ORIGINAL

DOCKET NO.: 981637-WS - APPLICATION FOR AMENDMENT OF CERTIFICATE NOS. 236-W AND 179-S TO EXTEND SERVICE AREA IN ST. JOHNS COUNTY BY UNITED WATER FLORIDA INC.

WITNESS: **Prefiled Testimony of Kristen Smeltzer,** Appearing On Behalf of Florida Public Service Commission

DATE FILED: May 13, 1999

DIRECT TESTIMONY OF KRISTEN SMELTZER

Q. Please state your name and business address?

A. My name is Kristen Smeltzer, and I am the Permitting Coordinator in the Wastewater Division for the Northeast District in the Florida Department of Environmental Protection (DEP). My business address is Florida Department of Environmental Protection, 7825 Baymeadows Way, Suite 200B, Jacksonville, Florida, 32256.

Q. Please state a brief description of your educational background.

A. Yes. I have a Bachelor of Science degree in Civil Engineering from Iowa State University. I am working on a Masters in Public Administration from the University of North Florida.

Q. How long have you been employed with the DEP and in what capacity?

A. I have been employed with DEP for 10 years. I worked in the Potable Water section conducting facility inspections and reviewing permits as an Engineer I, II and III from September 1988 to December 1992. In January of 1993 I moved to the Domestic Waste Section and worked as an Engineer III and a P.E. I conducted inspections of facilities and reviewed permits. From July 1994 to November 1997 I worked as the compliance and enforcement supervisor for Domestic Waste. From December 1997 to the present, I have been the permitting supervisor and am now the

permitting coordinator for Domestic Waste. (The change from supervisor to coordinator occurred during a District re-organization.)

Q. What are your general responsibilities at the DEP?

A. At this time, I coordinate all permitting activities. I review and assign all types of facility permit applications. I review all correspondence mailed regarding permit applications and all permit documents for accuracy and completeness. I have delegated the duties of coordinating collection system permits and reviewing package plant permits. I oversee the staff who are performing these duties. I provide new staff with training and occasionally inspect a facility.

Q. Have you testified on behalf of the DEP in previous Commission proceedings?

A. Yes. I have supplied written testimony for several facilities. I can not remember all of the specifics or what action was being taken that required my testimony. I believe two of the facilities were Ortega-Blanding Wastewater Treatment Facility (WWTF) and Ortega-Airport WWTF (also known as Ortega Utilities owned by Alan Potter, Jr. in Duval County). Another facility was the Point Townhomes WWTF (also known as Point Property Owners Association in Clay County). I also recall I was involved in a Southern States rate case where the utility was asking to combine all of their service areas.

Q. What is the purpose of your testimony in this docket?

A. The purpose of my testimony is to provide information on the technical ability of United Water Florida, Intercoastal Utility, St. Johns County and the City of Jacksonville through its utility service - Jacksonville Electric Authority (JEA), to provide wastewater service to the area at issue in the United Water Florida amendment application. My testimony will address the specific concerns the DEP has with respect to wastewater in this area, and the ability of each of the four utilities to address and satisfy these concerns.

Q. Would you explain what you mean by concerns relating to wastewater by the DEP?

A. Yes. DEP's primary concern is related to effluent disposal as this is the driving force behind plant design and is limited by geographical location. For St. Johns County, utilizing reuse and residential reuse is a high priority. This has been reinforced by both the Water Management District and the St. Johns County Commissioners as a result of salt water intrusion into interior water resources. The St. Johns Water Management District has designated the County as a "Water Resource Caution" area.

In addition, there are only a few large water bodies available for the disposal of effluent. In northern St. Johns County, there are several wetlands, the St. Johns River and the Intracoastal Waterway. However, portions of the St. Johns River have been identified as impaired. This has put our department in

the position of establishing "Total Maximum Daily Loads" (TMDLs) for the river in response to a lawsuit. To demonstrate the commitment to reduce effluent discharges to the St. Johns River, State money has recently been used to eliminate or reduce existing discharges. Moreover, portions of the Intracoastal Waterway have been designated as Outstanding Florida Water Bodies making it inaccessible for effluent disposal.

Q. What would be the role of DEP with respect to the issues of reuse?

A. This issue is complicated and requires some background information. First, all wastewater treatment facilities must have an operating permit. Usually permits are issued for 5 years, but can be issued for 10 years. At the time of permit renewal, any WWTF that disposes of its effluent to a surface water body and is located within a "Water Resource Caution" area must submit a reuse feasibility report. The purpose of the report is to have the utility determine if they have the ability to reduce or eliminate their discharge. In addition, if the WWTF is suspected of impairing the surface water stream, a utility will be required to evaluate other disposal options. To summarize, the impact a WWTF is having on their disposal site will determine if they can obtain another permit. A factor that weighs into the evaluations is the feasibility of implementing reuse.

All new and expanded discharges must meet a different

standard. They must submit an Anti-degradation Demonstration that shows their discharge will not impair the receiving stream. Part of the demonstration includes documenting that other options are not feasible. To summarize, if reuse is feasible, then a permit cannot be issued to allow a new or expanded discharge to a surface water body.

Reuse is usually technically feasible. However, it can be expensive, especially with regard to retrofitting existing developments to add residential reuse. Therefore part of a reuse feasibility report involves evaluating the cost. Section 403.064, Florida Statutes, states that the evaluation shall be performed by the applicant, and the applicant's evaluation shall be final if it complies with the requirements of the statute. If the utility finds that the cost of implementing reuse is too great, the department must accept their findings. Of course, the utility must support their findings with an accurate and detailed analysis.

To summarize my answer to your question, our department uses the requirement for a reuse feasibility report to encourage and potentially require the implementation of reuse. Typically the reuse feasibility report is an issue for a WWTF that disposes its effluent to surface waters.

Q. Would you discuss the ability of each of the utility systems in this docket to provide reuse?

A. Yes. The answers to this question are based on the

documents that we have received from the utilities. For each utility, expansions are planned at the present location of their treatment plants.

Blacks Ford WWTF (United Water Florida): The department issued a permit dated 01-27-1999 to 01-26-2004 to construct and operate a 1.0 million gallons per day (MGD) annual average daily flow (AADF) Sequential Batch Reactor (SBR) advanced wastewater treatment plant. The plant may discharge 1.0 MGD to Blacks Ford Swamp.

This plant is presently under construction and is expected to be placed into service this summer. Several inspections have been conducted of the construction which appears to be within schedule. Once the plant is put into service, two other plants, St. Johns North and St. Johns Forest will be taken out of service and their flow will be directed to the new plant. Their combined total annual average flow from March 1998 to February 1999 was 0.275 MGD. Since August 1998, we have issued 7 dry-line collection system permits with a total associated flow of 0.180 MGD. It is anticipated that several of these collection systems will be ready to connect at the time the plant is placed into service.

Portions of the plant were designed to allow an expansion to 2.0 MGD. Conceptual plans have been made to eventually expand the plant to 9.0 MGD. For the expansions, the Blacks Ford Swamp has been rated to take 2.0 MGD and potentially additional flow.

The conceptual plans include discharges to Whites Ford Swamp, Molasses Branch Swamp and Twelvemile Swamp.

This facility is not required to submit a Capacity Analyses Report (CAR) until its three month average daily flow exceeds 50% of the current capacity. A specific condition has been included in the permit for this requirement. At this time, it is estimated that the plant will reach capacity by 2002. Plans are in place to double the plant capacity between 2002 and 2004.

A Reuse Feasibility Report (RFR) was submitted March 1999. The permit required a submittal prior to placing the plant into service. The utility concluded that reuse is technically feasible, but is not economically feasible. Several options were considered. Residential reuse for several new developments was evaluated and found to cost $3.39/1000 gallons. Service to two Golf Courses, 1 planned and 1 existing was found to cost $2.62/1000 gallons. Currently, their potable water charges are $1.35/1000 gallons. This evaluation assumes there are no developer contributions to capital cost. The report identified 4 planned golf courses, 15 planned residential developments and 2 planned parks that could potentially use reuse.

As part of United Water Florida's Consumptive Use Permit Application # 1368 1089, the St. Johns Water Management District has also reviewed the Reuse Feasibility Report. On March 26, 1999, the Water Management District sent a request to the utility for a further analysis of the economic feasibility. They noted

the water usage assumptions seem low and have asked the utility for the method used to determine the reuse demand. In addition, they have asked the utility to recalculate the cost considering future connections. There is also a potential that there may be developer contributions.

Sawgrass WWTF (Intracoastal Utility): The department issued a permit dated 07-31-1997 to 07-30-2002 to operate a 0.8 MGD extended aeration plant and construct a 1.5 MGD SBR advanced wastewater treatment plant. The plant may discharge 0.3 MGD to the Sawgrass golf course and 1.2 MGD to the Intracoastal Waterway.

The last CAR was submitted November 1995. The current permit requires annual updates to the CAR every November 1, but we have not received these updates. An update to the CAR was due 11-1-98. The 1995 CAR referred to the 1991 evaluation and indicated it was still valid. The 1991 report shows the plant will reach a capacity of 1.32 MGD by 2002. An evaluation beyond 2002 was not conducted in 1991 or updated in 1995.

From April 1998 to March 1999, the annual average flow to the plant was 0.802 MGD. Presently, the department is only issuing dry-line collection system permits for this facility. Construction of the new plant had not started as of the last site visit conducted on November 24, 1998.

A RFR was submitted March 1997. The utility concluded that reuse was not technically or economically feasible. Only one

option was identified and evaluated, supplying residential reuse to new developments. The water usage was evaluated and it was determined that each residential lot would only use a maximum of 100 gallons per day (gpd). A new 728 lot development was identified, but it would only use 4.8 % of the total plant capacity. In addition, the cost of supplying reuse would be $8.37/1000 gallons. Currently, their potable water charges are $3.19/1000 gallons.

State Road 16, St. Johns County: The department issued a DRAFT permit on April 15, 1999 to operate a 0.5 MGD AADF advanced wastewater treatment plant and construct a 1.5 MGD AADF activated sludge plant. The plant may discharge up to 1.32 MGD to the World Golf Village golf course and landscape. An APRICOT (back-up or wet weather) discharge flow of 0.396 MGD (30% of 1.32 MGD) will be allowed to an on-site hydrologically altered wetland and then to Cowan Swamp.

Portions of the new plant were designed to allow an expansion to 3.0 MGD. Conceptual plans have been made to eventually expand the plant to 6.0 MGD. Information is not included about the effluent discharge for these expansions.

This facility is not required to submit a CAR until its three month average daily flow exceeds 50% of the current capacity. A specific condition will be included in the final permit for this requirement.

From February 1998 to January 1999, the annual average flow

to the plant was 0.178 MGD.

A RFR is not required because they are already providing 100% reuse. In their preliminary design report, they identified 3 planned golf courses which have the potential to take a total reuse flow of 1.0 AADF MGD.

Mandarin WWTF (JEA): This information is provided in the event JEA plans to provide sewer service. The department issued a permit dated 11-12-1996 to 11-12-2001 to operate a 7.5 MGD AADF activated sludge plant. A DRAFT permit revision was issued 05-12-99 to construct a 2.5 MGD AADF high level disinfection facility for reuse. The plant may discharge 7.5 MGD to the St. Johns River. No definite reuse customers have been identified yet.

The last CAR was submitted in April 1994. Using 1990 and 1992 data, they determined the plant will reach a capacity of 7.5 MGD AADF by 2010.

From April 1998 to March 1999, the annual average flow to the plant was 5.0 MGD.

A RFR was submitted December 1998. Potential reuse customers were identified as 6 golf courses and the University of North Florida. It is estimated that these customers would use 1.5 MGD of reuse. In the future, the utility believes they will be able to identify customers who can use 1.0 MGD of reuse. In addition, the reuse treatment may need to be expanded to treat 5.0 MGD of flow.

Specific Condition VI.2 requires the utility to have a capacity of 2.0 MGD of reuse water by 2000. The utility recently received a $11 million State grant to implement reuse.

Julington Creek (Recently purchased by JEA): The department issued a permit on 04-22-1998 to 04-21-2003 to operate a 0.5 MGD AADF SBR and construct a 0.5 MGD AADF SBR. The plant may discharge 0.627 MGD to a golf course. An additional 0.623 MGD of reuse will be added for landscape irrigation within commercial zones and right-of-ways. An APRICOT discharge up to 0.396 MGD and limited wet weather discharge to the St. Johns River is allowed.

An initial CAR is due October 1, 1999 in accordance with specific condition V.3. From March 1998 to February 1999, the annual average daily flow was 0.389 MGD.

A RFR is not required because they are already providing 100% reuse.

Overall Conclusion: Two utilities, St. Johns County and Julington Creek (JEA), are currently using reuse as their primary effluent disposal. The private utilities indicate there is a problem with the financial feasibility of serving reuse. Comparing the two private plants that found reuse too expensive, Blacks Ford WWTF costs were less prohibitive than Sawgrass WWTF. None of the facilities are supplying residential lots with reuse.

Q. Could you also discuss whether there are any other concerns DEP has with respect to the parties' facilities and their ability

to provide wastewater service to the area in question?

A. Of the plants indicated above, only Julington Creek faces a potential enforcement action. Now that JEA has purchased the utility, the enforcement action may be suspended as it was related to operations.

Of the plants indicated above, the Sawgrass plant construction schedule is unknown. The current plant does not have any excess capacity.

None of the facilities are serving residential areas with reuse. If the treatment plant (Mandarin, Sawgrass and SR-16) is not situated near the new development, residential reuse will be expensive because of the extensive distribution systems that will be required.

Q. Do you have any other comments on the ability of the parties to provide wastewater service to the area in question?

A. No, not at this time.

Q. Does this conclude your testimony?

A. Yes.