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May 3, 2001

BY HAND DELIVERY

Blanca Bayó
Director, Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399

Re: Docket Nos. 990696-WS & 992040-WS

Dear Ms. Bayó:

Enclosed for filing on behalf of Nocatee Utility Corporation are the original and fifteen copies of the Additional Rebuttal Testimony of Douglas C. Miller.

By copy of this letter, this testimony has been furnished to the parties on the attached service list. If you have any questions regarding this filing, please call.

Very truly yours,

Richard D. Melson

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I HEREBY CERTIFY that a true copy of the foregoing was served this 3RD day of May, 2001, on the following:

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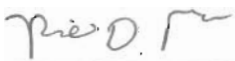
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Attorney

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

ADDITIONAL REBUTTAL TESTIMONY OF

DOUGLAS C. MILLER

ON BEHALF OF

NOCATEE UTILITY CORPORATION

DOCKET NOS. 990696-WS AND 992040-WS

May 3, 2001

Q. Please state your name and business address.

A. My name is Douglas C. Miller. My business address is 14775 St. Augustine Road, Jacksonville, Florida 32258.

Q. Have you previously filed direct, intervenor, rebuttal and supplemental direct testimony in these consolidated dockets?

A. Yes.

Q. What is the purpose of this additional rebuttal testimony?

A. The purpose is to comment on the plan of service for the Nocatee development that was recently unveiled by St. Johns County and to rebut the testimony of Mr. William Young and Mr. Donald Maurer regarding that plan of service and other matters contained in their testimony.

Q. Have you reviewed the County's plan of service?

1 A. Yes. I have reviewed (i) CDM's February 2001 version
2 of the plan of service, (ii) a March 2001 draft of a
3 revised plan of service, (iii) an updated draft of the
4 plan of service provided during Mr. Young's deposition
5 on April 19, 2001, and (iv) another revised version of
6 the plan of service presented to the St. Johns County
7 Commission on April 24, 2001 and attached to Mr.
8 Young's testimony at pages 11-21 of Exhibit ____ (WGY-
9 4). It is this final version of the plan of service
10 which Mr. Maurer describes in his prefiled testimony.

11 **Q. In your professional opinion, has the County presented**
12 **a technically and financially feasible plan for the**
13 **County to provide service to the Nocatee development?**

14 A. No. That plan is not technically or financially
15 feasible for either water service, wastewater service,
16 or reuse service.

17 **Q. Let's begin with technical feasibility. Why is the plan**
18 **for water service not technically feasible?**

19 A. First, the County's plan relies on expansion of a
20 current 0.9 MGD water plant to an ultimate capacity of
21 9.5 MGD, but assumes current treatment methods. The
22 quality of the water produced at the existing water
23 treatment plant is marginal, and the County has not

1 investigated either the adequacy or quality of the
2 supply to meet the projected demands. Data from the
3 Department of Environmental Protection which shows the
4 marginal nature of the water quality at the plant from
5 which the County proposes to provide service is
6 attached as Exhibit ____ (DCM-15). A letter from the
7 St. Johns River Water Management District which
8 discusses potable water resource limitations in St.
9 Johns County is attached as Exhibit ____ (DCM-16).

10 Second, the County's plan contemplates the
11 extension of water lines for a distance of over 15
12 miles from the current water treatment plant. Of this,
13 over 6.5 miles is proposed to occur in the U.S. 1
14 right-of-way. There is insufficient space in the
15 right-of-way for additional utility lines. A letter
16 from the Department of Transportation which discusses
17 the existing right-of-way congestion is attached as
18 Exhibit ____ (DCM-17). Even if there were space in the
19 right-of-way, the extension would parallel and
20 duplicate existing lines installed by JEA in that
21 right-of-way to provide bulk service to the County. In
22 contrast to the County's plan, NUC intends to connect

1 to existing JEA water and sewer mains that are
2 immediately adjacent to the Nocatee development.

3 Third, the County's plan still shows only a 12"
4 water main from the U.S. 1/CR 210 intersection to the
5 Nocatee town center. This line is simply too small to
6 meet the water demands (including fire flow) for Phase
7 I of the Nocatee development.

8 **Q. Why is the County's plan of service for wastewater not**
9 **technically feasible?**

10 A. The plan involves service from the S.R. 16 wastewater
11 treatment plant which currently has a wet weather
12 discharge to wetlands and ultimately to the
13 Intracoastal Waterway. Service to Nocatee from a plant
14 which has a wet weather discharge to that waterway
15 violates the intent of the development order for the
16 project, which prohibits wet weather discharge to the
17 Tolomato River (which is part of the Intracoastal
18 Waterway) or any of its tributaries.

19 Like the water plan, the wastewater plan also
20 requires the construction of new, duplicative wastewater
21 force mains for over 15 miles, of which over 6.5 miles
22 is in the congested U.S. 1 right-of-way.

23 **Q. Why is the County's plan of service for reuse not**

1 **technically feasible?**

2 A. First, the County's plan relies solely on stormwater
3 during the first phase of development. Primary use of
4 stormwater for irrigation is unreliable and will not
5 provide sufficient quantities of water to meet
6 irrigation needs.

7 Second, because stormwater is not available during
8 time of peak irrigation demand (i.e. dry season and/or
9 drought) the County's plan must rely on the Floridan
10 aquifer as the primary source for irrigation water.
11 This not only violates the development order, it
12 violates the strong environmental ethic that the
13 landowner has set for the project and is a poor use of
14 a scarce potable water resource.

15 Third, the County has not demonstrated an ability
16 to reliably operate a retail reuse system and has
17 recently abandoned the provision of retail reuse
18 service to the World Golf Village development.

19 Q. **Let's turn to financial feasibility. What is the basis**
20 **for your opinion that the County's plan of service is**
21 **not financially feasible?**

22 A. That plan is not financially feasible primarily because

1 the costs of the plan have been severely understated,
2 and some costs have been omitted entirely. As shown on
3 attached Exhibit ____ (DCM-18), I estimate the capital
4 costs required to serve Phase I of the Nocatee
5 development at \$20.4 million, compared to County's
6 estimate of \$15.3 million. Similarly, the capital
7 costs required to serve the build-out of the Nocatee
8 development are \$81.7 million, compared to the County's
9 estimate of \$50.7 million. The revenues available from
10 service to Nocatee -- even at the County's current
11 rates -- are insufficient to cover this capital cost.

12 **Q. Your Exhibit ____ (DCM-18) presents two different sets**
13 **of County cost estimates for its plan. What is the**
14 **difference between these two sets of numbers?**

15 **A.** The first set of numbers shows an initial cost of \$9.5
16 million and a build-out cost of \$46.9 million. This
17 was the County's original estimate which was contained
18 in the draft plan of service report that was provided
19 to the parties at Mr. Young's deposition on April 19.
20 The second set of numbers shows an initial cost of
21 \$15.3 million and a build-out cost of \$50.7 million.
22 This is the estimate which was provided to the Board of

1 County Commissioners on April 24.

2 Q. What happened between April 19 and April 24 to cause
3 this increase in the County's cost estimate?

4 A. On April 23, I met with Mr. Young, Mr. Maurer, and one
5 of the County Commissioners to point out a number of
6 errors in the County's cost estimate. After this
7 meeting, the County's cost estimates were increased
8 substantially by the morning of April 24. I assume
9 that this change was in response to the information I
10 provided on April 23.

11 Q. Is the County's current cost estimate realistic?

12 A. No. While the County's cost estimate moved in the
13 right direction, it still substantially understates the
14 costs the County will incur in pursuing its plan of
15 service. Also, while the County's cost projections for
16 some line items were increased in response to my
17 comments, in other areas their cost projections were
18 reduced, even though we had agreed that their initial
19 estimates appeared reasonable. In addition, the
20 County's new cost estimate eliminates the 10%
21 miscellaneous category which appeared in all earlier
22 versions of their costs.

- 1 Q. Are there any other factors that call into question the
2 financial feasibility of the plan of service?
- 3 A. Yes, as I noted above, the Nocatee development is
4 remote from the County's existing water transmission
5 and wastewater force main systems. The County's plan
6 calls for lines to be extended from World Golf Village
7 to U.S. 1 through the middle of the Twelve Mile Swamp.
8 This property has recently been acquired by the St.
9 Johns River Water Management District and is not
10 developable. In Phase 2 of the County service plan,
11 the County proposes to run approximately 7.5 miles of
12 24" reuse main and 24" sewer main through the City of
13 St. Augustine's service area from the County's
14 wastewater treatment plant to the Marshall Creek area,
15 with no potential for any customer connections. Thus
16 the County will not enjoy the typical economies which
17 come from extending lines into and through areas with
18 concentrations of potential customers.
- 19 Q. What would be the customer impact of the County plan of
20 service?
- 21 A. It would result in substantially higher water and sewer
22 rates and connection fees for residents of Nocatee even

1 if the County could provide service without a further
2 rate increase. Further, the County does not have a
3 residential reuse rate or connection fee in place
4 today, and has not done any financial analysis of the
5 cost of providing retail reuse service. I have
6 attached as Exhibit ____ (DCM-19) an exhibit which
7 compares NUC's proposed rates and service availability
8 charges (connection fees) and to the current St. Johns
9 County rates and charges.

10 The County's current combined water and wastewater
11 rates for a 10,000 gallon per month customer are 23%
12 higher than NUC's proposed rates, or \$87.03 for the
13 County versus \$70.71 for NUC.

14 Similarly, the County's connection fees are 133%
15 higher than NUC's proposed fees, or \$3,200 per ERC
16 versus \$1,375 per ERC.

17 **Q. Mr. Young's Exhibit ____ (WGY-5) contains different**
18 **rates for NUC than those shown on your Exhibit ____**
19 **(DCM-19). How do you explain the difference.**

20 **A. Mr. Young's rates for NUC are incorrect. First, he**
21 **apparently ignored the correction to NUC's proposed**
22 **wastewater rates which was made in Ms. Swain's Revised**

1 Exhibit ____ (DDS-12) attached to her March 22, 2001
2 testimony and instead used rates from the earlier
3 version of that exhibit. Second, he "grossed up" the
4 earlier rates by 4.5% for the Commission's regulatory
5 assessment fee. This is wrong, because the 4.5% fee is
6 already embedded in the rates NUC has proposed in this
7 docket.

8 Q. Mr. Young states (page 1 line 25 to page 2 line 21)
9 that even before the County voted on April 24 to
10 include Nocatee in its "exclusive service territory,"
11 NUC was required by Ordinance 99-36 to apply to the
12 Board of County Commissioners for authority to serve
13 within the County's "designated service territory."
14 How do you respond to this claim?

15 A. Although I am not a lawyer (and neither is Mr. Young),
16 I have been advised that the Commission has exclusive
17 jurisdiction over applications for multi-county
18 certificates. I don't understand how County permission
19 could be required for something that is in the
20 Commission's exclusive jurisdiction.

21 Q. Mr. Young also states that JEA has not yet determined
22 the size of the water, sewer and reuse joint project
23 lines which will be used to serve Phase I of the

1 Nocatee development. (Page 3, lines 24-28) Could you,
2 please respond?

3 A. Yes, NUC has determined the size of the lines required
4 to serve Phase I of Nocatee and has included the
5 appropriate costs in its proposed rates. If JEA elects
6 to require those lines to be upsized, JEA will bear its
7 share of the cost of the upsized lines. Section 8.4 of
8 NUC's agreement with JEA (Exhibit ____ (DCM-13) to my
9 earlier testimony) states that JEA will make a final
10 decision on its upsizing requirements within 30 days
11 after a request by NUC. NUC will make such a request
12 at an appropriate time before it enters the detailed
13 design process for its Phase I utility system.

14 Q. Do you have any other comments on the County's plan of
15 service?

16 A. Yes, the County proposes to serve only the portion of
17 Nocatee located within the County boundaries. This
18 means that approximately 20% of the Nocatee development
19 will require service from some other source, which will
20 undoubtedly to lead to duplication of facilities and
21 inefficiencies in operation.

22 Q. Does that conclude your additional rebuttal testimony?

23 A. Yes it does.

Northwest Utility Water Treatment Plant Water Quality Data

	Result	Secondary Drinking Water Standard
February 2000 Composite Sample	mg/L	mg/L
TDS	585	500
Sulfate	226	250
May 1997 Well 1 Sample		
TDS	540	500
Sulfate	230	250
March 1997 Well 1 Sample		
TDS	556	500
Sulfate	255	250

Source: Department of Environmental Protection



St. Johns River Water Management District

Henry Dean, Executive Director • John R. Wehle, Assistant Executive Director

Post Office Box 1429 • Palatka, FL 32178-1429 • (386) 329-4500

April 18, 2001

The Honorable Mary Kohnke, Chairman
St. Johns County Commission
P.O. Drawer 349
St. Augustine, Florida 32085

W

*Barbara Vengren - Director
Division of Water Supply Management*

RE: St. Johns County water supply information

Dear Chairman Kohnke:

I appreciated the opportunity to speak with you about your concerns for the future of water supply development in St. Johns County. The District shares your concern and is committed to assisting the St. Johns County Commission in making the important water supply management decisions that must be made to insure adequate water supplies for the future.

You have asked me if there is enough water in St. Johns County to supply currently approved DRIs and PUDs without a higher level of treatment than is currently being practiced. I cannot give you an absolute answer because the District has certainly not investigated all possibilities. However, I believe there are strong indications that the answer is no. Based on the best information available and the District's evaluation of that data about 30 million gallons per day (mgd) of additional water supply will be required to meet the demands of these known DRIs and PUDs through "build out." Of this 30 mgd only about 6 mgd is needed for indoor residential water use. The remaining 24 mgd will be required to meet lawn and landscape, golf course, and commercial/industrial demands. Most of the outdoor irrigation demand could eventually be supplied with reclaimed water and properly constructed domestic self-supply wells. In addition, JEA has agreed to supply 1 mgd to the County for use at Marshall Creek and Walden Chase. This water will come from sources outside of St. Johns County.

Ninety-seven percent of the projected increased demand is not provided for in existing consumptive use permits (CUP) issued by the District (JEA's CUP includes 1 mgd for Marshall Creek and Walden Chase). Some of the increased demand can probably be met with fresh groundwater developed in St. Johns County. However, only relatively small quantities can probably be developed at any given location because of the likelihood of wetland impacts, salt water intrusion, and interference with existing legal users of water (interference with domestic self-supply wells has historically been a problem in the agricultural area of the county and in the northwest area of the county). For example, based on analyses performed by the District, the County's Tillman Ridge wellfield cannot sustain its current production without resultant unacceptable wetland impacts. Decreasing withdrawals from existing wells and adding several new wells located at 2000-foot intervals extending to a total distance of two miles north of the existing wellfield would provide sustainable withdrawals of only 2.37 (mgd). This is less than

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The Honorable Mary Kohnke, Chairman
April 18, 2001
Page Two

the current production of the wellfield. This should give you an indication of how difficult it will be to develop additional fresh water supplies.

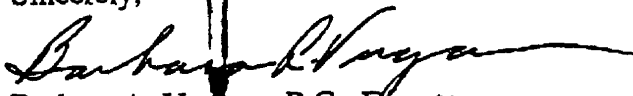
It is likely that larger quantities of brackish (slightly saline) groundwater can be successfully developed but this water will require more expensive treatment and would result in a treatment process concentrate byproduct that will have to be specially managed. This concentrate management will also increase the cost of developing these brackish water supplies. The potential costs of developing brackish ground water are reported in the draft document titled *Water 2020 Work Group Area V: Northern St. Johns and Southern Duval Counties Water Supply Plan* (pages 54 and 55) and in the *District Water Supply Plan* (page 111). These costs range from \$1.73 to \$1.86 per 1000 gallons. Typical costs for development of fresh groundwater range between \$0.75 and \$1.25 per 1000 gallons. Brackish groundwater is being successfully used for water supply by other coastal water supply utilities in the District, including Palm Coast, Melbourne, Vero Beach, and Indian River County. The District is currently working with the St. Johns County Utility Department to investigate the feasibility of developing brackish groundwater sources within the county.

The problem of identifying acceptable sources of water to supply projected demands is not just a problem for St. Johns County; it is a regional problem for counties in northeast Florida. Significant growth is projected for the region, but there has been no firm demonstration that the sources of supply proposed by the various public supply utilities (St. Johns County Utility, JEA, etc.) can be developed without causing unacceptable impacts to wetlands, salt water intrusion, and existing legal users. The District encourages St. Johns County to work cooperatively with other counties and public supply utilities in the region to develop a regional plan for water supply development that can be implemented without resultant undesirable impacts. The District is prepared to facilitate such an effort.

Enclosed is information compiled in response to your March 20, 2001, request.

Please contact me if you would like to discuss this matter further.

Sincerely,


Barbara A. Venara, P.G., Director
Division of Water Supply Management

Enclosures



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APR 30 2001

Florida Department of Transportation

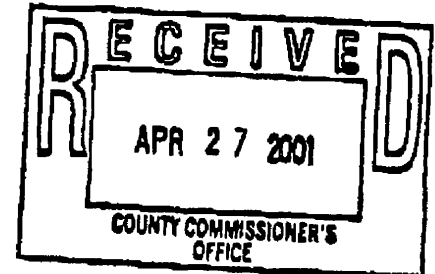
JEB BUSH
GOVERNOR

Post Office Box 1089-1901 South Marion Street
Lake City, Florida 32058-1089

Hopping, Green, Sams & Smith
THOMAS F. BARRY, JR.
SECRETARY

April 27, 2001

The Honorable Mary Kohnke
St. Johns County Commission
Post Office Drawer 349
St. Augustine, Florida 32085-0349



SUBJECT: Underground Utility Installation within SRS (US1) Right-of-way St. Johns County

Dear Dr. Kohnke:

The congestion of underground utilities within the US 1 right-of-way from Greenland Road in Duval County to SR 16 in St. Johns County has greatly increased in the past year and a half. Within this corridor, a company called LEVEL 3 Communications has installed a major underground conduit system throughout these limits. The City of St. Augustine recently installed major water and sewer facilities from the City Limits to just south of Stokes Landing. The JEA recently completed the extension of a 20" inch water main and a 24" inch force main along the east side of the US 1 right-of-way from Roscoe Road in Duval County to Stokes Landing. The Water Main is approximately 6 feet off the pavement edge and the force main is down the median of US 1. Teco Peoples Gas of Jacksonville has installed a new gas main from Greenland Road to International Golf Parkway along the west right of way of US 1. In addition to all of these new facilities, Bellsouth has many directed buried cables on both sides of the roadway throughout both Counties. As you can imagine, the right of way has become very congested and poses great problems for the future extension of any underground utility facilities.


It is extremely difficult to install facilities due to various separation requirements and potential impact to existing facilities and future widening of US 1.

In order to properly determine the possibility of permitting any further underground utilities being placed within the right of way, the Department would need to compile all previously issued permits for the above. With this composite of all utilities we would develop a cross section and plan view to locate all utilities, horizontally and vertically, to determine what, if any, space is available. Furthermore, the right of way currently has railroad right of way concerns along the west side and wetland issues along both sides that need to be studied and considered before providing a final recommendation to any future utility provider within this right of way.

In our opinion it will be very difficult and expensive to get another single line permitted and virtually impossible to permit multiple lines within this right of way. Another location or an adjacent utility easement may be necessary to accommodate future utility expansions in this area of St. Johns County. In addition, any potential utility provider would be required to submit a standard Department utility permit application to the St. Augustine Maintenance yard for final review and approval. Each application will be reviewed based on what is needed and what we have previously permitted.

If you have any questions, please contact Mr. Vince Camp, District Utility Engineer at 386/961-3732.

Sincerely,



Aage G. Schroder, III
District Secretary

Cc: Vince Camp, District Utility Engineer
Karen Kohoutek-Luckin., St Augustine Maintenance Engineer
Bobby Johns, District Maintenance Engineer
James Dees, District Planning Administrator
Dave Byrd, Director of Production
Jim MacLaughlin, Director of Operations

Table 2 Initial Costs to Serve Nocatee (Stand Alone Option)

Item No.	Description	Units	England, Thims & Miller, Inc.			St. Johns County 4/23/01			St. Johns County 4/24/01		
			Actual Quantity	Actual Unit Cost	Actual Total Cost ⁽¹⁾	Plan Quantity	Plan Unit Cost	Plan Total Cost	Plan Quantity	Plan Unit Cost	Plan Total Cost
Immediate Improvements Wastewater Transmission											
1.0	12" PVC FM from Nocatee to Walden Chase PS	LF	17,000	\$45	\$765,000	17000	\$24	\$408,000	17,000	\$40	\$680,000
2.0	New Walden Chase PS	LS	1	\$250,000	\$250,000	1	\$250,000	\$250,000	1	\$250,000	\$250,000
3.0	12" PVC FM from Walden Chase to Marshall Creek (U.S. 1)	LF	35,000	\$50	\$1,750,000	30000	\$24	\$720,000	30,000	\$45	\$1,350,000
4.0	12" PVC FM from Marshall Creek to NW WTP (IGP) (ETM - 16") (SJC 4/24 - 16")	LF	35,000	\$60	\$2,100,000	24000	\$24	\$576,000	24,000	\$55	\$1,320,000
5.0	Upsize 12" to 16" PVC FM from MC to NW WTP	LS	0	\$0	\$0	1	\$288,000	\$288,000	0	\$0	\$0
6.0	New pump station at Marshall Creek	LS	1	\$500,000	\$500,000	1	\$500,000	\$500,000	1	\$150,000	\$150,000
7.0	Jack and Bore U.S. 1 & I-95	LS	1	\$150,000	\$150,000	0	\$0	\$0	1	\$300,000	\$300,000
	Subtotal				\$5,515,000			\$2,742,000			\$4,050,000
	Miscellaneous - 10%				\$0			\$274,200		0%	\$0
	Contingency - 10%				\$551,500			\$274,200		10%	\$405,000
	Engineering - 15%				\$827,250			\$411,300		12%	\$486,000
	Total - Immediate Improvements				\$6,893,750			\$3,701,700			\$4,941,000
Immediate Improvements Water Transmission											
1.0	12" PVC WM from US 1 to Nocatee (ETM - 20")	LF	17,000	\$65	\$1,105,000	17,000	\$24	\$408,000	17,000	\$40	\$680,000
2.0	12" PVC WM Marshall Creek to CR 210 (ETM - 20")	LF	35,000	\$75	\$2,625,000	20,000	\$24	\$480,000	30,000	\$65	\$1,950,000
3.0	0.5 MG ground storage tank and HS PS at MC	LS	1	\$1,400,000	\$1,400,000	1	\$500,000	\$500,000	1	\$1,200,000	\$1,200,000
4.0	16" PVC WM from Marshall Creek to NW WTP	LF	24,000	\$60	\$1,440,000	24,000	\$32	\$768,000	24,000	\$55	\$1,320,000
5.0	Land acquisition - storage tank site	AC	See Below		\$0	Not Included		\$0	4	\$40,000	\$160,000
	Subtotal				\$6,570,000			\$2,156,000			\$5,310,000
	Miscellaneous - 10%				\$0			\$215,600		0%	\$0
	Contingency - 10%				\$657,000			\$215,600		10%	\$531,000
	Engineering - 15%				\$985,500			\$323,400		12%	\$637,200
	Total - Immediate Improvements				\$8,212,500			\$2,910,600			\$6,478,200
Immediate Improvements NW WTP											
1.0	1-1500 gpm well	LS	1	\$200,000	\$200,000	1	\$200,000	\$200,000	1	\$200,000	\$200,000
2.0	High service pump station upgrade	LS	1	\$250,000	\$250,000	1	\$250,000	\$250,000	1	\$250,000	\$250,000
	Subtotal				\$450,000			\$450,000			\$450,000
	Miscellaneous - 10%				\$45,000			\$45,000		0%	\$0
	Contingency - 10%				\$45,000			\$45,000		10%	\$45,000
	Engineering - 15%				\$67,500			\$67,500		12%	\$54,000
	Total - Immediate Improvements				\$607,500			\$607,500			\$549,000
Immediate Improvements Reuse											
1.0	Reclaimed water pump station	EA	5	\$100,000	\$500,000	1	\$65,000	\$65,000	3	\$100,000	\$300,000
2.0	1.0 mgd screening, grit removal, and filtration	LS	1	\$375,000	\$375,000	1	\$375,000	\$375,000	1	\$375,000	\$375,000
3.0	2.0 MG storage tank	LS	1	\$560,000	\$560,000	1	\$560,000	\$560,000	1	\$560,000	\$560,000
4.0	Disinfection facilities	LS	1	\$25,000	\$25,000	1	\$25,000	\$25,000	1	\$25,000	\$25,000
5.0	High service pumps	LS	1	\$125,000	\$125,000	1	\$125,000	\$125,000	1	\$125,000	\$125,000
6.0	8" PVC RWM for raw water (ETM - 10")	LF	20,000	\$20	\$400,000	7,500	\$16	\$120,000	15,000	\$16	\$240,000
7.0	1500 GPM back-up supply well at Nease WTP	EA	1	\$200,000	\$200,000	1	\$200,000	\$200,000	1	\$200,000	\$200,000
8.0	12" PVC Transmission Main	LF	17,000	\$32	\$544,000	10,000	\$24	\$240,000	17,000	\$30	\$510,000
9.0	Land acquisition - treatment facility site	AC	See Below		\$0	Not Included		\$0	10	\$40,000	\$400,000
	Subtotal				\$2,729,000			\$1,710,000			\$2,735,000
	Miscellaneous - 10%				\$0			\$171,000		0%	\$0
	Contingency - 10%				\$272,900			\$171,000		10%	\$273,500
	Engineering - 15%				\$409,350			\$256,500		12%	\$328,200
	Total - Immediate Improvements				\$3,411,250			\$2,308,500			\$3,336,700
					Subtotal			\$9,528,300			\$15,304,900
Items Not Included											
Land Costs											
1.0	Reuse Treatment, Storage and Pump Station Site	AC	7.0	\$108,900	\$762,300			\$0			\$0
2.0	Marshall Creek Water Storage and Pump Site	AC	5.0	\$108,900	\$544,500			\$0			\$0
					Subtotal			\$0			\$0
					Total			\$9,528,300			\$15,304,900

Notes:

- Actual Costs are based on five (5) JEA construction projects on the U.S. 1 corridor in St. Johns County and a St. Johns County/World Golf Village project on International Golf Parkway.
- Cost of right-of-way and easement acquisition are not included in either cost estimate.
- Financing and debt service costs are not included in either cost estimate.

Table 3 Utility System Build-Out improvement Cost (Stand Alone Option)

Item No.	Description	Units	England, Thims & Miller, Inc.			St. Johns County 4/23/01			St. Johns County 4/24/01		
			Actual Quantity	Actual Unit Cost	Actual Total Cost ⁽¹⁾	Plan Quantity	Plan Unit Cost	Plan Total Cost	Plan Quantity	Plan Unit Cost	Plan Total Cost
2007 Improvements Wastewater Transmission											
1.0	24" PVC FM from Marshall Creek to SR 16 WWTP	LF	44,700	\$90	\$4,023,000	44,700	\$48	\$2,145,600	44,700	\$90	\$4,023,000
2.0	Upgrade Marshall Creek pump station	LS	1	\$1,500,000	\$1,500,000	1	\$1,500,000	\$1,500,000	1	\$500,000	\$500,000
3.0	Intermediate pump station	LS	1	\$250,000	\$250,000	1	\$250,000	\$250,000	1	\$250,000	\$250,000
	Subtotal				\$5,773,000			\$3,895,600			\$4,773,000
	Miscellaneous - 10%				\$0			\$389,560		0%	\$0
	Contingency - 10%				\$577,300			\$389,560		10%	\$477,300
	Engineering - 15%				\$865,950			\$584,340		12%	\$572,760
	Total - 2007 Improvements				\$7,216,250			\$5,259,060			\$5,823,060
2006 Improvements Water NW WTP											
1.0	1.0 MG ground storage tank w/ aerator	LS	1	\$450,000	\$450,000	1	\$450,000	\$450,000	1	\$450,000	\$450,000
2.0	1-1500 gpm well	LS	1	\$200,000	\$200,000	1	\$200,000	\$200,000	1	\$150,000	\$150,000
	Subtotal				\$650,000			\$650,000			\$600,000
	Miscellaneous - 10%				\$65,000			\$65,000		0%	\$0
	Contingency - 10%				\$65,000			\$65,000		10%	\$60,000
	Engineering - 15%				\$97,500			\$97,500		15%	\$90,000
	Total - 2006 Improvements				\$877,500			\$877,500			\$750,000
2011 Improvements Water NW WTP											
1.0	2-1500 gpm wells	LS	2	\$200,000	\$400,000	2	\$200,000	\$400,000	2	\$150,000	\$300,000
	Subtotal				\$400,000			\$400,000			\$300,000
	Miscellaneous - 10%				\$40,000			\$40,000		0%	\$0
	Contingency - 10%				\$40,000			\$40,000		10%	\$30,000
	Engineering - 15%				\$60,000			\$60,000		15%	\$45,000
	Total - 2011 Improvements				\$540,000			\$540,000			\$375,000
2014 Improvements Water											
1.0	1.0 MG storage tank w/ aerator NW WTP	LS	1	\$450,000	\$450,000	1	\$450,000	\$450,000	1	\$450,000	\$450,000
2.0	2-1500 gpm wells	LS	2	\$200,000	\$400,000	2	\$200,000	\$400,000	2	\$150,000	\$300,000
	Subtotal				\$850,000			\$850,000			\$750,000
	Miscellaneous - 10%				\$85,000			\$85,000		0%	\$0
	Contingency - 10%				\$85,000			\$85,000		10%	\$75,000
	Engineering - 15%				\$127,500			\$127,500		15%	\$112,500
	Total - 2014 Improvements				\$1,147,500			\$1,147,500			\$937,500
2007 Improvements Reuse											
1.0	24" PVC FM from SR 16 WWTP to Nocatee	LF	80,300	\$90	\$7,227,000	80,300	\$48	\$3,854,400	80,300	\$90	\$7,227,000
	Subtotal				\$7,227,000			\$3,854,400			\$7,227,000
	Miscellaneous - 10%				\$0			\$385,440		0%	\$0
	Contingency - 10%				\$722,700			\$385,440		10%	\$722,700
	Engineering - 15%				\$1,084,050			\$578,160		12%	\$867,240
	Total - 2007 Improvements				\$9,033,750			\$5,203,440			\$8,816,940
2007 Improvements Wastewater Treatment											
1.0	Expand SR 16 WWTP to 4.5 mgd	LS	1	\$6,000,000	\$6,000,000	1	\$6,000,000	\$6,000,000	1	\$5,000,000	\$5,000,000
	Subtotal				\$6,000,000			\$6,000,000			\$5,000,000
	Miscellaneous - 10%				\$600,000			\$600,000		0%	\$0
	Contingency - 10%				\$600,000			\$600,000		10%	\$500,000
	Engineering - 15%				\$900,000			\$900,000		15%	\$750,000
	Total - 2007 Improvements				\$8,100,000			\$8,100,000			\$6,250,000

2013 Improvements Wastewater Treatment											
1.0	Expand SR 16 WWTP to 6.0 mgd	LS	1	\$6,000,000	\$6,000,000	1	\$6,000,000	\$6,000,000	1	\$6,000,000	\$6,000,000
	Subtotal				\$6,000,000			\$6,000,000			\$6,000,000
	Miscellaneous - 10%				\$600,000			\$600,000		0%	\$0
	Contingency - 10%				\$600,000			\$600,000		10%	\$600,000
	Engineering - 15%				\$900,000			\$900,000		15%	\$900,000
	Total - 2013 Improvements				\$8,100,000			\$8,100,000			\$7,500,000
2017 Improvements Wastewater Treatment											
1.0	Expand SR 16 WWTP to 9.0 mgd	LS	1	\$6,000,000	\$6,000,000	1	\$6,000,000	\$6,000,000	1	\$4,000,000	\$4,000,000
	Subtotal				\$6,000,000			\$6,000,000			\$4,000,000
	Miscellaneous - 10%				\$600,000			\$600,000		0%	\$0
	Contingency - 10%				\$600,000			\$600,000		10%	\$400,000
	Engineering - 15%				\$900,000			\$900,000		15%	\$600,000
	Total - 2017 Improvements				\$8,100,000			\$8,100,000			\$5,000,000
	TOTAL				\$43,115,000			\$37,327,500			\$35,452,500
Items Not Included											
Water											
Plant											
1.0	Expand Marshall Creek / Ray Road Storage & P. S.	LS	1	\$2,500,000	\$2,500,000			\$0			\$0
Transmission											
1.0	Nocatee Plant to Town Center (ETM -24")	LF	20,000	\$76	\$1,520,000			\$0			\$0
2.0	Town Center Loop (ETM -16")	LF	40,000	\$40	\$1,600,000			\$0			\$0
3.0	N - S Parkway (ETM -16")	LF	13,000	\$40	\$520,000			\$0			\$0
	Total Water				\$6,140,000			\$0			\$0
Wastewater											
Transmission											
1.0	U.S. 1 to Town Center (ETM -16")	LF	20,000	\$40	\$800,000			\$0			\$0
2.0	Town Center Loop (ETM -12")	LF	40,000	\$32	\$1,280,000			\$0			\$0
3.0	N - S Parkway (ETM -12")	LF	13,000	\$32	\$416,000			\$0			\$0
	Total Wastewater				\$2,496,000			\$0			\$0
Reuse											
Plant											
1.0	Expand Reuse Storage and P. S. to 6.0 MGD	LS	1	\$3,000,000	\$3,000,000			\$0			\$0
Transmission											
1.0	Plant to Town Center (ETM -24")	LF	20,000	\$60	\$1,200,000			\$0			\$0
2.0	Town Center Loop (ETM -12")	LF	40,000	\$32	\$1,280,000			\$0			\$0
3.0	N - S Parkway (ETM -12")	LF	13,000	\$32	\$416,000			\$0			\$0
	Total Reuse				\$5,896,000			\$0			\$0
					Subtotal			\$14,532,000			\$0
					Contingency	10%		\$1,453,200			\$0
					Engineering	15%		\$2,179,800			\$0
					Total Not Included			\$18,165,000			\$0
					Total Phase II - V			\$61,280,000			\$37,327,500
					GRAND TOTAL (Phase I - V)			\$81,711,800			\$46,855,800
											\$50,757,400

Notes:

1. Actual Costs are based on five JEA construction projects on the U.S. 1 corridor in St. Johns County and a St. Johns County/World Golf Village project on International Golf Parkway.
2. Cost of right-of-way and easement acquisition are not included in either cost estimate.
3. Financing and debt service costs are not included in either cost estimate.

UTILITY INSTALLATION COSTS

Location	Pipe	Length (LF)	Overall Cost	Overall Cost/LF	Pipe Size Adjustment	
					12"	16"
US 1 / JEA Contracts	24" Water Main	6,400	\$717,601	\$112.13	\$76.49	\$81.98
US 1 / JEA Contracts	20" Force Main	6,995	\$698,002	\$99.79	\$77.56	\$83.05
US 1 / JEA Contracts	24" Force Main	1,300	\$217,864	\$167.59	\$131.95	\$137.44
US 1 / JEA Contracts	24" Water Main	14,697	\$1,334,052	\$90.77	\$55.13	\$60.62
US 1 / JEA Contracts	20" Force Main	15,219	\$1,321,567	\$86.84	\$64.61	\$70.10
US 1 / JEA Contracts	24" Water Main	15,713	\$2,781,728 *	\$177.03	\$141.39	\$146.88
US 1 / JEA Contracts	20" Force Main	15,739	\$1,854,626	\$117.84	\$95.61	\$101.10
US 1 / JEA Contracts	16" Water Main	30,237	\$1,383,813	\$45.77	\$35.28	\$45.77
US 1 / JEA Contracts	16" Force Main	29,912	\$1,793,900	\$59.97	\$49.48	\$59.97
IGP/Pacetti / STJC Contract	16" Water Main	4,500	\$258,493	\$57.44	\$46.95	\$57.44
IGP/Pacetti / STJC Contract	16" Force Main	4,500	\$211,494	\$47.00	\$36.51	\$47.00
Average					\$70.48	\$77.63
(less high & low)						

* Includes 4600 linear feet of directional bore under Durbin Creek.

Water storage, repump and chlorine - \$1,387,000 @ Ray Road.

RATE COMPARISON FOR NOCATEE

Water Residential	<u>NUC*</u>	<u>SJCU**</u>
6,000 gallons	\$17.48	\$28.74
10,000 gallons	\$23.80	\$47.26
Wastewater Residential		
6,000 gallons	\$32.51	\$27.45
10,000 gallons	\$46.91	\$39.77
Total Water and Wastewater Residential		
6,000 gallons	\$49.99	\$56.19
10,000 gallons	\$70.71	\$87.03
Connection Fees		
Water	\$235	\$1,400
Wastewater	\$1,140	\$1,800
Total	\$1,375	\$3,200

* Nocatee Utility Corporation

** St. Johns County Utility Department