ORIGINAL

State of Florida

Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: March 23, 2005

TO: Blanca S. Bayó, Commission Clerk and Administrative Services Director

FROM: Richard P. Redemann, Professional Engineer III, Division of Economic Regulation

RE: Docket No. 050192-WS; Application for Certificates to Provide Water and Wastewater Service in Sumter County by Central Sumter Utility Company, L.L.C.

Please add to the docket file the attached letter dated May 7, 2005, from Ms. Vivian Bielski, P.G., at the Southwest Florida Water Management District. The attachment is the complete letter listed as Attachment A of the utility's application.

Attachment

cc: Division of Economic Regulation (Johnson)
Office of General Counsel (Helton)

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CMP _____
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ECR _____
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RCA _____
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SEC 1
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Southwest Florida Water Management District

2379 Broad Street, Brooksville, Florida 34604-6899
(352) 796-7211 or 1-800-423-1476 (FL only)
SUNCOM 628-4150 TDD only 1-800-231-6103 (FL only)
On the Internet at: WaterMatters.org

An Equal Opportunity Employer

Tampa Service Office
7601 Highway 301 North
Tampa, Florida 33637-6759
(813) 985-7481 or
1-800-836-0797 (FL only)
SUNCOM 578-2070

Bartow Service Office
170 Century Boulevard
Bartow, Florida 33830-7700
(863) 534-1448 or
1-800-492-7862 (FL only)
SUNCOM 572-6200

Sarasota Service Office
6750 Fruitville Road
Sarasota, Florida 34240-9711
(941) 377-3722 or
1-800-320-3503 (FL only)
SUNCOM 531-6900

Lecanto Service Office
3600 West Sovereign Path
Suite 226
Lecanto, Florida 34461-8070
(352) 527-8131
SUNCOM 667-3271

May 7, 2004

John Arnett
~~North Sumter Utility Company~~ CSU
1100 Main Street
The Villages, FL 32159

Subject: **Request for Additional Information**
Water Use Permit Application No.: 20012609.000
Project Name: **Central Sumter Utility** Company
County: **Sumter**

Reference: Chapters 40D-1 and 40D-2, Florida Administrative Code

Dear Mr.

The water use permit application you submitted is being reviewed. The additional information listed below is necessary before we can complete our review.

REQUIRED PROCESSING FEE
The fee for processing of a new application with requested quantities greater than 500,000 gallons per day (gpd), is $1,000.00. No fee was submitted with the application. In accordance with Rule 40D-2.201, F.A.C., the applicant is required to submit a processing fee.

1. **Please submit the processing fee of $1,000.00.**

PROPERTY OWNERSHIP
Item 1 of Part II. Of the Individual Water Use Permit (WUP) Application form requires a legal description of the owned property. According to the information received with the application, there are two parcels within the service area that are owned by the utility, the site with the proposed wells and the wastewater treatment plant site. The only legal description provided was for the well and potable water treatment plant site. No description was provided for the wastewater treatment plant site. In accordance with Subsection 40D-2.201(2); F.A.C., the applicant must submit information required on the appropriate WUP application and supplemental forms.

2. **Please provide documentation of ownership of the property upon which the wastewater treatment plant site is proposed.**

WELLS

Item 6 of Section D of the WUP application form requires a table of wells with specific information shown A table of proposed wells was provided that did not include all of the proposed construction information. The proposed casing and total depths and the proposed construction date need to be provided. In accordance with Subsection 40D-2.201(2), F.A.C., the applicant must submit information required on the appropriate WUP application and supplemental forms.

A table of existing wells was provided for wells located within the distance criteria indicated on the application form. According to the aerial map provided, these wells are not on property owned by the applicant and it is understood by the District that they are not included as owned wells and will not be included in the permit.

3. **Please provide the proposed casing depth, total depth, and construction date for the three 12-inch wells located on the owned property.**

PUBLIC SERVICE COMMISSION CERTIFICATION

Item 1 of Section V. of the Public Supply Supplemental Information form requires the applicant to provide the Certificate No. from the Public Service Commission (PSC). No Certificate No. was provided. In accordance with Subsection 40D-2.201(2), F.A.C., the applicant must submit information required on the appropriate WUP application and supplemental forms

4. **Please provide the PSC Certificate No. for the service area to be included in this application. Please be sure the area shown on the aerial map as the service area coincides with the certificated area. If the certificated area is different from the service shown on the aerial map submitted with the application, please provide an aerial map with the certified service area.**

DEMAND PROJECTIONS

This is an application for a new permit with requested quantities of greater than 500,000 gallons per day (gpd). In accordance with Subsection 40D-2.321(2)(a), F.A.C., the duration of a WUP shall not exceed six years when the permit is for a new use greater than or equal to 500,000 gpd. The requested peak month to average ratio is 2.5. Historic information at the Villages indicates that the peak month to average ratios are 1.4 to 1.5. The historic information will be considered when evaluating the requested quantities and the factor of 2.5 must be justified.

In Table 1 A of the document submitted with the application, the only residential quantities and commercial quantities shown are for indoor use. No source for the irrigation of residential and commercial landscape was indicated. The current modification application for the Villages Water Conservation Authority does not include this area as a service area and does not include the irrigation information for this area. It is unreasonable to assume that there will be no irrigation requirements for the residences, commercial units, and common landscape areas, due to the current pattern of development at the Villages. If no other source for this irrigation is available or proposed, the irrigation requirements must be included as a component of this application. No application for a new WUP for this area that includes the irrigation use has been received at the District.

In order to provide reasonable assurances that the application meets the conditions for permit issuance pertaining to water demand and conservation, the project design per capita use rates must be addressed. According to Section 3.6 of the Basis of Review (B.O.R.), incorporated into Chapter 40D-2, F.A.C., by Rule 40D-2.091, F.A.C., per capita water use is the population–related withdrawals associated with residential, business, institutional, industrial, miscellaneous metered, and unaccounted uses. The irrigation quantities for the lawns, commercial entities, and common area landscape, need to be considered in the calculation of the project design per capita use rate for the population served by this utility. If the source for the irrigation is to be considered in another WUP application, this application and the other application would have to be considered simultaneously.

In accordance with the section of the B.O.R. indicated above, where the per capita water use rate exceeds 150 gpd, the applicant must address reduction of the high rate in the conservation plan. Current per capita use rates at the other Villages developments are greater than 200 gallons per capita per day (gpcd). An explanation for the increase in the per capita use rate with time as shown in Table A in the document submitted with the application must be explained. The conservation plan for this service area should address reduction of the rate and the requested quantities should address that reduction. The per capita water use associated with indoor uses and utility uses for this permit is proposed to be 109 in the Year 2010. With reasonable application rates for irrigation, based upon historic use at the other Villages developments, the project design most likely will exceed 200 gpcd. In order to assess the projected water demand of the project area, and the effectiveness of conservation measures, it is useful to asses the water use history of the other areas of the villages having water demands that are comparable to the proposed project area.

Table B of the document submitted with the application indicates a potable water use for regional recreation centers and clubhouse recreation centers. An explanation of the specific potable water uses at each type of recreation center must be provided and the quantities of 1,200 gpd per center to 2,500 gpd per center, consecutively, must be explained.

In accordance with part 2.2 of the B.O.R., for projects which require both a WUP and a surface water management permit, the WUP application will not be deemed complete until the Environmental Resource Permit (ERP) application required by District rules is considered complete.

Based upon the considerations for the irrigation requirements and other items addressed above, the originally requested quantities may need to be adjusted and the impact analyses would need to address the adjusted quantities whether they are included in this application or in another WUP application. According to Subsections 40D-2.301(1)(a),(j),(K),(l), F.A.C., the applicant must provide information to demonstrate that the proposed water use is reasonable, will incorporate water conservation measures, will incorporate reuse measures to the greatest extent practicable. And will not cause water to go to waste.

5. **Please provide information on the proposed source for the irrigation requirements of the utility's service area. The required irrigation quantities must be included in a cumulative impact analysis provided in support of this application.**

6. **Please provide an explanation for the increase in per capita use rate over time as indicated in Table A of the document submitted with the application.**

7. **Please provide the project design per capita use rate for this application including the irrigation requirements as indicated above. Please provide actual yearly per capita water use rates for the other areas of the Villages having comparable water demands. Address the factors to which fluctuation in yearly per capita water use are attributable. Compare the actual per capita water use rate to the use rates that were projected for the service area. Address the elements of the Water Conservation Plan, and the evaluate the effectiveness of the Plan to reduce the per capita water use. Identify and explain Conservation Plan adjustment that could be implemented to increase the effectiveness of the Plan toward reduction of per capita water use over time.**

8. **Please provide an explanation of the specific potable water uses at each type of recreation center. Please provide justification for the quantities per recreation center used in the calculations sheets. Provide any calculations necessary to justify the quantities.**

9. **Please provide adjusted requested quantities based upon the information indicated above and considering the historic peak month to average ratio observed in the Villages developed areas.**

10. Please verify that the application for the ERP for this area has been considered complete.

WATER CONSERVATION

Reuse is proposed in the conservation plan. Projected figures for the amount of wastewater sent to the VWCA must be provided. Projected figures regarding the reuse of the wastewater flows generated by this service area must be provided in terms of percentage of effective reuse supplied to areas of this service area and the percentages effective reuse supplied to any other Villages development areas. According to Subsection 40D-2.301(1)(k), F.A.C., the applicant must provide information to demonstrate that the water use will incorporate reuse measures to the greatest extent practicable.

It is stated in the conservation plan submitted with the application, that the utility is proposing an inverted rate structure for this service area for Florida Public Service Commission approval. A time schedule for submitting the proposed rate structure is required for this application. In accordance with Subsection 40D-2.301(1)(j), F.A.C., the applicant must demonstrate that the application will incorporate conservation measures.

As indicated above, in accordance with the section of the B.O.R. indicated above, where the per capita water use rate exceeds 150 gpd, the applicant must address reduction of the high rate in the conservation plan.

11. Please provide information on the predicted wastewater flows from this service area. Please provide the projected percentage of effective reuse quantities supplied to this service area and the projected percentage supplied to other Villages development areas during stages of this development.

12. Please provide a schedule for proposal to the Public Service Commission for adoption of an inverted rate structure. Be provide details of the proposed inverted rate structure, such as the number of tiers, the rates at each tier, and the rates for each customer class.

13. Please provide conservation plan documentation that addresses reduction of the project design per capita use rate for this service area.

IMPACT ANALYSIS AND ENVIRONMENTAL EVALUATION:

Aquifer Testing

In review of all of the testing information provided, District staff does not have the necessary aquifer flow characteristic information to analyze the predicted impacts. For instance, no leakance values have been presented for the source aquifer and adjacent aquifers. Leakance values are essential for determination of the predicted impacts. Some of the aquifer parameters presented in past reports are of questionable value.

The reports of the tests performed to date do not include all of the data collected during those tests. A compact disk was provided with some data, but the testing site for each data set was not indicated so District staff have no way of knowing what test data has been submitted. All raw data associated with each test must be provided and clearly labeled including recorded pumping/discharge rates, water levels rainfall, barometric pressure, etc. In accordance with Subsection 40D-2.101(1), F.A.C., the applicant must provide information sufficient to demonstrate that the water use meets the criteria and conditions established in Rule 40D-2.301, F.A.C.

Testing has been proposed for the area of this application. District staff needs more information regarding the proposed testing. The results of the testing must be provided to the District to support the aquifer parameters used in the modeling submitted in support of the application. Enclosed are District comments regarding the proposed testing program dated October 30, 2003, that can also be used to design a test program acceptable to the District.

The information required above is necessary to provide the District with assurances that the water use meets the conditions for issuance in accordance with Rule 40D-2.301, F.A.C.

Impact Analysis - Modeling

The results of groundwater flow modeling were submitted in support of the application. The conceptualization of the model and all of the aquifer parameters were not discussed in the document submitted with the application. The input and output files were not provided. No information on the withdrawal points included in the cumulative analysis was provided. In order to provide the District with reasonable assurance that the application meets the conditions for issuance in accordance with Subsection 40D-2.301(1), F.A.C., the applicant must provide detailed information on the groundwater flow modeling.

Contour maps were provided for the results of the scenarios of impact analysis model runs. The contour map for the scenario using the Annual Average quantities for all Villages wells for six years with one inch of recharge, indicates that drawdown in the surficial aquifer can be as much as 1.4 feet at some sites. However, the contours were shown on a quadrangle map and do not clearly identify how those contours relate to area wetlands and surface water features, except for large scale features such as lakes. It was stated that impacts are not anticipated, but this must be demonstrated. Aerial maps of a smaller scale must be provided to demonstrate that the application meets the conditions for issuance in accordance with Subsection 40D-2.301(1)(b),(c), F.A.C.

The drawdowns in the upper and lower Floridan aquifers, predicted by the model submitted in support of this application, are great enough that they may cause impacts to other upper and lower Floridan aquifer withdrawals located within the cones of influence. The withdrawals in the upper Floridan aquifer may affect the drawdown on the lower Floridan aquifer and the withdrawals in the lower Floridan aquifer must be considered in this application. There was no mention of other lower Floridan aquifer withdrawals within the potentially impacted drawdown area of that aquifer. An investigation must be made regarding legal existing withdrawals within the 1.0 foot drawdown contour of the upper and lower Floridan aquifers. A table of the construction specifications and the withdrawal rates and an aerial map with the locations must be provided in support of this application.

Impact Analysis – Combined Annual Report

The Combined Monitoring Report for 2003 was received at the District on March 1, 2004. District staff has several suggestions for improvement of the value of the report. The report focuses mainly on the data analyses for the Year 2003 and should compare the 2003 data with the period of record data.

The current permit requires monitoring in order to determine if any relationship exists between pumping and water levels in area aquifer systems and water bodies. Water level analyses are more easily understood from graphs when the graphs for the monitor points of a station type (groundwater, wetlands, lakes), use a common vertical scale. Graphs showing period of record water levels for multiple monitoring points as they relate to period of record pumping in a nearby pumping well or wells and period of record rainfall in order to assess the potential localized effects of pumping on the hydrologic feastures of the area such as lakes, wetlands, and wells in each aquifer system. All graphs should be clearly labeled with sufficient information to determine what data are included in the analysis. For example, the pumping graph does not indicate whether it is monthly pumping or a 12-month moving average pumping, although the data looks like monthly data. At least the12-month moving average pumping rate should be considered in the analysis.

Cumulative average water levels for multiple variables (the combining and averaging of all monitoring points for each station type -groundwater, wetlands, lakes, springs) were used in the double mass curve analyses. Cumulative average water level analysis will tend to obscure any localized impacts. All analyses must be performed for the period of record for the variables. If double mass curves are to be employed for analysis, individual data points are recommended.

Figure 2 of the 2003 report is labeled "Floridan Aquifer Contour Map – October 2003". It is not known if this map shows upper or lower Floridan aquifer levels or both. Potentiometric surface maps of each groundwater system of interest would be useful.

Addressing the foregoing suggestions would increase the utility of the report, and perhaps would make it more effective as supporting information for this application.

An adjusted groundwater flow impact analysis is warranted if the requested quantities are changed and/or the upper and lower Floridan aquifer flow characteristics calculated from the results of the proposed aquifer testing are different from those used in the model submitted with this application. According to Rule 40D-2.301, F.A.C., the applicant is required to provide information that demonstrates that the application meets the criteria for issuance on an individual withdrawal and cumulative withdrawal basis.

14. **Please provide the results of aquifer performance testing in the area of this application. The results of aquifer performance tests in the upper Floridan aquifer and the lower Floridan aquifer are necessary to provide reasonable assurances that the application meets the conditions for issuance. Aerial maps must be provided showing the location of the test well, all monitor wells, all surface water bodies, and the final disposition of the pumping discharges with the distance between each of this points shown. The results must include all raw data including all water level measurements, pumping rate measurements, barometric pressure measurements, rainfall measurements, and water quality sampling.**

15. **Please provide an explanation regarding the conceptualization of all of the originally submitted groundwater flow modeling or any changed groundwater flow modeling submitted in support of the application. The explanation must include information on the flow characteristics (hydraulic conductivity/transmissivity, storage, leakance, recharge, boundary conditions, etc.), of the three aquifer systems included in the model and any differences in those flow characteristics used in the model to account for localized changes in the aquifer systems such in the area of wetlands or lakes. Please include an aerial map(s) map with the location of all withdrawal points included in the model and include a table of those points with the construction specifications and withdrawal rate information included for each of those points. Please include copies of the input and output files by way of a compact disk or electronic transfer. Please include aerial maps and other graphics as necessary showing the predicted drawdown in surficial water features and each aquifer system in the area of the cumulative impact analysis.**

16. **Please provide aerial maps with the predicted surficial aquifer drawdown contours. The maps should be of a sufficient scale to show the specific wetlands surface water bodies located within the area of the predicted drawdown.**

17. **Please provide a report on an investigation into upper and lower Floridan aquifer withdrawals that may exist in the area of the 1.0 foot drawdown contour of each of those aquifers predicted by previously performed or any changed groundwater flow modeling. Please provide the location of those wells on an aerial map(s), provide the construction specification, the withdrawal rates, and indicate whether or not those withdrawals were considered in a cumulative drawdown analysis.**

18. **Please identify the disposition of the treated effluent water that will result from the project area, and identify the different disposal locations on a map of the area.**

Environmental Management Plan

An Environmental Management Plan (EMP) was submitted with the application. The EMP did not include all of the monitoring points shown on the aerial map labeled in the area of this application. A table of all monitoring points included in the Combined EMP with specific information for each point must be provided and the monitoring points not covered on other Villages permits must be identified as monitoring points to be included in this application. Depending upon the responses provided above, other changes to the current EMP may be necessary. According to Rule 40D-2.301, F.A.C., the applicant is required to provide information that demonstrates the application meets the criteria for issuance.

The aerial map did not include specific locations of some of the majority of the monitoring points. The scale of the aerial map submitted did not allow District staff to identify specific monitoring point locations. An aerial map must be provided at a scale sufficient to identify the specific locations of all existing and proposed pumping wells, staff gages, piezometer wells, monitor wells, wetland transects, photostations, soil subsidence markers, water quality sampling points, and rain gages. In accordance with Rule 40D-2.301, F.A.C., the applicant must provide reasonable assurance that the application meets the conditions for issuance. A comprehensive EMP will provide the District with assurance that the potential impacts will be monitored.

In order for District staff to consider the proposed wetland monitoring stations in the area of this permit, a field visit to the stations is necessary. Arrangements for the field visit must be made with District staff.

District staff cannot assess the potential drawdown impacts or potential environmental impacts until the responses to this request for information have been provided. Subsections 40D-2.301(1)(a) through (m), F.A.C., require the applicant to demonstrate that the water use is reasonable, beneficial, and in the public interest, and will not interfere with any existing legal water use by providing reasonable assurances, on an individual and cumulative basis, that certain issuance criteria are met. These criteria are outlined in this section of the rule in items a. through m. and explanations for these criteria are included in the Water Use Permit Information Manual.

19. **Please provide a table of all of the monitoring points shown on the aerial map, and that considers potential impacts due to the requested or alternatively requested quantities. The table of monitoring points must include, but not be limited to the following for each monitoring point:**
    - A. **The Owner ID No.;**
    - B. **The latitude and longitude;**
    - C. **The type of monitoring point (water level monitor well, water quality monitor well, piezometer, staff gage, wetland transect, wetland photostation, wetland soil subsidence markers, rain gages, etc.);**
    - D. **The proposed construction specifications for any proposed monitoring wells (casing depth, total depth, casing diameter);**
    - E. **The frequency of monitoring;**
    - F. **The water body monitored (wetland with ID No., named lake, unnamed lake, etc.).**
    - G. **The associated WUP No. or WUP application No.**

20. **Please make arrangements with District staff to visit each wetland monitoring site proposed for the service area in the proposed EMP. Please either Alex Aycrigg or Vivian Bielski to make the arrangements.**

21. **Please demonstrate that the water use meets the criteria for issuance set forth Subsections 40D-2.301(1)(a) through (m), F.A.C. Documentation should include information which demonstrates that surface water bodies and wetlands will not be significantly impacted as well as demonstrating that the potentiometric surface of the Floridan Aquifer and adjacent Floridan Aquifer wells will not be significantly impacted. Please provide documentation and appropriate maps to demonstrate that the application meets the criteria for issuance. Any adjusted modeling should demonstrate that the proposed withdrawals are not predicted to significantly affect the surficial aquifer, surface water bodies/wetlands, and the Floridan Aquifer on an individual withdrawal and cumulative withdrawal basis. Please include the input and output of all adjusted modeling scenarios presented in support of the application.**

Please ensure that your response is received in this office within 30 days from the date of this letter. The response must reference the permit application number and include three copies of all requested information. Failure to provide the requested information within 30 days will delay the application's processing and will result in the application being processed for denial.

If the additional information cannot be provided within the stated time period, you may make a written request for a time extension, provided that an acceptable justification for the time extension accompanies the request. The time extension request should be received within 30 days from the date of this letter.

Please contact me at the Brooksville Service Office, extension 4328, if you have questions concerning the information requested or the District's procedures. For assistance with environmental concerns, please contact Alexander D. Aycrigg, extension 4390.

Sincerely,

Vivian J. Bielski, P.G.
Brooksville Regulation Department

Alexander D. Aycrigg
Brooksville Regulation Department

VJB:ADA:dkh
Enclosure
cc: File of Record 20012609.000
Nicolas Andreyev, P.E., Andreyev Engineering, Inc.
Cashier, Finance Department
John W. Parker, P.G.
Leonard F. Bartos, P.W.S.
Paul Williams, Staff Hydrologist
James Modica, Modica and Associates, Inc.