BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

98-713

In the Matter of	
	DOCKET NO. 920199-WS
Application for rate increase in Brevard Charlotte/Lee, Citrus, Clay, Duval, Highlands, Lake, Marion, Martin, Nassau, Orange, Osceola, Pasco, Putnam, Seminole Volusia, and Washington Counties by SOUTHERN STATES UTILITIES, INC.; Collier County by MARCO SHORES UTILITIES (Deltona); Hernando County by SPRING HILL UTILITIES (Deltona); and Volusia County by DELTONA LAKES UTILITIES (Deltona)	

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FIRST DISTRICT COURT OF APPEAL

FOURTH DAY - MORNING SESSION

VOLUME X

Pages 1363 through 1575

PROCEEDINGS:	FINAL HEARING
BEFORE:	CHAIRMAN THOMAS M. BEARD COMMISSIONER BETTY EASLEY COMMISSIONER SUSAN F. CLARK
DATE:	Wednesday, November 11, 1992
TIME:	Commenced at 8:30 a.m.
PLACE:	FPSC, Hearing Room 106 101 East Gaines Street Tallahassee, Florida 32399
REPORTED BY:	JOY KELLY, CSR, RPR SYDNEY C. SILVA, CSR, RPR PAMELA A. CANELL Official Commission Reporters and LISA GIROD JONES, RPR, CM
APPEARANCES:	

(As heretofore noted.)

FLORIDA PUBLIC SERVICE COMMISSION

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FPSC-RECORDS/REPORTING

I N D E X

WITNESSES - VOLUME X

EXHIBITS - VOLUME X

Number:		Identified	Admitted
100	(Hartman) GCH-1 and GCH-2	1376	
101	(Hartman) GCH-3 and GCH-4	1377	
102	(Hartman) Petition for Variance	1488	
103	(Hartman) Citrus County Ordinance 86-10	1498	
80			1506
104	(Hartman) OPC 210-R	1508	

P R O C E E D I N G S

(Transcript continues in sequence from Volume IX.)

(Hearing reconvened at 8:30 a.m.)

CHAIRMAN BEARD: Your witness.

MR. HOFFMAN: Thank you, Mr. Chairman.

Mr. Hartman, have you been sworn?

WITNESS HARTMAN: No, I have not.

CHAIRMAN BEARD: Yes or no?

MR. HOFFMAN: No.

WITNESS HARTMAN: No.

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GERALD C. HARTMAN

was called as a witness on behalf of Southern States Utilities, Inc., and, after being duly sworn, testified as follows:

MR. FEIL: Excuse me, Mr. Chairman, I have one preliminary matter.

Last night, we were asking some questions of Mr. Sweat regarding an order, a Commission order, and I neglected to ask that you take administrative notice of that order. For the record, the order number is 21408.

CHAIRMAN BEARD: Okay.

MR. FEIL: Thank you.

DIRECT EXAMINATION

BY MR. HOFFMAN:

Q Please state your name and business address.

A I'm Gerald C. Hartman. My business address is 201 East Pine Street, Orlando, Florida.

Q Mr. Hartman, did you prepare and cause to be filed prefiled direct testimony on behalf of Southern States Utilities in this proceeding?

A Yes, I did.

Q Did you also prepare and cause to be filed prefiled rebuttal testimony on behalf of Southern States in this proceeding?

A Yes, I did.

Q Mr. Hartman, do you have any changes or revisions to your prefiled direct testimony?

A No, I do not.

Q Do you have any changes or revisions to your prefiled rebuttal testimony?

A Yes, I do.

Q Would you please provide those changes.

A Yes. On Page 33, Line 4, change the numerals from "21" to "16." Typographical error.

Page 38, delete Lines 4 through 24.

Page 40, delete Lines 7 through 24.

MS. ASHER-COHEN: Excuse me, 7 through?

WITNESS HARTMAN: 24.

Q (By Mr. Hoffman) Mr. Hartman, with those changes, if I asked you the same questions contained in your prefiled direct and prefiled rebuttal testimony today, would your answers be the same?

A Yes, they would.

MR. HOFFMAN: Mr. Chairman, I would ask that Mr. Hartman's prefiled direct and prefiled rebuttal testimony be inserted into the record as though road.

CHAIRMAN BEARD: It will be so inserted.

MS. ASHER-COHEN: Commissioners, excuse me, I object to a portion of the rebuttal testimony being admitted, a question and answer specifically on Page 34.

CHAIRMAN BEARD: Wait a second.

COMMISSIONER EASLEY: Is that page 34?

MS. ASHER-COHEN: Yes, ma'am.

CHAIRMAN BEARD: Starting on Line 15?

MS. ASHER-COHEN: Yes, sir. It's the question dealing with the proposed rules and the answer, and it goes on for one line on Page 35.

(Pause)

The basis for my objection --

CHAIRMAN BEARD: It is not a rule.

MS. ASHER-COHEN: -- is that it's not a rule and it's totally irrelevant to these proceedings. And

I would also include in my objection the exhibit that's referenced in the answer, GCH-5, which is attached to the end of the rebuttal.

CHAIRMAN BEARD: And that is the proposed rule change?

MS. ASHER-COHEN: That's true. If you like, I can elaborate on my objection.

CHAIRMAN BEARD: I don't think it's necessary.

MR. HOFFMAN: Mr. Chairman, there are a lot of issues in this case which are not the subject of Commission rules, rather, they're the subject of Commission policies or whether there should be deviations from Commission policies.

The purpose of this testimony is to demonstrate to the Commission that Mr. Hartman has conducted his analysis in a method under which the Staff anticipates to be appropriate. Now, whether that ultimately turns out to be a rule remains to be seen. But I think it would be very educational for the Commission; I think it's appropriate testimony; and I don't think there's any basis to strike the testimony unless you start striking every piece of testimony in the proceeding that is not incorporated in the rule.

CHAIRMAN BEARD: Well, if I follow some of

your logic, then I would assume that whatever the Staff recommends in this case we just rubber stamp it?

MR. HOFFMAN: No, that's not what I'm saying, Mr. Chairman.

CHAIRMAN BEARD: Well, I'm misunderstanding. Because I've got to tell you, rules that are proposed by Staff, I have been a great proponent of saying we give Staff tremendous leeway to do whatever they think is appropriate, and, conversely, we don't rubber stamp anything. And to this extent it's a Staff proposal, certainly premature.

MR. HOFFMAN: I would agree with that that it's premature because it's not a rule yet, no question about that.

I think that the purpose of the testimony was to simply demonstrate that the way that Mr. Hartman has conducted his analysis is consistent with the way that Staff has, at least to this point, been viewing used and useful methodology. And whatever weight the Commission thinks it should be given it would be given.

MS. ASHER-COHEN: Commissioner --

MR. McLEAN: Citizens join in Staff's motion.

CHAIRMAN BEARD: I thought that would be the case.

MR. McLEAN: We think it's offered solely to

bolster his own credibility, saying, "See, I did it this way and it's the same way the Commission might do it when they adopt the rule, if they do."

MS. ASHER-COHEN: Commissioner, I was going to say that Mr. Hoffman has mentioned that sometimes they go according to Commission policy. This is not Commission policy. And this is often not what the Staff believes to be the methodology for used and useful.

He cannot pinpoint any particular Staff member. This is only being used to validate Mr. Hartman's opinion, and his opinion is already in the MFRs and in his prefiled direct and rebuttal. This does not go to his opinion to give him more credibility.

MR. HOFFMAN: One thing I would add, Mr. Chairman, is that part of the point we're trying to make here is that there is no policy. In other words, part of Mr. Hartman's testimony is, if you look at the current Commission rules, you won't find a specific methodology. And what he's trying to argue here is that the way he has conducted his analysis is at least consistent with the way that Staff is viewing the used and useful methodology at this point.

We would stipulate that that has not been

adopted by the Commission and we think it should be given whatever weight the Commission believes to be appropriate.

MS. ASHER-COHEN: Commissioner, excuse me?

CHAIRMAN BEARD: Very briefly.

MS. ASHER-COHEN: First of all, if he wants to show that the current rules do not show what he thinks they should, then he can quote from the current rules.

Second of all, there's also an improper foundation, because this is not the witness that is qualified to sponsor this exhibit. He did not write this exhibit; this is not his opinion; and this is not the opinion of any one Staff member, either.

CHAIRMAN BEARD: Well, I find this fascinating because I was -- as a side question while I'm thinking about it, is Mr. Shafer going to be back tomorrow?

MR. FEIL: No.

CHAIRMAN BEARD: He won't be back Friday?

MR. FEIL: I don't believe so.

COMMISSIONER EASLEY: Saturday?

MR. FEIL: I believe he's going to be in either Orlando or Gainesville Friday and Saturday.

CHAIRMAN BEARD: Because I had some -- my

brain was over-active last night on linear regression, which is interesting, because I was just fixing to ask you then we should perhaps just accept Mr. Shafer's linear regression methodology because Staff proposed it or one Staff member proposed it?

MR. HOFFMAN: Well, no, Chairman. I think the distinction is the basis for our objection with respect to Mr. Shafer was that the Company did not have the opportunity to review any results because he did not conduct them and there were none in the record.

In other words, he was saying that the linear regression analysis -- at least he started out saying that the linear regression analysis was better than using the historical average. And when we moved to strike yesterday, the point there was that there was no evidence in the record as to the results of that analysis, the Company had no opportunity to review and cross examine to determine whether he was right or whether he was wrong.

CHAIRMAN BEARD: And as it turned out, he was not specifically proposing that in absence of an analysis of the data at this stage, was he?

MR. HOFFMAN: I think toward the end there that he did somewhat recant his testimony, yes.

CHAIRMAN BEARD: Well, Commissioner, do you

have any strong feelings?

COMMISSIONER EASLEY: Mr. Chairman, I think probably had the testimony actually said what counsel said he intended to say, we might not be having this problem. But I don't think the attachment of a proposed rule, the exhibit itself, I don't think is appropriate.

And I think that Staff makes a good point that should the witness wish to point out that the current rule is in some way deficient or void of any particular methodology, I think there's a way to get there, but that isn't what this specific testimony says, and I tend to agree with Staff.

CHAIRMAN BEARD: Mr. Pruitt, have you got the testimony there by any chance?

MR. PRUITT: I don't have it, Mr. Chairman.

CHAIRMAN BEARD: Hand it to him. Because my inclination, quite frankly, is to strike Lines 24 and 25 and Line 1 on Page 35 and the exhibit. And the statements made on Lines 18 through 23, to allow those. So it is certainly statements he can make free will, but the incorporation of the exhibit and the sentence associated with that, I would tend to strike.

MR. PRUITT: I think that would be correct, Mr. Chairman.

CHAIRMAN BEARD: Do you have any problem with that?

COMMISSIONER EASLEY: No.

CHAIRMAN BEARD: Sobeit.

MR. HOFFMAN: Thank you, Mr. Chairman.

Q (By Mr. Hoffman) Mr. Hartman, have you prepared or attached any exhibits to your prefiled direct testimony?

A Yes, I have.

Q And those would be prefiled GCH-1 and -2?

A That's correct.

MR. HOFFMAN: Mr. Chairman, could have I those marked for identification?

CHAIRMAN BEARD: 100.

(Exhibit No. 100 marked for identification.)

Q (By Mr. Hoffman) And Mr. Hartman, have you prepared or attached any exhibits to your prefiled rebuttal testimony?

A Yes, I have.

Q One of those exhibits was the proposed rule which the Chairman has just stricken, is that correct?

A That's correct.

Q And what is the number of that exhibit?

A GCH-5, I believe. (Pause) Yes, GCH-5.

MR. HOFFMAN: Mr. Chairman, could we have

Exhibits GCH-3 and GCH-4 marked for identification?

CHAIRMAN BEARD: That will be Exhibit 101.

(Exhibit No. 101 marked for identification.)

Q (By Mr. Hoffman) Mr. Hartman, do you have any revisions to the MFRs with respect to the systems that you're responsible for that you would like to place in the record?

A Yes. Due to the interrogatories previously discussed with Staff and responded to all the parties, on the F Schedules -- and I think these are, some of these are already stipulated to -- the FPSC Interrogatory No. 155, Set 2, relative to Deltona water system, Page 0105, F-3, Line 6, the numerals should be "2" and not "4." And that's of the hours for fire flow. And we agreed. So, therefore, the number becomes 300,000 versus 600,000.

The second one is PSC Interrogatory 91, Set 1, Marion Oaks water, Page 0332, F-5, Line 3. The date should be 6-16-1992. Line No. 4 should read "1,032,000." Line No. 5 should read "717." Line No. 15 should read "72%."

The third one is FPSC Interrogatory No. 91, Set 1, the same interrogatory, the same system, Marion Oaks. Two pages further on is, "Water, 0334." F-8, Line No. 5, the numeral should be "446." Line No. 6,

the value should be "1,212,109." The used and useful line should be "84%."

The next one is FPSC Interrogatory 163, Set 2, Sugar Mill Country Club, Volusia County, water, Page 0559, F-5, Line No. 33, the number should be "767." That's the number of units, or ERCs.

The next one is the same system, same number, FPSC Set 2, Interrogatory 165, wastewater, Page 0193, F-6, Line No. 17, the numeral should be "767."

COMMISSIONER EASLEY: Mr. Hartman, have you got an awful lot of those?

WITNESS HARTMAN: No, this is the last one.

COMMISSIONER EASLEY: Okay.

WITNESS HARTMAN: These are all interrogatories and some were typographical errors; some were errors that were found through the discovery process.

COMMISSIONER EASLEY: Just a suggestion for future reference, an errata sheet handed to the court reporter probably would have been easier.

CHAIRMAN BEARD: I want an errata sheet for the court reporter, just to confirm these.

COMMISSIONER EASLEY: Yes, please.

WITNESS HARTMAN: Okay. FPSC Interrogatory 212, Set 2, Sunny Hills system, wastewater, Page 0207,

F-6 Schedule, Line 22, the numeral should be "2"; Line 25, the numeral should be "36%."

Page 0209, F-8, Line 1 should be "0.9%." Line 2 should be "2." And Line 4 should be "180." And these are all the points that we concurred through the interrogatories with Staff on their points.

MR. HOFFMAN: Thank you, Mr. Hartman.

REPORTER'S NOTE: Page 1379 inadvertently omitted in numbering. Transcript follows in sequence on Page 1380.

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Gerald C. Hartman. My business address is Hartman & Associates, Inc., Southeast Bank Building, 201 East Pine Street, Suite 1000, Orlando, Florida, 32801.

Q. WHAT IS YOUR POSITION WITH HARTMAN & ASSOCIATES, INC.?

A. I am a Principal Engineer with and President of Hartman & Associates, Inc., a consulting engineering firm in Orlando, Florida.

Q. PLEASE PROVIDE YOUR EDUCATIONAL BACKGROUND.

A. I received my Bachelors of Science degree in Civil Engineering from Duke University in 1975 and my Masters of Science degree in Environmental Engineering from Duke University in 1976. I have published over thirty papers on water and wastewater utility systems and have been involved in numerous technical training sessions and seminars. In addition, I have co-authored two books concerning water and wastewater systems.

Q. ARE YOU A REGISTERED PROFESSIONAL ENGINEER?

A. Yes, I am a registered professional engineer in the States of Florida, Georgia, Maryland, North Carolina, Pennsylvania and Virginia.

Q. ARE YOU A MEMBER OF ANY PROFESSIONAL ORGANIZATIONS?

A. Yes, I am a member of the following organizations:
American Society of Civil Engineers
National Society of Professional Engineers
Florida Engineering Society
American Water Works Association
Florida Pollution Control Association
American Water Resources Association
Water Pollution Control Federation
Florida Water and Pollution Control Operators Association
Florida Waterworks Association
In addition, I have served as an officer in several of these organizations.

Q. WHAT IS YOUR PROFESSIONAL ENGINEERING EXPERIENCE AS IT PERTAINS TO WATER AND WASTEWATER UTILITIES?

A. I have been the Engineer of Record for over thirty water and wastewater master plans and five capital improvements programs. I have been involved in over fifty hydraulic model analyses of water and wastewater systems. In addition, I have been involved in numerous studies and investigations ranging from pilot programs to value engineering investigations. I have performed numerous water process evaluations from simple aeration to reverse osmosis (R.O.). In addition, I have performed

wastewater evaluations from secondary treatment to advanced biological nutrient removal systems. I have been involved in the design of over $300 million worth of water and wastewater facilities in the State of Florida.

These designs range from small single well systems to large municipal and investor-owned systems.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION REGARDING USED AND USEFUL DETERMINATIONS?

A. Yes, I have testified before the Florida Public Service Commission ("Commission") on numerous occasions.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE OTHER REGULATORY BODIES REGARDING USED AND USEFUL DETERMINATION?

A. Yes, I have testified in rate proceedings in Sarasota County and Hillsborough County regarding used and useful issues.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my direct testimony is to briefly describe the information that is contained in the Commission's Minimum Filing Requirement Schedules

F-1 through F-10 as presented in Volumes II and III, Book 11 of 11 and Book 6 of 6, respectively, of the rate application. Specifically, my testimony will address the F-1 through F-10 Schedules for the water and wastewater systems in the following counties: Citrus, Collier, Duval, Lee/Charlotte, Marion, Martin,, Volusia, and Washington counties. Mr. Gary S. Morse will present direct testimony pertaining to the F-1 through F-10 Schedules for the systems in the following counties: Brevard, Clay, Hernando, Highlands, Lake, Orange, Osceola, Pasco, Putnam, and Seminole counties. In addition, I will discuss the sources of the information and the rationale used in completing these schedules.

Q. WERE THESE SUMMARIES AND SCHEDULES PREPARED BY YOUR OR UNDER YOUR DIRECTION AND SUPERVISION?

A. Yes, they were.

Q. WOULD YOU DESCRIBE THE "F" SCHEDULES CONTAINED IN VOLUME II, BOOK 11 ENTITLED - ENGINEERING INFORMATION (WATER)?

A. Book 11 of Volume II presents Schedules F-1 through F-10 of the Minimum Filing Requirements for each water system. Schedule F-1 is entitled "Gallons of Water Pumped, Sold, and Unaccounted For." Column 2 of this schedule indicates the "Total Gallons

Pumped" for the historic test year period January 1, 1991 through December 31, 1991. These numbers are taken directly from the monthly Water Treatment Plant Operation Report submitted to the Florida Department of Environmental Regulation ("FDER"). These reports are provided in Volume IV, Books 5 and 6, Additional Engineering information.

Column 3 of Schedule F-1, entitled "Gallons Purchased", is applicable only to a select few systems where water is purchased to either supplement our supply or is the sole source of supply for the water system. The data in this column comes from the bills received from the supplier each month.

Column 4 of Schedule F-1, entitled "Gallons Sold", is derived from information contained in the billing analysis.

Column 5 of Schedule F-1 is entitled "Other Uses" and is expressed in thousands of gallons. As indicated on the bottom of the table, "Other Uses" is broken into Flushing of lines, Utility Use, Water Main Breaks, Unmetered and Stuck Meters, and Fire Dept. Use.

Columns 6 and 7 of Schedule F-1 show the resulting "Unaccounted For Water" in thousands of

gallons and as a percentage, respectively.

The unaccounted for water information is sponsored by Mr. Charles Sweat and is further discussed in his direct testimony.

Q. WOULD YOU DESCRIBE THE INFORMATION CONTAINED ON SCHEDULE F-3 IN VOLUME II, BOOK 11 (WATER)?

A. Schedule F-3 is entitled "Water Treatment Plant Data." Part 1 of the schedule shows the rated plant capacity. The course of this data is the FDER permit. I have added a line to include the firm reliable capacity of the treatment plant based on standard engineering design criteria. Part 2 requests the maximum day demand which is defined as being the single day with the highest pumpage rate for the test year. The source of this data is the monthly FDER Water Treatment Plant Operation Reports. Part 3 requests information on the "Five-Day Max Month" demand, which is defined as "the five days with the highest pumpage rate from the month with the highest pumping rate during the test year." The average of these five figures is also requested, but has no real bearing upon the planning and/or design of a water system. The average of the five maximum consecutive days of the maximum month of the historic test year may be a significant factor in

the planning of a very large system; however, this information is not requested in Schedule F-3. Part 4 requests information on the "Five-Day Max Year" demand, which is defined as "the five days with the highest pumpage rate from any one month in the test year." Here also, the monthly FDER Water Treatment Plant Operation Reports were the source of this data. Part 5 requests the "Average Daily Flow" during the test year which is a calculated value. Its source is again the monthly FDER Water Treatment Plant Operation Reports. Part 6 is the "Required Fire Flow" for the water system. Typically, the source of this data is the Insurance Services Office "Fire Suppression Rating Schedule" dated June, 1980 or the County Fire Ordinance Code. Copies of local county ordinances, where applicable, are included in the Appendix of Volume II, Book 11 of 11.

Q. WOULD YOU DESCRIBE THE "F" SCHEDULES CONTAINED IN VOLUME III, BOOK 6 ENTITLED-ENGINEERING INFORMATION (WASTEWATER)?

A. Book 6 of Volume III presents Schedules F-2, F-4, F-6, F-7, F-8 and F-10 of the Minimum Filing Requirements for each wastewater system.

Q. WOULD YOU DESCRIBE THE INFORMATION CONTAINED ON SCHEDULE F-4 IN VOLUME III, BOOK 6 (WASTEWATER)?

A. Schedule F-4 is entitled "Wastewater Treatment Plant Data" and indicates the overall rated capacity of the wastewater treatment facilities and some basic information concerning the flows during the historic 1991 test year. The treatment plant capacity is that which is approved by the FDER and noted on the operating permit. Copies of the current FDER operating permits are provided in Volume IV of the rate filing.

Q. WOULD YOU DESCRIBE THE INFORMATION CONTAINED ON SCHEDULE F-5 IN VOLUME II, BOOK 11 (WATER)?

A. Schedule F-5 is entitled "Used and Useful Calculations - Water Treatment Plant." As the title indicates, Schedule F-5 presents the used and useful analysis proposed by the Company for water supply, treatment (if any), storage, pumping facilities, and the water distribution system for the 1991 test year. The used and useful methodology is described in detail in the introduction section at the front of Volume II.

Q. WOULD YOU DESCRIBE THE INFORMATION CONTAINED ON SCHEDULE F-6 IN VOLUME III, BOOK 6 (WASTEWATER)?

A. Schedule F-6 is entitled "Used and Useful Calculations-Wastewater Treatment Plant." As the title indicates, Schedule F-6 presents the used and

useful analysis proposed by the Company for wastewater treatment plants, the effluent disposal systems, and the collection systems. Data specific to the treatment plant is shown at the top of the Schedule and is referred to as Input Data. This data includes some basic information contained in the FDER operating permits, the average daily flow during the maximum month of the test year, a determination of usage per equivalent residential connection ("ERC") and the average number of ERCs connected to the system. For those particular systems requiring a margin reserve, the margin reserve flow and margin reserve growth are shown on lines 21 and 22, respectively. The resulting used and useful determination with the margin reserve taken into consideration is shown on line 23 for the wastewater plant, line 24 for the effluent disposal system, and line 25 for the collection system.

Q. WOULD YOU DESCRIBE THE INFORMATION CONTAINED ON SCHEDULE F-7 IN VOLUME II, BOOK 11 AND VOLUME III, BOOK 6 FOR THE WATER AND WASTEWATER SYSTEMS?

A. Schedule F-7 is entitled "Used and Useful Calculation-Water Distribution and Wastewater Collection Systems." As the title indicates, this schedule is generic to both water and wastewater

systems. However, the used and useful determination for the water distribution systems is shown on Schedule F-5 and the used and useful determination for wastewater collection systems is shown on Schedule F-6.

Q. WOULD YOU DESCRIBE THE INFORMATION CONTAINED ON SCHEDULE F-8 IN VOLUME II, BOOK 11 AND VOLUME III, BOOK 6 FOR THE WATER AND WASTEWATER SYSTEMS?

A. Schedule F-8 is entitled "Margin Reserve Calculations" and is generic to both water and wastewater systems. A description of the margin reserve determination is contained in the introduction at the front of Volume II, Book 11 for water systems and Volume III, Book 6 for wastewater systems. The margin reserve is computed for an eighteen month period of time for treatment plants and one year for distribution and collection systems.

Q. WHAT IS THE PURPOSE OF A MARGIN RESERVE?

A. The margin reserve is the additional water and wastewater facilities necessary to meet the customer demands while additional facilities are being constructed. The Commission realizes that a utility must construct facilities beyond the needs of its current customers and has an obligation to

do so, since the utility's customer base is a continuously growing and dynamic element while the construction of facilities takes a great deal of time.

Q. YOU MENTIONED AN "EIGHTEEN MONTH PERIOD OF TIME FOR TREATMENT PLANTS"? WHAT DOES THIS MEAN AND DO YOU THINK IT IS APPROPRIATE?

A. An "eighteen month margin reserve" is the period of time that the Commission believes is the appropriate time to consider for the addition of additional capacity to serve future customers of water and wastewater systems. In other words, the Commission believes that a utility with a growing customer base, such as many of the SSU systems, should provide adequate capacity to meet the demands of that customer base eighteen months beyond the test year period being considered for ratemaking purposes.

In most instances today, if a utility must construct additional capacity to keep ahead of the customer demands, it needs more than eighteen months to complete the process. For a relatively "clean" process in which there are no permitting, financing or construction delays, two years is about the minimum time period in which additional capacity can

be provided. Below I have briefly outlined a step by step process for the addition of water treatment capacity:

1. In house review of records, capacity, customer commitments, etc., and the determination of the abilities and manpower to complete the work.
2. Request for a proposal, review of qualifications and selection of an outside consultant to perform the work.
3. Determination of the needed capacity increase to meet the demands of the current and future customers via a planning document.
4. Study of the various raw water supply alternatives and the required treatment facilities necessary to produce potable water.
5. Selection of the raw water supply and treatment alternative that provide the highest quality product for the lowest customer price.
6. Determination of the source of supply and the sizing of treatment facilities taking into account economies of scale and used

and useful analysis.

7. Preliminary planning level engineering, estimate of planning, financing, design permitting, construction and startup costs including overhead expenses, capitalized interest, etc.

8. Study of complete financing alternatives and determination of lowest cost financing alternative considering all aspects.

9. Preliminary approval of selected financing alternative by financial institution, local government, etc.

10. Consumptive Use Permit (CUP) application preparation with supporting documentation.

11. Water Management District (WMD) review and request for additional information.

12. Complete request for additional information.

13. WMD review and staff report.

14. WMD Board approval, noticing and CUP issuance.

15. Design wells and local government approval.

16. Bidding, evaluation and award well drilling contract.

17. Finalization of financing for the well drilling contract.
18. Well construction and testing.
19. Water sampling and analysis.
20. Determination of water quality and its applicability to the treatment process. At this point, project redesign may be necessary causing significant delays.
21. Water treatment facilities design completion.
22. Application for FDER construction permit.
23. FDER review and request of additional information.
24. Complete request for additional information.
25. FDER review and notice of intent.
26. FDER construction permit noticing and permit issuance if no objections.
27. Local government review and permitting.
28. Final design completion and preparation of bidding documents.
29. Bidding, evaluation and award of construction contract.
30. Finalization of financing for the water plant construction contract.

31. Water treatment plant construction and disinfection.

32. Substantial completion inspection and certification.

33. Punch list determination and completion of items.

34. Start up, operator training and operation and maintenance manual review.

35. Final walk through and inspection and completion of final punch list items.

36. Final payment to contractor and project close-out.

37. Final FDER certification and preparation of as built drawings.

38. Adjustment of rates to include costs of new facilities.

It should be noted that the above list is not all inclusive and outlines only the major activities in the addition of additional water system capacity. Also, this outline assumes a relatively simple water treatment facility with no major delays in the permitting design or construction processes. If this were a complicated process, for example an R.O. facility with an injection well, the permitting and construction time would more than likely be extended

by at least one year. Hartman & Associates, Inc. recently completed an R.O. facility which utilized an existing injection well and which was on an extremely fast track, and the design, permitting and construction took more than two years. A similar result is also occurring in the wastewater industry. A currently ongoing wastewater treatment expansion is expected to take approximately two years to design, permit and construct. It should be noted that both of these projects were relatively straightforward since there were basically no treatment alternatives thus eliminating the first five steps previously outlined.

Q. WHY HAVE YOU PROPOSED ONLY AN EIGHTEEN MONTH MARGIN RESERVE IN SCHEDULE F-5?

A. To my knowledge, the eighteen month margin reserve time has never been disputed in a rate application and I therefore thought it inappropriate to present anything different in this instant application. My whole point is that if the Commission truly intends the margin reserve time period to account for the time required for a utility to implement its next phase of water and/or wastewater treatment capacity, that it consider a margin reserve time period much greater than eighteen months, and that it be a

function of the source of supply and the complexity of the water and/or wastewater treatment process and the effluent disposal methods. With the continued increased cost of constructing facilities in conjunction with stricter environmental regulations, it is very important that the utility be allowed adequate time to study the various alternatives and determine which will produce the lowest rates to its customers while meeting all regulatory issues and requirements.

Q. WOULD YOU DESCRIBE THE INFORMATION CONTAINED IN SCHEDULE F-9 IN VOLUME II, BOOK 11 FOR WATER SYSTEMS?

A. Schedule F-9 is entitled" Equivalent Residential Connections-Water." This schedule provides the beginning of year, end of year, and average number of ERCs for each of the last five years, including the test year. The source of the data is the company's billing records for actively metered customers. The average growth for the last five years is calculated in column 9 as required.

Q. WOULD YOU DESCRIBE THE INFORMATION CONTAINED IN SCHEDULE F-10 IN VOLUME III, BOOK 6 FOR WASTEWATER SYSTEMS?

A. Schedule F-10 is entitled "Equivalent Residential

Connections-Sewer." This schedule provides the same basic information for the wastewater systems as contained in Schedule F-9 for the water systems. The source of the data is the company's billing records.

Q. IS THERE A SUMMARY OF THE USED AND USEFUL PERCENTAGES AND THE ASSET ACCOUNTS TO WHICH THEY ARE APPLIED FOR THE WATER AND WASTEWATER SYSTEMS?

A. Yes. A summary of the non-used and useful percentages by asset account is contained in Volume I, Book 1 of 4 behind tabs "W-Schedule F" and "WW-Schedule F".

Q. DID YOU CALCULATE THE NON-USED AND USEFUL PERCENTAGES CONTAINED IN THE SUMMARY?

A. Yes, I did.

Q. MR. HARTMAN, DO YOU HAVE ANY ADDITIONAL TOPICS YOU WISH TO DISCUSS?

A. Yes. I wish to discuss the service life of R.O. permeators as they relate to the Burnt Store water system. Typically, R.O. permeators would be classified in NARUC Account 320.3, Treatment Plant Equipment, which has a depreciation life of twenty two years. R.O. permeators should be accounted for in a separate NARUC Account 320.35 and a five year depreciation life should be authorized.

Q. WHY IS FIVE YEARS A MORE APPROPRIATE DEPRECIATION SERVICE LIFE THAN TWENTY-TWO YEARS?

A. It is the intent of depreciation to recover invested capital in a particular asset over the useful life of the asset. According to Section 25-30.140, F.A.C., Account 320 has an "accepted service life" of twenty two years for a "Large Utility (Class A & B)." This accepted service life grossly overstates the "useful life" for R.O. permeators which must be considered in deriving depreciation expense.

Q. YOU STATE THAT FIVE YEARS IS A MORE APPROPRIATE USEFUL LIFE FOR R.O. PERMEATORS. WHAT EVIDENCE DO YOU HAVE IN SUPPORT OF THIS ASSERTION?

A. First, the average service life of R.O. permeators is a site specific condition and is subject to the recommendation of the permitting engineer and the manufacturer of the permeators.

Q. I SHOW YOU EXHIBIT 10D (GCH-1) UNDER COVER PAGE ENTITLED "FLORIDA PUBLIC SERVICE COMMISSION METHODOLOGY FOR DETERMINING THE AVERAGE SERVICE LIFE FOR R.O. PERMEATORS." WAS THIS EXHIBIT PREPARED BY YOU OR UNDER YOUR DIRECTION AND SUPERVISION?

A. Yes, it was.

Q. COULD YOU BRIEFLY DESCRIBE THIS EXHIBIT?

A. Yes, this exhibit is a copy of a letter from Mr. Robert J. Crouch, Engineering Supervisor of the Florida Public Service Commission which confirms that "the 22 years average life for NARUC account 320.3 Water Treatment Equipment is not appropriate for Reverse Osmosis equipment." R.O. permeators can have a useful life of three to eight years depending on the type of reverse osmosis process. The useful life is primarily a function of the quality of the raw water and numerous other quantitative and qualitative factors. In the case of Burnt Store, I recommend that a five year service life be used.

Q. DO YOU KNOW WHAT THE AVERAGE SERVICE LIFE IS FOR R.O. PERMEATORS USED BY OTHER UTILITIES?

A. Yes, I have contacted various investor-owned and publicly owned utilities which operate R.O. facilities in Florida. The following is a summary of the results of those contacts.

Palm Coast Utilities Corp.	5 years
Sailfish Point Utilities	4 years
City of Sarasota	5 years
City of Cape Coral	5 years
Island Water Assoc. (Sanibel)	7 years
Greater Pine Island Water Assoc.	5 years
Indian River Co.	6 years

Q. I SHOW YOU EXHIBIT 100 (GCH-2) UNDER COVER PAGE ENTITLED "LETTER FROM PALM COAST UTILITIES CORPORATION." DO YOU RECOGNIZE THIS LETTER?

A. Yes, I do.

Q. COULD YOU BRIEFLY DESCRIBE EXHIBIT 100 (GCH-2)?

A. Exhibit 100 (GCH-2) is a copy of a letter to me from Palm Coast Utilities Corporation which confirms that the use of the five year service life for R.O. permeators is appropriate. As you can see, the recommended five year service life is a reasonable period to account for the depreciation of the reverse osmosis permeators.

Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Gerald C. Hartman. My business address is Hartman & Associates, Inc., 201 East Pine Street, Suite 1000, Orlando, Florida 32801.

Q. ARE YOU THE SAME GERALD C. HARTMAN WHO SUBMITTED PREFILED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THE PROCEEDING?

A. The purpose of my rebuttal testimony is to rebut certain points of the prefiled direct testimonies of Kimberly H. Dismukes, Legislative Analyst III with the Office of the Public Counsel, Jerrold E. Chapdelaine, a Utilities Systems/Communications Engineer with the Staff of the Florida Public Service Commission, Gregory L. Shafer, Bureau Chief in the Special Assistance Bureau of the Staff of the Florida Public Service Commission and Harry C. Jones, President of the Cypress and Oak Villages Association in Sugar Mill Woods. In addition, I will be addressing several other issues that have been raised via the interrogatories, request for production of documents and the depositions that have taken place thus far in this proceeding.

Q. WHAT DO YOU WISH TO REBUT CONCERNING MS. DISMUKES'

PREFILED DIRECT TESTIMONY?

A. I wish to discuss Ms. Dismukes' comments concerning SSU's method of calculating margin reserve and her proposed alternative methods. SSU calculated the margin reserve based upon the historical average annual growth in ERC's generally over the last 5 years. This growth projection methodology has been the generally accepted method that the Florida Public Service Commission has been utilizing for a number of years. Only recently have they applied an alternative methodology in certain circumstances. I will be discussing this alternative methodology further in my rebuttal to the testimony of Gregory L. Shafer.

Ms. Dismukes states in her prefiled direct testimony on pages 27 and 28, starting with lines 23 and continuing through line 2 of the following page, that "in reviewing the information supplied by the Company in the MFRs, it appeared that in several instances, the historical growth in ERC's may not be reflective of the growth that would occur during the next year and a half. Under these circumstances, the Company's requested margin reserve would be excessive." First, I would like to state that the MFRs were prepared using the

standard methodology historically utilized by the Florida Public Service Commission.

Second, there are numerous industry-wide accepted methodologies for projecting growth, both in the long term and in the short term. Short term growth is investigated for purposes of determining the margin reserve. Certainly, if you will review some of the percentages of growth in ERC's indicated on the F-9 and F-10 schedules of the Engineering MFRs, it appears that growth has decreased over the last couple of years in some systems and increased in others. One factor driving a declining growth is the current state of the economy -- while in other systems, the availability of desirous housing may increase growth. Certain systems that SSU provides service to are seasonal in nature and with the current condition of the economy, people may defer the purchase of a second home or the rental of vacation dwelling units, thus possibly creating higher levels of growth when economic conditions do improve.

Third, most of the systems in this proceeding are relatively small systems, and due to that fact growth can vary dramatically from year to year, based upon the development trends in the service

area. Most of the systems have a current customer base of less than 1,000 ERC's. Thus, a system may appear to be at build-out currently, however, if a new development appears within the service area, for example, a 100 unit single family residential home development, growth can quickly increase. The purpose of the margin reserve is to assist the utility in being able to provide service to customers in a timely manner as required by both the Florida Public Service Commission and DER. Therefore, historical trends in growth for small systems do not necessarily indicate what the near future will bring. Certainly, a very large system, say 100,000 customers, would have a very steady growth rate which would not fluctuate as dramatically as growth may occur on small systems. For example, most large county and municipal systems in the State of Florida have growth in the range of 2-3% per year and generally budget based upon those growth rates. For a large system, the hypothetical 100 unit single family residential development would have a very small impact upon the growth of the system as a whole. Typically, the driving factor behind a declining growth rate, whether it be a large or small system, is the build-out condition

of the service area where no opportunities to expand that service area are available. With the exception of just a few systems, this condition does not apply to most of the SSU systems. Therefore, an average of the past five (5) year period statewide is the most reasonable method in my opinion.

Q. WHAT IS THE METHOD THAT MS. DISMUKES HAS PROPOSED FOR DETERMINING MARGIN RESERVE?

A. Ms. Dismukes has reviewed the information provided by Southern States in response to OPC Interrogatory No. 210. In that response, the Company provided a summary of projected growth for the years 1992, 1993, and 1994 for all of the water and wastewater systems in this application. The source of this data was a report prepared by the Engineering Department at SSU in March of 1992 to plan for capital improvements in the next 5 years. ~~This~~ report was intended for internal Company use only in preparation for the annual meeting of the Board of Directors of the parent company. As indicated in the assumptions section of the report, it states: "This report takes a macro view of the SSU system and makes general assumptions for the overall growth projections." The primary purpose of the projections was to provide a very conservative

estimate of revenues for the purposes of obtaining capital financing. As described in Mr. Scott W. Vierima's prefiled direct testimony, the Company had a difficult time obtaining financing in 1991 due to the outcome of the 1990 rate application in Docket No. 900329-WS. Thus, in the Company's current ongoing efforts to obtain long term capital financing, it wanted to be very conservative in its revenue projections in order to not overestimate its ability to make the debt payments. That is the source of the information to which Ms. Dismukes is referring on page 28, lines 5 through 9 of her testimony. Schedule 5 of Ms. Dismukes Exhibit KHD-1, page 1 of 1, provides a comparison of 30 selected water systems and 22 selected wastewater systems of the 127 systems included in Southern States' application. She has compared the projected number of ERC's through the margin reserve period as filed in the Company's rate application as compared to the projected number of ERC's based upon the growth projections indicated in Interrogatory response No. 210R.

Ms. Dismukes has selected only 30 of the 90 water systems that are contained in this rate application. It appears that Ms. Dismukes' criteria

for determining which systems to include on her summary Schedule 5 was that if the margin reserve projection in the MFRs was greater than the projection made for the capital improvements report, it was included in her summary. This is true with the exception of 3 systems listed in her schedule 5 for which the projected ERC's of the capital improvement plan are greater than the projected ERC's in the margin reserve request. Likewise for the wastewater systems, Ms. Dismukes selected 22 of the 37 wastewater systems contained in this application and the same criteria appears to have been used for selecting those systems. Thus, it appears that Ms. Dismukes is one-sided in her approach to calculating margin reserves.

Ms. Dismukes provides a detailed discussion utilizing the Beacon Hill's water system as an example. The average of the 5 years of historical growth for the Beacon Hills water system is 12.25% with the highest growth rate being in 1988 of 22.8% and declining in 1989 to 13.01%, in 1990 to 6.72% and in 1991 to 6.48%. I believe that the dramatic decline between 1989 and 1990 just proves my point that the economy is certainly a factor in the decline of growth of systems such as Beacon Hills.

The recessionary nature of the economy certainly began to appear in 1990 and has continued through to 1992. For the first 9 months of 1992, the Company's records indicate that there were an additional 96 ERC's added to the Beacon Hills water system which equates to 3.5% growth, indicating that growth is still off. It should be noted that there is still substantial vacant land within the Beacon Hills water system service area in which to grow, thus, the system has not approached build-out at this time. The capital improvements projection of growth in 1992 was only 4.7% for the Beacon Hills water system. Based upon this information, Ms. Dismukes states that the used and useful percentage of the supply wells would decline from 69% to 64% with the use of the lower growth factor. She states that a similar analysis of the wastewater treatment used and useful capacity equates to a 5% decline from 64% to 59%. Of course, I do not agree with either of these adjustments for the reasons previously given.

Ms. Dismukes pursues a similar analysis for the Spring Hill water and wastewater systems. In summary, she proposes that the margin reserve for 19 of the 90 water systems and 9 of the 37

wastewater systems included in this proceeding should be based upon the Company's capital improvements projections and not the 5 year historical average growth rates. As I indicated previously, this is not correct in light of the size of the systems and also the current conditions of the economy which should hopefully improve in the near future. The whole purpose of margin reserve is to assure that capacity is available so when customers request service, service can be provided immediately. Certainly, if a conservative growth projection is utilized for the margin reserve and then growth substantially increases, the Company will not be able to meet its responsibility to provide this immediate service and thus will be providing a reduced level of service to all of its customers, including existing customers.

Q. MR. HARTMAN, HAVE YOU REVIEWED THE PREFILED DIRECT TESTIMONY OF MR. JERROLD E. CHAPDELAINE FROM THE STAFF OF THE FLORIDA PUBLIC SERVICE COMMISSION AND DO YOU HAVE ANY PRELIMINARY COMMENTS?

A. Yes, I have reviewed Mr. Chapdelaine's testimony and yes I do have comments concerning it. First, I do not agree with Mr. Chapdelaine's rationale for used and useful adjustments as discussed on the top

of page 3 of his prefiled direct testimony. I believe that if the condition discussed in Mr. Chapdelaine's statement is of a no growth, moratorium, build-out or aberrational service condition, then there should be no used and useful adjustment. In the general circumstances cited, he alleges that even though the service area may be built-out (or in any of the above stated conditions) and even where the design capacity of the system has not been reached, the Company should be penalized even though the capacity of the system and facilities constructed were based upon sound engineering estimates of design loads and spatial configurations prior to actual connections occurring. I am aware that in at least one of the prior cases in which Mr. Chapdelaine testified as an expert witness (Docket No. 870981-WS, Miles Grant Water and Sewer Company), the Commission found that the utility facilities were 100% used and useful because the service area was at or near build-out and there was no room for expansion (due to the system being surrounded by other systems). Thus, in that case, the "connected load" was less than the expected build-out or "design load" yet the Commission found that the facilities were 100% used

and useful. I have been informed that there are numerous instances of similar findings by the Commission.

A utility must stand ready to provide service and to make prudent decisions regarding investment in plant necessary to serve its territory in the context of effective long-range planning as well as least cost design and construction. I agree that the used and useful analysis must consider the factors of least cost design, economies of scale, long range planning, etc. and these factors should be reflected in a proper determination.

Q. HAVE YOU REVIEWED FS 367.081(2)(a) REGARDING USED AND USEFUL CALCULATIONS AND THE REQUIREMENT FOR THE COMMISSION TO CONSIDER A REASONABLE TIME FROM THE END OF THE HISTORICAL TEST PERIOD FOR USE OF FACILITIES OR LAND?

A. Yes, I have. The end of the second sentence in section 367.081(2)(a) merely reflects "property used and useful in the public service." This statute does not prescribe a methodology for the used and useful determination. The final sentence of this statute states: "The Commission shall also consider the investment of the utility in land acquired or facilities constructed or to be constructed in the

public interest within a reasonable time in the future, not to exceed, unless extended by the Commission, 24 months from the end of the historical test period used to set final rates" (emphasis added).

Q. WHY WAS THE MARGIN OF RESERVE REQUESTED IN THIS CASE LIMITED TO 18 MONTHS FOR WATER AND WASTEWATER PLANTS AND 12 MONTHS FOR UTILITY LINES?

A. I limited the margin of reserve to these time periods due to the Company's direction not to create an issue on this point as a result of the combination of the Commission's adverse ruling in Docket 900329-WS and the critical need for rate relief. It should be noted that (1) the 24 month convention indicated in section 367.081(2)(a) was not used, (2) no extensions of that period were requested despite the existence of DER Rule 17-600.405, F.A.C., which confirms that for wastewater plants, a period in excess of 48 months would be appropriate, and (3) the period for designing, permitting, constructing, and placing water and wastewater plant facilities into service far exceed the 18 month period commonly used to establish the margin reserve for water and wastewater treatment plants.

Q. HAVE YOU REVIEWED THE COMMISSION'S RULES REGARDING USED AND USEFUL METHODOLOGY AND MARGIN RESERVE?

A. Yes, I have. To my knowledge, there are no prescribed methodologies for used and useful or margin reserve determinations stated in the Commission's rules. However, Rule 25-30.255, F.A.C., entitled "Plant and Facilities," sections (1) and (2) state, respectively, that the utility "shall design, construct and install its plant in accordance with accepted engineering practices to ensure reasonably adequate and safe service to its customers" (emphasis added) and "shall maintain and operate its plant and facilities . . . in accordance with the rules of the Department of Environmental Regulation" (emphasis added). It is accepted engineering practice to design and construct water facilities utilizing the average flow on the maximum day when sufficient storage is incorporated or the peaking needs of the water system when sufficient storage is not incorporated in the system.

Q. ON PAGE 4 OF MR. CHAPDELAINE'S PREFILED DIRECT TESTIMONY, HE SPEAKS BRIEFLY OF "ECONOMIES OF SCALE" AND THEIR EFFECT ON THE USED AND USEFUL ANALYSIS. WOULD YOU PLEASE COMMENT ON THESE EFFECTS?

A. Economies of scale are an important criteria in the

design of water and wastewater facilities. In April of this year, Hartman and Associates performed a brief industry-wide evaluation of capital planning costs and their effects on economies of scale.

Q. I SHOW YOU EXHIBIT 101 (GCH-3) UNDER THE COVER PAGE ENTITLED "CAPITAL COST CURVES." WAS THIS EXHIBIT PREPARED BY YOU OR UNDER YOUR DIRECTION?

A. Yes, it was.

Q. COULD YOU BRIEFLY DESCRIBE THIS EXHIBIT?

A. Yes, Exhibit 101 (GCH-3) indicates the results of this brief industry-wide evaluation of capital planning costs. As can be seen, there are large economies of scale to be achieved in the construction of water and wastewater facilities. As a result of dealings with Southern States, I can attest to the fact that Southern States capitalizes on these economies of scale whenever possible. However, it also should be noted that the Commission Staff's apparently preferred methodology for computing the used and useful portion of utility facilities (as advocated in Mr. Chapdelaine's testimony) adversely effects Southern States' ability to capture the benefits of such economies for its customers in some circumstances.

Q. HOW DOES MR. CHAPDELAINE PROPOSE THAT THE USED AND

USEFUL FACILITIES BE DETERMINED?

A. Mr. Chapdelaine proposes the use of the "hydraulic share of the plant used and useful in service to the customers in test year for the rate application." He goes on to say that other considerations should be taken into account over and above the hydraulic share. He cites Chapter 17-555, F.A.C., and Chapter 17-600, F.A.C., along with "sound engineering, standard industrial practices and regulatory requirements." In fact, on lines 1 and 2 of page 5 of Mr. Chapdelaine's direct testimony, it appears that he is agreeing with the Company's approach to used and useful in reviewing and analyzing the water and wastewater systems on a major component basis. Yet, the methodology that he discusses does not review these major components independently in relation to their standard engineering design criteria. As Mr. Chapdelaine states on lines 5 and 6 of page 5 of his prefiled direct testimony, "various maximum flows may be taken into account based on peak month, peak day, and peak hour demands to determine the highest level of capacity which is indicated for the system based on the test year data which may be adjusted for natural occurrences, line breaks and fire

fighting." This is certainly true. Yet, in his testimony he uses the average of the five maximum days to determine the used and useful capacity of all of the various water supply, treatment, storage, and pumping facilities when, in actuality, standard engineering design criteria requires that different components use different flow or demand considerations.

Q. DO YOU AGREE WITH MR. CHAPDELAINE'S APPROACH USING A 5-DAY MAXIMUM DAILY PRODUCTION OF WATER TO DETERMINE THE USED AND USEFUL PERCENTAGE?

A. No. I have reviewed the references cited in 17-555.330, F.A.C., entitled "Engineering References for Public Water Systems" along with several standard engineering design text books for water facilities and I have not been able to find any cite to substantiate Mr. Chapdelaine's statement that "maximum daily production water flow based upon the average of the 5 highest pumping rate days in the highest pumping rate month should be utilized." For example, Part 3 entitled "Source Development" of the "Recommended Standards for Water Works" - 1987, states under Section 3.2 - Groundwater, subsection 3.2.1 - Quantity, sub-subsection 3.2.1.1 - Source Capacity that "[t]he total developed groundwater

source capacity shall equal or exceed the design maximum day demand."

In addition, as discussed in Chapter 2 of "Water Treatment Plant Design", Second Edition, by the AWWA (page 17) under "Plant Capacity":

> We then plot water use trends for average 24 hour, maximum 24 hour and peak hour demands. The peak hourly demands are met from distribution storage and therefore do not have to pass through the treatment facility. The treatment facility is normally designed for maximum 24 hour demand, so that an adequate amount of water will be treated and transmitted to distribution storage system throughout the year including days when usage is maximum (emphasis added).

Thus, as clearly stated by these two standard references which are cited in Rule 17-555.330, F.A.C., the maximum day must be considered in the design of the treatment facility and supply sources. Moreover, it is my professional engineering opinion that the above is true (I have been qualified as a technical expert in water treatment design in numerous Florida DOAH cases). Further, as is discussed in the AWWA "Water

Treatment Plant Design" manual, different components of the water system facilities are utilized for different purposes and thus have different demands, i.e., storage and pumping needed to meet peak hour demands while treatment and supply sources must meet only maximum day demands.

At this point, I would like to state that even though in this rate application our used and useful analysis utilized only the data from the historical test year period, standard engineering design would require you to review as much of the record available, and no less than 5 years of historical data, to determine maximum day demands due to variations in climactic conditions, economic conditions, and seasonal population fluctuations. I would agree with Mr. Chapdelaine's statement that these maximum day demands should be adjusted for "natural occurrences, line breaks and fire fighting" only to the point that the source of supply or treatment facilities should not have to meet these requirements but that storage should.

It should be noted that these are "natural occurrences" and that they do occur and they are real world operational requirements that a utility must consider and thus must be considered in plant

design. Typically, occurrences such as line breaks and fire flows are absorbed by the storage requirements or peaking facilities of the system as I will discuss later. I would like to emphasize that what is being discussed is standard engineering design criteria. Certainly, if a system has little or no storage, the source of supply must be able to meet the peak hour demands of the system as was utilized in our used and useful analysis in this rate application. It should also be noted that the distribution system for very small systems generally consists of small pipes and is not very extensive in size. In addition, there generally is no storage, so that the source of supply must meet the instantaneous demands of the customers (i.e., there is little buffering volume within the distribution system to attenuate those instantaneous demands). In summary, I cannot agree with Mr. Chapdelaine's suggestion that the use of the 5 day average maximum day demand is appropriate. I believe the methodology, as explained in the Introduction section of Volume 2, Book 11 of 11 of the MFRs, details the appropriate used and useful methodology, which is substantiated by sound

engineering practice. It should be noted that the same methodology was used in the 1990 rate application and Staff did not propose the adjustment now advocated by Mr. Chapdelaine.

In addition, in the last SSU rate case, FPSC Docket No. 900329-WS, the Staff utilized the maximum day in its used and useful analysis for the Staff Recommendation. For this rate application, the major components selected for the water systems, if they applied, were the source of supply, water treatment equipment, finished water storage, high service pumping and hydropneumatic tanks. As explained in the introduction section of Volume 2, Book 11 of 11, source of supply facilities must meet maximum day or peak hour conditions depending on the quantities of storage available. In most instances, water treatment equipment is designed around the maximum day demand. Finished water storage capacity is made up of three criteria: equalization storage, fire flow requirements and emergency storage. High service pumping capacity is typically based upon peak hour demand conditions and hydropneumatic tanks are based upon the size of the pumping units pumping through them and the chlorine contact time

necessary for adequate disinfection.

Q. DO YOU AGREE WITH MR. CHAPDELAINE'S COMMENTS CONCERNING THE USE OF AVERAGE DAILY FLOW FROM THE PEAK FLOW MONTH FOR DETERMINATION OF THE USED AND USEFUL PORTION OF WASTEWATER FACILITIES?

A. Yes. It should be noted that all wastewater capacity determinations discussed have been based on a hydraulic flow basis. However, solids loading in the form of organic matter, i.e., BOD, total suspended solids and other factors, must be considered when designing the treatment facility and these solids loading have an impact on the capacity of the facility. With many utilities going to alternative reclaimed water disposal techniques, the effluent limitations leaving the treatment facilities have become more strict, and hence, more difficult to attain than the previous standard secondary treatment requirements. Thus, today engineers must be more conservative when determining appropriate hydraulic and solids loading rates when designing facilities. As a result of these phenomena, even though a facility has had capital improvements, the permitted capacity of the system actually could be reduced after such improvements due to the required

decreased loading rates to attain a more stringent effluent quality.

Q. DO YOU AGREE WITH MR. CHAPDELAINE'S COMMENTS CONCERNING THE TIME PERIOD FOR MARGIN RESERVE?

A. No. Although we did use 12 and 18 months for determining margin reserve with respect to this rate application, these periods are not adequate to plan, design, permit and construct additional facilities to meet customer demands. Thus, if the Commission intends to deviate at all from the heretofore preferred method of determining margin reserve (as advocated by Staff witness Shafer), the Commission should modify the margin reserve period to reflect this reality.

In most instances today, if a utility must construct additional capacity to keep ahead of customer demands, it needs more than eighteen months to complete the process. For a relatively "clean" process in which there are no permitting, financing or construction delays (which indeed would constitute an aberration from reality), two years is about the minimum time period in which additional capacity can be provided. Below, I have briefly outlined a step by step process for the addition of water treatment capacity:

1. In house review of records, capacity, customer commitments, etc. and the determination of the abilities and manpower needed to complete the work.
2. Request for a proposal, review of qualifications and selection of an outside consultant to perform the work.
3. Determination of the needed capacity increase to meet the demands of the current and future customers via a planning document.
4. Study of the various raw water supply alternatives and the required treatment facilities necessary to produce potable water.
5. Selection of the raw water supply and treatment alternative that provides the highest quality product for the lowest customer price.
6. Determination of the source of supply and the sizing of treatment facilities taking into account economies of scale and used and useful analysis.
7. Preliminary planning level engineering estimate of planning, financing, design, permit, construction and startup costs including overhead expenses, capitalized

interest, etc.

8. Study of complete financing alternatives and determination of lowest cost financing alternative considering all aspects.
9. Preliminary approval of selected financing alternative by financial institution, local government, etc.
10. Water Use Permit (WUP) application preparation with supporting documentation.
11. Water Management District (WMD) review and request for additional information.
12. Complete request for additional information.
13. WMD review and staff report.
14. WMD Board approval, noticing and WUP issuance.
15. Design wells and local government approval.
16. Bidding evaluation and award well drilling contract.
17. Finalization of financing for the well drilling contract.
18. Well construction and testing.
19. Water sampling and analysis.
20. Determination of water quality and its applicability to the treatment process. At this point, project redesign may be necessary causing significant delays.

21. Water treatment facilities design completion.
22. Application for FDER construction permit.
23. FDER review and request of additional information.
24. Complete request for additional information.
25. FDER review and notice of intent.
26. FDER construction permit noticing and permit issuance if no objections.
27. Local government review and permitting.
28. Final design completion and preparation of bidding documents.
29. Bidding, evaluation and award of construction contract.
30. Finalization of financing for the water plant construction contract.
31. Water treatment plant construction and disinfection.
32. Substantial completion inspection and certification.
33. Punch list determination and completion of items.
34. Start up, operator training and operation and maintenance manual review.
35. Final walk through and inspection and completion of final punch list items.

36. Final payment to contractor and project close-out.

37. Final FDER certification and preparation of as built drawings.

38. Begin preparing rate application to include costs of new facilities.

It should be noted that the above 38 steps for constructing new facilities are not all inclusive and constitute only the major activities required to add water system capacity. Also, the 38 steps assume construction of a relatively simple water treatment facility with no major delays in the permitting, design or construction processes. If this were a more complex facility, for example an R.O. facility with an injection well, the permitting and construction time would more than likely be extended by at least one additional year. Hartman & Associates recently completed an R.O. facility which utilized an existing injection well and which was on an extremely fast track, and the permitting and construction alone took more than two years. A similar result also is occurring in the wastewater industry. A fast tracked wastewater treatment facility expansion currently in progress is expected to take over two years to design,

permit and construct. Both of these projects were relatively straightforward since there were no treatment alternatives available, which eliminated the first five steps previously outlined.

Recent DER rule revisions concerning planning for wastewater facilities expansion also now require the extension of the margin reserve period beyond eighteen months for wastewater treatment facilities. DER Rule 17-600.405, F.A.C., requires a utility to provide timely planning, design and construction of plant expansions based on a schedule delineated by DER. This rule requires a utility providing wastewater service to submit annual capacity analysis reports to the DER. These reports must analyze existing facilities and their capacity to provide service. Basically, the rule has established four triggers to determine when certain activities need to be commenced concerning the design, permitting and construction of additional wastewater treatment facilities. If the projected flows of the facility exceed the permitted capacity of the facility within 5 years of the date of the report, then the report must include a statement by a registered engineer that planning and preliminary design of a plant

expansion has been initiated. When the projected flows are expected to exceed the capacity within 4 years, the report must include a statement from the registered engineer that plans and specifications for the expansion are being prepared. If the engineer determines that projected flows are going to exceed the capacity within 3 years, then a construction permit application must be submitted to the DER within 30 days of such a determination. The final trigger is that if the capacity analysis report indicates that the projected flows are going to exceed the permitted capacity of the treatment facilities within 6 months, an operating permit application must be submitted by the utility along with the capacity analysis report.

The clear intent of the DER's rule is that capacity must be maintained for a minimum 4 year window if the utility does not wish to perpetually be in a permitting and expansion mode for every wastewater treatment plant it operates. Hence, pursuant to this rule, a minimum 4 year margin reserve time period is required for wastewater treatment facilities.

This DER rule has been acknowledged by the Florida Public Service Commission in a recently

adopted Memorandum of Understanding between the DER and the Commission. Page 5 of the proposed Memorandum of Understanding, under the heading, "PSC Responsibilities - Wastewater Management", states as follows:

> The DER has adopted rules requiring utilities to perform timely planning, design and construction of expanded facilities to ensure that sufficient wastewater treatment, disposal and reuse capacity is available. In light of DER rules, the PSC agrees to evaluate capacity constraints imposed by statutes and rules on private utilities within PSC jurisdiction by PSC's application of the used and useful concept. If justified, this evaluation shall include the assessment of the possible need for statutory rule or revisions.

Thus, based upon DER's new rule requirements and this Memorandum of Understanding, a four year margin reserve requirement is necessary and justified for all of the Company's wastewater treatment facilities in order to be in compliance with current rules and regulations.

Q. I SHOW YOU EXHIBIT 101 (GCH-4) UNDER COVER PAGE ENTITLED, "MEMORANDUM OF UNDERSTANDING BETWEEN THE

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION AND THE FLORIDA PUBLIC SERVICE COMMISSION". ARE YOU FAMILIAR WITH THIS EXHIBIT?

A. Yes.

Q. COULD YOU BRIEFLY DESCRIBE THIS EXHIBIT?

A. This exhibit contains a copy of the Memorandum of Understanding between the Commission and the DER which I just referred to.

Q. DO YOU HAVE ANY FURTHER COMMENTS REGARDING MR. CHAPDELAINE'S PROPOSAL?

A. Yes. Mr. Chapdelaine refers to the Commission "policy" of capping the margin reserve at 20%, even where the historical growth rate is higher than 20%. I do not believe this cap is justified. If the customer base of a water or wastewater system is increasing at a growth rate higher than 20% per year, the utility must be able to provide service to those customers no matter how rapidly the requests for service are coming. This is particularly true of Southern States' small systems which are experiencing growth at a rate in excess of 20%, including Grand Terrace (117.1%), Lake Ajay (37.3%), Pine Ridge Estates (25.3%), Pine Ridge (20.5%) and Rolling Green (34.0%). Also, new systems such as Palisades, Quail Ridge, and

Fountains can be expected to exceed an annual growth rate of 20%. Land developers often project a 5 year build-out for their projects which translates into an average of 20% growth per year. However, typically a development starts out slow and finishes slow in reaching build-out, but the years in between, which say would be years 2, 3, and 4, would greatly exceed 20% and reach levels of perhaps 30% or even higher. The Commission should not limit the margin reserve to 20% for these SSU systems, but rather should establish the margin reserves based on the actual average rates of growth.

Q. DO YOU AGREE WITH MR. CHAPDELAINE'S COMMENTS CONCERNING REDUNDANCY?

A. Yes. As Mr. Chapdelaine discusses on page 5, lines 21 through 23, there are specific regulatory requirements for redundancy of the facilities. Typically, any mechanical component must have a back-up in order to adequately provide service if the primary unit should be out of service. The redundancy requirements are based upon a probability that a particular component of a system is going to be out of service and the reliability of that component. The theory of reliability for

water systems is described in Chapter 18 of AWWA's "Water Treatment Plant Design" manual, pages 537 through 539. In addition, the USEPA has established specific criteria concerning redundancy and reliability of wastewater treatment facilities. This is discussed in "Design Criteria for Mechanical, Electric, and Fluid System and Component Reliability" - MCD-05, published by the USEPA. In that manual, it discusses three levels of reliability for wastewater treatment facilities, Class I, Class II and Class III. The DER requires facilities providing reclaimed water to sites accessible to the general public to maintain Class I reliability. This is an important concept to understand when evaluating the capacity of existing wastewater treatment facilities that must now be in compliance with Class I reliability.

Typically, the minimum standard for reliability assumes the largest unit out of service for maintenance or due to a mechanical failure. As I explained earlier, reliability is a function of the probability that a particular piece of equipment is going to be out of service. Certainly, the greater the number of pieces of the same type of equipment that are necessary to

operate a system, the greater the likelihood that more than one unit could be out of service at the same time. For example, in multiple well systems such as Deltona Lakes (23), Spring Hill (~~21~~ 16) or Sugar Mill Woods (9), it is not uncommon to assume that at least the two largest units will be out of service. Certainly one well could be down for routine maintenance, such as bearing replacement, impeller replacement, thrust bearing replacement or numerous other things. While maintenance is occurring on that particular unit, another unit could fail due to a mechanical problem (i.e., motor burning up, being struck by lightning, shaft breaking), thus redundancy requirements are not strictly a function of a single unit being out of service, but in some instances, multiple units must be considered out of service. It must be remembered that we are not dealing with hypotheticals here but rather the realistic assumptions which must be made to insure the utility's ability to meet its obligation to provide water to its customers.

Q. DO YOU AGREE WITH MR. CHAPDELAINE'S COMMENTS CONCERNING FIRE FLOW REQUIREMENTS?

A. Yes, with the following qualifications:

Fire flow requirements typically come from the storage units within the system. Of course, if no storage or inadequate capacity is available, the source of supply must be able to meet the average demand conditions during the maximum day plus the fire flow requirement. Thus, for example, if a utility had a maximum day demand of 1 million gallons, the average demand condition during that day would be approximately 700 gallons per minute, if that system had a 500 gallon per minute fire flow requirement, the source of supply would need to have a capacity of approximately 1,200 gallons per minute to meet the conditions of the fire flow plus the maximum average day demand condition.

Q. ARE YOU AWARE OF ANY PROPOSED RULES REGARDING USED AND USEFUL METHODOLOGY AND MARGIN RESERVE DETERMINATION?

A. Yes, I participated in discussions with FPSC staff, Mr. Charles Hill, and the Florida Waterworks Association and provided information regarding the need to develop appropriate rules. The work product from these efforts were incorporated in the Commission staff's latest rulemaking proceeding. I have included this information as Exhibit ___ (GCH - 5). These proposed rules reflect the

methodology used by me in this proceeding.

Q. IS THE HISTORICAL TEST YEAR PERIOD ADEQUATE TO ASSESS THE EXTENT OF USED AND USEFUL FACILITIES IN WATER AND WASTEWATER SYSTEMS?

A. No. Even though for the purposes of this rate case we constrained these analyses to the historical test year, professional engineers are bound by Florida Statutes Chapter 471 to, in part, protect the "public health, safety and welfare." It is not generally accepted engineering practice or proper utility planning to consider only one year of historical data. For example, the Sugar Mill Woods water system in 1989 had five maximum days ranging from 2.788 MGD to 4.581 MGD and averaged 3.335 MGD. In 1991, the water system ranged from 1.833 MGD to 1.869 MGD averaging 1.854 MGD. Facilities were constructed to meet the needs in 1989 and the associated investments were prudently made at that time. Yet, in 1991, those same facilities were used less and the utility is penalized with a lower used and useful percentage. The Company cannot just arbitrarily reduce its investment simply due to a low usage year and thereafter increase the investment again when demands increase later. Rather, the Company has the obligation of having

adequate facilities for service. Therefore, the used and useful percentages calculated are below the appropriate level due to the restriction of a single historic test year convention. Absent plant additions, I can think of no situation which would justify a reduction in used and useful levels associated with the same plant assets from one year to the next. For example, if the investment in Plant A was prudent when made, the construction costs were reasonable and Plant A's used and useful character is determined in Year 1, the Company should not be penalized subsequently when events occur, particularly those beyond the Company's control such as inordinate rainfall levels or a devastating economic slowdown, which reduce water consumption and thus the usefulness of Plant A.

Q. WHAT IS AN APPROPRIATE AMOUNT OF UNACCOUNTED FOR WATER?

A. Unaccounted for water is an ambiguous term and a precise determination of what are excessive unaccounted for water levels is no less difficult to decipher. Mr. Chapdelaine states that the Commission "policy" is that anything greater than 10% is considered to <u>possibly</u> be excessive and should be investigated for possible adjustment. If

the system is having a problem with leaking transmission and distribution pipes, which is typically considered unaccounted for water, the true test of whether the amount of lost water is excessive should be determined by a cost/benefit analysis (examining the cost of repairing the lines versus paying the additional costs of pumping and treating the lost water). In some situations, it is more cost effective to improve the leakage situation, and in other situations, it is better to continue to pump water. Replacement of transmission and distribution lines and the follow-up restoration of pavements, landscaping, etc., is capital intensive and in many situations it is not practical to correct the problem. In these situations, the Company should not be penalized for unaccounted for water levels above 10%.

Q. DO YOU AGREE THAT AN ACCEPTABLE LEVEL OF UNACCOUNTED FOR WATER IS 10% OF THE WATER PUMPED?

A. No. This may be an acceptable level of unaccounted for water but to determine that anything above 10% is to be considered excessive is incorrect. As I previously mentioned in this testimony, a cost/benefit analysis must be done to determine whether it is worth the cost of resolving the

unaccounted for water problems. Replacement and restoration of water distribution lines can be very expensive.

Q. DO YOU BELIEVE ANY OF THE WATER SYSTEMS IN THIS RATE CASE APPLICATION HAVE EXCESSIVE UNACCOUNTED FOR WATER?

A. No. In Staff's Prehearing Statement, Staff raised the issue whether the Beechers Point, Interlachen Lakes Estates, Keystone Heights, River Grove, Saratoga Harbor-Weelacha, Kingswood, Oakwood, Palisades, and Stone Mountain systems have excessive unaccounted for water levels. As I have stated previously, excessive unaccounted for water levels cannot be determined solely on the fact that such levels may exceed 10% of the water pumped and sold to customers. Cost/benefit analyses must be performed to determine whether quantities of unaccounted for water are excessive to the point where extensive capital projects are necessary to correct the problem. It should be noted that each of the systems identified by Staff are very small and more than likely it would not even be prudent to cause customers served by these systems to pay for a cost/benefit analysis.

Q. WHAT IS INFILTRATION AND IN-FLOW?

A. Infiltration is typically considered the passing of groundwater into the gravity sewer system due to gaps in joints, cracks in pipes, etc. This occurs most in areas which have high groundwater levels (which is quite common in the State of Florida). Typically, in-flow is considered the passing of surface water into the collection system via manhole lids, illegal connections, stormwater connections into the collection system, etc. In-flow problems are more easily identified and resolved than infiltration problems. Infiltration can be difficult to both identify and locate within the system. The correction of the problem, which typically either calls for replacement of the pipe or lining the pipe with a suitable material, can be very costly, sometimes up to 3 times the cost of the original installation. As Mr. Chapdelaine states, the Commission policy is to allow 10% inflow and infiltration and anything beyond that is considered excessive and may affect the determination of used and useful plant absent justification. Again, as with unaccounted for water, the true test of whether the level of infiltration and in-flow is excessive should be determined by a cost/benefit analysis which

determines whether it is less costly to correct the problem or to continue to treat the existing amounts of wastewater. Therefore, I would not agree with Mr. Chapdelaine's comments that unaccounted for water and infiltration and in-flow should be limited to 10%.

Q. DO YOU BELIEVE INFILTRATION AT THE JUNGLE DEN WASTEWATER SYSTEM IS EXCESSIVE?

A. No. The Company provided Staff with an interrogatory response which included facts that confirm that based on the design of the collection system at Jungle Den, the amount of infiltration is not excessive. Moreover, based on the small size of the system, it is probably not even prudent to perform an analysis to determine where the infiltration may be occurring much less invest in capital improvements to correct problems which may exist.

Q. DO YOU BELIEVE THE PALM PORT SYSTEM HAS EXCESSIVE INFILTRATION?

A. No. We have compared the amount of wastewater treated in this system to the amount of water pumped and do not believe that there is excessive infiltration.

Q. DO YOU AGREE WITH MR. CHAPDELAINE'S ALLEGATION THAT

SSU'S USED AND USEFUL ADJUSTMENTS WERE "NOT BASED UPON STANDARD COMMISSION PRACTICE"?

A. First, I'm not sure that the Commission has a "standard practice" concerning used and useful adjustments. To the best of my knowledge, Chapter 367, Florida Statutes, and Chapter 25-30, F.A.C. do not address any "standard practices" for used and useful adjustment. Second, Mr. Chapdelaine states that "no explanation or justification was found as to why deviations occurred." I strongly disagree with this statement. As I discussed previously, the F schedules in the MFRs contain an introduction that describes the used and useful methodologies we used. Volume 2, Book 11 of 11, in the Introduction to Water Engineering Schedules under Schedules F-5 "Used and Useful Determination for Water Systems", contains a detailed explanation of the methodologies used to determine the used and usefulness of water supply wells, water treatment equipment, finished water storage, high service pumps, auxiliary power, chlorination equipment, hydropneumatic tanks, water transmission and distribution systems and fire flow requirements. I believe this introduction provides a more than adequate explanation and justification of the used

and useful methodologies we utilized. According to Mr. Chapdelaine, one of the Company's alleged deviations from alleged "standard practices" was our use of the single peak day rather than the average of the peak 5 days to determine used and useful plant levels. Our analysis is explained in the introduction section of the MFRs and I also thoroughly discussed this point previously in this rebuttal testimony.

Mr. Chapdelaine cites a second alleged deviation regarding our "calculation of hydropneumatic tank used and usefulness based upon a factor of 15 rather than a factor of 10 relative to well capacity as called for in the Ten State Standards (Recommended Standards for Water Works)." First, the standards indicated in the Ten State Standards manual are minimum standards only. The standard that Mr. Chapdelaine is referring to is in Part 7 of the Ten State Standards and it is entitled "Finished Water Storage". In Section 7.2 - Hydropneumatic Tanks, under subsection 7.2.2 - Sizing, it states:

> The capacity of the wells and pumps in a hydropneumatic system should be at least 10 times the average daily consumption rate. The

> gross volume of the hydropneumatic tank, in gallons, should be least ten times the capacity of the largest pump, rated in gallons per minute. For example, a 250 gallon per minute pump should have a 2,500 gallon pressure tank.

The Company's use of 15 times the capacity of the largest pump is done for two reasons. First and foremost, for most of these water systems, the only storage that is available is the hydropneumatic tank and it is the only place that chlorine has adequate time to contact the water and properly disinfect it. It should be noted that in Part b of subsection 7.2.2, of the Ten State Standards, it states: "Sizing of hydropneumatic storage tanks must consider the need for chlorine detention time, as applicable, independent of the requirements in 7.2.2.a above." Industry standards require a minimum of 15 minutes chlorine contact time at peak flow rates. Moreover, section 4.3.1.2, page 56 of the Ten State Standards states "free chlorine residual . . . maintained in the water after contact time of at least 30 minutes when maximum flow rate coincides with anticipated maximum chlorine demand." Thus, with a simple well and

hydropneumatic tank system, which exist on the majority of the SSU systems, the hydropneumatic tank must have a capacity of at least 15 times the well pump capacity so that there is approximately 15 minutes of detention (at peak hour versus maximum day) within the hydropneumatic tank prior to delivery to the distribution system.

Another reason for using 15 times the largest pump capacity is that you want to minimize the number of starts that an electrical motor has in a one hour period. Typically, the number of starts varies with the size of the motor, but a maximum of 4 to 5 starts per hour would require the hydropneumatic tank to have a capacity of at least 15 times the largest pump capacity.

To conclude, based on my foregoing responses to these two apparent "deviations", the Company's used and useful methodology certainly did not deviate from standard engineering practice. I know that in many instances the Commission practice would not even have considered the capacity of the hydropneumatic tanks in a separate analysis. It would have been included in the overall used and useful percentage of all the water treatment facilities.

Another "deviation" alleged by Mr. Chapdelaine is that Southern States "included fill-in lots in the distribution and collection systems used and useful adjustment rather than only the lots which were or would be developed as is the basis pursuant to Commission practice." It is true that we believe that some of the water distribution and wastewater collection systems included in this proceeding are 100% used and useful despite lower results when the total lots occupied are divided by the total number of lots where service is available. I know that in Docket No. 900329-WS, the Staff recommended 100% used and useful levels on numerous SSU water distribution and wastewater collection systems that still had lots that were vacant and thus were without active connections. I am also aware of several other dockets in which the Commission has determined the water distribution or wastewater collection system to be either 100% used and useful or used and useful in amounts greater than the result achieved by dividing the total active lots by the total number of lots with service available. If the application of this calculation is standard Commission practice (and I do not believe it is), the Commission

deviates quite often from this "practice" and should do so in this proceeding.

In addition, the Commission's own rules provide for the inclusion of "fill-in" lots. Rule 25-30.231 - Extent of System which Utility shall Maintain (emphasis added), requires "delivery of water service to the customer up to and including the point of delivery into the piping." Also, Rule 25-30.225 - Plant and Facilities, states in paragraph (7) that "each utility which provides both water and sewer service shall operate and maintain in safe, efficient, and proper condition, all of its facilities to the point of delivery" (emphasis added).

The utility strongly believes that fill-in lots are used and useful purely from a required service and an economy of scale approach. If the utility were to only install lines to one customer at a time, the cost would be exorbitant.

Q. DO YOU HAVE ANY COMMENTS REGARDING MR. CHAPDELAINE'S STATEMENTS CONCERNING THE USED AND USEFUL CHARACTER OF WATER DISTRIBUTION AND SEWER COLLECTION LINES?

A. On page 6, line 25 and continuing on through lines 1 and 2 of page 7, Mr. Chapdelaine states that

"Commission policy with regard to contributions in aid of construction (CIAC) calls for 100% of the distribution and collection system to be contributed." He continues by stating, "compliance with CIAC policy obviates used and useful determinations involving distribution and collection systems." I do not agree with Mr. Chapdelaine that Commission policy is that water distribution and wastewater collection systems are to be considered 100% contributed. Mr. Chapdelaine does not identify where this alleged "Commission policy" is established. To my knowledge, no such policy exists. Perhaps Mr. Chapdelaine is thinking that at the time the service availability charges are developed it is assumed that a minimum level of CIAC to be collected will cover the cost of at least the installation of the distribution and collection systems. However, in reality, it is more than likely that construction costs will have increased or some other factor would have occurred such that 100% recovery is not received from the service availability charges established at some prior time by the Commission. In addition, it should be noted that since SSU acquires most of its utilities long after the service availability

charges have been established and CIAC has been collected, it takes the system "as is" and has no control over the of CIAC levels. In addition, in each rate case that I have participated in before the Commission, the Commission has made a determination of the used and usefulness of the water distribution and wastewater collection lines independent of the level of CIAC associated with them.

Also, if Mr. Chapdelaine's statements were truly "Commission policy," why did Staff raise Issue 38 in their pre-hearing statement, which states, "What are the used and useful percentages for the water distribution systems?" and Issue 40, which states, "What are the used and useful percentages for the wastewater collection systems?" To conclude, I believe Mr. Chapdelaine's assertion regarding "Commission policy" is not accurate and the portion of his testimony concerning such alleged policy should be disregarded. The used and usefulness of the water and wastewater lines should be established at the levels indicated in the MFRs.

Q. DO YOU HAVE ANY COMMENTS CONCERNING MR. CHAPDELAINE'S STATEMENT THAT NON-USED AND USEFUL PLANT SHOULD BE ACCOMMODATED THROUGH RECOGNITION OF

AN ALLOWANCE FOR FUNDS PRUDENTLY INVESTED (AFPI)?

A. The Company does not disagree with this statement, and the MFRs confirm that the Company has applied for AFPI charges for all non-used and useful facilities. However, it should be noted that AFPI charges do not accrue to the Company's benefit until (and if) they are actually collected and these charges are only accrued up to a 5 year period. Thus, the Company's ability to recover a return on its prudent investments in utility plant is tied to growth projections over which the Company has no control and which may or may not be achieved.

Mr. Chapdelaine further indicates that "the used and useful determination should be made based upon Commission practice and MFR requirements all of which are known to utilities such as Southern States." First, I do not believe (as I have stated previously) that the Commission has an established practice for making used and useful determinations. Indeed, Commission Staff is only now working on a rule that will spell out used and useful methodologies and even this rule is to be used only in situations where the utility does not present an alternative method of determining the

used and usefulness of utility plant. Second, the MFRs do not specify a methodology for making used and useful determinations.

Q. DO YOU AGREE WITH MR. CHAPDELAINE'S STATEMENT THAT "IT IS INCUMBENT UPON THE UTILITY TO JUSTIFY ITS FILING, PROVE ITS CASE AND INDICATE WHY IT CHOSE TO DEVIATE FROM COMMISSION PRACTICE"?

A. Yes. But I believe Mr. Chapdelaine has ignored, perhaps inadvertently, the introductory sections to the F Schedules in both volumes of the Company's MFRs in which our used and useful methodologies are identified and explained. In addition, it must be noted that the Company responded to numerous Staff interrogatories concerning certain aspects of our methods for determining the used and useful levels. Therefore, Mr. Chapdelaine's expressed lack of knowledge of our methods is surprising to the Company.

Finally, if the Company has deviated from "Commission practice" (which practice either does not exist or is routinely deviated from), it is solely because the Company wanted to provide a methodology that appropriately tracked the engineering design criteria utilized in building these facilities.

Q. HAVE YOU REVIEWED THE TESTIMONY OF STAFF WITNESS GREGORY L. SHAFER?

A. Yes, I have.

Q. WHAT COMMENTS DO YOU WISH TO MAKE CONCERNING MR. SHAFER'S TESTIMONY?

A. Mr. Shafer discusses the methodology for determining margin reserve. He believes the margin reserve should be calculated using a linear regression model analysis.

Q. DO YOU AGREE WITH MR. SHAFER'S UNDERSTANDING OF THE CONCEPT OF MARGIN RESERVE IN THE REGULATION OF WATER AND WASTEWATER UTILITIES?

A. Yes I do. Mr. Shafer states that "a margin reserve allowance is recognition in rate base of that portion of plant needed to serve short term growth." As I stated earlier, a utility must have the next increment of capacity ready to serve customers at a moments notice. If the utility did not have this margin reserve capacity available, it would either have to continuously be constructing small increments of plant capacity, which would be very uneconomical to construct, or the utility would more than likely not be able to complete the facilities in a timely manner to be able to serve such customers. In addition, without a margin

reserve, the utility more than likely would be unable to comply with DER rules and regulations perhaps at some point in the not too distant future for certain systems.

Q. DO YOU AGREE WITH MR. SHAFER'S STATEMENTS CONCERNING THE COMMISSION'S CURRENT METHOD OF CALCULATING THE MARGIN RESERVE?

A. Not entirely. I do not agree with his statement that "the construction time factors represent the average amount of time needed for construction of additional treatment plant or distribution or collection facilities." As I have stated previously in this testimony, I do not believe the margin reserve time factor of 18 months is adequate time to design, permit and construct additional water or wastewater treatment facilities.

Mr. Shafer states that he does not have any particular problem with the simple average method other than that it is the most basic approach possible and there are perhaps other methods, i.e., the linear regression method, that may more accurately relate to the actual historical data in certain situations. This is true -- but if you are going to use linear regression, why stop there. You could project growth based on a second, third,

fourth or fifth order equation or even a more elaborate equation that would probably match the historical data exactly. But the pertinent question is, does this reflect an accurate projection of growth in the future? Mr. Shafer states that "as a strictly mathematical extrapolation, [the simple average method] totally ignores the fact that there may be a relationship between the two pertinent factors, time and rate of growth." It is true that there certainly is always some sort of relationship between time and rate of growth, but as I discussed earlier in this testimony, for small systems such as many of the systems included in this rate proceeding, any historical relationship between time and rate of growth could be greatly modified in the near future due to a new residential or commercial development or some other condition that may occur within the service area. Mr. Shafer believes the statistical linear regression is a relatively easy and superior method upon which to base growth projections. With the advent of PC computer based statistical methods, any other multiple regression analysis technique could also be easily used. Models require only that you input the data and the

computer determines which type of equation best fits the data.

Another problem I see with any statistical approach to growth projections is that we are looking at only 5 observations, which typically is not sufficient to provide accurate results. In addition, you must be able to interpret the accuracy of these results to determine whether the statistical methodology is appropriate. In reviewing two of the three examples provided in Exhibit 92 (GLS-1), Sanlando Utilities Corporation's Wastewater Treatment - Wekiva facility and SSU's Marco Island - Wastewater facility, there appears to be a poor correlation between the growth and ERCs in any historical trend. This poor correlation is confirmed by the R squared value of 0.29 for Sanlando and 0 for the Marco Island facility and can be observed in the graphs presenting both of these results. I believe these results also confirm that Mr. Shafer's linear regression approach is not appropriate for this rate case. While I believe the linear regression method is one possibility for projecting growth, when it appears that it accurately depicts the historical data, I believe that ten (10) years of

historical data would better suit future projections. This is supported by DER's requirement to provide 10-years of historical data as part of all capacity analysis reports conducted for wastewater facility planning. Given the data, systems and circumstances in this proceeding, I believe that the average of the past 5-years of data is the most appropriate method for determining margin reserve in this case.

Q. MR. HARTMAN HAVE YOU REVIEWED THE TESTIMONY OF MR. HARRY C. JONES?

A. Yes I have, and I wish to rebut several points raised by Mr. Jones.

First, I would like to address Mr. Jones' statements that Southern States needs to "change their usage from meter sizes to residential units to determine ERC's" and that "previous Public Service Commission decisions used residential units." Mr. Jones is referring to the fact that the single family residential customer in Sugar Mill Woods utilizes a 1 inch water meter, which based on American Water Works Association meter equivalency standards is equivalent to 2.5 ERC's. In Docket No. 900329-WS, the Company agreed with the Cypress Village Homeowners Association (COVA)

that the potential of the water distribution and wastewater collection system was 9,054 ERC's based on an exhibit provided by COVA's witness in that case, Mr. Bud L. Hanson. In order to compare apples to apples, we converted the number of connections based upon meter size and AWWA meter equivalents into ERC's. This calculation results in 4,291 ERC's for the historic test year. This equates to approximately 47% used and useful. With the inclusion of the margin reserve, the used and useful capacity for the water distribution system increased to 50%. Now Mr. Jones argues that the 9,054 is not ERC's but lots and that we should either multiply the 9,054 lots by 2.5 to come up with the denominator in ERC's or convert the numerator back to lots. If we were to multiply the 9,054 ERC's by 2.5, it would require us to assume that all residential connections in the future would contain a 1 inch meter. This may not be true as time goes on in the Sugar Mill Woods development.

To analyze the water distribution and wastewater collection system strictly on a lot by lot approach provides no credit for fill-in lots. As discussed previously in this testimony, from an

analysis of the distribution and collection system maps provided with the rate application, it appears that there are two discrete areas within Sugar Mill Woods -- an area that has a relatively high density of customers and an area that has a very low density of active connections. In analyzing this situation, we were able to draw a line on these maps indicating a delineation between these high and low density areas. If an assumption is made that all the lots within the high density area (whether they were occupied by an active connection or not) are 100% used and useful, and all vacant lots in the low density area are 0% used and useful, the used and usefulness of the water distribution and wastewater collection systems, including the margin reserve, would be approximately 40%. This analysis assumes that no less of a water distribution and wastewater collection system could have been installed in the high density area to serve the existing number of customers. This appears to be a reasonable assumption based on the type of distribution and collection system in service in Sugar Mill Woods and the above average water usage of the Sugar Mill Woods customers. It could conceivably be argued

that even the people in the remote areas of the water distribution system are required to have fire protection service and hence the main sizes provided to serve them are required to provide that fire protection service. In any event, we think that the "two area" approach represents a reasonable check confirming the validity of our analysis.

Q. DO YOU AGREE WITH MR. JONES' DETERMINATION OF THE USED AND USEFUL PERCENTAGES FOR SUGAR MILL WOODS?

A. No. Mr. Jones has incorrectly calculated the used and useful percentage of the water plant. He states that it is 73% used and useful. The Sugar Mill Woods water system consists of simple well and hydropneumatic tank arrays in which each water treatment facility has two or more wells pumping water through hydropneumatic tanks, which water is chlorinated and pumped directly into the distribution system utilizing the energy of the well pump only. As I previously indicated, a system such as Sugar Mill Woods must be able to meet the maximum hour demands plus the fire flow requirements. In the case of Sugar Mill Woods, it is believed that the reliable capacity of the water system should be considered with the two largest

wells out of service. As I also discussed previously, mechanical equipment can be out of service for many different reasons, but they primarily fall into two categories, either maintenance or mechanical failure. For instance, if one of Sugar Mill Woods' nine wells is down for bearing replacement, impeller replacement, thrust bearing wear or any other routine maintenance item, it is conceivable that a second well could be out of service due to a mechanical failure (i.e., struck by lightning, broken shaft, motor failure, starter failure or any other problem). The total capacity of Sugar Mill Woods' 9 wells is 4,800 gallons per minute. The 2 largest wells have capacities of 600 gallons per minute each, thus the total reliable well capacity for Sugar Mill Woods would be 3,600 gallons per minute. The average daily demand during the maximum day equates to 1,298 gallons per minute. If you multiply 1,298 gpm by two to approximate the peak hour demands (which probably exceed that figure on the Sugar Mill Woods system), you arrive at a peak hour demand rate of 2,596 gallons per minute. Adding the 2,500 gallon per minute fire flow requirement based on Citrus County Ordinance 86-10, brings the

required well capacity to 5,096 gallons per minute. With a reliable well capacity of only 3,600 gallons per minute, the facilities are considered 100% used and useful.

Mr. Jones does not identify how he arrived at his 73% percent used and useful determination, but I believe it was based upon the average daily flow during the maximum day (1,298 gallons per minute) plus a fire flow requirement of 1,500 gallons per minute. Summing these two factors provides a required well capacity of 2,798 gallons per minute. I believe Mr. Jones assumed the source of supply with the single largest well out of service or a reliable capacity of 4,200 gallons per minute. Thus, dividing the 2,798 gallons per minute by the 4,200 gallons per minute, you arrive at a 67% used and useful. With the inclusion of a margin reserve, this would increase to approximately 73% as Mr. Jones indicates.

Mr. Jones' methodology is in error in that he has only allowed well capacity to meet the average daily demand conditions during the maximum day, yet a system of this type must meet peak hour demand. Thus, even if we stipulate to Mr. Jones' 1,500 gallons per minute fire flow requirement and only

one well out of service, total required capacity is still 1,298 x 2 + 1,500 = 4,096. Utilizing Mr. Jones' criteria of only one well out of service, the reliable well capacity is 4,200 gallons per minute and the facilities are 97.5% used and useful or, for all intents and purposes, 100% used and useful.

Q. DO YOU AGREE WITH MR. JONES' CONTENTION THAT THE "FIRE PROTECTION RESERVE" SHOULD BE ONLY 1,500 GALLONS PER MINUTE AND NOT 2,500 GALLONS PER MINUTE?

A. No. Citrus County Ordinance 86-10 requires a utility to provide 2,500 gallons per minute of fire flow based on the criteria established in the Ordinance. The letter dated October 28, 1991 from John Reeves, Citrus County Deputy Fire Marshall to Andy Woodcock of my firm, Hartman & Associates, Inc., states that "for Sugar Mill Woods as per Citrus County Ordinance 86-10 and NFPA 1231, the required fire flow for this project is 1,500 gallons per minute." A letter from the Deputy Fire Marshall does not relieve the Company of its obligation to comply with Citrus County Ordinance 86-10 which requires 2,500 gallons per minute. Moreover, even if Southern States were to be

notified today that the Citrus County Board of County Commissioners has amended the ordinance to reduce Sugar Mill Woods' fire flow requirement to 1,500 gallons per minute, the Company still would have been required in the past to have built facilities meeting the then-existing requirements of the ordinance. Therefore, the reduction of the fire flow requirement to 1,500 gallons per minute has no affect upon the used and useful percentage of the water source of supply facility. I still believe that the reliable capacity of the source of supply should be evaluated with the two largest wells out of service based upon my previous discussion concerning maintenance requirements and mechanical failures. But, even assuming only the largest well out of service, the source of supply facilities are still considered 100% used and useful, so the outcome is the same with or without Mr. Jones' proposed changes in applicable criteria.

Q. DO YOU AGREE WITH MR. JONES' STATEMENT THAT THE THREE NEW WELLS DID NOT BECOME ACTIVE UNTIL APRIL OF 1992 YET THE COSTS WERE INCLUDED IN THE HISTORICAL 1991 TEST YEAR?

A. Based upon Company records, the water treatment facility was placed into service in December 1991.

At that time, they had reached substantial completion on all phases of the project except the 3 wells and the chlorination system. Thus, all the improvements located at the existing water treatment plant no. 2 site were in service and being utilized. The construction of the wells had been completed, however, there were difficulties acquiring the necessary bacteriological clearance prior to placing the wells into service. After several rounds of sampling, the wells were cleared for service in 1992. Even though the wells were not cleared, the construction had been completed and Southern States had booked all of the plant in service.

Q. **MR. HARTMAN, DO YOU HAVE ANY ADDITIONAL ISSUES YOU WISH TO DISCUSS?**

A. Yes. I do not believe that, from an engineering standpoint, CIAC should be imputed on any of the margin reserve capacity. The Company has a duty to provide service to the customers when they apply. The imputation of CIAC is inappropriate because whether customers will actually hook onto the system is beyond the Company's control and they may never do so. Also, there is no guarantee that the CIAC levels which exist today, and thus would be

utilized to compute the imputation, will not be decreased by the Commission in the future. Under either scenario, Southern States would never be able to recover a portion of its prudently invested funds. Therefore, the imputation would be premised on two totally speculative events whereas the Company's duty to stand ready to serve is real and remains a regulatory requirement imposed on the Company under Chapter 367, Florida Statutes, and DER Rules and Regulations. Second, I have reviewed the fire flow requirements for the Deltona Lakes system and they appear to have been overstated in the original application. The original application stated fire flow requirements to be 2,500 gallons per minute for 4 hours. The appropriate fire flow requirement is 2,500 gallons per minute for 2 hours, not 4 hours.

Q. DO YOU AGREE WITH THE CONTENTION THAT NO MARGIN RESERVE SHOULD BE ALLOWED FOR THE SALT SPRINGS WASTEWATER SYSTEM SINCE IT HAS EXPERIENCED NO GROWTH IN THE PAST 3 YEARS AND IS ESSENTIALLY BUILT-OUT?

A. No. The Salt Springs system is not built-out and although it may not have experienced any growth in the past 3 years, there are still vacant lots to be

occupied and Adventure Resorts of America is considering an expansion of their RV park at this time which would provide a substantial increase in the number of connected ERC's for both the water and wastewater systems.

Q. DO YOU AGREE THAT THE WOODMERE WATER AND WASTEWATER SYSTEMS SHOULD RECEIVE NO MARGIN RESERVE DUE TO LOW GROWTH RATE?

A. No. The SSU commitment report indicates that there are four current developments that either are in process or are beginning to connect to the Woodmere system. Thus, the service area does not appear to be built-out and as soon as the economy picks up, it is expected that growth will once again occur for the Woodmere system and it more than likely would exceed the 3.9% historical 5 year average indicated in the MFRs.

Q. DO YOU HAVE ANY USED AND USEFUL PERCENTAGES WHICH YOU WISH TO REVISE AT THIS TIME?

A. Yes. Through the discovery process, it became apparent that on the maximum day utilized in the determination of the used and usefulness of the Marion Oaks water system, there was a main break occurrence, and this unusual event should have been ignored. However, it is certainly a fact that

these things do occur and the utility must have sufficient capacity in order to continue to provide sufficient service and also manage these situations. If the May 14, 1991 maximum day is ignored, the next highest maximum day was June 16, 1991 in which 1,032,000 gallons of water were pumped to the Marion Oaks customers. For systems such as Marion Oaks, which have adequate storage, the source of supply must be able to meet the average daily demand during the maximum day. Thus, the average daily demand using the June 16, 1991 maximum day is 717 gallons per minute. The reliable well capacity with the largest well out of service is 1,000 gallons per minute, thus the revised used and useful capacity of the historical test year is 72% for the supply wells without the margin reserve. The finished water storage and high service pumps remain 100% used and useful, the hydropneumatic tanks' used and useful percentages remain the same, and the distribution system remains 31% used and useful excluding the margin reserve.

Q. DO YOU AGREE THAT THE DELTONA LAKES, SUGAR MILL, JUNGLE DEN, FOX RUN, PALMS MOBILE HOME PARK, SUNSHINE PARKWAY AND VENETIAN VILLAGE WATER

DISTRIBUTION SYSTEMS ARE LESS THAN 100% USED AND USEFUL?

A. No. These systems, like most of the other water systems in this rate application, could not provide service to existing customers with any less of a water transmission and distribution system. There may remain some vacant lots within these systems but they must be considered fill-in lots. Many developments never reach 100% occupancy and if the methodology that is being proposed by Staff is utilized, the utility would never receive a return on its prudent investment. In addition, I do not understand why these systems have been singled out as being something less than 100% used and useful when they have similar characteristics as many other systems that are included in this rate application and that have been considered by Staff in previous cases to be 100% used and useful. For example, in the 1990 rate case (Docket No. 900329-WS), the Staff recommendation indicated that the Fox Run system was 100% used and useful. I also question whether electric or telephone utilities are subjected to the disallowance for used and useful purposes of "fill-in lots." I do not believe they are and I do not see how such an

adjustment could be considered proper.

Q. DO YOU AGREE THAT THE SOUTH FORTY WASTEWATER TREATMENT FACILITY USED AND USEFUL DETERMINATION IS OVERSTATED SINCE THE CAPACITY OF THE SOUTH FORTY PLANT AND NOT THE SPRAY FIELD SHOULD BE USED TO CALCULATE THE CAPACITY?

A. No. The permitted condition of the South Forty treatment facility is limited to the capacity of the spray field site and hence that should be used as the denominator in the determination of the used and useful facilities. In addition, it should be noted that at one time this system had substantially higher flows due to one single customer that was lost in 1990, namely, Gold Bond Ice Cream. A refurbished treatment facility was brought in (the 75,000 gallon per day treatment plant), when the old facility was being overloaded due to the Gold Bond Ice Cream customer. However, not long after the refurbished 75,000 gallon per day plant was brought in, Gold Bond Ice Cream closed its doors, resulting in a dramatic decrease in flows. It should also be noted that this refurbished 75,000 gallon per day plant was probably acquired at a cost much less than it would have cost to construct say a 30,000 gallon per day

plant which otherwise would have been required to serve the existing customers besides Gold Bond Ice Cream. For these reasons, and as I indicated previously, the Company should not be penalized by a reduction to the prior use of its plant due to circumstances beyond its control.

Q. DO YOU AGREE THAT THE DELTONA LAKES, SUGAR MILL, JUNGLE DEN, FOX RUN, SUNSHINE PARKWAY, AND VENETIAN VILLAGE WASTEWATER COLLECTION SYSTEMS ARE LESS THAN 100% USED AND USEFUL?

A. No. As stated previously, these systems may have some vacant lots spread throughout their service area but essentially no less of a system could provide service to the existing customers, hence they should be considered 100% used and useful.

Q. DOES THAT CONCLUDE YOUR PREFILED REBUTTAL TESTIMONY?

A. Yes, it does at this time.

MR. HOFFMAN: Mr. Chairman, Mr. Hartman is available for cross.

CROSS EXAMINATION

BY MR. JONES:

Q Good morning, Mr. Hartman.

I'm Harry Jones with COVA. You and I have not had the pleasure of communicating before. We missed you in Apopka by one day, I believe. Most of the communication you have had with COVA has been through Bud Hansen, and most of the testimony that I'm going to question you on relates to things that he has provided.

How long have you been involved in consulting for water and sewer utilities?

A In the State of Florida?

Q Well, any --

A 16 years.

Q I see. And you have represented SSU most of the time that they've been in business?

A No.

Q But you have represented them for the last some number of years?

A I've been involved on a project-by-project basis for the past four years.

Q Four years, is that right?

A That's correct.

Q Have you had any contact with the predecessor company in Sugar Mill Woods, Twin County Utilities?

A I've had no direct contact with them. I had some contact with their engineers and Post, Buckley, Schuh & Jernigan. I think Mr. Weber was design engineer there, he is a friend of mine, and I know him quite well. And I had some other work relative to the Division of Land Sales transfer.

Q Were you at all involved in the acquisition of Twin County by SSU?

A Yes, I was. Only to the extent of the Division of Land Sales certification of looking at lots and growth and writing the report associated with the investment required for additional lots and growth, which is predicated upon the certifications of Dan Weber of Post, Buckley, Schuh & Jernigan and discussions with him relative to the facilities. Nothing associated with the actual acquisition itself, other than those aspects.

Q Then, are you aware that there are essentially two villages in the Sugar Mill Woods complex that are in the development condition, the first one being Cypress Village and the second one being Oak Village?

A I'm aware of the villages.

Q Are you aware that the Cypress Village was the first one that was started and now comprises perhaps 80% of the residents in Sugar Mill Woods?

A I have not looked at the system from a development standpoint. I've looked at it from a utility standpoint. So I don't know the percentages.

Q Are you aware that when those two villages were laid out, it was mandated that most of the lots were designed for single family residences, that each lot is approximately one-half to one-third acre? That's the question, I believe.

A Okay. Yes, I am familiar with the lot size and configuration, generally, from a utility service standpoint.

Q Then are you aware that along the golf course and in certain other areas there are estate-sized lots?

A I'm aware of various lot sizes. I can't classify them.

Q Well, then you may not be aware, but are you aware, that for most of the estate-sized lots, the builder put in private Wells, or the residents?

A I know that there are some wells in existence, private wells in the area that I've been told. I personally have not inspected private wells in the area.

Q Well, for the record, according to SWFWMD, there are 250 private wells in Sugar Mill Woods and I don't know how to make a question out of that.

COMMISSIONER EASLEY: Just ask him does he know that.

MR. JONES: Do you know that?

COMMISSIONER EASLEY: Or would he accept that, subject to check?

Q (By Mr. Jones) Will you accept that as being valid?

A I have no reason to accept or reject that. I have knowledge that there are some wells in the area. I have no knowledge of how many.

Q Then are you aware that all of those large lots have one-inch meters?

A I have not looked at each service connection. I am aware that many lots in Sugar Mill have one-inch meters.

Q All right. In the 1989 rate case, this piece of paper which I'm holding in my hand was agreed to by all the parties involved and it lists the total number of ERCs in Sugar Mill Woods and breaks them down by different sized lots and so forth. Are you familiar with this?

A I do not have that in front of me.

MR. HOFFMAN: Mr. Chairman? I think Mr. Jones ought to identify what document he's referring to for the record.

MR. JONES: Unfortunately, I don't have extra copies to pass out.

COMMISSIONER EASLEY: Well just tell us what it is and where it came from.

MR. JONES: Well, it was a part of the testimony prepared by COVA in the 1990-91 rate case. I may have quoted the wrong year. And it related to coming up with a more precise number of ERCs than had originally been presented in the rate case at that time.

COMMISSIONER EASLEY: Why don't you let his attorney see it and then he can give it to his witness and see if the witness knows enough about it to answer your question. (Pause)

MR. JONES: I'm sorry, I didn't have the opportunity to make copies of this.

Q (By Mr. Jones) As you looked at this one page, perhaps you noticed that there were slightly over 7,000 single family lots; did you not?

A The page reflects that number. The number I recall that we agreed to, and I do not recall -- and I do not believe we've verified the individual disaggregated components to equal the total, was 9,054 ERCs.

Q That's the figures at the bottom of the page, and what you're saying is you do not remember the 7,000 single family residence lots which are part -- make up part of that total?

A The exact number -- that's a page that I haven't gone back and checked and verified. So all I can say is that the sheet shows that value. The sheet you showed me shows that value.

Q That's correct. In my prefiled testimony, Exhibit 1, Page 1, which has to do with water ERC used and useful corrections, the figures from this page were incorporated in that, and further, we calculated from the MFRs what the average number of residential connections were for Sugar Mill Woods during the test year, which turned out to be 769 ERCs. In your analysis, were you able to validate a number that approximated that?

A Excuse me. If I may clarify your question, did you ask me if we verified that 700 or so ERCs were the present number of ERCs? My answer to that question would be that is not the number that we calculated as a present number of ERCs in the system. That number would be in error.

Q I'm sorry?

A That number would be in error if you're

talking about the total number of ERCs in that system.

Q Well, those were annual bills to customers divided by 12 months showing that number and --

CHAIRMAN BEARD: Mr. Jones, let me help you a little bit. When you're on the stand, you get to testify to your numbers and whether they're good, bad or indifferent. What you need to do now is, if you don't like his numbers, you got to try to attack those. Okay?

MR. JONES: The problem is I don't have his numbers.

CHAIRMAN BEARD: Are those numbers not available?

WITNESS HARTMAN: They're in all the filings.

COMMISSIONER EASLEY: One way you could possibly get there from here that I don't think would be a problem, if you have an exhibit that you can point him to that has those numbers on it, you can ask -- probably ask him what his corresponding numbers would be. That might get you there.

MR. JONES: Yes, I do have such an exhibit, and I thought I mentioned it. It's HCJ Exhibit 1, Page 1.

CHAIRMAN BEARD: Why don't you either -- do you all have that exhibit?

MR. HOFFMAN: I don't have it with me. I

think he's referring to something that's appended to his own testimony.

COMMISSIONER EASLEY: That's correct.

MR. JONES: Prefiled --

CHAIRMAN BEARD: Have you got a spare copy, by any chance, here?

COMMISSIONER EASLEY: No, well --

CHAIRMAN BEARD: Hang on a second. We're going to help you.

MR. JONES: Direct testimony as of October 5th, 1992. I was informed if anything was in the prefiled exhibits, I didn't have to bring extra copies of it. So I didn't.

COMMISSIONER EASLEY: I understand that.

MR. JONES: Forgive me.

COMMISSIONER EASLEY: That's all right. And normally you would be right, but I suspect that's what's happened is they just don't -- they have it now. Okay. I stalled long enough. He's got it now. Keep talking long enough something is going to happen, I guess.

CHAIRMAN BEARD: Us state employees always aim to serve, even on holidays. (Pause)

WITNESS HARTMAN: Okay. I have the "Direct Testimony of Harry C. Jones" in front of me.

Q (By Mr. Jones) Yes. And it's the Exhibit 1 Page 1, "Water ERC, Used and Useful Corrections"?

A I have in front of me HCJ Exhibit 1, Page 1.

Q Right. Paragraph 4, which is one sentence is the one to which I was I was referring. (Pause)

A I see where the value is in the exhibit. I disagree with the value, and in the method that arrives to that value. The assumption, evidently, commented on in this exhibit, is that a bill is one ERC.

Q In some previous testimony, I have a recollection that where customers had a meter for household usage and a meter for irrigation usage, that they would get two bills. Is this what you're referring to?

MR. HOFFMAN: Mr. Chairman, I'm going to object just to clarify the record and to ask is he referring to Mr. Hart -- some previous testimony of Mr. Hartman or another docket or what?

CHAIRMAN BEARD: Well, let's just forget the previous testimony because the context I took his question in was he says he disagrees with that methodology. And the question, as I understood it, was is your disagreement with the methodology because certain quote/unquote "bills" have two meters, that is to say one residential, one irrigation; and so if he'll

answer that question?

WITNESS HARTMAN: No. My disagreement is even broader than that. A bill is not directly reflective of an ERC, and the standard for conversion to number of ERCs is the American Waterworks Association standard and that's what is used in the annual reports that have been provided many times in this -- in these cases, and that is what's used.

COMMISSIONER EASLEY: Mr. Hartman, how is an ERC calculated?

WITNESS HARTMAN: On meter equivalents.

COMMISSIONER EASLEY: And a meter equivalent is not just a meter, not just a bill that goes to a meter?

WITNESS HARTMAN: That's correct.

COMMISSIONER EASLEY: What is it?

WITNESS HARTMAN: A meter equivalent is that -- is taking the meter by size and calculating the equivalent five-eighths by three-fourths-inch meters for AWWA standards. So if you have a one-inch meter, it would be two and a half meter equivalents or ERCs

Q (By Mr. Jones) Are you saying then that if I have a one-inch meter, which I do, that I have the equivalent of two and a half ERCs and then are you saying that I should get two and a half bills a month

instead of one?

A You're asking two questions, I believe. Can I answer one at a time.

Q One follows the other, yes.

CHAIRMAN BEARD: Yes, you may.

WITNESS HARTMAN: The first question is if you have a one-inch meter, do you have a meter equivalent of two and a half? And my answer to your question is yes. And I went in and researched this system. If you take 809-or-so-gallons per connection, divide by the standard default formula for ERCs, you get 2.29; go back in the record and you can find it as high as 2.7, the usage for a one-inch meter being as high as 2.7 ERCs. So the usage is varied between 2.29 and 2.7. We utilize 2.5, which is the standard.

COMMISSIONER EASLEY: Address the question about the bills.

WITNESS HARTMAN: No, I'm not -- no, first is the answer. The explanation is a bill is a bill, and I'm not intimidated -- I'm not trying to imply that you would get two and a half bills.

Q (By Mr. Jones) If most of the residents in Sugar Mill are on single-family lots and most of them have one-inch meters, and most of them then have the equivalent of two and a half ERCs, I guess is the right thing to say

there, you're agreeing that they would not necessarily all have two and a half bills for every month?

A My answer to you is no, they would not have two and a half bills, to my knowledge of utility systems. Typically, a company bills only on -- versus their billing cycle, number one; and number two, per connection, or client.

Q Well, in order to calculate used and useful, I think is the term, that has something to do with the number of ERCs versus the total that would be available, is that correct?

A That's correct.

Q But when you're looking at customers, does it matter whether it's a five-eighths meter, a three-quarter meter, a one-inch meter or whatever, except for the base facility charge?

A Yes. It does matter what size meter a customer has. First, my answer is yes. The explanation to the answer is it does matter. There's a draw on the system that changes and demands on the system change by meter size; quite apparent in the Sugar Mill system. When the irrigation system goes on, we have a drop in that system from 70 to 75 PSI. Historically, back in '89, it went down to 15 PSI. You can see what kind of a tremendous draw that system has. So there have been improvements put

in to bolster the pressure for that large draw.

Q In some of your filing you refer to 1989 figures, I believe March of '89, and came up with some average of whatever the number was. Do you remember that?

A If you could point me to -- in the filing where you're suggesting --

MS. ASHER-COHEN: Excuse me. Can I ask that he speak into the mike. We can't hear him at all over here.

COMMISSIONER EASLEY: Who?

MS. ASHER-COHEN: Mr. Jones, I'm sorry.

COMMISSIONER EASLEY: Speak into the microphone.

MR. JONES: Thought I was. I may be speaking out of this side of my mouth.

CHAIRMAN BEARD: That's okay. A lot of people in these rooms want to speak out of both sides of their mouth, so you know. The fact you stuck to one side is pretty good.

MR. JONES: I'm glad you said that. I think I'm referring to Page 35.

COMMISSIONER EASLEY: Of what?

MR. JONES: In response to --

COMMISSIONER EASLEY: No. Page 35 of --

MR. JONES: Oh, I'm sorry. Of his rebuttal

testimony. That's the only one I have.

COMMISSIONER EASLEY: Okay.

WITNESS HARTMAN: I have it. Page 35.

Q (By Mr. Jones) All right. Lines 9 through 16, I guess.

A I've read it, yes.

Q As I remember from the documents that you used to come up with these figures, that was March of 1989. Do you accept that?

A No, I don't. How I came up with these values-- those are the five maximum days in 1989. I do not know if they're all in March.

Q Are you aware that in March of 1989, the balance of the distribution lines for the water system were placed by -- Twin County Utilities actually started the thing, and I don't know under whose umbrella it was completed. But during 1989 and 1988, the balance of the lines for the second village were put in. Are you aware of that?

MR. HOFFMAN: Mr. Chairman, I sure hate to interrupt Mr. Jones. I just want to protect the record. I don't recall specifically if his statement is in his testimony, but I know his testimony is not in the record yet. So I guess, my objection is that that question presumes a fact which is not in the record.

CHAIRMAN BEARD: The number that you just quoted, you took that from where?

MR. JONES: Well, I cannot absolutely answer that and I'm not sure I can find it. I have it here somewhere.

CHAIRMAN BEARD: How about if you ask what the appropriate number is, first?

MR. JONES: He's quoted an appropriate number which I wanted to point something out about.

COMMISSIONER EASLEY: You're probably going to have to do that in your testimony, Mr. Jones. Make yourself a note to address it directly.

MR. JONES: All right.

COMMISSIONER EASLEY: And remember that all this free legal advice you're getting from two nonlawyers up here is worth exactly what you're paying for it.

MR. JONES: Well, what I'm leading to is something that I -- so, I'll move beyond that and say in 1989 your figures are as shown in your rebuttal testimony. Is that correct?

A Yes, they are.

Q Okay. And in 1991 the figures are as shown in your rebuttal testimony.

A Yes, they are.

Q Now, since I can't prove when it was in 1989 that they were doing all of this flushing and had all of this excess water consumption, I won't ask you that question.

CHAIRMAN BEARD: See, this is exactly the problem we get into when you have someone that takes the role of advocate and witness and balancing that, and even people experienced in this process, it's virtually impossible to do it and not cross the bounds.

MR. JONES: I'd like to introduce into evidence or whatever you call --

COMMISSIONER EASLEY: You want us to mark an exhibit for identification at this point?

MR. JONES: Yes, ma'am. That's the right words.

CHAIRMAN BEARD: Good.

MR. JONES: Maybe not the right words but words.

CHAIRMAN BEARD: We're working with you.

COMMISSIONER EASLEY: We've got the hawk leading the blind here, with a whole mess of nonattorneys.

MR. JONES: While these are being passed out can I make a statement that would lead you up to this?

COMMISSIONER EASLEY: No. You can ask a

question.

MR. JONES: Of whom can I ask it?

COMMISSIONER EASLEY: The only one you've got is the witness.

CHAIRMAN BEARD: Is it a procedural question?

MR. JONES: I'm not sure what "procedural" means.

COMMISSIONER EASLEY: No, it's not. He wants to lead up to this exhibit, and you're going to have to ask the witness a question about the exhibit to do it.

Q (By Mr. Jones) Before we go into the details of that, Mr. Hoffman, are you aware that in the spring of 1991, because of a shortage of water throughout the SWWMD water district, that water restrictions were put on most counties within their district?

A I am generally familiar with the water use caution area, which the southwest Florida Water Management District imposed upon a large portion of southwest Florida and the water restrictions in the severe caution areas, yes.

Q Would you accept the fact that Citrus County was one of those counties that was involved?

A From my recollection, Citrus County is one of the counties that was involved in a regulatory water restriction consideration. And to my knowledge the

district imposed water restrictions in 1991 in that county. And how each entity responded to those restrictions, I do not know.

Q Were you aware of the fact that one of the restrictions for Citrus County, and I think for most counties in this water restriction, related to automatic sprinkler systems, of which Sherman Woods has almost 100%?

COMMISSIONER EASLEY: Would you believe?

MR. JONES: Is that was too complicated?

COMMISSIONER EASLEY: No. Just ask him a question, "Would you believe?"

CHAIRMAN BEARD: Would you believe?

MR. JONES: I said "are you aware?"

COMMISSIONER EASLEY: Oh, I beg your pardon. I missed the "are you aware."

MR. JONES: I said so many other words that they got missed.

A I'm aware of the time periods for irrigation that were laid out. I don't know if the regulations addressed automatic sprinkler systems or not.

Q Well, then, perhaps, you're not aware that the automatic sprinklers were only supposed to be used between the hours of six in the morning to nine in the morning.

COMMISSIONER EASLEY: Mr. Jones, you're getting awful close to testifying again now.

CHAIRMAN BEARD: You really are getting close; you are.

COMMISSIONER EASLEY: I was trying to be --

CHAIRMAN BEARD: Your turn is going to come.

MR. JONES: Well, let's strike that question. May I do that?

COMMISSIONER EASLEY: You did good.

CHAIRMAN BEARD: You sure can. You're starting to act like a lawyer and that scares me. (Laughter)

COMMISSIONER EASLEY: Do you wish to mark this exhibit, Mr. Jones?

MR. JONES: May we?

CHAIRMAN BEARD: Let's mark this as Exhibit No. 102, and we'll call this -- the short title, "Petition for Variance."

COMMISSIONER EASLEY: Watering restrictions.

CHAIRMAN BEARD: Watering restrictions.

(Exhibit No. 102 marked for identification.)

COMMISSIONER CLARK: Mr. Chairman, I'm starting to take offense that your maligning attorneys.

COMMISSIONER EASLEY: I don't know why you waited this long to take offense at it, he's been doing it for years.

COMMISSIONER CLARK: Well, it's just sort of building up.

CHAIRMAN BEARD: Well, my apologies. I just thought I was so maligned for so many hears as a school teacher that I'm just trying to catch up. Not here, but in other places.

MR. JONES: We engineers get maligned, too.

CHAIRMAN BEARD: You know, the old story, "if you can do; if you can't, become a teacher." I missed all that.

COMMISSIONER EASLEY: Moving right along.

Q (By Mr. Jones) In looking at your testimony on Page 35, as we talked before, you note that the water system ranged from 1.833 million gallons per day to 1.869 million gallons per day and average, so and so. Would you accept that once this -- whatever it is we did with SWWMD, Exhibit No. 102, could have had a material affect on the water consumption in Sugar Mill Woods?

A Yes. One of the factors that impacts water consumption is the use of water by the customers, of course. And with a regulatory water restriction, normal use is knocked down to a lower use.

In this test year for this system, the used and useful also was knocked down due to the water

restriction from what the used and useful was before.

Q Yes, sir. Thank you.

A I have a problem with that concept, though. If you have to build it for the historic usage for several years, and have a regulatory requirement and have to knock it down to used and useful, I have a real problem with that.

Q And there's, perhaps -- and I shouldn't say this so I won't.

I'm still having trouble with your analysis of the used and useful capacity for the water distribution system, which is spelled out in your rebuttal testimony on Page 56.

COMMISSIONER EASLEY: It's contagious. You need to ask your question.

MR. JONES: Yes. I am. Maybe.

Q (By Mr. Jones) Do you not agree that the things that are being done in Sugar Mill to reduce water consumption makes some of this -- some of these calculations subject to question?

A Yes, from the standpoint that it would increase the used and useful in the future because it was under a regulatory requirement to knock down the consumption. You know, these -- when you're looking at the overall -- oh, are you talking about ERCs? Excuse

me.

On the ERCs, I don't think there's a question of the 2.5 value. In fact, the Post, Buckley, Schuh & Jernigan design parameter from Mr. Weber is 950 divided by 350 is 2.71. Our calculation was 2.29. The one inch is 2.5. The hydraulic analysis done by Post Buckley into this system, and then the computerized hydraulic analysis conducted by our firm, indicates additional transmission and storage facilities are required due to the high use per ERC.

Q If the distribution system is capable of handling 9,054 residential users, and if currently, it is handling 1,845, and my numbers may not be 100% accurate, how can you say that it is 47% used and useful when those two numbers calculate to a much lower percentage?

A My first point is, I disagree with -- you're saying the 9054 is the number of connections. It's the number of ERCs. And then you apply, in the numerator, the number of connections divided by the number of ERCs, and then you will calculate a much lower number. I would agree with that. But that is incorrect. The numerator and denominator, to calculate a percentage mathematically should have the same units. The units should be ERCs. And if so, if you have the units of

4,291 divided by 9,054, which are both in ERCs, give you the percentage. And I disagree with mixing connections with ERCs.

Q Do you remember in the previous rate case where the 9054 was agreed to, wasn't the concept of one ERC per residence in Sugar Mill Woods also agreed to?

A I do not know of that.

Q All right. Obviously, you can't prove that. So, I think that's correct.

Somewhere else in your testimony, we're talking about the amount of water available, and you have indicated that there are essentially nine wells, and that they are delivering 4,800 gallons per minute at -- whatever their rating is. Is this correct?

A That's correct.

MR. HOFFMAN: Mr. Chairman, could you ask Mr. Jones to advise what page he's referring to in the testimony?

MR. JONES: I think it's Page 59 in the rebuttal.

MR. HOFFMAN: Thank you.

A The values that you stated, and my answer is yes, that's correct. The values you stated, specifically, you can find them on the F-5 Schedule 0567 Page of the water MFRs, and they're Lines 11, 12

and 13. Shows the total installed well capacity is 4,800 gallons per minute, you're correct.

Q (By Mr. Jones) Are you aware that three of the newest wells, the 600 gallon-a-minute wells, did not officially go on stream, in other words, were not approved by whichever agency has to approve their going on stream, until April of 1982?

A If you change your question to '92.

Q I'm sorry, '92.

A I'm aware that the construction and substantial completion of the wells was done in 1991. But bacteriological clearance of those wells were not achieved through FDR until 1992. There's a proposed rule from the Florida Department of Environmental Regulation that addresses this Chapter 17-555, proposed rule, final draft, Pages 5 and 6, that finally they're going to clarify this issue under Disinfection Part B, Line 12 -- Line 11, excuse me, to Line 20. It addresses now the 15 minutes disinfectant contact time in the new rule.

Q Then is it not correct that prior to April of 1992 there was only the equivalent of 3,000 gallons of water per minute from the wells which were feeding into the system?

A That were cleared bacteriologically, yes.

The plan at that site plant improvements were cleared and were in use. Just the wells were not.

Q Right. Is it not a fact that a pump which is nominally rated at 600 gallons a minute at 80 psi, is capable of producing perhaps up to 50% in excess of that rating as the pressure drops toward zero?

A Yes.

Q So is it not possible, then, that even when we only had 3000 gallons of water available, in a sense, we may have had as much as 4500 gallons?

A At a reduced pressure, yes. There's something called -- I agree -- there's something called "pump curve," as you know. And it's the quantity of water coming from the pump increases as the pressure decreases. But also the pressure in the system decreases.

Q Then would it not be correct to state that the current 48 gallons -- 4800 gallons per minute might rise to a level of 7200 gallons, if my figures are correct?

A At some pressure level, if they all can come on at the same time. It would be a matter of conjecture.

Q When we only had 3000 gallons of water available -- a minute of water -- was not our fire flow

in jeopardy?

A Fire flow ratings are at 20 PSI. And as you stated before, typical customer service is at 65 PSI or so.

COMMISSIONER CLARK: Is that a "yes" or "no"?

WITNESS HARTMAN: Well, at a peak, at one of the peaks that I saw on a chart in 1989, I think it would be very marginal, depending on where the fire was, whether the fire at 2500 gallons per minute could have been served in that system in 1989.

COMMISSIONER CLARK: I still don't know if the answer is "yes" or "no."

WITNESS HARTMAN: In 1989 the answer is "yes" in certain areas.

COMMISSIONER CLARK: And "no" in others?

WITNESS HARTMAN: That's right.

COMMISSIONER CLARK: Okay.

WITNESS HARTMAN: Because we have a hydraulic analysis of the entire system, and you have for look at the fire flow ratings at various areas. And I'm knowledgeable of that, so I'd have to -- it's not just a pure "yes" or "no" answer. I wish I could just do that.

Q So now, in 1992 with additional wells on there and with the potential for 7200 gallons a minute

at reduced pressure, then we're in pretty good shape regarding fire flow; do you agree with that?

A The purpose of the additional wells was to increase the level of service, which was not as -- the pressure ratings were dropping way low. And also to provide for fire protection and meet the needs of the system, the customer demands on that system. And yes, those wells were designed to do that and they should be doing that, once they're in full operation.

Q I'm going to go back now to a couple more exhibits that I furnished in my direct testimony, which I believe you have there.

COMMISSIONER EASLEY: Identify specifically which ones.

Q (By Mr. Jones) Please refer to HCJ, Exhibit 2, Page 1.

A Yes.

Q This is a page from a book put out by the Insurance Service offices, is that correct?

A That's correct. I'm familiar with this.

Q Okay. And looking at those fire flow requirements, does it not appear that Sugar Mill Woods would fit into the ten feet or less distance between buildings and 1500 gallons per minute needed fire flow?

A This, from the Insurance Services Office

administered out of Jacksonville, you would read that to be the case. But the Utility is required to meet the County ordinances for construction and you would have to go to the County ordinance, because that would supersede the general ISO ratings.

Q If you will refer to HCJ Exhibit 2, Page 2, which should be the next page.

A Yes.

Q There is a letter there addressed to Mr. Andy Woodcock of your Company, and the subject is Sugar Mill Woods fire flow requirements. And it is signed by John Reeves, who is the Deputy Fire Marshal. And was this letter in response to a request by Mr. Woodcock?

A Yes. Clarification, Mr. Woodcock works for me.

Q Yes, sir.

A He asked for clarification of fire flow in an area. And in that area, based on the, just looking at that area, the required fire flow was 1500 gallons per minute. But he also, based on this letter, which he did not -- I don't think the Deputy Fire Marshal looked or considered the entire development and the entire fire flow requirements of the entire system.

He did state in the second paragraph, "I would like also to take this opportunity to make you aware of the commercial corridor," obviously showing

there is another area to be concerned about. And he doesn't state what the fire flow would be for that area.

So, what you've got here is the fire flow for an area in response from one of my engineers. My opinion is you have to defer to the County ordinance for the entire system for system needs on fire flow.

Q I have a copy of the County Ordinance 86-10, which I would like to distribute at this time. (Pause)

CHAIRMAN BEARD: This will be Exhibit 103. Short title?

MR. JONES: "Citrus County Ordinance 86-10."

CHAIRMAN BEARD: Okay.

(Exhibit No. 103 marked for identification.)

Q (By Mr. Jones) If you will turn to Page 5 -- I'm sorry, 4 -- of this exhibit. (Pause)

And you look at the chart, which is in Section 5, you'll find that it is somewhat confusing. Do you not agree, Mr. Hartman?

A No. Section 5, Page 4, of the ordinance to me is quite clear, saying that what the total fire flow requirements are for a system for multifamily and commercial. There's a schedule there; you just read it off the schedule, to me.

Q Are you aware that at the time that SSU was

in a negotiation with Twin County Utilities that this ordinance was brought up and it was stated by the then President of SSU that this did not apply because they were grandfathered in?

MR. HOFFMAN: Mr. Chairman, let me just object again on the same basis.

I think it would be fine if Mr. Jones phrased his question in the form of "Isn't it true?" But I think the way he has phrased his question it presumes facts which are not in evidence.

COMMISSIONER EASLEY: Well, Mr. Jones, you're testifying again, is what you're really doing.

MR. JONES: Sorry.

COMMISSIONER EASLEY: You get a chance to say these things in response.

MR. JONES: I was going to ask someone that yesterday but it wasn't part of his thing and I thought I would be out of order.

CHAIRMAN BEARD: Well, that's exactly the point. What you're doing now is you're cross examining his testimony and a little bit later on you're going to get to put yours on.

MR. JONES: Then scrub what I just said.

COMMISSIONER CLARK: Well, let me ask you a question.

You're asking him if he's aware that Sugar Mill Woods is exempted from this ordinance because they have been grandfathered in?

MR. JONES: Well, I'm asking if he's aware that an officer of Southern States Utilities made that statement to us.

COMMISSIONER CLARK: All right.

MR. JONES: And I think he would have to answer "no."

A My answer to your question is, no, I'm not aware of that. And secondly, as an engineer, I'm bound to comply with the ordinances and the public health, safety and welfare requirements. And so, I'm bound to comply with the ordinance.

COMMISSIONER CLARK: Wait a minute. If you have a system that's been exempted from the ordinance, you're not bound to comply with it as an engineer.

WITNESS HARTMAN: You're bound to comply with the minimum design standards, yes, you are, even if you -- if you exempt a system totally from any fire flow needs and you have fire hydrants out there, as an engineer, your manual of practice would say that you would go back to the Standard of Practice for Water System Design, which would be Linsey and Franzini, which is the reference --

COMMISSIONER CLARK: Which may not be what the ordinance requires, is that correct?

WITNESS HARTMAN: Would not be what the ordinance requires. But without my knowledge, I did not know if it's true, false or otherwise. I don't know that this system is grandfathered. To my knowledge it is not. I have seen no document that says it is, so I would have to go by the ordinance. But if there is a grandfathering, if you say there's no ordinance, you are bound by your standard of practice.

COMMISSIONER CLARK: Okay.

Q (By Mr. Jones) The almost last paragraph on Page 4, which starts out, "Alternate system," does this not indicate that the letter from Fire Marshal Reeves is valid for Sugar Mill Woods?

A No. The context of the letter, my understanding of the context of the letter was not an alternative delineation; rather, it was a -- and it wasn't from the Chief, it was from the Deputy Chief. It was a determination request of an area. So I have a difficult time saying that it complies with that paragraph.

Q Are you saying that you don't accept the Deputy Fire Marshal, you only accept the Fire Marshal? (Pause)

A Well, first, it says in the ordinance that the Division Chief would do it, would provide this alternate system. And I don't think there's a system being provided, there's a number provided for an area.

If you're looking for an alternative system, you would think there would be a different schedule provided.

COMMISSIONER CLARK: Mr. Hartman, what you're saying, I think, is that paragraph appears to be meaningless. It sets -- there's a standard set, and it says if you use an alternative system, you still have to meet the same standards, right?

WITNESS HARTMAN: Well, I'm not saying that it's absolutely meaningless. I'm just saying that -- I'm saying that there's a standard set and you would have to petition or request some formal action to change that standard; and I don't think that has been done. I think it was just looked at an area. And in any area, fire flows change from area to area.

CHAIRMAN BEARD: About how much more do you have?

MR. JONES: Beg your pardon?

CHAIRMAN BEARD: About how much more cross examination do you have?

MR. JONES: Very little.

CHAIRMAN BEARD: Okay. Go ahead.

MR. JONES: Sometimes it's takes longer than very little, but very little.

Q (By Mr. Jones) Did you receive a call from the Fire Marshal within the last two weeks about this question?

A Chuck Bliss, of my firm, has discussed this issue with the Fire Marshal back and forth, I believe, historically. And there's, I believe, there's a memoranda dated January 21, 1991, from Mike Connell, the Fire Marshal, to me and to Hal relative to the master plan for this system. And Mike Connell, the Citrus County Fire Marshal, stated that the fire code requirements would be enforced for the development, for the total development the size of Sugar Mill Woods; that 2500 gallons per minute for a duration of five hours would be required.

I mean, this is the -- and this was sent, confirmation of the phone call to the Fire Marshal was made January 18th, 1991. And if this was not the case, we asked him to respond in writing; there was no response.

So what you're doing, this 1500 gallons per minute is relative to a specific little area. The Fire Marshal, which is this man's boss, has informed our

firm verbally, we have a memo on it, and we confirmed it in writing back to him that it is 2500 gallons per minute. So I think it's pretty clear.

Q Wasn't 1991 a year when there was very little water pressure available to the system in Sugar Mill Woods?

A 1991 is the test year for this case.

Q Yes, because of --

COMMISSIONER CLARK: Again, is the answer "yes" or "no"?

WITNESS HARTMAN: Oh, I'm sorry. The 1991 -- excuse me, I'm sorry, I apologize.

In 1991 the usage was down and with the same capacity, so more water was available than in 1989, where the usage was much higher and less water was available. So the answer to your question is no.

MR. JONES: I have no further questions at this time.

CHAIRMAN BEARD: Let's take 15 minutes and then we'll come back and pick up.

MR. ARMSTRONG: Commissioners, if I could, I just have a housekeeping matter.

Yesterday we had Exhibit 80 that Public Counsel had offered.

CHAIRMAN BEARD: I've got it right here.

MR. ARMSTRONG: I've worked with Public Counsel -- the Company has worked with Public Counsel, and we have a replacement Exhibit 80, which I have spoken with Staff and Public Counsel and the only person I haven't cleared this with is Mr. Jones. But they all agree that we could place this new replacement Exhibit 80 into the record.

What it is is the first two pages of that exhibit and two additional pages, which we did determine that Price Waterhouse had provided these first two pages.

CHAIRMAN BEARD: Why don't you put it "X 80(R)"; and then when I get it up here and we come back from break, we'll get it taken care of.

MR. ARMSTRONG: Okay. Thank you.

COMMISSIONER EASLEY: And give a copy to Mr. Jones.

(Brief recess.)

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COMMISSIONER EASLEY: All right. Ready? We'll go back on the record. And I believe, Mr. Twomey, did you have -- I beg your pardon, Colonel, did you have any cross?

MR. TWOMEY: No, ma'am.

COMMISSIONER EASLEY: Thank you. Mr. McLean.

MR. McLEAN: Seaman McLean, if you please.

COMMISSIONER EASLEY: Seaman McLean, first or second class?

MR. McLEAN: Well, third.

COMMISSIONER EASLEY: Seaman third, do you have cross for this witness?

MR. McLEAN: Yes, ma'am.

COMMISSIONER EASLEY: Excuse me just a minute, Mr. McLean.

MR. ARMSTRONG: Commissioner, before the break we had said that we would talk to Mr. Jones and make sure it was okay with him and he has no problem with that revised Exhibit 80. So what we would request is that the prior previously submitted Exhibit 80 be deleted and that the new Exhibit 80 be identified. We don't have any opposition to the motion to move that into evidence.

COMMISSIONER EASLEY: And the court reporter has the copy of the revised Exhibit 80 and without objection Exhibit 80 is moved into evidence.

(Exhibit No. 80 received into evidence.)

MR. McLEAN: Why don't we show that as a joint motion.

MR. ARMSTRONG: That's fine.

COMMISSIONER EASLEY: Now, Seaman Third.

CROSS EXAMINATION

BY MR. McLEAN:

Q Mr. Hartman, did I hear you say toward the end of your testimony that water consumption seemed to have been somewhat lower in 1991 than it was in previous years? The question really refers more to what you said than what you wrote.

A Yes. In 1989 the -- this is on the five-day -- the average of the five-day maximums. The average of the five-day maximums in -- maximum days, in 1989, was greater than the average of the five day maximum days in 1991.

Q Do you know whether people irrigate their lawns more or less when it rains a lot?

A Typically, people irrigate their lawns less when it rains a lot. That's the standard of my knowledge.

Q Sure. Can you -- not an engineering standard, is it?

A No.

Q Okay. Can you say with certainty that that is not an explanation for the consumption being less in 1991 in Sugar Mill Woods than in other years?

A My understanding of your question is that can I state with certainty the reason that the consumption

is less in 1991 than in previous years is due to rainfall?

Q No. Can you state that it's not rainfall?

A There are many factors. I can't -- I can't say that there is a causal relationship of any single factor and I don't know that.

Q All right. Let's turn to the exhibit you were just handed.

A Exhibit I was just handed?

Q Yes, sir. I hope you were handed one. It should say "OPC 210-R," which I suggest is a short title.

COMMISSIONER EASLEY: It will be marked as Exhibit 104.

(Exhibit No. 104 marked for identification.)

Q (By Mr. McLean) Mr. Hartman, is this the same -- look to Page 5 of your rebuttal testimony, if you would. Do you have it, sir? Page 5?

A Yes.

Q Now, referring to the exhibit and to the No. 210, which appears there on Line 11 of your testimony, is that the same interrogatory that you refer to in your testimony?

A I don't -- the labeling is different. I don't -- the labeling on what you gave me is a revised August 24th, 1992 Interrogatory No. 210-R with an

Appendix 210-R-A prepared by Gary Morse.

Q All right, now, isn't it true that the Company declined and objected to Interrogatory 210 and that 210-R is the revised response which was issued after the prehearing officer ruled that that interrogatory should be answered?

A I don't know all the rulings in this case.

Q Okay, well look to Page 11 -- I'm sorry, Line 11 of Page 5, you used the word "response." What response were you referring?

A I was referring to -- and I don't -- I'll have to find it here, but it looks similar to the table that you have attached to this exhibit.

Q Okay. Now, speaking of that table, is that the table which you were referring to on Page 5?

A I believe it is. I have -- I would have to check -- but, subject to check, I believe that it is.

Q Okay. You have no reason to doubt that it is, correct?

A I don't see anything on it. I just don't have any reason to doubt it.

Q Okay. Now, is it a fair interpretation of that interrogatory that the Citizens ask the Company to provide the projected number of ERCs for each of the Company's systems for the years 1992, '93 and '94?

A Yes.

Q Okay. And do you think that projected number would be driven by growth? Wouldn't they be one in the same thing?

A It may or may not. If this came from capital planning financing document -- I don't know exactly where it all came from, but it would be dependent on where this came from.

Q Sure. So what you're telling me is the number of ERCs which the Company thought they would have in 1992 depends on what purpose they thought the question would be asked?

A No. That's not what I said. What I said was that it depends on what document it would come from, whether it is necessarily growth or not. In some documents that you prepare of projections of ERCs, et cetera, for internal purposes for financing, one -- I have seen companies -- and this will be generic because I have no knowledge here of this Company, of all the dealings, you know, that would be involved, but would have a more conservative growth projections such that they can attain those things. It may not be reflective of, you know, the systems.

Q Well, the question is, I think, posed by Interrogatory 210, tell me how many ERCs you're going

to have in 1992? And this was your answer, isn't it?

A This was not my answer. This answer, I would expect to be correct, was prepared by Gary Morse. And I've answered what I can to you.

Q Sure.

A I think you need to talk to him. I think it's correct. He's certified to it, and he can explain it.

Q Well, I may do that. Now, when you computed your margin of reserve, you relied on information to show that there would be a number of ERCs different than what this document suggests, didn't you?

A When I calculated the margin reserve, I looked at the past five-year average and projected that either for 18 months or for 12 months.

Q Now, Mr. Hartman, if you received the question: Please provide the projected number of ERCs for each of the Company's systems for the years 1992," would you have provided that five-year growth data?

A That's what -- you know, I can't say what the thought process was for this interrogatory, but I -- if I was asked that, I would provide it, you know -- if it came to me, I would have provided the five-year averages I projected.

Q So you can't say why the Company didn't provide that, assuming they didn't, correct?

A No, I cannot -- this is not an interrogatory prepared by me, and I assume it to be correct. It's certified to and there's a rationale for it, and I think you're talking to the wrong witness on this one.

Q Perhaps, we'll see. Now you criticized Ms. Dukes to some considerable extent -- Ms. -- I'll get it straight, be patient.

A I went to Duke.

Q We noticed that. Ms. Dismukes, you criticized Ms. Dismukes for having relied on the information which was provided in Interrogatory No. 210-R, correct? Let me say, rather than criticize Ms. Dukes -- geez, what's your name, ma'am?

COMMISSIONER EASLEY: Why don't you refer to her as "my witness"?

MR. McLEAN: How about Kim?

CHAIRMAN BEARD: How about the Dismukes of Hazard?

Q (By Mr. McLean) You don't criticize her; you criticize the techniques she uses because she relied upon the information which was furnished with 210-R, is that correct?

MR. HOFFMAN: Chairman, I'm going to object. I think that's a mischaracterization of his testimony because I think his testimony is very clear that not

only did he dispute Ms. Dismukes' use of the data, but the way that she selected only certain systems out of the data.

MR. McLEAN: We'll get to that problem, too.

MR. HOFFMAN: I just want to make sure the record is clear.

CHAIRMAN BEARD: Are you mad at Ms. Dismukes for anything?

WITNESS HARTMAN: Excuse me?

CHAIRMAN BEARD: Are you mad at Ms. Dismukes for anything?

WITNESS HARTMAN: No, I'm not.

CHAIRMAN BEARD: Okay. So it's probably her testimony that you're taking exception to?

WITNESS HARTMAN: I'm rebutting her testimony, that's all.

CHAIRMAN BEARD: Okay. Go ahead.

Q (By Mr. McLean) That's a good question. You rebut Ms. Dismukes and one the reasons you use is because she relied upon what the Company furnished us in Interrogatory 210-R, correct?

A One of the -- it's correct that one of the items was this 210, and in my rebuttal testimony, Lines 11, on Page 5, Lines 11 through 22 on Page 6 talks about the documents that this may have been taken from.

It talks that the source of this data was a report prepared by the engineering department at SSU in March of 1992 to plan for capital improvements. This report was intended the for internal company use only in preparation for the annual meeting of the Board of Directors of the parent company.

As indicated in the assumption section of the report, it states "This report takes a macro view of the SSU system and makes general assumptions for overall growth projections."

The primary purpose of the projections was to provide a very conservative estimate of revenues. This is a financing-type situation for the purpose of obtaining capital financing. I think, you know, as described by Scott Vierima's prefiled direct testimony, the Company had a difficult time obtaining financing in 1991 due to the outcome of the previous rate application; thus the Company's efforts were to be very conservative.

Q Sure.

A So this data was pulled for that purpose, was my knowledge.

Q So what happened is the Citizens asked how many ERCs you going to have in 1992, and the Company handed us this. And you have done what you can in your

testimony to impeach that, haven't you?

A Well, I -- I disagree that the growth, as -- if this varies from what I have projected on the five-year average, I disagree with the difference. And we've already provided for the 1992, and part of 1993 in our five-year average of the historical trends, and that data was available in the MFRs.

Q The question recurs, sir, did you do what you could to impeach it, or did you not?

A I did what I could to, in my rebuttal testimony, to clarify that situation, and to understand the circumstances that that data was provided.

Q Do you know what "impeach" means, sir?

A My only knowledge of impeaching is an action to -- like impeaching the president, it's starting an action, a legal action of some sort.

Q Oh, I see what the problem is, okay.

A So I'm not -- to impeach a president is to start the action, not actually take him out of office.

Q Okay. Well, let me ask the question differently then. Isn't it true that when the Citizens asked the Company how many ERCs they would have in 1992, they furnished us with this document, and you have done what you can to put as much distance between yourself and this document as possible, correct?

A Well, what I provided in my rebuttal testimony is my knowledge of the situation.

Q Of course.

A And I -- I just want to make it clear and straightforward and honest. I mean that's exactly what the situation is. I'm not trying to do anything. I'm just trying to provide information. I'm an engineer.

Q But you say this report is wrong and shouldn't be used for the purpose that Ms. Dismukes used it for, correct?

MR. HOFFMAN: Mr. Chairman, let me object because I think we've had a couple of questions now that have been repeated and have been answered. And I think what Counsel is trying to do is indicate that the Company did something inappropriate in this case.

MR. McLEAN: Oh, yes, absolutely.

MR. HOFFMAN: And I think if you read the request, the Company fully responded to the request. Now, if the request had been: "Please provide the projected number of ERCs which the Company is using for the purposes of its used and useful methodology," I think that's a little bit of a different request. But I think the Company fully responded to this request.

MR. McLEAN: Could be. Maybe we should ask how many ERCs will you have when you're talking to your

bankers? How many ERCs are you going to have when you talk to the Commission, or who? What we asked is how many ERCs are you going to have in 1992? They apparently have two views of that depending on who they're talking to, only one of which was given to us.

COMMISSIONER CLARK: Mr. McLean, maybe it would be helpful to point to the exact language in his rebuttal testimony where he deals with that, because I -- it's of interest to me, if, you know, the Company provides projected number of ERCs which Public Counsel then uses. It seems to me that it's inappropriate for the Company to take issue with the use of those ERCs.

MR. McLEAN: Commissioner, the testimony that begins on Page 5, Line 14, and continues to Page 6, Line 22. There is no disclaimer written on the document we received to indicate that it's for any limited purpose whatsoever.

COMMISSIONER CLARK: And, Mr. Hartman, your criticism of the use of this data is that it was prepared for a different purpose?

WITNESS HARTMAN: And it's prepared for a different purpose and I don't agree with it.

COMMISSIONER CLARK: Well why should that make any difference? Why should there be a difference in the projected number of ERCs for purposes of a rate

filing and for purposes of letting internal Company use in preparation for an annual meeting? It seems to me they ought to be the same. Do you know any reason why they would be different? What the rationale for presenting two different numbers would be?

WITNESS HARTMAN: I only have conjecture.

COMMISSIONER CLARK: You can say I don't know.

WITNESS HARTMAN: I do not know the rationale, but I would have a, you know, a conjecture that in my business, when I'm working with my bank, and they ask me for loan purposes what my revenue is going to be next year, I'm very conservative. And then when I do my budget and do my capital financing and do my investment, it's what I think it should be. And so I want to make sure I can repay any loans.

COMMISSIONER CLARK: I don't think I followed that.

COMMISSIONER EASLEY: Well, let me, let me --

WITNESS HARTMAN: That's all I can say about my business. That's what I would do to make sure that I'm conservative, I can repay any loans that I would have. And I'm not carrying --

COMMISSIONER CLARK: Let me ask something different. Are these numbers that are projected, are they above or below what you project?

WITNESS HARTMAN: I do not know. I haven't gone through them all.

COMMISSIONER CLARK: So we couldn't make a conclusion that these are conservative and there's a reason for doing conservative numbers when you're doing -- dealing with internal financing? I mean we couldn't --

WITNESS HARTMAN: They appear to be lower. They appear to be lower. I can't give you the numbers exactly, though, is what I'm trying to say.

COMMISSIONER CLARK: Mr. Chairman, I think there needs to be an answer to this question.

CHAIRMAN BEARD: Go ahead.

COMMISSIONER CLARK: Whether it's this witness or another witness, I think the Company needs to state.

MR. McLEAN: At this point, I want to move to strike all of the testimony which seeks to impeach the data which they furnished us and strike any numbers which result from it. We were given the wrong numbers.

COMMISSIONER EASLEY: Before you rule on that, let me ask a question on this.

Mr. Hartman, I do not recall whether Mr. McLean in his objection or in his explanation of his objection referred to Page 6, Lines 7 -- the sentence that begins on Line 17 through Line 22. And when I read that, unless I don't understand the prior discussion, I see something

different in there from what I thought was being discussed. Is there a difference? Am I just either not reading it correctly or reading too much into it?

WITNESS HARTMAN: It says "She has compared the projected number of ERC's --"

COMMISSIONER EASLEY: Yeah, it's that sentence.

WITNESS HARTMAN: -- through the margin reserve period as filed -- compared to the ERCs in this document. That's all, you know, she says.

COMMISSIONER EASLEY: Well, no. That doesn't match the discussion, and the discussion went to the language on Page -- on Line 8, same page about being conservative in revenue projections, and the internal report in preparation for the annual meeting, language on the prior page. The sentence, the projected number for the margin reserve period being compared with the projected number based upon growth projections sounded to me like two different things, and I don't know whether I'm misreading that.

WITNESS HARTMAN: Well, they seem to be two different things.

COMMISSIONER EASLEY: Well, you wrote it. Now don't tell me it seems to be.

WITNESS HARTMAN: They are two different

things.

COMMISSIONER EASLEY: Okay.

WITNESS HARTMAN: And all I can do is go and look at -- let's pull, you know, a system and I can look at system by system. But I didn't do this, and I'm being cross examined, you know -- my rebuttal is that what we provided in the MFRs is a valid, reasonable technique for projecting the margin of reserve. And it's the past five-year average.

COMMISSIONER EASLEY: Well, do the ERCs -- maybe this is the question I need to ask. Do the ERCs projected through a margin reserve period come up with a different number for the same ERCs based on the growth projections?

WITNESS HARTMAN: I have not totalled all of these numbers. I could do that as a late-filed.

COMMISSIONER EASLEY: No. That would be totally inadequate since we're getting into this right now. I'm not even sure I'm asking the question the right way, but if there is a reason why, based on that sentence, that projected ERCs through the margin reserve period should be different from the ERCs based on growth projections I think that's important to know.

MR. McLEAN: Well, Commissioner, let me point this out: I would have no objection whatsoever if the

answer says, "Yes, Citizens, we've got two. We've got one that we use when we're talking to our bankers here." And that's pretty much the answer that we got. "We've got another one we used when we calculate margin reserve." But they didn't say that. They gave us only one and then they turn around and criticize us for having used it.

COMMISSIONER EASLEY: Well, the only trouble is the question on the interrogatory just asked for the projected number. Of course, you didn't know to ask for two different.

MR. McLEAN: It doesn't ask any purpose. If there were different numbers for different purposes, they should have told us that.

COMMISSIONER EASLEY: However, chances are pretty good since you weren't planning to loan them any money, they wouldn't have given you the financial statement ERCs, if indeed there were any different ERCs.

MR. McLEAN: That's what they gave to us.

COMMISSIONER EASLEY: I'm thinking of financial statements that you prepare for your bank and financial statements that you prepare for your annual meeting.

MR. McLEAN: We're not saying that Mr.

Hartman's testimony is incorrect, incidentally. Mr. Hartman is defending his testimony, as well he should. We're not saying that's wrong or unreasonable. We're saying there is a discovery of violation here and that one of the appropriate sanctions for discovery violation is to strike the testimony.

COMMISSIONER EASLEY: Okay.

MR. ARMSTRONG: Commissioners, may I make just two legal observations? I'm not going to be testifying if it's just two legal observations.

This wasn't interrogatory response, and what every witness and every person in our Company was told was if there is information there that responds to this interrogatory, you provide it. And that's what was done. And Mr. Morse did provide his response and he did come and speak about that fact; that there weren't numbers that he did or that he would do based on a duty to serve or a computation of a duty to serve what the margin reserve would be. That's the question that we're dealing with in ratemaking. What is the possibility of the margin reserve -- what's the possible connections that might be out there that you have a duty to be able to provide service to, and if you cannot provide that service, you might have some penalties imposed on you.

COMMISSIONER BEARD: Well, the interrogatory was asked and the Company responded, correct?

MR. ARMSTRONG: We agree. Right.

COMMISSIONER BEARD: It's my understanding -- I'm trying to keep this in real simple terms -- that the Public Counsel then used this information. And it is my understand that now this witness is rebutting Public Counsel's use of this information.

MR. ARMSTRONG: Yeah, I --

COMMISSIONER BEARD: Explain my way out of how you're going to rebutt that their using this information to do calculations that was provided by you.

MR. ARMSTRONG: I think the rebuttal just speaks for itself. I don't think the witness is saying anything other than when the Company is publicly traded and you're going to a bank and saying, "I want to get some financing from you." I think he's related to his own situation, which is what was discussed previously.

COMMISSIONER BEARD: But you gave information to them to use. This doesn't say, there's no qualifiers on this that I see. I'm looking, okay. It says, "Pending 210R8 contain the projected number of ERCs for each company systems for years '92, '93, '94." It doesn't say, "comma for use with financial analysis

and loans." It just simply says here they are.

MR. ARMSTRONG: I agree with you, Commissioner.

COMMISSIONER BEARD: And then they used those.

COMMISSIONER EASLEY: The difficulty I'm having is that -- and why I keyed in on that sentence, and I think maybe I finally came up with the right question.

I think what the witness has said is that not only did Ms. Dismukes use the ERCs -- the correct ERCs, but applied the wrong methodology to get to margin reserve, but they're saying that they wouldn't have used those -- the witness is saying he wouldn't have used those ERCs to determine it under any circumstance.

COMMISSIONER CLARK: That's correct. But the only point we're on now is the fact that they should be estopped from criticizing this witness for using these figures when they provided the figures with no caveat.

COMMISSIONER EASLEY: I'm not arguing that. I'm finally discovering what my problem was with the language in the testimony.

MR. ARMSTRONG: The legal argument that I would like just to raise this that the testimony that is here I don't believe is asking or disputing her use

of testimony but rather saying that she was selective in what she did use out of those nubmers.

MR. McLEAN: That is a separate point.

MR. ARMSTRONG: The testimony, that's the way it does read. He's disputing that she looked at 30 instances where the numbers.

COMMISSIONER CLARK: That's one aspect of it, but one aspect of the criticism is also that she used these numbers from this exhibit that you all provided.

COMMISSIONER BEARD: Can you identify for me specifically the portions that criticize the use of this data? I'm very narrow in that, and it's the use of these numbers for ERCs. Analysis, methodology, I'm not dealing with now. I'm dealing with the numbers that were provided by the Company with no caveat.

MR. McLEAN: You mean what evidence is linked to this?

COMMISSIONER BEARD: You just asked me to strike some stuff.

MR. McLEAN: Yes.

COMMISSIONER BEARD: Okay. And I'm specifically asking what it is that you want struck, because your first request was overly broad, and, if you leave it there, I'm going to deny it. If we can focus on the request as it's related to provision of

numbers by the Company that you relied upon, then I'm going to uphold it.

MR. McLEAN: I don't have the expertise to do it, but my witness did and it's in her testimony. She developed the margin reserve based upon the numbers which were given.

COMMISSIONER BEARD: Well, restate your motion. You tell me what your motion to strike is so I'll know what it is.

MR. McLEAN: I think I have a better suggestion, to tell you the truth.

COMMISSERION BEARD: Okay.

MR. McLEAN: I think it shocks the Commission's conscience to think that you're going to find a wrong margin of reserve because of a discovery violation, and that doesn't make a whole lot of sense to me. I think there are other sanctions available to the Commission for a company which, hypothetically, did not comply with enough enthusiasm for our discovery. And I think one of those things might be some penalty on return on equity when the time comes. I want to make that argument when the time comes.

I think this process is a little different from Circuit Court. I don't think you can turn your back on a good witness who offers you good testimony,

but I think there may be a more appropriate sanction in this particular instance, and I think it could be reflected in return on equity rather than you're having to find numbers which you know or which you think are incorrect.

COMMISSIONER BEARD: I'll give you a word of caution. One, very little shocks me anymore, okay, in here. No. 2, I might be hesitant -- I'm only speaking as one person -- to say that they were less than enthusiatic. What I would be more apt to say is you live with what you provided. You gave him the numbers. These are the numbers we live with. Then when we get past that, we'll go to talk. If you want to debate methodology and you want to debate selection of points that are inappropriate, all those things, we could debate those but we have a basis from which to start, which is the data provided by the Company with no caveat.

MR. McLEAN: Sanctions are up to you, Mr. Chariman, and up to the Commission, but let me say --

COMMISSIONER BEARD: You're not precluded from arguing that, no, don't get me wrong.

MR. McLEAN: Of course not. But to put the burden on us to come up with the right numbers doesn't seem to me too equitible since we've already come up

with what we thought the right numbers were based on what the Company gave us the first time.

COMMISSIONER BEARD: We're talking past each other.

COMMISSIONER EASLEY: Yes.

MR. McLEAN: I don't think I have the expertise to give the numbers that I would like stricken from the record.

COMMISSIONER BEARD: Okay.

COMMISSIONER EASLEY: That, I don't think, was the question. The question was what in the testimony did you wish struck because that was the motion. If you're thinking about withdrawing your motion in favor of something else, then I'm going to get in on the word of caution.

MR. McLEAN: Page 5.

COMMISSIONER BEARD: Okay. This is rebuttal testimony, right? Page 5.

MR. McLEAN: The testimony which is, I think, directed to her use of the data which were finished by the Company, runs from Page 5, Line 17 through Line 13 of Page 6.

COMMISSIONER EASLEY: Ending with the word "testimony"?

MR. McLEAN: Yes, ma'am. I'm sorry. And

then beginning on Line 17 -- I'm not sure about 17 through 22. I don't know whether that addresses the selective nature of Ms. Dismukes -- the alleged selective memory of Ms. Dismukes' criticism, or if directs itself more to her reliance upon the report which we were provided.

COMMISSIONER BEARD: I'm with you on Page 13 -- Page 6, Line 13. The one you say you're not sure about is what?

MR. McLEAN: Begins on Line 17 where it says, "She has compared the projected number of ERCs through the margin reserve period as filed in the Company's rate application as compared to the projected number of ERCs based upon the gross projections in Interrogatory Response No. 210." So I can't tell with that paragraph. Of course I would be more comfortable with it striken because I think it seeks to criticize or approach for having relied upon what the Company furished us.

With respect to the 17 versus 30, whatever that is, we don't object to that. We don't agree with it, but we don't object to it as a discovery --

COMMISSIONER BEARD: That's for debate. That's what this is all about, it's the debate.

MR. HOFFMAN: Mr. Chairman, may I offer up a

proposal?

COMMISSIONER BEARD: Sure.

MR. HOFFMAN: What I would propose is that the Company -- is that the Commission leave the testimony as is because I think that that portion of the testimony that counsel has referred to is somewhat factual in nature, and an inference can be drawn that there was a criticism of Ms. Dismukes. And I think that that's a correct inference. What I would suggest is, that the testimony stays as is and that the Company state on the record that it withdraws any implicit or express criticism of Ms. Dismukes for her use of the data.

COMMISSIONER EASLEY: Mr. Hoffman, I don't think that's what's at issue. I think what's at issue is the content of a discovery request.

COMMISSIONER BEARD: Wait. I respectfully -- and I want Public Counsel to respond but -- if the Company is saying that they will withdraw any and all criticism, whatever the proper terms are, of Ms. Dismukes' use of this data as the proper data to use in her analysis as the beginning point, I think that does speak to your motion to strike.

MR. McLEAN: No, sir. Ms. Dismukes' feelings are not hurt.

COMMISSIONER BEARD: I don't care about Ms. Dismukes' feelings, she's a pro. I'm talking about the data.

MR. McLEAN: What are we arguing about?

COMMISSIONER BEARD: We're arging about this is the base data or it isn't, right?

MR. McLEAN: Sir?

COMMISSIONER BEARD: We're arguing that this is the base data that she used upon to do her evaluation, and the Company is saying -- the Company criticized that. They provided the data and then they criticize that. If they are saying, if they are willing to publicly state on the record that they withdraw any and all criticism of her use of this data as the basis upon which she did her evaluation, I don't understand what the problem is.

MR. McLEAN: Because they rely on data that they could have but did not give to us. They are building their case on data which they should have provided to us when this discovery response was made.

COMMISSIONER BEARD: Well, at the risk of being lawyerly, it would appear that we take this one -- and correct me if I'm wrong, Commissioner -- but we take this and deal with it, and then perhaps we have to separately deal with their use of data that was not

provided. Am I getting overly complicated?

COMMISSIONER CLARK: Well, to me, I guess, I see it as this being a broader issue, and I think what Mr. McLean has suggested is don't strike the testimony but take it into account as you assess the credibility of information you have been given, and the care with which discovery was responded to and the case was put together. And for that reason, I would not strike it.

I think the fact that she relied on data provided by the Company is clear, and that the Company shouldn't be heard to criticize her on that point. To me it's a broader issue.

You have a situation where you have an allocation of an insurance expense that was not disclosed because somebody had a different view about what "allocated" meant. The word he used was "assigned." But the point is, I think, when you get discovery requests sometimes you need to not just look at what's requested, but what may be meant by the request. And I'm concerned about that; I'm concerned about the fact that included in advertising expenses were expenses that clearly should not have been included, and also in the billing for legal services. We had some that were a mistake, and it is troublesome to have that occur.

MR. McLEAN: Commissioner, I can represent that later in this case we will again address the issue of discovery compliance.

COMMISSIONER EASLEY: Well, I've got to get in on this one.

COMMISSIONER CLARK: Is it your request now that we sort of look at the care and the compliance with discovery requests as a broad issue?

MR. McLEAN: No, ma'am. My request at this point is that you strike this testimony and any reliance of the Company on that testimony. Failing in that, I think if we what Commissioner Beard suggest, what Chariman Beard suggests, then you will have provided no incentive whatsoever for the Company to scrupulously follow their requirements under discovery.

MR. ARMSTRONG: Commissioners, if I may?

COMMISSIONER EASLEY: Before you do, I've got to tell you, I'm coming to this particular argument with a little bit of a built-in bias because I was a Prehearing Officer. And if we're going to get into how who did what on discovery, I've got to remind both parties that I had to scold both parties about their responses on discovery. I just thought I'd mention that, that if we're going to hold people's feet to the fire on discovery, it may be both sides of that fire.

MR. McLEAN: To the extent that the Company relied on data we provided them in violation of discovery, we surrender.

COMMISSIONER EASLEY: I'm just mentioning it, Mr. McLean

MR. ARMSTRONG: And if I may, just to make sure the the record is straight, and I think I did address this yesterday, the Company provided discovery responses, discovery document production requests, and interrogatories in the thousands, in this case and in anther cases. In the thousands. And the information provided, I think, if you look at the last cases information was provided and in this case, you'd see significant, significant differences of information.

Every effort that was humanly possible was made to make sure that the information provided answered the question. It was reviewed to the extent possible a couple of times to try and make sure they were responsive. I think Public Counsel can also ask if they feel there isn't a full response for further information, and they could have done that since a lot of these interrogatories were seen and were asked in May and the responses were provided in June. I think Public Counsel, if they would have asked, would have been provided additional information. We were getting

discovery responses right up until the day before the prehearing conference or the week before the prehearing conference.

COMMISSIONER BEARD: We're all familiar with the process.

MR. ARMSTRONG: I know that, Commissioner. I just want to make it clear that these are three instances in a myriad and a multitude of information provided. And to pick out a couple of instances that, you know, certainly financial-wise we're talking maybe at tops $50,000, $20,000, I don't even know out of a $29.5 million of revenue requirement that we did support through discovery.

COMMISSIONER EASLEY: I think what he's trying to tell you, Mr. Armstrong, is you've made your point.

MR. ARMSTRONG: Thank you very much.

COMMISSIONER CLARK: I would like to say that the fact that we only have four instances may be correct, but it does give me pause in terms in relying on the data that was given. Is there something we've overlooked it terms of not finding it? It goes to the issue of the comfort level I have in relying on the information given to me by the Utility.

MR. ARMSTRONG: Commissioner, I just ask that

when you assess a comfort level, we consider that there were up to five or six FPSC Staff Orders on our site for up to five months; PSC auditors or analysts, three of them, I believe, for several months -- I mean, several weeks. And that's all I ask.

COMMISSIONER BEARD: Well, my comfort level is going to increase because I'm going to strike the testimony starting with the word "this" on Line 17 of Page 5, and concluding with the word "testimony" on Line 13 of Page 6. That's all that will be struck. Mr. McLean, you're not precluded from any other argument you choose to make at a later time with respect to discovery and violations of discovery, et cetera, whenever it's appropriate. Moving right along.

MR. McLEAN: Thank you, sir.

Q (By Mr. McLean) Mr. Hartman, would you turn to Page 6, the rest of Line 13 where I read, "Schedule 5 of Ms. Dismukes' Exhibit KHD-1, Part 1," so forth, "Provides a comparison of 30 selected water systems. My question is: How many did you all select to ask for a margin reserve in? (Pause)

A I didn't do a total on that, I think it's --

Q It's about 30, isn't it?

The problem I have with that is that I don't have all of Mr. Morse's items. We both took portions

of this, so --

Q Okay. Well, you rebutted, in your testimony, you saw fit to rebut Ms. Dismukes for having selected 30 water systems and 22 wastewater systems. And I submit to you that it is you who did the selecting, or at least Southern States, because those are the only companies they appear to have asked for margin reserves in. Isn't that correct?

A Is your question that the ones she selected are all the ones that we've asked margin reserve for?

Q My question is, "Is that correct," yes, sir.

I want to get to the point of who did the selecting, was it Southern States or Ms. Dismukes? (Pause)

A I would think that Ms. Dismukes selected the ones that she's using. We provide the margin reserve in our MFRs, and that stands -- I can go back and go through all the MFRs and come up with the totals. I do not have them in front of me, unfortunately. (Pause)

Later on in this testimony I'll be able to give you those numbers.

Q Well, what was the basis of the testimony that you offered on Page 6? It is one of the reasons, am I not correct, just offered by your counsel as why you rebutted Ms. Dismukes is because she did some

selecting?

A Well, she did do some selecting.

Q Sure, she did. And you meant that in a pejorative sense, didn't you? You meant that she selected when she probably shouldn't have selected?

A I meant it in the factual sense that she selected 30 of the 90 water systems.

Q Do you find anything wrong with her making that selection?

A I just point out that she selected only 30 of 90. I would have looked at all them.

Q Is that a "yes" or "no," sir?

A I find a problem when you look at margin reserve, you don't look at all the systems you should be complete.

Q May I move to strike that answer?

A Yes.

Q Thanks. You do find something wrong with her having made the same selection that you did?

A No.

COMMISSIONER EASLEY: Do you still want to strike the answer or do you want to ask it again?

You all quit arguing with each other. Let's just ask questions and answer them.

Q (By Mr. McLean) When you mentioned that Ms.

Dismukes selected certain systems, what did you want the Commission to infer from that use of terminology?

A Exactly what it says. There's no inference made, it's factual.

Q So there's nothing wrong with her having done that?

A I'm just stating what the facts are. I'm getting to my rebuttal later on. You're picking at words here that I'm saying the predicate for what I'm going to say.

Q I'm picking at the words, sir, which your counsel said was one of the reasons that you rebutted her. Now, do you think she incorrectly selected or did she not incorrectly select them?

MR. HOFFMAN: Mr. Chairman, I'm going to object. I think he's asked the question three times already.

MR. McLEAN: I'm waiting on the answer the whole time.

A The bottom line, the answer to your question is, I stated the fact that she selected 30 of 90, which sets up the later portion of the rebuttal. You have to set the predicate before you can finish the answer; and you've attacked the predicate, which is factual.

Q What's the answer?

CHAIRMAN BEARD: Are you a lawyer?

WITNESS HARTMAN: No, I'm not.

CHAIRMAN BEARD: Okay. She selected 30, right?

WITNESS HARTMAN: That's right.

CHAIRMAN BEARD: We know that, okay.

WITNESS HARTMAN: That's right.

CHAIRMAN BEARD: So let the lawyer set the predicate. You answer the question.

WITNESS HARTMAN: Yes, sir.

CHAIRMAN BEARD: Once she selected the 30, so what? Let's try it that way.

COMMISSIONER EASLEY: What's the problem?

CHAIRMAN BEARD: Isn't that the question we're supposed to be at? She selected 30, we know that.

COMMISSIONER CLARK: What's wrong with that?

CHAIRMAN BEARD: What's wrong with that? Is that the question you're asking, Mr. McLean?

MR. McLEAN: Yes, sir.

CHAIRMAN BEARD: Okay. Now, what's wrong with her selecting the 30?

Now it's your turn. You don't have to set the predicate, just answer the question. (Pause)

WITNESS HARTMAN: There's nothing wrong. You know, I'm not saying that there's anything wrong there. I'm just pointing out what the situation was.

Q (By Mr. McLean) And you're going to defer the answer on the question. My question is, isn't it true that she selected the same ones you all selected? (Pause)

A I will have to come back on that. I do not know that that is the case.

Q Okay. Let's go to Page 67. Let's leave this area and go to Page 67 of your testimony, your rebuttal testimony. That's the area in fill-in lots.

Now, your basic thesis with fill-in lots is that the Utility has to build lines which run by lots which may never be occupied, or at least are not occupied now, and, thus, their investment which can be associated with those lots ought to be included in used and useful. Isn't that the theory fairly well, roughly stated?

Q You're referring to Page 7 of my --

Q 67, I'm sorry.

A 67?

Q Yes, sir, way back on 67. (Pause)

A The theory of fill-in lots, to answer your question, is that there's an investment necessary for

service. And in an area that has a high level of development, when you build a collection system, the facilities must be interconnected to allow for the system to be functional and to provide the service to that customer.

The fill-in lot theory says that there's no additional cost, yet later on in the future, as the overall system developed, there will be additional transmission costs which go into the equation. And in many cases, you have an area that was built, let's say, has 100 units. And it's got 95 units constructed and will never reach 100 because five of the rest of the difference between 95 and 100 may be owned by the same people who are already on the system, or they're unbuildable lots, or they will never be sold. And, yet, the investment is prudent, is used and useful, and it is required to provide service to those customers. And that is the theory of fill-in lots.

Q I understand.

Now, presumably because you're asking for a return on that increment of investment, you believe that increment of investment to be material -- that means "significant," correct?

A I'm not testifying to the investment. That would have to be someone else. I'm just saying --

Q Okay if you want --

(Simultaneous conversation)

A -- from an engineering standpoint, it's required. I'm just stating a fact.

Q Sure, you have to go out there -- well, that's all we can all state. You go out there and you build the lines they may never be used. But you still had to build them, and you're entitled to a return on that increment of investment associated with that lot, correct? And doesn't that pretty well come to that?

A Yes. The Company has to make the investment. They are the people who make the investment in a fill-in lot. It's necessary for service to those customers and, therefore, it's part of the overall proper investment.

Q All right, sir. Let's look now to Page -- I mean, sorry, Page 67, Line 21. I quote from you there, "I also question whether electric or telephone utilities are subjected to the disallowance for used and useful purposes of fill-in lots." Is that correct? That's what you say?

A That's correct.

Q What's a pair gain device, Mr. Hartman, do you know?

A No, I do not know. This testimony here was

in discussion with others at the Company and relative to electric and telephone utilities.

Q Well --

A I'm not an expert in that.

Q But you did make a comparison to electric and telephone companies, didn't you?

A Based upon -- an expert is allowed to investigate to see --

Q Of course.

A -- what the situation would be. And based upon others' expertise in these areas, I inquired to see what the practices were.

Q Well, in order to draw an analogy to the telephone and electric industries, wouldn't you also have to assume that the materiality is at least similar? (Pause)

A Yes. The situation would be similar, of course.

Q So you'd have to know -- let me ask. You don't know what a pair gain device is. If it aggregated traffic, if it concentrated traffic, could you say that there's an analog for that device in the water and sewer business?

A Your question is hypothetical.

Q Yes, sir.

A I'm trying to understand it. If the device was used in traffic --

Q Let me withdraw the question and ask it differently.

If a pair gain device is designed to concentrate or aggregate traffic, do you know whether there is a similar -- is there an analog for that device in the water or sewer industry?

A No, I don't know.

Q Okay. So you don't know, for example, if remote switching is available or any analog to remote switching is available in the water and sewer industry, do you?

A Remote switching?

MR. HOFFMAN: Objection, Chairman. There has been no predicate laid that there is remote switching available in the water and sewer industry.

MR. McLEAN: Well, I was asking him if there is.

COMMISSIONER EASLEY: Does he know?

A I don't know.

Q (By Mr. McLean) You don't know?

So you don't know whether the comparison between the telephone industry, for example, and whether they are compensated for fill-in lots and the

water and sewer industry is a good analogy, do you, because you don't know about the materiality, do you?

A What I did as an expert, which you're allowed and it is a proper thing to do, if you are trying to make an analogy, you ask others who are knowledgeable in the area and discuss the issue, and relative to lines passing lots. And that's what I did, and that's what is the result.

So, as the other people who I talked to understood the industry, that's my knowledge.

Q Mr. Hartman, you know what a transformer is, don't you?

A Yes, I know what a transformer is.

Q And you know when electrical energy leaves a generating plant, it leaves at transmission voltage, do you?

A I'm knowledgeable of that, yes.

Q And then it goes through distribution voltage?

A Yes.

Q Okay. It ultimately comes into my house as presumably 220 or 440, or something like that, right?

A Yes.

Q It is a transformer that accomplishes all that step-downs, right?

MR. HOFFMAN: Object to the relevancy of the

questions.

MR. McLEAN: I could link it up if you wish.

Well, it's fairly easy to understand. When you have -- the fill-in lot theory is that there is a tremendous amount of investment associated with an individual fill-in lot and that the Company can't get around that.

My thesis is -- and I'd like to show it through this witness since he's the only one listed for the issue -- is that the amount of investment associated with the lot is far less in the electric and telephone industries because in both of those industries they have the opportunity on the one hand to aggregate traffic and on the other hand to transfer energy much cheaper on a per-lot basis. That there is much less individual investment -- there's much less incremental investment associated with each unoccupied lot in the electric industry and the telephone industry. There is no analog for transformers in the water and sewer industry, and there is no analog for traffic aggregators --

COMMISSIONER EASLEY: How does that say you shouldn't take fill-in lots into consideration then?

MR. McLEAN: Perhaps you should. It runs the risk of cutting both ways. But the point is that it is

immaterial in the electric and telephone industry, and that's why you do it.

COMMISSIONER EASLEY: It's immaterial and that's why you do it?

MR. McLEAN: Sure, it doesn't make any difference whether you do it or not. In this industry it makes a tremendous difference.

COMMISSIONER EASLEY: I'm sorry, I was trying to put the context for here and I'm also trying to understand why I care, if it's immaterial.

COMMISSIONER CLARK: I think what is happening is the witness has drawn an analogy with utility service from electric and telephone companies. And I think there is the right to cross examine on the basis of whether or not that analogy is an appropriate one.

CHAIRMAN BEARD: My problem is I hate to flog a dead mule. I mean, understand -- I guess, even with my limited knowledge, I understand that the distribution system in the electrical relative to generation system is insignificant, relatively speaking. And I think I understand the distribution system relative to the equivalent of the generation system, if you will, in water and sewer is more significant. Okay.

And I understand that the central office is probably far more expensive in the telephone industry than probably the general end user distribution system in the telephone system.

I understand all that. Do you understand that?

WITNESS HARTMAN: Generally.

CHAIRMAN BEARD: Okay. We can get down to details if you want.

Do you all understand that? Do you all understand that? I mean, you know, can we cut to the chase?

MR. McLEAN: Sure. I can ask him if he knows whether both the electric and telephone industries have an opportunity to very significantly limit the incremental investment associated with those fill-in lots, and that's an opportunity which the water and sewer industry doesn't have.

COMMISSIONER EASLEY: Maybe my big problem is I am having trouble understanding why there is so much to-do over this particular analogy which, in your opinion, doesn't make any difference anyway.

MR. McLEAN: Because this industry is going to come along and say, "Well, you do it in electric and telephone, you ought to do it here." And there's a

very substantial difference.

CHAIRMAN BEARD: Anything you can do to expedite cutting to the chase on this would be greatly appreciated.

Q (By Mr. McLean) Mr. Hartman, is it fair to say that you formed that comparison to the electric and telephone industry by conversations you had with other persons and that doesn't really spring directly from your own knowledge?

A Yes.

MR. McLEAN: Thank you, sir. No further questions.

CHAIRMAN BEARD: Thank you.

MS. ASHER-COHEN: Commissioners, before I begin my cross, I have a matter of clarification, an error that we found in the Prehearing Order in three of the Staff positions on three issues.

CHAIRMAN BEARD: Okay.

MS. ASHER-COHEN: In Issues 27, 28 and 30, the name "Sugar Mill Woods" was inadvertently left out of the Staff position, and we just want to add that back in.

CHAIRMAN BEARD: Okay.

MS. ASHER-COHEN: All right?

CHAIRMAN BEARD: Yes.

CROSS EXAMINATION

BY MS. ASHER-COHEN:

Q Mr. Hartman, do you believe that differences exist between engineering design practice and the ratemaking concept of used and useful? (Pause)

A I think they're both interrelated is my answer, and let me explain.

The design practice of putting facilities in place and what is required matches up with the regulatory requirements, just as used and useful would; it matches up with the investment, which the used and useful would; and depicts as part as incorporated into any analysis.

When you say you look at the used and useful percentage of a water system, it includes several components to that system. And the design practice has different criteria for each component. Each criteria -- and there's not many -- but in each segment, the investment is made associated with that. So if you're really looking at the investment and looking at the constructive facilities, you would look at the design criterion and then come up with your overall utilization.

Q Thank you. Isn't it your testimony that a prudently designed system is always 100% used and

useful?

A No. I never said that.

Q What would you say, as far as a prudently-designed system, goes, how does that figure into your calculations of used and useful?

A A prudently-designed system?

Q Uh-huh.

A A prudently designed system is a system meeting the needs of the overall customer base and the projected needs. Insomuch as there are aspects of that system which are decided to be prudently designed, and prudently invested, but held for future use, I wouldn't think those would be used and useful.

Q Do you believe that a system can be 100% used and useful and still have capacity for growth and be able to add new customers?

A Yes. There are circumstances that that could occur.

Q Do you think --

A The circumstances can be that with the margin of reserve, and it's a build-out condition, and you would have 100% used and useful and still have more customers.

Q Do you think that present customers should pay for the plant to serve future customers?

A That's a rate question. I don't have an opinion on what present customers pay for or not. I'm just looking at the used and useful components of the systems.

Q Isn't it true that you disagree with the Staff using the average of the five max days to measure the demands placed on the system by the current customers?

A Oh, definitely. And there's a reason for that.

Q Thank you.

A The investment necessary is not based upon the five-day maximum. It's based upon the regulatory requirements of the maximum day. If you look at other design engineers that understand, and other people who have put in facilities, you'll see what their investment was for. It was for the maximum daily occurrence when you have adequate storage. And it's so stated on the DER forms; and, therefore, if you invest and pay for it, and it's needed and it's used, I think it's 100% used and useful when all those circumstances coincide.

Q Isn't it true that a peak day can be influenced by natural occurrences and line breaks and firefighting on that day?

A The answer is --

Q Yes?

A The answer is "yes," but -- the absolute peak day. But what we do is we take out abnormal occurrences and delete them. And through this complete filing, when we look at maximum day, we've done our very best effort to take them out. In fact, one, I started this whole testimony with was, there was a line break and we changed -- and that's one that got through, that was an abnormal occurrence. And we delete those because that's not appropriate when we look at it.

Q In your introduction to the water engineering schedules, you stated that you take the largest well out of service when you figure out the firm reliable capacity; but in the Sugar Mill system you took out the two largest wells. And I want to know why you did not follow your own methodology and take out only the largest well?

A I did follow the methodology. When you read this, we continued and talk about multiple well systems. And when you're talking in nine wells, typically the situation would be to have two wells out of service. And that's what it says here, it says ten or more wells in this.

I was an extra witness in a DOAH case, 89-0828, Mary Clark --

Q Excuse me, Mr. Hartman, we don't have nine wells in Sugar Mill.

MR. HOFFMAN: Mr. Chairman --

WITNESS HARTMAN: Excuse me. I thought you were talking about Sugar Mill Woods.

Q (By Ms. Asher-Cohen) No.

A Okay, Sugar Mill?

Q Yes. There were four wells and you took out two.

A Okay.

Q Can you tell us why you did not take out one?

A Yes, I sure can, and we provided that before.

The reason is because there was four wells in that location. Several of these wells are close to each other. And you cannot operate -- as an operational requirement, you cannot operate more than two wells at a time without causing a problem in the aquifer system in yield. In fact, the Company has endeavored, and done a very good job, in going out -- and we have a CPE application in for additional wells necessary at that location.

Q Why would an engineer design and place two wells so close together if it wipes out two wells at

once? Is that a design problem?

A It happened over a number of years. When those wells were constructed, I do not believe that the pollutant transport models, three-dimensional transport models, were known and used. This is an area next to saltwater, and the Trimble Bay (phonetic) area near New Smyrna Beach. And it's a situation that at the time of the design, there are natural factors that none of us know. And at that time the state-of-the-art was not as sophisticated to pick that up.

COMMISSIONER EASLEY: When are we talking about, in terms of what year, approximately, time frame?

WITNESS HARTMAN: I think it's prior to the 1980s.

COMMISSIONER EASLEY: Prior to 1980?

WITNESS HARTMAN: Yes. The advent --

COMMISSIONER EASLEY: And the technology didn't exist prior to 1980 to -- is that what you're saying?

WITNESS HARTMAN: I'm saying the pollutant transport models we now use --

COMMISSIONER EASLEY: Whatever that is.

WITNESS HARTMAN: We didn't do that back then then.

COMMISSIONER EASLEY: Maybe I'm not understanding this. But it seems to me prior to 1980 we understood saltwater intrusion; we understood -- we had the deep-well injection technology. We understood the problem of putting wells two close to each other, I thought. I don't know what this method is you're talking about, but what am I missing?

WITNESS HARTMAN: Well, we understand those things but we did not understand the long-term impact that's a very gradual accumulation type of impact, which appears to be occurring in this location. And it's just like trihalomethanes in cancer, you have to drink water for 70 years to have this situation occur, but when you drink the first glass of water or looked at the water at that time, you would not have thought that you --

COMMISSIONER EASLEY: Living is dangerous to your health.

WITNESS HARTMAN: It's a situation that over long period of time these wells interfere with each other now. And initially they did not.

Q (By Ms. Asher-Cohen) Mr. Hartman, in your rebuttal testimony, you state that "imputing CIAC on margin reserve is incorrect from an engineering standpoint because the Company's obligation is to be

ready to serve, whereas the prospect of new customers actually connecting to the system is speculative."

Isn't it correct that margin reserve allowance is based on the premise that growth will occur?

A Yes, and let me --

Q Mr. Hartman, isn't it correct --

MR. HOFFMAN: Mr. Chairman, this is about the fifth time. Could counsel please be instructed to allow Mr. Hartman to finish his answer after he gives a yes or no?

COMMISSIONER EASLEY: Mr. Hartman has got to start out with yes or no in order to do what you want him to do.

CHAIRMAN BEARD: And he knows to go ahead and complete the answer; and, yes, you do need to wait.

WITNESS HARTMAN: Thank you. Yes, there is a component to growth. And as you continue and get to build-out, you still run into the margin reserve increment of facilities that may be necessary to have an efficient and sufficient service to the utility customers.

Also, you don't know whether, in the future, the service area will or will not be expanded. You provide for an increment, very slight increment, too,

and we're talking about a very small percentage here -- that if we have a changing demand characteristic, that we can get to it.

We're talking about a small percentage. It's something that provides for proper, safe and efficient utility operations, and I believe it's appropriate.

Q Isn't it correct that margin reserve is calculated based on growth from a prior period?

A Yes. In this case we've looked at the past five years and averaged it and projected either 18 months or 12 months.

Q Do you agree that a utility should not be allowed a margin reserve when growth will not occur, based on that historical data?

A I believe it becomes a -- first, I would say, to answer your question, that would it not be allowed a margin reserve?

Q Correct.

A It depends on the situation. I wish I could give you a "yes" or "no." It depends on the situation whether you can have a need for variability demand that you see. If there is a variability in demand that is not provided in the historic test year, you just go back one year in a historic test year. And the prior

years, as we've seen in this case, there are many other years much higher demands. And without a margin reserve, you're not meeting the system characteristics and system needs.

So it depends on the situation. If the Company does not request a margin reserve, it's built out and there's no growth and that's a proper -- you know, you look at that from a prudent standpoint, fine. But if there's a variability in the system need back here, you build out, the next year the need goes up and you don't have a margin reserve, you're not meeting the system needs.

There's more than one thing happening here, not just growth. And I think the margin reserve is a slight compensation for the variability requirements.

Q In your direct testimony you discuss the step-by-step process for adding water plant capacity. Isn't it true that quite a few of these steps could be performed simultaneously?

COMMISSIONER EASLEY: Could be what?

MS. ASHER-COHEN: Performed simultaneously.

WITNESS HARTMAN: Yes, in an overlapping manner.

Q (By Ms. Asher-Cohen) Okay. In your rebuttal you talked about DER Rule 17-600.405, which requires a

margin reserve for a period of 48 months. Is there a specific proviso in that rule that states that 48 months is necessary for the submittal of plans to DER?

A Yes. There's a -- let me -- it's stated in my testimony, the requirements of the rule, I have right here. And --

MR. HOFFMAN: May I ask what page you're referring to?

MS. ASHER-COHEN: In his rebuttal, Page 12.

MR. HOFFMAN: Thank you.

WITNESS HARTMAN: And --

COMMISSIONER EASLEY: Are you saying that the answer to your question is in his rebuttal at Page 12?

MS. ASHER-COHEN: I'm saying that's where he mentions this DER rule.

COMMISSIONER EASLEY: Okay. (Pause)

WITNESS HARTMAN: Yes, yes, I do. And on that page in the DER rule -- and first, to clarify an issue there, I think the -- in reading Issue 4, I think that we're talking about the -- the Company is talking about a five-year average for the margin reserve. But getting back to the rule, it states several things, and I can read them to you.

COMMISSIONER EASLEY: Not if it's contained in your testimony, please.

WITNESS HARTMAN: It is contained.

COMMISSIONER EASLEY: Just refer to it, that it's in your testimony.

WITNESS HARTMAN: It's in my testimony, and, yes, B shows that the initial capacity supported is -- Item B in the rule shows that four years is required.

Q (By Ms. Asher-Cohen) Is it your testimony that 48 months is how long it takes to get a project on line?

A Now, it is; before, it was not. But since the advent of this rule, a project will now have to be initiated in wastewater treatment plants -- and that's all I'm referring to here -- 48 months prior to having it on line, yes.

Q Does it take 48 months actually to get a project on line?

MR. HOFFMAN: Objection, asked and answered.

COMMISSIONER EASLEY: I think it's a different question. I think.

MR. HOFFMAN: I thought the other question --

COMMISSIONER EASLEY: I'm in engineering overload right now, Mr. Hoffman. I don't know whether it's a good question or not.

CHAIRMAN BEARD: Ask the question. Answer the question.

WITNESS HARTMAN: Okay. Presently, after the advent of this rule, procedurally there is a time requirement added on to the normal construction needs on a wastewater-treatment-only facility by DER mandate; and, therefore, it would take that period of time. But, how long would it take if you just went out and built something? It would be less than -- it would be a case-by-case basis based on the complexity and the situation involved, permitting involved. But in most cases it would be less than 48 months.

COMMISSIONER CLARK: Let me try it a different way. You take issue with 18 months margin of reserve because you say it takes longer than that to get plant on line to serve additional customers.

WITNESS HARTMAN: Yes.

COMMISSIONER CLARK: And what do you recommend? What period of time do you recommend?

WITNESS HARTMAN: Well, I would recommend for wastewater treatment facilities, a 48-month period.

COMMISSIONER CLARK: And why do you recommend that?

WITNESS HARTMAN: Because of the regulatory requirements.

COMMISSIONER CLARK: Now, is it that DER requires you to apply for a permit at least four years

in advance of wanting to operate that?

WITNESS HARTMAN: That's correct.

COMMISSIONER CLARK: Okay, thank you.

WITNESS HARTMAN: Okay. This is a change that we didn't have before and it's being enforced.

COMMISSIONER CLARK: But it's your testimony DER says they don't have to issue you a permit unless you ask for it four years in advance of when you need it?

WITNESS HARTMAN: No, that's not my testimony. My testimony is that to comply with their rules, you must start the project four years in advance for a wastewater treatment plant. Now, on water it's less.

COMMISSIONER CLARK: Do you say that because in your experience it takes 48 months to just go through their process?

WITNESS HARTMAN: To meet their time lines now, it does. This is a new rule, we haven't been -- it's in force. We haven't been through a 48-month period, so I can't say "in my experience." But I have been involved in wastewater treatment facilities that, depending on there complexity, that have taken six years to get completed.

Look at the regional facilities in Orange

County, $100 million program. So it varies based on the project. But the actual construction time of a wastewater treatment facility today, I don't think you can put one in place in 18 months. There's no way.

Q (By Ms. Asher-Cohen) Isn't it true that you oppose the Commission's policy of capping margin reserve at 20% of the existing customers because some of Southern States' small systems have growth rates that exceed 20%?

A I'm not attacking the Commission policy. I would state that you should look at the -- because there are -- there's a provision to look at growth rates; and if the growth rates exceed 20% and they have been documented in that fashion, in certain instances that should be provided.

COMMISSIONER CLARK: Ms. Asher-Cohen, would you ask that question again. And would you answer the question she asked, "yes" or "no," and then give of give an explanation, because I'm not sure you answered the question she asked.

WITNESS HARTMAN: Okay.

Q (By Ms. Asher-Cohen) The question is, isn't it true that you oppose the Commission policy of capping margin reserve at 20% because some of Southern States' small systems have growth rates that exceed

20%? (Pause)

A "Yes" is the answer. The continuation of that answer, the explanation is, that's because, also, there's other policies that you consider growth. And to have a cap of 20% is a nice -- is a good guideline. It's something that should be looked at. I don't doubt that. I'm not disputing that at all. What I'm saying, though, when you have the data that shows a growth rate greater than 20%, how can you just limit it artificially at 20%?

Q Okay. If the Commission were to vary its policy, would you agree that since the growth rate for some of these systems is so significant, that the revenues from the future customers should be imputed?

A I'm not a witness on revenue imputation.

Q Turning to a specific system of Sugar Mill Woods, are you aware that COVA is suggesting that each residential connection at Sugar Mill Woods should be treated as one ERC regardless of meter size?

A Yes, I've heard that statement.

COMMISSIONER EASLEY: For quite a while, I think.

Q (By Ms. Asher-Cohen) And that COVA has calculated the water flow for each residential connection to be 500 gallons per day. Are you aware of

that?

A I'm aware that that is one calculation, but if you go historically, the calculation varies.

COMMISSIONER EASLEY: But COVA calculated it at 500.

WITNESS HARTMAN: At one time, one calculation. All the other calculations are greater. That is one.

Q (By Ms. Asher-Cohen) Would you agree that they have calculated the wastewater flow for each residential connection to be 255 gallons per day?

A That is a calculation, yes.

Q Do you believe that the Utility's method of calculation is more fair than that used by COVA?

A Yes.

Q Are you aware that COVA's methodology was used for Sugar Mill Woods in the last rate case and was stipulated to by the parties in that case?

A The methodology?

Q Yes, their way of calculating.

A That one customer is one ERC? I don't know -- I don't believe that was -- I never saw the note.

COMMISSIONER EASLEY: That isn't the question. Repeat the question.

Q (By Ms. Asher-Cohen) My question is, are you

aware that COVA's methodology was used in the last rate case for Sugar Mill Woods and that that methodology was stipulated to by the parties in that case?

A No, I'm not, because I don't believe it was. I don't think it was. That's not true. I don't think that's the case. I don't think we said one meter is one ERC.

Q Would you agree that COVA's methodology would be a fair methodology to be used for this system in this case?

A No.

Q Why not?

A Because the usage on the system is far greater than a typical ERC usage is.

If you go back and look at the original work by Post, Buckley, Schuh & Jernigan, and then, what is required -- there's a hydraulic analysis. Our firm just completed a hydraulic analysis of this system. There's going to be more and more transmission improvements and storage improvements and other improvements necessary to meet this customer base, because of the high usage per customer, and not reflective of the singular ERC.

Q Are you aware that the single family homes in Sugar Mill Woods have a deed restriction that require

them to have a sprinkler system in their yards?

A I'm generally aware of that, yes.

Q Are you also aware that due to the sprinkler systems being connected to the Utility's water system, that most of the single family residences at Sugar Mill Woods would have one inch meters?

A Quite a few of them do, yes.

Q Are you saying that each resident with a 1-inch meter should be treated as 2.5 ERCs for ratemaking purposes?

A For used and useful purposes, yes, I am saying that a one-inch meter should be 2.5 ERCs. It's the use on that -- on the meter side, the customer use is very great.

Q Does it follow then, that, every vacant single family residential lot should be treated as 2.5 ERCs in terms of future demand?

A I don't think -- no. And the reason is because there's an option. You can have your own well or you can connect to the system. You can create your lawn irrigation system however you want. I mean, my lawn irrigation system is connected with a three-fourths-inch meter. It's a half acre lot. So you can pick the size of the meter and the size of the situation. Meter size would vary; the source, it's the

preference of the customer to use the company as a source. It can have its own source, I believe. There are individual wells there.

Q Would you agree, subject to check, that as shown on Schedule E2-A-I, for Sugar Mill Woods, that less than 12% of the residential meters are smaller than one inch?

A Subject to check, that number sounds in the right ballpark, yes.

Q Do you know what this comparison was in the last rate case for this system?

A I don't recall.

Q Would you agree, subject to check, that it was 12% or smaller?

A It sounds in about the right ballpark, yes.

Q In your rebuttal you've talked about, that it's important to count apples to apples when you're talking about ERCs. If each current customer is equal to 2.5 ERCs, then wouldn't it make more sense to count each future customer as 2.5 ERCs?

A I don't know the answer to that. If the historical customer base is that, you would have to look at where you'd be growing.

COMMISSIONER EASLEY: I thought your testimony indicated the only way you could do that was

if you assumed everybody had a one-inch meter.

WITNESS HARTMAN: That's right, so I wouldn't know that you could do that.

Q (By Ms. Asher-Cohen) But doesn't that disagree with the historical data that 88% of the residential customers have a one-inch meter?

A That is a fact, and that is their choice, to purchase the use from this company. And it's that demand which is great. There are also a lot of customers there that own more than one lot.

Q Mr. Hartman, I'd like to turn to your theory on fill-in lots.

In your response to Staff Interrogatory No. 157, you use Deltona Lakes as an example to explain your fill-in lots theory. You stated that "It's common to install lines as each phase is constructed, and that the Company has little control over which lots are developed first. And some lots will then be vacant for some time."

A Yes.

Q If the Utility Company does not control the lot development, then who does?

A There are several entities that would impact that. First is the zoning by the county. Secondly, it's the various developers in the area and home

builders. Thirdly, it's the desire for people for that specific development. The desire to be in a area varies, as well as the comprehensive plan for the area. There are several factors that would be involved.

Q Isn't it true that in the case of Deltona; Deltona was the utility as well as the developer. So in that case, Deltona was responsible for laying the lines and developing the lines?

A I would assume so.

Q Isn't it reasonable to assume that Southern States knew when it acquired that system that Deltona had its customers spread over a wide area?

A I would think that the Company, in its due diligence, would investigate the spatial disaggregation of the customers somewhat, to some extent.

Q When was the last water or sewer construction phase completed?

A I do not know.

Q Would you be able to estimate five years or ten years, or you just don't know at all?

A Well, I know there was a very recent water system expansions in Deltona just a little while ago. There's a development that just came in, a couple hundred units.

Q Are there still about 7,000 vacant lots,

which you call fill-in lots, in that system?

A There's 7,000 vacant fill-in lots in that system about, yes.

Q Isn't it unusual that phase construction would leave 7,000 vacant lots?

A No. That's, you know, over 75%.

Q Isn't it true that the present customers may be paying for these vacant lots for an indefinite period of time?

A Yes. I don't know what the amount of time for each specific lot would be.

Q Isn't it true that margin reserve will account for the fill-in lots?

A To some extent, yes. You have to also realize that the service area for the Company, through the interlocal agreement, is much larger than just the distribution system. So there are many areas that have no piping in, and they're added in areas outside of the basic transmission system all the time.

Q Besides margin reserve, isn't it true that an AFPI charge will cover the fill-in lots problem?

A I'm not the witness to testify on that.

CHAIRMAN BEARD: How much do you have?

MS. ASHER-COHEN: How much more?

CHAIRMAN BEARD: Uh-huh.

MS. ASHER-COHEN: Less than I've done. I don't mean to be --

CHAIRMAN BEARD: I'm looking for a convenient point to break for lunch. And I'd like to get a little bit of a head start on the parade crowd, if that's possible.

MS. ASHER-COHEN: I would say a half hour.

CHAIRMAN BEARD: Is this convenient, or can we get to a convenient point?

MS. ASHER-COHEN: If the Commission wants to break now, that's fine. If they want to go on, and not miss the restaurants --

CHAIRMAN BEARD: Is it convenient? I don't think we have much to miss today. That's the problem. Is this a convenient point? I don't want to break a train of thought.

MS. ASHER-COHEN: Yes. It's fine.

CHAIRMAN BEARD: Come back in an hour?

COMMISSIONER EASLEY: Yeah.

(Thereupon, lunch recess was taken at 11:45 a.m.)

(Transcript follows in sequence in Volume XI.)

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