

DOCKET 950495-WS  
EXHIBIT NO. 67  
CASE NO. 96-04227



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BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION  
DOCKET NO. 950495 - WS  
APPLICATION FOR A GENERAL RATE INCREASE

VOLUME I  
BOOK 16 OF 22

MINIMUM FILING REQUIREMENTS  
PREFILED DIRECT TESTIMONY

Containing

JAMES P. ELLIOTT

FLORIDA PUBLIC SERVICE COMMISSION  
DOCKET  
NO. \_\_\_\_\_ EXHIBIT NO. \_\_\_\_\_  
COMPANY/ \_\_\_\_\_  
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**DIRECT TESTIMONY OF JAMES P. ELLIOTT**  
**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**  
**ON BEHALF OF**  
**SOUTHERN STATES UTILITIES, INC.**  
**DOCKET NO. 950495-WS**

1 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

2 A. James P. Elliott, 1334 Lafayette Street, Cape Coral, Florida 33904.

3 Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

4 A. I am employed by Source, Inc., an engineering and planning firm, as  
5 President.

6 Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL  
7 BACKGROUND?

8 A. I am a graduate engineer with a Bachelor of Science degree in Civil  
9 Engineering from Kansas State University in 1968. I am a registered  
10 Professional Engineer in Florida and Illinois. Prior to founding Source,  
11 Inc. in 1979, I was employed for four years with Black Crow and  
12 Eidness/CH2M Hill ("CH2M Hill") in Gainesville, Florida. At CH2M  
13 Hill, I was the Construction Service Manager for a wide variety of Florida  
14 projects. Prior to joining CH2M Hill, I worked for Greeley and Hansen  
15 in Chicago for five years as a design engineer, project manager, and  
16 resident engineer.

17 Q. ARE YOU A MEMBER OF ANY PROFESSIONAL SOCIETIES OR  
18 AFFILIATIONS?

19 A. Yes. I am a member of the American Society of Civil Engineers,  
20 American Water Works Association, Florida Engineering Society, National  
21 Society of Professional Engineers, Water Environment Federation,  
22 American Desalting Association and the Southeast Desalting Association.

1       **Q.    HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE FLORIDA**  
2       **PUBLIC   SERVICE   COMMISSION   OR   ANY   OTHER**  
3       **REGULATORY BODY?**

4       A.    Yes.  I testified in three administrative hearings relating to Florida  
5       Department of Environmental Protection (then the Department of  
6       Environmental Regulation) permitting issues.  I also testified before the  
7       Commission on behalf of Southern States in Docket No. 920655-WS.

8       **Q.    WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

9       A.    I support Southern States' proposal to use the hydraulic flow method to  
10       determine the used and useful capacity of the water transmission and  
11       distribution lines and the maximum day flow from 1994 to determine the  
12       used and useful capacity of supply and treatment facilities.  I also support  
13       the Company's proposal to use two service classifications for water service  
14       -- conventional treatment and reverse osmosis treatment.

15       **Q.    COULD YOU EXPLAIN WHY THE USE OF THE HYDRAULIC**  
16       **FLOW METHOD IS JUSTIFIED FOR WATER TRANSMISSION**  
17       **AND DISTRIBUTION LINES?**

18       A.    Use of the hydraulic flow method to determine the used and useful  
19       capacity of water transmission and distribution lines is justified primarily  
20       because the hydraulic flow method is used to design those facilities.  I  
21       have designed facilities for private as well as governmental utilities and,  
22       without exception, I have used the hydraulic flow method to design the

1 capacities and configuration of transmission and distribution lines. The  
2 hydraulic flow method not only is most reasonable to use because it is the  
3 method used to design such facilities but it also is the most accurate means  
4 of simulating the hydraulic capacity being used in the distribution system.  
5 A lot count method for determining the used and useful capacity has no  
6 basis in reality. It is beyond dispute that flows are determined more by the  
7 type of customer being served, the personal water consuming habits or  
8 needs of the people being served, the irrigation requirements, the number  
9 of people in each household and a number of other factors than from a  
10 simplistic determination of lots platted versus lots connected. Therefore,  
11 I believe the Commission's current practice is overly simplistic and bears  
12 no relationship to reality. As an engineer, I cannot accept it as a valid  
13 flow measurement or projected flow measurement technique. In contrast,  
14 the hydraulic flow method is rooted in reality and precision.

15 **Q. COULD YOU EXPLAIN WHY YOU BELIEVE THE USE OF THE**  
16 **MAXIMUM DAY FLOW IS THE MOST REASONABLE MEANS OF**  
17 **DETERMINING THE USED AND USEFUL LEVEL OF WATER**  
18 **SUPPLY AND TREATMENT FACILITIES?**

19 **A.** When designing water supply and treatment facilities, an engineer must  
20 utilize the maximum day demand projections as the basis for his or her  
21 design. To use any other basis would be a dereliction of the professional  
22 engineer's obligation and responsibilities. Since the maximum day criteria

1 is the basis for designing the facilities, it appears to me to be unreasonable  
2 to measure the used and useful level of the facilities using any  
3 measurement other than the maximum day criteria.

4 **Q. IS A PROFESSIONAL ENGINEER REQUIRED TO CONSIDER**  
5 **POTENTIAL FIRE FLOW DEMANDS WHEN DESIGNING WATER**  
6 **SUPPLY, STORAGE, TREATMENT AND DISTRIBUTION**  
7 **FACILITIES?**

8 A. Yes. A professional engineer must design water supply, storage, treatment  
9 and distribution facilities to accommodate fire flow requirements in  
10 addition to residential and other water needs which may exist. Therefore,  
11 I believe that actual fire flows which may have been experienced in a  
12 maximum day should be included for purposes of determining the used  
13 and useful levels of these facilities.

14 **Q. DO YOU BELIEVE THAT IT WOULD BE REASONABLE TO**  
15 **EXCLUDE FROM MAXIMUM DAY FLOWS THE AMOUNT OF**  
16 **WATER LOST TO WATER MAIN BREAKS, FOR EXAMPLE, FOR**  
17 **USED AND USEFUL PURPOSES?**

18 A. No, I do not. Water main breaks and other occurrences such as line  
19 flushing, fire incidence and fire department use are expected, ordinary  
20 occurrences for all water facilities. As such, if the facilities experience  
21 such occurrences and nevertheless continue to meet the water needs of  
22 customers served by them, I see no reason to exclude volumes of water

1 lost to such occurrences for purposes of calculating the facilities' used and  
2 useful levels and, in fact, for this reason I believe it would be unreasonable  
3 to do so.

4 **Q. COULD YOU EXPLAIN WHY YOU AGREE WITH SOUTHERN**  
5 **STATES' DIVISION OF WATER CUSTOMERS INTO SEPARATE**  
6 **SERVICE CLASSIFICATIONS DEPENDING UPON WHETHER**  
7 **THEY ARE SERVED BY CONVENTIONAL OR REVERSE**  
8 **OSMOSIS WATER TREATMENT FACILITIES?**

9 A. I agree that the classification of customers into two groups based on  
10 whether the customers are served by conventional or reverse osmosis water  
11 treatment facilities is appropriate because the existence of reverse osmosis  
12 facilities confirms that the customers are served by brackish water supplies.  
13 Brackish water, without exception, must be treated, at minimum, by  
14 reverse osmosis facilities which undeniably are the most expensive  
15 treatment methods available other than facilities treating seawater. The  
16 existence of brackish water is evidence that the fresh water supplies  
17 previously had been consumed to such an extent that treatment of brackish  
18 water became necessary. It appears logical that one of the indirect benefits  
19 of the division into conventional and reverse osmosis service classifications  
20 would be to dissuade customers currently served by conventional treatment  
21 facilities from consuming water in quantities which would hasten the  
22 deterioration of the supply source to brackish water and thus the need for

1 higher cost reverse osmosis facilities as well as the corresponding higher  
2 rates proposed by Southern States.

3 **Q. DOES THAT CONCLUDE YOUR TESTIMONY?**

4 **A. Yes, it does.**