

RESOLUTION NO. 2005-139

A RESOLUTION OF BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY, FLORIDA, ACCEPTING THE CONSENT AGREEMENT BY ST. JOHNS SERVICE COMPANY RELATING TO CERTAIN WASTEWATER COLLECTION SYSTEM PROBLEMS EXPERIENCED BY THE UTILITY CUSTOMERS RESIDING ON MOSS CREEK LANE AND SPECIFYING THE COLLECTION SYSTEM IMPROVEMENTS TO BE CONSTRUCTED BY THE UTILITY AND THE TIMEFRAME WITHIN WHICH THAT CONSTRUCTION WILL BE COMPLETED IN ORDER TO MEET THOSE CONCERNS, AND TO SPECIFY STIPULATED PENALTIES IN THE EVENT OF NONCOMPLIANCE WITH SAID CONSENT AGREEMENT.

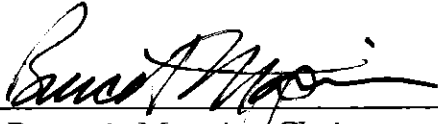
WHEREAS, the Board of County Commissioners of St. Johns County (the "Board") has the power and duty with respect to its regulation of St. Johns Service Company, Inc. (the "Utility") pursuant to Sec. 367.171, Fla. Stat., and Board enacted ordinances to issue an order requiring repairs, improvements, additions, and extension to any facility if reasonably necessary to provide any prescribed quality of service; and

WHEREAS, the Board and the Utility, (collectively referred to as the Parties), wish to identify the Board's concern with certain wastewater collection system problems experienced by Utility customers residing on Moss Creek Lane and specify the collection system improvements to be constructed by the Utility, and the timeframe within which that construction will be completed in order to meet those concerns, and to specify stipulated penalties in the event of noncompliance with this Agreement.

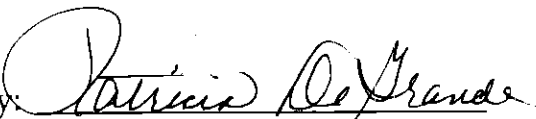
NOW THEREFORE, BE IT RESOLVED by the Board of County Commissioners of St. Johns County, Florida as follows: Section 1. The above recitals are incorporated by reference into the body of this Resolution, and such Recitals are adopted as Findings of Fact. Section 2. The Board of County Commissioners approves and accepts the Consent Agreement, attached and incorporated as "Exhibit", and authorizes the Chairperson of the Board of County Commissioners to execute the Consent Agreement on behalf of the County.

PASSED AND ADOPTED by the Board of County Commissioners of St. Johns County, State of Florida, this 18th day of May, 2005.

BOARD OF COUNTY COMMISSIONERS
OF ST. JOHNS COUNTY, FLORIDA

By: 
Bruce A. Maguire, Chairman

ATTEST: Cheryl Strickland, Clerk

By: 
Deputy Clerk

5-26-05

BEFORE THE BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY

In Re: St. Johns Service Company Moss Creek Lane
Wastewater Collection System improvements

CONSENT AGREEMENT

This Consent Agreement ("Agreement") is entered into between the Board of County Commissioners of St. Johns County (the "Board") and St. Johns Service Company (the "Utility"), (collectively referred to as the Parties), to identify the Board's concern with certain wastewater collection system problems experienced by Utility customers residing on Moss Creek Lane and specify the collection system improvements to be constructed by the Utility, and the timeframe within which that construction will be completed in order to meet those concerns, and to specify stipulated penalties in the event of noncompliance with this Agreement.

The Parties admit the following, except that the Utility neither admits nor denies paragraph 3:

1. The Board has the power and duty with respect to its regulation of the Utility pursuant to Sec. 367.171, Fla. Stat., and Board enacted ordinances to issue an order requiring repairs, improvements, additions, and extension to any facility if reasonably necessary to provide any prescribed quality of service. The Board has jurisdiction over the matters addressed in this Agreement.

2. The Utility is a certificated utility subject to the jurisdiction of the Board and the St. Johns County Water and Sewer Authority ("Authority").

3. The Utility's wastewater collection system has experienced certain failures over the past five years as documented in customer complaints. The collection system

facilities and equipment have not been functioning in an overall safe, efficient, and proper condition, and adequate and safe service has not been maintained at all times, in violation of St Johns County Water and Sewer Utility Authority Rules and Regulations, Sec. 4.2.

4. The Utility submitted to the Board a letter of April 6, 2005, which transmitted a document entitled "Moss Creek Lane Backflow Incident and Findings" and engineer's estimates of probable cost for two alternate designs for repairs to the collection system (hereinafter referred to as the "BHR Report") (copy attached hereto as Exhibit A). At the direction of the Board, the St. Johns County Utility Department ("County Utilities") reviewed the BHR Report. The Utility and County Utilities agreed that Option 2 identified therein is an acceptable plan of action for correction of the Moss Creek Lane wastewater collection system problems.

Having reached resolution of the matter the Board and the Utility mutually agree and it is,

ORDERED:

5. Upon the effective date of this Agreement, the Utility shall take all necessary actions required in order to implement the BHR Report, Option 2, pursuant to the time table for tasks as set forth in Exhibit B hereto. Written progress reports shall be submitted to the Board for review on the first day of each month that any the Utility's obligations hereunder remain outstanding. These reports shall reference the time table tasks set forth in Exhibit B hereto and shall show compliance with the particular tasks identified therein.

6. All reports and penalties required by this Agreement to be submitted to the Board shall be mailed to the County Attorney in the same manner as that for providing notice as set forth in paragraph 7 herein.

7. (a) If any event occurs which causes delay, or the reasonable likelihood of delay, in complying with the requirements or deadlines of this Agreement, the Utility shall have the burden of proving that the delay was or will be caused by circumstances beyond the reasonable control of the Utility and could not have been or cannot be overcome by the Utility's due diligence. Economic circumstances shall not be considered circumstances beyond the control of the Utility, nor shall the failure of a contractor, subcontractor material man or other agent (collectively referred to as "Contractor") to whom responsibility for performance is delegated to meet contractually imposed deadlines be a cause beyond the control of the Utility, unless the cause of the Contractor's late performance was also beyond the Contractor's control. Upon occurrence of an event causing delay, or upon becoming aware of a potential for delay, the Utility shall notify the Board orally within 24 hours or by the next working day and shall, within seven days of oral notification to the Board, notify the Board in writing of the anticipated length and cause of the delay, the measures taken or to be taken to prevent or minimize the delay, and the timetable by which the Utility intends to implement these measures.

(b) Without limiting the applicability of the notification requirements in paragraph 7(a) above, the Utility shall notify the Board regarding the potential for delay concerning the approval by the Florida Department of Environmental Protection (FDEP) of the permit application (identified as item 23 to Exhibit B hereto), if the Utility

anticipates such by the 26th day from submittal of the permit application to DEP. Such notice shall be deemed adequate notice as required by paragraph 7 (a) in the event that FDEP takes longer than the 30 days to process the permit application as identified in the Exhibit B timeframe hereto. Any such notice to the Board shall be in writing, and shall identify the anticipated length and cause of the delay, the measures taken or to be taken to prevent or minimize the delay, and the anticipated timetable by which the Utility, after consultation with the appropriate FDEP personnel, anticipates permit approval. The Utility acknowledges that time is of the essence and shall proceed in good faith and do all in its power such that the permit application may be approved in the shortest possible time.

(c) If the Board agrees that the delay or anticipated delay has been or will be caused by circumstances beyond the reasonable control of the Utility, the time for performance hereunder shall be extended for a period equal to the agreed delay resulting from such circumstances. Such agreement shall adopt all reasonable measures necessary to avoid or minimize delay. Notice shall be sent by regular U.S. Mail to the following:

For the Board:

Dan Bosanko, County Attorney
St. Johns County Office of the County Attorney
P.O. Box 349
St. Augustine, Florida 32085-0349

For the Utility:

Sidney F. Ansbacher, Esq.
Upchurch Bailey & Upchurch
P.O. Box 3007
St. Augustine, Florida 32085-3007

Failure of the Utility to comply with the notice requirements of this paragraph in a timely manner shall constitute a waiver of the Utility's right to request an extension of time for compliance with the requirements or deadlines of this Agreement.

8. If the Utility does not complete the construction and all action required pursuant to the time frame as set forth in paragraph 5 herein, and no extension of time has been granted pursuant to paragraph 7 herein, then, and in that case, the Utility shall pay the Board \$250 per day, until such time as the project is complete, and notice of same is sent to the Board, pursuant to paragraph 7 herein. Payment shall be made by cashier's check or money order. Notwithstanding the foregoing, the Utility shall be liable for penalties in the amount of up to \$500 per violation per day pursuant to Sec. 14.2 of the Rules and Regulations of the St. Johns County, Florida, Utility Authority, in the event the Utility is found by the Board to have refused to comply with or to have willfully violated the terms of this Agreement.

9. The Board, for and in consideration of the complete and timely performance by the Utility of the obligations agreed to in this Agreement, hereby waives its right, or the right of the Authority acting on behalf of St. Johns County, to initiate a limited proceeding (the costs of which would be borne by the Utility), or any other proceeding, concerning the customer complaints regarding utility service to Moss Creek Lane customers.

10. The Utility acknowledges but waives any right it may have to a hearing on the subject matter or terms of this Agreement, including any right to appeal the terms of this Agreement.

11. Nothing herein shall be construed to limit the authority of the Board or Authority to undertake any action against the Utility in response to or to recover the costs of responding to conditions that require Board action to abate an imminent hazard to the public health, welfare or the environment.

12. Entry of this Agreement does not relieve the Utility of the need to comply with all applicable federal, state or local laws, regulations or ordinances.

13. The terms and conditions set forth in this Agreement may be enforced by the Board in a court of competent jurisdiction and pursuant to Sec. 61-224, St. Johns County Utility Ordinance.

14. The Utility is fully aware that a violation of the terms of this Agreement shall subject it to the stipulated penalties as set forth in paragraph 8 herein, and may subject the Utility to administrative action, judicial imposition of damages, further penalties of up to \$500 per day per offense and criminal penalties.

15. The Utility shall allow all authorized representatives of the Board access to the property at reasonable times for the purpose of determining compliance with this Agreement and the rules and ordinances of the Board and Authority.

16. The Board hereby expressly reserves the right to initiate appropriate legal action to prevent or prohibit any violations or applicable ordinances that are not specifically addressed by the terms of this Agreement.

17. No modifications of the terms of this Agreement shall be effective until reduced to writing and executed by both the Board and the Utility.

18. The provisions of this Agreement shall apply to and be binding upon the parties, their officers, their directors, agents, employees, successors, and assigns and all

persons, firms and corporations acting under, through or for them and upon those persons, firms and corporations in active concert or participation with them.

19. This Agreement is a settlement of the Board's administrative and civil causes of action arising from Chapter 367, Florida Statutes, to pursue correction of the alleged ordinance violations addressed in paragraph 3 herein.

FOR THE UTILITY:
St. Johns County Service Company,
a Florida corporation

DATE: _____

By:
Title:

DATE:

FOR ST. JOHNS COUNTY:

Ben W. Adams, Jr.
County Administrator

DONE AND ORDERED this _____ day of _____ 2005, in St. Augustine, Florida.

County Seal:

Deputy Clerk

Date



Exh. A

DUPONT CENTER, SUITE 400 • 1650 PRUDENTIAL DRIVE • JACKSONVILLE, FLORIDA 32207 • 904.721.3991 • FAX: 904.861.2450

Commercial,
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Entertainment

Transportation

Urban &
Community
Development

April 6, 2005

St. Johns County Board of Commissioners
P.O. Box 349
Jacksonville, FL 32085

RE: Moss Creek Lane backflow incident

Dear Commissioners,

Attached is a summary document entitled "Moss Creek Lane Backflow Incident and Findings", prepared by this office. We transmit it to you, along with engineering solutions that we believe solve the previous problem and provide for safe and effective sewer service for the affected parties, as well as presently undeveloped lots served by this system, in the future.

We also transmit to you engineer's estimates of probable cost for two alternate designs for repairs to the system which are called for.

We respectfully submit this information to you in support of your consideration of a possible transaction to purchase the St. Johns Service Company Utility, and for your use otherwise.

Sincerely,

Michael J. Saylor, AICP
Sr. Vice President

Florida
License
Numbers:

EB 0855
LC 0120
LB 6739

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Moss Creek Lane Backflow Incidents and Findings---5 April, 2005

The Moss Creek Lane backflow incident of the 6th of September 2004 is well-documented insofar as what happened from the affected SJSC customers' viewpoint, but there was previously no conclusive analytical data to substantiate why, on that date, the sewer on Moss Creek Lane surcharged into the residence of Marc and Ann Crawford, located at 24237 Marsh Landing Parkway and the residence of Roy and Linda Mercado, located at 24308 Moss Creek Lane. There is even less technical information related to complaints from residents of Moss Creek Lane going back five or more years.

BHR has prepared a hydraulic model of the Moss Creek Lane service area, using a prediction software called SewerCAD. This model replicates the system capacity, sewage flows, power outages and other events of the morning and afternoon of September 6th, 2004, as the "worst case condition" that could be expected to occur. From our analysis of this simulation model, BHR was able to determine why these incidents have occurred and we have identified engineering measures that can be taken to prevent such backflow conditions in the future. Note that in any mechanical or electrical system, or component of such a system, catastrophic conditions may occur which cannot be predicted. Nor can an engineer design such a system to be entirely fail-safe.

There is on record a comment from Mrs. Ann Crawford, which indicates that shortly after the backflow incident of September 6, Mitch Cox, a plant operator employed by SJSC, "admitted" that he probably caused the event in her home when he powered-up the pump stations in her area simultaneously. It was implied that he did so, after having turned the pump stations all off after the power failure.

On March 11, 2005, representatives of BHR spoke with Mr. Cox, at which time he indicated that he had not placed the pumps in an "offline" mode after the power outage and could not physically have powered-up the pumps in a manner as described by Mrs. Crawford, in that he would have to have been at four pump station locations

simultaneously in order to do so. He confirmed what BHR's engineering staff knew intuitively... that the simultaneous surges in the pumping stations and force mains on Moss Creek Lane occurred when the power feed from JEA and Jacksonville Beach Electric was restored at approximately 4:00 pm on the 6th, while the pumps were still in the original "online" mode. Mr. Cox indicated that Mrs. Crawford may have originally misconstrued his statements due to the extreme anxiety of the moment, in that he encountered her within fifteen minutes after she had called SJSC to report the backflow of raw sewage into her home.

Water/wastewater engineers from BHR have also analyzed the as-built surveys of the Moss Creek service area sewer system and the upstream (westerly, towards the Intracoastal Waterway) and downstream (easterly, towards Solano Road) systems that feed and receive sewage from Moss Creek Lane. We have determined the following:

1. BHR, in the early 1980's, designed a gravity main in Moss Creek Lane that tied to a downstream pump station (Deer Trace) and downstream force mains, which functioned properly (so far as we know) until modified in the late 1980's;
2. In the late 1980's, the PHK engineering firm designed a force main system upstream of the Moss Creek Lane gravity system and tied this 8" force main to the manhole located at the head of the gravity system in Moss Creek Lane. This manhole is located in front of the Crawford and Mercado residences, both of which have been the subjects of sewer system malfunctions and repeat customer complaints. The force mains in the upstream system have unusually high-flow pump station designs with large-diameter transmission pipes. Therefore, the gravity line in Moss Creek Lane can become surcharged when those upstream pump stations are pumping at very high volumes, AND when the downstream pump station (Deer Trace) is not pumping (such as in a power outage, but possibly at other times as well);

3. Mercado's and Crawford's homes have been reported to have periodically experienced "sewer gas" odors. No doubt. Their sewer connection laterals are tied directly into a gravity manhole which is also connected to a force main. This practice has historically been permitted by St. Johns County and other regulatory agencies, although it is not the most desirable design. This manhole, in front of the Crawford and Mercado residences, can become surcharged with pressurized liquids and gases created in the upstream system, and could result in "sewer gas" being forced past any gas traps in the residential plumbing system, entering the home through virtually any sanitary drain in the house. It is not the usual practice to tie a service lateral into a manhole receiving flow from a force main for this very reason. In this case, however, the laterals were installed first and the manhole was retrofitted by a subsequent design engineer;
4. The Crawford residence is built in the 100 year flood plain, along with most of Marsh Landing, but with a finished floor elevation (FFE) in the range of approximately 6.5 feet above Mean Sea Level. Our investigation does not delve into those privately-owned plumbing connections constructed between the SJSC system (in the public right of way) and the residences along Moss Creek Lane. However, because of the extremely low finished lot grades and FFE's in this area, we recommend that any permanent engineering solution to the current problem include a determination of both the connection and discharge elevations of the sewer service laterals from those homes, as well as the slopes of those laterals. In any case, backwater valves should be installed on these lines, on the homeowner's side of the property line, as an added safeguard against future backflows. Backwater valves are reliable and available commercially for approximately \$50 apiece. Installation of a residential backwater valve is typically in the cost range of \$200 to \$300, and while a generally good idea, should be considered as a code requirement for homes lying in low areas, such as found in Marsh Landing. It has been noted that the Rhoden residence, where a backwater valve had been installed in 2001, did not experience a backflow on September 6, even though the Rhoden residence lies more than a foot lower than the Crawford home ;

5. To significantly reduce the backflow potential created by a large, pressurized system discharging into the gravity line in Moss Creek Lane, BHR recommends that a bypass of that gravity line be created at the intersection of Moss Creek Lane and Marsh Landing Parkway, and that a section of force main be constructed to affect that bypass from Moss Creek Lane to the existing Deer Trace pump station located at the intersection of Marsh Landing Parkway and Deer Trace Drive. Also, the extension of the 4' force main from Arbor View Pump Station to a manhole located north of Moss Creek Lane will affect a bypass of the manhole they are presently connected to and eliminate conditions which have contributed to the backflow and sewer gas complaints at those residences. Additionally, upsized pumps will be required at the Harbor View pump station, to assure proper flow rates in the proposed new section of force main and to eliminate surcharging conditions, similar to those that existed on Moss Creek Lane, for upstream customers.
6. The above-stated improvements, when designed to industry standards, will insure that adequate sewer capacity will be available, without the previously-experienced backflow problems, for existing residents and the undeveloped parcels and home sites that remain in the Marsh Landing community.

Other Findings

Illegal Sewer Connections

Contrary to an earlier concern raised by BHR, SJSC operations personnel could not confirm and do not believe that there are significant numbers of private swimming pools with overflow drains connected to the sanitary sewer system. Our concern was that illegal tie-ins to the sanitary system could surcharge the system during large rainfall events, thus aggravating conditions that could lead to a sewer backflow problem in the lower-lying residences in the development. This is apparently not the case so far as swimming pools are concerned.

It was noted, however, that there have been documented illegal connections to the SJSC sewer system from privately-installed yard-drains in residents' gardens and lawns, which are typically employed to reduce surface flooding due to the low floodplain elevation within Marsh Landing. Mr. Glen Holeves, Chief of Systems Operations for SJSC, indicated that during a large rainfall event, SJSC sewage treatment plants experience up to a 20% increase in treatment volumes. This fact partially supports the contention that yard drains are aggravating the surcharged sewer line problem. Controlling these illegal installations through code enforcement would improve the risk factor for potential sewer system backflows throughout the system.

Plumbing Defects

BHR has been advised that the current allowable minimum FFE in the 100 year flood plain of Marsh Landing is 7 feet above Mean Sea Level. The Crawford residence and others on Moss Creek Lane, are built below the current minimum construction elevation. A further investigation of the plumbing installations (service lines) of the Crawford residence and other homes where complaints have been recorded is recommended, to determine if modifications are in order to correct homebuilder/plumbing construction defects. Backwater valves are recommended as a safety factor for these low-lying homes.

Standby Generators

BHR has considered recommending the installation of emergency pump station generators, to provide standby power during extended electrical outages such as experienced in 2004 after three hurricane events. However, SJSC feels that having their maintenance personnel pump-down the pump station wet wells during a power outage is a more reliable and aesthetically more desirable method than having standby generators and fuel cells sitting-out in the open weather every few blocks throughout the Country Club.

SCADA and wireless telemetry

BHR has evaluated the retrofitting of certain critical pump stations in the Marsh Landing system with wireless Supervisory Control and Data Acquisition (SCADA) systems, to

replace hard-wired, phone-actuated alarms, so that operations personnel will have a more reliable alert-and-response option when a pump station is failing or gone off-line. Furthermore, the SCADA system allows the utility company to manually override pump station controls to phase them in after power is restored, to prevent surges and backflows. After careful consideration and consultation with a design professional with extensive experience in automated systems control, however, it appears that the better alternative to SCADA in this sized system is to install pressure-sensitive pump switches inside the pumping stations, to automatically sense and react to changes in line pressures and thus regulate flows between pump stations far more reliably than could be expected with the wireless SCADA system.

Recommendations and Cost Estimates

The following Engineers Estimate of Probable Cost provides both summary and detailed data for two alternative designs, titled Option A and Option B. Option A is the least cost solution to the deficiencies identified in our modeling of the sewer system. Option B also corrects the deficiencies, but with a higher degree of reliability and potential lower life cycle costs for equipment maintenance and replacement, due to an inherent greater efficiency in the design and components. Further review and critique of the two options by SJSC operating personnel and management is in order.

BESSERT, HANNAHOE AND RUCKMAN, INC

ENGINEER'S ESTIMATE OF PROBABLE COST

PROJECT NAME:

St. Johns Service Company
 Force Main/Pump Station Improvements for
 Harbour View and Deer Trace Wastewater Collection System

DATE:

5-Apr-05

PROJECT NO.
 MADE BY:

01213
 BG

DESCRIPTION:

Summary of Probable Costs
 Option 1 and Option 2

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	UNIT COST	TOTAL
Option 1 System Modifications					
1			8" FM (Moss Creek to Manifold at Deer Trace/Marsh Landing Pkwy)		\$80,848.35
2			4" FM The Arbor PS to MH #5		\$56,964.60
3			Existing 5" FM to Junction Manhole at Harbour View PS		\$15,979.70
4			Upgrades at Harbour View PS (Includes Generator)		\$101,325.00
5			Upgrades at Deer Trace PS		\$70,875.00
			Option 1 Total		\$325,992.65
Option 2 System Modifications					
1			BRISTOL PS (replace pumps)		\$49,770.00
2			HARBOUR MASTER PS (replace pumps)		\$49,770.00
3			DEER TRACE PS (replace pumps)		\$49,770.00
4			ARBOR PS (replace pumps)		\$67,520.00
5			HARBOUR VIEW PS (replace pumps)		\$65,520.00
6			8" FM (Moss Creek to Manifold at Deer Trace/Marsh Landing Pkwy)		\$80,848.35
			Option 2 Total		\$363,298.35

Exh B.

