ORIGINAL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Application for Rate Increase in Pinellas County by Mid-County Services, Inc.)	Docket No. 971065-SU Filed: February 8, 1999

TESTIMONY AND EXHIBITS

OF

FRANK SEIDMAN

TESTIMONY OF FRANK SEIDMAN

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

REGARDING THE APPLICATION FOR RATE INCREASE

IN PINELLAS COUNTY

BY MID-COUNTY SERVICES, INC.

DOCKET NO. 971065-SU

Q. Please state your name, profession and address.

A. My name is Frank Seidman. I am President of Management and Regulatory Consultants, Inc., consultants in the utility regulatory field. My mailing address is P.O. Box 13427, Tallahassee, FL 32317-3427.

Q. What is the nature of your engagement with the Applicant, Mid-County Services, Inc. (Mid-County)?

A. I was engaged by Mid-County to address three issues: (1) the appropriate methodology for determining that portion of Mid-County's wastewater treatment plant assets that is used and useful in the public service, (2) the appropriate methodology for determining the margin reserve component of used and useful for Mid-County's wastewater treatment plant, and (3) whether CIAC should be imputed against margin reserve.

Q. State briefly your educational background and experience.

A. I hold the degree of Bachelor of Science in Electrical Engineering from the University of Miami. I have also completed several graduate level courses in economics at Florida State University, including public utility economics. I am a Professional Engineer, registered to practice in the state of Florida. I have over 30 years experience in utility regulation, management and consulting. This experience includes nine years as a staff member of the Florida Public Service Commission, two years as a planning engineer for a Florida telephone company, four years as Manager of Rates and Research for a water and sewer holding company with operations in six states, and three years as Director of Technical Affairs for a national association of industrial users of electricity. I have either supervised or prepared rate cases, rates studies, certificate applications and original cost studies or testified as an expert witness with regard to water and wastewater utilities in Florida, California, Indiana, Michigan, Missouri, North Carolina and Ohio. I have participated in, and appeared as a

witness at, many of this Commission's rulemaking proceedings with regard to water, wastewater and electric rules, as well as proceedings before the Department of Administrative Hearings.

GENERAL CONCLUSIONS

Q. What is your conclusion regarding the appropriate methodology for determining that portion of Mid-County's wastewater treatment plant assets that is used and useful in the public service?

A. The appropriate methodology is the peak demand methodology. The peak demand methodology, which is the ratio of average daily flow during the maximum month (plus capacity for margin reserve) to the firm reliable capacity of the treatment plant is the appropriate measure of that portion of Mid-County's wastewater treatment plant assets that is used and useful in the public service.

Q. What is your conclusion regarding the appropriate methodology for determining the margin reserve component of used and useful for Mid-County's wastewater treatment plant.

A. The appropriate methodology is to express the margin reserve component of used and useful

wastewater treatment plant as the capacity necessary to serve the equivalent of five years annual growth.

Q. What is your conclusion as to whether any CIAC should be imputed against margin reserve?

A. No amount of CIAC should be imputed against margin reserve.

USED AND USEFUL METHODOLOGY

Q. You have concluded that what you refer to as the peak demand methodology is the appropriate methodology for determining that portion of Mid-County's wastewater treatment plant assets that is used and useful in the public service. How did you come to that conclusion?

A. I came to that conclusion as a result of applying my knowledge, developed over a period of more than 30 years, of the concept of used and useful as utilized in the regulation of public utilities.

Q. Could you explain what you mean by the "concept" of used and useful?

A. Yes. Used and Useful is not a mathematical or scientific term. It is a concept, an abstract idea, that, to my knowledge is found only in laws relating to the regulation of public utilities. And, to my knowledge, there is no definition of used and useful in any of the statutes that utilize the term. That is not to say that the concept is without definition, but any definition has been developed by regulators in order to put the idea into words.

Q. Has this Commission ever defined "used and useful"?

A. Yes, at least with regard to the regulation of water and wastewater utilities. In 1977, in Order No. 7684 regarding a petition for a rate increase by the Deltona Utilities Division of Deltona Corporation, the Commission presented a definition that still holds true, more than 20 years later. The definition in Order No. 7684 provides such clear guidance that it bears restating in the record of this proceeding. In Order No. 7684, issued March 14, 1977, the Commission stated:

The concept of "used and useful in the public service" basically an engineering concept, is one of the most valuable tools in utility regulation and rate making. It is basically a measuring rod or test used to determine the portion or amount of the utility's assets which are to be included in its rate base and upon which the utility has an opportunity to earn a return.

Basically a two-step determination, the first step is to establish the physical existence and cost of the assets which the utility alleges are in its operations. This is done by any of several methods, either individually or in combination. These include previous rate case determinations, original cost accounting records coupled with field verifications and engineering cost evaluations.

Once the existence and cost of a utility's assets has been established,

the second step in defining used and useful is to determine which identified assets are really used or useful in performing the utility's service obligation. The asset must be reasonably necessary to furnish adequate service to the utility's customers during the course of the prudent operation of the utility's business.

Generally, any asset which is required to perform a function which is a necessary step in furnishing the service to the public is considered used and useful.

In addition, good engineering design will give a growing utility a sufficient capacity over and above actual demand to act as a cushion for maximum daily flow requirements and normal growth over a reasonable period of time.

Q. That definition provides several criteria for evaluating whether assets are used and useful, but it does not offer any methodology or formulas. Where does the methodology or formula approach come from?

A. The methodology or formula approach evolved over a period of several years as an attempt by both utilities and the Commission to find a simplified, mathematical expression of the criteria defined in Order No. 7684. In 1982, in response to the expressed desire of the Commissioners for a "formula" that would help resolve many ambiguities the Commissioners faced, the Commission Staff prepared a Memorandum that presented simplified formulas as an illustration of "the function of key considerations in determining the percentage of a plant system to be used and useful." For wastewater treatment plants, the formula presented by Commission Staff was:

$$\frac{\text{Average Daily Flow in Test Year + Margin Reserve}}{\text{Capacity of Plant}}$$

In the Staff Memorandum, "Average Daily Flow" was defined as "an average of the daily flows during

the peak usage month during the test year. Care should be exercised to be sure the flow data is not influenced by abnormal infiltration due to rainfall periods."

Q. How does the methodology or formula you have used for Mid-County compare to that developed by Commission Staff in 1982?

A. It is the same except for a refinement of the term plant capacity to mean firm reliable capacity rather than simply hydraulic rated capacity as used in the 1982 Memorandum. This is the term suggested in workshops and proceedings related to the Commission's attempt to develop rules regarding used and useful.

Q. Are you aware that in recent rate cases, and even in the Proposed Agency Action (PAA) for this Mid-County case, that Commission Staff is recommending a change in the formula under discussion with regard to definition of flow in the numerator?

A. Yes, I am. It is my understanding that Staff is recommending that the flows in the numerator, rather than being the average daily flow in the

maximum month, should be the average daily flows for the same period designated in the FDEP permit.

Q. Do you agree with that recommendation?

A. No. Regardless of the period designated in the FDEP permit, the numerator should reflect flows for the peak period.

Q. Why?

A. Because in this "simplified" formula we are not merely expressing some mathematical relationship; we are trying to reflect the considerations and criteria for evaluating the abstract concept of used and useful in the public service. Recall from Commission Order 7684, that these criteria were to be considered: (1) is the asset reasonably necessary to furnish adequate service during the course of prudent operation, (2) is the asset required to perform a function which is a necessary step in furnishing service to the public, (3) does it have sufficient capacity over and above actual demand to act as a cushion for maximum day flow requirements and (4) does it have sufficient capacity over and above actual demand for normal growth over a reasonable period of time?

Whether a system or plant meets these criteria can be determined by an engineer's evaluation of the system, but the results of that evaluation are not necessarily going to be reflected by a simplified formula, unless that formula is designed to specifically acknowledge criteria (3) and (4). The inclusion of margin reserve in the numerator of the formula addresses criterion (4). The inclusion of the average daily flow during the peak usage month addresses criterion (3). In my opinion, the Staff's choice, in its 1982 Memorandum, of the average daily flow during the peak usage month was not happenstance. It had a purpose which is still relevant.

Q. **Are you aware that the most recent permit granted to Mid-County by FDEP rates the wastewater treatment plant at 900,000 gpd on an annual average daily flow basis?**

Yes.

Q. Is it your testimony that even though the plant capacity is expressed on an annual average daily flow basis, the appropriate methodology for determining that portion of Mid-County's wastewater treatment plant assets that is used and useful in the public service, is to express the numerator in terms of the average daily flow in the maximum month?

A. Yes.

Q. Aren't you concerned about a mismatch of maximum monthly flows with annual capacity?

A. I might be concerned if I were trying to explain some physical phenomenon in mathematical terms instead of trying to express an abstract regulatory concept in numerical form. In any case there is not a mismatch. I believe this becomes more understandable if we separate the formula into components. Disregarding the margin reserve component, the used and useful formula can be expressed in either of two ways. First, is the form that we are used to seeing:

$$\frac{\text{Average Flow Max Month}}{\text{AADF Capacity}} = \frac{828,000}{900,000} = .92$$

But the same information can be expressed this way:

$$\frac{\text{AADF}}{\text{AADF Capacity}} \times \text{Peaking Factor} =$$

$$\frac{721{,}000}{900{,}000} \times 1.148 = .92$$

In each of these formats, the quantities shown are actual for Mid-County for the test year.

In this second format, the peaking factor is the actual ratio of the maximum month flow to annual average flow for Mid-County and is a legitimate measure of the range of flows that the treatment plant must be capable of meeting. It is not uncommon for formulas to be adjusted for relationships such as peaking factors or safety factors in order to provide more information than the original formula can provide. Apparently the combining of components has caused some confusion and directed attention away from its purpose.

Q. Is the peak demand methodology you are recommending consistent with the methodology that this Commission has approved in the last Mid-County rate cases?

A. Yes. The last rate case filed by Mid-County was addressed in PAA Order No. PSC-93-1713-FOF-SU, issued November 30, 1993, and in Final Order No. PSC-94-1042-FOF-SU, issued August 24, 1994. In the PAA, the percentage of used and useful wastewater treatment plant was determined using the peak demand methodology. In the final order, the parties stipulated to a used and useful percentage that was determined using the peak demand methodology.

Q. Have there been any changes to the wastewater treatment plant since the last rate case that have resulted in a change in its capacity?

A. No.

Q. Have there been any changes in the basis for the design flow since the last rate case?

A. No.

Q. In Final Order No. PSC-94-1042-FOF-SU, issued August 24, 1994, what was the stipulated percent used and useful for the wastewater treatment plant?

A. The stipulated percent used and useful was 88% for a projected test year ended March 31, 1994.

Q. And what plant capacity was that based on?

A. A capacity of 900,000 gpd, annual average daily flow.

Q. Since the test year in the last rate case, has there been any change in the number of ERCs served or in the flows treated by the plant?

A. Yes. As summarized in Exhibit (FS-1)____, the number of ERCs served increased by 11.70%, the annual average daily flows increased by 9.14% and the average daily flows in the maximum month increased by 10.70%.

Q. If the ERCs served and the flows treated have increased since the test year in the last rate case, and the plant capacity has remained the same, shouldn't the percent used and useful for the wastewater treatment plant be higher in this case than it was in the last case?

A. Yes. That is intuitive.

Q. If the flows for the test year in this case had been less than in the last case, should the percent used and useful for the wastewater treatment plant be reduced?

A. No. Once a level of used and useful has been reached for a plant, that establishes that the investment was actually necessary to serve the public. Even though the flows in every subsequent year do not necessarily rise to that particular level, it doesn't make the investment any less used and useful. A utility cannot, and should not be expected to, add and subtract investment at will to follow load exactly. Neither should it be penalized in subsequent years because it had the necessary capacity in prior years.

MARGIN RESERVE COMPONENT OF USED AND USEFUL

Q. You have indicated that the appropriate methodology to express the margin reserve component of used and useful wastewater treatment plant is as the capacity necessary to serve the equivalent of five years annual growth. Would you please explain why?

A. Yes. A regulated utility must maintain, at all times, sufficient capacity to meet its statutory responsibilities. Those responsibilities include meeting the existing and changing demands of present customers and the demands of potential customers within a reasonable time and in an economic manner. This Commission has identified that portion of plant, used and useful in the public service, that serves to meet the changing demands of existing customers and demands of potential customers in a reasonable period of time and in an economic manner, as margin reserve. The margin reserve portion of plant, used and useful in the public service, must be in place and available to serve until the next economic capacity addition can be placed in service without causing a deterioration in the quality of service. For wastewater treatment plants, giving due recognition to today's permitting requirements of the FDEP,

five years is considered a minimum period during which sufficient capacity must be available while an economically sized expansion is being planned, designed, permitted and constructed. A measure of the capacity necessary to be available during that period is the capacity associated with annual customer demands over a five year period.

Q. Have you made a calculation of the margin reserve capacity required for Mid-County?

A. Yes. A capacity of 112,905 gpd is required for an adequate margin reserve. The calculation is shown in Exhibit (FS-2)____.

Q. Have you made a calculation of the percentage of investment in wastewater treatment plant that is used and useful in the public service, including the margin reserve component?

A. Yes. 100% of the investment in wastewater treatment plant is used and useful in the public service. That calculation is also shown in Exhibit (FS-2)____.

IMPUTATION OF CIAC AGAINST MARGIN RESERVE

Q. You have stated that CIAC should not be imputed against margin reserve. Would you please explain why?

A. Yes. Imputation of CIAC against investment in margin reserve is a mismatch of investment and contributions from different accounting periods. As previously discussed, margin reserve is a component of plant used and useful in the public service. The investment in margin reserve capacity is a real one. The costs have been incurred during or prior to the rate case test year. The costs were incurred to enable the utility to meet its statutory obligations to its customers and to the state. CIAC is contributed funds received from customers and offsets all or part of the costs incurred by the utility in providing service. Any CIAC received prior to or during the rate case test year is a legitimate offset to those costs incurred by the utility prior to or during the rate case test year. The matching investment and offsetting CIAC from the same accounting periods are properly reflected in rate base.

Imputed CIAC is CIAC that has either not been collected prior to or during the rate case test period or is CIAC associated with plant not included in the test year rate base. It is potential CIAC that may be collected some time in the future from potential customers. If and when potential customers become actual customers, any CIAC they pay will be recorded on the books of the utility and will offset the costs incurred by the utility, thus reducing the amount of investment on which it is entitled the opportunity to earn a fair rate of return. Between the time when a utility makes an investment and the time it receives CIAC to offset the investment, the utility has expended actual funds upon which it is entitled to earn a return. Imputing CIAC assumes that the time period between investment and offsetting CIAC either does not exist or is arbitrarily reduced. The result is that the utility is denied the opportunity to ever earn a return on its investment.

Q. For Mid-County, how much of its investment in margin reserve assets would be included in rate base if CIAC is imputed against it?

A. The imputation of CIAC would result in absolutely none of the utility's investment in margin reserve being included in rate base.

Q. Does that conclude your direct testimony?

A. Yes.

Docket No. 971065-SU
Witness: Seidman
Exhibit (FS-1)_____

MID-COUNTY SERVICES, INC.

WASTEWATER TREATMENT PLANT

COMPARISON OF 1996 and 1994 TEST YEARS

	Test Year 3/31/94	Test Year 12/31/96	Pct Chg.
Average Daily Flow Maximum Month (ADFMM)	748,000	828,000	10.70%
Annual Average Daily Flow (AADF)	660,550	720,956	9.14%
Firm Reliable Capacity (FRC)	900,000	900,000	0.00%
ERCs Served	2,402	2683	11.70%

Docket No. 971065-SU
Witness: Seidman
Exhibit (FS-2)_____

MID-COUNTY SERVICES, INC.

WASTEWATER TREATMENT PLANT

For 12 months ended December 31, 1996

		gpd
Average Daily Flow Maximum Month (ADFMM)		828,000
Annual Average Daily Flow (AADF)		720,956
Peaking Factor (Test Year) ADFMM./AADF = PF		1.148
Firm Reliable Capacity (FRC)		900,000

1. Margin Reserve Capacity (MRC) = EG x MP x D =

Average		98,080
Pk Month		112,643

where:

EG = Equivalent Annual Growth in ERCs (per PSC Staff) 73 ERCs

MP = Margin Reserve Period 5 years

D = Demand per ERC

Average	268.71	gpd
Pk Month	308.61	

Avg Demand/ERC = Annual SFR Gallons/SFR/366 = 268.71 gpd/ERC
Peaking Factor = 1.148
Demand per ERC = 308.61

where: Annual SFR Gallons = 263,870,000
SFR = 2,683

2. Percent Used and Useful

$$\frac{ADFMM + MRC}{FRC} = \frac{828,000 + 112,643}{900,000} = 105\%$$

OR

$$\frac{AADF + MRC}{FRC} \times PF = \frac{720,956 + 98,080}{900,000} \times 1.148 = 105\%$$