

ORIGINAL

DOCKET NO. 981637-WS

DIRECT TESTIMONY OF
TODD D. MACKEY
ON BEHALF OF
UNITED WATER FLORIDA INC.

DOCUMENT NUMBER-DATE

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FD-302 (REV. 11-15-83) REPORTING

1
2 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**3
4 In re: Application by United)
5 Water Florida Inc. For an)
6 Extension of Service Area in) DOCKET NO.: 981637-WS
7 St. Johns County, Florida)
8 _____)9
10 **TESTIMONY**
11 **OF TODD D. MACKEY**
12 **ON BEHALF OF UNITED WATER FLORIDA INC.**13
14 Q: Please state your name and business address.15 A: My name is Todd D. Mackey. My business address is 1400
16 Millcoe Road, Post Office Box 8004, Jacksonville,
17 Florida 32239-8004.18 Q: Did you prepare, or have prepared at your direction and
19 under your supervision, the testimony you are about to
20 give in this matter?

21 A: Yes.

22 Q: By whom are you employed?

23 A: United Water Florida Inc. ("United Water Florida").

24 Q: What is your position with United Water Florida?

25 A: My current position is that of Assistant Manager.

26 Q: What is the nature of your work for United Water
27 Florida?28 A: My primary responsibilities involve the direct
29 supervision of the Operations department and the

1 Transmission and Distribution department. I also
2 provide assistance to the General Manager in the day to
3 day operations and the long term planning for United
4 Water Florida.

5 Q: For the purpose of having you qualified as an expert in
6 the field of water and wastewater engineering, I would
7 like to investigate your formal education and prior
8 employment. Please identify where you received your
9 undergraduate degree and the area of concentration of
10 your studies?

11 A: I received my undergraduate degree in Civil Engineering
12 from the University of Buffalo, State University of New
13 York in 1976.

14 Q: What post graduate degrees have you received and from
15 what institutions were these degrees obtained?

16 A: I received my masters degree in Civil Engineering from
17 Villanova University in 1993.

18 Q: Please describe your previous experience and
19 employment.

20 A: Prior to accepting the position of Assistant Manager,
21 I held the position of Manager of Engineering and
22 Technical Services. I served in that position from
23 January 1997 until January 1999. In that position I
24 was responsible for all engineering related matters at
25 United Water Florida which included; design, permitting

1 construction, inspection, capital expenditure planning
2 and monitoring, and Supervisory Control and Data
3 Acquisition ("SCADA") activities.

4 Q: How long have you practiced in the area of engineering?

5 A: I have been employed by United Waterworks Corporation,
6 formerly General Waterworks Corporation since July 1977
7 and have held several assignments in various locations
8 since that time. Each assignment was an engineering
9 position with increasing levels of responsibility
10 except my current position as Assistant Manager. Of
11 course, because I oversee Operations, I am still
12 involved with United Water Florida's engineering
13 planning and construction.

14 Q: Could you please describe your previous experience and
15 employment in which you pursued your area of
16 specialization?

17 A: My previous employment includes the following:

| | | |
|----|-----------|--------------------------------------|
| 18 | 1997-1999 | Manager of Engineering and Technical |
| 19 | | Services - United Water Florida |
| 20 | 1994-1997 | Manager of Engineering Design and |
| 21 | | Construction - United Water M&S |
| 22 | | (Director 1994) |
| 23 | 1989-1994 | Region Engineer, Atlantic Region - |
| 24 | | General Waterworks M&S |
| 25 | | |

1 | 1988-1989 Senior Staff Engineer, Atlantic Region -
2 | General Waterworks M&S

3 | 1981-1988 Area Engineer, New York Area

4 | 1979-1981 Assistant Engineer - Jacksonville
5 | Suburban Utilities Corporation

6 | 1978-1979 District Engineer - Maine District

7 | 1977-1978 Staff Engineer, Northeast Region -
8 | General Waterworks M&S

9 | Q: Are you currently board or state certified as an
10 | engineer?

11 | A: Currently I am a registered professional engineer in
12 | the State of Florida as well as in the States of
13 | Connecticut, Maine, New York, New Jersey and Rhode
14 | Island.

15 | Q: I show you a document labeled Exhibit TDM-1. Can you
16 | identify it?

17 | A: Yes. It is my resume.

18 | Q: Have you ever been previously qualified to testify in
19 | trial and administrative agency proceedings as an
20 | expert in engineering?

21 | A: Yes, I have been qualified as an expert in engineering
22 | and have in fact testified such as an expert in several
23 | cases before the Public Service Commissions in
24 | Connecticut, New York, and New Jersey.

25 | Q: Are you a member of any professional associations?

1 A: I am a member of the American Waterworks Association
2 and the Water Environment Federation.

3 Q: Are you familiar with United Water Florida's
4 certificated service area?

5 A: Yes. I am familiar with United Water Florida's
6 certificated service area, including its certificated
7 service area in St. Johns County.

8 Q: Are you familiar with the additional service area
9 sought by United Water Florida in this docket
10 ("Requested Area")?

11 A: Yes.

12 Q: Are you familiar with United Water Florida's water and
13 wastewater facilities?

14 A: Yes, including the facilities in St. Johns County.

15 Q: How did you acquire such knowledge?

16 A: As Manager of Engineering and Technical Services, I was
17 responsible to plan for the improvement and/or upgrade
18 of the facilities to ensure continued service and meet
19 current and future demands. I was also involved in the
20 development of United Water Florida's master plan for
21 St. Johns County.

22 Q. Will you briefly describe for us the history of United
23 Water Florida?

24 A. Until recently, United Water Florida was known as
25 Jacksonville Suburban Utilities Corporation, a wholly

1 owned subsidiary of General Waterworks Corporation, now
2 known as United Waterworks Inc.

3 In 1966, General Waterworks Corporation acquired
4 several small water and wastewater utility companies in
5 Duval County. These companies were merged to form
6 Jacksonville Suburban Utilities Corporation. At the
7 same time, General Waterworks Corporation acquired
8 another developer oriented water and wastewater company
9 in Duval County, Southern Utilities Company.

10 While it was necessary to keep the books, records
11 and customer billing separate, the two companies were
12 operated basically as one, from the same office, by the
13 same employees. On December 31, 1980, the two
14 companies were merged with the surviving legal entity
15 being Southern Utilities Company, the name of which was
16 then changed to Jacksonville Suburban Utilities
17 Corporation.

18 Over the years Jacksonville Suburban Utilities
19 Corporation expanded its service area and acquired the
20 water and wastewater facilities of additional water and
21 wastewater utility companies. These acquisitions were:
22 1986 - Lucina Utilities Company in Duval County; 1989 -
23 The Oaks Wastewater Facilities of Gateway Utilities
24 Company and Greenland Development Corporation, both in
25 Duval County; 1990 - Ponce de Leon Utility Company of

1 St. Johns County, Inc., and St. Johns North Utility
2 Corp., both in St. Johns County, and Yulee Utilities,
3 Inc., in Nassau County; 1992 - Atlantic Utilities of
4 Jacksonville, Inc., and San Pablo Utilities
5 Corporation, both in Duval County; 1993 - Ponte Vedra
6 Utilities Company in St. Johns County; and 1997 -
7 Sunray Utilities-Nassau, Inc., in Nassau County and
8 Sunray Utilities-St. Johns, Inc., in St. Johns County.

9 From 1966 through April 1994, financing,
10 accounting, legal, engineering and other general
11 supervision and directional functions were provided to
12 Jacksonville Suburban Utilities Corporation by General
13 Waterworks Management and Service Company.

14 In April 1994, United Water Resources Inc. merged
15 with GWC Corporation and its General Waterworks
16 subsidiaries. Subsequently, the names of General
17 Waterworks Corporation and General Waterworks
18 Management and Service Company were changed to United
19 Waterworks Inc. ("United Waterworks") and United Water
20 Management and Services Inc. ("United Water Management
21 and Services") and the companies continue to provide
22 the same services to Jacksonville Suburban.

23 In May 1995, the Commission approved the change of
24 the Company's name from "Jacksonville Suburban
25 Utilities Corporation" to "United Water Florida Inc."

1 Q. What business is United Water Florida engaged in?

2 A. United Water Florida is a utility company engaged in
3 the business of supplying potable water for
4 residential, commercial, municipal and public and
5 private fire protection purposes to about 28,000
6 customers in Duval, Nassau and St. Johns Counties.
7 United Water Florida also collects and treats
8 wastewater for over 20,000 residential, commercial and
9 municipal customers in Duval, Nassau and St. Johns
10 Counties.

11 Q. Will you please describe the water supply and
12 distribution system of United Water Florida?

13 A. The source of water supply of United Water Florida
14 consists of 40 wells located at or near 29 water
15 treatment facilities. At the treatment facilities, the
16 water is pumped from the ground, aerated, chlorinated
17 and pumped into the distribution system. The
18 distribution system is comprised of approximately 350
19 miles of main ranging in size from one (1) inch to
20 sixteen (16) inches.

21 Q. Will you please describe the wastewater treatment
22 facilities and collection system of United Water
23 Florida?

24 A. United Water Florida has 14 wastewater treatment
25 facilities, 152 wastewater lift stations and 295 miles

1 of collection and effluent main. After treatment, the
2 wastewater sludge is hauled to an approved land
3 disposal site. The treated wastewater effluent flows
4 to surface waters such as the St. Johns River or to
5 percolation ponds located on the wastewater treatment
6 plant sites.

7 Q. Please describe the quality of service provided by
8 United Water Florida.

9 A. Yes. United Water Florida is a well run company which
10 provides prompt, courteous service to its customers and
11 provides a good quality of product at a reasonable
12 costs (i.e., water supply, treatment, and distribution
13 and wastewater collection, treatment, and disposal
14 service). United Water Florida constantly seeks to be
15 more cost efficient and customer responsive. United
16 Water Florida also seeks creative solutions for the
17 betterment of its customers, its shareholders, and the
18 community.

19 United Water Resources Inc. and its affiliates
20 have been engaged in owning and operating water systems
21 for over one hundred (100) years. The utility systems
22 owned and operated by United Water Resources Inc. and
23 its subsidiaries provide water service to over two
24 million individuals in fourteen states. Several of the
25 affiliates, including United Water Florida, also

1 provide wastewater service to many of their customers.
2 United Water Resources affiliate United Waterworks has
3 owned and operated several facilities in various and
4 diverse locations in Florida over the past fifty (50)
5 years. United Water Florida has provided service in
6 Northeast Florida for the past thirty (30) years.

7 United Water Resources, United Waterworks, and
8 United Water Florida have extensive knowledge of
9 regulations and vast experience in working with
10 regulatory agencies. Representatives of United Water
11 Florida also have assisted government agencies in the
12 development of rules, regulations, standards, and
13 policies including the following:

- 14 1. City of Jacksonville Subdivision Standards and
15 Policy Advisory Committee;
- 16 2. City of Jacksonville Public Utilities Department
17 - Technical Committee on Development of Standards
18 and Specifications for Water and Wastewater
19 Systems;
- 20 3. City of Jacksonville Environmental Protection
21 Board
22 - Rule 3.4 Domestic Waste Water Facilities;
- 23 4. Florida Department of Environmental Protection
24 (hereinafter sometimes referred to as "DEP") -
25 Wetland disposal system rules; and

1 5. St. Johns River Water Management District Water
2 conservation rules.

3 United Water Florida and United Water Resources
4 have many talented employees with expertise in fields
5 important to the provision of service including the
6 following:

7 1. Engineers. United Water Florida has on its staff
8 four registered professional engineers.

9 2. Accountants. United Water Florida has on its
10 staff an accountant who can draw on the expertise
11 of the accountants for United Waterworks Inc.

12 3. Customer service. United Water Florida has
13 customer service representatives and field service
14 representatives trained to respond to customer
15 inquiries.

16 4. Operators. United Water Florida has thirty (30)
17 highly trained, state licensed and certified
18 operators who operate its water and wastewater
19 treatment facilities.

20 5. Rate Department. United Water Management and
21 Services has a rate department with specialists in
22 all aspects of ratemaking that is available to
23 United Water Florida.

24 United Waterworks and United Water Florida have
25 substantial experience with acquisitions of facilities.

1 Both companies have a proven track record of bringing
2 such facilities into compliance with regulatory
3 requirements and then continuing to operate the
4 facilities in compliance. United Water Florida has
5 acquired the facilities and service areas of eleven
6 utility companies. Often, United Waterworks and United
7 Water Florida were encouraged by regulatory agencies
8 to acquire such facilities because the facilities were
9 being operated in violation of environmental and other
10 regulatory requirements.

11 United Water Florida takes pride in its utility
12 system and operations. It has preventive and
13 predictive maintenance programs to maintain its utility
14 system in an economical and efficient manner. These
15 two programs have been successful in anticipating and
16 avoiding problems before they develop. A part of the
17 preventative maintenance program is a program for
18 cleaning, closed circuit television inspection and
19 chemical grouting of leaks in wastewater collection
20 mains. Potential problem areas are identified and then
21 classified for immediate repair (chemical grouting),
22 immediate replacement or future replacement. The TV
23 inspection also confirms that the repairs have solved
24 any previously located leaks or other difficulties.

25

1 1995 was the third year of a leak detection survey
2 implemented as part of United Water Florida's water
3 conservation program. The objective was to survey
4 every mile of water distribution main over a three (3)
5 year period. A total of 352 miles of main were
6 surveyed, and 82 leaks with estimated losses of 164,500
7 gallons per day were located and repaired. The total
8 cost for the leak survey over the three (3) year period
9 was \$41,188.

10 United Water Florida also has been a leader in the
11 use of telemetry in the operation of systems.
12 Beginning in the mid-1970s, United Water Florida
13 developed an alarm system to provide warnings of system
14 malfunctions to company personnel through the use of
15 telephone wires. In the mid-1980s, United Water
16 Florida enhanced its telemetry system by installing a
17 Supervisory Control and Data Acquisition system
18 ("SCADA"). SCADA is a radio-based network of remote
19 terminal units ("RTUs") which continuously monitor
20 United Water Florida's water treatment plants,
21 wastewater treatment plants, and wastewater lift
22 stations. The RTUs are in continuous communication
23 with a central computer. The SCADA system allows
24 United Water Florida to effectively monitor its plants
25 and lift stations twenty-four hours a day as opposed to

1 the fewer hours of on-site operator attendance required
2 by the DEP. The SCADA system is an efficient,
3 effective, and economical tool for monitoring and main-
4 taining United Water Florida's utility system. United
5 Water Florida has outgrown the existing SCADA system
6 and is currently in the process of replacing and
7 upgrading it.

8 United Water Florida is able to carefully plan for
9 plant expansions and the development of its collection
10 and distribution systems due to its in-house staff of
11 highly trained engineers.

12 United Water Florida has a trained team of
13 customer service representatives and field service
14 representatives, overseen by a customer service
15 department foreman, who are available to investigate
16 questions concerning billing, metered usage, and other
17 customer inquiries. United Water Florida includes its
18 customer phone number (725-2865) on its service
19 invoices.

20 United Water Florida practices good corporate cit-
21 izenship by participating in community affairs and
22 encouraging its employees to become active in the
23 community. For example, representatives of United
24 Water Florida have visited schools and made
25 presentations to the students on the importance of

1 water conservation. In addition, United Water Florida,
2 the City of Jacksonville Public Utilities Department,
3 and the City of Jacksonville Regulatory and
4 Environmental Services Department co-sponsored a Small
5 Change Theatre presentation of The Story of Water to
6 elementary school children.

7 Q. What has United Water Florida done to reduce costs,
8 increase productivity and improve reliability?

9 A. United Water Florida continues to investigate and
10 utilize new technologies to improve productivity,
11 reduce costs and improve reliability. We are in the
12 process of converting our water distribution and
13 wastewater collection mapping system to a Geographic
14 Information System ("GIS"). This new program will
15 provide instant access to computerized information on
16 any location within our system. In another technology
17 area, United Water Florida has selected a new liquid
18 level controller. This modular, solid state controller
19 has replaced relay logic (necessary for control) and
20 five associated float balls in wastewater lift
21 stations. This same equipment is also being
22 implemented in our water treatment facilities for water
23 level control in the ground storage tanks.

24 United Water Florida's tank and building painting
25 program uses a seven year cycle to paint all water and

1 wastewater tanks and buildings. This program helps to
2 extend the life of the facilities and helps us to be a
3 good neighbor in the area where the facilities are
4 located.

5 United Water Florida's change out program for
6 small meters over twenty years old (as well as those
7 damaged or not operating) along with its annual testing
8 and repair of three inch and larger meters, helps to
9 ensure accurate billing of customers and a minimal
10 number of estimated bills.

11 In 1997, approximately four percent of United
12 Water Florida employee time was spent in training. All
13 water and wastewater treatment plant operators are
14 licensed by the State of Florida, as is United Water
15 Florida's cross connection control technician. All
16 transmission and distribution system maintenance
17 employees have their State of Florida Voluntary
18 License. All employees are given safety training, with
19 special attention placed on OSHA requirements. In
20 1997, our field and office customer service
21 representatives received additional training which will
22 help them in the investigation and resolution of
23 customer inquiries and complaints.

24 Q. Please tell me about if United Water Florida has
25 programs similar to its meter replacement program?

1 | A. United Water Florida has many programs designed to
2 | improve its service to customers including our leak
3 | detection program, our water main replacement program,
4 | our water service pipe replacement program, and our
5 | meter replacement program. In 1995, we completed a
6 | three (3) year program in which our water system was
7 | inspected for leaks by a leak detection company. The
8 | major leaks were corrected as soon as possible. The
9 | correction of the insignificant leaks was scheduled and
10 | completed in an efficient and economical manner.

11 | Our water main replacement program generally
12 | consists of replacing the older mains in our system.
13 | Often these mains are in worse shape and more likely to
14 | fail than our newer mains because (i) they are older
15 | and, accordingly, have encountered more wear; (ii) they
16 | are made out of galvanized steel or other materials
17 | which are not as long lasting as the PVC of our newer
18 | mains; and (iii) they are smaller in diameter and more
19 | sensitive to buildup occurring in the main. The older
20 | mains generally are smaller in size because they were
21 | installed under older design and water demand criteria.
22 | When we replace the older water mains we generally use
23 | larger sized pipe as required by the current standards.
24 | For example, we have replaced a significant amount of
25 | two inch mains which were installed over thirty (30)

1 | years ago with six inch and eight inch mains. In
2 | addition, when we install eight inch replacement mains,
3 | we also install fire hydrants with the large
4 | replacement mains if necessary.

5 | With the service pipe replacement program and
6 | meter replacement program, we assist customers by the
7 | replacement of services and meters when there are leaks
8 | detected in the area of such services and meters or if
9 | they are older galvanized services by replacing the
10 | service pipe on our side of the meter and when
11 | necessary, replacing the meter. Services are also
12 | replaced when the main to which they are attached is
13 | replaced in our water main replacement program.

14 | The programs have several benefits with the
15 | increase of the size of the pipes (through the water
16 | main replacement program) and the elimination of leaks,
17 | we have improved dynamic water pressure, water quality,
18 | and our ability to provide more water over a short
19 | period of time, all of which promote customer
20 | satisfaction. The programs also reduce our unaccounted
21 | for water which, in turn, promotes the conservation of
22 | water. All of these components improve the quality of
23 | customer service.

24 | Q. Does United Water Florida have any similar programs for
25 | its wastewater system?

1 A. Yes. In accordance with our standards and criteria, we
2 also have an ongoing series of programs related to our
3 wastewater collection system maintenance. One example
4 is the gravity sewer main television, inspection,
5 cleaning, and repair program. We have a schedule for
6 the inspection of our gravity sewer mains with closed
7 circuit television and we arrange for the repair of
8 leaks discovered in the mains or, if necessary, the
9 replacement of the mains. We inspect manholes
10 concurrently with the gravity sewer main inspection,
11 and rehabilitate, repair, or replace the manholes as
12 needed. We review the adequacy of force mains for
13 rehabilitation or replacement. We also inspect lift
14 stations on a weekly basis as a part of our operations
15 and rehabilitate or repair the lift stations as needed.
16 We monitor our lift stations through SCADA system. Of
17 course, if we discover a problem with a gravity sewer
18 main, manhole, force main, or lift station, we resolve
19 the problem.

20 These programs help us to provide more dependable
21 and reliable service, reduce the risk to customers'
22 property from sewer main breaks and backups, reduce the
23 risk of damage from potential cave-ins, and prolong the
24 life of the collection system. The programs have also
25 helped United Water Florida to avoid problems with

1 excessive inflow and infiltration. All these
2 components help to improve our quality of service and
3 the customers' level of satisfaction.

4 Q: I show you a document labeled Exhibit RWC-2. Can you
5 identify it?

6 A: Yes. It is the Application by United Water Florida for
7 an Extension of Service Area in St. Johns County filed
8 in this docket ("Application").

9 Q: Are you familiar with the Application?

10 A: Yes.

11 Q: I show you four documents labeled Exhibits A-1, A-2, A-
12 3, and A-4 from the Application. Can you identify them?

13 A: Yes. Exhibit A-1 is a legal description of the
14 Requested Area. Exhibit A-2 is a map showing both the
15 current certificated service area of United Water
16 Florida in northwest St. Johns County and the Requested
17 Area. Exhibits A-3 and A-4 are maps which show plant
18 sites, certain existing mains, and proposed extensions
19 of mains. Exhibit A-3 shows the water system and
20 Exhibit A-4 shows the wastewater system. The set of
21 maps submitted with the original Application and the
22 maps included with Exhibit RWC-2 are the same except
23 that the original maps used color and the maps in
24 Exhibit RWC-2 use cross hatching and other references
25 to identify territory and facilities.

1 Q: I show you a document labeled Exhibit RWC-3. Can you
2 identify it?

3 A: Yes. It is a map that United Water Florida obtained
4 from St. Johns County, Florida. It shows the water and
5 wastewater public and private utility service areas in
6 St. Johns County.

7 Q: Is the Requested Area located near United Water
8 Florida's current certificated area?

9 A: Yes. In fact, the Requested Area is adjacent to United
10 Water Florida's current certificated area. As Exhibit
11 RWC-3 shows, the Requested Area is not located near any
12 other utility's service area.

13 Q: What is the first area in the Requested Area
14 anticipated to need service?

15 A: The Florida First Coast Development Corporation
16 ("FFCDC") property.

17 Q: What facilities need to be installed for United Water
18 Florida to be able to serve the FFCDC project?

19 A: Exhibit A-3 shows the location of United Water
20 Florida's existing and planned water facilities
21 anticipated to be used to initially serve the Requested
22 Area. Exhibit A-4 shows the location of United Water
23 Florida's existing and planned wastewater facilities
24 anticipated to be used to initially serve the Requested
25 Area. United Water Florida currently has water and

1 wastewater service available on the eastern side of the
2 intersection of Interstate 95 and County Road 210. In
3 order to provide service to the FFCDC project at
4 C.R.210 and U.S.1, water and wastewater mains will need
5 to be extended approximately 14,400 feet (2.72 miles).
6 United Water Florida intends to install a 16 inch
7 polyvinyl chloride (PVC) water main and a 10 inch PVC
8 force main for this extension.

9 Q: Has United Water Florida planned how to extend its
10 system to serve the Requested Area?

11 A: Yes. United Water Florida completed a master plan in
12 June of 1997 for its existing near term and potential
13 St. Johns County service area. The Requested Area was
14 considered and included in the master plan as part of
15 United Water Florida's anticipated service area. The
16 engineering firm of CH2M-Hill was hired to complete the
17 master plan. Among other things, the master plan
18 projected customer growth, water and wastewater
19 demands, and possible water and sewer main sizing.

20 Q. I show you a document labeled TDM-2. Can you identify
21 it?

22 A. Yes. It is United Water Florida's master plan.

23 Q: When United Water Florida was in the process of
24 acquiring the facilities of Sunray Utilities-St. Johns,
25

1 Inc., it did consider expansion of its service area in
2 the area of County Road 210 and U.S. Highway No. 1?

3 A: Yes, It was United Water Florida's long range intent to
4 serve the northern section of St Johns County. However,
5 United Water Florida only included in its proposed
6 service area only those areas that it believed that it
7 could serve immediately from its existing facilities.
8 United Water Florida believed that as growth occurred
9 and the need arose, the existing facilities would be
10 expanded and its certificated area would be extended to
11 include other territories such the area in the vicinity
12 of County Road 210 and U.S. Highway No. 1. The master
13 plan for St. Johns County was completed accordingly to
14 include such territory, including the Requested Area.

15 Q: How long will it take for United Water Florida to
16 install such facilities to satisfy the initial need for
17 service for the FFCDG project?

18 A: Once a developer agreement is in place, United Water
19 Florida would immediately begin to design and permit
20 the project. It has been our experience that the
21 initial preparation of permit applications, the site
22 survey, engineering, preparation of plans and
23 specifications would be completed in sixty (60) working
24 days. The final design would then be submitted to the
25 Department of Environmental Protection and other

1 | permitting agencies as required for approval. Bidding
2 | of the project could occur concurrently with the
3 | permitting process. Allowing for a pre-bid meeting,
4 | bid submittal, evaluation of bids and award, this phase
5 | should take approximately sixty (60) working days. The
6 | receipt of permits and the award of the contract could
7 | hopefully occur simultaneously. As to the
8 | construction, United Water Florida estimates that
9 | construction would take no more than ninety (90)
10 | working days. Of course, the developer could, at its
11 | option, do the planning, designing, permitting, and
12 | construction itself if the developer thought it could
13 | do it faster or more economically.

14 | Q: Other than the main extensions, what additional
15 | facilities in the Requested Area would need to be
16 | installed for United Water Florida to serve the needs
17 | of the FFCDC project?

18 | A: Initially the main extensions shown on Exhibits A-3 and
19 | A-4 of the Application are all that will be needed to
20 | adequately serve the initial phase of the FFCDC
21 | project. Other projects may require additional main
22 | extensions, but the majority of the main extensions
23 | needed for the entire Requested Area will be made with
24 | the main extensions to the FFCDC project. Depending
25 | upon the rate of growth in the Requested Area, a

1 booster pump station and/or ground storage tank may be
2 needed to ensure adequate service and fire protection.

3 Q: What treatment plants will United Water Florida use to
4 serve the FFCDC project?

5 A: The St. Johns Forest Water Treatment Plant and the
6 Blacks Ford Regional Wastewater Treatment plant.

7 Q: Will United Water Florida's Water Treatment Plants have
8 sufficient capacity to serve the FFCDC project?

9 A: Yes. The St Johns Forest Water Treatment Plant has the
10 capacity to serve the initial phase of the FFCDC
11 project. The current capacity of the plant is 0.490
12 million gallons per day ("mgd"). United Water Florida
13 is in the process of permitting two new 1000 gallons
14 per minute ("gpm") wells. In addition a new high
15 service pump station is being planned. Both are
16 scheduled for construction in the year 2000. United
17 Water Florida will plan and construct any necessary
18 additional facilities to timely provide service in its
19 territory, including the Requested Area.

20 Q: Will Blacks Ford Regional Wastewater Treatment Plant
21 have sufficient capacity to serve the FFCDC project?

22 A: Yes, the Blacks Ford Regional Wastewater Treatment
23 Plant is currently under construction and will be in
24 service in time to serve the initial phase of the FFCDC
25 project. United Water Florida planned for a regional

1 plant and successfully obtained the plant site
2 concurrently with its acquisition of the facilities and
3 service area of Sunray Utilities-St. Johns, Inc. The
4 plant will have the capacity to serve the initial phase
5 of the FFCDC project. United Water Florida will plan
6 and construct any necessary additional facilities to
7 timely provide service in its territory, including the
8 Requested Area.

9 Q: Earlier you mentioned United Water Florida's Master
10 Plan. Please explain United Water Florida's procedures
11 for preparing and executing its master plan.

12 A: United Water Florida hired CH2M-Hill, a consulting
13 engineer, in October of 1996 to help complete a master
14 plan for its St Johns County service area. The purpose
15 of the master plan was to incorporate the existing St.
16 Johns North service area with potential territory
17 acquisitions and provide a 20 year planning road map.
18 The master plan included a review of anticipated
19 growth, water and wastewater flows, improvement
20 alternatives, and implementation schedule. The intended
21 use of the document is to provide guidance for future
22 improvements. It was not intended to necessarily
23 identify all of the needs of the potential service
24 area, but to be a living document that must be updated
25 as conditions change and new information is identified.

1 The plan will be used for capital expenditure planning
2 on an annual as well as long term basis. During the
3 preparation of the master plan, United Water Florida
4 and CH2M-Hill obtained information for use in the
5 master plan from the Department of Environmental
6 Protection ("DEP") and the St. Johns River Water
7 Management District. Population projection information
8 were provided by the St. Johns County Planning
9 Department, the City of Jacksonville Planning
10 Department, and the Northeast Florida Planning Council.

11 Q: Is United Water Florida performing any work related to
12 Water Treatment Plant and Wastewater Treatment Plant
13 capacity in St. Johns County?

14 A: United Water Florida is working to increase the
15 capacity of both its water and wastewater capacities in
16 St Johns County. United Water Florida is upgrading the
17 St Johns Forest Water Treatment Plant and constructing
18 the Blacks Ford Regional Wastewater Treatment Plant in
19 response to the need for water and wastewater capacity
20 in St. Johns County. The new Wastewater Treatment
21 Plant will allow United Water Florida to eliminate an
22 existing inadequate Wastewater Treatment Plant. As the
23 need for additional service is required, United Water
24 Florida will plan to increase the capacity of existing
25 plants or construct additional plants in order to

1 satisfy those needs. At the St Johns Forest Water
2 Treatment Plant, United Water Florida is completing the
3 construction of a ground storage tank and is in the
4 process of permitting two new wells (1000 gpm). It is
5 anticipated that the wells will be constructed in the
6 first half of the year 2000. Coupled with the
7 construction of a new high service pump building, these
8 additions will increase the capacity of the plant to
9 1.44 mgd.

10 Currently United Water Florida has two sites that
11 provide water to its St Johns service area. As shown
12 in the master plan, two additional sites may be needed
13 in the future to adequately serve all of United Water
14 Florida's anticipated service area, but the need for
15 and timing of such additional facilities will be
16 determined as growth occurs.

17 The Blacks Ford Regional Wastewater Treatment
18 Plant is currently under construction and will be
19 online in 1999. It will have a capacity of 1.0 mgd and
20 it is United Water Florida's intent to serve its entire
21 St. Johns service area from this site for the near
22 future. The effluent of the wastewater treatment plant
23 will be treated to advanced wastewater standards and
24 will be suitable for reuse purposes. If growth
25 requires an additional plant, United Water Florida will

1 | construct a second regional wastewater treatment plant.

2 | Based upon growth projections, United Water
3 | Florida expects that a 0.5 mgd upgrade of the
4 | Wastewater Treatment Plant will be necessary in the
5 | year 2003. In its recent PAA order, the Florida Public
6 | Service Commission ruled that the construction of the
7 | Blacks Ford Regional Plant was prudent.

8 | Q: Are these expansions part of the capital improvements
9 | from United Water Florida's last rate case?

10 | A: Some of such improvements were included in United
11 | Water Florida's last rate case. Such improvements
12 | include the new ground storage tank at the Water
13 | Treatment Plant and the 1.0 mgd Blacks Ford Regional
14 | Wastewater Treatment Plant.

15 | Q: Why is the Blacks Ford Regional Wastewater Plant called
16 | a Regional Plant.

17 | A: As I mentioned earlier, it is United Water Florida's
18 | intent to serve its entire St Johns County service area
19 | from one location, hence the regional status. This
20 | method was chosen in part to minimize the number of
21 | wastewater plants needed to serve an area and not
22 | promote the proliferation of a number of small package
23 | plants.

24 | Q: Is Regional status significant?

25 |

1 A: Yes, for several reasons, including two primary
2 reasons. Based upon economies of scale, it is more
3 economical to operate a single large plant than it is
4 to operate a number of small plants. Secondly and most
5 importantly, is the minimization of the number of
6 effluent discharges. In this instance, the effluent is
7 being treated to advanced wastewater standards. This
8 concept should have the least impact on the environment
9 of a service area as opposed to a number of small
10 plants.

11 Q: What would happen if United Water Florida could not
12 provide service with its existing facilities?

13 A: United Water Florida would expand its capacity. It
14 would plan and have the additional capacity constructed
15 in a timely fashion. It is my experience that United
16 Water Florida expands its facilities in a manner which
17 insures that they will be able to provide all needed
18 service when such service is needed and that the
19 expansions are performed in a prudent manner.

20 Q: Please discuss United Water Florida's quality of
21 service?

22 A: United Water Florida has the technical ability to serve
23 the Requested Area. United Water Florida provides
24 excellent service to all of its customers. The company
25 maintains a staff of technical personnel capable of

1 | dealing with United Water Florida's water and
2 | wastewater system. Including myself, United Water
3 | Florida has four engineers on its staff. All four are
4 | registered professional engineers in the State of
5 | Florida and three have post graduate degrees in
6 | engineering. This staff is further supported by the
7 | engineering staff of United Water Management and
8 | Services Inc. in Harrington Park, New Jersey. United
9 | Water Florida has demonstrated its commitment to
10 | service with the construction of the Blacks Ford
11 | Wastewater Treatment Plant. This plant is being built
12 | to treat effluent to advanced wastewater levels, one of
13 | the few such plants in the area. Water treatment is
14 | another area where United Water Florida is excelling.
15 | United Water Florida is eliminating as much as
16 | practical its use of chlorine at its water and
17 | wastewater facilities. All of its wastewater treatment
18 | plants and water plants that have utilized one ton
19 | chlorine cylinders are being converted to either ultra-
20 | violet disinfection or on-site hypochlorite generation.
21 | This conversion will be complete by mid year 1999 and
22 | will promote the goals of United Water Florida and
23 | OSHA. United Water Florida researched and piloted
24 | various aeration methods and chemical corrosion
25 | inhibitors in the early 1990's in order to find a

1 solution to a copper corrosion problem. The result was
2 the use of Packed Tower Aerators ("PTA") and ground
3 storage detention to remove in excess of 90% of the
4 hydrogen sulfide from the groundwater. This allowed
5 United Water Florida to meet the requirements of the
6 Lead and Copper Rule, improve water taste, and reduce
7 odor, as well as significantly reduce the level of
8 chlorine needed for disinfection. To date, United
9 Water Florida has installed four PTA's and has plans
10 to install three additional PTAs in 1999. The above
11 are examples of how United Water Florida is committed
12 to improve service to all of its customers.

13 Q: Which utility service provider's existing facilities
14 are nearest to the Requested Area?

15 A: United Water Florida's existing facilities are closest
16 to the Requested Area and they are also closest to
17 the FFCDC project. As previously mentioned, United
18 Water Florida's existing facilities currently serve
19 customers to the east of the Interstate 95 and County
20 Road 210 intersection. It is approximately 14,400 feet
21 (2.7 miles) to the FFCDC project. United Water Florida
22 does not believe that there is another utility that has
23 facilities within 5 miles of the FFCDC project.
24 Furthermore, in order for Intercoastal Utilities
25 Company ("Intercoastal") to serve the Requested Area,

1 Intercoastal would need to (i) build new plants west of
2 the Intercoastal Waterway or (ii) obtain approval to
3 construct mains across the Intercoastal Waterway, which
4 would be difficult; to construct such mains, which
5 would be costly; and connect the mains to its utility
6 plants east of the Intercoastal Waterway and possibly
7 expand such plants.

8 Q: What does this say about the respective cost of
9 extensions.

10 A: Assuming that the specifications to install the main
11 extension from any utility would be similar and using
12 the same contractors, the bidding process should yield
13 similar unit costs to install water and wastewater
14 mains. Due to the longer length of the main extensions
15 for the other utility service providers, United Water
16 Florida's cost should be the lowest. Intercoastal's
17 unit cost would likely be higher for the reasons stated
18 above.

19 Q: Is United Water Florida's proposed provision of water
20 and wastewater service to the Requested Area consistent
21 with the St. Johns County Local Comprehensive Plan?

22 A: Yes. United Water Florida's provision of water and
23 wastewater service to the Requested Area will be
24 consistent with the water and wastewater sections of
25 the St. Johns County Local Comprehensive Plan.

1 Furthermore, United Water Florida's provision of water
2 and wastewater service will promote many goals,
3 objectives, and policies of the local comprehensive
4 plan.

5 Q: I show you a document labeled Exhibit TDM-3. Can you
6 identify it?

7 A: Yes. It is an exhibit which I caused to be prepared to
8 demonstrate how United Water Florida's provision of
9 water and wastewater service to the Requested Area will
10 promote many of the goals, objectives, and policies of
11 the local comprehensive plan.

12 Q: Do you have any further comments that you would like to
13 make?

14 A: No. However, I will be glad to answer any questions
15 that anyone would like to ask.

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Todd D. Mackey

Current Address:

305 Pinewood Court
Jacksonville, Florida

(904) 287-5388

Education:

Master Of Civil Engineering
Villanova University 1993

Bachelor of Science, Civil Engineering
State University of New York at Buffalo 1976

Associate of Science, Engineering Science
Orange County Community College 1974

Work Experience:

Assistant Manager
United Water Florida

January 1999 to Present

Directly responsible for all activities related to the Operations, Maintenance, and T&D Departments. Assist the General Manager as needed in the day to day activities of the company.

Manager of Engineering & Technical Services January 1997 to
January 1999
United Water Florida

Responsible for all of the engineering activities including the planning, design, permitting, construction and implementation of the capital expenditure projects. Plan required capital on an annual as well as long term basis. Monitor capital expenditures to ensure expenditures remain within budgetary constraints.

Manager of Engineering January 1995 to January 1997
(Director January 1994 to December 1994)
Design and Construction
United Water M&S

Responsible for all activities involved in the Design and Construction of major engineering projects primarily within the United Waterworks subsidiary companies. Primary duties involved ensuring the completion of major projects in an accurate, cost effective and timely manner. Other duties include management of outside engineering firms that have responsibilities for design and/or construction management, selection of firms based upon a qualification review process, liaison as necessary with health

department, commission, and community officials. The successful incorporation of value engineering and partnering on a formal basis was initiated for the major projects listed below at United Water Delaware and Florida.

Major Projects included;

Upgrade of Stanton Water Treatment Plant
United Water Delaware
Approx. Construction Cost completed \$21.0 million

Delaware Pump Station
United Water New Rochelle
Estimated Construction Cost aprox. \$18.0 million

Monterey Wastewater Treatment Plant
United Water Florida
Approx. Construction Cost \$10.2 million

Brookside Iron Removal Plant
United Water Toms River
Estimated Construction Cost \$1.8 million

SCADA Upgrade
United Water Florida

Ramsen Road Venturi Meter
United Water New Rochelle

Region Engineer
Atlantic Region
General Waterworks M&S

Oct. 1989 to December 1994

Responsible for all the engineering activities with the Atlantic Region which included subsidiary companies in Rhode Island, Connecticut, New York, New Jersey Delaware and Florida. These duties included the supervision of studies, designs, drawings and specifications to ensure accuracy and that target dates were met, provide liaison with regulatory and community officials, supervised and assisted in the preparation of the capital expenditure program and controlled capital expenditures, testified in rate proceedings on engineering matters as necessary.

Senior Staff Engineer
Atlantic Region
General Waterworks M&S

Jan. 1988 to Oct 1989

Area Engineer Nov. 1981 to Jan. 1988
New York Area

Assistant Engineer Nov. 1979 to Nov. 1981
Jacksonville Suburban Utilities

District Engineer May 1978 to Nov. 1979
Maine District

Staff Engineer July 1977 to May 1978
Northeast Region

Registrations and Professional Organizations:

Registered Professional Engineer
Maine, Rhode Island, Connecticut, New York, New Jersey,
and Florida
Member of AWWA and WEF

Special Committees:

Member of Transition Team/Vision 2000 since June 1994 till
September 1996. Currently member of Workforce Effectiveness
Team.

EXHIBIT TDM-3

1. Having central water and central sewer available for development (such as that offered by United Water Florida) is a high priority and is given incentives. See Policy A.1.2.2. "The County shall promote residential development near existing facilities by offering a Variable Residential Density bonus for residential developments that are served by central water and central sewer." See also pages AA1-12, AA1-14.

2. Policy A.1.8.2. "Future utility facilities shall be located to promote the efficient provision of services, minimize the cost of construction and maintenance, and minimize the impact on the natural environment."

United Water Florida's facilities are regional in nature. Such regional facilities promote the efficient provision of services, minimize the cost of construction and maintenance, and minimize the impact on the natural environment. United Water Florida's regional wastewater treatment plant treats its wastewater to reuse standards, which also minimizes the impact on the natural environment.

3. The availability of central water and central sewer is required for development in some zones. See Policy A.1.9.2.; Textual Appendix to Future Land Use Element, paragraph 1(a)(ii)(c). United Water Florida provides central water and center sewer service.

4. Goal F.1. "To make available safe and sanitary potable water facilities, sanitary sewer facilities, drainage facilities, and solid waste facilities for current and future residents of St. Johns County, and protect aquifer recharge areas."

United Water Florida provides safe and sanitary potable water facilities and sanitary sewer facilities for current residents of St. Johns County and will provide such facilities for future residents of St. Johns County, which United Water Florida intends to include future residents in the area requested in United Water Florida's Application for Extension of Service Area in St. Johns County ("Application"), Docket No. 981637-WS ("Requested Area"). United Water Florida has also designed its water system to spread out the impact of its withdrawals from the aquifer and treats its wastewater to reuse levels.

5.a. Objective F.1.1. Sanitary Sewer. "The County shall implement procedures which will coordinate the extension

of sewer facilities, or the increase in capacity of sewer facilities, in order to: meet future needs, to correct existing sewer facility deficiencies, and to promote compact urban growth. All system improvements for replacement, expansion, or increase in capacity of sewer facilities shall comply with the existing or newly adopted level of service standards for the facilities."

- 5.b. Objective F.2.1. "To ensure that the impacts of development are met and addressed, the provision of solid waste, sanitary sewer, potable water and drainage facility capacity shall be based upon the levels of service set forth in Objective J.1.5. in the Capital Improvements Element."

United Water Florida is extending its sewer facilities to meet the future needs of the Requested Area and will continue to increase its plant capacity in a timely manner to provide service for future demand in St. Johns County. United Water Florida's improvements and capacity increases will comply with the level of service ("LOS") standards of the local comprehensive plan (i.e., 100 gallons of water per day per capita for central water and sewer facilities). See Objective J.1.2.

- 6.a. Policy F.1.1.1. "The County shall, through its Future Land Use Map and comprehensive planning activities, direct new high density development to geographic areas within the service areas of existing or planned regional water and sewer facilities."
- 6.b. Policy F.1.1.2. "The County shall continue to replace package treatment plants with regional sewer facilities, and shall retire a minimum of 5 additional package treatment plants by the year 1995."
- 6.c. Policy G.2.3.7. "By December 1991, the County Water and Sewer Authority shall adopt standards and procedures for the construction, operation and maintenance of waste water treatment plants to ensure the future option of incorporating these plants into larger systems."

United Water Florida has regional plants. United Water Florida will use its Blacks Ford Regional Wastewater Plant to serve the Requested Area. United Water Florida is converting one small wastewater treatment plant into a lift station and is diverting the flows from the lift station and much of the flows of another small wastewater plant to the regional plant.

- 7.a. Policy F.1.1.4. "Pursuant to applicable law, residents using septic tank systems shall be required to tie into public sewer systems once that system becomes available in the area."
- 7.b. Policy G.2.1.7. "Pursuant to applicable law, users of septic tank systems shall be required to tie into public or private sewer systems once service becomes available in that area."
- 7.c. Policy G.2.3.4. "Pursuant to applicable law, users of septic tank systems shall be required to tie into public or private sewer systems once service becomes available in that area."
- 7.d. Policy G.2.3.5. "New developments above the Department of Health and Rehabilitative Services (HRS) threshold(s) for septic tank use shall rely upon public or private sewer systems and wastewater treatment plants built to county/state specifications."

United Water Florida will be installing sewer facilities in the Requested Area. Such facilities can be used to serve septic tank users and avoid the need for septic tanks in the Requested Area in the future.

8. Goal F.2. "New public facilities shall be developed in a manner which protects investments in existing facilities and promotes orderly compact urban growth."

United Water Florida's investment in its existing facilities will be protected by serving the Requested Area. St. Johns County will not have to invest in new public facilities to serve the Requested Area.

- 9.a. Goal G.2. "The County shall conserve, utilize, and protect the natural resources of the area, including air, water, wetlands, waterwells, estuaries, water bodies, soils, minerals, vegetative communities, wildlife, wildlife habitat, groundwater recharge areas and other natural and environmental resources, insuring that resources are available for existing and future generations."

- 9.b. Policy G.2.1.3. "By April 1991, through revisions to the County's land development regulations, new developments which meet specified size threshold(s) and locational criteria shall, as part of the approval process, be required to consider the use of effluents for irrigation."

- 9.c. Policy G.2.1.4. "Wastewater treatment plants with a minimum design capacity of 1.0 MGD, planned and funded following adoption of the Plan, shall be designed and constructed with the ability to provide reclaimed water for anticipated land application and irrigation needs."

United Water Florida's Blacks Ford Regional Wastewater Plant was designed and constructed with the ability to provide reclaimed water for land application and irrigation needs. United Water Florida owns Blacks Ford Swamp (301 acres) and can now prevent development of the 301 acres.

10. Objective G.2.1. Groundwater Protection/Conservation. "The County shall adopt policies which will ensure adequate quality and quantity of water supplies to meet existing and projected future demands."

United Water Florida's operation of its water and wastewater system and its planning promotes the achievement of adequate quality and quantity of water supplies to meet existing and projected future demands.

- 11.a. Objective G.2.3. Wastewater. "Protect the water resources of the county from contamination by sewage disposal systems."

- 11.b. Policy G.2.3.6. "Public and private sewage treatment systems should be brought into full compliance with applicable state regulations and permit conditions."

United Water Florida operates its sewage treatment systems in full compliance with applicable state regulations and permit conditions. If United Water Florida discovers any event of noncompliance, it takes action to bring the system into full compliance.

- 12.a. J. Capital Improvements Element. Goal J.1. "The Board of County Commissioners shall ensure the orderly and efficient provision of the following facilities or services: sanitary sewer, potable water, solid waste, drainage, roads, recreation/open space, police services, fire services, Emergency Medical Services ("EMS"), and public buildings."

- 12.b. Policy J.1.1.5. "Outside the areas served by County facilities, the County will support and encourage provision of essential facilities and services through privately owned, publicly regulated regional systems."

United Water Florida's provision of water and sewer service to the Requested Area will be orderly and efficient. Because St. Johns County does not serve the

Requested Area, St. Johns County is required to support and encourage the provision of essential facilities and services like central water and central sewer service through privately owned, publicly regulated regional systems. United Water Florida is privately owned, publicly regulated by the Florida Public Service Commission, and has regional systems. United Water Florida is exactly the type of service provider that the local comprehensive plan intends to serve the Requested Area.