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ORIGINAL

ADMINISTRATIVE LAW
GOVERNMENTAL LAW
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April 22, 1999

VIA HAND DELIVERY

Ms. Blanca Bayo, Director
Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399-0850

RE: Testimony of St. Johns County, Florida
In re: Application by United Water Florida, Inc. for an
Extension of Service Area in St. Johns County, Florida,
Docket No. 981637-WS

Dear Ms. Bayo:

Enclosed please find the originals and 15 copies each of the direct testimony of Herb Van Der Mark, William G. Young, John Bishop and Scott Clem on behalf of St. Johns County, Florida to be filed in the above referenced docket.

Thank you for your attention to this matter.

Very truly yours,



Suzanne Brownless
Attorney for St. Johns County, Florida

AFA _____
APP _____
CAF _____
CMU _____
CTR ct 2758
EAG _____
LEG _____
MAS _____
OPC _____
RRR _____
SEC _____
WAW _____
OTH _____

Mark
DOCUMENT NUMBER-DATE

05238 APR 22 8

FPSC-RECORDS/REPORTING

Young
DOCUMENT NUMBER-DATE

05239 APR 22 8

FPSC-RECORDS/REPORTING

Bishop
DOCUMENT NUMBER-DATE

05240 APR 22 8

FPSC-RECORDS/REPORTING

Clem
DOCUMENT NUMBER-DATE
05241 APR 22 8
FPSC-RECORDS/REPORTING

ORIGINAL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: APPLICATION BY UNITED WATER
FLORIDA, INC. FOR AN EXTENSION OF
SERVICE AREA IN ST. JOHNS COUNTY,
FLORIDA

DOCKET NO. 981637-WS

RECORDS AND
REPORTING

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DIRECT TESTIMONY OF
HERB VAN DER MARK
ON BEHALF OF ST. JOHNS COUNTY, FLORIDA

RECEIVED & FILED
[Signature]
FPSC-BUREAU OF RECORDS

Suzanne Brownless, P.A.
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ATTORNEY FOR ST. JOHNS COUNTY,
FLORIDA

DOCUMENT NUMBER-DATE

 APR 22 99

FPSC-RECORDS/REPORTING

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: APPLICATION BY UNITED WATER
FLORIDA, INC. FOR AN EXTENSION OF
SERVICE AREA IN ST. JOHNS COUNTY,
FLORIDA

DOCKET NO. 981637-WS

DIRECT TESTIMONY OF
HERB VAN DER MARK
ON BEHALF OF ST. JOHNS COUNTY, FLORIDA

Suzanne Brownless, P.A.
1311-B Paul Russell Road
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Tallahassee, Florida 32301
Phone: (850) 877-5200
Fax: (850) 878-0090

ATTORNEY FOR ST. JOHNS COUNTY,
FLORIDA

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2
3 In re: Application by United)
4 Water Florida, Inc. for an)
5 Extension of Service Area in) DOCKET NO.: 981637-WS
6 St. Johns County, Florida)

7 _____)

8
9
10 **TESTIMONY OF HERB VAN DER MARK**

11 **ON BEHALF OF ST. JOHNS COUNTY, FLORIDA**

12
13 Q: Please state your name and business address.

14 A: My name is Herb Van der Mark. My business address is
15 P. O. Box 3006, St. Augustine, Florida 32085-3006.

16 Q: Did you prepare, or have prepared at your direction and
17 under your supervision, the testimony you are about to
18 give in this matter?

19 A: Yes.

20 Q: By whom are you employed?

21 A: St. Johns County, Florida.

22 Q: What is your position with St. Johns County.

23 A: I was hired by St. Johns County in 1988 and I am
24 currently the Engineering/Construction Manager of the
25 Utilities Department of St. Johns County.

26 Q: What are your responsibilities as the
27 Engineering/Construction Manager of the Utilities

1 Department of St. Johns County?

2 A: I oversee all engineering and construction matters
3 related to water and wastewater utilities for the
4 County. My job duties include the following:
5 reviewing designs, specifications, and contract
6 documentation submitted by engineers for private
7 subdivisions and county projects; ensuring compliance
8 by consulting engineers and contractors with federal,
9 state, and local permitting and regulatory
10 requirements; cost control for County engineering
11 consultants, contracts and construction projects, etc.

12 Q: Please describe your previous experience and
13 employment.

14 A: I worked for Bechtel Group for 28 years in project
15 management and construction management, field
16 engineering on power plants, chemical plants, and
17 refineries, and cost estimating/engineering. Some of
18 my assignments with Bechtel Group included
19 construction manager on a coal-fired station project
20 in Australia, general construction superintendent in
21 charge of international proposals and studies, project
22 construction manager of the Shoubrah El-Kheima Project
23 for the Egyptian Electrical Authority, and project
24 superintendent responsible for all field engineering
25 and construction management activities on an oil-gas-

1 fired unit in New Zealand. I served for two years as
2 the resident engineer for Bechtel Group in Indonesia,
3 where I was responsible for all field engineering on
4 the Arun Project and, on a subsequent assignment, for
5 all field engineering for an LNG storage tank area. I
6 was project field engineer for a coal-fired plant for
7 Gulf States Utilities, piping superintendent on two
8 oil-gas projects, and project field engineer for an
9 oil-gas-fired station for Southern California Edison.

10 I have extensive experience in the areas of cost
11 engineering and scheduling/planning, and I have
12 prepared civil and mechanical estimates and budgets
13 for refineries and power plants. I am a registered
14 mechanical engineer in The Netherlands.

15 Q: Please describe your educational background.

16 A: I received a B.S. in Mechanical Engineering from
17 Mathesis Scientiarum, Genetrix College, The
18 Netherlands and a B.M.C. in Economics and Managerial
19 Accounting from Pepperdine University.

20 Q: Do you have an exhibit attached to your testimony
21 labeled HV-1 and can you identify it?

22 A: Yes, I do have an exhibit labeled HV-1. It is my
23 resume.

24 Q: Are you familiar with United Water Florida, Inc.'s
25 Application for Amendment of its Certificate at issue

1 in this proceeding?

2 A: Yes. My Department received a copy of the application
3 and I have reviewed it.

4 Q: Were you involved in advising the St. Johns County
5 Board of County Commissioners regarding this
6 application by United Florida Water, Inc. and its
7 impact on St. Johns County?

8 A: Yes, I was involved in advising the St. Johns County
9 Board of County Commissioners regarding this
10 application by United Florida Water, Inc. and its
11 impact on St. Johns County.

12 Q: Why does St. Johns County object to United Water
13 Florida, Inc.'s application?

14 A: As St. Johns County Resolution 98-226, adopted December
15 15, 1998, states, St. Johns County objects to United
16 Water Florida, Inc.'s application because the County
17 intends to serve the area requested by United Water
18 Florida, Inc. in its application and granting this
19 territory to United Water Florida, Inc. will violate
20 the provisions of the 1994 County Utility Master Plan
21 which describes the US-1 North and CR-210 intersection
22 as a Future County Service Area.

23 Q: What is the purpose of your testimony in this
24 proceeding?

25 A: The purpose of my testimony in this proceeding is to

1 address United Water Florida, Inc.'s lack of technical
2 capability to serve the requested area and the
3 increased costs that will be involved in United Water
4 Florida, Inc. serving the requested area and the
5 resulting higher rates for service. My testimony
6 urges the Florida Public Service Commission to deny
7 this application by United Water Florida, Inc. to
8 amend its certificated territory in St. Johns County.

9 Q: Do you believe it is in the public interest for the
10 Florida Public Service Commission to grant United
11 Water Florida, Inc. the additional territory it has
12 requested in this application?

13 A: No, it would not be in the public interest for the
14 Florida Public Service Commission to grant this
15 application of United Water Florida, Inc. It is in
16 the public interest for St. Johns County to provide
17 water and wastewater services in the area requested by
18 United Water Florida, Inc. in this application because
19 St. Johns County has been pursuing the provision of
20 water and wastewater services to this area for some
21 time and can provide the most low cost, economically-
22 efficient and timely water and wastewater service to
23 the requested area through its water and wastewater
24 utility service agreement with JEA.

25 Q: Were you personally involved in the execution of the

1 agreements between JEA and St. Johns County and
2 between Walden Chase Developers, Ltd., and St. Johns
3 County?

4 A: Yes, I was personally involved with the execution of
5 these agreements.

6 Q: Is the area requested by United Water Florida, Inc. in
7 its application part of St. Johns County's overall
8 planning for its provision of water and wastewater
9 services to its residents?

10 A: Yes. The intersection of US-1 North and CR-210 is
11 described as a Future County Service Area in the 1994
12 County Master Utility Plan and the County has included
13 this area in its overall water and wastewater
14 development plans. Mr. Scott Clem, Planning Chief for
15 St. Johns County will address the County's
16 Comprehensive Plan and the elements associated with
17 water and wastewater services in his testimony.

18 Q: Did you request Camp Dresser & McKee, Inc., consulting
19 engineers, to analyze and revise the St. Johns County
20 1994 Master Utility Plan?

21 A: Yes. I have the evaluation done by Camp Dresser &
22 McKee, Inc. attached as Exhibit HV-2 to my testimony.

23 Q: What are the County's technical plans to provide
24 service to the area requested by United Water Florida,
25 Inc. in its application, and especially the

1 development at the intersection of US-1 North and CR-
2 210?

3 A: The County has entered into an agreement with JEA in
4 which JEA will provide bulk water and wastewater
5 treatment services to the development. The JEA will
6 run the necessary transmission lines from an existing
7 location in Duval County to the point of connection in
8 the vicinity of Allen Nease High School. The County
9 and JEA will immediately commence design of the
10 improvements necessary for the water and wastewater
11 services to the point of connection to enable services
12 to be provided to Allen Nease High School at the US-1
13 North/CR-210 development. The County will be
14 responsible for construction of approximately 3200
15 feet of new twelve inch sewer force main and 3200 feet
16 of new sixteen inch water main from the CR-210 PUD
17 along the Jacksonville Beach Electric Transmission
18 Utility Easement to the proposed master lift station
19 and point of connection with the County water system.
20 From the Jacksonville Beach Electric Transmission
21 Utility Easement the County will install an additional
22 2,453 feet of twelve inch sewer force and sixteen inch
23 water mains to finish the interconnection with the
24 County's system. Walden Chase shall obtain the
25 appropriate encroachment agreement from Jacksonville

1 Beach for use by the County for the Jacksonville Beach
2 Electric Transmission Utility Easement. All
3 engineering, permitting and design for the sewer force
4 main and the water force main construction shall be
5 performed, done, and obtained by Walden Chase subject
6 to prior County review and approval.

7 Q: What effect will St. Johns County's provision of water
8 and wastewater services have on the environment and
9 the water resources generally in the requested area?

10 A: St. Johns County's provision of water and wastewater
11 services to the area at issue in this proceeding will
12 be environmentally benign. St. Johns County is very
13 sensitive to the environmental issues involved in this
14 area and has made great efforts to cooperate with the
15 Department of Environmental Protection and the St.
16 Johns River Water Management District to protect the
17 environment and the water supply in the area.

18 Q: Why will St. Johns County be able to provide water and
19 wastewater services to the requested area in a more
20 economically efficient fashion than United Water
21 Florida and what impact will St. Johns County's
22 provision of water and wastewater services have on the
23 customers in the requested area?

24 A: St. Johns County has previously entered into an
25 agreement with JEA and the St. Johns County School

1 District to provide service to the Allen D. Nease High
2 School. The water and wastewater treatment facilities
3 and distribution and transmission lines located at the
4 high school are in much closer proximity to the
5 development area than those of United Water Florida,
6 Inc. or any other utility at this time.

7 Q: Can you summarize your testimony please?

8 A: Yes. The County is authorized and desires to provide
9 water and wastewater services to the US-1 North and
10 CR-210 intersection and surrounding area. The County
11 has the technical and financial resources to provide
12 environmentally benign and economically efficient
13 water and wastewater services to the proposed Walden
14 Chase development and surrounding area and is,
15 therefore, the provider of choice. United Water
16 Florida, Inc.'s application is inconsistent with St.
17 Johns County's 1994 Master Utility Plan and will
18 violate the pattern of planned development that the
19 County has determined to be appropriate. The Florida
20 Public Service Commission should deny United Water
21 Florida, Inc.'s application for amendment of its
22 territory to include this territory in St. Johns
23 County.

24 Q: Does this conclude your testimony?

25 A: Yes.

HERBERT A. VAN DER MARK

POSITION:

Project Manager

EDUCATION:

Registered mechanical engineer in The Netherlands

B.S., Mechanical Engineering
Mathesis Scientiarum, Genetrix College,
The Netherlands

B.M.C., Economics and Managerial Accounting
Pepperdine University

SUMMARY:

20 years at Bechtel, with experience in project management and construction management, field engineering on power plants and chemical and refinery, and cost estimating/engineering

EXPERIENCE IN:

- Egypt
- Belgium
- The Netherlands
- Indonesia
- New Zealand
- Australia
- England

FUNCTION:

Manages overall project.

EXPERIENCE:

Mr. Van der Mark is currently project manager, in charge of all task orders as requested by General Dynamics Service Company for the Egyptian Tank Plant Program in Cairo.

Prior experience includes construction manager on a coal-fired station project in Australia, general construction superintendent in charge of international proposals and studies, project construction manager of the Shoubrah El-Kheima Project for the Egyptian Electrical Authority, project superintendent responsible for all field engineering and construction management activities on an oil-gas-fired unit in New Zealand.

Mr. Van der Mark served for 2 years as a resident engineer for Bechtel in Indonesia, in which capacity he was responsible for all field engineering on the Arun Project and, on a subsequent assignment, for all field engineering for an LNG storage tank area.

Other field engineering assignments include project field engineer for a coal-fired plant for Gulf States Utilities, piping superintendent on two oil-gas projects, and project field engineer for an oil-gas-fired station for Southern California Edison.

Mr. Van der Mark has also had extensive experience in the areas of cost engineering and cost and scheduling/planning, and has prepared civil, mechanical, and mechanical estimates and budgets for refineries and power plants.

MEMBERSHIPS:

- Royal Dutch Society of Engineers
- American Association of Cost Engineers

Herbert A. Van Der Mark
St. Johns County Utility Department
Date of Employment: October 24, 1988
Construction Manager

Main Duties and Responsibilities:

1. Reviews designs, specifications, and contract documentation submitted by engineers for private subdivisions and county projects.
2. Ensures compliance by consulting engineers and contractors with federal, state, and local permitting and regulatory requirements.
3. Chairs all pre-construction meetings with developers, contractors, and consultants.
4. Answers public questions and concerns regarding compliance of rules and regulations by researching county records and providing technical data.
5. Conducts weekly and monthly construction progress meetings and determines actual progress for invoicing certification.
6. Develops and updates technical utility specifications.
7. Provides cost control for engineering consultants, contracts, and construction projects.
8. Approves all progress invoicing.
9. Prepares and updates capital improvement programs.
10. Ensures engineering and construction document records are updated and current.
11. Prepares all management status reporting.
12. See achievements summary.

NOTEWORTHY ACHIEVEMENTS SUMMARY

OF

HERBERT A. VAN DER MARK

CONSTRUCTION MANAGER OF UTILITIES

Instrumental in identifying and initiating the completion of the following St. Johns County utility related activities:

- 1) Identified three (3) years ago the need for a, Master water and sewer plan for St. Johns County, assisted and coordinated thru completion.
- 2) Initiated and coordinated the Industrial Pretreatment Ordinance, assisted and coordinated thru completion.
- 3) The author of the St. Johns County Utility Design Standards and specifications, currently sold over 50 copies to Engineering firms, Contractors and other Counties. At \$24.30 a copy. Updates standards as required.
- 4) Recognized the need and initiated additional effluent disposal site studies for the SR 207 WWTP are currently in process.
- 5) Recommended and initiated design efforts to divert effluent flows from the SAS WWTP to the Anastasia Plant at a \$2.0 million savings and increased customer base along US1 for sewer services.
- 6) Initiated and assisted with the application process of the State Revolving Low Interest Fund Program thru the FDEP in Tallahassee, for the force main project along US1 and the abandonment of the SAS WWTP.
- 7) At the request of the town of Hastings assistance was provided in the selection process of Engineering Consultants, Farmers Home Administration Program and designs efforts and coordination of water/sewer improvements under the CDBG Program. Substantial time after working hours were spent in attendance and presentation to Council Board Members of the town of Hastings.

(3)

- 8) Three (3) years ago initial goodwill contact was established with Davidson Development and potential interest was expressed in servicing Northwest Utilities-PGA. With the support of County Administration utility design reviews and cost analysis have recently been completed and a final agreement document is in process for water/sewer service the the PGA, which will significantly increase the SJCUD customer base.
- 9) Initiates and develops the 5 year Capital Improvement Program with yearly refinements for recognized priority projects and available funds and performs cost and schedule control functions until completion of projects.
- 10) Recognized and established over six (6) years ago the need for effective monthly reporting activities by each department. Handles the coordination and preparation of monthly management reporting.
- 11) Initiated and developed with the FDOT Lake City a Master Relocation Schedule Agreement between St. Johns County and the Florida Department of Transportation, which reduced the Administrative "Red Tape" between the two entities.

CDM Camp Dresser & McKee Inc.

consulting
engineering
construction
operations

6650 Southpoint Parkway, Suite 330
Jacksonville, Florida 32216
Tel: 904 281-0170 Fax: 904 281-0323

September 1, 1998

Mr. Herbert Van Der Mark, Manager of Construction
St. Johns County Utility Department
2175 Mizell Road
St. Augustine, FL 32085

Re: Water and Wastewater Master Plan Update

Dear Mr. Van Der Mark:

In 1994, the St. Johns County Utility Department authorized Camp Dresser & McKee Inc. (CDM) to prepare a master plan for the water and wastewater systems owned and operated by St. Johns County. The final report was presented in October 1994. This master plan was prepared to evaluate the future of the County's systems, considering the large expanse of undeveloped property, and the number of franchised private utilities in St. Johns County. At the time, this consideration was due largely to the underdeveloped nature of the County's water and sewer infrastructure and the anticipation of a high rate of growth and development in the County. As a result, the report prepared by CDM for the growth and expansion of the County's utility systems provided clear direction to accommodate new growth, while maximizing the use of existing facilities (public or private). The essential issues of centralization and regionalization of water and sewer services to customers were addressed in recommendations for the expansion of the systems. The private utilities were anticipated to continue providing centralized service in their franchised service areas. The service in the unincorporated areas of the County was planned to be provided by the expanded systems operated by the St. Johns County Utility Department. Recommendations regarding the expansion of the systems were structured to account for near term, mid term and long term planning of capital improvements to account for growth and development activities around the County.

In the four years since the publication of the Water and Wastewater Master Plan, growth and development activity in St. Johns County has taken off. Furthermore, there have been some significant actions that have occurred that warrant consideration in an update of the master plan. The most significant action is the acquisition of the Northwest Utilities I by the County. This proposed private utility was to provide service to the Saint Johns development and the World Golf Village. In addition, the City of St. Augustine and St. Johns County have recently agreed to work together to provide utility services in the U.S. 1 corridor north of the City. Finally, a substantial number of new developments have made significant strides toward implementation. As a result, CDM was authorized to provide a review of the 1994 Water and Wastewater Master Plan in July 1998, and to provide an assessment of the new development activity occurring in the following areas:

CDM Camp Dresser & McKee Inc.

Mr. Herbert Van Der Mark
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1. U.S. 1 North in the area of County Road 210
2. State Road 16 in the area of State Road 13A, known as the Six Mile Creek Parcel
3. U.S. 1 South in the area of County Road 206, specifically the FDOT rest area on I-95

This master plan update is organized into a presentation of the proposed developments in the study areas; a determination of the anticipated population, and water and wastewater flow contributions; and an assessment of the feasibility of the County providing utility service consistent with the master plan with the recommended improvements.

DESCRIPTION OF PROPOSED DEVELOPMENTS

U.S. 1 North and County Road 210

In the north county area, the new development in the U.S. 1 and County Road 210 area is anticipated to occur in the Marsh Harbor subdivision on the west bank of the Intracoastal Waterway, and on property known as the McCormick tract located at the intersection of U.S. 1 and County Road 210. The Marsh Harbor development will encompass approximately 76 single family dwelling units and potential commercial/retail development in the form of a fish camp, restaurant, or convenience store. The McCormick tract is the approved site of the County Road 210 PUD. This potential development may include up to 500 single family residential units, and multi-family residential development up to 160 units. In addition, the site has been approved for 170,000 square feet of office space, 100,000 square feet of commercial space and 280,000 square feet of industrial space. This development activity is in addition to the 2,700 unit development known as Marshall Creek. Marshall Creek is proposed for the property on the east side of the intersection of U.S. 1 North and International Golf Parkway.

State Road 16 Area

The Six Mile Creek parcel along State Road 13A is the second phase of the development of Saint Johns. It is located in the central county area immediately to the west of and adjacent to area that is currently served by the County Utility Department. The Six Mile Creek parcel is a 4,000 acre parcel is anticipated to be home to approximately 5,300 residential units, 2 golf courses, and approximately 130,000 square feet of office/commercial development. The development schedule of this property has been accelerated due to the success of the Interchange parcel, home of the World Golf Village. The development of the Six Mile Creek parcel would be in addition to other development activity in the central county area along State Road 16. The other development occurring in this area includes the Belz Outlet Mall at St. Augustine Center, Anderson Park, Hampton, Whetstone Park, Royal St. Augustine Country Club, the Community College expansion, and Royal St. Johns, among other developments.

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U.S. 1 South and County Road 206

In the south county area, the FDOT Rest Stop is being considered for inclusion in this master plan update due to a request by the FDOT for utility service. Improvements are being made to the FDOT rest stop on Interstate 95 south of County Road 206. In lieu of package treatment facilities, the FDOT would prefer water and wastewater service provided by the St. Johns County Utility Department, if such service is feasible and economical.

PROJECTED POPULATION AND FLOW DATA

U.S. 1 North and County Road 210

The CR 210 and Marsh Harbor PUDs are approved for up to a total of 736 residential units. If built out, these two PUDs could be home to a permanent resident population of approximately 1,840 people. In addition, the developments could include the construction of over 550,000 square feet of commercial/office space. The developments are projected to have a potable water demand of approximately 340,000 gallons per day. The corresponding wastewater flow contribution from the developments is equivalent to about 300,000 gallons per day. Both estimates are values for annual average daily flow. In addition, the Marshall Creek development is in the process of review and approval. This development located on U.S. 1 at the intersection with International Golf Parkway, will produce a potable water demand of approximately 1,200,000 gallons per day, and a wastewater flow contribution of 950,000 gallons per day.

State Road 16 Area

In the State Road 16 area, the Six Mile Creek parcel may be the most significant. The area, however is experiencing a substantial amount of other development activity as well. The majority of the planned development activity is occurring in the State Road 16 corridor, where water and sewer facilities already exist. The Six Mile Creek parcel and the additional area surrounding State Road 16 west of the St. Augustine Outlet Center, County Road 13A, and County Road 208 do not currently have water and sewer service available. This area, however, can be served from the Northwest water plant and the State Road 16 wastewater treatment plant. The development at the Six Mile Creek parcel is projected to be home for approximately 13,000 residents. The development, including the planned commercial office space, is expected to produce a potable water demand of 1.87 mgd. The wastewater flow expected to be returned to the treatment facility is estimated to be 1.59 mgd.

U.S. 1 South and County Road 206

The FDOT rest stop on Interstate 95 south of County Road 206 has two small water treatment facilities that are permitted 144,000 gallons per day each. The package wastewater treatment facility is permitted to treat 60,000 gallons per day.

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RECOMMENDED IMPROVEMENTS

U.S. 1 North and County Road 210

The U.S. 1 North and County Road 210 area can be provided water and sewer service from the International Golf Parkway intersection. Water and sewer service will be provided to Marshall Creek through a cooperative agreement between the City of St. Augustine and St. Johns County. Under this agreement, water and wastewater transmission lines would be extended from the City's existing system north along U.S. 1 to the Marshall Creek development. From Marshall Creek, it is recommended that a 12 inch water main be extended to CR 210 to provide water services. If the County wants to provide service to the CR 210 corridor, it is also recommended that an additional 12 inch water main be installed along International Golf Parkway from I-95 to U.S. 1. To serve Marsh Harbor on the east end of CR 210, an 8 inch water main could be installed along CR 210. It is, however, recommended that a 12 inch water main be installed because of the potential for future growth in the corridor and to accommodate potential fire flow demands. To reduce peak pumping capacity, it is also recommended that a ground storage tank and repump station be constructed in the vicinity of the intersection of U.S. 1 and CR 210.

Wastewater can also be returned to the State Road 16 wastewater treatment facility with the installation of a master pump station and force main. It is recommended that the force main size be 12 inch pipe. With the current expansion of the State Road 16 WWTP, there is adequate interim capacity to treat wastewater generated in this area. If wastewater service is extended to this area, it is recommended that this service be provided on a temporary basis by conveying wastewater to the City's treatment facility through the Marshall Creek force main. When the proposed County Road 312 bypass is constructed around the northwest part of St. Augustine, the County can install a wastewater transmission main along CR 312 adequate to convey all of the wastewater flow from the U.S. 1 North corridor to the State Road 16 WWTP.

State Road 16 Area

Potable water service to the western side of the State Road 16 service area should be provided by the Northwest water treatment plant recently constructed at the World Golf Village. Potable water can be provided to the Six Mile Creek parcel through a 16 inch water main extension along International Golf Parkway south to CR 13A. As potable water demands increase, the capacity of the Northwest water treatment plant will also have to be increased.

Providing wastewater service to the Six Mile Creek parcel and other potential development that may occur in the western part of the SR 16 service area will have to be implemented in phases. With respect to the projected wastewater flow at build out of the anticipated developments, the existing pumping stations and force mains have hydraulic limitations.

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Therefore, modifications or improvements will have to be made to handle the projected flows. Furthermore, it will be more economically feasible to implement improvements in a phased approach matching the progress of development and construction activity for the Six Mile Creek parcel. In this manner, the Utility Department can allocate capital improvements project funding on an "as-needed" basis.

Currently, wastewater service is proposed initially to be provided by constructing a 12 inch force main along CR 13A and International Golf Parkway to the master pumping station at the water plant site. Future conveyance capacity must be provided through improvements to the master pump station at the water plant and additional force main hydraulic capacity. In the design memorandum for the International Golf Parkway utilities extension project, CDM previously recommended that the hydraulic capacity be provided by constructing a second pumping station between the water plant site and the SR 16 WWTP. The equivalent hydraulic capacity for a 20 inch force main would be necessary to handle the flow resulting from the build out of the Six Mile Creek parcel.

U.S. 1 South and County Road 206

To allow for the abandonment of the existing package treatment facilities at the FDOT rest stop, water will be conveyed to and wastewater transmitted from the site to the County utility systems on U.S. 1 South near Moses Creek. Currently, the FDOT and the County Utility Department are designing a proposed 12 inch water main and 12 inch force main for installation in U.S. 1 South and CR 206 to I-95. At the interchange, the pipelines will extend south to the rest stop location on I-95. Upon review of the flow and hydraulic conditions for the water main, the 12 inch pipe size is appropriate for the delivery of water sufficient to provide fire protection. Also considering the peak hour flow and hydraulic conditions in the wastewater force main, the 12 inch pipe is appropriate for the conveyance of wastewater to the existing wastewater transmission system.

It is important to note that the extension of water and sewer lines along the U.S. 1 and CR 206 corridors does make County provided water and sewer service available for potential development along those roadways. There is also inherent reserve capacity available because of the nature of the hydraulic design of the pipelines for the rest stop. If the water and wastewater transmission lines are installed to serve the FDOT rest stop, then service could be made available to additional development. Currently, there are two such developments in the planning stages for the CR 206 intersection with U.S. 1. The first is known as the Dupont Center. The second is known as the Dupont Center Commercial Park.

The Dupont Center is located on 22 acres of property on the southwest quadrant of the intersection. The property is zoned CG and allows a maximum of 12,000 square feet of developed space per acre with a maximum of 70 percent impervious. Based on this data, it is estimated that the potable water demand for this development is 47,000 gallons per day. The wastewater flow contribution from this development is estimated to be 26,400 gallons

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per day.

The Dupont Center Commercial Park is proposed for 9 acres of property located on the southeast quadrant of the intersection. The property is also zoned CG allowing a maximum of 12,000 square feet per acre with a maximum of 70 percent impervious. For this proposed development, the estimated potable water demand is 20,000 gallons per day. The estimated wastewater flow for the development is 10,800 gallons per day.

The combined flows for these two potential developments is relatively low considering the maximum hydraulic design condition necessary for the water and wastewater mains. As a result, the proposed developments can be connected to the County's utility systems in the event the line extensions are constructed to the FDOT rest stop.

SUMMARY AND CONCLUSIONS

Based on the evaluations conducted as a part of this master plan update, it has been determined that the proposed new development in the areas near:

1. U.S. 1 North and County Road 210
2. State Road 16 and County Road 13A
3. U.S. 1 South and County Road 206

can be adequately provided water and sewer service through extension of the County's existing systems. Furthermore, the provision of this utility service is consistent with the master planned approach to expansion of the utility systems to provide regional and centralized water and sewer service to residents of the County. The recommendations for expansion of service to these areas are generally based on the extension of existing pipelines to utilize available capacity in existing treatment facilities as much as possible. This approach is generally considered the most economical to expansion of the systems. Consistent with the master plan, however, the County Utility Department may continue to consider the construction of regional treatment facilities located in the north and south County areas as originally outlined in the 1994 report. This long range facilities planning should be dependent on the rate and density of new development in these areas.

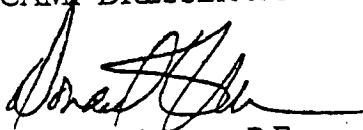
CDM Camp Dresser & McKee Inc.

Mr. Herbert Van Der Mark
September 1, 1998
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It is hoped that this master plan update sufficiently addresses the proposed expansion of the existing utility systems necessary to serve new development in these rapidly growing areas of the County. If you should have questions or comments regarding the findings of this letter report, please call me to discuss.

Sincerely,

CAMP DRESSER & MCKEE INC.



Donald E. Maurer, P.E.
Associate

cc: Bill Young

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: Application by United
Water Florida, Inc. for an
Extension of Service Area in
St. Johns County, Florida.

DOCKET NO. 981637-WS

CERTIFICATE OF SERVICE

I HEREBY certify that a true and correct copy of the foregoing Direct Testimony of Herb Van Der Mark on Behalf of St. Johns County, Florida has been provided by United States Mail or Hand Delivery (*) to the persons listed below on this 22 day of April, 1999:

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