	
Profit 5%			Engineering/SDC 16%		ASR 1.5 * ADF	
Mob/Bond 3%			Start-up 2%			
Contingency 30%			Legal 3%			

Source: CH2MHill and HDR

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# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### SECTION II – ANALYSIS

**Table 5 (Cont'd) – Cost Assumptions for each Scenario Evaluated – Page 2 of 3**

**St. Johns River Water Supply Project  
Affordability Analysis  
Surface Water Cost Assumptions**

***Reliable Source with Aquifer Storage and Recovery***

Demand Center	Initial Design		Ultimate Design		Ultimate Design	
			<b>Site G</b>		<b>Site E</b>	
<b>All Volusia</b>	<b>ADF</b>	<b>26 mgd</b>	<b>ADF</b>	<b>34 mgd</b>	<b>ADF</b>	<b>34 mgd</b>
	<b>Max Day</b>	<b>30 mgd</b>	<b>Max Day</b>	<b>39 mgd</b>	<b>Max Day</b>	<b>39 mgd</b>
<b>Capital Costs</b>						
Plant			\$183,408,393		\$183,408,393	
Raw Water Pipeline			\$890,400		\$26,022,000	
Finished Water Pipeline			\$55,836,000		\$59,517,600	
Concentrate Disposal Pipeline			\$7,392,000		\$10,803,600	
ASR			\$10,540,000		\$10,540,000	
Plant Land Cost			\$510,000		\$750,000	
Pipeline Land Cost			\$4,141,000		\$6,065,000	
<b>Total Ultimate Design</b>			<b>\$262,717,793</b>		<b>\$297,096,593</b>	
Less: Process Equip Capital Cost Increment			-\$5,822,878		-\$5,822,878	
<b>Total Initial Design</b>			<b>\$256,894,916</b>		<b>\$291,273,716</b>	
<b>Annual O&amp;M Cost (same for both sites)</b>		<b>\$19,898,834</b>		<b>\$26,836,052</b>		<b>\$26,836,052</b>
			<b>Site B</b>		<b>Site K</b>	
<b>Seminole</b>	<b>ADF</b>	<b>19 mgd</b>	<b>ADF</b>	<b>25 mgd</b>	<b>ADF</b>	<b>25 mgd</b>
	<b>Max Day</b>	<b>22 mgd</b>	<b>Max Day</b>	<b>29 mgd</b>	<b>Max Day</b>	<b>29 mgd</b>
<b>Capital Costs</b>						
Plant			\$139,456,224		\$139,456,224	
Raw Water Pipeline			\$2,024,878		\$8,590,139	
Finished Water Pipeline			\$46,631,791		\$50,313,345	
Concentrate Disposal Pipeline			\$261,883		\$4,188,291	
ASR			\$7,750,000		\$7,750,000	
Plant Land Cost			\$1,300,000		\$0	
Pipeline Land Cost			\$3,453,000		\$4,816,000	
<b>Total Ultimate Design</b>			<b>\$200,877,776</b>		<b>\$215,114,000</b>	
Less: Process Equip Capital Cost Increment			-\$4,382,522		-\$4,382,522	
<b>Total Initial Design</b>			<b>\$196,495,254</b>		<b>\$210,731,478</b>	
<b>Annual O&amp;M Cost (same for both sites)</b>		<b>\$13,922,910</b>		<b>\$17,965,501</b>		<b>\$17,965,501</b>
			<b>Site K</b>		<b>Site E</b>	
<b>Seminole and South Volusia</b>	<b>ADF</b>	<b>32 mgd</b>	<b>ADF</b>	<b>43 mgd</b>	<b>ADF</b>	<b>43 mgd</b>
	<b>Max Day</b>	<b>37 mgd</b>	<b>Max Day</b>	<b>49 mgd</b>	<b>Max Day</b>	<b>49 mgd</b>
<b>Capital Costs</b>						
Plant			\$221,288,669		\$221,288,669	
Raw Water Pipeline			\$10,625,833		\$28,841,679	
Finished Water Pipeline			\$144,966,427		\$144,966,427	
Concentrate Disposal Pipeline			\$5,275,636		\$12,529,204	
ASR			\$13,330,000		\$13,330,000	
Plant Land Cost			\$0		\$750,000	
Pipeline Land Cost			\$8,840,000		\$10,680,000	
<b>Total Ultimate Design</b>			<b>\$404,326,566</b>		<b>\$432,385,979</b>	
Less: Process Equip Capital Cost Increment			-\$7,888,457		-\$7,888,457	
<b>Total Initial Design</b>			<b>\$396,438,109</b>		<b>\$424,497,522</b>	
<b>Annual O&amp;M Cost (same for both sites)</b>		<b>\$24,714,665</b>		<b>\$34,367,175</b>		<b>\$34,367,175</b>
Construction Markups:			Capital Mark-ups:		Design Flow Factors:	
Overhead 10%			Permitting 3%		Max Day 1.15 * ADF	
Profit 5%			Engineering/SDC 16%		ASR 0.50 * ADF	
Mob/Bond 3%			Start-up 2%			
Contingency 30%			Legal 3%			

Source: CH2MHill and HDR

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**ST. JOHNS RIVER WATER SUPPLY PROJECT**  
**AFFORDABILITY ANALYSIS**  
**SECTION II – ANALYSIS**

**Table 5 (Cont'd) – Cost Assumptions for each Scenario Evaluated – Page 3 of 3**

**St. Johns River Water Supply Project**  
**Affordability Analysis**  
**Surface Water Cost Assumptions**

**Reliable Source without Aquifer Storage and Recovery**

Demand Center	Initial Design		Ultimate Design		Ultimate Design	
	ADF	Max Day	ADF	Max Day	ADF	Max Day
<b>All Volusia</b>	26 mgd	39 mgd	<b>Site G</b>		<b>Site E</b>	
			34 mgd	51 mgd	34 mgd	51 mgd
<b>Capital Costs</b>						
Plant			\$224,810,074		\$224,810,074	
Raw Water Pipeline			\$890,400		\$26,022,000	
Finished Water Pipeline			\$55,836,000		\$59,517,600	
Concentrate Disposal Pipeline			\$7,392,000		\$10,803,600	
ASR			\$0		\$0	
Plant Land Cost			\$510,000		\$750,000	
Pipeline Land Cost			\$4,141,000		\$6,055,000	
<b>Total Ultimate Design</b>			<b>\$293,579,474</b>		<b>\$327,958,274</b>	
Less: Process Equip Capital Cost Increment			-\$7,531,443		-\$7,531,443	
<b>Total Initial Design</b>			<b>\$286,048,032</b>		<b>\$320,426,832</b>	
<b>Annual O&amp;M Cost (same for both sites)</b>		<b>\$22,798,729</b>	<b>\$30,844,123</b>		<b>\$30,844,123</b>	
<b>Seminole</b>	19 mgd	29 mgd	<b>Site B</b>		<b>Site K</b>	
			25 mgd	38 mgd	25 mgd	38 mgd
<b>Capital Costs</b>						
Plant			\$171,301,478		\$171,301,478	
Raw Water Pipeline			\$2,024,878		\$8,590,139	
Finished Water Pipeline			\$46,631,791		\$50,313,345	
Concentrate Disposal Pipeline			\$261,883		\$4,188,291	
ASR			\$0		\$0	
Plant Land Cost			\$1,300,000		\$0	
Pipeline Land Cost			\$3,453,000		\$4,816,000	
<b>Total Ultimate Design</b>			<b>\$224,973,030</b>		<b>\$239,209,254</b>	
Less: Process Equip Capital Cost Increment			-\$5,620,954		-\$5,620,954	
<b>Total Initial Design</b>			<b>\$219,352,076</b>		<b>\$233,588,300</b>	
<b>Annual O&amp;M Cost (same for both sites)</b>		<b>\$14,799,688</b>	<b>\$19,601,801</b>		<b>\$19,601,801</b>	
<b>Seminole and South Volusia</b>	32 mgd	48 mgd	<b>Site K</b>		<b>Site E</b>	
			43 mgd	65 mgd	43 mgd	65 mgd
<b>Capital Costs</b>						
Plant			\$278,906,715		\$278,906,715	
Raw Water Pipeline			\$10,625,833		\$28,841,679	
Finished Water Pipeline			\$144,966,427		\$144,966,427	
Concentrate Disposal Pipeline			\$5,275,636		\$12,529,204	
ASR			\$0		\$0	
Plant Land Cost			\$0		\$750,000	
Pipeline Land Cost			\$8,840,000		\$10,680,000	
<b>Total Ultimate Design</b>			<b>\$448,614,612</b>		<b>\$476,674,025</b>	
Less: Process Equip Capital Cost Increment			-\$10,520,295		-\$10,520,295	
<b>Total Initial Design</b>			<b>\$438,094,317</b>		<b>\$466,153,731</b>	
<b>Annual O&amp;M Cost (same for both sites)</b>		<b>\$27,994,856</b>	<b>\$41,371,847</b>		<b>\$41,371,847</b>	
Construction Markups:		Capital Mark-ups:		Design Flow Factors:		
Overhead 10%		Permittng 3%		Max Day 1.50 * ADF		
Profit 5%		Engineering/SDC 16%		ASR 0.0 * ADF		
Mob/Bond 3%		Start-up 2%				
Contingency 30%		Legal 3%				

Source: CH2Mhill and HDR

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**ST. JOHNS RIVER WATER SUPPLY PROJECT**  
**AFFORDABILITY ANALYSIS**  
*SECTION III – RESULTS*

**III. RESULTS**

This section presents the results of the analysis. A summary of the comparative analysis of scenarios is first presented, followed by a description of the detailed projections for each scenario evaluated and a description of the affordability analysis.

**A. COMPARATIVE ANALYSIS OF SCENARIO RESULTS**

This section presents a comparative analysis of the results of each scenario evaluated. The groundwater scenario for each Demand Center serves as the benchmark scenario in this comparative analysis because it represents the status quo assuming that groundwater was available throughout the projection period. However, based upon the District’s groundwater modeling, groundwater will not be available to serve the incremental water demands of new growth at some point during the projection period. At that time groundwater can continue to be used as the source to serve water usage up to the maximum sustainable groundwater withdrawal limit, but an alternative water source must be used to serve the incremental water usage demands of new growth above that level.

All other scenarios evaluate the impact upon the cost of delivered water of a typical retail utility, assuming that surface water will be provided by a WSE, either an existing utility or a new entity, which will provide surface water to a number of local utilities (all of each demand Center in this analysis). This will allow realization of the economies of scale, on a unit cost basis, of a larger facility. However, this scenario will also require a blended rate including 1) the cost of groundwater at steady-state groundwater withdrawals<sup>12</sup>, and 2) the cost to provide incremental water usage demands with surface water facilities

**1. Rate Adjustment Strategies**

Three comparisons were made during this analysis: 1) just-in-time rate adjustments, 2) equal annual rate adjustments to smooth the large rate increases, or “rate spikes”, that result with just-in-time rate adjustments and 3) annual rate indexing adjustments to lessen the rate spikes that result with just-in-time rate adjustments. Equal annual rate adjustments and annual rate indexing in advance of the need for surface water are two mitigation strategies that local utilities could consider to make the transition to surface water more financially and politically feasible.

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<sup>12</sup> Groundwater withdrawals that will continue after conversion to the surface water plant to meet incremental demands.

**ST. JOHNS RIVER WATER SUPPLY PROJECT**  
**AFFORDABILITY ANALYSIS**  
*SECTION III – RESULTS*

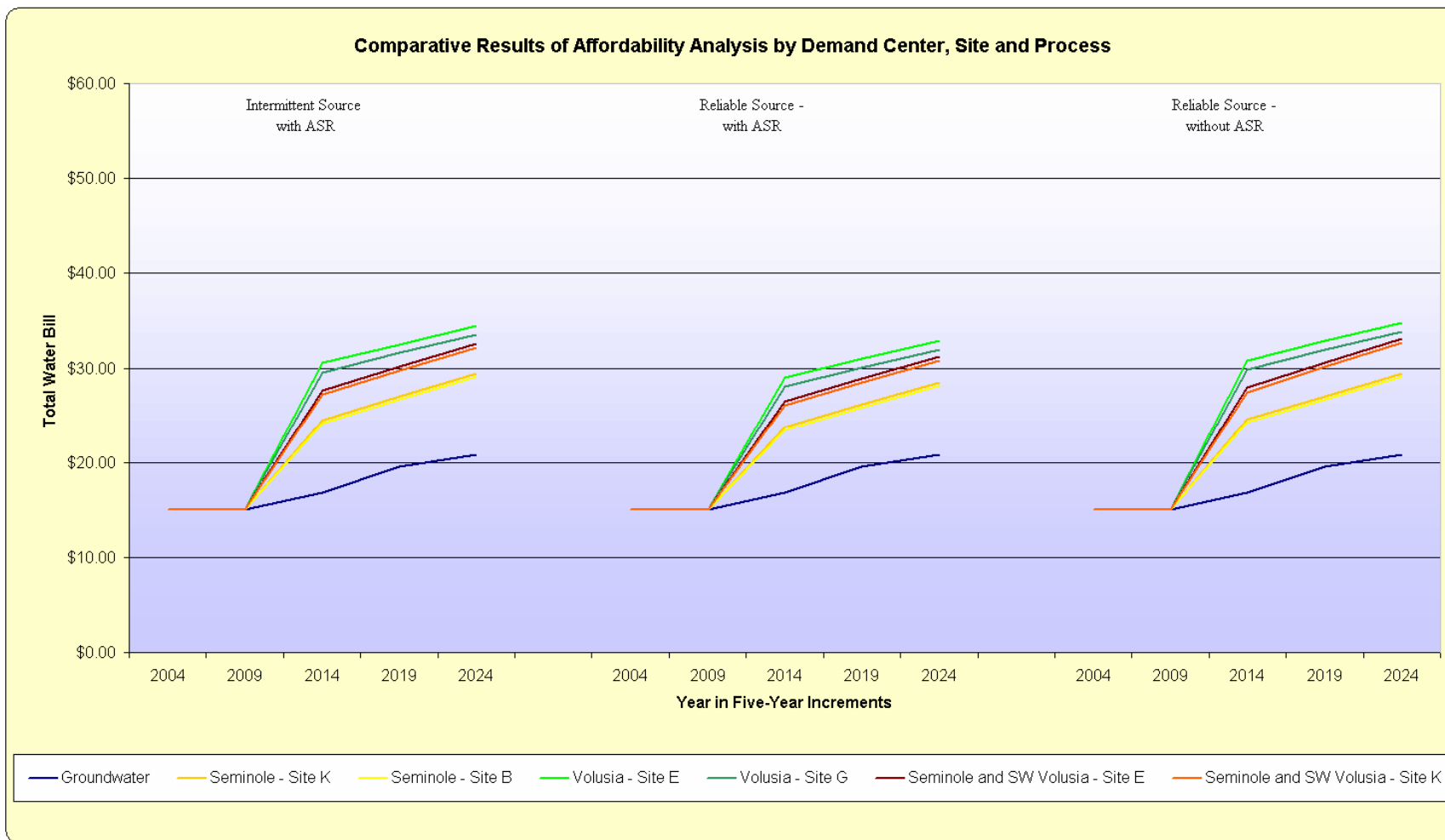
*a.     Just-in-time Rate Adjustments*

First, just-in-time rate adjustments were calculated and compared. Just-in-time rate adjustments reflect the required adjustments in rates in the year required. This approach to rate planning often results in “rate spikes”, or large rate increase requirements in one year and utilities often adopt a plan of regular annual rate adjustments in advance of projected rate spikes to avoid, or at least lessen these rate spikes.

Figures 7, 8 and 9, on the following pages, present graphical summary representations of the impact of surface water upon the retail cost of water per average household in absolute dollars and as a percentage increase for all scenarios evaluated, assuming just-in-time rate adjustments and a range of current cost of water per household of \$15 per month on the low end and \$25 per month on the high end. Due to the extended term of the projection period, and the large number of scenarios evaluated, these graphs show the impacts of surface water upon the cost of water at the retail level at five-year increments. Tables 5 and 6, following Figure 9, present the numerical results from which the graphical representations in Figures 7, 8 and 9 are drawn.

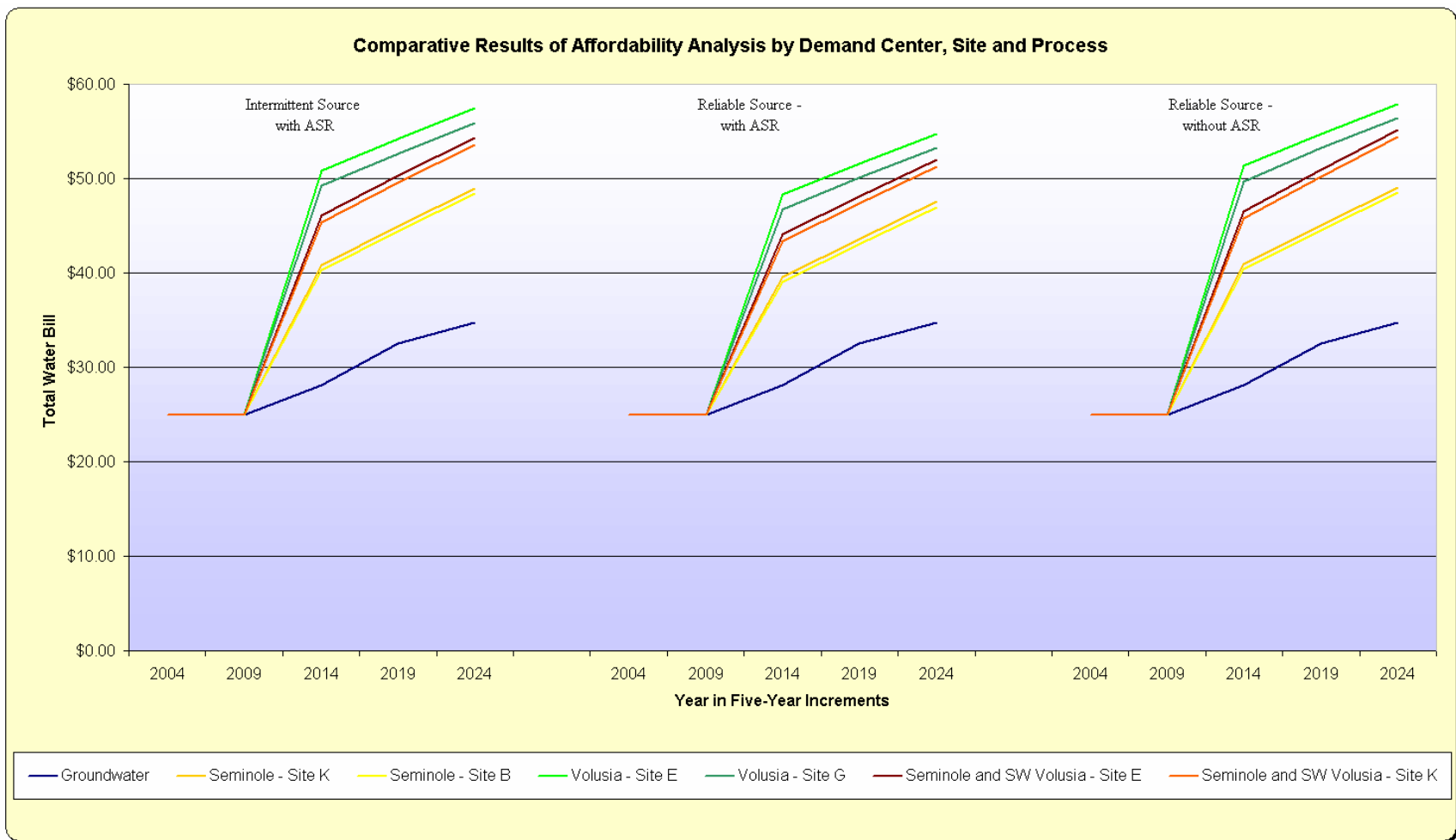
# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS SECTION III – RESULTS

**Figure 7 – Graphical Representation of Dollar Impact upon Household Water Cost – Assumes \$15 Average Water Bill per Month per Household**



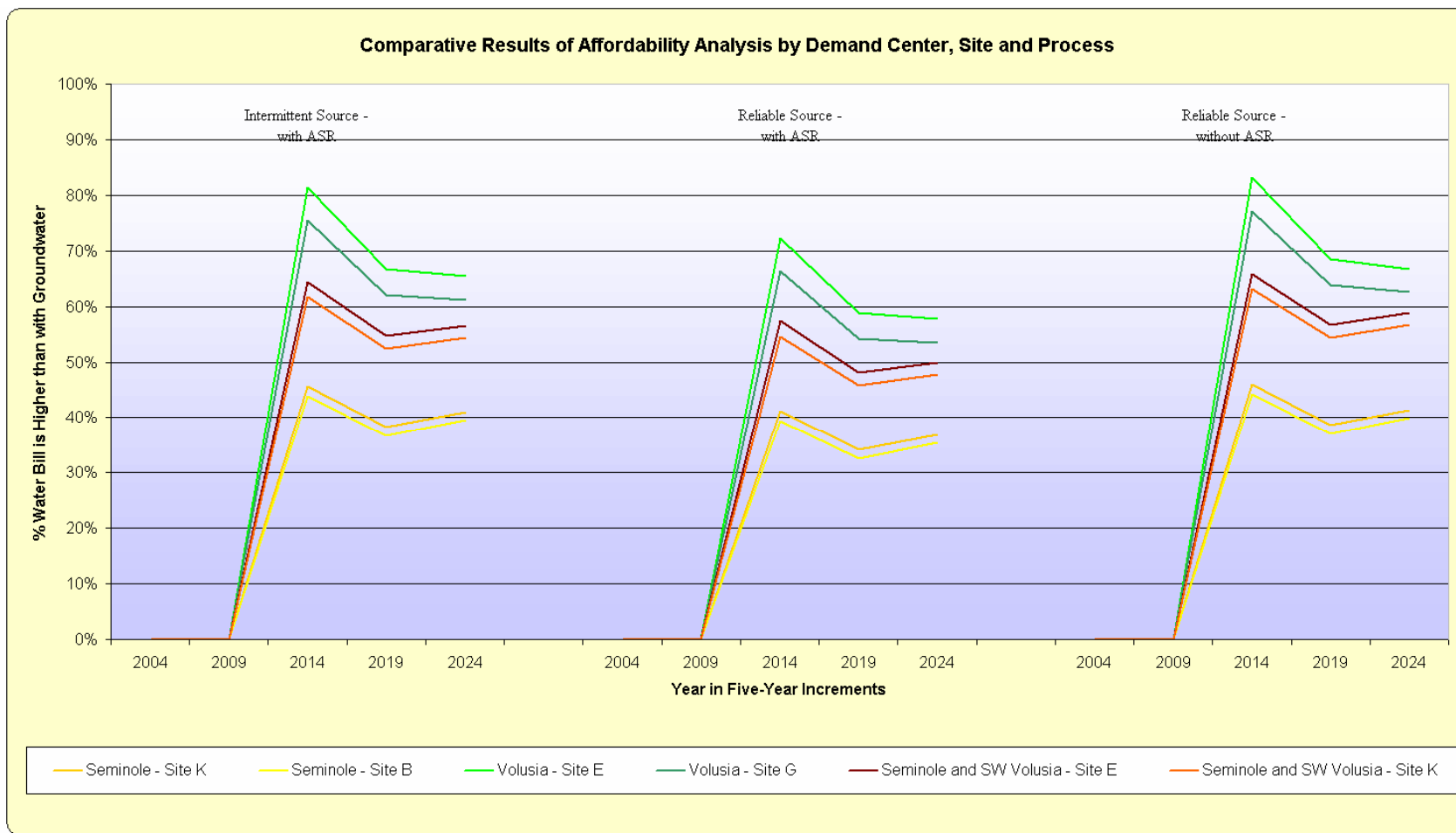
# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS SECTION III – RESULTS

**Figure 8 – Graphical Representation of Dollar Impact upon Household Water Cost – Assumes \$25 Average Water Bill per Month per Household**



# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS SECTION III – RESULTS

**Figure 9 – Graphical Representation of the Percentage that Household Water Cost is Higher with Surface Water than with Groundwater – Same for \$15 and \$25 Average Water Bill per Month per Household**



# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS SECTION III – RESULTS

**Table 6 – Dollar Impact upon Household Water Cost – Assumes \$15 Average Water Bill per Month per Household**

St. Johns River Water Management District  
St. Johns River Water Supply Project  
Affordability Analysis  
**Comparative Summary of Scenario Results**

Demand Centers/Sites (1)	Groundwater					IS-ASR					RS - w ASR					RS - w/o ASR				
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
	2004	2009	2014	2019	2024	2004	2009	2014	2019	2024	2004	2009	2014	2019	2024	2004	2009	2014	2019	2024
<b>1 Seminole</b>																				
2 <b>Site K</b>																				
3 % Rate Increase	0.00%	0.00%	12.23%	29.99%	38.86%	0.00%	0.00%	63.51%	79.75%	95.87%	0.00%	0.00%	58.50%	74.47%	90.13%	0.00%	0.00%	63.90%	80.27%	96.33%
4 Monthly Bill	\$15.00	\$15.00	\$16.83	\$19.50	\$20.83	\$15.00	\$15.00	\$24.53	\$26.96	\$29.38	\$15.00	\$15.00	\$23.78	\$26.17	\$28.52	\$15.00	\$15.00	\$24.58	\$27.04	\$29.45
5 % SW Bill is Greater than GW Bill	NA	NA	NA	NA	NA		0.00%	45.69%	38.29%	41.05%		0.00%	41.23%	34.22%	36.92%		0.00%	46.03%	38.69%	41.39%
6 <b>Site B</b>																				
7 % Rate Increase	0.00%	0.00%	12.23%	29.99%	38.86%	0.00%	0.00%	61.40%	77.67%	93.74%	0.00%	0.00%	56.38%	72.37%	88.00%	0.00%	0.00%	61.79%	78.19%	94.21%
8 Monthly Bill	\$15.00	\$15.00	\$16.83	\$19.50	\$20.83	\$15.00	\$15.00	\$24.21	\$26.65	\$29.06	\$15.00	\$15.00	\$23.46	\$25.86	\$28.20	\$15.00	\$15.00	\$24.27	\$26.73	\$29.13
9 % SW Bill is Greater than GW Bill	NA	NA	NA	NA	NA		0.00%	43.81%	36.68%	39.52%		0.00%	39.34%	32.61%	35.39%		0.00%	44.16%	37.08%	39.86%
<b>10 Volusia County</b>																				
11 <b>Site E</b>																				
12 % Rate Increase	0.00%	0.00%	12.23%	29.99%	38.86%	0.00%	0.00%	103.53%	116.76%	129.69%	0.00%	0.00%	93.42%	106.49%	119.05%	0.00%	0.00%	105.49%	119.04%	131.62%
13 Monthly Bill	\$15.00	\$15.00	\$16.83	\$19.50	\$20.83	\$15.00	\$15.00	\$30.53	\$32.51	\$34.45	\$15.00	\$15.00	\$29.01	\$30.97	\$32.86	\$15.00	\$15.00	\$30.82	\$32.86	\$34.74
14 % SW Bill is Greater than GW Bill	NA	NA	NA	NA	NA		0.00%	81.35%	66.76%	65.41%		0.00%	72.34%	58.86%	57.75%		0.00%	83.10%	68.51%	66.80%
15 <b>Site G</b>																				
16 % Rate Increase	0.00%	0.00%	12.23%	29.99%	38.86%	0.00%	0.00%	96.93%	110.60%	123.70%	0.00%	0.00%	86.76%	100.37%	113.09%	0.00%	0.00%	98.83%	112.99%	125.74%
17 Monthly Bill	\$15.00	\$15.00	\$16.83	\$19.50	\$20.83	\$15.00	\$15.00	\$29.54	\$31.59	\$33.56	\$15.00	\$15.00	\$28.01	\$30.05	\$31.96	\$15.00	\$15.00	\$29.82	\$31.95	\$33.86
18 % SW Bill is Greater than GW Bill	NA	NA	NA	NA	NA		0.00%	75.47%	62.01%	61.10%		0.00%	66.41%	54.14%	53.46%		0.00%	77.16%	63.86%	62.57%
<b>19 Seminole &amp; SW Volusia</b>																				
20 <b>Site E</b>																				
21 % Rate Increase	0.00%	0.00%	12.23%	29.99%	38.86%	0.00%	0.00%	84.50%	101.06%	117.33%	0.00%	0.00%	76.59%	92.51%	108.06%	0.00%	0.00%	86.13%	103.63%	120.58%
22 Monthly Bill	\$15.00	\$15.00	\$16.83	\$19.50	\$20.83	\$15.00	\$15.00	\$27.67	\$30.16	\$32.60	\$15.00	\$15.00	\$26.49	\$28.88	\$31.21	\$15.00	\$15.00	\$27.92	\$30.54	\$33.09
23 % SW Bill is Greater than GW Bill	NA	NA	NA	NA	NA		0.00%	64.39%	54.67%	56.51%		0.00%	57.34%	48.10%	49.84%		0.00%	65.85%	56.66%	58.85%
24 <b>Site K</b>																				
25 % Rate Increase	0.00%	0.00%	12.23%	29.99%	38.86%	0.00%	0.00%	81.45%	98.13%	114.39%	0.00%	0.00%	73.54%	89.59%	105.12%	0.00%	0.00%	83.08%	100.70%	117.64%
26 Monthly Bill	\$15.00	\$15.00	\$16.83	\$19.50	\$20.83	\$15.00	\$15.00	\$27.22	\$29.72	\$32.16	\$15.00	\$15.00	\$26.03	\$28.44	\$30.77	\$15.00	\$15.00	\$27.46	\$30.11	\$32.65
27 % SW Bill is Greater than GW Bill	NA	NA	NA	NA	NA		0.00%	61.67%	52.42%	54.39%		0.00%	54.62%	45.85%	47.72%		0.00%	63.13%	54.40%	56.73%

(1) SW = Surface Water; GW=Groundwater

Source: Burton & Associates

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# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS SECTION III – RESULTS

**Table 7 – Dollar Impact upon Household Water Cost – Assumes \$25 Average Water Bill per Month per Household**

St. Johns River Water Management District  
St. Johns River Water Supply Project  
Affordability Analysis  
*Comparative Summary of Scenario Results*

Demand Centers/Sites (1)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
	Groundwater					IS-ASR					RS - w ASR					RS - w/o ASR				
	2004	2009	2014	2019	2024	2004	2009	2014	2019	2024	2004	2009	2014	2019	2024	2004	2009	2014	2019	2024
<b>1 Seminole</b>																				
2 <b>Site K</b>																				
3 % Rate Increase	0.00%	0.00%	12.23%	29.99%	38.86%	0.00%	0.00%	63.51%	79.75%	95.87%	0.00%	0.00%	58.50%	74.47%	90.13%	0.00%	0.00%	63.90%	80.27%	96.33%
4 Monthly Bill	\$25.00	\$25.00	\$28.06	\$32.50	\$34.71	\$25.00	\$25.00	\$40.88	\$44.94	\$48.97	\$25.00	\$25.00	\$39.63	\$43.62	\$47.53	\$25.00	\$25.00	\$40.97	\$45.07	\$49.08
5 % SW Bill is Greater than GW Bill	NA	NA	NA	NA	NA		0.00%	45.69%	38.29%	41.05%		0.00%	41.23%	34.22%	36.92%		0.00%	46.03%	38.69%	41.39%
6 <b>Site B</b>																				
7 % Rate Increase	0.00%	0.00%	12.23%	29.99%	38.86%	0.00%	0.00%	61.40%	77.67%	93.74%	0.00%	0.00%	56.38%	72.37%	88.00%	0.00%	0.00%	61.79%	78.19%	94.21%
8 Monthly Bill	\$25.00	\$25.00	\$28.06	\$32.50	\$34.71	\$25.00	\$25.00	\$40.35	\$44.42	\$48.44	\$25.00	\$25.00	\$39.10	\$43.09	\$47.00	\$25.00	\$25.00	\$40.45	\$44.55	\$48.55
9 % SW Bill is Greater than GW Bill	NA	NA	NA	NA	NA		0.00%	43.81%	36.68%	39.52%		0.00%	39.34%	32.61%	35.39%		0.00%	44.16%	37.08%	39.86%
<b>10 Volusia County</b>																				
11 <b>Site E</b>																				
12 % Rate Increase	0.00%	0.00%	12.23%	29.99%	38.86%	0.00%	0.00%	103.53%	116.76%	129.69%	0.00%	0.00%	93.42%	106.49%	119.05%	0.00%	0.00%	105.49%	119.04%	131.62%
13 Monthly Bill	\$25.00	\$25.00	\$28.06	\$32.50	\$34.71	\$25.00	\$25.00	\$50.88	\$54.19	\$57.42	\$25.00	\$25.00	\$48.35	\$51.62	\$54.76	\$25.00	\$25.00	\$51.37	\$54.76	\$57.90
14 % SW Bill is Greater than GW Bill	NA	NA	NA	NA	NA		0.00%	81.35%	66.76%	65.41%		0.00%	72.34%	58.86%	57.75%		0.00%	83.10%	68.51%	66.80%
15 <b>Site G</b>																				
16 % Rate Increase	0.00%	0.00%	12.23%	29.99%	38.86%	0.00%	0.00%	96.93%	110.60%	123.70%	0.00%	0.00%	86.76%	100.37%	113.09%	0.00%	0.00%	98.83%	112.99%	125.74%
17 Monthly Bill	\$25.00	\$25.00	\$28.06	\$32.50	\$34.71	\$25.00	\$25.00	\$49.23	\$52.65	\$55.93	\$25.00	\$25.00	\$46.69	\$50.09	\$53.27	\$25.00	\$25.00	\$49.71	\$53.25	\$56.43
18 % SW Bill is Greater than GW Bill	NA	NA	NA	NA	NA		0.00%	75.47%	62.01%	61.10%		0.00%	66.41%	54.14%	53.46%		0.00%	77.16%	63.86%	62.57%
<b>19 Seminole &amp; SW Volusia</b>																				
20 <b>Site E</b>																				
21 % Rate Increase	0.00%	0.00%	12.23%	29.99%	38.86%	0.00%	0.00%	84.50%	101.06%	117.33%	0.00%	0.00%	76.59%	92.51%	108.06%	0.00%	0.00%	86.13%	103.63%	120.58%
22 Monthly Bill	\$25.00	\$25.00	\$28.06	\$32.50	\$34.71	\$25.00	\$25.00	\$46.12	\$50.26	\$54.33	\$25.00	\$25.00	\$44.15	\$48.13	\$52.02	\$25.00	\$25.00	\$46.53	\$50.91	\$55.14
23 % SW Bill is Greater than GW Bill	NA	NA	NA	NA	NA		0.00%	64.39%	54.67%	56.51%		0.00%	57.34%	48.10%	49.84%		0.00%	65.85%	56.66%	58.85%
24 <b>Site K</b>																				
25 % Rate Increase	0.00%	0.00%	12.23%	29.99%	38.86%	0.00%	0.00%	81.45%	98.13%	114.39%	0.00%	0.00%	73.54%	89.59%	105.12%	0.00%	0.00%	83.08%	100.70%	117.64%
26 Monthly Bill	\$25.00	\$25.00	\$28.06	\$32.50	\$34.71	\$25.00	\$25.00	\$45.36	\$49.53	\$53.60	\$25.00	\$25.00	\$43.38	\$47.40	\$51.28	\$25.00	\$25.00	\$45.77	\$50.18	\$54.41
27 % SW Bill is Greater than GW Bill	NA	NA	NA	NA	NA		0.00%	61.67%	52.42%	54.39%		0.00%	54.62%	45.85%	47.72%		0.00%	63.13%	54.40%	56.73%

(1) SW = Surface Water; GW=Groundwater

Source: **Burton & Associates**

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**ST. JOHNS RIVER WATER SUPPLY PROJECT**  
**AFFORDABILITY ANALYSIS**  
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Under the just-in-time rate adjustment approach represented in the graphs in Figures 7, 8 and 9, and in Tables 6 and 7, a “rate spike”, or large annual rate increase is required in each scenario. The years of the rate spikes and the amounts are presented in Table 8 below.

**Table 8 – Rate Spikes under Just-in-time Rates**

<i>Scenario</i>	<i>Year of Rate Spike</i>	<i>Percentage Rate Spike Required</i>	<i>Equal Annual Rate Increases Required to Smooth Rate Spike</i>	<i>Rate Spike after Annual Indexing of 2.5%</i>
<b><i>Seminole:</i></b>				
<b><i>Groundwater</i></b>	<b><i>2011 &amp; 2018</i></b>	<b><i>3.88% &amp; 9.50%</i></b>	<b><i>1.35%</i></b>	<b><i>0.00%</i></b>
<b><i>IS-ASR; Site K</i></b>	<b><i>2011</i></b>	<b><i>49.63%</i></b>	<b><i>4.14%</i></b>	<b><i>24.53%</i></b>
<b><i>Site B</i></b>	<b><i>2011</i></b>	<b><i>47.58%</i></b>	<b><i>4.10%</i></b>	<b><i>22.77%</i></b>
<b><i>RS-w ASR; Site K</i></b>	<b><i>2011</i></b>	<b><i>44.93%</i></b>	<b><i>3.95%</i></b>	<b><i>20.49%</i></b>
<b><i>Site B</i></b>	<b><i>2011</i></b>	<b><i>42.88%</i></b>	<b><i>3.87%</i></b>	<b><i>18.72%</i></b>
<b><i>RS-w/o ASR; Site K</i></b>	<b><i>2011</i></b>	<b><i>50.03%</i></b>	<b><i>4.15%</i></b>	<b><i>24.88%</i></b>
<b><i>Site B</i></b>	<b><i>2011</i></b>	<b><i>47.99%</i></b>	<b><i>4.11%</i></b>	<b><i>23.12%</i></b>
<b><i>Volusia:</i></b>				
<b><i>Groundwater</i></b>	<b><i>2011 &amp; 2018</i></b>	<b><i>3.88% &amp; 9.50%</i></b>	<b><i>1.33%</i></b>	<b><i>0.00%</i></b>
<b><i>IS-ASR; Site E</i></b>	<b><i>2011</i></b>	<b><i>93.26%</i></b>	<b><i>6.97%</i></b>	<b><i>62.15%</i></b>
<b><i>Site G</i></b>	<b><i>2011</i></b>	<b><i>86.92%</i></b>	<b><i>6.52%</i></b>	<b><i>56.68%</i></b>
<b><i>RS-w ASR; Site E</i></b>	<b><i>2011</i></b>	<b><i>83.27%</i></b>	<b><i>6.29%</i></b>	<b><i>53.54%</i></b>
<b><i>Site G</i></b>	<b><i>2011</i></b>	<b><i>76.83%</i></b>	<b><i>5.88%</i></b>	<b><i>47.99%</i></b>
<b><i>RS-w/o ASR; Site E</i></b>	<b><i>2011</i></b>	<b><i>96.30%</i></b>	<b><i>7.18%</i></b>	<b><i>64.78%</i></b>
<b><i>Site G</i></b>	<b><i>2011</i></b>	<b><i>89.84%</i></b>	<b><i>6.72%</i></b>	<b><i>59.21%</i></b>
<b><i>Seminole &amp; SW Volusia:</i></b>				
<b><i>Groundwater</i></b>	<b><i>2011 &amp; 2018</i></b>	<b><i>3.88% &amp; 9.50%</i></b>	<b><i>1.35%</i></b>	<b><i>0.00%</i></b>
<b><i>IS-ASR; Site E</i></b>	<b><i>2011</i></b>	<b><i>71.40%</i></b>	<b><i>5.51%</i></b>	<b><i>43.31%</i></b>
<b><i>Site K</i></b>	<b><i>2011</i></b>	<b><i>68.46%</i></b>	<b><i>5.32%</i></b>	<b><i>40.78%</i></b>
<b><i>RS-w ASR; Site E</i></b>	<b><i>2011</i></b>	<b><i>63.77%</i></b>	<b><i>5.00%</i></b>	<b><i>36.73%</i></b>
<b><i>Site K</i></b>	<b><i>2011</i></b>	<b><i>60.82%</i></b>	<b><i>4.81%</i></b>	<b><i>34.19%</i></b>
<b><i>RS-w/o ASR; Site E</i></b>	<b><i>2011</i></b>	<b><i>73.08%</i></b>	<b><i>5.62%</i></b>	<b><i>44.76%</i></b>
<b><i>Site K</i></b>	<b><i>2011</i></b>	<b><i>70.14%</i></b>	<b><i>5.43%</i></b>	<b><i>42.22%</i></b>

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b. *Alternative Rate Adjustment Mitigation Strategies: Equal Annual Rate Adjustments and Annual Rate Indexing*

Table 8 shows that significant rate spikes will occur in 2011 for all scenarios under a just-in-time rate adjustment approach. Two alternative rate adjustment strategies were evaluated that mitigate the rate shock of just-in-time rates, 1) equal annual rate adjustments sized to smooth out the rate spikes, and 2) annual rate indexing to lessen the rate spikes. The results of these analyses are in the two right hand columns of Table 8 on the preceding page.

**B. DETAILED SCENARIO ANALYSIS RESULTS**

Detailed analyses were conducted for each scenario evaluated. The previous section presents comparative summary results of the scenarios evaluated and the detailed analysis schedules and results for each scenario evaluated are presented in the Appendices.

**C. AFFORDABILITY ANALYSIS**

In order to examine the affordability of the retail water rates that would be necessary to fund surface water facilities in Seminole and Volusia Counties, we performed an affordability analysis of the resultant cost of water per average household. Although there is not a published standard for affordability of drinking water, the U.S. Environmental Protection Agency (USEPA), under provisions of the Safe Drinking Water Act Amendments of 1996, published information to assist the states in formulating affordability criteria. This information is available at:

<http://www.epa.gov/OGWDW/smallsys/afforddh.html#preface>.

Based upon a review of the above referenced information, it is concluded that 1) the most commonly accepted measure of affordability of drinking water is the relationship of the cost of water per household to median household income and 2) a household affordability ratio, or index of affordability, can be established as the cost of water per household divided by the median household income in the service area.

A number of studies are cited in the above referenced USEPA information that have established such ratios as thresholds for affordable drinking water. These thresholds of affordability generally range from 1.5% to 2%. That is, if the cost of water is less than the threshold of from 1.5% to 2% of median household income, water is generally considered to be affordable.

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The above referenced USEPA information includes selected state policies using affordability criteria. The most specific affordability policies cited were developed by the State of New York (New York). New York developed a table that established “Target Service Charges” below which water could be considered affordable, for ranges of Median Household Income. These affordability criteria developed by New York are shown in Table 9 below.

**Table 9 – Affordability Thresholds**

<u>Median Annual Household Income</u>	<u>Affordability Threshold for Annual Water Service Charges</u>	<u>Affordability Threshold for Monthly Water Service Charges (1)</u>	<u>Affordability Threshold for Water Service Charges as a % of MMHI (1)</u>
\$10,000	\$100	\$8.33	1.00%
\$15,000	\$150	\$12.50	1.00%
\$20,000	\$200	\$16.67	1.00%
\$25,000	\$253	\$21.08	1.01%
\$30,000	\$371	\$30.92	1.24%
\$35,000	\$488	\$40.67	1.39%
\$40,000	\$600	\$50.00	1.50%
\$45,000	\$675	\$56.25	1.50%
\$50,000	\$750	\$62.50	1.50%
\$55,000	\$825	\$68.75	1.50%
\$60,000	\$900	\$75.00	1.50%

(1) These values were calculated from the table published in the USEPA information.

In order to evaluate the affordability of the impact of the cost of surface water upon the retail cost of water in Seminole and Volusia Counties, the above referenced table of affordability thresholds relative to median household income was used, with interpolations of median household income values in \$1,000 increments. An analysis was conducted which determined the ratio of the cost of water per average household in each year, in each scenario presented herein (assuming just-in-time rate adjustments), to the projected median household income in Seminole and Volusia counties.

The analysis was conducted relative to projected median household income for Seminole County for the lowest cost scenario (Seminole Demand Center, Reliable Source with ASR, Site B) and for Volusia County for the highest cost scenario (Volusia Demand Center, Reliable Source w/o ASR, Site E). The analysis was conducted based upon an assumed current cost of

**ST. JOHNS RIVER WATER SUPPLY PROJECT**  
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**SECTION III – RESULTS**

water per household of \$25.00 per month<sup>13</sup>, adjusted by the annual percentage rate increases determined in the above referenced scenarios (assuming just-in-time rate adjustments).

The projected median household income data used in the analysis was derived from U.S. Census Bureau median household income data for Seminole and Volusia Counties shown in Table 10 below.

**Table 10 – Historical Median Household Income for Seminole and Volusia Counties**

Year	<i>Seminole County</i>		<i>Volusia County</i>	
	Median Household Income	Average Annual Rate of Increase	Median Household Income	Average Annual Rate of Increase
1979	\$18,289	NA	\$12,393	NA
1989	\$35,637	6.90%	\$24,818	7.19%
1999	\$49,326	3.30%	\$35,219	3.56%

Table 10 shows that both counties had historical average increases in median household income from 1989 to 1999 of from 3.30% to 7.19%. However, in order to be conservative, the average median household income for each county was projected to increase at only 3.0% per year throughout the 20-year projection period. This assumption is consistent with the operations and maintenance cost escalation factor assumed in the projections in the utility and WSE models.

Table 11a presents the results of the affordability analysis based upon 1) the highest cost scenario evaluated (Volusia Demand Center - Reliable Source w/o ASR – Site E), 2) the lowest median household income of Volusia County, and 3) assumed current water costs per household, or equivalent residential unit (ERU), of \$25.00 per month

Table 11b presents the results of the affordability analysis based upon 1) the lowest cost scenario evaluated (Seminole Demand Center - Reliable Source w ASR – Site B), 2) the highest median household income of Seminole County, and 3) assumed current water costs per household, or equivalent residential unit (ERU), of \$25.00 per month.

<sup>13</sup> Discussions with a number of representatives from utilities in the Seminole and Volusia County region indicated that the current cost of potable water is within a range of from about \$15.00 to \$25.00 per month per ERU for most utilities in the study area. The higher cost was used in the affordability analysis in order to present the most conservative picture possible

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The two examples in Tables 11a and 11b represent the high and low range respectively of affordability of all of the scenarios evaluated in this Study.

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS SECTION III – RESULTS

**Table 11a – Analysis of the Cost of Water Compared to Median Household Income for the Highest Cost Scenario Assuming a Current Monthly Cost of Water of \$25.00 per ERU**

St. Johns River Water Management District  
St. Johns River Water Supply Project  
*Affordability Analysis*

	Years																										
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
<b>Median Household Income (\$1,000s)</b>																											
<b>Annual Household Income</b>																											
1																											
2	Esc Factor 3.00%																										
3	Seminole \$49.3 \$50.8 \$52.3 \$53.9 \$55.5 \$57.2 \$58.9 \$60.7 \$62.5 \$64.4 \$66.3 \$68.3 \$70.3 \$72.4 \$74.6 \$76.8 \$79.2 \$81.5 \$84.0 \$86.5 \$89.1 \$91.8 \$94.5 \$97.3 \$100.3 \$103.3																										
4	Volusia \$35.2 \$36.3 \$37.4 \$38.5 \$39.6 \$40.8 \$42.1 \$43.3 \$44.6 \$46.0 \$47.3 \$48.8 \$50.2 \$51.7 \$53.3 \$54.9 \$56.5 \$58.2 \$60.0 \$61.8 \$63.6 \$65.5 \$67.5 \$69.5 \$71.6 \$73.7																										
<b>Monthly Household Income</b>																											
5																											
6	Seminole \$4.1 \$4.2 \$4.4 \$4.5 \$4.6 \$4.8 \$4.9 \$5.1 \$5.2 \$5.4 \$5.5 \$5.7 \$5.9 \$6.0 \$6.2 \$6.4 \$6.6 \$6.8 \$7.0 \$7.2 \$7.4 \$7.6 \$7.9 \$8.1 \$8.4 \$8.6																										
7	Volusia \$2.9 \$3.0 \$3.1 \$3.2 \$3.3 \$3.4 \$3.5 \$3.6 \$3.7 \$3.8 \$3.9 \$4.1 \$4.2 \$4.3 \$4.4 \$4.6 \$4.7 \$4.9 \$5.0 \$5.1 \$5.3 \$5.5 \$5.6 \$5.8 \$6.0 \$6.1																										
<b>Scenario - Volusia - Reliable Source w/o ASR - Site E (1)</b>																											
<b>Affordability Threshold</b>																											
8																											
9	Monthly County Household Income in Service Area \$3.4 \$3.5 \$3.6 \$3.7 \$3.8 \$3.9 \$4.1 \$4.2 \$4.3 \$4.4 \$4.6 \$4.7 \$4.9 \$5.0 \$5.1 \$5.3 \$5.5 \$5.6 \$5.8 \$6.0 \$6.1																										
10	<b>Affordability Threshold:</b>																										
11	% of Median Household Income 1.50%																										
12	Maximum Affordable Monthly Water Cost \$51.04 \$52.57 \$54.14 \$55.77 \$57.44 \$59.16 \$60.94 \$62.77 \$64.65 \$66.59 \$68.59 \$70.65 \$72.76 \$74.95 \$77.20 \$79.51 \$81.90 \$84.35 \$86.88 \$89.49 \$92.18																										
<b>Analysis of Affordability - Benchmark Groundwater Scenario</b>																											
13																											
14	Projected Rate Increases with Groundwater 0.00%																										
15	Projected Monthly Cost of Water if Groundwater were Available \$25.00																										
16	Monthly Cost of Water as a Percent of Household Income 0.73%																										
17	Affordability Check OK																										
<b>Analysis of Affordability - Surface Water Scenario</b>																											
18																											
19	Projected Rate Increases with Surface Water 0.00%																										
20	Projected Monthly Cost of Water with Surface Water \$25.00																										
21	Monthly Cost of Water as a Percent of Household Income 0.73%																										
22	Affordability Check OK																										
<b>Percentage that Water Cost in Surface Water Scenario is Higher than in Groundwater Scenario</b>																											
23	0.00%																										

(1) This scenario resulted in the highest cost of water after implementation of the surface water plant in a Demand Center with the lowest median household income, therefore, a positive test of affordability for this scenario, ensures that all other scenarios will be affordable.

Source: Burton & Associates

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS SECTION III – RESULTS

**Table 11b – Analysis of the Cost of Water Compared to Median Household Income for the Lowest Cost Scenario Assuming a Current Monthly Cost of Water of \$25.00 per ERU**

St. Johns River Water Management District  
St. Johns River Water Supply Project  
*Affordability Analysis*

	Years																										
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
<b>Median Household Income (\$1,000s)</b>																											
1	<b>Annual Household Income</b>																										
2	Esc Factor 3.00%																										
3	Seminole	\$49.3	\$50.8	\$52.3	\$53.9	\$55.5	\$57.2	\$58.9	\$60.7	\$62.5	\$64.4	\$66.3	\$68.3	\$70.3	\$72.4	\$74.6	\$76.8	\$79.2	\$81.5	\$84.0	\$86.5	\$89.1	\$91.8	\$94.5	\$97.3	\$100.3	\$103.3
4	Volusia	\$35.2	\$36.3	\$37.4	\$38.5	\$39.6	\$40.8	\$42.1	\$43.3	\$44.6	\$46.0	\$47.3	\$48.8	\$50.2	\$51.7	\$53.3	\$54.9	\$56.5	\$58.2	\$60.0	\$61.8	\$63.6	\$65.5	\$67.5	\$69.5	\$71.6	\$73.7
5	<b>Monthly Household Income</b>																										
6	Seminole	\$4.1	\$4.2	\$4.4	\$4.5	\$4.6	\$4.8	\$4.9	\$5.1	\$5.2	\$5.4	\$5.5	\$5.7	\$5.9	\$6.0	\$6.2	\$6.4	\$6.6	\$6.8	\$7.0	\$7.2	\$7.4	\$7.6	\$7.9	\$8.1	\$8.4	\$8.6
7	Volusia	\$2.9	\$3.0	\$3.1	\$3.2	\$3.3	\$3.4	\$3.5	\$3.6	\$3.7	\$3.8	\$3.9	\$4.1	\$4.2	\$4.3	\$4.4	\$4.6	\$4.7	\$4.9	\$5.0	\$5.1	\$5.3	\$5.5	\$5.6	\$5.8	\$6.0	\$6.1
<b>Scenario - Seminole - Reliable Source with ASR - Site B (1)</b>																											
8	<b>Affordability Threshold</b>																										
9	Monthly County Household Income in Service Area \$4.8 \$4.9 \$5.1 \$5.2 \$5.4 \$5.5 \$5.7 \$5.9 \$6.0 \$6.2 \$6.4 \$6.6 \$6.8 \$7.0 \$7.2 \$7.4 \$7.6 \$7.9 \$8.1 \$8.4 \$8.6																										
10	<b>Affordability Threshold:</b>																										
11	% of Median Household Income 1.50%																										
12	Maximum Affordable Monthly Water Cost \$71.48 \$73.62 \$75.83 \$78.11 \$80.45 \$82.86 \$85.35 \$87.91 \$90.55 \$93.26 \$96.06 \$98.94 \$101.91 \$104.97 \$108.12 \$111.36 \$114.70 \$118.14 \$121.69 \$125.34 \$129.10																										
13	<b>Analysis of Affordability - Benchmark Groundwater Scenario</b>																										
14	Projected Rate Increases with Groundwater 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 3.89% 2.85% 2.88% 2.11% 2.24% 0.64% 1.14% 9.50% 1.64% 2.46% 0.83% 0.52% 1.44% 1.41%																										
15	Projected Monthly Cost of Water if Groundwater were Available \$25.00 \$25.00 \$25.00 \$25.00 \$25.00 \$25.00 \$25.00 \$25.97 \$26.71 \$27.48 \$28.06 \$28.69 \$28.87 \$29.20 \$31.97 \$32.50 \$33.29 \$33.57 \$33.75 \$34.23 \$34.71																										
16	Monthly Cost of Water as a Percent of Household Income 0.52% 0.51% 0.49% 0.48% 0.47% 0.45% 0.44% 0.44% 0.44% 0.44% 0.44% 0.44% 0.43% 0.42% 0.42% 0.44% 0.44% 0.43% 0.42% 0.41% 0.40%																										
17	Affordability Check OK																										
18	<b>Analysis of Affordability - Surface Water Scenario</b>																										
19	Projected Rate Increases with Surface Water 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 42.88% 0.14% 5.32% 3.77% 2.60% 1.26% 1.50% 2.61% 1.87% 3.08% 0.83% 1.75% 1.59% 1.51%																										
20	Projected Monthly Cost of Water with Surface Water \$25.00 \$25.00 \$25.00 \$25.00 \$25.00 \$25.00 \$35.72 \$35.77 \$37.67 \$39.10 \$40.11 \$40.61 \$41.22 \$42.30 \$43.09 \$44.42 \$44.79 \$45.57 \$46.30 \$47.00																										
21	Monthly Cost of Water as a Percent of Household Income 0.52% 0.51% 0.49% 0.48% 0.47% 0.45% 0.44% 0.61% 0.59% 0.61% 0.61% 0.61% 0.60% 0.59% 0.58% 0.58% 0.57% 0.56% 0.55% 0.55%																										
22	Affordability Check OK																										
23	<b>Percentage that Water Cost in Surface Water Scenario is Higher than in Groundwater Scenario</b>																										
		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	37.54%	33.92%	37.10%	39.34%	39.83%	40.69%	41.19%	32.31%	32.61%	33.42%	33.42%	35.04%	35.25%	35.39%		

(1) This scenario resulted in the lowest cost of water after implementation of the surface water plant in a Demand Center with the highest median household income, therefore, this is the most affordable scenario evaluated.

Source: Burton & Associates



**ST. JOHNS RIVER WATER SUPPLY PROJECT**  
**AFFORDABILITY ANALYSIS**  
*SECTION III – RESULTS*

The analysis reflected in Table 11a shows that, assuming a current cost of water of \$25.00 per ERU and the scenario with the highest cost of water:

- The cost of water compared to the Volusia County median household income (the affordability index), is 0.73% in 2004,
- The affordability index reaches a maximum of 1.17% in 2011,
- This affordability index is below the affordability threshold of 1.50% in each year of the projection period.

Also, the analysis reflected in Table 11b shows that, assuming a current cost of water of \$25.00 per ERU and the scenario with the lowest cost of water:

- The cost of water compared to the Seminole County median household income (the affordability index), is 0.52% in 2004,
- The affordability index reaches a maximum of .61% in 2011,
- This affordability index is well below the affordability threshold of 1.50% in each year of the projection period.

In summary, the affordability analysis presented in this section shows that the projected cost of water, including the impact of the projected cost of surface water facilities, compared to the projected median household income for Seminole and Volusia Counties, is within generally accepted thresholds of affordability for all years of the projection period, with an assumed current monthly water cost of \$25.00 per ERU per household, escalated based upon the required rate increases in the analysis of the highest and the lowest cost scenarios.

**ST. JOHNS RIVER WATER SUPPLY PROJECT**  
**AFFORDABILITY ANALYSIS**  
**SECTION IV – CONCLUSIONS**

**IV. CONCLUSIONS**

Based upon the analyses presented in this Technical Memorandum, several conclusions can be made. The major conclusions of this analysis, based upon the evaluation of the typical local utility as defined in this analysis, are as follows<sup>14</sup>:

1. For the moderately sized local utility evaluated in this analysis, a large rate increase, or rate spike, of from about 43% to 96% will be required when surface water is implemented if no mitigating rate adjustment strategies are adopted in advance of that time.
2. This will result in the cost of retail water per household being from 39% to 83% higher in 2014, three years after surface water is assumed to be implemented, than the cost would otherwise be if groundwater were available throughout the projection period.
3. This will also result in a cumulative rate increase of from about 88% to about 132% by the end of the projection period (compared to a projected cumulative increase if groundwater were available throughout the projection period of about 39%) causing the cost of retail water per household to be from about 35% to 67% higher by the end of the projection period than the cost would otherwise be if groundwater were available throughout the projection period. This reduction compared to groundwater is due to the growth in demand that allows the fixed costs of the surface water facilities to be spread over a larger base.
4. The cost impact of surface water is considerably larger in the Volusia scenario than in the Seminole scenario. This is due primarily to 1) the fact that the surface water plant size in the Volusia Demand Center (33.63 mgd) is about 35% larger than in the Seminole Demand Center (25.00 mgd), yet the base water demand over which the plant cost are spread in the blended rate plan described herein is about 22% smaller in the Volusia Demand Center (57.76 mgd in 2010) than in the Seminole Demand Center (74.03 mgd in 2010)<sup>15</sup>, thus resulting in a higher blended unit cost in the Volusia demand Center than in the Seminole demand Center, and 2) the larger transmission costs to deliver the raw water

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<sup>14</sup> All ranges represent results for the lowest and highest cost scenarios which are the Seminole Demand Center, Reliable Source with ASR, Site B and the Volusia Demand Center, Reliable Source w/o ASR, Site E respectively.

<sup>15</sup> This happens because, even though the Volusia Demand Center has a smaller base level of water demand than does the Seminole Demand Center, the demand curve, or growth in water demand, is linear throughout the projection period in the Volusia demand Center; whereas, in Seminole County the demand curve flattens out considerably in 2015 as the County approaches build-out.

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*SECTION IV – CONCLUSIONS*

to the plant and the treated surface water to the two Volusia population clusters on the west and east of the County.

The difference in demand curves described in the footnote on this page causes the convention adopted for this Study of sizing the surface water plant to meet incremental water demands through 2024, to result in an initial facilities size and cost that is larger relative to overall water demand for the Volusia Demand Center than for the Seminole Demand Center. The higher pipeline costs exacerbate this impact, causing rather large rate spikes in 2011 in the Volusia demand Center.

In a situation such as this, the cost impact could be mitigated by phasing the plant. For instance, the initial plant in the Volusia Demand Center could be sized to meet 8 to 10 years of projected growth in demand above its initial 50% base load instead of the 14 years of projected growth in demand in the scenario evaluated herein. Reducing the plant sizing to meet 8 to 10 years of projected growth would reduce the rate increase in 2011 from about 96% to about 74%

5. Adopting equal annual rate increases of from about 4.0% to 7.2% during the years preceding the implementation of surface water will eliminate the large rate spikes mentioned in conclusion 1.
6. Adopting annual rate indexing at inflationary levels of approximately 2.5% will mitigate the rate spikes mentioned in conclusion 1 (that are projected to range from 43% to 96% to increases in the range of from about 19% to 65%), with the lowest increases being in the Seminole Demand Center, the largest increases being in the Volusia Demand Center and mid range increases being in the Seminole and SW Volusia demand Center.
7. The conclusions and observations in conclusion 4 demonstrate that the earlier that annual rate adjustment mitigation strategies are put in place, the more effective they will be in mitigating the rate shock that otherwise will accompany the implementation of surface water.
8. The affordability analysis presented in this Technical Memorandum, shows that the projected cost of water, including the impact of the projected cost of surface water facilities and operations, compared to the projected median household income for Seminole, and Volusia Counties is projected to be within generally accepted thresholds of

**ST. JOHNS RIVER WATER SUPPLY PROJECT**  
**AFFORDABILITY ANALYSIS**  
*SECTION IV – CONCLUSIONS*

affordability (less than 1.5% of median household income) for all years of the projection period, with an assumed current monthly water cost of \$25.00 per household.

9. Although the effects of implementing surface water upon the cost of retail water are projected to be well within accepted measures of affordability, the large rate increases that are projected to be required may present the perception of unaffordable water rates and consequently may be politically difficult to implement. Therefore, it is concluded that it is extremely important for local utilities to begin to implement mitigating rate adjustment strategies well in advance of the time that surface water must be implemented.
  
10. Given the timeframe in which surface water is projected to be required; the uncertainties as to the final levels of groundwater withdrawals that will be sustainable; the time required to organize a water supply governance structure and the time required to plan, design and build the required surface water facilities and bring those facilities into service; it is critical that local utilities begin the process now.

**ST. JOHNS RIVER WATER SUPPLY PROJECT  
AFFORDABILITY ANALYSIS**

*APPENDIX Aa*

**APPENDIX Aa**

**Seminole County Demand Center**

**Intermittent Source**

**ASR**

**Site K**

**Just-in-Time Rates**

**Figure**

**Number**

**Title**

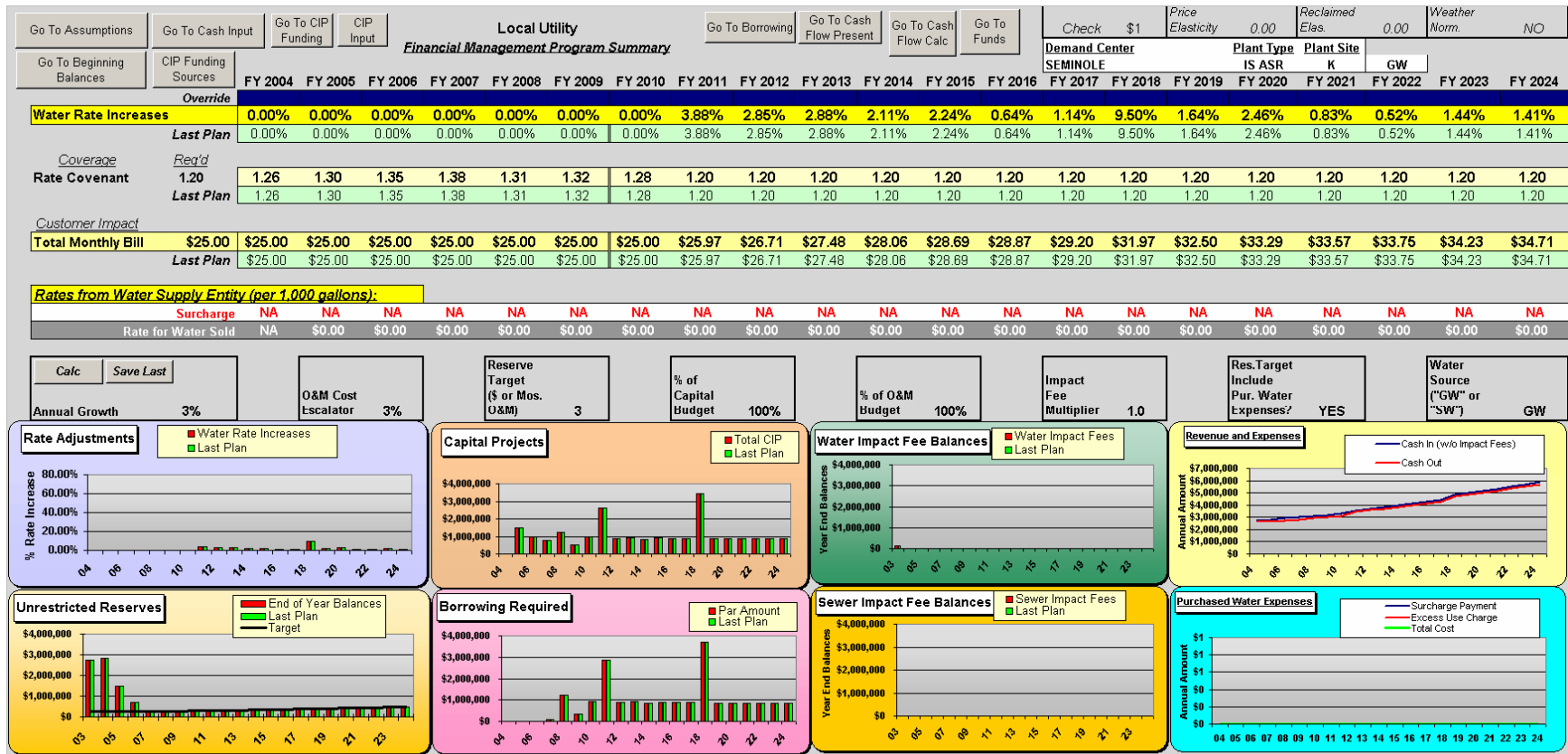
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<b>Aa1</b>	<b>Utility – Groundwater Scenario – Summary Panel</b>
<b>Aa2</b>	<b>Utility – Groundwater Scenario – Proforma</b>
<b>Aa3</b>	<b>Utility – Surface Water Scenario – Summary Panel</b>
<b>Aa4</b>	<b>Utility – Surface Water Scenario – Proforma</b>
<b>Aa5</b>	<b>Water Supply Entity – Surface Water Scenario – Summary Panel</b>
<b>Aa6</b>	<b>Water Supply Entity – Surface Water Scenario – Proforma</b>

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Aa*

## St. Johns River Water Supply Project *Affordability Analysis - Scenario Results* Scenario: Seminole Demand Center, Intermittent Source with ASR, Site K **FIGURE Aa1 - UTILITY – GROUNDWATER SCENARIO – SUMMARY PANEL**



Source: Burton & Associates

# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### APPENDIX Aa

## St. Johns River Water Supply Project

### Affordability Analysis - Scenario Results

### Scenario: Seminole Demand Center, Intermittent Source with ASR, Site K

### FIGURE Aa2 - UTILITY – GROUNDWATER SCENARIO – PROFORMA

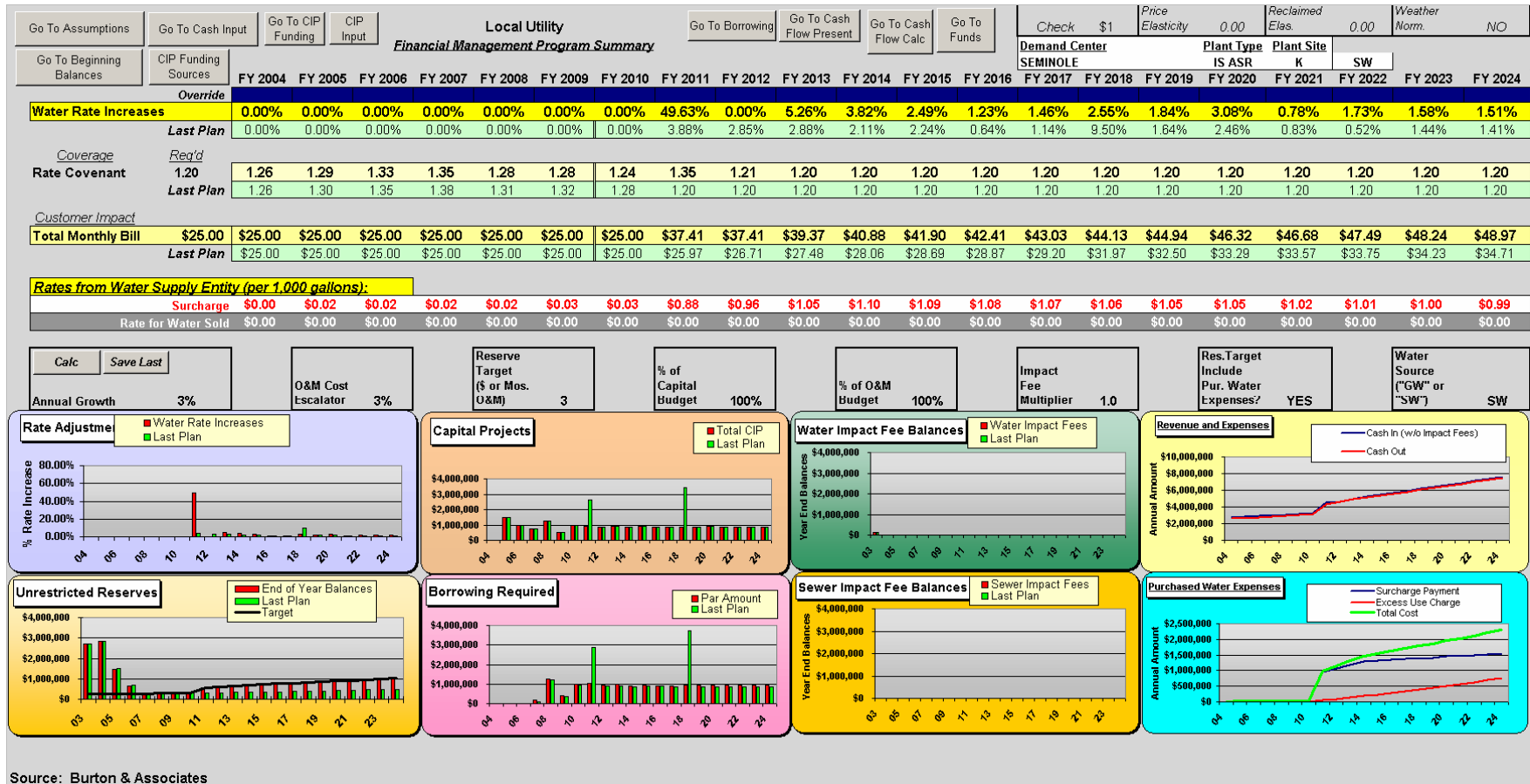
Local Utility Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																						
	Water Growth	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
		0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
<b>1 Revenue</b>																						
2 Revenue Subject to Rate Increases																						
3 Water Rate Revenue		\$1,900,000	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$2,415,646	\$2,546,639	\$2,685,443	\$2,810,523	\$2,945,210	\$3,038,053	\$3,149,509	\$3,617,702	\$3,647,033	\$3,811,355	\$3,919,902	\$4,019,247	\$4,158,478
4 Rate Revenue from Growth		\$0	\$57,000	\$58,710	\$60,471	\$62,295	\$64,154	\$66,079	\$68,061	\$70,991	\$75,139	\$80,263	\$87,630	\$95,951	\$102,990	\$110,354	\$118,741	\$127,227	\$136,983	\$147,036	\$158,419	\$171,170
5 Proposed Rate Increase		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6 Rate Revenue from Rate Increase		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$90,230	\$70,601	\$75,139	\$80,263	\$87,630	\$95,951	\$102,990	\$110,354	\$118,741	\$127,227	\$136,983	\$147,036	\$158,419
7 Total Water Rate Revenue		\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$2,415,646	\$2,546,639	\$2,685,443	\$2,810,523	\$2,945,210	\$3,038,053	\$3,149,509	\$3,617,702	\$3,647,033	\$3,811,355	\$3,919,902	\$4,019,247	\$4,158,478	
8 Other Operating Revenue		\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$388,948	\$400,616	\$412,634	\$425,014	\$437,764	\$450,897	\$464,424	\$478,366	\$492,707
9 Other Operating Revenue (1)		\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$388,948	\$400,616	\$412,634	\$425,014	\$437,764	\$450,897	\$464,424	\$478,366	\$492,707
<b>10 Total Operating Revenue</b>		\$2,172,800	\$2,237,984	\$2,305,124	\$2,374,277	\$2,445,506	\$2,518,871	\$2,594,437	\$2,751,156	\$2,892,214	\$3,041,385	\$3,177,144	\$3,322,829	\$3,427,001	\$3,550,125	\$3,830,337	\$4,072,046	\$4,249,119	\$4,370,799	\$4,483,670	\$4,636,835	\$4,794,214
<b>11 Expenses</b>																						
12 Purchased Water at Groundwater Rates		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13 Water Treatment Facility Surcharge		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14 Operations and Maintenance Expense		\$974,025	\$1,033,246	\$1,033,343	\$1,064,343	\$1,096,274	\$1,129,162	\$1,163,037	\$1,208,099	\$1,252,933	\$1,300,184	\$1,350,015	\$1,400,395	\$1,453,576	\$1,509,568	\$1,566,804	\$1,625,472	\$1,688,800	\$1,753,123	\$1,820,971	\$1,891,222	\$1,963,967
<b>15 Net Operating Income</b>		\$1,198,775	\$1,204,738	\$1,271,780	\$1,309,934	\$1,349,232	\$1,389,709	\$1,431,400	\$1,545,057	\$1,639,280	\$1,741,201	\$1,827,129	\$1,922,434	\$1,973,424	\$2,041,558	\$2,363,733	\$2,446,575	\$2,560,319	\$2,617,676	\$2,662,700	\$2,745,613	\$2,830,247
<b>16 Plus: Non Operating Income (Expense)</b>																						
17 Non Operating Revenue		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18 Interest Earned on Invested Funds		\$57,993	\$67,514	\$75,488	\$83,957	\$90,092	\$92,905	\$99,251	\$156,184	\$142,463	\$125,035	\$115,954	\$103,804	\$133,455	\$145,136	\$164,525	\$159,246	\$123,731	\$144,001	\$176,431	\$170,854	\$163,471
19 Transfers In		\$500,000	\$515,000	\$530,450	\$546,364	\$562,754	\$579,637	\$597,026	\$614,937	\$633,395	\$652,397	\$671,950	\$692,117	\$712,280	\$734,267	\$756,295	\$778,984	\$802,353	\$826,424	\$851,217	\$876,750	\$903,056
20 Water Expansion Fees		\$0	\$141,000	\$145,230	\$149,587	\$154,075	\$158,697	\$163,458	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$158,738	\$162,706	\$133,419	\$136,088	\$138,809	\$141,585	\$144,417	\$147,306	\$150,252
<b>21 Total Non Operating Income</b>		\$557,993	\$723,514	\$751,168	\$769,907	\$806,921	\$831,239	\$859,745	\$911,432	\$919,656	\$924,626	\$931,001	\$950,788	\$1,004,074	\$1,042,110	\$1,054,239	\$1,074,317	\$1,049,893	\$1,112,010	\$1,172,064	\$1,194,913	\$1,216,778
<b>22 Net Income</b>		\$1,756,768	\$1,958,252	\$2,022,948	\$2,079,841	\$2,196,153	\$2,220,948	\$2,291,145	\$2,444,488	\$2,558,937	\$2,666,027	\$2,766,130	\$2,873,222	\$2,978,498	\$3,083,667	\$3,417,972	\$3,520,892	\$3,625,212	\$3,729,687	\$3,834,764	\$3,940,525	\$4,047,025
Less: Water Expansion Fees		\$0	(\$141,000)	(\$145,230)	(\$149,587)	(\$154,075)	(\$158,697)	(\$163,458)	(\$140,301)	(\$143,809)	(\$147,404)	(\$151,089)	(\$154,866)	(\$158,738)	(\$162,706)	(\$133,419)	(\$136,088)	(\$138,809)	(\$141,585)	(\$144,417)	(\$147,306)	(\$150,252)
<b>24 Net Income Available for Debt Service</b>		\$1,756,768	\$1,817,252	\$1,877,719	\$1,930,254	\$2,002,078	\$2,062,251	\$2,127,687	\$2,314,187	\$2,415,128	\$2,518,623	\$2,615,041	\$2,718,355	\$2,819,760	\$2,920,961	\$3,284,553	\$3,384,804	\$3,486,403	\$3,588,101	\$3,690,347	\$3,793,220	\$3,896,774
<b>Senior Lien Debt Service Coverage</b>		\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391
Existing Senior Lien Debt Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Senior Lien Debt Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cumulative New Senior Lien Debt for Additional Borrowings		\$0	\$0	\$0	\$7,632	\$99,876	\$126,662	\$198,969	\$417,651	\$486,395	\$556,806	\$620,845	\$690,141	\$757,342	\$823,854	\$1,108,491	\$1,173,126	\$1,236,317	\$1,303,007	\$1,373,651	\$1,431,998	\$1,496,374
<b>Total Senior Lien Debt Service</b>		\$998,391	\$998,391	\$998,391	\$1,006,023	\$1,098,367	\$1,125,053	\$1,197,360	\$1,416,042	\$1,484,786	\$1,555,197	\$1,619,236	\$1,688,532	\$1,756,733	\$1,822,245	\$2,106,882	\$2,171,517	\$2,236,706	\$2,301,386	\$2,365,942	\$2,430,389	\$2,494,765
Senior Lien Debt Service Coverage	1.2 Req'd	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2
<b>SRF Debt Service Coverage</b>																						
23 Net Income Available for Senior Lien Debt Service Coverage		\$1,756,768	\$1,817,252	\$1,877,719	\$1,930,254	\$2,002,078	\$2,062,251	\$2,127,687	\$2,314,187	\$2,415,128	\$2,518,623	\$2,615,041	\$2,718,355	\$2,819,760	\$2,920,961	\$3,284,553	\$3,384,804	\$3,486,403	\$3,588,101	\$3,690,347	\$3,793,220	\$3,896,774
Less: Senior Lien Debt Service		(\$998,391)	(\$998,391)	(\$998,391)	(\$1,006,023)	(\$1,098,367)	(\$1,125,053)	(\$1,197,360)	(\$1,416,042)	(\$1,484,786)	(\$1,555,197)	(\$1,619,236)	(\$1,688,532)	(\$1,756,733)	(\$1,822,245)	(\$2,106,882)	(\$2,171,517)	(\$2,236,706)	(\$2,301,386)	(\$2,365,942)	(\$2,430,389)	(\$2,494,765)
<b>25 Net Income Available for SRF Debt Service Coverage</b>		\$758,377	\$818,861	\$879,328	\$924,231	\$903,711	\$937,198	\$930,327	\$898,145	\$930,342	\$963,426	\$995,805	\$1,029,823	\$1,064,027	\$1,098,716	\$1,177,671	\$1,213,267	\$1,249,695	\$1,286,703	\$1,324,405	\$1,362,811	\$1,402,009
Existing SRF Debt Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>27 Net Income Available for Debt Service</b>		\$1,756,768	\$1,817,252	\$1,877,719	\$1,930,254	\$2,002,078	\$2,062,251	\$2,127,687	\$2,314,187	\$2,415,128	\$2,518,623	\$2,615,041	\$2,718,355	\$2,819,760	\$2,920,961	\$3,284,553	\$3,384,804	\$3,486,403	\$3,588,101	\$3,690,347	\$3,793,220	\$3,896,774
Less:																						
28 Total Senior Lien Debt Service		(\$998,391)	(\$998,391)	(\$998,391)	(\$1,006,023)	(\$1,098,367)	(\$1,125,053)	(\$1,197,360)	(\$1,416,042)	(\$1,484,786)	(\$1,555,197)	(\$1,619,236)	(\$1,688,532)	(\$1,756,733)	(\$1,822,245)	(\$2,106,882)	(\$2,171,517)	(\$2,236,706)	(\$2,301,386)	(\$2,365,942)	(\$2,430,389)	(\$2,494,765)
29 State Revolving Fund Loans		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30 Payment of Debt Service With Water Impact Fees		\$116,626	\$141,875	\$145,237	\$149,587	\$154,075	\$158,697	\$163,458	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$158,738	\$162,706	\$133,419	\$136,088	\$138,809	\$141,585	\$144,417	\$147,306	\$150,252
31 Payment of Debt Service With Sewer Impact Fees		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
32 Transfer Out		(\$757,000)	(\$779,710)	(\$803,101)	(\$827,194)	(\$852,010)	(\$877,570)	(\$903,898)	(\$931,015)	(\$958,945)	(\$987,713)	(\$1,017,345)	(\$1,047,865)	(\$1,079,301)	(\$1,111,680)	(\$1,145,030)	(\$1,179,381)	(\$1,214,763)	(\$1,251,206)	(\$1,288,742)	(\$1,327,404)	(\$1,367,226)
33 Capital Outlay		(\$17,000)	(\$17,510)	(\$18,035)	(\$18,576)	(\$19,134)	(\$19,708)	(\$20,299)	(\$20,908)	(\$21,535)	(\$22,181)	(\$22,847)	(\$23,532)	(\$24,238)	(\$24,965)	(\$25,714)	(\$26,485)	(\$27,280)	(\$28,099)	(\$28,941)	(\$29,807)	(\$30,700)
<b>44 Net Cash Flow</b>		\$101,003	\$163,516	\$203,428	\$228,047	\$186,642	\$198,617	\$169,588	\$86,524	\$93,671	\$100,935	\$106,703	\$113,293	\$119,226	\$124,777	\$140,346	\$143,508	\$146,461	\$148,985	\$151,139	\$152,923	\$154,330

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Aa*

## St. Johns River Water Supply Project *Affordability Analysis - Scenario Results*

**Scenario: Seminole Demand Center, Intermittent Source with ASR, Site K**  
***FIGURE Aa3 - UTILITY – SURFACE WATER SCENARIO – SUMMARY PANEL***





# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### APPENDIX Aa

### St. Johns River Water Supply Project

#### Affordability Analysis - Scenario Results

#### Scenario: Seminole Demand Center, Intermittent Source with ASR, Site K

#### FIGURE Aa4 - UTILITY – SURFACE WATER SCENARIO – PROFORMA

		Local Utility Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																					
	Water Growth	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	
		0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	
<b>1 Revenue</b>																							
2	Revenue Subject to Rate Increases																						
3	Water Rate Revenue	\$1,900,000	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$3,479,417	\$3,566,402	\$3,847,728	\$4,094,653	\$4,301,518	\$4,463,178	\$4,641,650	\$4,855,131	\$5,043,358	\$5,302,461	\$5,450,640	\$5,655,862	\$5,860,184	
4	Rate Revenue from Growth	\$0	\$57,000	\$58,710	\$60,471	\$62,295	\$64,154	\$66,079	\$68,057	\$66,717	\$66,995	\$69,160	\$71,933	\$75,311	\$79,286	\$83,861	\$89,037	\$94,813	\$101,191	\$107,169	\$113,147	\$119,224	
5	Proposed Rate Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
6	Rate Revenue from Rate Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,154,000	\$0	\$192,166	\$150,732	\$104,498	\$54,122	\$66,892	\$120,649	\$91,124	\$158,236	\$42,130	\$96,210	\$91,204	\$90,074	
7	Total Water Rate Revenue	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$3,479,417	\$3,566,402	\$3,847,728	\$4,094,653	\$4,301,518	\$4,463,178	\$4,641,650	\$4,855,131	\$5,043,358	\$5,302,461	\$5,450,640	\$5,655,862	\$5,860,184		
8	Other Operating Revenue	\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$389,048	\$400,616	\$412,634	\$425,014	\$437,764	\$450,897	\$464,424	\$478,366	\$492,707	
9	Other Operating Revenue (1)	\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$389,048	\$400,616	\$412,634	\$425,014	\$437,764	\$450,897	\$464,424	\$478,366	\$492,707	
10	<b>Total Operating Revenue</b>	\$2,172,800	\$2,237,984	\$2,305,124	\$2,374,277	\$2,445,506	\$2,518,871	\$2,594,437	\$3,814,927	\$3,911,977	\$4,203,670	\$4,461,274	\$4,679,137	\$4,862,125	\$5,042,266	\$5,267,766	\$5,468,372	\$5,740,225	\$5,901,537	\$6,120,286	\$6,338,540	\$6,550,188	
11	<b>Expenses</b>																						
12	Purchased Water at Groundwater Rates	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$46,929	\$88,643	\$135,571	\$187,714	\$234,643	\$286,796	\$338,929	\$396,286	\$448,429	\$511,000	\$568,357	\$630,929	\$693,500	\$756,071	
13	Water Treatment Facility Surcharge	\$0	\$18,447	\$20,052	\$21,814	\$23,748	\$25,873	\$28,253	\$32,160	\$1,056,599	\$1,190,632	\$1,278,117	\$1,311,471	\$1,337,732	\$1,362,869	\$1,387,996	\$1,413,116	\$1,454,997	\$1,463,912	\$1,489,815	\$1,515,974	\$1,542,430	
14	Operations and Maintenance Expense	\$974,025	\$1,003,246	\$1,033,343	\$1,064,343	\$1,096,274	\$1,129,162	\$1,163,037	\$1,197,528	\$1,233,866	\$1,270,882	\$1,309,008	\$1,348,278	\$1,388,727	\$1,430,389	\$1,473,300	\$1,517,498	\$1,563,024	\$1,609,915	\$1,658,212	\$1,707,959	\$1,759,187	
15	<b>Net Operating Income</b>	\$1,198,775	\$1,216,291	\$1,251,729	\$1,286,120	\$1,325,483	\$1,363,836	\$1,403,147	\$1,627,920	\$1,532,470	\$1,606,856	\$1,686,434	\$1,764,745	\$1,838,881	\$1,910,680	\$1,980,164	\$2,059,328	\$2,111,203	\$2,259,353	\$2,341,330	\$2,421,107	\$2,502,469	
16	<b>Plus: Non Operating Income (Expense)</b>																						
17	Non Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
18	Interest Earned on Invested Funds	\$57,993	\$67,375	\$74,910	\$73,611	\$80,489	\$89,493	\$99,992	\$108,649	\$117,103	\$121,316	\$123,959	\$112,761	\$143,117	\$155,475	\$141,936	\$148,319	\$113,115	\$149,932	\$153,130	\$158,265	\$161,584	
19	Transfers In	\$500,000	\$515,000	\$530,450	\$545,364	\$562,754	\$579,637	\$597,026	\$614,937	\$633,365	\$652,387	\$671,958	\$692,117	\$712,880	\$734,267	\$756,295	\$778,984	\$802,363	\$826,424	\$851,217	\$876,753	\$903,066	
20	Water Expansion Fees	\$0	\$141,000	\$145,230	\$149,587	\$154,075	\$158,697	\$163,458	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$158,738	\$162,706	\$133,419	\$136,088	\$138,809	\$141,586	\$144,417	\$147,306	\$150,252	
21	<b>Total Non Operating Income</b>	\$557,993	\$723,375	\$750,690	\$769,562	\$807,318	\$874,206	\$960,476	\$863,887	\$894,297	\$921,106	\$946,956	\$959,744	\$1,014,735	\$1,052,449	\$1,031,650	\$1,063,391	\$1,054,278	\$1,117,941	\$1,148,764	\$1,182,324	\$1,214,891	
22	<b>Net Income</b>	\$1,756,768	\$1,939,666	\$2,002,319	\$2,057,682	\$2,132,801	\$2,195,662	\$2,263,622	\$2,491,807	\$2,426,767	\$2,527,691	\$2,633,390	\$2,744,489	\$2,863,616	\$2,962,538	\$3,041,834	\$3,152,718	\$3,265,481	\$3,377,294	\$3,490,094	\$3,603,431	\$3,717,360	
23	Less: Water Expansion Fees	\$0	(\$141,000)	(\$145,230)	(\$149,587)	(\$154,075)	(\$158,697)	(\$163,458)	(\$140,301)	(\$143,809)	(\$147,404)	(\$151,089)	(\$154,866)	(\$158,738)	(\$162,706)	(\$133,419)	(\$136,088)	(\$138,809)	(\$141,586)	(\$144,417)	(\$147,306)	(\$150,252)	
24	<b>Net Income Available for Debt Service</b>	\$1,756,768	\$1,798,666	\$1,857,089	\$1,908,095	\$1,978,726	\$2,036,965	\$2,100,165	\$2,351,505	\$2,282,958	\$2,380,287	\$2,482,301	\$2,589,623	\$2,694,878	\$2,799,822	\$2,908,414	\$3,016,631	\$3,126,672	\$3,235,708	\$3,345,677	\$3,456,125	\$3,567,108	
25	<b>Senior Lien Debt Service Coverage</b>																						
26	Existing Senior Lien Debt Service	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	
27	New Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
28	Cumulative New Senior Lien Debt for Additional Borrowings	\$0	\$0	\$0	\$13,744	\$108,913	\$138,877	\$214,989	\$292,564	\$365,458	\$441,526	\$510,228	\$582,864	\$653,274	\$722,905	\$795,042	\$866,315	\$936,541	\$1,009,346	\$1,080,326	\$1,151,086	\$1,221,653	
29	<b>Total Senior Lien Debt Service</b>	\$998,391	\$998,391	\$998,391	\$1,012,135	\$1,107,304	\$1,137,268	\$1,213,380	\$1,290,955	\$1,363,849	\$1,439,917	\$1,508,619	\$1,581,255	\$1,651,665	\$1,721,296	\$1,793,433	\$1,864,706	\$1,936,932	\$2,007,737	\$2,078,717	\$2,149,477	\$2,220,044	
30	Senior Lien Debt Service Coverage	1.2 Req'd	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2		
31	<b>SRF Debt Service Coverage</b>																						
32	Net Income Available for Senior Lien Debt Service Coverage	\$1,756,768	\$1,798,666	\$1,857,089	\$1,908,095	\$1,978,726	\$2,036,965	\$2,100,165	\$2,351,505	\$2,282,958	\$2,380,287	\$2,482,301	\$2,589,623	\$2,694,878	\$2,799,822	\$2,908,414	\$3,016,631	\$3,126,672	\$3,235,708	\$3,345,677	\$3,456,125	\$3,567,108	
33	Less: Senior Lien Debt Service	(\$998,391)	(\$998,391)	(\$998,391)	(\$1,012,135)	(\$1,107,304)	(\$1,137,268)	(\$1,213,380)	(\$1,290,955)	(\$1,363,849)	(\$1,439,917)	(\$1,508,619)	(\$1,581,255)	(\$1,651,665)	(\$1,721,296)	(\$1,793,433)	(\$1,864,706)	(\$1,936,932)	(\$2,007,737)	(\$2,078,717)	(\$2,149,477)	(\$2,220,044)	
34	Net Income Available for SRF Debt Service Coverage	\$758,377	\$800,275	\$858,698	\$895,960	\$871,422	\$899,697	\$886,785	\$1,060,550	\$919,109	\$940,370	\$973,682	\$1,008,368	\$1,043,213	\$1,078,526	\$1,114,981	\$1,151,925	\$1,189,740	\$1,227,971	\$1,266,980	\$1,306,648	\$1,347,064	
35	Existing SRF Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
36	SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
37	<b>Net Income Available for Debt Service</b>	\$1,756,768	\$1,798,666	\$1,857,089	\$1,908,095	\$1,978,726	\$2,036,965	\$2,100,165	\$2,351,505	\$2,282,958	\$2,380,287	\$2,482,301	\$2,589,623	\$2,694,878	\$2,799,822	\$2,908,414	\$3,016,631	\$3,126,672	\$3,235,708	\$3,345,677	\$3,456,125	\$3,567,108	
38	Less:																						
39	Total Senior Lien Debt Service	(\$998,391)	(\$998,391)	(\$998,391)	(\$1,012,135)	(\$1,107,304)	(\$1,137,268)	(\$1,213,380)	(\$1,290,955)	(\$1,363,849)	(\$1,439,917)	(\$1,508,619)	(\$1,581,255)	(\$1,651,665)	(\$1,721,296)	(\$1,793,433)	(\$1,864,706)	(\$1,936,932)	(\$2,007,737)	(\$2,078,717)	(\$2,149,477)	(\$2,220,044)	
40	State Revolving Fund Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
41	Payment of Debt Service With Water Impact Fees	\$116,626	\$141,875	\$145,237	\$149,587	\$154,075	\$158,697	\$163,458	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$158,738	\$162,706	\$133,419	\$136,088	\$138,809	\$141,586	\$144,417	\$147,306	\$150,252	
42	Payment of Debt Service With Sewer Impact Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
43	Transfer Out	(\$757,000)	(\$779,710)	(\$803,101)	(\$827,194)	(\$852,010)	(\$877,570)	(\$903,898)	(\$931,015)	(\$958,945)	(\$987,713)	(\$1,017,345)	(\$1,047,865)	(\$1,079,301)	(\$1,111,680)	(\$1,145,030)	(\$1,179,381)	(\$1,214,763)	(\$1,251,206)	(\$1,288,742)	(\$1,327,404)	(\$1,367,206)	
44	Capital Outlay	(\$17,000)	(\$17,510)	(\$18,035)	(\$18,576)	(\$19,134)	(\$19,708)	(\$20,299)	(\$20,908)	(\$21,535)	(\$22,181)	(\$22,847)	(\$23,532)	(\$24,238)	(\$24,965)	(\$25,714)	(\$26,485)	(\$27,280)	(\$28,099)	(\$28,944)	(\$29,816)	(\$30,704)	
45	<b>Net Cash Flow</b>	\$101,003	\$144,930	\$182,798	\$199,776	\$154,353	\$161,116	\$126,046	\$248,929	\$82,438	\$77,879	\$84,580	\$91,837	\$98,412	\$104,587	\$77,656	\$82,146						

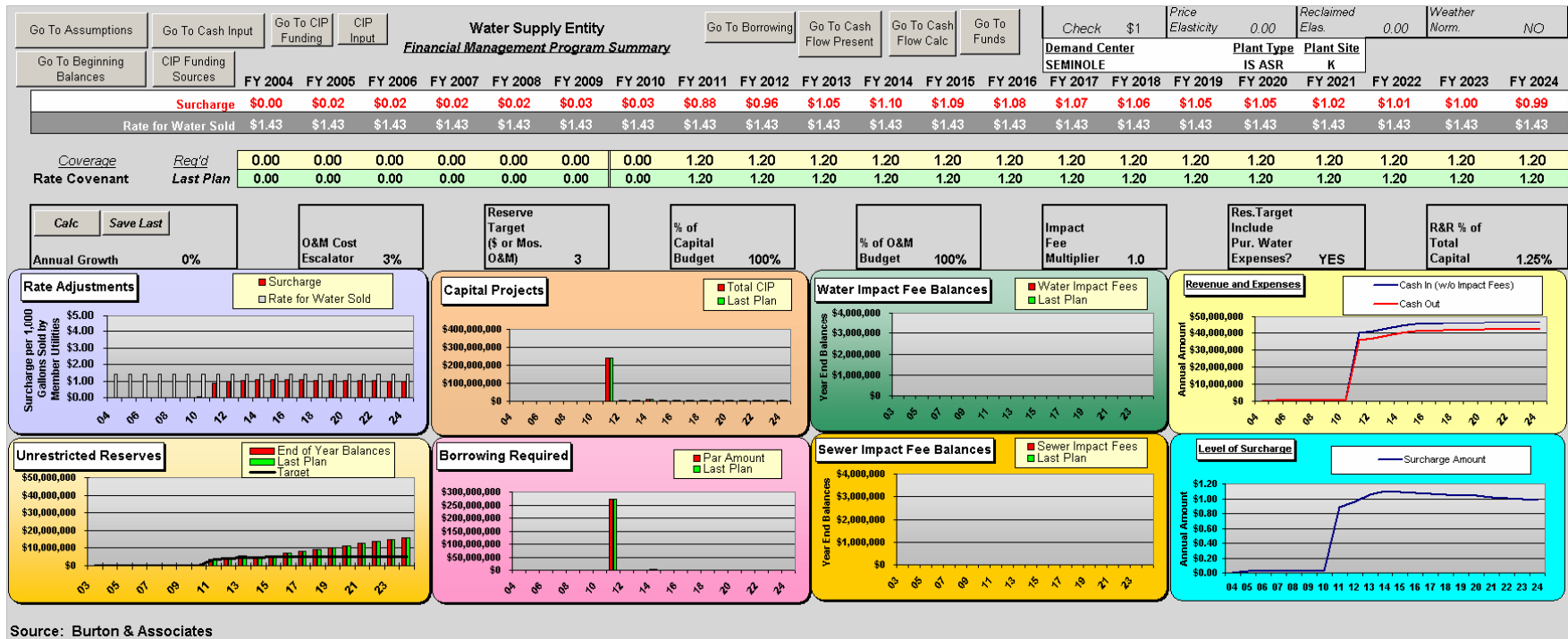
# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Aa*

## St. Johns River Water Supply Project Affordability Analysis - Scenario Results

**Scenario: Seminole Demand Center, Intermittent Source with ASR, Site K**

**FIGURE Aa5 - WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – SUMMARY PANEL**



## St. Johns River Water Supply Project

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS APPENDIX Aa

## Affordability Analysis - Scenario Results

**Scenario: Seminole Demand Center, Intermittent Source with ASR, Site K**

### **FIGURE Aa6 - WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – PROFORMA**

Water Supply Entity Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																					
	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>1 Revenue</b>																					
2 Surcharge Revenue	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$2,914,352	\$2,717,696	\$3,947,321	\$3,915,167	\$3,349,422	\$3,334,824	\$3,379,159	\$3,011,466	\$3,832,406	\$3,023,199	\$3,406,214	\$3,165,700	\$3,192,055	\$3,176,257
3 Delivered Water Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,380,300	\$9,241,700	\$9,103,100	\$9,964,600	\$10,825,900	\$11,102,267	\$11,378,614	\$11,654,971	\$11,931,329	\$12,207,686	\$12,415,214	\$12,622,743	\$12,830,271	\$13,037,800
<b>4 Total Operating Revenue</b>	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$32,294,652	\$35,959,396	\$40,050,421	\$42,879,667	\$44,775,322	\$44,437,081	\$44,857,773	\$44,666,437	\$44,763,735	\$45,230,885	\$44,821,428	\$44,788,443	\$44,752,327	\$44,714,057
<b>5 Expenses</b>																					
6 Operations and Maintenance Expense	\$0	\$515,000	\$556,973	\$602,366	\$651,459	\$704,552	\$761,973	\$1,846,967	\$1,620,729	\$1,597,233	\$1,886,926	\$2,120,290	\$2,292,754	\$2,452,680	\$2,600,380	\$2,736,813	\$2,862,593	\$2,872,777	\$2,879,927	\$2,881,946	\$2,882,812
<b>8 Net Operating Income</b>	\$0	(\$3,807)	(\$5,076)	(\$6,344)	(\$7,613)	(\$8,882)	(\$8,882)	\$17,447,685	\$19,708,667	\$22,453,188	\$23,992,741	\$24,155,032	\$24,144,328	\$24,105,193	\$24,066,057	\$24,026,922	\$24,368,291	\$23,948,651	\$23,909,516	\$23,870,381	\$23,831,245
<b>9 Plus: Non Operating Income (Expense)</b>																					
10 Non Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11 Interest Earned on Invested Funds	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$8,882	\$7,603,709	\$5,242,726	\$2,498,205	\$1,219,379	\$1,057,088	\$1,067,792	\$1,106,927	\$1,146,063	\$1,185,198	\$843,829	\$1,263,469	\$1,302,604	\$1,341,739	\$1,380,875
12 Transfers In	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13 Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>14 Total Non Operating Income</b>	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$8,882	\$7,603,709	\$5,242,726	\$2,498,205	\$1,219,379	\$1,057,088	\$1,067,792	\$1,106,927	\$1,146,063	\$1,185,198	\$843,829	\$1,263,469	\$1,302,604	\$1,341,739	\$1,380,875
<b>15 Net Income</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$24,951,394	\$24,951,394	\$24,951,394	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120
16 Less: Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>17 Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$24,951,394	\$24,951,394	\$24,951,394	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120
<b>Senior Lien Debt Service Coverage</b>																					
18 Existing Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
19 New Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
20 Cumulative New Senior Lien Debt for Additional Borrowings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>22 Total Senior Lien Debt Service</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23 Senior Lien Debt Service Coverage	1.2 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
<b>24 SRF Debt Service Coverage</b>																					
25 Net Income Available for Senior Lien Debt Service Coverage	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$24,951,394	\$24,951,394	\$24,951,394	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120
26 Less: Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>27 Net Income Available for SRF Debt Service Coverage</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$4,158,566	\$4,158,566	\$4,158,566	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020
28 Existing SRF Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
29 SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>30 Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$24,951,394	\$24,951,394	\$24,951,394	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120	\$25,212,120
31 Less:																					
32 Total Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$20,792,828)	(\$20,792,828)	(\$20,792,828)	(\$21,010,100)	(\$21,010,100)	(\$21,010,100)	(\$21,010,100)	(\$21,010,100)	(\$21,010,100)	(\$21,010,100)	(\$21,010,100)	(\$21,010,100)	(\$21,010,100)	(\$21,010,100)
33 State Revolving Fund Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
34 Payment of Debt Service With Water Impact Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
35 Transfer Out	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
36 Capital Outlay	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>37 Net Cash Flow</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$4,158,566	\$4,158,566	\$4,158,566	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020
38 Unrestricted Reserve Fund - Beginning of Year Balance	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$4,786,440	\$5,861,138	\$4,721,731	\$5,839,884	\$6,968,036	\$8,076,188	\$9,194,341	\$10,312,493	\$11,430,645	\$12,548,798	\$13,666,950	\$14,785,102
39 Minimum Working Capital Reserve Target	\$0	\$128,750	\$139,243	\$150,591	\$162,885	\$176,138	\$190,493	\$3,711,742	\$4,062,682	\$4,399,308	\$4,721,731	\$5,030,072	\$5,073,189	\$5,113,145	\$5,150,095	\$5,184,203	\$5,215,648	\$5,218,194	\$5,219,732	\$5,220,487	\$5,220,703
40 Reserve Fund Balance in Excess of Working Capital Target	\$250,000	\$125,028	\$114,535	\$103,187	\$90,914	\$77,640	\$63,285	\$0	\$0	\$387,132	\$1,139,406	\$0	\$766,895	\$1,844,891	\$2,926,093	\$4,010,137	\$5,096,845	\$6,212,451	\$7,329,066	\$8,446,463	\$9,564,399
41 Less: Reserve Fund Balance used for Cash Flow	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>42 Reserve Fund Balance in Excess of Working Capital Target Net of Current Year Cash Flow</b>	\$250,000	\$125,028	\$114,535	\$103,187	\$90,914	\$77,640	\$63,285	\$0	\$0	\$387,132	\$1,139,406	\$0	\$766,895	\$1,844,891	\$2,926,093	\$4,010,137	\$5,096,845	\$6,212,451	\$7,329,066	\$8,446,463	\$9,564,399
<b>43 Net Cash Flow After Use of Reserve Funds</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$4,158,566	\$4,158,566	\$4,158,566	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020
44 Less: CIP Projects Designated to be Paid with Cash	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>45 Net Cash Flow to Unrestricted Reserve Fund</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$4,158,566	\$4,158,566	\$4,158,566	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020
<b>Unrestricted Reserve Fund - Beginning of Year Balance</b>	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$4,786,440	\$5,861,138	\$4,721,731	\$5,839,884	\$6,968,036	\$8,076,188	\$9,194,341	\$10,312,493	\$11,430,645	\$12,548,798	\$13,666,950	\$14,785,102
46 Cash In/Out from Rate Revenues	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$4,158,566	\$4,158,566	\$4,158,566	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020	\$4,202,020
47 Less: Reserve Fund Balance used for Cash Flow	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
48 Less: Projects Paid with Reserve Funds (Non Specified Funding)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$700,602)	(\$3,083,868)	(\$3,083,868)	(\$5,341,426)	(\$3,083,868)	(\$3,083,868)	(\$3,083,868)	(\$3,083,868)	(\$3,083,868)	(\$3,083,868)	(\$3,083,868)	(\$3,083,868)	(\$3,083,868)	(\$3,083,868)
49 Unrestricted Reserve Fund - End of Year Balance	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$3,711,742	\$4,786,440	\$5,861,138	\$4,721,731	\$5,839,884	\$6,968,036	\$8,076,188	\$9,194,341	\$10,312,493	\$11,430,645	\$12,548,798	\$13,666,950	\$14,785,102	\$15,903,255
50 Minimum Working Capital Reserve Target	\$0	\$128,750	\$139,243	\$150,591	\$162,885	\$176,138	\$190,493	\$3,711,742	\$4,062,682	\$4,399,308	\$4,721,731	\$5,030,072	\$5,073,189	\$5,113,145	\$5,150,095	\$5,184,203	\$5,215,648	\$5,218,194	\$5,219,732	\$5,220,487	\$5,220,703
<b>52 Excess (Deficiency) of Working Capital Reserves to Target</b>	\$253,778	\$125,028	\$114,535	\$103,187	\$90,914	\$77,640	\$63,285	(\$0)	\$723,758	\$1,481,830	(\$0)	\$809,811	\$1,884,848	\$2,963,043	\$4,044,246	\$5,128,290	\$6,214,997	\$7,330,603	\$8,447,218	\$9,564,616	\$10,682,552

Source: Burton & Associates  
C:\Data\SRF\MD\Undy\SRF\MD V\Models as of 2-1-2004\FAMS-Water Supply Entity-SRF\MD\_416\FR-Forma

## APPENDIX Ab Seminole County Demand Center

**ST. JOHNS RIVER WATER SUPPLY PROJECT  
AFFORDABILITY ANALYSIS**

*APPENDIX Ab*

**Reliable Source  
ASR  
Site K  
Just-in-Time Rates**

**Figure**

**Number**

**Title**

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<b>Ab1</b>	<b>Utility – Groundwater Scenario – Summary Panel</b>
<b>Ab2</b>	<b>Utility – Groundwater Scenario – Proforma</b>
<b>Ab3</b>	<b>Utility – Surface Water Scenario – Summary Panel</b>
<b>Ab4</b>	<b>Utility – Surface Water Scenario – Proforma</b>
<b>Ab5</b>	<b>Water Supply Entity – Surface Water Scenario – Summary Panel</b>
<b>Ab6</b>	<b>Water Supply Entity – Surface Water Scenario – Proforma</b>

**ST. JOHNS RIVER WATER SUPPLY PROJECT  
AFFORDABILITY ANALYSIS**

*APPENDIX Ab*

**St. Johns River Water Supply Project  
Affordability Analysis - Scenario Results**

**Scenario: Seminole Demand Center, Reliable Source with ASR, Site K**

**FIGURE Ab1 - UTILITY – GROUNDWATER SCENARIO –SUMMARY PANEL**

**&**

**FIGURE Ab2 - UTILITY – GROUNDWATER SCENARIO – PROFORMA**

**Same as Figures Aa1 and Aa2**

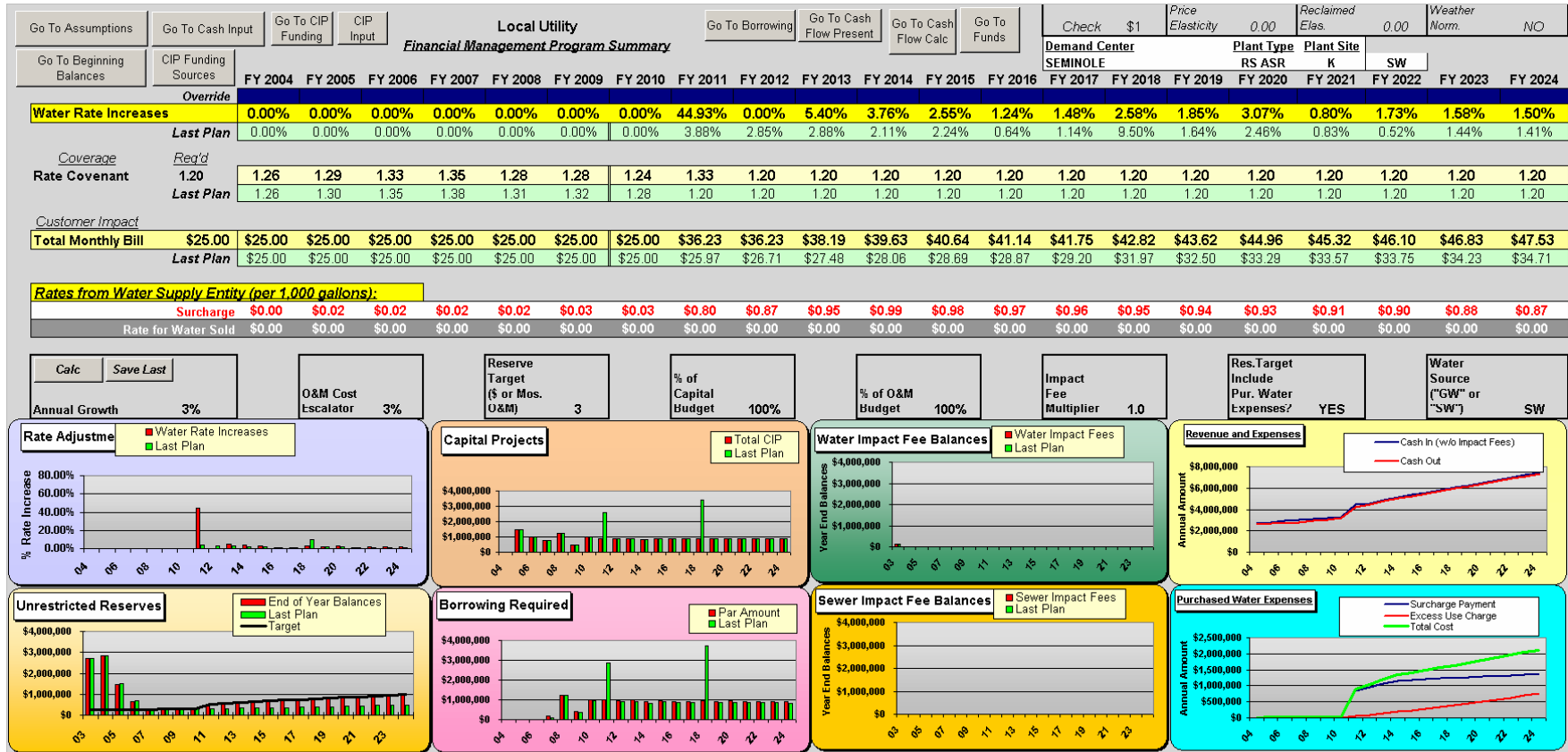
# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Ab*

## St. Johns River Water Supply Project Affordability Analysis - Scenario Results

Scenario: Seminole Demand Center, Reliable Source with ASR, Site K

**FIGURE Ab3 - UTILITY – SURFACE WATER SCENARIO – SUMMARY PANEL**



Source: Burton & Associates

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Ab*

## St. Johns River Water Supply Project Affordability Analysis - Scenario Results

### Scenario: Seminole Demand Center, Reliable Source with ASR, Site K FIGURE Ab4 - UTILITY – SURFACE WATER SCENARIO – PROFORMA

		Local Utility Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																				
		FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
		0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
1	<b>Revenue</b>																					
2	Revenue Subject to Rate Increases																					
3	Water Rate Revenue	\$1,900,000	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$3,370,306	\$3,454,564	\$3,732,103	\$3,969,302	\$4,172,313	\$4,329,444	\$4,503,263	\$4,711,921	\$4,895,085	\$5,146,313	\$5,291,434	\$5,490,763	\$5,688,947
4	Rate Revenue from Growth	\$0	\$57,000	\$58,710	\$60,471	\$62,285	\$64,154	\$66,079	\$68,059	\$84,258	\$86,354	\$93,303	\$99,233	\$104,308	\$108,236	\$90,066	\$94,238	\$97,902	\$102,926	\$105,929	\$109,815	\$113,779
5	Proposed Rate Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	Rate Revenue from Rate Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,044,889	\$0	\$191,175	\$143,897	\$103,778	\$52,823	\$65,603	\$118,574	\$88,927	\$153,327	\$42,196	\$93,501	\$88,370	\$87,102
7	Total Water Rate Revenue	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$3,370,306	\$3,454,564	\$3,732,103	\$3,969,302	\$4,172,313	\$4,329,444	\$4,503,263	\$4,711,923	\$4,895,087	\$5,146,314	\$5,291,436	\$5,490,764	\$5,688,948	\$5,890,828
8	Other Operating Revenue																					
9	Other Operating Revenue (1)	\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$388,948	\$400,616	\$412,634	\$425,014	\$437,764	\$450,897	\$464,424	\$478,356	\$492,700
10	<b>Total Operating Revenue</b>	\$2,172,800	\$2,237,984	\$2,305,124	\$2,374,277	\$2,445,506	\$2,518,871	\$2,594,437	\$3,705,815	\$3,800,138	\$4,088,045	\$4,335,923	\$4,549,921	\$4,716,392	\$4,903,879	\$5,124,557	\$5,320,100	\$5,584,078	\$5,742,332	\$5,955,188	\$6,167,304	\$6,382,535
11	<b>Expenses</b>																					
12	Purchased Water at Groundwater Rates	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$46,929	\$88,643	\$135,571	\$187,714	\$234,643	\$286,786	\$338,929	\$396,286	\$448,429	\$511,000	\$568,357	\$630,929	\$693,500	\$756,071
13	Water Treatment Facility Surcharge	\$0	\$18,447	\$20,052	\$21,814	\$23,748	\$25,873	\$28,253	\$30,984	\$35,055	\$45,939	\$60,565	\$80,992	\$110,201	\$143,739	\$193,873	\$259,313	\$344,417	\$454,417	\$594,417	\$774,417	\$1,004,417
14	Operations and Maintenance Expense	\$974,025	\$1,003,246	\$1,033,343	\$1,064,343	\$1,096,274	\$1,129,162	\$1,163,037	\$1,197,928	\$1,233,866	\$1,270,882	\$1,309,008	\$1,348,278	\$1,388,727	\$1,430,389	\$1,473,300	\$1,517,498	\$1,563,024	\$1,609,916	\$1,658,212	\$1,707,959	\$1,759,197
15	<b>Net Operating Income</b>	\$1,198,775	\$1,216,291	\$1,251,729	\$1,288,120	\$1,325,493	\$1,363,836	\$1,403,147	\$1,606,404	\$1,521,691	\$1,608,027	\$1,687,746	\$1,786,019	\$1,840,078	\$1,911,203	\$2,011,232	\$2,090,299	\$2,210,736	\$2,260,169	\$2,342,056	\$2,421,747	\$2,503,022
16	<b>Plus: Non Operating Income (Expense)</b>																					
17	Non Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18	Interest Earned on Invested Funds	\$57,993	\$67,375	\$74,910	\$73,611	\$80,489	\$83,493	\$89,992	\$108,266	\$116,292	\$120,382	\$122,854	\$111,642	\$141,958	\$154,274	\$140,691	\$147,028	\$113,104	\$148,535	\$151,886	\$156,765	\$160,025
19	Transfers In	\$500,000	\$515,000	\$530,450	\$546,364	\$562,754	\$579,637	\$597,026	\$614,937	\$633,395	\$652,387	\$671,958	\$692,117	\$712,880	\$734,267	\$756,295	\$778,984	\$802,363	\$826,424	\$851,217	\$876,753	\$903,056
20	Water Expansion Fees	\$0	\$141,000	\$145,230	\$149,687	\$154,075	\$158,697	\$163,589	\$168,764	\$174,200	\$179,885	\$185,801	\$191,958	\$198,366	\$205,036	\$211,989	\$219,247	\$226,825	\$234,643	\$242,721	\$251,069	\$259,700
21	<b>Total Non Operating Income</b>	\$557,993	\$723,375	\$750,590	\$769,562	\$807,816	\$831,826	\$869,478	\$903,504	\$939,485	\$970,173	\$995,901	\$1,017,817	\$1,051,247	\$1,030,405	\$1,182,029	\$1,054,266	\$1,116,544	\$1,147,319	\$1,180,824	\$1,213,332	\$1,245,756
22	<b>Net Income</b>	\$1,756,768	\$1,939,666	\$2,002,319	\$2,057,682	\$2,132,801	\$2,195,662	\$2,263,622	\$2,469,908	\$2,415,176	\$2,528,200	\$2,633,647	\$2,744,644	\$2,853,655	\$2,962,450	\$3,041,637	\$3,152,368	\$3,265,002	\$3,376,713	\$3,489,375	\$3,602,517	\$3,716,354
23	Less: Water Expansion Fees	\$0	(\$141,000)	(\$145,230)	(\$149,587)	(\$154,075)	(\$158,697)	(\$163,589)	(\$168,764)	(\$174,200)	(\$179,885)	(\$185,801)	(\$191,958)	(\$198,366)	(\$205,036)	(\$211,989)	(\$219,247)	(\$226,825)	(\$234,643)	(\$242,721)	(\$251,069)	(\$259,700)
24	<b>Net Income Available for Debt Service</b>	\$1,756,768	\$1,798,666	\$1,857,089	\$1,908,095	\$1,978,726	\$2,036,965	\$2,100,165	\$2,292,607	\$2,271,367	\$2,380,796	\$2,482,558	\$2,589,778	\$2,694,917	\$2,799,744	\$2,908,218	\$3,016,311	\$3,126,193	\$3,235,127	\$3,344,958	\$3,455,265	\$3,566,103
25	<b>Senior Lien Debt Service Coverage</b>																					
26	Existing Senior Lien Debt Service	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391
27	New Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
28	Cumulative New Senior Lien Debt for Additional Borrowings	\$0	\$0	\$13,744	\$108,913	\$138,877	\$163,458	\$140,301	\$366,234	\$441,950	\$510,442	\$582,993	\$653,306	\$722,840	\$794,878	\$866,048	\$936,142	\$1,009,862	\$1,077,727	\$1,150,369	\$1,228,815	\$1,302,815
29	<b>Total Senior Lien Debt Service</b>	\$990,391	\$990,391	\$990,391	\$1,012,135	\$1,107,304	\$1,137,268	\$1,213,380	\$1,290,955	\$1,364,625	\$1,440,341	\$1,508,833	\$1,581,384	\$1,651,697	\$1,721,231	\$1,793,269	\$1,864,439	\$1,936,533	\$2,007,253	\$2,078,118	\$2,148,760	\$2,219,306
30	Senior Lien Debt Service Coverage	1.2 Req'd	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2
31	<b>SRF Debt Service Coverage</b>																					
32	Net Income Available for Senior Lien Debt Service Coverage	\$1,756,768	\$1,798,666	\$1,857,089	\$1,908,095	\$1,978,726	\$2,036,965	\$2,100,165	\$2,292,607	\$2,271,367	\$2,380,796	\$2,482,558	\$2,589,778	\$2,694,917	\$2,799,744	\$2,908,218	\$3,016,311	\$3,126,193	\$3,235,127	\$3,344,958	\$3,455,265	\$3,566,103
33	Less: Senior Lien Debt Service	(\$990,391)	(\$990,391)	(\$990,391)	(\$1,012,135)	(\$1,107,304)	(\$1,137,268)	(\$1,213,380)	(\$1,290,955)	(\$1,364,625)	(\$1,440,341)	(\$1,508,833)	(\$1,581,384)	(\$1,651,697)	(\$1,721,231)	(\$1,793,269)	(\$1,864,439)	(\$1,936,533)	(\$2,007,253)	(\$2,078,118)	(\$2,148,760)	(\$2,219,306)
34	<b>Net Income Available for SRF Debt Service Coverage</b>	\$766,377	\$808,275	\$866,698	\$895,960	\$871,422	\$899,697	\$886,785	\$1,036,652	\$906,742	\$940,455	\$973,725	\$1,008,394	\$1,043,200	\$1,078,513	\$1,114,949	\$1,151,872	\$1,189,660	\$1,227,874	\$1,266,840	\$1,306,505	\$1,346,897
35	Existing SRF Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
36	SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
37	<b>Net Income Available for Debt Service</b>	\$1,756,768	\$1,798,666	\$1,857,089	\$1,908,095	\$1,978,726	\$2,036,965	\$2,100,165	\$2,292,607	\$2,271,367	\$2,380,796	\$2,482,558	\$2,589,778	\$2,694,917	\$2,799,744	\$2,908,218	\$3,016,311	\$3,126,193	\$3,235,127	\$3,344,958	\$3,455,265	\$3,566,103
38	Less:																					
39	Total Senior Lien Debt Service	(\$990,391)	(\$990,391)	(\$990,391)	(\$1,012,135)	(\$1,107,304)	(\$1,137,268)	(\$1,213,380)	(\$1,290,955)	(\$1,364,625)	(\$1,440,341)	(\$1,508,833)	(\$1,581,384)	(\$1,651,697)	(\$1,721,231)	(\$1,793,269)	(\$1,864,439)	(\$1,936,533)	(\$2,007,253)	(\$2,078,118)	(\$2,148,760)	(\$2,219,306)
40	State Revolving Fund Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
41	Payment of Debt Service With Water Impact Fees	\$116,626	\$141,875	\$145,237	\$149,587	\$154,075	\$158,697	\$163,458	\$140,301	\$143,809	\$147,404	\$151,069	\$154,866	\$158,738	\$162,706	\$133,419	\$136,088	\$138,809	\$141,586	\$144,417	\$147,306	\$150,252
42	Payment of Debt Service With Sewer Impact Fees	(\$757,000)	(\$779,710)	(\$803,101)	(\$827,194)	(\$852,010)	(\$877,570)	(\$903,898)	(\$930,915)	(\$959,945)	(\$987,719)	(\$1,017,345)	(\$1,047,855)	(\$1,079,301)	(\$1,111,689)	(\$1,145,030)	(\$1,179,381)	(\$1,214,763)	(\$1,251,200)	(\$1,288,742)	(\$1,327,404)	(\$1,367,226)
43	Transfer Out	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
44	Capital Outlay	(\$17,000)	(\$17,510)	(\$18,035)	(\$18,576)	(\$19,134)	(\$19,708)	(\$20,299)	(\$20,908)	(\$21,535)	(\$22,181)	(\$22,847)	(\$23,532)	(\$24,238)	(\$24,965)	(\$25,714)	(\$26,485)	(\$27,280)	(\$28,099)	(\$28,941)	(\$29,810)	(\$30,704)
45	<b>Net Cash Flow</b>	\$101,003	\$144,930	\$182,798	\$199,776	\$154,353	\$161,116	\$126,046	\$227,030	\$70,071	\$77,964	\$84,622	\$91,863	\$98,419	\$104,574	\$77,623	\$82,082	\$86,426	\$90,156	\$93,574	\$96,597	\$99,218
46	Unrestricted Reserve Fund - Beginning of Year Balance	\$2,729,000	\$2,830,003	\$1,474,933	\$657,731	\$271,539	\$280,006	\$288,759	\$297,823	\$524,853	\$569,612	\$620,004	\$662,044	\$690,978	\$719,578	\$748,174	\$778,331	\$807,450	\$843,336	\$870,541	\$903,283	\$936,389
47	Minimum Working Capital Reserve Target	\$243,506	\$255,423	\$263,349	\$271,539	\$280,006	\$288,759	\$297,823	\$524,853	\$569,612	\$620,004	\$662,044	\$690,978	\$719,578	\$748,174	\$778,331	\$807,450	\$843,336	\$870,541	\$903,283	\$936,389	\$969,878
48	Reserve Fund Balance in Excess of Working Capital Target	\$2,485,494	\$2,574,580	\$1,211,584	\$386,192	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
49	Less: Reserve Fund Balance used for Cash Flow	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
50	<b>Reserve Fund Balance in Excess of Working Capital Target Net of Current Year Cash Flow</b>	\$2,48																				

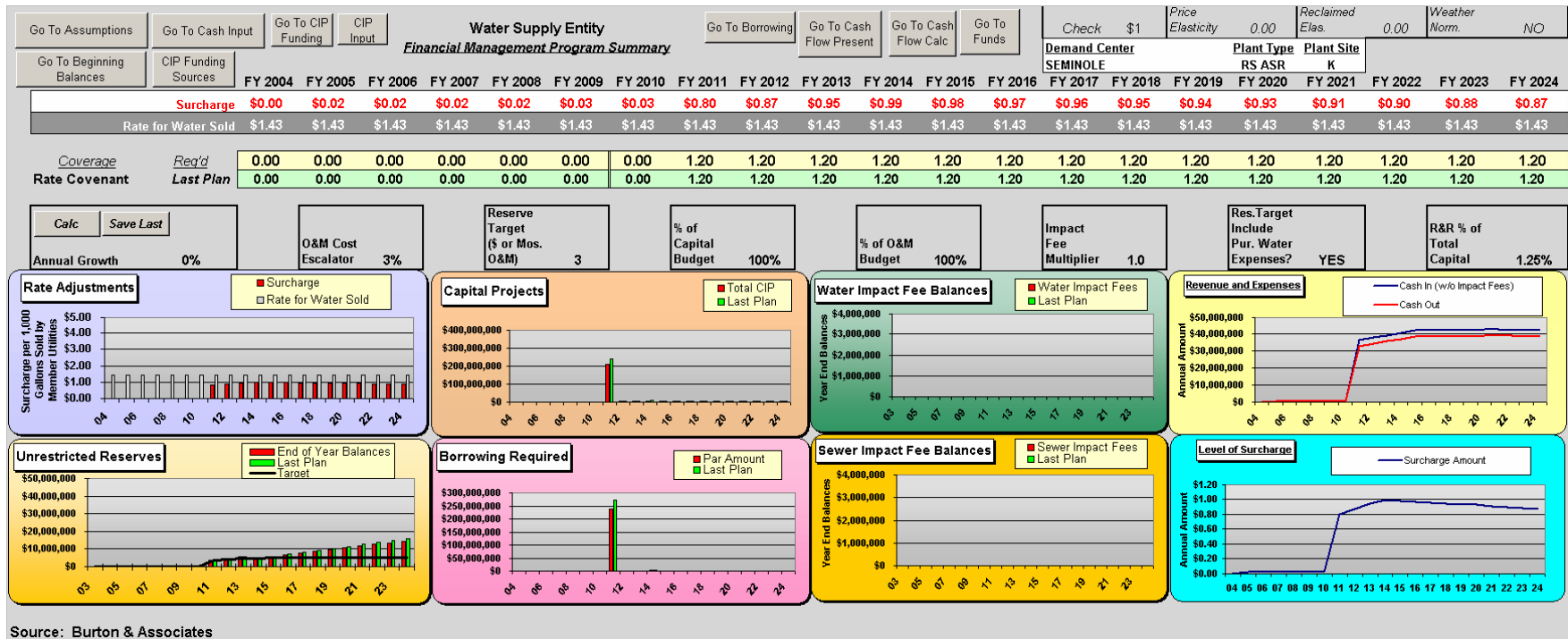
# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Ab*

## St. Johns River Water Supply Project Affordability Analysis - Scenario Results

**Scenario: Seminole Demand Center, Reliable Source with ASR, Site K**

**FIGURE Ab5 - WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – SUMMARY PANEL**





# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### APPENDIX Ab

### St. Johns River Water Supply Project

#### Affordability Analysis - Scenario Results

#### Scenario: Seminole Demand Center, Reliable Source with ASR, Site K

### FIGURE Ab6 - WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – PROFORMA

Water Supply Entity		Water and Sewer System Financial Management Program Summary																				
Forecast of Net Revenues and Debt Service Coverage																						
	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	
<b>1 Revenue</b>																						
2																						
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4																						
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Source: Burton & Associates  
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**ST. JOHNS RIVER WATER SUPPLY PROJECT  
AFFORDABILITY ANALYSIS**

*APPENDIX Ac*

**APPENDIX Ac**

**Seminole County Demand Center  
Reliable Source  
Without ASR  
Site K  
Just-in-Time Rates**

**Figure**

**Number**

**Title**

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<b>Ac1</b>	<b>Utility – Groundwater Scenario – Summary Panel</b>
<b>Ac2</b>	<b>Utility – Groundwater Scenario – Proforma</b>
<b>Ac3</b>	<b>Utility – Surface Water Scenario – Summary Panel</b>
<b>Ac4</b>	<b>Utility – Surface Water Scenario – Proforma</b>
<b>Ac5</b>	<b>Water Supply Entity – Surface Water Scenario – Summary Panel</b>
<b>Ac6</b>	<b>Water Supply Entity – Surface Water Scenario – Proforma</b>

**ST. JOHNS RIVER WATER SUPPLY PROJECT  
AFFORDABILITY ANALYSIS**

*APPENDIX Ac*

**St. Johns River Water Supply Project  
Affordability Analysis - Scenario Results**

**Scenario: Seminole Demand Center, Reliable Source without ASR, Site K  
FIGURE Ac1 - UTILITY – GROUNDWATER SCENARIO – SUMMARY PANEL**

**&**

**FIGURE Ac2 - UTILITY – GROUNDWATER SCENARIO – PROFORMA**

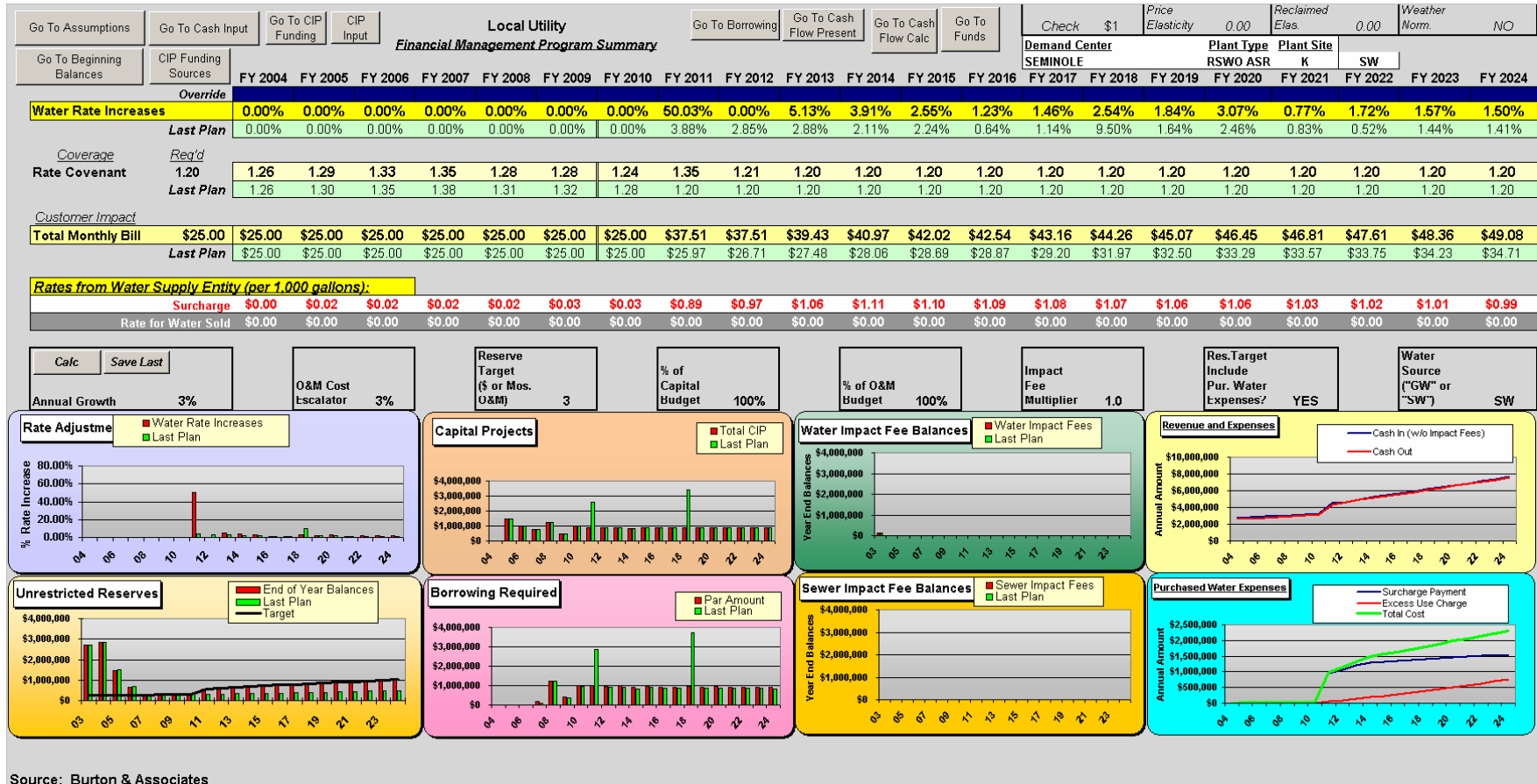
**Same as Figures Aa1 and Aa2**

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Ac*

## St. Johns River Water Supply Project *Affordability Analysis - Scenario Results*

**Scenario: Seminole Demand Center, Reliable Source without ASR, Site K**  
**FIGURE Ac3 - UTILITY – SURFACE WATER SCENARIO – SUMMARY PANEL**



# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS APPENDIX Ac

## St. Johns River Water Supply Project Affordability Analysis - Scenario Results Scenario: Seminole Demand Center, Reliable Source without ASR, Site K FIGURE Ac4 - UTILITY – SURFACE WATER SCENARIO – PROFORMA

Local Utility Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																						
	Water Growth	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
		0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
<b>1 Revenue</b>																						
2 Revenue Subject to Rate Increases																						
3 Water Rate Revenue		\$1,900,000	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$3,488,873	\$3,576,094	\$3,853,649	\$4,104,314	\$4,314,295	\$4,476,594	\$4,655,480	\$4,869,338	\$5,057,897	\$5,317,572	\$5,465,461	\$5,670,629	\$5,874,838
4 Rate Revenue from Growth		\$0	\$57,000	\$58,710	\$60,471	\$62,295	\$64,154	\$66,079	\$68,051	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5 Proposed Rate Increase		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6 Rate Revenue from Rate Increase		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,163,456	\$0	\$188,153	\$154,324	\$107,372	\$54,442	\$66,971	\$120,748	\$91,172	\$158,517	\$141,538	\$95,898	\$90,796
7 Total Water Rate Revenue		\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$3,488,873	\$3,576,094	\$3,853,649	\$4,104,314	\$4,314,295	\$4,476,594	\$4,655,480	\$4,869,338	\$5,057,897	\$5,317,572	\$5,465,461	\$5,670,629	\$5,874,838	
8 Other Operating Revenue		\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$356,442	\$368,620	\$377,619	\$389,948	\$400,616	\$412,634	\$425,014	\$437,764	\$450,897	\$464,424	\$478,356	\$492,707
9 Other Operating Revenue (1)		\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$356,442	\$368,620	\$377,619	\$389,948	\$400,616	\$412,634	\$425,014	\$437,764	\$450,897	\$464,424	\$478,356	\$492,707
<b>10 Total Operating Revenue</b>		\$2,172,800	\$2,237,984	\$2,305,124	\$2,374,277	\$2,445,506	\$2,518,871	\$2,594,437	\$3,824,383	\$3,921,669	\$4,209,591	\$4,472,935	\$4,691,914	\$4,866,542	\$5,056,096	\$5,281,972	\$5,482,911	\$5,755,336	\$5,916,368	\$6,136,053	\$6,363,194	\$6,574,561
<b>11 Expenses</b>																						
12 Purchased Water at Groundwater Rates		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$46,929	\$88,643	\$135,571	\$187,714	\$234,643	\$286,786	\$338,929	\$396,286	\$448,429	\$511,000	\$568,357	\$630,929	\$693,500	\$756,071
13 Water Treatment Facility Surcharge		\$0	\$18,447	\$20,052	\$21,814	\$23,748	\$25,873	\$28,253	\$30,941	\$1,064,214	\$1,196,919	\$1,268,059	\$1,324,478	\$1,351,378	\$1,376,523	\$1,402,418	\$1,427,864	\$1,453,000	\$1,477,937	\$1,502,674	\$1,527,211	\$1,551,548
14 Operations and Maintenance Expense		\$974,025	\$1,033,246	\$1,033,343	\$1,064,343	\$1,086,274	\$1,129,162	\$1,163,037	\$1,197,928	\$1,233,886	\$1,270,882	\$1,309,008	\$1,348,278	\$1,388,727	\$1,430,389	\$1,473,300	\$1,517,498	\$1,563,024	\$1,609,915	\$1,658,212	\$1,707,959	\$1,759,187
<b>15 Net Operating Income</b>		\$1,198,775	\$1,216,291	\$1,251,729	\$1,286,120	\$1,325,483	\$1,363,836	\$1,403,147	\$1,629,784	\$1,534,947	\$1,608,219	\$1,686,154	\$1,764,514	\$1,838,651	\$1,909,656	\$2,008,968	\$2,089,119	\$2,211,134	\$2,259,150	\$2,341,128	\$2,420,903	\$2,502,284
<b>16 Plus: Non Operating Income (Expense)</b>																						
17 Non Operating Revenue		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
18 Interest Earned on Invested Funds		\$57,993	\$67,375	\$74,910	\$73,611	\$80,489	\$83,493	\$89,952	\$108,682	\$117,164	\$121,366	\$123,972	\$112,896	\$143,229	\$155,593	\$142,058	\$148,444	\$113,113	\$150,062	\$153,259	\$158,394	\$161,711
19 Transfers In		\$500,000	\$515,000	\$530,450	\$546,364	\$562,754	\$579,637	\$597,026	\$614,937	\$633,305	\$652,207	\$671,950	\$692,117	\$712,880	\$734,267	\$756,295	\$778,964	\$802,263	\$826,424	\$851,217	\$876,753	\$903,056
20 Water Expansion Fees		\$0	\$141,000	\$145,230	\$149,587	\$154,075	\$158,697	\$163,458	\$140,301	\$143,809	\$147,404	\$151,089	\$154,886	\$158,738	\$162,706	\$166,791	\$171,000	\$175,331	\$179,787	\$184,368	\$189,075	\$193,918
<b>21 Total Non Operating Income</b>		\$557,993	\$723,375	\$750,690	\$769,562	\$807,318	\$831,826	\$860,476	\$863,920	\$984,308	\$992,156	\$947,019	\$959,904	\$1,014,848	\$1,052,567	\$1,031,772	\$1,063,516	\$1,118,071	\$1,118,071	\$1,182,452	\$1,202,262	\$1,215,016
<b>22 Net Income</b>		\$1,756,768	\$1,939,666	\$2,002,319	\$2,057,682	\$2,132,801	\$2,195,662	\$2,263,622	\$4,493,704	\$2,429,305	\$2,527,375	\$2,633,173	\$2,744,354	\$2,853,499	\$2,962,423	\$3,041,740	\$3,152,634	\$3,265,410	\$3,377,221	\$3,490,021	\$3,603,356	\$3,717,282
Less: Water Expansion Fees		\$0	(\$141,000)	(\$145,230)	(\$149,587)	(\$154,075)	(\$158,697)	(\$163,458)	(\$140,301)	(\$143,809)	(\$147,404)	(\$151,089)	(\$154,886)	(\$158,738)	(\$162,706)	(\$166,791)	(\$171,000)	(\$175,331)	(\$180,000)	(\$184,368)	(\$189,075)	(\$193,918)
<b>24 Net Income Available for Debt Service</b>		\$1,756,768	\$1,798,666	\$1,857,089	\$1,908,095	\$1,978,726	\$2,036,965	\$2,100,165	\$2,353,403	\$2,285,496	\$2,379,971	\$2,482,084	\$2,589,467	\$2,694,761	\$2,799,716	\$2,908,321	\$3,016,547	\$3,126,601	\$3,236,635	\$3,345,604	\$3,454,604	\$3,563,366
<b>Senior Lien Debt Service Coverage</b>		\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391
26 Existing Senior Lien Debt Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
27 New Senior Lien Debt Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
28 Cumulative New Senior Lien Debt for Additional Borrowings		\$0	\$0	\$0	\$13,744	\$108,913	\$138,877	\$214,989	\$292,564	\$365,210	\$441,263	\$510,047	\$582,751	\$653,176	\$722,817	\$794,964	\$866,245	\$936,482	\$1,001,285	\$1,071,265	\$1,141,023	\$1,211,588
<b>Total Senior Lien Debt Service</b>		\$998,391	\$998,391	\$998,391	\$1,012,135	\$1,107,304	\$1,137,268	\$1,213,380	\$1,290,955	\$1,363,601	\$1,439,654	\$1,508,438	\$1,581,142	\$1,651,567	\$1,721,208	\$1,793,355	\$1,864,636	\$1,936,873	\$2,007,676	\$2,078,656	\$2,149,414	\$2,219,979
Senior Lien Debt Service Coverage	1.2 Req'd	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	
<b>SRF Debt Service Coverage</b>																						
31 Net Income Available for Senior Lien Debt Service Coverage		\$1,756,768	\$1,798,666	\$1,857,089	\$1,908,095	\$1,978,726	\$2,036,965	\$2,100,165	\$2,353,403	\$2,285,496	\$2,379,971	\$2,482,084	\$2,589,467	\$2,694,761	\$2,799,716	\$2,908,321	\$3,016,547	\$3,126,601	\$3,236,635	\$3,345,604	\$3,454,604	\$3,563,366
32 Less: Senior Lien Debt Service		(\$998,391)	(\$998,391)	(\$998,391)	(\$1,012,135)	(\$1,107,304)	(\$1,137,268)	(\$1,213,380)	(\$1,290,955)	(\$1,363,601)	(\$1,439,654)	(\$1,508,438)	(\$1,581,142)	(\$1,651,567)	(\$1,721,208)	(\$1,793,355)	(\$1,864,636)	(\$1,936,873)	(\$2,007,676)	(\$2,078,656)	(\$2,149,414)	(\$2,219,979)
<b>33 Net Income Available for SRF Debt Service Coverage</b>		\$758,377	\$800,275	\$858,698	\$896,960	\$871,422	\$899,697	\$886,795	\$1,062,448	\$921,895	\$940,317	\$973,646	\$1,008,345	\$1,043,194	\$1,078,508	\$1,114,966	\$1,151,911	\$1,189,726	\$1,227,959	\$1,266,948	\$1,306,636	\$1,347,051
34 Existing SRF Debt Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
35 SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>37 Net Income Available for Debt Service</b>		\$1,756,768	\$1,798,666	\$1,857,089	\$1,908,095	\$1,978,726	\$2,036,965	\$2,100,165	\$2,353,403	\$2,285,496	\$2,379,971	\$2,482,084	\$2,589,467	\$2,694,761	\$2,799,716	\$2,908,321	\$3,016,547	\$3,126,601	\$3,236,635	\$3,345,604	\$3,454,604	\$3,563,366
Less:																						
38 Total Senior Lien Debt Service		(\$998,391)	(\$998,391)	(\$998,391)	(\$1,012,135)	(\$1,107,304)	(\$1,137,268)	(\$1,213,380)	(\$1,290,955)	(\$1,363,601)	(\$1,439,654)	(\$1,508,438)	(\$1,581,142)	(\$1,651,567)	(\$1,721,208)	(\$1,793,355)	(\$1,864,636)	(\$1,936,873)	(\$2,007,676)	(\$2,078,656)	(\$2,149,414)	(\$2,219,979)
39 State Revolving Fund Loans		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
40 Payment of Debt Service With Water Impact Fees		\$116,626	\$141,875	\$145,237	\$149,587	\$154,075	\$158,697	\$163,458	\$140,301	\$143,809	\$147,404	\$151,089	\$154,886	\$158,738	\$162,706	\$166,791	\$171,000	\$175,331	\$179,787	\$184,368	\$189,075	
41 Payment of Debt Service With Sewer Impact Fees		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
42 Transfer Out		(\$757,000)	(\$779,710)	(\$803,101)	(\$827,194)	(\$852,010)	(\$877,570)	(\$903,898)	(\$931,015)	(\$958,945)	(\$987,713)	(\$1,017,345)	(\$1,047,865)	(\$1,079,301)	(\$1,111,680)	(\$1,145,030)	(\$1,179,381)	(\$1,214,763)	(\$1,251,206)	(\$1,288,742)	(\$1,327,404)	(\$1,367,206)
43 Capital Outlay		(\$17,000)	(\$17,510)	(\$18,035)	(\$18,576)	(\$19,134)	(\$19,708)	(\$20,299)	(\$20,908)	(\$21,535)	(\$22,181)	(\$22,847)	(\$23,532)	(\$24,238)	(\$24,965)	(\$25,714)	(\$26,485)	(\$27,287)	(\$28,120)	(\$28,984)	(\$29,881)	(\$30,811)
<b>44 Net Cash Flow</b>		\$101,003	\$144,930	\$182,798	\$199,776	\$154,353	\$161,116	\$126,046	\$250,827	\$85,224	\$77,827	\$84,543	\$91,815	\$98,393	\$104,570	\$77,641	\$82,132	\$86,494	\$90,240	\$93,682	\$96,726	\$9

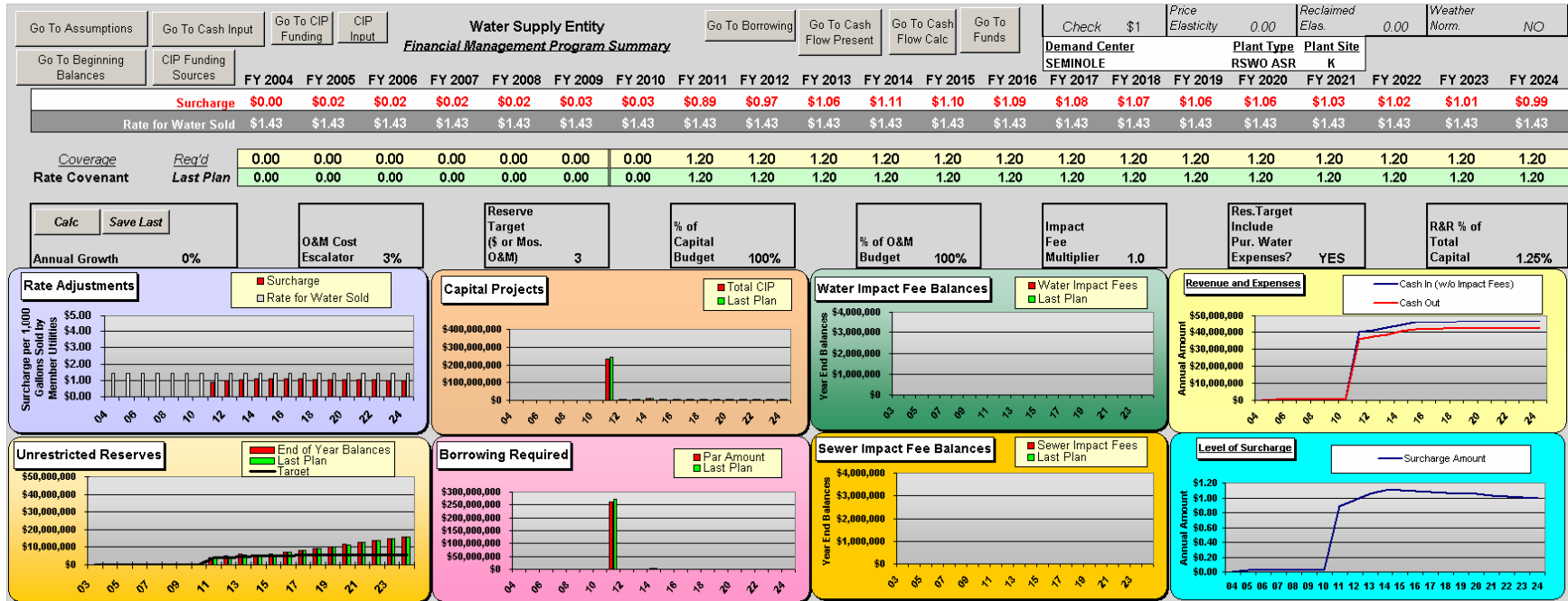
# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Ac*

## St. Johns River Water Supply Project *Affordability Analysis - Scenario Results*

Scenario: Seminole Demand Center, Reliable Source without ASR, Site K

**FIGURE Ac5 – WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – SUMMARY PANEL**



Source: Burton & Associates

# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### APPENDIX Ac

### St. Johns River Water Supply Project

#### Affordability Analysis - Scenario Results

#### Scenario: Seminole Demand Center, Reliable Source without ASR, Site K

### FIGURE Ac6 – WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – PROFORMA

Water Supply Entity Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																					
	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>1 Revenue</b>																					
2 Surcharge Revenue	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$25,115,090	\$27,906,884	\$31,110,734	\$33,171,191	\$33,781,183	\$33,674,886	\$33,521,297	\$33,364,470	\$33,175,065	\$33,267,721	\$32,738,813	\$32,488,887	\$32,234,900	\$31,977,890
3 Delivered Water Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,380,300	\$9,241,700	\$9,103,100	\$9,864,500	\$10,625,900	\$11,102,257	\$11,378,614	\$11,654,971	\$11,931,329	\$12,207,686	\$12,415,214	\$12,622,743	\$12,830,271	\$13,037,800
<b>4 Total Operating Revenue</b>	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$32,495,380	\$36,148,584	\$40,213,834	\$43,135,691	\$44,607,083	\$44,777,143	\$44,899,911	\$45,009,441	\$45,106,394	\$45,575,407	\$45,154,027	\$45,111,629	\$45,065,192	\$45,016,690
<b>5 Expenses</b>																					
6 Operations and Maintenance Expense	\$0	\$515,000	\$556,973	\$602,366	\$651,459	\$704,552	\$761,973	\$15,623,762	\$17,100,133	\$18,515,473	\$19,870,228	\$21,164,980	\$21,339,689	\$21,500,649	\$21,649,372	\$21,783,517	\$21,906,798	\$21,907,536	\$21,903,331	\$21,895,086	\$21,883,778
<b>8 Net Operating Income</b>	\$0	(\$3,807)	(\$6,076)	(\$6,344)	(\$7,613)	(\$8,882)	(\$8,882)	\$16,871,628	\$19,048,451	\$21,698,361	\$23,265,463	\$23,442,203	\$23,437,455	\$23,399,262	\$23,361,069	\$23,322,877	\$23,668,608	\$23,246,491	\$23,209,298	\$23,170,106	\$23,131,913
<b>9 Plus: Non Operating Income (Expense)</b>																					
10 Non Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11 Interest Earned on Invested Funds	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$8,882	\$7,251,204	\$5,074,381	\$2,424,471	\$1,222,557	\$1,045,817	\$1,050,565	\$1,088,758	\$1,126,950	\$1,165,143	\$819,411	\$1,241,528	\$1,279,721	\$1,317,914	\$1,356,107
12 Transfers In	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13 Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>14 Total Non Operating Income</b>	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$8,882	\$7,251,204	\$5,074,381	\$2,424,471	\$1,222,557	\$1,045,817	\$1,050,565	\$1,088,758	\$1,126,950	\$1,165,143	\$819,411	\$1,241,528	\$1,279,721	\$1,317,914	\$1,356,107
<b>15 Net Income</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$24,122,832	\$24,122,832	\$24,122,832	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020
16 Less: Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>17 Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$24,122,832	\$24,122,832	\$24,122,832	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020
<b>18 Senior Lien Debt Service Coverage</b>								\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
19 Existing Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
20 New Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21 Cumulative New Senior Lien Debt for Additional Borrowings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,102,360	\$20,102,360	\$20,102,360	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683
<b>22 Total Senior Lien Debt Service</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,102,360	\$20,102,360	\$20,102,360	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683	\$20,406,683
23 Senior Lien Debt Service Coverage	1.2 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
<b>24 SRF Debt Service Coverage</b>																					
25 Net Income Available for Senior Lien Debt Service Coverage	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$24,122,832	\$24,122,832	\$24,122,832	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020
26 Less: Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$20,102,360)	(\$20,102,360)	(\$20,102,360)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)
27 Net Income Available for SRF Debt Service Coverage	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$4,020,472	\$4,020,472	\$4,020,472	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337
28 Existing SRF Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
29 SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>30 Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$24,122,832	\$24,122,832	\$24,122,832	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020	\$24,400,020
31 Less:																					
32 Total Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$20,102,360)	(\$20,102,360)	(\$20,102,360)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)	(\$20,406,683)
33 State Revolving Fund Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
34 Payment of Debt Service With Water Impact Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
35 Transfer Out	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
36 Capital Outlay	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>37 Net Cash Flow</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$4,020,472	\$4,020,472	\$4,020,472	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337
38 Unrestricted Reserve Fund - Beginning of Year Balance	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$3,905,941	\$4,936,297	\$5,966,653	\$4,967,557	\$6,068,778	\$7,149,999	\$8,241,220	\$9,332,441	\$10,423,662	\$11,514,883	\$12,606,104	\$13,697,324
39 Minimum Working Capital Reserve Target	\$0	\$126,750	\$139,243	\$150,591	\$162,886	\$176,138	\$190,493	\$3,905,941	\$4,275,033	\$4,628,868	\$4,967,557	\$5,291,220	\$5,334,922	\$5,275,162	\$5,412,093	\$5,445,879	\$5,476,700	\$5,476,884	\$5,475,833	\$5,473,771	\$5,470,944
40 Reserve Fund Balance in Excess of Working Capital Target	\$250,000	\$125,028	\$114,535	\$103,187	\$90,914	\$77,640	\$63,285	\$0	\$0	\$307,429	\$969,096	\$0	\$723,856	\$1,774,837	\$2,829,127	\$3,886,561	\$4,946,962	\$6,037,999	\$7,130,271	\$8,223,553	\$9,317,601
41 Less: Reserve Fund Balance used for Cash Flow	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>42 Reserve Fund Balance in Excess of Working Capital Target Net of Current Year Cash Flow</b>	\$250,000	\$125,028	\$114,535	\$103,187	\$90,914	\$77,640	\$63,285	\$0	\$0	\$307,429	\$969,096	\$0	\$723,856	\$1,774,837	\$2,829,127	\$3,886,561	\$4,946,962	\$6,037,999	\$7,130,271	\$8,223,553	\$9,317,601
<b>43 Net Cash Flow After Use of Reserve Funds</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$4,020,472	\$4,020,472	\$4,020,472	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337
44 Less: CIP Projects Designated to be Paid with Cash	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>45 Net Cash Flow to Unrestricted Reserve Fund</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$4,020,472	\$4,020,472	\$4,020,472	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337
<b>46 Unrestricted Reserve Fund - Beginning of Year Balance</b>	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$3,905,941	\$4,936,297	\$5,966,653	\$4,967,557	\$6,068,778	\$7,149,999	\$8,241,220	\$9,332,441	\$10,423,662	\$11,514,883	\$12,606,104	\$13,697,324	\$14,788,545
47 Cash In/Out from Rate Revenues	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$4,020,472	\$4,020,472	\$4,020,472	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337	\$4,081,337
48 Less: Reserve Fund Balance used for Cash Flow	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
49 Less: Projects Paid with Reserve Funds (Non Specified Funding)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$388,210)	(\$2,990,116)	(\$2,990,116)	(\$5,060,433)	(\$2,990,116)	(\$2,990,116)	(\$2,990,116)	(\$2,990,116)	(\$2,990,116)	(\$2,990,116)	(\$2,990,116)	(\$2,990,116)	(\$2,990,116)	(\$2,990,116)
50 Unrestricted Reserve Fund - End of Year Balance	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$3,905,941	\$4,936,297	\$5,966,653	\$4,967,557	\$6,068,778	\$7,149,999	\$8,241,220	\$9,332,441	\$10,423,662	\$11,514,883	\$12,606,104	\$13,697,324	\$14,788,545	\$15,879,766
51 Minimum Working Capital Reserve Target	\$0	\$126,750	\$139,243	\$150,591	\$162,886	\$176,138	\$190,493	\$3,905,941													

**ST. JOHNS RIVER WATER SUPPLY PROJECT  
AFFORDABILITY ANALYSIS**

***APPENDIX Ba***

**APPENDIX Ba**

**Seminole and SW Volusia Demand Center**

**Intermittent Source**

**ASR**

**Site E**

**Just-in-Time Rates**

**Figure**

**Number**

**Title**

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<b>Ba1</b>	<b>Utility – Groundwater Scenario – Summary Panel</b>
<b>Ba2</b>	<b>Utility – Groundwater Scenario – Proforma</b>
<b>Ba3</b>	<b>Utility – Surface Water Scenario – Summary Panel</b>
<b>Ba4</b>	<b>Utility – Surface Water Scenario – Proforma</b>
<b>Ba5</b>	<b>Water Supply Entity – Surface Water Scenario – Summary Panel</b>
<b>Ba6</b>	<b>Water Supply Entity – Surface Water Scenario – Proforma</b>

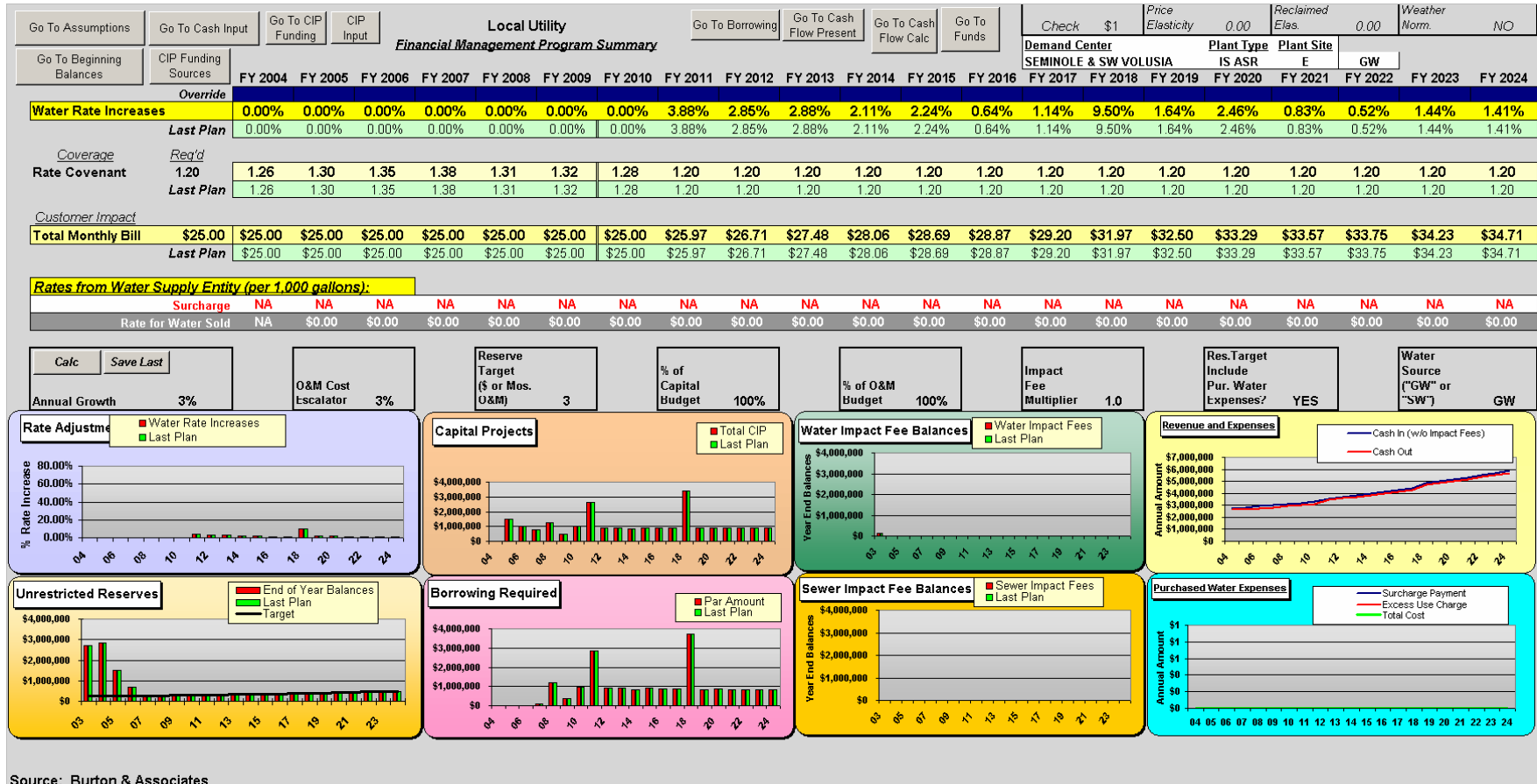


# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Ba*

## St. Johns River Water Supply Project *Affordability Analysis - Scenario Results*

**Scenario: Seminole and SW Volusia Demand Center, Intermittent Source with ASR, Site E**  
**FIGURE Ba1 - UTILITY – GROUNDWATER SCENARIO –SUMMARY PANEL**



# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### APPENDIX Ba

#### St. Johns River Water Supply Project Affordability Analysis - Scenario Results

#### Scenario: Seminole and SW Volusia Demand Center, Intermittent Source with ASR, Site E **FIGURE Ba2 - UTILITY – GROUNDWATER SCENARIO – PROFORMA**

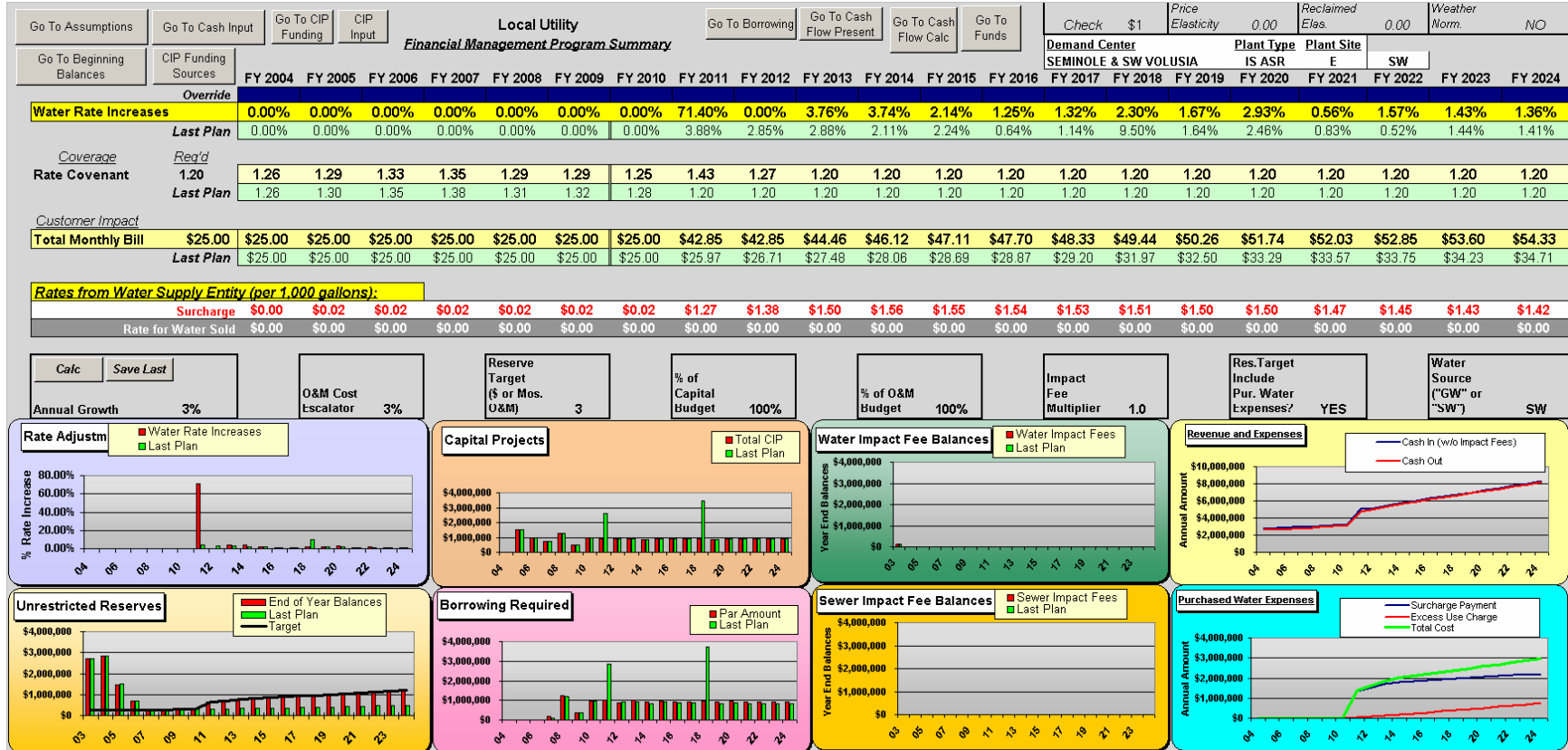
Local Utility Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																							
	Water Growth	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	
		0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	
<b>1 Revenue</b>																							
2 Revenue Subject to Rate Increases																							
3 Water Rate Revenue		\$1,900,000	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$2,415,646	\$2,546,639	\$2,685,443	\$2,810,523	\$2,945,210	\$3,038,053	\$3,149,509	\$3,217,702	\$3,347,033	\$3,411,355	\$3,519,902	\$4,019,247	\$4,158,479	
4 Rate Revenue from Growth		\$0	\$57,000	\$58,710	\$60,471	\$62,285	\$64,154	\$66,079	\$68,061	\$70,101	\$72,203	\$74,374	\$76,613	\$78,919	\$81,293	\$83,735	\$86,246	\$88,826	\$91,475	\$94,194	\$96,983	\$99,852	
5 Proposed Rate Increase		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
6 Rate Revenue from Rate Increase		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$90,230	\$70,601	\$75,139	\$67,944	\$64,423	\$19,213	\$35,605	\$305,203	\$58,977	\$91,382	\$32,300	\$20,945	\$58,846	\$59,898
7 Total Water Rate Revenue		\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$2,415,646	\$2,546,639	\$2,685,443	\$2,810,523	\$2,945,210	\$3,038,053	\$3,149,509	\$3,217,702	\$3,347,033	\$3,411,355	\$3,519,902	\$4,019,247	\$4,158,479		
8 Other Operating Revenue		\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$388,948	\$400,616	\$412,634	\$425,014	\$437,764	\$450,897	\$464,424	\$478,366	\$492,707	
9 Other Operating Revenue (1)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>10 Total Operating Revenue</b>		\$2,172,800	\$2,237,984	\$2,305,124	\$2,374,277	\$2,445,506	\$2,518,871	\$2,594,437	\$2,751,156	\$2,892,214	\$3,041,385	\$3,177,144	\$3,322,829	\$3,427,001	\$3,550,125	\$3,630,337	\$4,072,046	\$4,249,119	\$4,370,799	\$4,483,669	\$4,636,634	\$4,794,213	
<b>11 Expenses</b>																							
12 Purchased Water at Groundwater Rates		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
13 Water Treatment Facility Surcharge		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
14 Operations and Maintenance Expense		\$974,025	\$1,033,246	\$1,033,343	\$1,064,343	\$1,096,274	\$1,129,162	\$1,163,037	\$1,208,099	\$1,252,933	\$1,300,184	\$1,350,015	\$1,400,395	\$1,453,576	\$1,509,568	\$1,566,804	\$1,625,472	\$1,686,800	\$1,753,123	\$1,820,971	\$1,891,222	\$1,963,967	
<b>15 Net Operating Income</b>		\$1,198,775	\$1,204,738	\$1,271,780	\$1,309,934	\$1,349,232	\$1,389,709	\$1,431,400	\$1,543,057	\$1,639,280	\$1,741,201	\$1,827,129	\$1,922,434	\$1,973,424	\$2,041,558	\$2,363,733	\$2,446,575	\$2,550,319	\$2,617,676	\$2,862,899	\$2,745,612	\$2,830,246	
<b>16 Plus: Non Operating Income (Expense)</b>																							
17 Non Operating Revenue		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
18 Interest Earned on Invested Funds		\$57,993	\$67,514	\$75,488	\$73,957	\$80,092	\$82,905	\$89,251	\$156,194	\$142,463	\$125,035	\$115,954	\$103,804	\$133,455	\$145,136	\$164,525	\$159,246	\$123,731	\$144,001	\$176,431	\$170,564	\$163,471	
19 Transfers In		\$500,000	\$515,000	\$530,450	\$546,364	\$562,754	\$579,637	\$597,026	\$614,937	\$633,305	\$652,207	\$671,598	\$692,117	\$712,280	\$734,267	\$759,295	\$789,984	\$822,353	\$862,424	\$911,217	\$976,753	\$993,056	
20 Water Expansion Fees		\$0	\$141,000	\$145,230	\$149,587	\$154,075	\$158,697	\$163,458	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$156,738	\$162,706	\$133,419	\$136,088	\$136,809	\$141,585	\$144,417	\$147,336	\$150,252	
<b>21 Total Non Operating Income</b>		\$557,993	\$723,514	\$751,168	\$769,907	\$806,921	\$831,239	\$859,745	\$911,432	\$919,656	\$926,626	\$939,001	\$950,788	\$1,000,074	\$1,042,110	\$1,054,239	\$1,074,317	\$1,074,317	\$1,112,010	\$1,127,064	\$1,194,913	\$1,216,776	
<b>22 Net Income</b>		\$1,756,768	\$1,958,252	\$2,022,949	\$2,079,841	\$2,196,153	\$2,220,948	\$2,291,145	\$2,464,488	\$2,568,937	\$2,668,027	\$2,766,130	\$2,873,222	\$2,978,498	\$3,083,667	\$3,417,972	\$3,520,892	\$3,625,212	\$3,729,887	\$3,834,763	\$3,940,524	\$4,047,024	
Less: Water Expansion Fees		\$0	(\$141,000)	(\$145,230)	(\$149,587)	(\$154,075)	(\$158,697)	(\$163,458)	(\$140,301)	(\$143,809)	(\$147,404)	(\$151,089)	(\$154,866)	(\$156,738)	(\$162,706)	(\$133,419)	(\$136,088)	(\$136,809)	(\$141,585)	(\$144,417)	(\$147,336)	(\$150,252)	
<b>24 Net Income Available for Debt Service</b>		\$1,756,768	\$1,817,252	\$1,877,719	\$1,930,254	\$2,002,078	\$2,062,251	\$2,127,687	\$2,314,187	\$2,415,128	\$2,518,623	\$2,615,041	\$2,718,355	\$2,819,760	\$2,920,961	\$3,284,553	\$3,384,804	\$3,486,403	\$3,588,101	\$3,690,346	\$3,793,219	\$3,896,772	
<b>Senior Lien Debt Service Coverage</b>		\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	
26 Existing Senior Lien Debt Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
27 New Senior Lien Debt Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
28 Cumulative New Senior Lien Debt for Additional Borrowings		\$0	\$0	\$0	\$7,632	\$99,876	\$126,662	\$198,969	\$417,651	\$486,395	\$566,806	\$620,845	\$690,141	\$757,342	\$823,854	\$1,108,491	\$1,173,126	\$1,236,317	\$1,303,007	\$1,373,650	\$1,431,997	\$1,496,373	
<b>Total Senior Lien Debt Service</b>		\$998,391	\$998,391	\$998,391	\$1,006,023	\$1,098,367	\$1,125,053	\$1,197,360	\$1,416,042	\$1,484,786	\$1,555,197	\$1,619,236	\$1,688,532	\$1,756,733	\$1,822,245	\$2,106,882	\$2,171,517	\$2,236,706	\$2,301,386	\$2,365,941	\$2,430,388	\$2,494,764	
Senior Lien Debt Service Coverage	1.2 Req'd	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	
<b>SRF Debt Service Coverage</b>																							
31 Net Income Available for Senior Lien Debt Service Coverage		\$1,756,768	\$1,817,252	\$1,877,719	\$1,930,254	\$2,002,078	\$2,062,251	\$2,127,687	\$2,314,187	\$2,415,128	\$2,518,623	\$2,615,041	\$2,718,355	\$2,819,760	\$2,920,961	\$3,284,553	\$3,384,804	\$3,486,403	\$3,588,101	\$3,690,346	\$3,793,219	\$3,896,772	
32 Less: Senior Lien Debt Service		(\$998,391)	(\$998,391)	(\$998,391)	(\$1,006,023)	(\$1,098,367)	(\$1,125,053)	(\$1,197,360)	(\$1,416,042)	(\$1,484,786)	(\$1,555,197)	(\$1,619,236)	(\$1,688,532)	(\$1,756,733)	(\$1,822,245)	(\$2,106,882)	(\$2,171,517)	(\$2,236,706)	(\$2,301,386)	(\$2,365,941)	(\$2,430,388)	(\$2,494,764)	
<b>33 Net Income Available for SRF Debt Service Coverage</b>		\$758,377	\$818,861	\$879,328	\$924,231	\$903,711	\$937,198	\$930,327	\$898,145	\$930,342	\$963,426	\$995,805	\$1,029,823	\$1,064,027	\$1,088,716	\$1,177,671	\$1,213,267	\$1,249,695	\$1,286,703	\$1,324,405	\$1,362,831	\$1,402,008	
34 Existing SRF Debt Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>35 SRF Debt Service Coverage</b>	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>37 Net Income Available for Debt Service</b>		\$1,756,768	\$1,817,252	\$1,877,719	\$1,930,254	\$2,002,078	\$2,062,251	\$2,127,687	\$2,314,187	\$2,415,128	\$2,518,623	\$2,615,041	\$2,718,355	\$2,819,760	\$2,920,961	\$3,284,553	\$3,384,804	\$3,486,403	\$3,588,101	\$3,690,346	\$3,793,219	\$3,896,772	
Less:																							
38 Total Senior Lien Debt Service		(\$998,391)	(\$998,391)	(\$998,391)	(\$1,006,023)	(\$1,098,367)	(\$1,125,053)	(\$1,197,360)	(\$1,416,042)	(\$1,484,786)	(\$1,555,197)	(\$1,619,236)	(\$1,688,532)	(\$1,756,733)	(\$1,822,245)	(\$2,106,882)	(\$2,171,517)	(\$2,236,706)	(\$2,301,386)	(\$2,365,941)	(\$2,430,388)	(\$2,494,764)	
39 State Revolving Fund Loans		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
40 Payment of Debt Service With Water Impact Fees		\$116,626	\$141,875	\$145,237	\$149,587	\$154,075	\$158,697	\$163,458	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$156,738	\$162,706	\$133,419	\$136,088	\$136,809	\$141,585	\$144,417	\$147,336	\$150,252	
41 Payment of Debt Service With Sewer Impact Fees		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
42 Transfer Out		(\$977,000)	(\$779,710)	(\$803,101)	(\$827,194)	(\$852,010)	(\$877,570)	(\$903,898)	(\$931,015)	(\$958,945)	(\$987,713)	(\$1,017,345)	(\$1,047,865)	(\$1,079,301)	(\$1,111,680)	(\$1,145,030)	(\$1,179,381)	(\$1,214,763)	(\$1,251,206)	(\$1,288,742)	(\$1,327,404)	(\$1,367,206)	
43 Capital Outlay		(\$17,000)	(\$17,510)	(\$18,035)	(\$18,576)	(\$19,134)	(\$19,708)	(\$20,299)	(\$20,908)	(\$21,535)	(\$22,181)	(\$22,847)	(\$23,532)	(\$24,238)	(\$24,965)	(\$25,714)	(\$26,485)	(\$27,280)	(\$28,099)	(\$28,944)	(\$29,816)	(\$30,724)	
<b>44 Net Cash Flow</b>		\$101,003	\$163,516	\$203,428	\$228,047	\$186,642	\$198,617	\$169,588	\$86,524	\$93,671	\$100,935	\$106,703	\$113,293	\$119,226	\$124,777	\$140,346	\$143,508	\$146,461	\$148,985	\$151,139	\$152,922	\$154,330	
45 Unrestricted Reserve Fund - Beginning of Year Balance		\$2,729,000	\$2,830,003	\$1,493,519	\$696,947	\$266,066	\$274,068																

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Ba*

## St. Johns River Water Supply Project *Affordability Analysis - Scenario Results*

**Scenario: Seminole and SW Volusia Demand Center, Intermittent Source with ASR, Site E**  
***FIGURE Ba3 - UTILITY – SURFACE WATER SCENARIO – SUMMARY PANEL***



Source: Burton & Associates

# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### APPENDIX Ba

### St. Johns River Water Supply Project Affordability Analysis - Scenario Results

#### Scenario: Seminole and SW Volusia Demand Center, Intermittent Source with ASR, Site E FIGURE Ba4 - UTILITY – SURFACE WATER SCENARIO – PROFORMA

Local Utility Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																						
	Water Growth	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
		0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
<b>1 Revenue</b>																						
2 Revenue Subject to Rate Increases																						
3 Water Rate Revenue		\$1,900,000	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$3,985,757	\$4,085,401	\$4,344,938	\$4,620,226	\$4,836,884	\$5,019,782	\$5,212,974	\$5,439,623	\$5,641,041	\$5,922,579	\$6,075,094	\$6,293,905	\$6,511,742
4 Rate Revenue from Growth		\$0	\$57,000	\$58,710	\$60,471	\$62,285	\$64,154	\$66,079	\$68,044	\$99,644	\$102,135	\$108,623	\$115,506	\$120,922	\$125,495	\$104,259	\$108,792	\$112,821	\$118,452	\$121,502	\$125,878	\$130,236
5 Proposed Rate Increase		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6 Rate Revenue from Rate Increase		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,680,340	\$0	\$157,403	\$168,664	\$101,152	\$61,976	\$67,698	\$122,389	\$92,626	\$188,717	\$34,063	\$97,308	\$91,958	\$90,473
7 Total Water Rate Revenue		\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$3,985,757	\$4,085,401	\$4,344,938	\$4,620,226	\$4,836,884	\$5,019,782	\$5,212,974	\$5,439,623	\$5,641,041	\$5,922,579	\$6,075,094	\$6,293,905	\$6,511,740	\$6,732,449
8 Other Operating Revenue		\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$388,948	\$400,616	\$412,634	\$424,914	\$437,764	\$450,897	\$464,424	\$478,366	\$492,707
9 Other Operating Revenue (1)		\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$388,948	\$400,616	\$412,634	\$424,914	\$437,764	\$450,897	\$464,424	\$478,366	\$492,707
<b>10 Total Operating Revenue</b>		\$2,172,800	\$2,237,984	\$2,305,124	\$2,374,277	\$2,445,506	\$2,518,871	\$2,594,437	\$4,321,266	\$4,430,976	\$4,700,881	\$4,986,846	\$5,214,503	\$5,408,729	\$5,613,590	\$5,852,257	\$6,066,054	\$6,300,343	\$6,525,909	\$6,758,327	\$6,990,907	\$7,225,156
<b>11 Expenses</b>																						
12 Purchased Water at Groundwater Rates		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$46,929	\$88,643	\$135,571	\$187,714	\$234,643	\$286,786	\$338,929	\$396,286	\$448,429	\$511,000	\$568,357	\$630,929	\$693,500	\$756,071
13 Water Treatment Facility Surcharge		\$0	\$13,803	\$14,754	\$16,018	\$17,404	\$18,925	\$20,629	\$1,350,397	\$1,512,487	\$1,701,991	\$1,817,358	\$1,860,285	\$1,907,254	\$1,946,777	\$1,984,747	\$2,022,732	\$2,061,246	\$2,099,681	\$2,138,845	\$2,178,219	\$2,217,812
14 Operations and Maintenance Expense		\$974,025	\$1,033,246	\$1,033,343	\$1,064,343	\$1,086,274	\$1,129,162	\$1,163,037	\$1,197,928	\$1,233,866	\$1,270,882	\$1,309,008	\$1,348,278	\$1,388,727	\$1,430,389	\$1,473,300	\$1,517,499	\$1,563,024	\$1,609,915	\$1,658,212	\$1,707,959	\$1,759,197
<b>15 Net Operating Income</b>		\$1,198,775	\$1,221,135	\$1,257,026	\$1,293,916	\$1,331,828	\$1,370,704	\$1,410,772	\$1,726,012	\$1,595,980	\$1,652,436	\$1,672,768	\$1,771,286	\$1,825,562	\$1,897,495	\$1,997,924	\$2,077,394	\$2,205,073	\$2,248,037	\$2,330,341	\$2,410,419	\$2,492,075
<b>16 Plus: Non Operating Income (Expense)</b>																						
17 Non Operating Revenue		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
18 Interest Earned on Invested Funds		\$57,993	\$67,411	\$75,063	\$73,702	\$80,383	\$89,336	\$99,797	\$110,252	\$120,635	\$125,223	\$128,219	\$117,254	\$147,758	\$160,288	\$146,881	\$153,300	\$151,923	\$155,274	\$158,583	\$163,847	\$167,293
19 Transfers In		\$500,000	\$515,000	\$530,450	\$546,364	\$562,754	\$579,637	\$597,026	\$614,937	\$633,305	\$652,287	\$671,958	\$692,117	\$712,880	\$734,267	\$756,295	\$778,984	\$802,363	\$826,424	\$851,217	\$876,753	\$903,056
20 Water Expansion Fees		\$0	\$141,000	\$145,230	\$149,587	\$154,075	\$158,897	\$163,958	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$158,738	\$162,706	\$133,419	\$136,088	\$138,809	\$141,585	\$144,417	\$147,306	\$150,252
<b>21 Total Non Operating Income</b>		\$557,993	\$723,411	\$750,743	\$769,652	\$807,212	\$831,670	\$860,280	\$865,490	\$897,828	\$905,014	\$951,266	\$964,238	\$1,019,376	\$1,057,261	\$1,036,595	\$1,068,462	\$1,123,283	\$1,144,217	\$1,187,306	\$1,220,600	
<b>22 Net Income</b>		\$1,756,768	\$1,944,547	\$2,007,769	\$2,063,569	\$2,139,040	\$2,202,454	\$2,271,052	\$2,591,033	\$2,493,809	\$2,617,450	\$2,624,032	\$2,735,534	\$2,845,339	\$2,954,756	\$3,034,520	\$3,145,865	\$3,259,156	\$3,329,156	\$3,484,559	\$3,598,325	\$3,712,675
Less: Water Expansion Fees		\$0	\$141,000	\$145,230	\$149,587	\$154,075	\$158,897	\$163,958	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$158,738	\$162,706	\$133,419	\$136,088	\$138,809	\$141,585	\$144,417	\$147,306	\$150,252
<b>24 Net Income Available for Debt Service</b>		\$1,756,768	\$1,803,547	\$1,862,539	\$1,913,982	\$1,984,966	\$2,043,757	\$2,107,594	\$2,451,201	\$2,350,000	\$2,370,046	\$2,472,943	\$2,580,667	\$2,686,601	\$2,792,050	\$2,901,100	\$3,009,768	\$3,120,349	\$3,229,735	\$3,340,141	\$3,451,019	\$3,562,424
<b>Senior Lien Debt Service Coverage</b>		\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391
26 Existing Senior Lien Debt Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
27 New Senior Lien Debt Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
28 Cumulative New Senior Lien Debt for Additional Borrowings		\$0	\$0	\$0	\$12,128	\$106,543	\$136,629	\$210,717	\$286,292	\$355,573	\$432,992	\$502,430	\$575,401	\$646,376	\$716,428	\$788,947	\$860,596	\$937,272	\$1,014,368	\$1,075,713	\$1,148,831	\$1,217,749
<b>Total Senior Lien Debt Service</b>		\$998,391	\$998,391	\$998,391	\$1,010,519	\$1,104,934	\$1,134,200	\$1,209,108	\$1,286,683	\$1,353,964	\$1,431,383	\$1,500,821	\$1,573,792	\$1,644,767	\$1,714,819	\$1,787,338	\$1,858,967	\$1,931,663	\$2,002,759	\$2,074,104	\$2,145,222	\$2,216,140
Senior Lien Debt Service Coverage	1.2 Req'd	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2
<b>SRF Debt Service Coverage</b>																						
31 Net Income Available for Senior Lien Debt Service Coverage		\$1,756,768	\$1,803,547	\$1,862,539	\$1,913,982	\$1,984,966	\$2,043,757	\$2,107,594	\$2,451,201	\$2,350,000	\$2,370,046	\$2,472,943	\$2,580,667	\$2,686,601	\$2,792,050	\$2,901,100	\$3,009,768	\$3,120,349	\$3,229,735	\$3,340,141	\$3,451,019	\$3,562,424
32 Less: Senior Lien Debt Service		\$998,391	\$998,391	\$998,391	\$1,010,519	\$1,104,934	\$1,134,200	\$1,209,108	\$1,286,683	\$1,353,964	\$1,431,383	\$1,500,821	\$1,573,792	\$1,644,767	\$1,714,819	\$1,787,338	\$1,858,967	\$1,931,663	\$2,002,759	\$2,074,104	\$2,145,222	\$2,216,140
33 Net Income Available for SRF Debt Service Coverage		\$758,377	\$805,156	\$864,148	\$903,463	\$880,032	\$909,737	\$898,486	\$1,164,518	\$996,036	\$938,663	\$972,122	\$1,006,875	\$1,041,834	\$1,077,231	\$1,113,762	\$1,150,781	\$1,188,686	\$1,226,976	\$1,266,037	\$1,305,797	\$1,346,284
34 Existing SRF Debt Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
35 SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>37 Net Income Available for Debt Service</b>		\$1,756,768	\$1,803,547	\$1,862,539	\$1,913,982	\$1,984,966	\$2,043,757	\$2,107,594	\$2,451,201	\$2,350,000	\$2,370,046	\$2,472,943	\$2,580,667	\$2,686,601	\$2,792,050	\$2,901,100	\$3,009,768	\$3,120,349	\$3,229,735	\$3,340,141	\$3,451,019	\$3,562,424
Less:																						
38 Total Senior Lien Debt Service		\$998,391	\$998,391	\$998,391	\$1,010,519	\$1,104,934	\$1,134,200	\$1,209,108	\$1,286,683	\$1,353,964	\$1,431,383	\$1,500,821	\$1,573,792	\$1,644,767	\$1,714,819	\$1,787,338	\$1,858,967	\$1,931,663	\$2,002,759	\$2,074,104	\$2,145,222	\$2,216,140
39 State Revolving Fund Loans		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
40 Payment of Debt Service With Water Impact Fees		\$116,626	\$141,875	\$145,237	\$149,587	\$154,075	\$158,897	\$163,958	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$158,738	\$162,706	\$133,419	\$136,088	\$138,809	\$141,585	\$144,417	\$147,306	\$150,252
41 Payment of Debt Service With Sewer Impact Fees		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
42 Transfer Out		(\$757,000)	(\$779,710)	(\$803,101)	(\$827,194)	(\$852,010)	(\$877,570)	(\$903,898)	(\$931,015)	(\$958,945)	(\$987,713)	(\$1,017,345)	(\$1,047,865)	(\$1,079,301)	(\$1,111,680)	(\$1,145,030)	(\$1,179,381)	(\$1,214,763)	(\$1,251,206)	(\$1,288,742)	(\$1,327,404)	(\$1,367,206)
43 Capital Outlay		(\$17,000)	(\$17,510)	(\$18,035)	(\$18,576)	(\$19,134)	(\$19,708)	(\$20,299)	(\$20,908)	(\$21,535)	(\$22,181)	(\$22,847)	(\$23,532)	(\$24,238)	(\$24,965)	(\$25,714)	(\$26,486)	(\$27,280)	(\$28,098)	(\$28,941)	(\$29,810)	(\$30,704)
<b>44 Net Cash Flow</b>		\$101,003	\$149,811	\$188,248	\$207,279	\$162,963	\$171,156	\$														



# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

## APPENDIX Ba

### St. Johns River Water Supply Project

#### Affordability Analysis - Scenario Results

### Scenario: Seminole and SW Volusia Demand Center, Intermittent Source with ASR, Site E FIGURE Ba6 - WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – PROFORMA

Water Supply Entity Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																					
	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>1 Revenue</b>																					
2 Surcharge Revenue	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$811,331	\$870,219	\$929,772	\$990,000	\$1,050,900	\$1,112,500	\$1,174,800	\$1,237,900	\$1,301,800	\$1,366,500	\$1,432,000	\$1,498,300	\$1,565,400	\$1,633,300
3 Delivered Water Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>4 Total Operating Revenue</b>	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$811,331	\$870,219	\$929,772	\$990,000	\$1,050,900	\$1,112,500	\$1,174,800	\$1,237,900	\$1,301,800	\$1,366,500	\$1,432,000	\$1,498,300	\$1,565,400	\$1,633,300
<b>5 Expenses</b>																					
6 Operations and Maintenance Expense	\$0	\$515,000	\$556,973	\$602,366	\$651,459	\$704,552	\$761,973	\$823,369	\$889,702	\$960,075	\$1,034,500	\$1,112,500	\$1,194,500	\$1,281,000	\$1,371,500	\$1,466,500	\$1,566,500	\$1,671,000	\$1,780,500	\$1,894,500	\$2,013,500
<b>8 Net Operating Income</b>	\$0	(\$3,807)	(\$5,076)	(\$6,344)	(\$7,613)	(\$8,882)	(\$8,882)	(\$8,882)	(\$8,882)	(\$8,882)	(\$8,882)	(\$8,882)	(\$8,882)	(\$8,882)	(\$8,882)	(\$8,882)	(\$8,882)	(\$8,882)	(\$8,882)	(\$8,882)	(\$8,882)
<b>9 Plus: Non Operating Income (Expense)</b>																					
10 Non Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11 Interest Earned on Invested Funds	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$8,882	\$14,781,869	\$10,316,831	\$4,904,651	\$2,176,310	\$2,305,101	\$2,080,845	\$2,082,087	\$2,157,880	\$2,233,672	\$1,656,413	\$2,385,258	\$2,461,051	\$2,536,843	\$2,612,636
12 Transfers In	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13 Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>14 Total Non Operating Income</b>	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$8,882	\$14,781,869	\$10,316,831	\$4,904,651	\$2,176,310	\$2,305,101	\$2,080,845	\$2,082,087	\$2,157,880	\$2,233,672	\$1,656,413	\$2,385,258	\$2,461,051	\$2,536,843	\$2,612,636
<b>16 Net Income</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
17 Less: Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>16 Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
<b>18 Senior Lien Debt Service Coverage</b>																					
19 Existing Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
20 New Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21 Cumulative New Senior Lien Debt for Additional Borrowings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40,973,790	\$40,973,790	\$40,973,790	\$40,973,790	\$41,217,678	\$41,217,678	\$41,217,678	\$41,217,678	\$41,217,678	\$41,217,678	\$41,217,678	\$41,217,678	\$41,217,678	\$41,217,678
<b>22 Total Senior Lien Debt Service</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40,973,790	\$40,973,790	\$40,973,790	\$40,973,790	\$41,217,678	\$41,217,678	\$41,217,678	\$41,217,678	\$41,217,678	\$41,217,678	\$41,217,678	\$41,217,678	\$41,217,678	\$41,217,678
23 Senior Lien Debt Service Coverage	1.2 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
<b>24 SRF Debt Service Coverage</b>																					
25 Net Income Available for Senior Lien Debt Service Coverage	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$49,168,548	\$49,168,548	\$49,168,548	\$49,168,548	\$49,461,212	\$49,461,212	\$49,461,212	\$49,461,212	\$49,461,212	\$49,461,212	\$49,461,212	\$49,461,212	\$49,461,212	\$49,461,212
26 Less: Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$40,973,790)	(\$40,973,790)	(\$40,973,790)	(\$40,973,790)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)
<b>27 Net Income Available for SRF Debt Service Coverage</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$8,194,758	\$8,194,758	\$8,194,758	\$8,194,758	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534
28 Existing SRF Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
29 SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>30 Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$49,168,548	\$49,168,548	\$49,168,548	\$49,168,548	\$49,461,212	\$49,461,212	\$49,461,212	\$49,461,212	\$49,461,212	\$49,461,212	\$49,461,212	\$49,461,212	\$49,461,212	\$49,461,212
31 Less:																					
32 Total Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$40,973,790)	(\$40,973,790)	(\$40,973,790)	(\$40,973,790)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)	(\$41,217,678)
33 State Revolving Fund Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
34 Payment of Debt Service With Water Impact Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
35 Transfer Out	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
36 Capital Outlay	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>37 Net Cash Flow</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$8,194,758	\$8,194,758	\$8,194,758	\$8,194,758	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534
38 Unrestricted Reserve Fund - Beginning of Year Balance	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778
39 Minimum Working Capital Reserve Target	\$0	\$128,750	\$139,243	\$150,591	\$162,865	\$176,138	\$190,493	\$6,736,842	\$7,309,496	\$7,863,138	\$8,397,879	\$8,913,839	\$9,084,288	\$9,247,059	\$9,402,306	\$9,550,193	\$9,690,899	\$9,766,715	\$9,837,843	\$9,904,510	\$9,966,960
40 Reserve Fund Balance in Excess of Working Capital Target	\$250,000	\$125,028	\$114,536	\$103,167	\$90,914	\$77,640	\$63,285	\$0	\$0	\$990,434	\$2,572,422	\$4,173,190	\$0	\$1,832,288	\$3,842,549	\$5,860,170	\$7,884,971	\$9,974,663	\$12,069,043	\$14,167,883	\$16,270,942
41 Less: Reserve Fund Balance used for Cash Flow	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>42 Reserve Fund Balance in Excess of Working Capital Target Net of Current Year Cash Flow</b>	\$250,000	\$125,028	\$114,536	\$103,167	\$90,914	\$77,640	\$63,285	\$0	\$0	\$990,434	\$2,572,422	\$4,173,190	\$0	\$1,832,288	\$3,842,549	\$5,860,170	\$7,884,971	\$9,974,663	\$12,069,043	\$14,167,883	\$16,270,942
<b>43 Net Cash Flow After Use of Reserve Funds</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$8,194,758	\$8,194,758	\$8,194,758	\$8,194,758	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534
44 Less: CIP Projects Designated to be Paid with Cash	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>44 Net Cash Flow to Unrestricted Reserve Fund</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$8,194,758	\$8,194,758	\$8,194,758	\$8,194,758	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534
<b>45 Unrestricted Reserve Fund - Beginning of Year Balance</b>	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778
47 Cash In/Out from Rate Revenues	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$8,194,758	\$8,194,758	\$8,194,758	\$8,194,758	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534	\$8,243,534
48 Less: Reserve Fund Balance used for Cash Flow	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
49 Less: Projects Paid with Reserve Funds (Non Specified Funding)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$1,711,894)	(\$6,078,029)	(\$6,078,029)	(\$6,078,029)	(\$12,416,727)	(\$6,078,029)	(\$6,078,029)	(\$6,078,029)	(\$6,078,029)	(\$6,078,029)	(\$6,078,029)	(\$6,078,029)	(\$6,078,029)	(\$6,078,029)
50 Unrestricted Reserve Fund - End of Year Balance	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$6,736,842	\$8,853,571	\$10,970,300	\$13,087,029	\$8,913,837	\$11,079,345	\$13,244,852	\$15,410,360	\$17,575,868	\$19,741,376	\$21,906,883	\$24,072,391	\$26,237,899	\$28,403,407
51 Minimum Working Capital Reserve Target	3 Mo O&M	\$0	\$128,750	\$139,243	\$150,591	\$162,865	\$176,138	\$190,493	\$6,736,842	\$7,309,496	\$7,863,138	\$8,397,879	\$8,913,839	\$9,084,288	\$9,247,059	\$9,402,306	\$9,550,193	\$9,690,899	\$9,766,715	\$9,837,843	\$9,904,510
<b>52 Excess (Deficiency) of Working Capital Reserves to Target</b>	\$253,778	\$125,028	\$114,536	\$103,167	\$90,914	\$77,640	\$63,285	(\$0)	\$1,544,075	\$3,107,163	\$4,689,151	(\$2)	\$1,995,957	\$3,997,793	\$6,006,054	\$8,025,675	\$10,050,477	\$12,140,169	\$14,234,548	\$16,333,389	\$18,436,447

Source: Burton & Associates  
C:\Data\SRWMD\Andy\SRWMD V\Models as of 2-1-2004\FAMS-Water Supply Entity-SRWMD\_4.xls Pro-Forma

**ST. JOHNS RIVER WATER SUPPLY PROJECT  
AFFORDABILITY ANALYSIS**

*APPENDIX Bb*

**APPENDIX Bb  
Seminole and SW Volusia Demand Center  
Reliable Source  
ASR  
Site E  
Just-in-Time Rates**

**Figure**

**Number**

**Title**

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<b>Bb1</b>	<b>Utility – Groundwater Scenario – Summary Panel</b>
<b>Bb2</b>	<b>Utility – Groundwater Scenario – Proforma</b>
<b>Bb3</b>	<b>Utility – Surface Water Scenario – Summary Panel</b>
<b>Bb4</b>	<b>Utility – Surface Water Scenario – Proforma</b>
<b>Bb5</b>	<b>Water Supply Entity – Surface Water Scenario – Summary Panel</b>
<b>Bb6</b>	<b>Water Supply Entity – Surface Water Scenario – Proforma</b>

**ST. JOHNS RIVER WATER SUPPLY PROJECT  
AFFORDABILITY ANALYSIS**

*APPENDIX Bb*

**St. Johns River Water Supply Project**

**Affordability Analysis - Scenario Results**

**Scenario: Seminole and SW Volusia Demand Center, Reliable Source with ASR, Site E**

**FIGURE Bb1 - UTILITY – GROUNDWATER SCENARIO – SUMMARY PANEL**

**&**

**FIGURE Bb2 - UTILITY – GROUNDWATER SCENARIO – PROFORMA**

**Same as Figures Ba1 and Ba2**

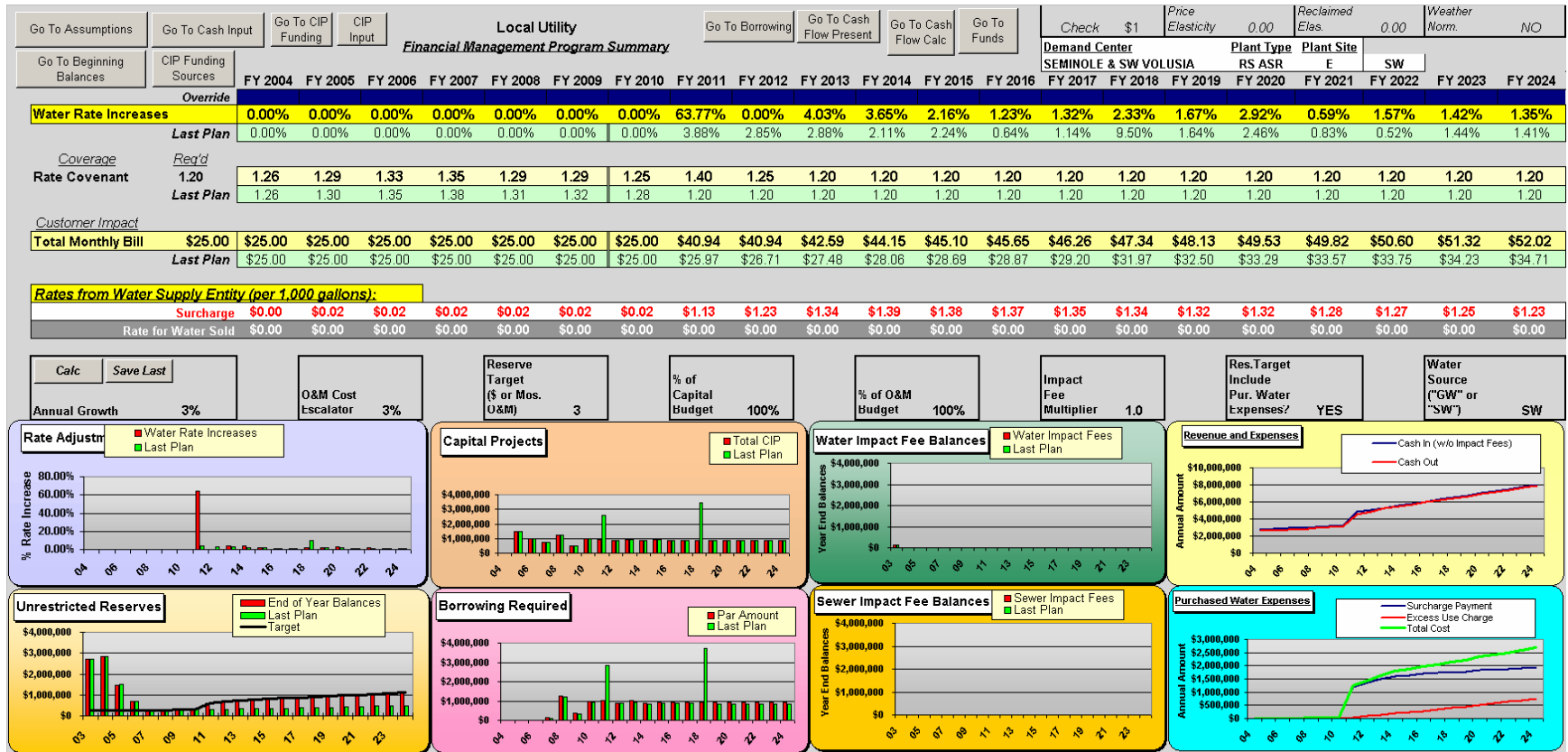


# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Bb*

## St. Johns River Water Supply Project *Affordability Analysis - Scenario Results*

**Scenario: Seminole and SW Volusia Demand Center, Reliable Source with ASR, Site E**  
**FIGURE Bb3 - UTILITY – SURFACE WATER SCENARIO – SUMMARY PANEL**



Source: Burton & Associates

# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### APPENDIX Bb

### St. Johns River Water Supply Project Affordability Analysis - Scenario Results

#### Scenario: Seminole and SW Volusia Demand Center, Reliable Source with ASR, Site E FIGURE Bb4 - UTILITY – SURFACE WATER SCENARIO – PROFORMA

Local Utility Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																						
	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	
	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	
<b>1 Revenue</b>																						
2 Revenue Subject to Rate Increases																						
3 Water Rate Revenue	\$1,900,000	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,139,467	\$2,202,621	\$2,268,699	\$3,808,233	\$3,903,439	\$4,162,341	\$4,422,123	\$4,630,419	\$4,804,663	\$4,969,862	\$5,208,410	\$5,401,386	\$5,670,187	\$5,817,534	\$6,026,853	\$6,234,825	
4 Rate Revenue from Growth	\$0	\$57,000	\$58,710	\$60,471	\$62,285	\$64,154	\$66,079	\$68,056	\$97,596	\$97,596	\$104,059	\$110,553	\$115,700	\$120,117	\$99,797	\$104,168	\$108,028	\$113,404	\$116,351	\$120,537	\$124,687	
5 Proposed Rate Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
6 Rate Revenue from Rate Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,482,816	\$0	\$161,316	\$155,723	\$97,743	\$58,484	\$65,083	\$118,751	\$88,808	\$160,772	\$33,943	\$92,968	\$87,435	\$85,752	
7 Total Water Rate Revenue	\$1,900,000	\$1,967,000	\$2,015,710	\$2,076,181	\$2,139,467	\$2,202,621	\$2,268,699	\$3,808,233	\$3,903,439	\$4,162,341	\$4,422,123	\$4,630,419	\$4,804,663	\$4,969,862	\$5,208,410	\$5,401,386	\$5,670,187	\$5,817,534	\$6,026,853	\$6,234,825		
8 Other Operating Revenue	\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$388,948	\$400,616	\$412,634	\$425,014	\$437,764	\$450,897	\$464,424	\$478,256	\$492,700	
9 Total Operating Revenue	\$2,172,800	\$2,237,984	\$2,305,124	\$2,374,277	\$2,445,506	\$2,518,871	\$2,594,437	\$4,143,743	\$4,249,014	\$4,518,283	\$4,788,743	\$5,008,038	\$5,193,611	\$5,390,478	\$5,621,045	\$5,826,400	\$6,107,950	\$6,288,431	\$6,491,277	\$6,713,102	\$6,937,981	
<b>11 Expenses</b>																						
12 Purchased Water at Groundwater Rates	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$46,929	\$88,643	\$135,571	\$187,714	\$234,643	\$286,786	\$338,929	\$396,286	\$448,429	\$511,000	\$568,357	\$630,929	\$693,500	\$756,071	
13 Water Treatment Facility Surcharge	\$0	\$13,603	\$14,754	\$16,018	\$17,404	\$18,925	\$20,629	\$1,207,880	\$1,350,221	\$1,516,714	\$1,616,802	\$1,651,478	\$1,689,939	\$1,721,597	\$1,751,596	\$1,781,272	\$1,829,377	\$1,840,578	\$1,870,397	\$1,900,048	\$1,929,525	
14 Operations and Maintenance Expense	\$974,025	\$1,003,246	\$1,033,343	\$1,064,343	\$1,096,274	\$1,129,162	\$1,163,037	\$1,197,928	\$1,233,866	\$1,270,882	\$1,309,008	\$1,348,278	\$1,388,727	\$1,430,389	\$1,473,300	\$1,517,499	\$1,563,024	\$1,609,916	\$1,658,212	\$1,707,959	\$1,759,197	
15 Net Operating Income	\$1,198,775	\$1,221,135	\$1,257,026	\$1,293,916	\$1,331,828	\$1,370,784	\$1,410,772	\$1,891,006	\$1,576,285	\$1,595,116	\$1,675,219	\$1,773,638	\$1,828,159	\$1,899,564	\$1,999,863	\$2,079,201	\$2,204,549	\$2,249,580	\$2,331,739	\$2,411,675	\$2,493,187	
<b>16 Plus: Non Operating Income (Expense)</b>																						
17 Non Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
18 Interest Earned on Invested Funds	\$57,993	\$67,411	\$75,063	\$73,702	\$90,383	\$93,336	\$99,797	\$109,629	\$119,328	\$123,747	\$126,560	\$115,483	\$145,907	\$158,359	\$144,877	\$151,309	\$112,911	\$153,020	\$156,251	\$161,425	\$164,777	
19 Transfers In	\$500,000	\$515,000	\$530,450	\$546,364	\$562,754	\$579,637	\$597,026	\$614,937	\$633,395	\$652,387	\$671,958	\$692,117	\$712,880	\$734,267	\$756,295	\$778,964	\$802,363	\$826,424	\$851,217	\$876,753	\$903,066	
20 Water Expansion Fees	\$657,993	\$723,411	\$750,743	\$769,652	\$807,212	\$831,810	\$859,290	\$884,987	\$923,537	\$949,608	\$966,486	\$1,017,235	\$1,055,332	\$1,034,231	\$1,068,380	\$1,054,074	\$1,121,029	\$1,151,886	\$1,185,484	\$1,219,086		
21 Total Non Operating Income	\$1,195,768	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547		
22 Net Income	\$1,195,768	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547	\$1,241,547		
23 Less: Water Expansion Fees	\$(141,000)	\$(145,230)	\$(149,587)	\$(154,075)	\$(158,697)	\$(163,458)	\$(168,360)	\$(173,404)	\$(178,581)	\$(183,891)	\$(189,336)	\$(194,917)	\$(200,634)	\$(206,487)	\$(212,466)	\$(218,570)	\$(224,800)	\$(231,156)	\$(237,639)	\$(244,251)	\$(250,993)	
24 Net Income Available for Debt Service	\$1,054,768	\$1,096,317	\$1,091,960	\$1,087,472	\$1,082,849	\$1,078,089	\$1,073,147	\$1,068,143	\$1,063,166	\$1,058,206	\$1,053,263	\$1,048,336	\$1,043,422	\$1,038,521	\$1,033,631	\$1,028,751	\$1,023,881	\$1,019,030	\$1,014,199	\$1,009,388	\$1,004,587	
25 Senior Lien Debt Service Coverage	1.2 Req'd	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2		
26 Existing Senior Lien Debt Service	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391		
27 New Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
28 Cumulative New Senior Lien Debt for Additional Borrowings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
29 Total Senior Lien Debt Service	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391		
30 Senior Lien Debt Service Coverage	1.2 Req'd	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2		
<b>31 SRF Debt Service Coverage</b>																						
32 Net Income Available for Senior Lien Debt Service Coverage	\$1,054,768	\$1,096,317	\$1,091,960	\$1,087,472	\$1,082,849	\$1,078,089	\$1,073,147	\$1,068,143	\$1,063,166	\$1,058,206	\$1,053,263	\$1,048,336	\$1,043,422	\$1,038,521	\$1,033,631	\$1,028,751	\$1,023,881	\$1,019,030	\$1,014,199	\$1,009,388		
33 Less: Senior Lien Debt Service	\$(990,391)	\$(990,391)	\$(990,391)	\$(1,010,519)	\$(1,104,934)	\$(1,134,020)	\$(1,209,108)	\$(1,286,683)	\$(1,355,480)	\$(1,432,386)	\$(1,501,483)	\$(1,574,268)	\$(1,645,055)	\$(1,714,936)	\$(1,787,284)	\$(1,859,758)	\$(1,931,217)	\$(2,002,167)	\$(2,073,325)	\$(2,144,250)	\$(2,214,970)	
34 Net Income Available for SRF Debt Service Coverage	\$75,377	\$805,156	\$864,148	\$903,463	\$942,915	\$982,469	\$1,022,141	\$1,061,960	\$1,101,926	\$1,142,047	\$1,182,314	\$1,222,730	\$1,263,295	\$1,304,009	\$1,344,872	\$1,385,883	\$1,427,040	\$1,468,353	\$1,509,822	\$1,551,446	\$1,593,225	
35 Existing SRF Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
36 SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
<b>37 Net Income Available for Debt Service</b>	\$1,054,768	\$1,096,317	\$1,091,960	\$1,087,472	\$1,082,849	\$1,078,089	\$1,073,147	\$1,068,143	\$1,063,166	\$1,058,206	\$1,053,263	\$1,048,336	\$1,043,422	\$1,038,521	\$1,033,631	\$1,028,751	\$1,023,881	\$1,019,030	\$1,014,199	\$1,009,388		
38 Less:																						
39 Total Senior Lien Debt	\$(990,391)	\$(990,391)	\$(990,391)	\$(1,010,519)	\$(1,104,934)	\$(1,134,020)	\$(1,209,108)	\$(1,286,683)	\$(1,355,480)	\$(1,432,386)	\$(1,501,483)	\$(1,574,268)	\$(1,645,055)	\$(1,714,936)	\$(1,787,284)	\$(1,859,758)	\$(1,931,217)	\$(2,002,167)	\$(2,073,325)	\$(2,144,250)	\$(2,214,970)	
40 State Revolving Fund Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
41 Payment of Debt Service With Water Impact Fees	\$116,626	\$141,875	\$145,237	\$149,587	\$154,075	\$158,697	\$163,458	\$168,360	\$173,404	\$178,581	\$183,891	\$189,336	\$194,917	\$200,634	\$206,487	\$212,466	\$218,570	\$224,800	\$231,156	\$237,639		
42 Payment of Debt Service With Sewer Impact Fees	\$(757,000)	\$(779,710)	\$(803,101)	\$(827,194)	\$(852,010)	\$(877,570)	\$(903,898)	\$(931,015)	\$(958,945)	\$(987,719)	\$(1,017,345)	\$(1,047,855)	\$(1,079,201)	\$(1,111,680)	\$(1,145,080)	\$(1,179,381)	\$(1,214,763)	\$(1,251,208)	\$(1,288,724)	\$(1,327,404)	\$(1,367,226)	
43 Transfer Out	\$100,000	\$117,000	\$135,000	\$154,000	\$174,000	\$195,000	\$217,000	\$240,000	\$264,000	\$289,000	\$315,000	\$342,000	\$370,000	\$399,000	\$429,000	\$460,000	\$492,000	\$525,000	\$559,000	\$594,000	\$630,000	
44 Capital Outlay	\$(17,000)	\$(17,510)	\$(18,035)	\$(18,576)	\$(19,134)	\$(19,708)	\$(20,299)	\$(20,908)	\$(21,535)	\$(22,181)	\$(22,847)	\$(23,532)	\$(24,238)	\$(24,965)	\$(25,714)	\$(26,485)	\$(27,278)	\$(28,093)	\$(28,929)	\$(29,787)	\$(30,667)	
45 Net Cash Flow	\$101,003	\$149,811	\$188,248	\$207,279	\$227,163	\$247,871	\$269,396	\$291,735	\$314,888	\$338,855	\$363,636	\$389,241	\$415,670	\$442,914	\$470,973	\$500,846	\$531,523	\$563,004	\$595,285	\$628,462	\$662,531	
46 Unrestricted Reserve Fund - Beginning of Year Balance	\$2,729,000	\$2,830,003	\$1,479,813	\$668,061	\$270,090	\$278,419	\$287,022	\$295,916	\$613,184	\$668,182	\$730,792	\$778,381	\$808,600	\$841,363	\$872,729	\$905,295	\$936,800	\$975,850	\$1,004,713	\$1,039,884	\$1,075,377	
47 Minimum Working Capital Reserve Target	\$243,506	\$254,212	\$262,024	\$270,090	\$278,419	\$287,022	\$295,916															



# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### APPENDIX Bb

### St. Johns River Water Supply Project

#### Affordability Analysis - Scenario Results

#### Scenario: Seminole and SW Volusia Demand Center, Reliable Source with ASR, Site E

#### **FIGURE Bb6 - WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – PROFORMA**

Water Supply Entity Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																					
	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>1 Revenue</b>																					
Surcharge Revenue	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$811,086	\$869,631,796	\$928,262,342	\$987,075,792	\$1,046,183,784	\$1,105,534,374	\$1,165,189,917	\$1,225,137,874	\$1,285,489,917	\$1,346,147,917	\$1,407,112,917	\$1,468,384,917	\$1,530,062,917	\$1,592,147,917
Delivered Water Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>4 Total Operating Revenue</b>	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$811,086	\$869,631,796	\$928,262,342	\$987,075,792	\$1,046,183,784	\$1,105,534,374	\$1,165,189,917	\$1,225,137,874	\$1,285,489,917	\$1,346,147,917	\$1,407,112,917	\$1,468,384,917	\$1,530,062,917	\$1,592,147,917
<b>5 Expenses</b>																					
Operations and Maintenance Expense	\$0	\$515,000	\$566,973	\$602,366	\$651,459	\$704,552	\$761,973	\$825,638,739	\$882,653,204	\$940,268,670	\$1,000,000,000	\$1,060,000,000	\$1,120,000,000	\$1,180,000,000	\$1,240,000,000	\$1,300,000,000	\$1,360,000,000	\$1,420,000,000	\$1,480,000,000	\$1,540,000,000	\$1,600,000,000
<b>8 Net Operating Income</b>	\$0	(\$3,807)	(\$5,076)	(\$6,344)	(\$7,613)	(\$8,882)	(\$9,882)	\$30,626,032	\$34,592,049	\$39,407,499	\$44,834,647	\$49,625,336	\$54,173,426	\$58,500,000	\$62,714,917	\$66,812,917	\$70,812,917	\$74,712,917	\$78,512,917	\$82,212,917	\$85,912,917
<b>9 Plus: Non Operating Income (Expense)</b>																					
Non Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interest Earned on Invested Funds	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$9,882	\$13,160,669	\$9,194,653	\$4,379,203	\$1,951,855	\$2,058,891	\$1,847,998	\$1,868,695	\$1,936,308	\$2,003,930	\$1,474,073	\$2,139,176	\$2,208,799	\$2,274,422	\$2,342,044
Transfers In	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>14 Total Non Operating Income</b>	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$9,882	\$13,160,669	\$9,194,653	\$4,379,203	\$1,951,855	\$2,058,891	\$1,847,998	\$1,868,695	\$1,936,308	\$2,003,930	\$1,474,073	\$2,139,176	\$2,208,799	\$2,274,422	\$2,342,044
<b>15 Net Income</b>	\$3,778	(\$0)	\$0	\$0	\$0	\$0	\$0	\$43,786,702	\$43,786,702	\$43,786,702	\$43,786,702	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426
Less: Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>17 Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$43,786,702	\$43,786,702	\$43,786,702	\$43,786,702	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426
<b>Senior Lien Debt Service Coverage</b>																					
Existing Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$36,488,918	\$36,488,918	\$36,488,918	\$36,488,918	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522
Cumulative New Senior Lien Debt for Additional Borrowings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>22 Total Senior Lien Debt Service</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$36,488,918	\$36,488,918	\$36,488,918	\$36,488,918	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522
Senior Lien Debt Service Coverage	1.2 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
<b>SRF Debt Service Coverage</b>																					
Net Income Available for Senior Lien Debt Service Coverage	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$43,786,702	\$43,786,702	\$43,786,702	\$43,786,702	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426
Less: Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$36,488,918	\$36,488,918	\$36,488,918	\$36,488,918	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522
<b>27 Net Income Available for SRF Debt Service Coverage</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$7,297,784	\$7,297,784	\$7,297,784	\$7,297,784	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904
Existing SRF Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>30 Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$43,786,702	\$43,786,702	\$43,786,702	\$43,786,702	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426	\$44,021,426
Less:																					
Total Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$36,488,918	\$36,488,918	\$36,488,918	\$36,488,918	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522	\$36,684,522
State Revolving Fund Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Payment of Debt Service With Water Impact Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transfer Out	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Outlay	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>37 Net Cash Flow</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$7,297,784	\$7,297,784	\$7,297,784	\$7,297,784	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904
Unrestricted Reserve Fund - Beginning of Year Balance	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$6,384,685	\$6,277,644	\$10,170,603	\$12,063,561	\$8,376,507	\$10,308,587	\$12,240,666	\$14,172,746	\$16,104,826	\$18,036,905	\$19,968,985	\$21,901,065	\$23,833,144
Minimum Working Capital Reserve Target	\$0	\$128,750	\$139,243	\$150,591	\$162,865	\$176,138	\$190,493	\$6,384,685	\$6,913,301	\$7,421,401	\$7,903,096	\$8,376,507	\$8,517,866	\$8,651,082	\$8,775,949	\$8,892,753	\$9,001,670	\$9,049,450	\$9,091,993	\$9,129,524	\$9,162,288
Reserve Fund Balance in Excess of Working Capital Target	\$250,000	\$125,028	\$114,535	\$103,187	\$90,914	\$77,640	\$63,285	\$0	\$0	\$856,243	\$2,261,506	\$3,687,054	\$0	\$1,657,505	\$3,464,717	\$5,279,984	\$7,103,156	\$8,987,455	\$10,876,992	\$12,771,540	\$14,670,857
Less: Reserve Fund Balance used for Cash Flow	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>42 Reserve Fund Balance in Excess of Working Capital Target Net of Current Year Cash Flow</b>	\$250,000	\$125,028	\$114,535	\$103,187	\$90,914	\$77,640	\$63,285	\$0	\$0	\$856,243	\$2,261,506	\$3,687,054	\$0	\$1,657,505	\$3,464,717	\$5,279,984	\$7,103,156	\$8,987,455	\$10,876,992	\$12,771,540	\$14,670,857
<b>43 Net Cash Flow After Use of Reserve Funds</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$7,297,784	\$7,297,784	\$7,297,784	\$7,297,784	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904
Less: CIP Projects Designated to be Paid with Cash	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>46 Net Cash Flow to Unrestricted Reserve Fund</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$7,297,784	\$7,297,784	\$7,297,784	\$7,297,784	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904
Unrestricted Reserve Fund - Beginning of Year Balance	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$6,384,685	\$6,277,644	\$10,170,603	\$12,063,561	\$8,376,507	\$10,308,587	\$12,240,666	\$14,172,746	\$16,104,826	\$18,036,905	\$19,968,985	\$21,901,065	\$23,833,144
Cash In/Out from Rate Revenues	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$7,297,784	\$7,297,784	\$7,297,784	\$7,297,784	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904	\$7,336,904
Less: Reserve Fund Balance used for Cash Flow	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Less: Projects Paid with Reserve Funds (Non Specified Funding)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$1,166,877)	(\$5,404,825)	(\$5,404,825)	(\$5,404,825)	(\$11,023,959)	(\$5,404,825)	(\$5,404,825)	(\$5,404,825)	(\$5,404,825)	(\$5,404,825)	(\$5,404,825)	(\$5,404,825)	(\$5,404,825)	(\$5,404,825)
Unrestricted Reserve Fund - End of Year Balance	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$6,384,685	\$6,277,644	\$10,170,603	\$12,063,561	\$8,376,507	\$10,308,587	\$12,240,666	\$14,172,746	\$16,104,826	\$18,036,905	\$19,968,985	\$21,901,065	\$23,833,144	\$25,765,224
Minimum Working Capital Reserve Target	3 Mo O&	\$0	\$128,750	\$139,243	\$150,591	\$162,865	\$176,138	\$190,493	\$6,384,685	\$6,913,301	\$7,421,401	\$7,903,096	\$8,376,507	\$8,517,866	\$8,651,082	\$8,775,949	\$8,892,753	\$9,001,670	\$9,049,450	\$9,091,993	\$9,129,524
<b>52 Excess (Deficiency) of Working Capital Reserves to Target</b>	\$253,778	\$125,028	\$114,535	\$103,187	\$90,914	\$77,640	\$63,285	(\$0)	(\$1,364,343)	\$2,749,202	\$4,154,465	(\$0)	\$1,790,601	\$3,589,584	\$5,386,797	\$7,212,073	\$9,036,236	\$10,919,535	\$12,809,071	\$14,703,620	\$16,602,936

Source: Burton & Associates  
C:\Data\SRV\MD\Andy\SRV\MD\Models as of 2-1-2004\FAMS-Water Supply Entity-SRV\MD\_4\_19\Pro-Forma

**ST. JOHNS RIVER WATER SUPPLY PROJECT  
AFFORDABILITY ANALYSIS**

*APPENDIX Bc*

**APPENDIX Bc**

**Seminole and SW Volusia Demand Center**

**Reliable Source**

**Without ASR**

**Site E**

**Just-in-Time Rates**

**Figure**

**Number**

**Title**

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**Bc1      Utility – Groundwater Scenario – Summary Panel**

**Bc2      Utility – Groundwater Scenario – Proforma**

**Bc3      Utility – Surface Water Scenario – Summary Panel**

**Bc4      Utility – Surface Water Scenario – Proforma**

**Bc5      Water Supply Entity – Surface Water Scenario – Summary Panel**

**Bc6      Water Supply Entity – Surface Water Scenario – Proforma**

**ST. JOHNS RIVER WATER SUPPLY PROJECT  
AFFORDABILITY ANALYSIS**

*APPENDIX Bc*

**St. Johns River Water Supply Project  
Affordability Analysis - Scenario Results**

**Scenario: Seminole and SW Volusia Demand Center, Reliable Source without ASR, Site E**

**FIGURE Bc1 - UTILITY – GROUNDWATER SCENARIO – SUMMARY PANEL**

**&**

**FIGURE Bc2 - UTILITY – GROUNDWATER SCENARIO – PROFORMA**

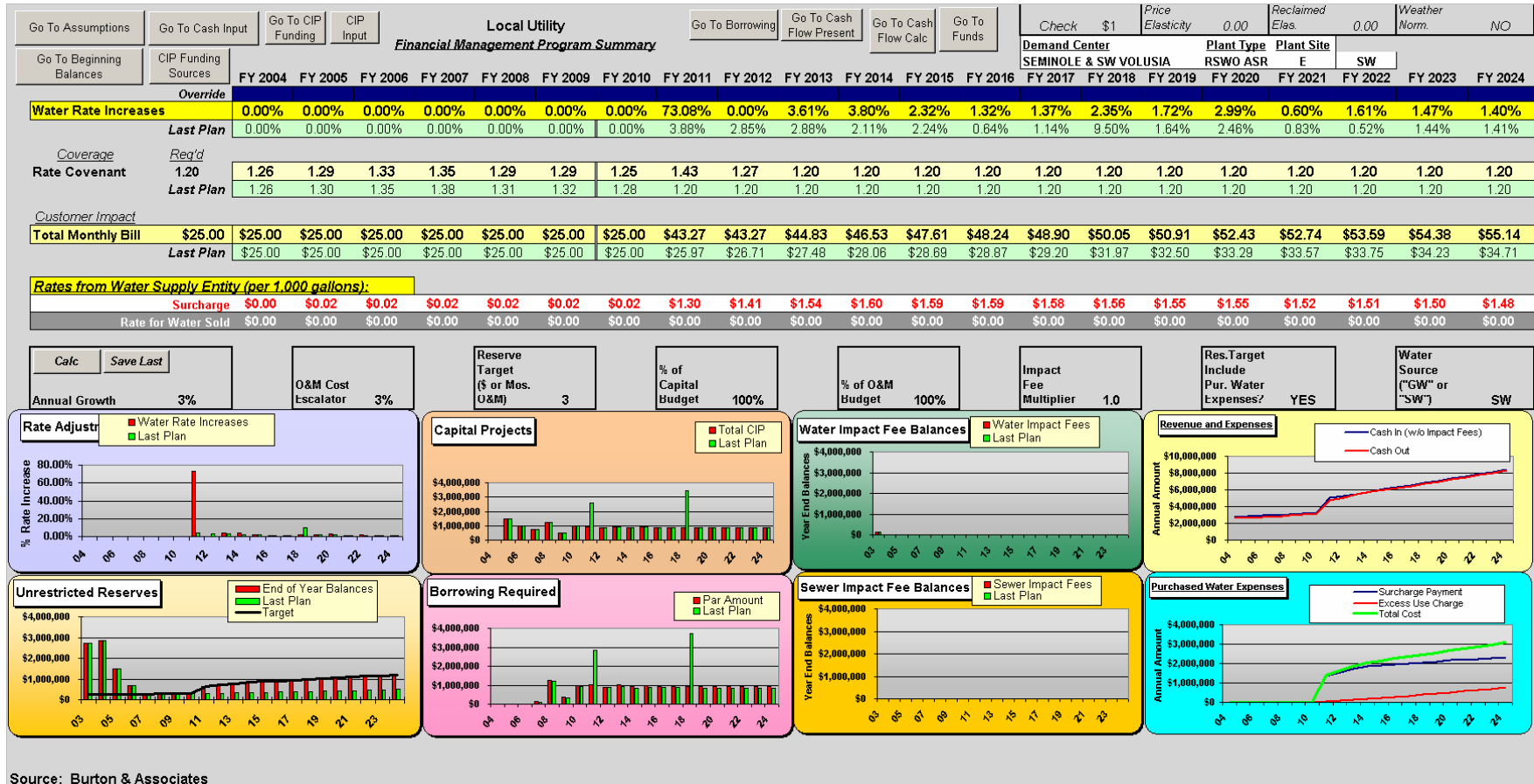
**Same as Figures Ba1 and Ba2**

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Bc*

## St. Johns River Water Supply Project *Affordability Analysis - Scenario Results*

**Scenario: Seminole and SW Volusia Demand Center, Reliable Source without ASR, Site E**  
**FIGURE Bc3 - UTILITY – SURFACE WATER SCENARIO – SUMMARY PANEL**



# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### APPENDIX Bc

### St. Johns River Water Supply Project

#### Affordability Analysis - Scenario Results

### Scenario: Seminole and SW Volusia Demand Center, Reliable Source without ASR, Site E

#### FIGURE Bc4 - UTILITY – SURFACE WATER SCENARIO – PROFORMA

		Local Utility																						
		Water and Sewer System Financial Management Program Summary																						
		Forecast of Net Revenues and Debt Service Coverage																						
	Water Growth	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024		
		0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	2.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%		
1	<b>Revenue</b>																							
2	Revenue Subject to Rate Increases																							
3	Water Rate Revenue	\$1,900,000	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,139,467	\$2,202,621	\$2,268,699	\$4,024,742	\$4,125,361	\$4,381,117	\$4,661,193	\$4,888,493	\$5,076,608	\$5,274,880	\$5,506,602	\$5,713,331	\$6,001,722	\$6,158,227	\$6,382,576	\$6,606,205		
4	Rate Revenue from Growth	\$0	\$57,000	\$58,710	\$60,471	\$62,285	\$64,154	\$66,079	\$68,059	\$100,619	\$103,134	\$109,528	\$116,530	\$122,212	\$128,915	\$105,498	\$110,132	\$114,267	\$120,034	\$123,165	\$127,652	\$132,124		
5	Proposed Rate Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
6	Rate Revenue from Rate Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,699,325	\$0	\$1,699,325	\$0	\$1,699,325	\$170,548	\$110,770	\$65,902	\$71,357	\$126,224	\$96,598	\$174,124	\$36,471	\$101,184	
7	Total Water Rate Revenue	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,139,467	\$2,202,621	\$2,268,699	\$4,024,742	\$4,125,361	\$4,381,117	\$4,661,193	\$4,888,493	\$5,076,608	\$5,274,880	\$5,506,602	\$5,713,331	\$6,001,722	\$6,158,227	\$6,382,576	\$6,606,205	\$6,832,972		
8	Other Operating Revenue																							
9	Other Operating Revenue (1)	\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$388,948	\$400,616	\$412,634	\$425,014	\$437,764	\$450,897	\$464,424	\$478,356	\$492,700		
10	<b>Total Operating Revenue</b>	\$2,172,800	\$2,237,984	\$2,305,124	\$2,374,277	\$2,445,506	\$2,518,871	\$2,594,437	\$4,360,252	\$4,470,935	\$4,737,059	\$5,027,814	\$5,266,112	\$5,465,555	\$5,675,496	\$5,919,236	\$6,136,345	\$6,439,486	\$6,609,124	\$6,847,000	\$7,084,562	\$7,325,679		
11	<b>Expenses</b>																							
12	Purchased Water at Groundwater Rates	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$46,929	\$88,643	\$135,571	\$187,714	\$234,643	\$286,786	\$338,929	\$396,286	\$448,429	\$511,000	\$568,357	\$630,929	\$693,500		
13	Water Treatment Facility Surcharge	\$0	\$13,603	\$14,754	\$16,018	\$17,404	\$18,925	\$20,629	\$1,381,695	\$1,546,686	\$1,738,985	\$1,859,049	\$1,912,419	\$1,964,545	\$2,009,070	\$2,052,035	\$2,095,252	\$2,159,683	\$2,182,892	\$2,227,514	\$2,272,601	\$2,318,172		
14	Operations and Maintenance Expense	\$974,025	\$1,003,246	\$1,033,343	\$1,064,343	\$1,096,274	\$1,129,162	\$1,163,037	\$1,197,928	\$1,233,866	\$1,270,882	\$1,309,008	\$1,348,278	\$1,388,727	\$1,430,389	\$1,473,300	\$1,517,499	\$1,563,024	\$1,609,915	\$1,658,212	\$1,707,959	\$1,759,197		
15	<b>Net Operating Income</b>	\$1,198,775	\$1,221,135	\$1,257,026	\$1,293,916	\$1,331,828	\$1,370,784	\$1,410,772	\$1,733,700	\$1,801,741	\$1,591,822	\$1,672,043	\$1,770,772	\$1,825,497	\$1,897,109	\$1,997,615	\$2,077,165	\$2,205,599	\$2,247,960	\$2,330,345	\$2,410,502	\$2,492,239		
16	<b>Plus: Non Operating Income (Expense)</b>																							
17	Non Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
18	Interest Earned on Invested Funds	\$57,993	\$67,411	\$75,063	\$73,702	\$90,383	\$93,336	\$93,797	\$110,389	\$120,912	\$125,518	\$128,550	\$117,657	\$148,235	\$160,813	\$147,454	\$154,012	\$112,937	\$155,999	\$159,366	\$164,673	\$168,173		
19	Transfers In	\$500,000	\$515,000	\$530,450	\$546,364	\$562,754	\$579,637	\$597,026	\$614,937	\$633,395	\$652,387	\$671,958	\$692,117	\$712,880	\$734,267	\$756,295	\$778,964	\$802,363	\$826,424	\$851,217	\$876,753	\$903,056		
20	Water Expansion Fees	\$0	\$141,000	\$145,230	\$149,697	\$154,075	\$159,697	\$165,468	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$158,736	\$162,706	\$133,419	\$136,088	\$139,809	\$141,595	\$144,417	\$147,306	\$150,252		
21	<b>Total Non Operating Income</b>	\$557,993	\$723,411	\$750,743	\$769,652	\$807,212	\$831,810	\$852,290	\$855,527	\$925,106	\$955,597	\$964,841	\$1,019,853	\$1,057,786	\$1,037,189	\$1,069,063	\$1,054,099	\$1,124,088	\$1,154,990	\$1,188,731	\$1,221,481	\$1,254,481		
22	<b>Net Income</b>	\$1,756,768	\$1,944,547	\$2,007,769	\$2,063,569	\$2,139,040	\$2,202,454	\$2,271,052	\$2,599,327	\$2,499,847	\$2,516,930	\$2,623,640	\$2,735,412	\$2,845,361	\$2,954,896	\$3,034,784	\$3,146,248	\$3,259,696	\$3,371,968	\$3,485,335	\$3,599,233	\$3,713,719		
23	Less: Water Expansion Fees	\$0	(\$141,000)	(\$145,230)	(\$149,697)	(\$154,075)	(\$159,697)	(\$165,468)	(\$140,301)	(\$143,809)	(\$147,404)	(\$151,089)	(\$154,866)	(\$158,736)	(\$133,419)	(\$136,088)	(\$139,809)	(\$141,595)	(\$144,417)	(\$147,306)	(\$150,252)			
24	<b>Net Income Available for Debt Service</b>	\$1,756,768	\$1,803,547	\$1,862,539	\$1,913,982	\$1,984,966	\$2,043,757	\$2,107,594	\$2,459,026	\$2,356,038	\$2,369,527	\$2,472,551	\$2,580,546	\$2,686,613	\$2,792,189	\$2,901,364	\$3,010,161	\$3,120,889	\$3,230,383	\$3,340,918	\$3,451,928	\$3,563,468		
25	<b>Senior Lien Debt Service Coverage</b>																							
26	Existing Senior Lien Debt Service	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391	\$990,391		
27	New Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
28	Cumulative New Senior Lien Debt for Additional Borrowings	\$0	\$0	\$0	\$12,128	\$106,543	\$135,629	\$210,717	\$288,292	\$355,072	\$422,559	\$502,103	\$575,300	\$646,386	\$716,544	\$789,167	\$860,923	\$932,722	\$1,004,908	\$1,076,380	\$1,147,588	\$1,218,619		
29	<b>Total Senior Lien Debt Service</b>	\$990,391	\$990,391	\$990,391	\$1,010,519	\$1,104,934	\$1,134,020	\$1,209,108	\$1,286,683	\$1,363,463	\$1,430,950	\$1,500,494	\$1,573,691	\$1,644,777	\$1,714,935	\$1,787,558	\$1,859,314	\$1,932,113	\$2,003,299	\$2,074,751	\$2,145,979	\$2,217,010		
30	Senior Lien Debt Service Coverage	1.2	Req'd	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2			
31	<b>SRF Debt Service Coverage</b>																							
32	Net Income Available for Senior Lien Debt Service Coverage	\$1,756,768	\$1,803,547	\$1,862,539	\$1,913,982	\$1,984,966	\$2,043,757	\$2,107,594	\$2,459,026	\$2,356,038	\$2,369,527	\$2,472,551	\$2,580,546	\$2,686,613	\$2,792,189	\$2,901,364	\$3,010,161	\$3,120,889	\$3,230,383	\$3,340,918	\$3,451,928	\$3,563,468		
33	Less: Senior Lien Debt Service	(\$990,391)	(\$990,391)	(\$990,391)	(\$1,010,519)	(\$1,104,934)	(\$1,134,020)	(\$1,209,108)	(\$1,286,683)	(\$1,363,463)	(\$1,430,950)	(\$1,500,494)	(\$1,573,691)	(\$1,644,777)	(\$1,714,935)	(\$1,787,558)	(\$1,859,314)	(\$1,932,113)	(\$2,003,299)	(\$2,074,751)	(\$2,145,979)	(\$2,217,010)		
34	<b>Net Income Available for SRF Debt Service Coverage</b>	\$756,377	\$803,156	\$864,148	\$903,463	\$880,032	\$909,737	\$898,486	\$1,172,343	\$1,002,575	\$938,577	\$972,057	\$1,006,855	\$1,041,836	\$1,077,254	\$1,113,806	\$1,150,847	\$1,188,776	\$1,227,084	\$1,266,167	\$1,305,949	\$1,346,458		
35	Existing SRF Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
36	SRF Debt Service Coverage	1.15	Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
37	<b>Net Income Available for Debt Service</b>	\$1,756,768	\$1,803,547	\$1,862,539	\$1,913,982	\$1,984,966	\$2,043,757	\$2,107,594	\$2,459,026	\$2,356,038	\$2,369,527	\$2,472,551	\$2,580,546	\$2,686,613	\$2,792,189	\$2,901,364	\$3,010,161	\$3,120,889	\$3,230,383	\$3,340,918	\$3,451,928	\$3,563,468		
38	Less:																							
39	Total Senior Lien Debt	(\$990,391)	(\$990,391)	(\$990,391)	(\$1,010,519)	(\$1,104,934)	(\$1,134,020)	(\$1,209,108)	(\$1,286,683)	(\$1,363,463)	(\$1,430,950)	(\$1,500,494)	(\$1,573,691)	(\$1,644,777)	(\$1,714,935)	(\$1,787,558)	(\$1,859,314)	(\$1,932,113)	(\$2,003,299)	(\$2,074,751)	(\$2,145,979)	(\$2,217,010)		
40	State Revolving Fund Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
41	Payment of Debt Service With Water Impact Fees	\$116,626	\$141,875	\$145,237	\$149,587	\$154,075	\$159,697	\$163,458	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$158,736	\$162,706	\$133,419	\$136,088	\$139,809	\$141,595	\$144,417	\$147,306	\$150,252		
42	Payment of Debt Service With Sewer Impact Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
43	Transfer Out	(\$757,000)	(\$779,710)	(\$803,101)	(\$827,194)	(\$852,010)	(\$877,570)	(\$903,898)	(\$931,015)	(\$959,945)	(\$987,719)	(\$1,017,345)	(\$1,047,865)	(\$1,079,301)	(\$1,111,660)	(\$1,145,030)	(\$1,179,381)	(\$1,214,763)	(\$1,251,200)	(\$1,288,742)	(\$1,327,404)	(\$1,367,226)		
44	Capital Outlay	(\$17,000)	(\$17,510)	(\$18,035)	(\$18,576)	(\$19,134)	(\$19,708)	(\$20,299)	(\$20,908)	(\$21,535)	(\$22,181)	(\$22,847)	(\$23,532)	(\$24,238)	(\$24,965)	(\$25,714)	(\$26,485)	(\$27,280)	(\$28,099)	(\$28,941)	(\$29,810)	(\$30,704)		
45	<b>Net Cash Flow</b>	\$101,003	\$149,811	\$188,248	\$207,279	\$162,963	\$171,156	\$137,747	\$165,904	\$76,086	\$82,955	\$90,324	\$97,035	\$103,315	\$76,481	\$81,067	\$85,542	\$89,365	\$92,901	\$96,041	\$98,779			
46	Unrestricted Reserve Fund - Beginning of Year Balance	\$2,729,000	\$2,830,003	\$1,479,813																				



# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

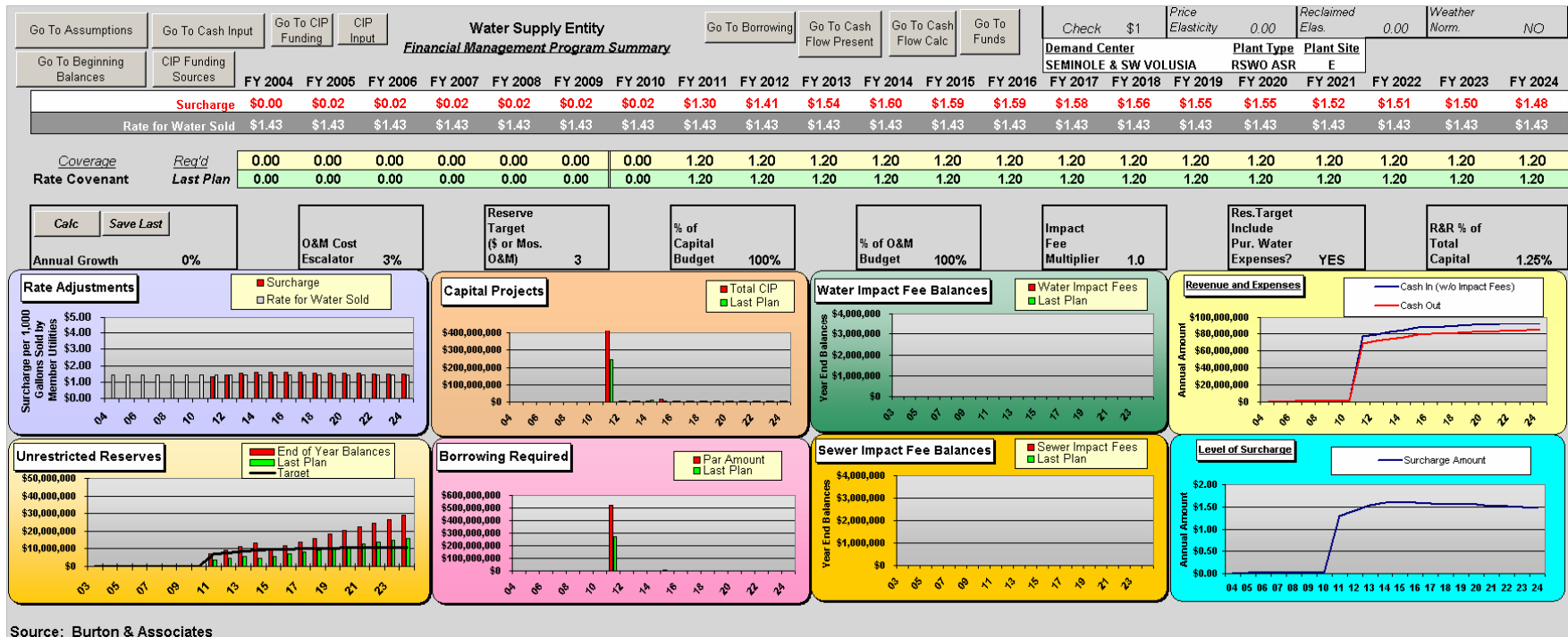
*APPENDIX Bc*

## St. Johns River Water Supply Project

### Affordability Analysis - Scenario Results

**Scenario: Seminole and SW Volusia Demand Center, Reliable Source without ASR, Site E**

**FIGURE Bc5 - WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – SUMMARY PANEL**



# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

## APPENDIX Bc

### St. Johns River Water Supply Project

#### Affordability Analysis - Scenario Results

#### Scenario: Seminole and SW Volusia Demand Center, Reliable Source without ASR, Site E **FIGURE Bc6 - WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – PROFORMA**

		Water Supply Entity Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																					
		FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	
1	<b>Revenue</b>																						
2	Surcharge Revenue	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$811,563	\$870,709	\$930,270	\$990,227	\$1,050,229	\$1,110,229	\$1,170,229	\$1,230,229	\$1,290,229	\$1,350,229	\$1,410,229	\$1,470,229	\$1,530,229	\$1,590,229	\$1,650,229
3	Delivered Water Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	<b>Total Operating Revenue</b>	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$811,563	\$870,709	\$930,270	\$990,227	\$1,050,229	\$1,110,229	\$1,170,229	\$1,230,229	\$1,290,229	\$1,350,229	\$1,410,229	\$1,470,229	\$1,530,229	\$1,590,229	\$1,650,229
5	<b>Expenses</b>																						
6	Operations and Maintenance Expense	\$0	\$515,000	\$556,973	\$602,366	\$651,459	\$704,552	\$761,973	\$821,830	\$882,437	\$943,303	\$1,004,227	\$1,065,227	\$1,126,227	\$1,187,227	\$1,248,227	\$1,309,227	\$1,370,227	\$1,431,227	\$1,492,227	\$1,553,227	\$1,614,227	\$1,675,227
8	<b>Net Operating Income</b>	\$0	(\$3,807)	(\$6,076)	(\$6,344)	(\$7,613)	(\$8,882)	(\$8,882)	(\$3,650,319)	(\$3,001,040)	(\$4,269,305)	(\$4,956,395)	(\$5,643,485)	(\$6,330,575)	(\$7,017,665)	(\$7,704,755)	(\$8,391,845)	(\$9,078,935)	(\$9,766,025)	(\$10,453,115)	(\$11,140,205)	(\$11,827,295)	(\$12,514,385)
9	<b>Plus: Non Operating Income (Expense)</b>																						
10	Non Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
11	Interest Earned on Invested Funds	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$8,882	\$14,455,409	\$10,104,687	\$4,816,422	\$2,150,332	\$2,329,221	\$2,062,497	\$2,074,747	\$2,149,593	\$2,224,439	\$1,626,542	\$2,374,131	\$2,448,977	\$2,523,823	\$2,598,669	\$2,673,515
12	Transfers In	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13	Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14	<b>Total Non Operating Income</b>	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$8,882	\$14,455,409	\$10,104,687	\$4,816,422	\$2,150,332	\$2,329,221	\$2,062,497	\$2,074,747	\$2,149,593	\$2,224,439	\$1,626,542	\$2,374,131	\$2,448,977	\$2,523,823	\$2,598,669	\$2,673,515
15	<b>Net Income</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$40,105,727)	(\$40,105,727)	(\$40,105,727)	(\$40,105,727)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)
16	Less: Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
17	<b>Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$40,105,727)	(\$40,105,727)	(\$40,105,727)	(\$40,105,727)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)
18	<b>Senior Lien Debt Service Coverage</b>																						
19	Existing Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
20	New Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	Cumulative New Senior Lien Debt for Additional Borrowings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40,088,106	\$40,088,106	\$40,088,106	\$40,088,106	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404
22	<b>Total Senior Lien Debt Service</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40,088,106	\$40,088,106	\$40,088,106	\$40,088,106	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404	\$40,494,404
23	Senior Lien Debt Service Coverage	1.2 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
24	<b>SRF Debt Service Coverage</b>																						
25	Net Income Available for Senior Lien Debt Service Coverage	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$40,105,727)	(\$40,105,727)	(\$40,105,727)	(\$40,105,727)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)
26	Less: Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$40,088,106)	(\$40,088,106)	(\$40,088,106)	(\$40,088,106)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)
27	Net Income Available for SRF Debt Service Coverage	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$8,017,621	\$8,017,621	\$8,017,621	\$8,017,621	\$8,096,881	\$8,096,881	\$8,096,881	\$8,096,881	\$8,096,881	\$8,096,881	\$8,096,881	\$8,096,881	\$8,096,881	\$8,096,881	\$8,096,881
28	Existing SRF Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
29	SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30	<b>Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$40,105,727)	(\$40,105,727)	(\$40,105,727)	(\$40,105,727)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)	(\$40,501,205)
31	Less:																						
32	Total Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$40,088,106)	(\$40,088,106)	(\$40,088,106)	(\$40,088,106)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	(\$40,494,404)	
33	State Revolving Fund Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
34	Payment of Debt Service With Water Impact Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
35	Transfer Out	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
36	Capital Outlay	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
37	<b>Net Cash Flow</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$8,017,621)	(\$8,017,621)	(\$8,017,621)	(\$8,017,621)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)
38	Unrestricted Reserve Fund - Beginning of Year Balance	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778
39	Minimum Working Capital Reserve Target	\$0	\$126,750	\$139,243	\$150,591	\$162,886	\$176,138	\$190,493	\$7,204,733	\$7,830,109	\$8,437,401	\$9,026,719	\$9,598,184	\$9,798,474	\$9,991,522	\$10,177,479	\$10,366,512	\$10,526,798	\$10,631,254	\$10,729,362	\$10,823,348	\$10,913,496	\$11,003,644
40	Reserve Fund Balance in Excess of Working Capital Target	\$250,000	\$125,026	\$114,535	\$103,167	\$90,914	\$77,640	\$63,285	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
41	Less: Reserve Fund Balance used for Cash Flow	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
42	<b>Reserve Fund Balance in Excess of Working Capital Target Net of Current Year Cash Flow</b>	\$250,000	\$125,026	\$114,535	\$103,167	\$90,914	\$77,640	\$63,285	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
43	<b>Net Cash Flow After Use of Reserve Funds</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	(\$8,017,621)	(\$8,017,621)	(\$8,017,621)	(\$8,017,621)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)
44	Less: OIP Projects Designated to be Paid with Cash	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
45	<b>Net Cash Flow to Unrestricted Reserve Fund</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	(\$8,017,621)	(\$8,017,621)	(\$8,017,621)	(\$8,017,621)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)
46	<b>Unrestricted Reserve Fund - Beginning of Year Balance</b>	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778
47	Cash In/(Out) from Rate Revenues	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	(\$8,017,621)	(\$8,017,621)	(\$8,017,621)	(\$8,017,621)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)	(\$8,096,881)
48	Less: Reserve Fund Balance used for Cash Flow	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
49	Less: Projects Paid with Reserve Funds (Non-Specified Funding)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$1,066,867)	(\$5,969,425)	(\$5,969,425)	(\$5,969,425)	(\$11,681,017)	(\$5,969,425)	(\$5,969,425)	(\$5,969,425)	(\$5,969,425)	(\$5,969,425)	(\$5,969,425)	(\$5,969,425)	(\$5,969,425)	(\$5,969,425)	
50	Unrestricted Reserve Fund - End of Year Balance	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$7,204,733	\$7,830,109	\$8,437,401	\$9,026,719	\$9,598,184	\$9,798,474	\$9,991,522	\$10,177,479	\$10,366,512	\$10,526,798	\$10,631,254	\$10,729,362	\$10,823,348	\$10,913,496	\$11,003,644
51	Minimum Working Capital Reserve Target	3 Mo O&M	\$0	\$126,750	\$139,243	\$150,591	\$162,886	\$176,138	\$190,493	\$7,204,733	\$7,830,109	\$8,437,401	\$9,026,719	\$9,598,184	\$9,798,474	\$9,991,522	\$10,177,479	\$10,366,512	\$10,526,798	\$10,631,254	\$10,729,362	\$10,823,348	\$10,913,496
52	<b>Excess (Deficiency) of Working Capital Reserves to Target</b>	\$253,778	\$125,026	\$114,535	\$103,167	\$90,914	\$77,640	\$63,285	(\$0)	(\$1,433,819)	\$2,865,724	\$4,355,620											

**ST. JOHNS RIVER WATER SUPPLY PROJECT**  
**AFFORDABILITY ANALYSIS**  
*APPENDIX Ca*

**APPENDIX Ca**

**Volusia County Demand Center**  
**Intermittent Source**  
**ASR**  
**Site E**  
**Just-in-Time Rates**

**Figure**

**Number**

**Title**

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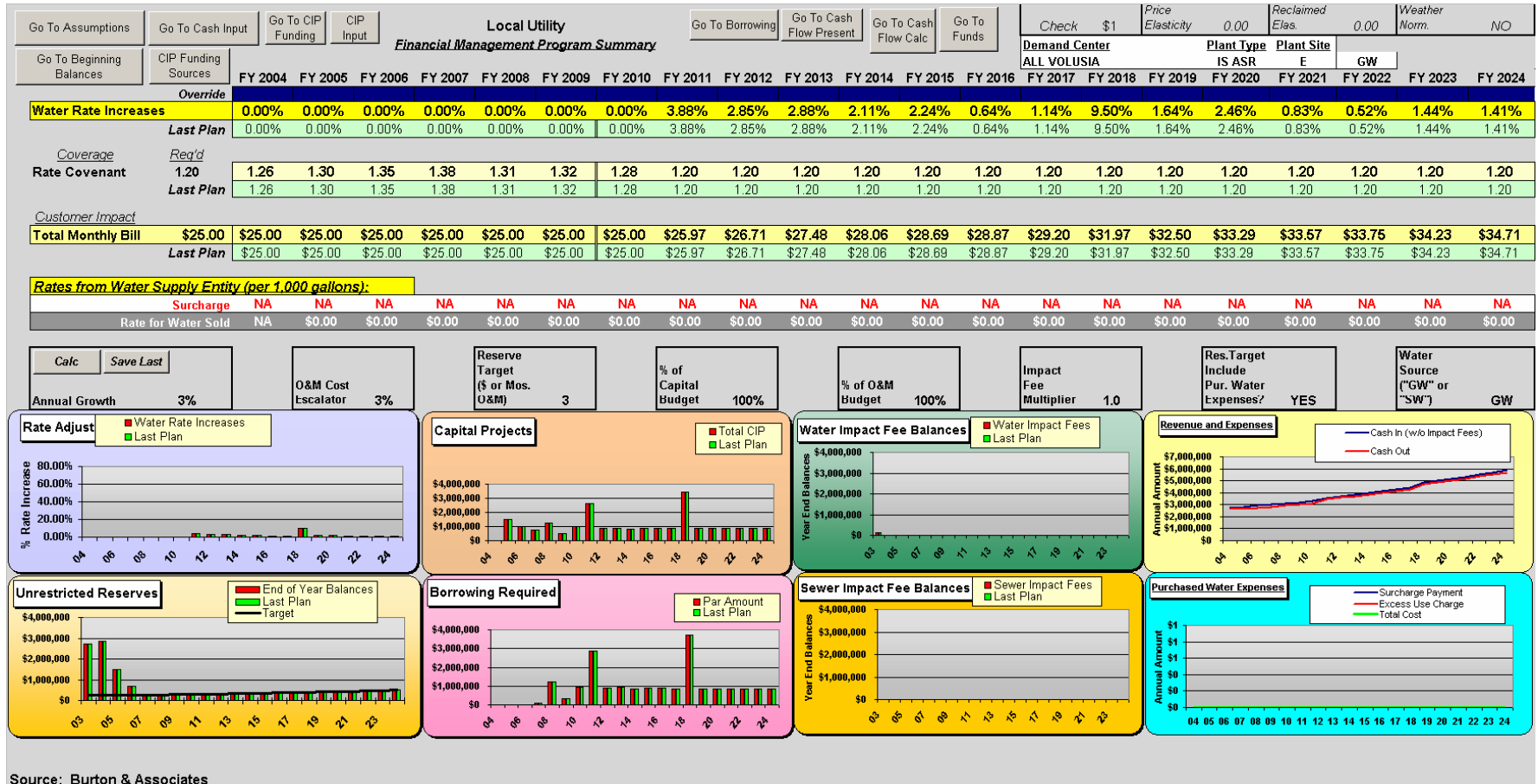
<b>Ba1</b>	<b>Utility – Groundwater Scenario – Summary Panel</b>
<b>Ba2</b>	<b>Utility – Groundwater Scenario – Proforma</b>
<b>Ba3</b>	<b>Utility – Surface Water Scenario – Summary Panel</b>
<b>Ba4</b>	<b>Utility – Surface Water Scenario – Proforma</b>
<b>Ba5</b>	<b>Water Supply Entity – Surface Water Scenario – Summary Panel</b>
<b>Ba6</b>	<b>Water Supply Entity – Surface Water Scenario – Proforma</b>

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Ca*

## St. Johns River Water Supply Project *Affordability Analysis - Scenario Results*

**Scenario: Volusia County Demand Center, Intermittent Source with ASR, Site E**  
**FIGURE Ca1 - UTILITY – GROUNDWATER SCENARIO –SUMMARY PANEL**



# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### APPENDIX Ca

### St. Johns River Water Supply Project

#### Affordability Analysis - Scenario Results

#### Scenario: Volusia County Demand Center, Intermittent Source with ASR, Site E

#### **FIGURE Ca2 - UTILITY – GROUNDWATER SCENARIO – PROFORMA**

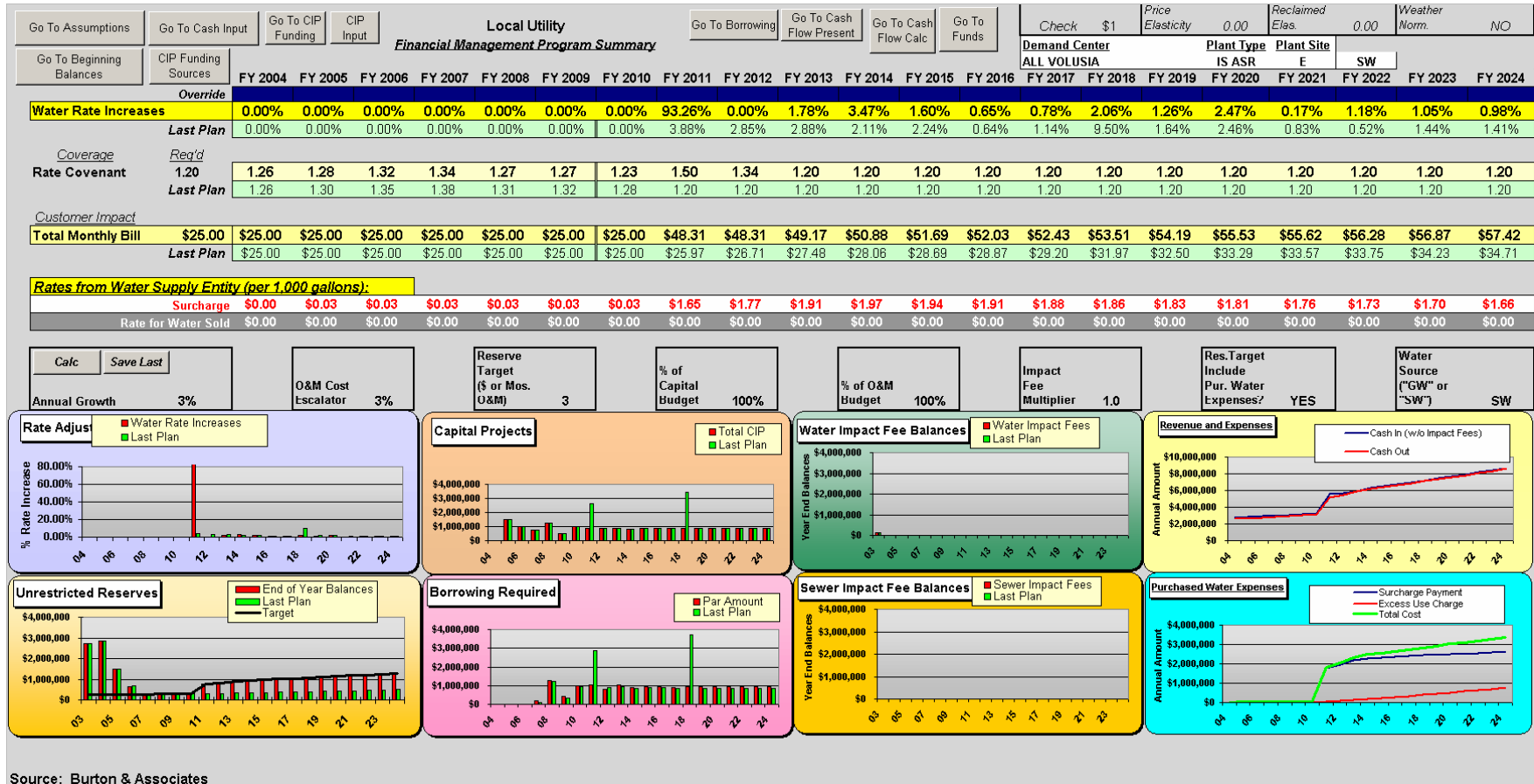
Local Utility Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																							
	Water Growth	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	
		0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	
<b>1 Revenue</b>																							
2 Revenue Subject to Rate Increases																							
3 Water Rate Revenue		\$1,900,000	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$2,415,646	\$2,546,639	\$2,685,443	\$2,810,523	\$2,945,210	\$3,038,053	\$3,149,509	\$3,217,702	\$3,267,033	\$3,311,355	\$3,319,902	\$4,019,247	\$4,158,479	
4 Rate Revenue from Growth		\$0	\$57,000	\$58,710	\$60,471	\$62,285	\$64,154	\$66,079	\$68,061	\$70,091	\$72,166	\$74,286	\$76,450	\$78,658	\$80,910	\$83,207	\$85,550	\$87,938	\$90,371	\$92,849	\$95,372	\$97,939	
5 Proposed Rate Increase		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
6 Rate Revenue from Rate Increase		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$90,230	\$70,601	\$75,139	\$67,944	\$64,423	\$19,213	\$35,605	\$305,203	\$58,977	\$91,382	\$32,300	\$20,945	\$58,846	\$59,868
7 Total Water Rate Revenue		\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$2,415,646	\$2,546,639	\$2,685,443	\$2,810,523	\$2,945,210	\$3,038,053	\$3,149,509	\$3,217,702	\$3,267,033	\$3,311,355	\$3,319,902	\$4,019,245	\$4,158,477	\$4,301,506	
8 Other Operating Revenue		\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$388,948	\$400,616	\$412,634	\$425,014	\$437,764	\$450,897	\$464,424	\$479,366	\$492,707	
9 Total Operating Revenue		\$2,172,800	\$2,237,984	\$2,305,124	\$2,374,277	\$2,445,506	\$2,518,871	\$2,594,437	\$2,751,156	\$2,892,214	\$3,041,385	\$3,177,144	\$3,322,829	\$3,427,001	\$3,550,125	\$3,630,337	\$4,072,046	\$4,249,119	\$4,370,799	\$4,483,669	\$4,636,634	\$4,794,213	
<b>11 Expenses</b>																							
12 Purchased Water at Groundwater Rates		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
13 Water Treatment Facility Surcharge		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
14 Operations and Maintenance Expense		\$974,025	\$1,033,246	\$1,033,343	\$1,064,343	\$1,096,274	\$1,129,162	\$1,163,037	\$1,208,099	\$1,252,933	\$1,300,184	\$1,350,015	\$1,400,395	\$1,453,576	\$1,509,568	\$1,566,804	\$1,625,472	\$1,686,000	\$1,753,123	\$1,820,871	\$1,891,222	\$1,963,967	
15 Net Operating Income		\$1,198,775	\$1,204,738	\$1,271,780	\$1,309,934	\$1,349,232	\$1,389,709	\$1,431,400	\$1,543,057	\$1,639,280	\$1,741,201	\$1,827,129	\$1,922,434	\$1,973,424	\$2,041,558	\$2,363,733	\$2,446,575	\$2,650,319	\$2,617,676	\$2,662,899	\$2,745,612	\$2,830,246	
<b>16 Plus: Non Operating Income (Expense)</b>																							
17 Non Operating Revenue		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
18 Interest Earned on Invested Funds		\$57,993	\$67,514	\$75,488	\$73,957	\$80,092	\$92,905	\$99,251	\$156,194	\$142,463	\$125,035	\$115,954	\$103,804	\$133,455	\$145,136	\$164,525	\$159,246	\$123,731	\$144,001	\$176,431	\$170,854	\$163,471	
19 Transfers In		\$500,000	\$515,000	\$530,450	\$546,364	\$562,754	\$579,637	\$597,026	\$614,937	\$633,305	\$652,207	\$671,590	\$692,117	\$712,280	\$734,267	\$759,295	\$789,984	\$822,363	\$862,424	\$851,217	\$876,756	\$903,056	
20 Water Expansion Fees		\$0	\$141,000	\$145,230	\$149,587	\$154,075	\$158,697	\$163,458	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$156,738	\$162,706	\$133,419	\$136,088	\$136,809	\$141,585	\$144,417	\$147,336	\$150,252	
21 Total Non Operating Income		\$557,993	\$723,514	\$751,168	\$749,907	\$806,921	\$891,239	\$859,745	\$911,432	\$919,656	\$926,626	\$939,001	\$950,788	\$1,004,074	\$1,042,110	\$1,054,239	\$1,074,317	\$1,112,010	\$1,112,010	\$1,194,913	\$1,216,776		
22 Net Income		\$1,756,768	\$1,958,252	\$2,022,948	\$2,079,841	\$2,196,153	\$2,220,948	\$2,291,145	\$2,464,488	\$2,568,937	\$2,668,027	\$2,766,130	\$2,873,222	\$2,978,498	\$3,083,667	\$3,417,972	\$3,520,892	\$3,625,212	\$3,729,887	\$3,834,763	\$3,940,524	\$4,047,024	
23 Less: Water Expansion Fees		\$0	(\$141,000)	(\$145,230)	(\$149,587)	(\$154,075)	(\$158,697)	(\$163,458)	(\$140,301)	(\$143,809)	(\$147,404)	(\$151,089)	(\$154,866)	(\$156,738)	(\$162,706)	(\$133,419)	(\$136,088)	(\$136,809)	(\$141,585)	(\$144,417)	(\$147,336)	(\$150,252)	
24 Net Income Available for Debt Service		\$1,756,768	\$1,817,252	\$1,877,719	\$1,930,254	\$2,002,078	\$2,062,251	\$2,127,687	\$2,314,187	\$2,415,128	\$2,518,623	\$2,615,041	\$2,718,355	\$2,819,760	\$2,920,961	\$3,284,553	\$3,384,804	\$3,486,403	\$3,588,101	\$3,690,346	\$3,793,219	\$3,896,772	
<b>Senior Lien Debt Service Coverage</b>																							
25 Existing Senior Lien Debt Service		\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	
26 New Senior Lien Debt Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
27 Cumulative New Senior Lien Debt for Additional Borrowings		\$0	\$0	\$0	\$7,632	\$99,876	\$126,662	\$198,969	\$417,651	\$486,395	\$566,806	\$620,845	\$690,141	\$757,342	\$823,854	\$1,108,491	\$1,173,126	\$1,236,317	\$1,303,007	\$1,373,650	\$1,431,997	\$1,496,373	
28 Total Senior Lien Debt Service		\$998,391	\$998,391	\$998,391	\$1,006,023	\$1,098,267	\$1,125,053	\$1,197,360	\$1,416,042	\$1,484,786	\$1,555,197	\$1,619,236	\$1,688,532	\$1,756,733	\$1,822,245	\$2,106,882	\$2,171,517	\$2,236,706	\$2,301,386	\$2,365,941	\$2,430,388	\$2,494,764	
29 Senior Lien Debt Service Coverage	1.2 Req'd	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2		
<b>SRF Debt Service Coverage</b>																							
31 Net Income Available for Senior Lien Debt Service Coverage		\$1,756,768	\$1,817,252	\$1,877,719	\$1,930,254	\$2,002,078	\$2,062,251	\$2,127,687	\$2,314,187	\$2,415,128	\$2,518,623	\$2,615,041	\$2,718,355	\$2,819,760	\$2,920,961	\$3,284,553	\$3,384,804	\$3,486,403	\$3,588,101	\$3,690,346	\$3,793,219	\$3,896,772	
32 Less: Senior Lien Debt Service		(\$998,391)	(\$998,391)	(\$998,391)	(\$1,006,023)	(\$1,098,267)	(\$1,125,053)	(\$1,197,360)	(\$1,416,042)	(\$1,484,786)	(\$1,555,197)	(\$1,619,236)	(\$1,688,532)	(\$1,756,733)	(\$1,822,245)	(\$2,106,882)	(\$2,171,517)	(\$2,236,706)	(\$2,301,386)	(\$2,365,941)	(\$2,430,388)	(\$2,494,764)	
33 Net Income Available for SRF Debt Service Coverage		\$758,377	\$818,861	\$879,328	\$924,231	\$903,711	\$937,198	\$930,327	\$898,145	\$930,342	\$963,426	\$995,805	\$1,029,823	\$1,064,027	\$1,088,716	\$1,177,671	\$1,213,267	\$1,249,695	\$1,286,703	\$1,324,405	\$1,362,831	\$1,402,008	
34 Existing SRF Debt Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
35 SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
<b>Net Income Available for Debt Service</b>		\$1,756,768	\$1,817,252	\$1,877,719	\$1,930,254	\$2,002,078	\$2,062,251	\$2,127,687	\$2,314,187	\$2,415,128	\$2,518,623	\$2,615,041	\$2,718,355	\$2,819,760	\$2,920,961	\$3,284,553	\$3,384,804	\$3,486,403	\$3,588,101	\$3,690,346	\$3,793,219	\$3,896,772	
36 Less:																							
37 Total Senior Lien Debt Service		(\$998,391)	(\$998,391)	(\$998,391)	(\$1,006,023)	(\$1,098,267)	(\$1,125,053)	(\$1,197,360)	(\$1,416,042)	(\$1,484,786)	(\$1,555,197)	(\$1,619,236)	(\$1,688,532)	(\$1,756,733)	(\$1,822,245)	(\$2,106,882)	(\$2,171,517)	(\$2,236,706)	(\$2,301,386)	(\$2,365,941)	(\$2,430,388)	(\$2,494,764)	
38 State Revolving Fund Loans		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
39 Payment of Debt Service With Water Impact Fees		\$116,626	\$141,875	\$145,237	\$149,587	\$154,075	\$158,697	\$163,458	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$156,738	\$162,706	\$133,419	\$136,088	\$136,809	\$141,585	\$144,417	\$147,336	\$150,252	
40 Payment of Debt Service With Sewer Impact Fees		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
41 Transfer Out		(\$957,000)	(\$779,710)	(\$803,101)	(\$827,194)	(\$852,010)	(\$877,570)	(\$900,898)	(\$931,015)	(\$958,945)	(\$987,713)	(\$1,017,345)	(\$1,047,865)	(\$1,079,301)	(\$1,111,680)	(\$1,145,030)	(\$1,179,381)	(\$1,214,763)	(\$1,251,206)	(\$1,288,742)	(\$1,327,404)	(\$1,367,206)	
42 Capital Outlay		(\$17,000)	(\$17,510)	(\$18,035)	(\$18,576)	(\$19,134)	(\$19,708)	(\$20,299)	(\$20,908)	(\$21,535)	(\$22,181)	(\$22,847)	(\$23,532)	(\$24,238)	(\$24,965)	(\$25,714)	(\$26,485)	(\$27,280)	(\$28,099)	(\$28,943)	(\$29,811)	(\$30,704)	
43 Net Cash Flow		\$101,003	\$163,516	\$203,428	\$228,047	\$186,642	\$198,617	\$169,588	\$86,524	\$93,671	\$100,935	\$106,703	\$113,293	\$119,226	\$124,777	\$140,346	\$143,508	\$146,461	\$148,985	\$151,139	\$152,922	\$154,330	
44 Unrestricted Reserve Fund - Beginning of Year Balance		\$2,729,000	\$2,830,003	\$1,493,519	\$696,947	\$266,086	\$274,068	\$282,290	\$290,759	\$302,025	\$313,233	\$325,046	\$337,504	\$350,099	\$363,394	\$377,142	\$391,651	\$406,368	\$422,200	\$438,281	\$455,243	\$472,806	
45 Minimum Working Capital Reserve Target		\$243,506	\$250,811	\$258,336	\$266,086	\$274,068	\$282																

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Ca*

## St. Johns River Water Supply Project *Affordability Analysis - Scenario Results*

**Scenario: Volusia County Demand Center, Intermittent Source with ASR, Site E**  
***FIGURE Ca3 - UTILITY – SURFACE WATER SCENARIO – SUMMARY PANEL***



# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### APPENDIX Ca

### St. Johns River Water Supply Project

#### Affordability Analysis - Scenario Results

### Scenario: Volusia County Demand Center, Intermittent Service with ASR, Site E

#### FIGURE Ca4 - UTILITY – SURFACE WATER SCENARIO – PROFORMA

		Local Utility Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																				
		Water Growth																				
		FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
		0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
1	<b>Revenue</b>																					
2	Revenue Subject to Rate Increases																					
3	Water Rate Revenue	\$1,900,000	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$4,494,004	\$4,606,354	\$4,805,578	\$5,096,748	\$5,307,621	\$5,475,498	\$5,655,929	\$5,888,159	\$6,081,675	\$6,356,365	\$6,494,703	\$6,702,596	\$6,908,184
4	Rate Revenue from Growth	\$0	\$57,000	\$58,710	\$60,471	\$62,285	\$64,154	\$66,079	\$68,057	\$0	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Proposed Rate Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	Rate Revenue from Rate Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,168,987	\$0	\$84,065	\$1,031,031	\$83,454	\$36,187	\$43,644	\$119,112	\$75,753	\$153,057	\$112,210	\$77,989	\$71,537
7	Total Water Rate Revenue	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$4,494,004	\$4,606,354	\$4,805,578	\$5,096,748	\$5,307,621	\$5,475,498	\$5,655,929	\$5,888,159	\$6,081,675	\$6,356,365	\$6,494,703	\$6,702,596	\$6,908,184	
8	Other Operating Revenue	\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$389,048	\$401,616	\$412,634	\$425,014	\$437,764	\$449,897	\$464,424	\$479,366	\$492,707
9	Other Operating Revenue (1)	\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$389,048	\$401,616	\$412,634	\$425,014	\$437,764	\$449,897	\$464,424	\$479,366	\$492,707
10	<b>Total Operating Revenue</b>	\$2,172,800	\$2,237,984	\$2,305,124	\$2,374,277	\$2,445,506	\$2,518,871	\$2,594,437	\$4,829,513	\$4,951,929	\$5,161,520	\$5,463,389	\$5,885,240	\$6,164,445	\$6,056,545	\$6,300,794	\$6,506,689	\$6,794,129	\$6,945,600	\$7,167,019	\$7,386,541	\$7,607,893
11	<b>Expenses</b>																					
12	Purchased Water at Groundwater Rates	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$46,929	\$88,643	\$135,571	\$187,714	\$234,643	\$286,786	\$338,929	\$396,286	\$448,429	\$511,000	\$568,357	\$630,929	\$693,500	\$756,071
13	Water Treatment Facility Surcharge	\$0	\$23,621	\$25,682	\$27,945	\$30,430	\$33,159	\$36,216	\$1,754,808	\$1,942,303	\$2,164,294	\$2,295,410	\$2,332,786	\$2,365,652	\$2,392,037	\$2,436,444	\$2,485,742	\$2,513,785	\$2,522,054	\$2,550,490	\$2,577,825	\$2,604,028
14	Operations and Maintenance Expense	\$974,025	\$1,003,246	\$1,033,343	\$1,064,343	\$1,096,274	\$1,129,162	\$1,163,037	\$1,197,928	\$1,233,866	\$1,270,882	\$1,309,008	\$1,348,278	\$1,388,727	\$1,430,389	\$1,473,300	\$1,517,498	\$1,563,024	\$1,609,915	\$1,658,212	\$1,707,959	\$1,759,187
15	<b>Net Operating Income</b>	\$1,198,775	\$1,211,117	\$1,246,098	\$1,261,989	\$1,318,802	\$1,366,550	\$1,395,184	\$1,629,849	\$1,687,117	\$1,680,774	\$1,871,236	\$1,769,532	\$1,823,881	\$1,895,191	\$1,996,764	\$2,075,919	\$2,206,321	\$2,245,274	\$2,327,389	\$2,407,257	\$2,489,886
16	<b>Plus: Non Operating Income (Expense)</b>																					
17	Non Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
18	Interest Earned on Invested Funds	\$57,993	\$67,336	\$74,748	\$73,514	\$80,600	\$93,658	\$100,198	\$112,387	\$124,480	\$129,182	\$132,406	\$121,488	\$151,894	\$164,293	\$150,852	\$157,350	\$152,965	\$150,047	\$162,257	\$167,413	\$170,738
19	Transfers In	\$500,000	\$515,000	\$530,450	\$546,364	\$562,754	\$579,637	\$597,026	\$614,937	\$633,305	\$652,287	\$671,958	\$692,117	\$712,880	\$734,267	\$756,295	\$778,984	\$802,353	\$826,424	\$851,217	\$876,753	\$903,056
20	Water Expansion Fees	\$0	\$141,000	\$145,230	\$149,587	\$154,075	\$158,897	\$163,958	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$158,738	\$162,706	\$133,419	\$136,088	\$138,809	\$141,586	\$144,417	\$147,306	\$150,252
21	<b>Total Non Operating Income</b>	\$557,993	\$723,336	\$750,428	\$769,465	\$807,429	\$893,991	\$960,681	\$867,635	\$901,653	\$908,471	\$896,452	\$966,471	\$1,021,512	\$1,061,266	\$1,040,567	\$1,072,421	\$1,127,057	\$1,172,891	\$1,191,471	\$1,214,045	
22	<b>Net Income</b>	\$1,756,768	\$1,934,453	\$1,996,527	\$2,051,453	\$2,126,231	\$2,188,542	\$2,256,865	\$2,697,484	\$2,588,770	\$2,519,746	\$2,626,689	\$2,738,035	\$2,847,393	\$2,956,458	\$3,036,330	\$3,147,440	\$3,260,448	\$3,372,331	\$3,495,280	\$3,598,726	\$3,712,730
23	Less: Water Expansion Fees	\$0	(\$141,000)	(\$145,230)	(\$149,587)	(\$154,075)	(\$158,897)	(\$163,958)	(\$140,301)	(\$143,809)	(\$147,404)	(\$151,089)	(\$154,866)	(\$158,738)	(\$162,706)	(\$133,419)	(\$136,088)	(\$138,809)	(\$141,586)	(\$144,417)	(\$147,306)	(\$150,252)
24	<b>Net Income Available for Debt Service</b>	\$1,756,768	\$1,793,453	\$1,851,297	\$1,901,866	\$1,972,156	\$2,029,845	\$2,092,407	\$2,557,183	\$2,444,962	\$2,372,342	\$2,475,600	\$2,583,137	\$2,688,655	\$2,793,751	\$2,902,911	\$3,011,352	\$3,121,639	\$3,230,745	\$3,340,863	\$3,451,423	\$3,562,479
25	<b>Senior Lien Debt Service Coverage</b>																					
26	Existing Senior Lien Debt Service	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391
27	New Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
28	Cumulative New Senior Lien Debt for Additional Borrowings	\$0	\$0	\$0	\$16,460	\$111,423	\$142,310	\$219,493	\$297,068	\$356,819	\$434,905	\$504,644	\$577,459	\$648,088	\$717,846	\$790,456	\$861,916	\$934,347	\$1,005,210	\$1,076,314	\$1,147,167	\$1,217,795
29	<b>Total Senior Lien Debt Service</b>	\$998,391	\$998,391	\$998,391	\$1,013,851	\$1,109,814	\$1,140,701	\$1,217,884	\$1,295,459	\$1,355,210	\$1,433,296	\$1,503,035	\$1,575,850	\$1,646,479	\$1,716,237	\$1,788,847	\$1,860,307	\$1,932,738	\$2,003,601	\$2,074,705	\$2,145,568	\$2,216,186
30	Senior Lien Debt Service Coverage	1.2 Req'd	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	
31	<b>SRF Debt Service Coverage</b>																					
32	Net Income Available for Senior Lien Debt Service Coverage	\$1,756,768	\$1,793,453	\$1,851,297	\$1,901,866	\$1,972,156	\$2,029,845	\$2,092,407	\$2,557,183	\$2,444,962	\$2,372,342	\$2,475,600	\$2,583,137	\$2,688,655	\$2,793,751	\$2,902,911	\$3,011,352	\$3,121,639	\$3,230,745	\$3,340,863	\$3,451,423	\$3,562,479
33	Less: Senior Lien Debt Service	(\$998,391)	(\$998,391)	(\$998,391)	(\$1,013,851)	(\$1,109,814)	(\$1,140,701)	(\$1,217,884)	(\$1,295,459)	(\$1,355,210)	(\$1,433,296)	(\$1,503,035)	(\$1,575,850)	(\$1,646,479)	(\$1,716,237)	(\$1,788,847)	(\$1,860,307)	(\$1,932,738)	(\$2,003,601)	(\$2,074,705)	(\$2,145,568)	(\$2,216,186)
34	Net Income Available for SRF Debt Service Coverage	\$758,377	\$795,062	\$852,906	\$888,015	\$862,342	\$889,144	\$874,523	\$1,261,724	\$1,089,752	\$939,046	\$972,565	\$1,007,287	\$1,042,176	\$1,077,514	\$1,114,064	\$1,151,045	\$1,188,901	\$1,227,144	\$1,266,158	\$1,305,865	\$1,346,293
35	Existing SRF Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
36	SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
37	<b>Net Income Available for Debt Service</b>	\$1,756,768	\$1,793,453	\$1,851,297	\$1,901,866	\$1,972,156	\$2,029,845	\$2,092,407	\$2,557,183	\$2,444,962	\$2,372,342	\$2,475,600	\$2,583,137	\$2,688,655	\$2,793,751	\$2,902,911	\$3,011,352	\$3,121,639	\$3,230,745	\$3,340,863	\$3,451,423	\$3,562,479
38	Less:																					
39	Total Senior Lien Debt Service	(\$998,391)	(\$998,391)	(\$998,391)	(\$1,013,851)	(\$1,109,814)	(\$1,140,701)	(\$1,217,884)	(\$1,295,459)	(\$1,355,210)	(\$1,433,296)	(\$1,503,035)	(\$1,575,850)	(\$1,646,479)	(\$1,716,237)	(\$1,788,847)	(\$1,860,307)	(\$1,932,738)	(\$2,003,601)	(\$2,074,705)	(\$2,145,568)	(\$2,216,186)
40	State Revolving Fund Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
41	Payment of Debt Service With Water Impact Fees	\$116,626	\$141,875	\$145,237	\$149,587	\$154,075	\$158,897	\$163,958	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$158,738	\$162,706	\$133,419	\$136,088	\$138,809	\$141,586	\$144,417	\$147,306	\$150,252
42	Payment of Debt Service With Sewer Impact Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
43	Transfer Out	(\$757,000)	(\$779,710)	(\$803,101)	(\$827,194)	(\$852,010)	(\$877,570)	(\$900,898)	(\$931,015)	(\$958,945)	(\$987,713)	(\$1,017,345)	(\$1,047,865)	(\$1,079,301)	(\$1,111,680)	(\$1,145,030)	(\$1,179,381)	(\$1,214,763)	(\$1,251,206)	(\$1,288,742)	(\$1,327,404)	(\$1,367,206)
44	Capital Outlay	(\$17,000)	(\$17,510)	(\$18,035)	(\$18,576)	(\$19,134)	(\$19,708)	(\$20,299)	(\$20,908)	(\$21,535)	(\$22,181)	(\$22,847)	(\$23,532)	(\$24,238)	(\$24,965)	(\$25,714)	(\$26,485)	(\$27,280)	(\$28,099)	(\$28,941)	(\$29,807)	(\$30,704)
45	<b>Net Cash Flow</b>	\$101,003	\$139,716	\$177,006	\$191,832	\$145,273	\$150,562	\$113,785	\$450,103	\$253,080	\$76,555	\$83,463	\$90,756	\$97,375	\$103,575	\$76,739	\$81,266	\$85,667	\$89,425	\$92,892	\$95,	

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

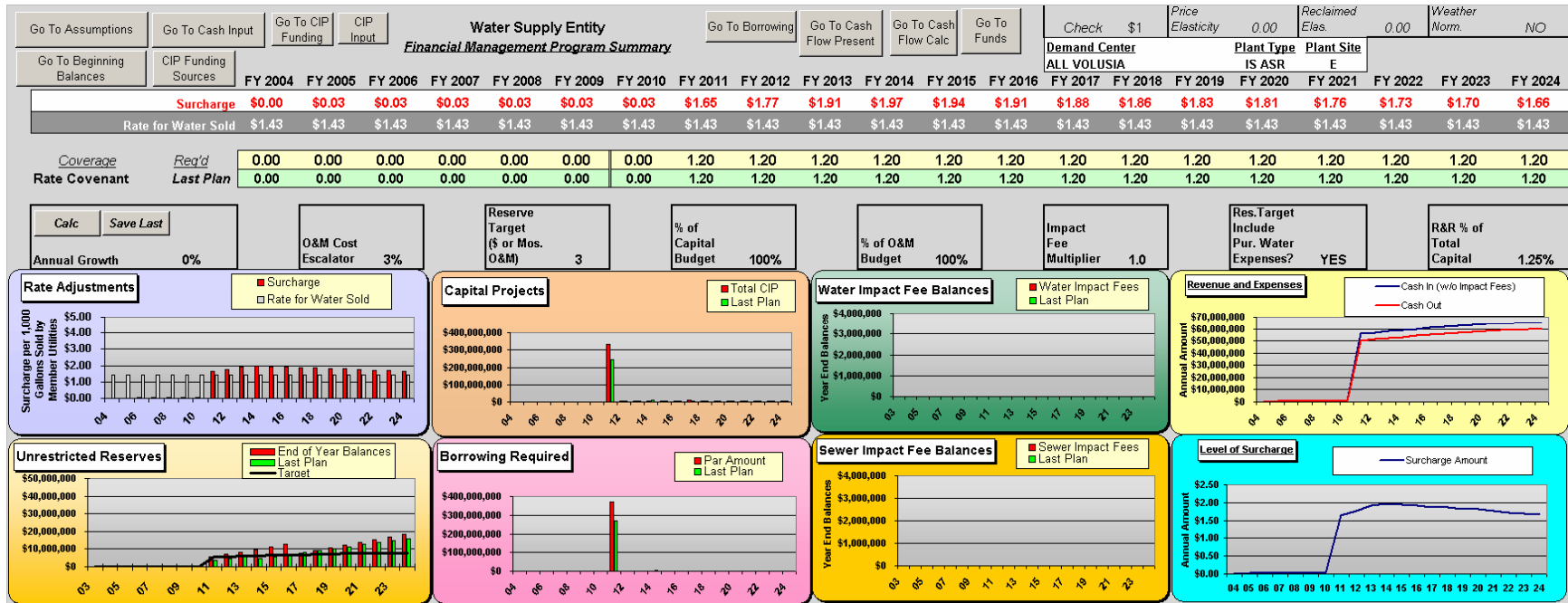
*APPENDIX Ca*

## St. Johns River Water Supply Project

### Affordability Analysis - Scenario Results

**Scenario: Volusia County Demand Center, Intermittent Source with ASR, Site E**

**FIGURE Ca5 - WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – SUMMARY PANEL**



Source: Burton & Associates



# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### APPENDIX Ca

### St. Johns River Water Supply Project

#### Affordability Analysis - Scenario Results

#### Scenario: Volusia County Demand Center, Intermittent Source with ASR, Site E

#### **FIGURE Ca6 - WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – PROFORMA**

Water Supply Entity Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																					
	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>1 Revenue</b>																					
2 Surcharge Revenue	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$819,754	\$890,421	\$965,105	\$1,043,821	\$1,126,594	\$1,214,533	\$1,307,747	\$1,406,511	\$1,511,935	\$1,624,228	\$1,743,500	\$1,869,871	\$1,993,450	\$2,124,339
3 Delivered Water Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>4 Total Operating Revenue</b>	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$819,754	\$890,421	\$965,105	\$1,043,821	\$1,126,594	\$1,214,533	\$1,307,747	\$1,406,511	\$1,511,935	\$1,624,228	\$1,743,500	\$1,869,871	\$1,993,450	\$2,124,339
<b>5 Expenses</b>																					
6 Operations and Maintenance Expense	\$0	\$515,000	\$556,873	\$602,366	\$651,459	\$704,552	\$761,973	\$823,157	\$889,429	\$960,812	\$1,038,405	\$1,122,818	\$1,214,151	\$1,312,914	\$1,419,307	\$1,533,540	\$1,655,823	\$1,787,466	\$1,928,779	\$2,080,072	\$2,241,665
<b>8 Net Operating Income</b>	\$0	(\$3,807)	(\$5,076)	(\$6,344)	(\$7,613)	(\$8,882)	(\$10,151)	(\$11,420)	(\$12,689)	(\$13,958)	(\$15,227)	(\$16,496)	(\$17,765)	(\$19,034)	(\$20,303)	(\$21,572)	(\$22,841)	(\$24,110)	(\$25,379)	(\$26,648)	(\$27,917)
<b>9 Plus: Non Operating Income (Expense)</b>																					
10 Non Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11 Interest Earned on Invested Funds	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$10,151	\$11,420	\$12,689	\$13,958	\$15,227	\$16,496	\$17,765	\$19,034	\$20,303	\$21,572	\$22,841	\$24,110	\$25,379	\$26,648	\$27,917
12 Transfers In	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13 Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>14 Total Non Operating Income</b>	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$10,151	\$11,420	\$12,689	\$13,958	\$15,227	\$16,496	\$17,765	\$19,034	\$20,303	\$21,572	\$22,841	\$24,110	\$25,379	\$26,648	\$27,917
<b>15 Net Income</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
16 Less: Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>17 Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
<b>18 Senior Lien Debt Service Coverage</b>																					
19 Existing Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
20 New Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21 Cumulative New Senior Lien Debt for Additional Borrowings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>22 Total Senior Lien Debt Service</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23 Senior Lien Debt Service Coverage	1.2 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>24 SRF Debt Service Coverage</b>																					
25 Net Income Available for Senior Lien Debt Service Coverage	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
26 Less: Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
27 Net Income Available for SRF Debt Service Coverage	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
28 Existing SRF Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
29 SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>30 Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
31 Less:																					
32 Total Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
33 State Revolving Fund Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
34 Payment of Debt Service With Water Impact Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
35 Transfer Out	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
36 Capital Outlay	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>37 Net Cash Flow</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
38 Unrestricted Reserve Fund - Beginning of Year Balance	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778
39 Minimum Working Capital Reserve Target	\$0	\$128,750	\$139,243	\$150,591	\$162,865	\$176,138	\$190,493	\$205,939	\$222,476	\$239,105	\$256,826	\$275,639	\$295,544	\$316,541	\$338,620	\$361,781	\$386,024	\$411,459	\$438,086	\$465,905	\$494,917
40 Reserve Fund Balance in Excess of Working Capital Target	\$250,000	\$125,028	\$114,536	\$103,187	\$90,914	\$77,640	\$63,285	\$0	\$0	\$944,082	\$2,177,354	\$3,423,677	\$4,679,812	\$5,946,861	\$7,224,810	\$8,514,659	\$9,826,408	\$11,159,057	\$12,512,606	\$13,887,155	\$15,282,704
41 Less: Reserve Fund Balance used for Cash Flow	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>42 Reserve Fund Balance in Excess of Working Capital Target Net of Current Year Cash Flow</b>	\$250,000	\$125,028	\$114,536	\$103,187	\$90,914	\$77,640	\$63,285	\$0	\$0	\$944,082	\$2,177,354	\$3,423,677	\$4,679,812	\$5,946,861	\$7,224,810	\$8,514,659	\$9,826,408	\$11,159,057	\$12,512,606	\$13,887,155	\$15,282,704
<b>43 Net Cash Flow After Use of Reserve Funds</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
44 Less: CIP Projects Designated to be Paid with Cash	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>45 Net Cash Flow to Unrestricted Reserve Fund</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>46 Unrestricted Reserve Fund - Beginning of Year Balance</b>	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778
47 Cash In/Out from Rate Revenues	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
48 Less: Reserve Fund Balance used for Cash Flow	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
49 Less: Projects Paid with Reserve Funds (Non Specified Funding)	\$0	\$0	\$0	\$0	\$0	\$0	(\$562,178)	(\$4,235,639)	(\$4,235,639)	(\$4,235,639)	(\$4,235,639)	(\$4,235,639)	(\$4,235,639)	(\$4,235,639)	(\$4,235,639)	(\$4,235,639)	(\$4,235,639)	(\$4,235,639)	(\$4,235,639)	(\$4,235,639)	(\$4,235,639)
50 Unrestricted Reserve Fund - End of Year Balance	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778
51 Minimum Working Capital Reserve Target	3 Mo O&M	\$0	\$128,750	\$139,243	\$150,591	\$162,865	\$176,138	\$190,493	\$205,939	\$222,476	\$239,105	\$256,826	\$275,639	\$295,544	\$316,541	\$338,620	\$361,781	\$386,024	\$411,459	\$438,086	\$465,905
<b>52 Excess (Deficiency) of Working Capital Reserves to Target</b>	\$253,778	\$125,028	\$114,536	\$103,187	\$90,914	\$77,640	\$63,285	\$0	\$1,206,822	\$2,426,924	\$3,660,197	\$4,906,520	\$6,162,843	\$7,430,166	\$8,707,489	\$10,004,812	\$11,322,135	\$12,659,458	\$14,026,781	\$15,424,104	\$16,851,427

Source: Burton & Associates  
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**ST. JOHNS RIVER WATER SUPPLY PROJECT  
AFFORDABILITY ANALYSIS**

*APPENDIX Cb*

**APPENDIX Cb**

**Volusia County Demand Center**

**Reliable Source**

**ASR**

**Site E**

**Just-in-Time Rates**

**Figure**

**Number**

**Title**

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<b>Cb1</b>	<b>Utility – Groundwater Scenario – Summary Panel</b>
<b>Cb2</b>	<b>Utility – Groundwater Scenario – Proforma</b>
<b>Cb3</b>	<b>Utility – Surface Water Scenario – Summary Panel</b>
<b>Cb4</b>	<b>Utility – Surface Water Scenario – Proforma</b>
<b>Cb5</b>	<b>Water Supply Entity – Surface Water Scenario – Summary Panel</b>
<b>Cb6</b>	<b>Water Supply Entity – Surface Water Scenario – Proforma</b>

**ST. JOHNS RIVER WATER SUPPLY PROJECT  
AFFORDABILITY ANALYSIS**

*APPENDIX Cb*

**St. Johns River Water Supply Project  
Affordability Analysis - Scenario Results**

**Scenario: Volusia County Demand Center, Reliable Source with ASR, Site E  
FIGURE Cb1 - UTILITY – GROUNDWATER SCENARIO –SUMMARY PANEL**

**&**

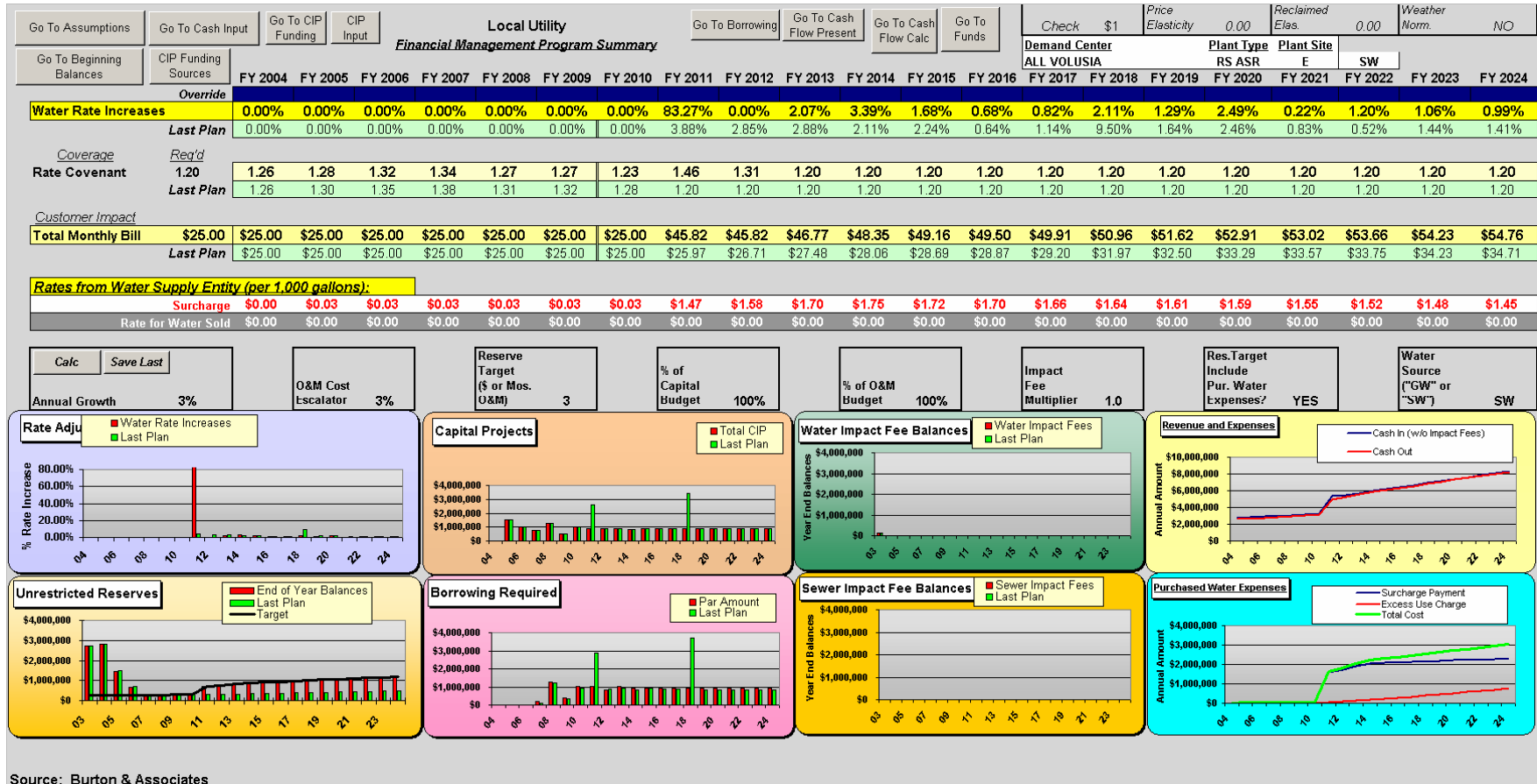
**FIGURE Cb2 - UTILITY – GROUNDWATER SCENARIO – PROFORMA**

**Same as Figures Ca1 and Ca2**

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Cb*

## St. Johns River Water Supply Project *Affordability Analysis - Scenario Results* Scenario: Volusia County Demand Center, Reliable Source with ASR, Site E **FIGURE Cb3 - UTILITY – SURFACE WATER SCENARIO – SUMMARY PANEL**



# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### APPENDIX Cb

### St. Johns River Water Supply Project

#### Affordability Analysis - Scenario Results

#### Scenario: Volusia County Demand Center, Reliable Source with ASR, Site E

#### FIGURE Cb4 - UTILITY – SURFACE WATER SCENARIO – PROFORMA

		Local Utility Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																					
	Water Growth	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	
		0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	
<b>1 Revenue</b>																							
2	Revenue Subject to Rate Increases																						
3	Water Rate Revenue	\$1,900,000	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$4,261,658	\$4,368,405	\$4,570,280	\$4,843,555	\$5,047,895	\$5,209,422	\$5,383,703	\$5,607,453	\$5,793,586	\$6,056,394	\$6,191,058	\$6,390,530	\$6,557,415	
4	Rate Revenue from Growth	\$0	\$57,000	\$58,710	\$60,471	\$62,295	\$64,154	\$66,079	\$68,057	\$109,210	\$106,546	\$114,257	\$121,089	\$128,197	\$130,236	\$107,674	\$112,149	\$115,872	\$121,128	\$123,821	\$127,811	\$131,748	
5	Proposed Rate Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
6	Rate Revenue from Rate Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,936,441	\$0	\$92,665	\$159,018	\$83,251	\$35,329	\$44,046	\$116,076	\$73,964	\$146,936	\$13,635	\$75,649	\$69,073	\$68,339	
7	Total Water Rate Revenue	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$4,261,658	\$4,368,405	\$4,570,280	\$4,843,555	\$5,047,895	\$5,209,422	\$5,383,703	\$5,607,453	\$5,793,586	\$6,056,394	\$6,191,058	\$6,390,530	\$6,557,415		
8	Other Operating Revenue	\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$389,948	\$400,616	\$412,634	\$425,014	\$437,764	\$450,897	\$464,424	\$478,366	\$492,707	
9	Other Operating Revenue (1)	\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$389,948	\$400,616	\$412,634	\$425,014	\$437,764	\$450,897	\$464,424	\$478,366	\$492,707	
10	<b>Total Operating Revenue</b>	\$2,172,800	\$2,237,984	\$2,305,124	\$2,374,277	\$2,445,506	\$2,518,871	\$2,594,437	\$4,597,368	\$4,713,980	\$4,926,222	\$5,210,176	\$5,425,514	\$5,598,370	\$5,784,319	\$6,020,087	\$6,218,599	\$6,494,157	\$6,641,954	\$6,854,951	\$7,065,769	\$7,278,210	
<b>11 Expenses</b>																							
12	Purchased Water at Groundwater Rates	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$46,929	\$88,643	\$135,571	\$187,714	\$234,643	\$286,786	\$338,929	\$396,286	\$448,429	\$511,000	\$568,357	\$630,929	\$693,500	\$756,071	
13	Water Treatment Facility Surcharge	\$0	\$23,621	\$25,682	\$27,945	\$30,430	\$33,159	\$36,216	\$1,588,439	\$1,731,730	\$1,925,254	\$2,038,736	\$2,089,651	\$2,096,685	\$2,116,631	\$2,151,714	\$2,174,750	\$2,213,657	\$2,215,753	\$2,236,910	\$2,254,677	\$2,272,015	
14	Operations and Maintenance Expense	\$974,025	\$1,003,246	\$1,033,343	\$1,064,343	\$1,096,274	\$1,129,162	\$1,163,037	\$1,197,928	\$1,233,866	\$1,270,882	\$1,309,008	\$1,348,278	\$1,388,727	\$1,430,389	\$1,473,300	\$1,517,499	\$1,563,024	\$1,609,915	\$1,658,212	\$1,707,959	\$1,759,197	
15	<b>Net Operating Income</b>	\$1,198,775	\$1,211,117	\$1,246,098	\$1,261,989	\$1,318,802	\$1,366,550	\$1,395,184	\$1,764,073	\$1,659,741	\$1,594,515	\$1,674,718	\$1,772,942	\$1,827,173	\$1,896,311	\$1,998,767	\$2,077,922	\$2,206,477	\$2,247,928	\$2,329,900	\$2,409,634	\$2,490,927	
<b>16 Plus: Non Operating Income (Expense)</b>																							
17	Non Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
18	Interest Earned on Invested Funds	\$57,993	\$67,336	\$74,748	\$73,514	\$80,600	\$93,658	\$100,198	\$111,581	\$122,761	\$127,279	\$130,263	\$119,251	\$149,596	\$161,936	\$148,427	\$154,850	\$112,973	\$159,397	\$159,538	\$164,614	\$167,856	
19	Transfers In	\$500,000	\$515,000	\$530,450	\$546,364	\$562,754	\$579,637	\$597,026	\$614,937	\$633,305	\$652,207	\$671,958	\$692,117	\$712,880	\$734,267	\$756,295	\$778,984	\$802,263	\$826,424	\$851,217	\$876,750	\$903,056	
20	Water Expansion Fees	\$0	\$141,000	\$145,230	\$149,587	\$154,075	\$158,897	\$163,958	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$158,738	\$162,706	\$133,419	\$136,088	\$138,809	\$141,585	\$144,417	\$147,306	\$150,252	
21	<b>Total Non Operating Income</b>	\$557,993	\$723,336	\$750,428	\$769,465	\$807,429	\$831,991	\$860,681	\$866,819	\$899,956	\$927,070	\$953,317	\$936,234	\$1,021,214	\$1,058,910	\$1,038,141	\$1,069,921	\$1,047,136	\$1,124,406	\$1,156,172	\$1,188,672	\$1,221,163	
22	<b>Net Income</b>	\$1,756,768	\$1,934,453	\$1,996,527	\$2,051,453	\$2,126,231	\$2,188,542	\$2,256,865	\$2,660,892	\$2,559,696	\$2,521,586	\$2,628,049	\$2,739,176	\$2,848,387	\$2,957,281	\$3,036,928	\$3,147,843	\$3,260,613	\$3,372,334	\$3,485,072	\$3,598,306	\$3,712,000	
23	Less: Water Expansion Fees	\$0	(\$141,000)	(\$145,230)	(\$149,587)	(\$154,075)	(\$158,897)	(\$163,958)	(\$140,301)	(\$143,809)	(\$147,404)	(\$151,089)	(\$154,866)	(\$158,738)	(\$162,706)	(\$133,419)	(\$136,088)	(\$138,809)	(\$141,585)	(\$144,417)	(\$147,306)	(\$150,252)	
24	<b>Net Income Available for Debt Service</b>	\$1,756,768	\$1,793,453	\$1,851,297	\$1,901,866	\$1,972,156	\$2,029,645	\$2,092,407	\$2,501,193	\$2,415,887	\$2,374,181	\$2,476,960	\$2,584,309	\$2,689,649	\$2,794,574	\$2,903,509	\$3,011,755	\$3,121,803	\$3,230,749	\$3,340,655	\$3,451,000	\$3,561,838	
25	<b>Senior Lien Debt Service Coverage</b>	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	
26	Existing Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
27	New Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
28	Cumulative New Senior Lien Debt for Additional Borrowings	\$0	\$0	\$0	\$16,460	\$111,423	\$142,310	\$219,493	\$297,068	\$358,991	\$438,438	\$505,777	\$578,436	\$648,916	\$718,532	\$790,954	\$862,262	\$934,484	\$1,005,213	\$1,076,141	\$1,146,815	\$1,217,261	
29	<b>Total Senior Lien Debt Service</b>	\$998,391	\$998,391	\$998,391	\$1,013,851	\$1,109,814	\$1,140,701	\$1,217,884	\$1,295,459	\$1,357,382	\$1,434,829	\$1,504,168	\$1,576,827	\$1,647,307	\$1,716,923	\$1,789,345	\$1,860,643	\$1,932,875	\$2,003,804	\$2,074,532	\$2,145,260	\$2,216,000	
30	Senior Lien Debt Service Coverage	1.2 Req'd	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2		
31	<b>SRF Debt Service Coverage</b>	\$1,756,768	\$1,793,453	\$1,851,297	\$1,901,866	\$1,972,156	\$2,029,645	\$2,092,407	\$2,501,193	\$2,415,887	\$2,374,181	\$2,476,960	\$2,584,309	\$2,689,649	\$2,794,574	\$2,903,509	\$3,011,755	\$3,121,803	\$3,230,749	\$3,340,655	\$3,451,000	\$3,561,838	
32	Net Income Available for Senior Lien Debt Service Coverage	\$1,756,768	\$1,793,453	\$1,851,297	\$1,901,866	\$1,972,156	\$2,029,645	\$2,092,407	\$2,501,193	\$2,415,887	\$2,374,181	\$2,476,960	\$2,584,309	\$2,689,649	\$2,794,574	\$2,903,509	\$3,011,755	\$3,121,803	\$3,230,749	\$3,340,655	\$3,451,000	\$3,561,838	
33	Less: Senior Lien Debt Service	(\$998,391)	(\$998,391)	(\$998,391)	(\$1,013,851)	(\$1,109,814)	(\$1,140,701)	(\$1,217,884)	(\$1,295,459)	(\$1,357,382)	(\$1,434,829)	(\$1,504,168)	(\$1,576,827)	(\$1,647,307)	(\$1,716,923)	(\$1,789,345)	(\$1,860,643)	(\$1,932,875)	(\$2,003,804)	(\$2,074,532)	(\$2,145,260)	(\$2,216,000)	
34	Net Income Available for SRF Debt Service Coverage	\$758,377	\$795,062	\$852,906	\$888,015	\$862,342	\$889,144	\$874,523	\$1,215,132	\$1,058,505	\$939,352	\$972,792	\$1,007,482	\$1,042,342	\$1,077,661	\$1,114,164	\$1,151,112	\$1,188,926	\$1,227,145	\$1,266,123	\$1,305,794	\$1,346,186	
35	Existing SRF Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
36	SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
37	<b>Net Income Available for Debt Service</b>	\$1,756,768	\$1,793,453	\$1,851,297	\$1,901,866	\$1,972,156	\$2,029,645	\$2,092,407	\$2,501,193	\$2,415,887	\$2,374,181	\$2,476,960	\$2,584,309	\$2,689,649	\$2,794,574	\$2,903,509	\$3,011,755	\$3,121,803	\$3,230,749	\$3,340,655	\$3,451,000	\$3,561,838	
38	Less:																						
39	Total Senior Lien Debt Service	(\$998,391)	(\$998,391)	(\$998,391)	(\$1,013,851)	(\$1,109,814)	(\$1,140,701)	(\$1,217,884)	(\$1,295,459)	(\$1,357,382)	(\$1,434,829)	(\$1,504,168)	(\$1,576,827)	(\$1,647,307)	(\$1,716,923)	(\$1,789,345)	(\$1,860,643)	(\$1,932,875)	(\$2,003,804)	(\$2,074,532)	(\$2,145,260)	(\$2,216,000)	
40	State Revolving Fund Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
41	Payment of Debt Service With Water Impact Fees	\$116,626	\$141,875	\$145,237	\$149,587	\$154,075	\$158,897	\$163,958	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$158,738	\$162,706	\$133,419	\$136,088	\$138,809	\$141,585	\$144,417	\$147,306	\$150,252	
42	Payment of Debt Service With Sewer Impact Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
43	Transfer Out	(\$57,993)	(\$77,910)	(\$83,101)	(\$82,194)	(\$85,010)	(\$87,570)	(\$90,898)	(\$93,015)	(\$95,945)	(\$97,713)	(\$1,017,345)	(\$1,047,865)	(\$1,079,301)	(\$1,111,680)	(\$1,145,030)	(\$1,179,381)	(\$1,214,763)	(\$1,251,206)	(\$1,288,742)	(\$1,327,404)	(\$1,367,206)	
44	Capital Outlay	(\$17,000)	(\$17,510)	(\$18,035)	(\$18,576)	(\$19,134)	(\$19,708)	(\$20,299)	(\$20,908)	(\$21,535)	(\$22,181)	(\$22,847)	(\$23,532)	(\$24,238)	(\$24,965)	(\$25,714)	(\$26,485)	(\$27,28					

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

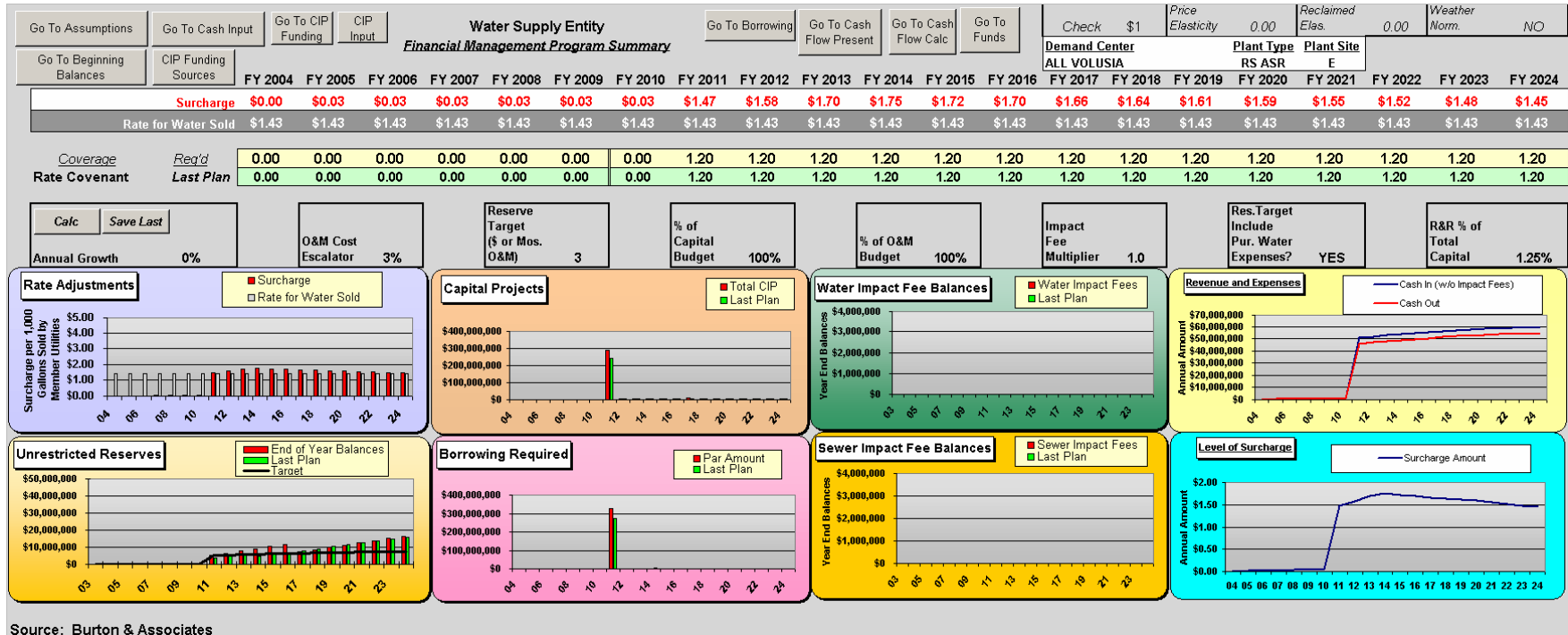
*APPENDIX Cb*

## St. Johns River Water Supply Project

### Affordability Analysis - Scenario Results

**Scenario: Volusia County Demand Center, Reliable Source with ASR, Site E**

**FIGURE Cb5 - WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – SUMMARY PANEL**



# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### APPENDIX Cb

### St. Johns River Water Supply Project

#### Affordability Analysis - Scenario Results

#### Scenario: Volusia County Demand Center, Reliable Source with ASR, Site E

### **FIGURE Cb6 - WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – PROFORMA**

Water Supply Entity Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																						
	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	
<b>1 Revenue</b>																						
2 Surcharge Revenue	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$823,955	\$896,423	\$971,450	\$1,049,571	\$1,131,229	\$1,217,343	\$1,307,915	\$1,403,052	\$1,502,866	\$1,607,457	\$1,716,834	\$1,831,117	\$1,951,528	\$2,078,194	
3 Delivered Water Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>4 Total Operating Revenue</b>	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$823,955	\$896,423	\$971,450	\$1,049,571	\$1,131,229	\$1,217,343	\$1,307,915	\$1,403,052	\$1,502,866	\$1,607,457	\$1,716,834	\$1,831,117	\$1,951,528	\$2,078,194	
<b>5 Expenses</b>																						
6 Operations and Maintenance Expense	\$0	\$515,000	\$556,873	\$602,366	\$651,459	\$704,552	\$761,973	\$823,220	\$888,594	\$957,188	\$1,029,124	\$1,104,511	\$1,183,458	\$1,265,976	\$1,352,224	\$1,442,321	\$1,535,287	\$1,631,234	\$1,730,171	\$1,832,108	\$1,937,145	
<b>8 Net Operating Income</b>	\$0	(\$3,807)	(\$5,076)	(\$6,344)	(\$7,613)	(\$8,882)	(\$8,882)	(\$21,071)	(\$1,163)	\$23,776	\$27,082	\$28,747	\$26,767	\$28,720	\$26,866	\$26,799	\$26,866	\$26,866	\$26,866	\$26,866	\$26,866	
<b>9 Plus: Non Operating Income (Expense)</b>																						
10 Non Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
11 Interest Earned on Invested Funds	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$8,882	\$9,046	\$9,339	\$9,660	\$10,008	\$10,383	\$10,783	\$11,207	\$11,655	\$12,127	\$12,623	\$13,143	\$13,687	\$14,255	\$14,847	
12 Transfers In	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
13 Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>14 Total Non Operating Income</b>	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$8,882	\$9,046	\$9,339	\$9,660	\$10,008	\$10,383	\$10,783	\$11,207	\$11,655	\$12,127	\$12,623	\$13,143	\$13,687	\$14,255	\$14,847	
<b>15 Net Income</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	
16 Less: Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>17 Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	
<b>18 Senior Lien Debt Service Coverage</b>																						
19 Existing Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
20 New Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
21 Cumulative New Senior Lien Debt for Additional Borrowings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>22 Total Senior Lien Debt Service</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
23 Senior Lien Debt Service Coverage	1.2	Req'd																				
<b>24 SRF Debt Service Coverage</b>																						
25 Net Income Available for Senior Lien Debt Service Coverage	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	
26 Less: Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>27 Net Income Available for SRF Debt Service Coverage</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	
28 Existing SRF Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
29 SRF Debt Service Coverage	1.15	Req'd																				
<b>30 Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	
31 Less:																						
32 Total Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
33 State Revolving Fund Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
34 Payment of Debt Service With Water Impact Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
35 Transfer Out	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
36 Capital Outlay	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>37 Net Cash Flow</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	
38 Unrestricted Reserve Fund - Beginning of Year Balance	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	
39 Minimum Working Capital Reserve Target	\$0	\$128,750	\$139,243	\$150,591	\$162,865	\$176,138	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	
40 Reserve Fund Balance in Excess of Working Capital Target	\$250,000	\$125,028	\$114,535	\$103,187	\$90,914	\$77,640	\$63,285	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
41 Less: Reserve Fund Balance Used for Cash Flow	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	
<b>42 Reserve Fund Balance in Excess of Working Capital Target Net of Current Year Cash Flow</b>	\$250,000	\$125,028	\$114,535	\$103,187	\$90,914	\$77,640	\$63,285	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>43 Net Cash Flow After Use of Reserve Funds</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
44 Less: CIP Projects Designated to be Paid with Cash	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>45 Net Cash Flow to Unrestricted Reserve Fund</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
46 Unrestricted Reserve Fund - Beginning of Year Balance	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	
47 Cash In/(Out) from Rate Revenues	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
48 Less: Reserve Fund Balance Used for Cash Flow	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	
49 Less: Projects Paid with Reserve Funds (Non Specified Funding)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$92,711)	(\$3,713,707)	(\$3,713,707)	(\$3,713,707)	(\$3,713,707)	(\$3,713,707)	(\$3,713,707)	(\$3,713,707)	(\$3,713,707)	(\$3,713,707)	(\$3,713,707)	(\$3,713,707)	(\$3,713,707)	(\$3,713,707)	
50 Unrestricted Reserve Fund - End of Year Balance	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	
51 Minimum Working Capital Reserve Target	\$0	\$128,750	\$139,243	\$150,591	\$162,865	\$176,138	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	\$190,493	
52 Excess (Deficiency) of Working Capital Reserves to Target	\$253,778	\$125,028	\$114,535	\$103,187	\$90,914	\$77,640	\$63,285	(\$0)	(\$1,048,099)	(\$2,109,734)	(\$3,184,794)	(\$4,273,156)	(\$5,371,743)	(\$6,460,822)	(\$7,550,309)	(\$8,640,306)	(\$9,730,803)	(\$10,821,800)	(\$11,913,297)	(\$13,005,294)	(\$14,097,291)	

Source: Burton & Associates  
 C:\Data\SRF\MD\Analysis\SRF\MD\_V\Models as of 2-1-2004\FAMS-Water Supply Entity-SRJ\MD\_A\_10Pro-Forma

**ST. JOHNS RIVER WATER SUPPLY PROJECT  
AFFORDABILITY ANALYSIS**

*APPENDIX Cc*

**APPENDIX Cc**

**Volusia County Demand Center  
Reliable Source  
Without ASR  
Site E  
Just-in-Time Rates**

**Figure**

**Number**

**Title**

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<b>Cc1</b>	<b>Utility – Groundwater Scenario – Summary Panel</b>
<b>Cc2</b>	<b>Utility – Groundwater Scenario – Proforma</b>
<b>Cc3</b>	<b>Utility – Surface Water Scenario – Summary Panel</b>
<b>Cc4</b>	<b>Utility – Surface Water Scenario – Proforma</b>
<b>Cc5</b>	<b>Water Supply Entity – Surface Water Scenario – Summary Panel</b>
<b>Cc6</b>	<b>Water Supply Entity – Surface Water Scenario – Proforma</b>



**ST. JOHNS RIVER WATER SUPPLY PROJECT  
AFFORDABILITY ANALYSIS**

*APPENDIX Cc*

**St. Johns River Water Supply Project  
Affordability Analysis - Scenario Results**

**Scenario: Volusia County Demand Center, Reliable Source without ASR, Site E  
FIGURE Cc1 - UTILITY – GROUNDWATER SCENARIO – SUMMARY PANEL**

**&**

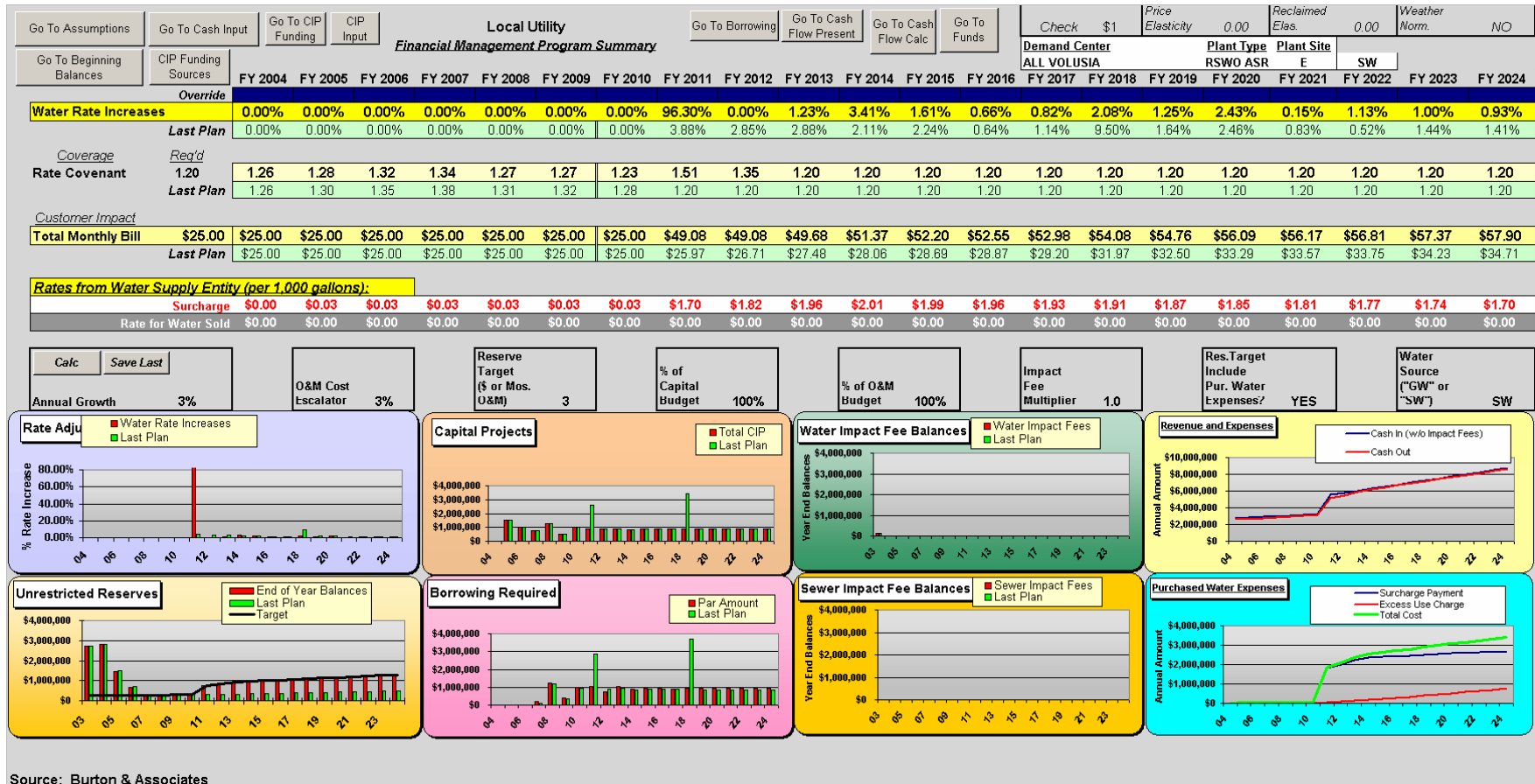
**FIGURE Cc2 - UTILITY – GROUNDWATER SCENARIO – PROFORMA**

**Same as Figures Ca1 and Ca2**

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Cc*

## St. Johns River Water Supply Project Affordability Analysis - Scenario Results Scenario: Volusia County Demand Center, Reliable Source without ASR, Site E FIGURE Cc3 - UTILITY – SURFACE WATER SCENARIO – SUMMARY PANEL



# ST. JOHNS RIVER WATER SUPPLY PROJECT

## AFFORDABILITY ANALYSIS

### APPENDIX Cc

### St. Johns River Water Supply Project

#### Affordability Analysis - Scenario Results

#### Scenario: Volusia County Demand Center, Reliable Source without ASR, Site E

#### FIGURE Cc4 - UTILITY – SURFACE WATER SCENARIO – PROFORMA

		Local Utility Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																					
		Water Growth																					
		FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	
		0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	
1	<b>Revenue</b>																						
2	Revenue Subject to Rate Increases																						
3	Water Rate Revenue	\$1,900,000	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$4,564,878	\$4,679,000	\$4,854,967	\$5,145,983	\$5,359,684	\$5,530,144	\$5,714,983	\$5,950,377	\$6,145,514	\$6,420,876	\$6,558,801	\$6,795,669	\$6,969,803	
4	Rate Revenue from Growth	\$0	\$57,000	\$59,710	\$60,471	\$62,295	\$64,154	\$66,079	\$66,717	\$114,122	\$116,975	\$121,374	\$128,650	\$133,992	\$138,254	\$144,300	\$149,000	\$152,424	\$156,418	\$161,176	\$165,313	\$169,396	
5	Proposed Rate Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
6	Rate Revenue from Rate Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,239,462	\$0	\$89,592	\$169,641	\$85,052	\$36,468	\$46,695	\$121,095	\$76,129	\$152,452	\$9,507	\$75,692	\$68,820	\$65,798
7	Total Water Rate Revenue	\$1,900,000	\$1,957,000	\$2,015,710	\$2,076,181	\$2,138,467	\$2,202,621	\$2,268,699	\$4,564,878	\$4,679,000	\$4,854,967	\$5,145,983	\$5,359,684	\$5,530,144	\$5,714,983	\$5,950,377	\$6,145,514	\$6,420,876	\$6,558,801	\$6,795,669	\$6,969,803	\$7,174,987	
8	Other Operating Revenue	\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$388,948	\$400,616	\$412,634	\$425,014	\$437,764	\$450,897	\$464,424	\$478,366	\$492,700	
9	Other Operating Revenue (1)	\$272,800	\$280,984	\$289,414	\$298,096	\$307,039	\$316,250	\$325,737	\$335,510	\$345,575	\$355,942	\$366,620	\$377,619	\$388,948	\$400,616	\$412,634	\$425,014	\$437,764	\$450,897	\$464,424	\$478,366	\$492,700	
10	<b>Total Operating Revenue</b>	\$2,172,800	\$2,237,984	\$2,305,124	\$2,374,277	\$2,445,506	\$2,518,871	\$2,594,437	\$4,900,388	\$5,024,575	\$5,210,909	\$5,512,603	\$5,737,303	\$5,919,092	\$6,115,599	\$6,363,012	\$6,570,528	\$6,868,640	\$7,009,698	\$7,230,093	\$7,448,159	\$7,667,594	
11	<b>Expenses</b>																						
12	Purchased Water at Groundwater Rates	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$46,929	\$88,643	\$135,571	\$187,714	\$234,643	\$286,796	\$338,929	\$396,286	\$448,429	\$511,000	\$568,357	\$630,929	\$693,500	\$756,071	
13	Water Treatment Facility Surcharge	\$0	\$23,621	\$25,682	\$27,945	\$30,430	\$33,159	\$36,216	\$1,811,706	\$1,997,281	\$2,216,236	\$2,347,151	\$2,387,264	\$2,422,042	\$2,453,326	\$2,499,824	\$2,531,698	\$2,579,014	\$2,628,220	\$2,615,628	\$2,641,509	\$2,665,812	
14	Operations and Maintenance Expense	\$974,025	\$1,003,246	\$1,033,343	\$1,064,343	\$1,096,274	\$1,129,162	\$1,163,037	\$1,197,928	\$1,233,865	\$1,270,882	\$1,309,008	\$1,348,278	\$1,388,727	\$1,430,389	\$1,473,300	\$1,517,499	\$1,563,024	\$1,609,915	\$1,658,212	\$1,707,959	\$1,759,197	
15	<b>Net Operating Income</b>	\$1,198,775	\$1,211,117	\$1,241,698	\$1,281,989	\$1,318,802	\$1,366,550	\$1,395,184	\$1,843,625	\$1,704,795	\$1,668,221	\$1,668,729	\$1,767,118	\$1,821,538	\$1,892,566	\$1,993,602	\$2,072,502	\$2,204,802	\$2,243,206	\$2,325,324	\$2,405,191	\$2,486,814	
16	<b>Plus: Non Operating Income (Expense)</b>																						
17	Non Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
18	Interest Earned on Invested Funds	\$57,993	\$67,336	\$74,748	\$73,514	\$80,600	\$89,658	\$100,198	\$112,646	\$124,918	\$129,587	\$132,797	\$121,892	\$152,324	\$164,757	\$151,352	\$157,873	\$112,919	\$159,581	\$162,787	\$167,931	\$171,241	
19	Transfers In	\$500,000	\$515,000	\$530,450	\$546,364	\$562,754	\$579,637	\$597,026	\$614,937	\$633,305	\$652,207	\$671,958	\$692,117	\$712,880	\$734,267	\$756,295	\$778,984	\$802,363	\$826,424	\$851,217	\$876,753	\$903,066	
20	Water Expansion Fees	\$0	\$141,000	\$145,230	\$149,587	\$154,075	\$158,897	\$163,958	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$158,738	\$162,706	\$133,419	\$136,088	\$138,809	\$141,585	\$144,417	\$147,306	\$150,252	
21	<b>Total Non Operating Income</b>	\$557,993	\$723,336	\$750,428	\$769,465	\$807,429	\$831,991	\$860,681	\$867,884	\$902,112	\$929,376	\$956,544	\$968,875	\$1,023,943	\$1,061,730	\$1,041,066	\$1,072,944	\$1,127,904	\$1,158,421	\$1,191,900	\$1,224,548		
22	<b>Net Income</b>	\$1,756,768	\$1,934,453	\$1,996,527	\$2,051,453	\$2,126,231	\$2,188,542	\$2,256,865	\$2,711,709	\$2,606,897	\$2,517,599	\$2,624,574	\$2,735,993	\$2,845,480	\$2,954,666	\$3,034,668	\$3,145,846	\$3,258,883	\$3,370,796	\$3,483,745	\$3,597,181	\$3,711,162	
23	Less: Water Expansion Fees	\$0	(\$141,000)	(\$145,230)	(\$149,587)	(\$154,075)	(\$158,897)	(\$163,958)	(\$140,301)	(\$143,809)	(\$147,404)	(\$151,089)	(\$154,866)	(\$158,738)	(\$162,706)	(\$133,419)	(\$136,088)	(\$138,809)	(\$141,585)	(\$144,417)	(\$147,306)	(\$150,252)	
24	<b>Net Income Available for Debt Service</b>	\$1,756,768	\$1,793,453	\$1,851,297	\$1,901,866	\$1,972,156	\$2,029,845	\$2,092,407	\$2,571,408	\$2,463,089	\$2,370,195	\$2,473,486	\$2,581,127	\$2,686,742	\$2,791,980	\$2,901,249	\$3,009,759	\$3,120,074	\$3,229,210	\$3,339,328	\$3,449,876	\$3,560,910	
25	<b>Senior Lien Debt Service Coverage</b>	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	\$998,391	
26	Existing Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
27	New Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
28	Cumulative New Senior Lien Debt for Additional Borrowings	\$0	\$0	\$0	\$16,460	\$111,423	\$142,310	\$219,493	\$297,068	\$355,064	\$433,116	\$502,881	\$575,784	\$646,494	\$716,370	\$789,071	\$860,588	\$933,043	\$1,003,931	\$1,075,035	\$1,145,878	\$1,216,488	
29	<b>Total Senior Lien Debt Service</b>	\$998,391	\$998,391	\$998,391	\$1,013,851	\$1,109,814	\$1,140,701	\$1,217,884	\$1,295,459	\$1,353,455	\$1,431,507	\$1,501,272	\$1,574,175	\$1,644,885	\$1,714,761	\$1,787,462	\$1,868,979	\$1,931,434	\$2,002,322	\$2,073,426	\$2,144,269	\$2,214,879	
30	Senior Lien Debt Service Coverage	1.2 Req'd	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2		
31	<b>SRF Debt Service Coverage</b>																						
32	Net Income Available for Senior Lien Debt Service Coverage	\$1,756,768	\$1,793,453	\$1,851,297	\$1,901,866	\$1,972,156	\$2,029,845	\$2,092,407	\$2,571,408	\$2,463,089	\$2,370,195	\$2,473,486	\$2,581,127	\$2,686,742	\$2,791,980	\$2,901,249	\$3,009,759	\$3,120,074	\$3,229,210	\$3,339,328	\$3,449,876	\$3,560,910	
33	Less: Senior Lien Debt Service	(\$998,391)	(\$998,391)	(\$998,391)	(\$1,013,851)	(\$1,109,814)	(\$1,140,701)	(\$1,217,884)	(\$1,295,459)	(\$1,353,455)	(\$1,431,507)	(\$1,501,272)	(\$1,574,175)	(\$1,644,885)	(\$1,714,761)	(\$1,787,462)	(\$1,868,979)	(\$1,931,434)	(\$2,002,322)	(\$2,073,426)	(\$2,144,269)	(\$2,214,879)	
34	Net Income Available for SRF Debt Service Coverage	\$758,377	\$795,062	\$852,906	\$888,015	\$862,342	\$889,144	\$874,523	\$1,275,949	\$1,109,634	\$938,688	\$972,213	\$1,006,952	\$1,041,857	\$1,077,219	\$1,113,787	\$1,150,780	\$1,188,640	\$1,226,888	\$1,265,502	\$1,305,607	\$1,346,031	
35	Existing SRF Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
36	SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
37	<b>Net Income Available for Debt Service</b>	\$1,756,768	\$1,793,453	\$1,851,297	\$1,901,866	\$1,972,156	\$2,029,845	\$2,092,407	\$2,571,408	\$2,463,089	\$2,370,195	\$2,473,486	\$2,581,127	\$2,686,742	\$2,791,980	\$2,901,249	\$3,009,759	\$3,120,074	\$3,229,210	\$3,339,328	\$3,449,876	\$3,560,910	
38	Less:																						
39	Total Senior Lien Debt Service	(\$998,391)	(\$998,391)	(\$998,391)	(\$1,013,851)	(\$1,109,814)	(\$1,140,701)	(\$1,217,884)	(\$1,295,459)	(\$1,353,455)	(\$1,431,507)	(\$1,501,272)	(\$1,574,175)	(\$1,644,885)	(\$1,714,761)	(\$1,787,462)	(\$1,868,979)	(\$1,931,434)	(\$2,002,322)	(\$2,073,426)	(\$2,144,269)	(\$2,214,879)	
40	State Revolving Fund Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
41	Payment of Debt Service With Water Impact Fees	\$116,626	\$141,875	\$145,237	\$149,587	\$154,075	\$158,897	\$163,958	\$140,301	\$143,809	\$147,404	\$151,089	\$154,866	\$158,738	\$162,706	\$133,419	\$136,088	\$138,809	\$141,585	\$144,417	\$147,306	\$150,252	
42	Payment of Debt Service With Sewer Impact Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
43	Transfer Out	(\$57,993)	(\$77,910)	(\$83,101)	(\$82,194)	(\$85,010)	(\$87,570)	(\$90,898)	(\$93,015)	(\$95,945)	(\$97,713)	(\$1,017,345)	(\$1,047,865)	(\$1,079,301)	(\$1,111,690)	(\$1,145,030)	(\$1,179,381)	(\$1,214,763)	(\$1,251,206)	(\$1,288,742)	(\$1,327,404)	(\$1,367,206)	
44	Capital Outlay	(\$17,000)	(\$17,510)	(\$18,035)	(\$18,576)	(\$19,134)	(\$19,708)	(\$20,299)	(\$20,908)	(\$21,535)	(\$22,181)	(\$22,847)	(\$23,532)	(\$24,238)	(\$24,965)	(\$25,714)	(\$26,485)	(\$27,280)	(\$28,109)	(\$28,974)	(\$29,874)	(\$30,740)	
45	<b>Net Cash Flow</b>	\$101,003	\$139,716	\$177,006	\$191,832	\$145,273	\$150,562	\$113,785	\$464,327	\$272,962	\$76,197	\$											

# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

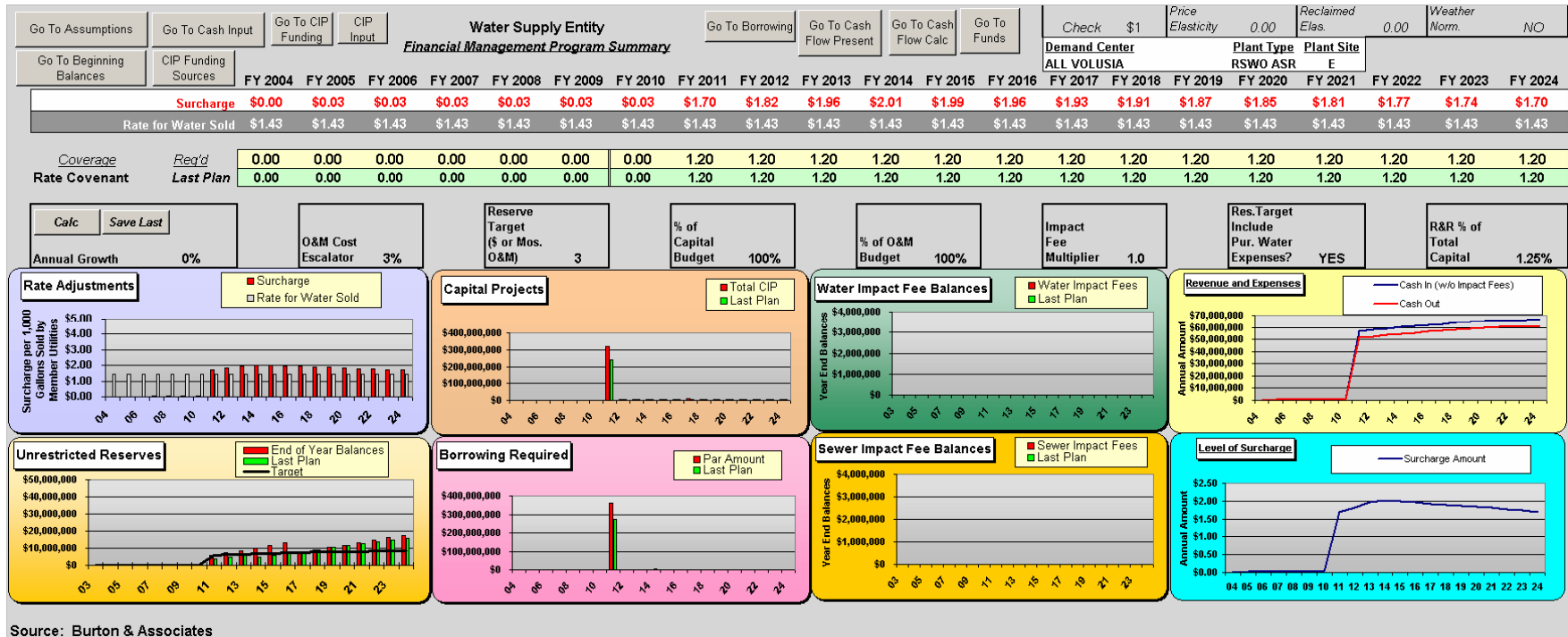
*APPENDIX Cc*

## St. Johns River Water Supply Project

### Affordability Analysis - Scenario Results

**Scenario: Volusia County Demand Center, Reliable Source without ASR, Site E**

**FIGURE Cc5 - WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – SUMMARY PANEL**



# ST. JOHNS RIVER WATER SUPPLY PROJECT AFFORDABILITY ANALYSIS

*APPENDIX Cc*

## St. Johns River Water Supply Project

### Affordability Analysis - Scenario Results

**Scenario: Volusia County Demand Center, Reliable Source without ASR, Site E**

### **FIGURE Cc6 - WATER SUPPLY ENTITY – SURFACE WATER SCENARIO – PROFORMA**

Water Supply Entity Water and Sewer System Financial Management Program Summary Forecast of Net Revenues and Debt Service Coverage																					
	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>1 Revenue</b>																					
Surcharge Revenue	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$37,373,513	\$40,855,397	\$44,933,522	\$47,147,434	\$47,490,326	\$47,707,227	\$47,826,973	\$48,219,230	\$48,299,806	\$48,662,871	\$48,041,630	\$47,766,363	\$47,451,778	\$47,098,851
Delivered Water Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,438,900	\$10,109,457	\$10,780,014	\$11,450,571	\$12,121,129	\$12,797,943	\$13,474,757	\$14,151,571	\$14,828,386	\$15,505,200	\$16,103,071	\$16,520,943	\$17,028,814	\$17,536,686
<b>4 Total Operating Revenue</b>	\$0	\$511,193	\$551,897	\$596,021	\$643,845	\$695,670	\$753,091	\$46,812,413	\$50,964,854	\$55,713,536	\$58,598,006	\$59,611,455	\$60,505,170	\$61,303,730	\$62,370,801	\$63,128,191	\$64,168,071	\$64,054,702	\$64,287,306	\$64,490,592	\$64,635,537
<b>5 Expenses</b>																					
Operations and Maintenance Expense	\$0	\$515,000	\$556,973	\$602,366	\$651,459	\$704,552	\$761,973	\$23,622,803	\$24,799,050	\$25,913,038	\$26,965,212	\$27,956,055	\$28,899,623	\$29,792,313	\$30,604,738	\$31,367,555	\$32,071,480	\$32,394,545	\$32,677,389	\$32,920,915	\$33,126,100
<b>8 Net Operating Income</b>	\$0	(\$3,807)	(\$5,076)	(\$6,344)	(\$7,613)	(\$8,882)	(\$8,882)	\$23,189,610	\$26,165,804	\$29,800,498	\$31,632,794	\$31,655,400	\$31,605,548	\$31,521,417	\$31,766,064	\$31,760,636	\$32,096,591	\$31,660,157	\$31,809,917	\$31,559,677	\$31,509,437
<b>9 Plus: Non Operating Income (Expense)</b>																					
Non Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interest Earned on Invested Funds	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$8,882	\$9,953,358	\$6,977,164	\$3,342,470	\$1,510,174	\$1,487,568	\$1,537,420	\$1,687,981	\$1,443,334	\$1,448,761	\$1,112,807	\$1,549,241	\$1,599,481	\$1,649,720	\$1,699,960
Transfers In	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>14 Total Non Operating Income</b>	\$3,778	\$3,807	\$5,076	\$6,344	\$7,613	\$8,882	\$8,882	\$9,953,358	\$6,977,164	\$3,342,470	\$1,510,174	\$1,487,568	\$1,537,420	\$1,687,981	\$1,443,334	\$1,448,761	\$1,112,807	\$1,549,241	\$1,599,481	\$1,649,720	\$1,699,960
<b>15 Net Income</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$33,142,968	\$33,142,968	\$33,142,968	\$33,142,968	\$33,142,968	\$33,142,968	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398
Less: Water Expansion Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>17 Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$33,142,968	\$33,142,968	\$33,142,968	\$33,142,968	\$33,142,968	\$33,142,968	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398
<b>Senior Lien Debt Service Coverage</b>																					
Existing Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cumulative New Senior Lien Debt for Additional Borrowings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140
<b>22 Total Senior Lien Debt Service</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140	\$27,619,140
Senior Lien Debt Service Coverage	1.2 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
<b>SRF Debt Service Coverage</b>																					
Net Income Available for Senior Lien Debt Service Coverage	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$33,142,968	\$33,142,968	\$33,142,968	\$33,142,968	\$33,142,968	\$33,142,968	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398
Less: Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>27 Net Income Available for SRF Debt Service Coverage</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828
Existing SRF Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SRF Debt Service Coverage	1.15 Req'd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>30 Net Income Available for Debt Service</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$33,142,968	\$33,142,968	\$33,142,968	\$33,142,968	\$33,142,968	\$33,142,968	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398	\$33,209,398
Less:																					
Total Senior Lien Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$27,619,140)	(\$27,619,140)	(\$27,619,140)	(\$27,619,140)	(\$27,619,140)	(\$27,619,140)	(\$27,619,140)	(\$27,619,140)	(\$27,619,140)	(\$27,619,140)	(\$27,619,140)	(\$27,619,140)	(\$27,619,140)	(\$27,619,140)
State Revolving Fund Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Payment of Debt Service With Water Impact Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transfer Out	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Outlay	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>37 Net Cash Flow</b>	\$3,778	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828
Unrestricted Reserve Fund - Beginning of Year Balance	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778
Minimum Working Capital Reserve Target	\$0	\$128,750	\$139,243	\$150,591	\$162,865	\$176,138	\$190,493	\$5,905,701	\$6,199,763	\$6,478,259	\$6,741,303	\$6,989,014	\$7,224,906	\$7,445,578	\$7,651,184	\$7,841,889	\$8,017,870	\$8,099,636	\$8,169,347	\$8,230,229	\$8,281,525
Reserve Fund Balance in Excess of Working Capital Target	\$250,000	\$125,028	\$114,535	\$103,187	\$90,914	\$77,640	\$63,285	\$0	\$0	\$723,696	\$1,885,003	\$3,061,641	\$4,250,099	\$5,453,776	\$0	\$1,039,111	\$2,288,551	\$3,653,206	\$5,017,916	\$6,392,456	\$7,776,580
Less: Reserve Fund Balance used for Cash Flow	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
<b>42 Reserve Fund Balance in Excess of Working Capital Target Net of Current Year Cash Flow</b>	\$250,000	\$125,028	\$114,535	\$103,187	\$90,914	\$77,640	\$63,285	\$0	\$0	\$723,696	\$1,885,003	\$3,061,641	\$4,250,099	\$5,453,776	\$0	\$1,039,111	\$2,288,551	\$3,653,206	\$5,017,916	\$6,392,456	\$7,776,580
<b>43 Net Cash Flow After Use of Reserve Funds</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828
Less: CIP Projects Designated to be Paid with Cash	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>46 Net Cash Flow to Unrestricted Reserve Fund</b>	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828
Unrestricted Reserve Fund - Beginning of Year Balance	\$250,000	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778
Cash In/(Out) from Rate Revenues	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828	\$5,523,828
Less: Reserve Fund Balance used for Cash Flow	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
Less: Projects Paid with Reserve Funds (Non Specified Funding)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$4,099,478)	(\$4,099,478)	(\$4,099,478)	(\$4,099,478)	(\$4,099,478)	(\$4,099,478)	(\$4,099,478)	(\$4,099,478)	(\$4,099,478)	(\$4,099,478)	(\$4,099,478)	(\$4,099,478)	(\$4,099,478)
Unrestricted Reserve Fund - End of Year Balance	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778	\$253,778
Minimum Working Capital Reserve Target	3 Mo O&	\$0	\$128,750	\$139,243	\$150,591	\$162,865	\$176,138	\$190,493	\$5,905,701	\$6,199,763	\$6,478,259	\$6,741,303	\$6,989,014	\$7,224,906	\$7,445,578	\$7,651,184	\$7,841,889	\$8,017,870	\$8,099,636	\$8,169,347	\$8,230,229
<b>52 Excess (Deficiency) of Working Capital Reserves to Target</b>	\$253,778	\$125,028	\$114,535	\$103,187	\$90,914	\$77,640	\$63,285	(\$128,084)	\$1,002,193	\$2,148,046	\$3,309,352	\$4,485,991	\$5,674,449	(\$0)	\$1,229,815	\$2,474,532	\$3,733,972	\$5,088,627	\$6,453,337	\$7,827,877	\$9,212,002

Source: Burton & Associates  
C:\Data\SRJ\MD\Andy\SRJ\MD V\Models as of 2-1-2004\FAME-Water Supply Entity-SRJ\MD\_4\_19\Pro-Forma