BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for rate increase and for increase in service availability charges in Lake County by Lake Utility Services, Inc.	)))))	Docket No. 960444-WU

DIRECT TESTIMONY AND EXHIBITS

OF

FRANK SEIDMAN

on behalf of

LAKE UTILITY SERVICES, INC.

Filed July 11, 1997

TESTIMONY OF FRANK SEIDMAN

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

REGARDING THE APPLICATION FOR RATE INCREASE

AND FOR INCREASE IN SERVICE AVAILABILITY CHARGES

IN LAKE COUNTY

BY LAKE UTILITY SERVICES, INC.

DOCKET NO. 960444-WU

Q. Please state your name, profession and address.

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

Q. What is the nature of your engagement with the Applicant, Lake Utility Services, Inc. (LUSI)?

A. I was engaged by LUSI to perform an independent used and useful analysis for the supply, treatment, pumping and storage facilities serving its customers. Specifically, these are the facilities booked in NARUC Accounts 307.2, 311.2, 320.3 and 330.4. I was also requested to determine, for purposes of evaluating the service availability charges under Commission guidelines, the remaining

ERCs that can be served from existing supply and treatment facilities and the number of years to buildout of those facilities.

Q. State briefly your educational background and experience.

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

as an expert witness with regard to water and wastewater utilities in Florida, California, Indiana, Michigan, Missouri, North Carolina and Ohio.

DESCRIPTION OF THE LUSI SYSTEM

Q. Would you please briefly describe the system serving LUSI's service area, as it affects the determination of used and useful?

A. LUSI provides water only service to a group of eighteen subdivisions in Lake County. Fifteen of them are located just south of the city of Clermont; two are located about five miles due east of Clermont near Lake Apopka; one is located near Tavares. These subdivisions are served, not by one system, but by several systems acquired by LUSI over a period of years and incorporated into a single service area. Several of the systems have been interconnected such that there are now six systems serving the eighteen subdivisions. At present, these six systems operate physically independently of each other and cannot share capacity to serve customer demand. Therefore, for purposes of determining used and useful, each of the six systems must be evaluated separately.

Exhibit (FS-1) ____ is a list of the six physically independent systems and the well site locations in each system. The well sites are identified by the name of the subdivision in which they are located.

Q. Are there similarities in the methods the six systems obtain and treat water?

A. Yes. Each system obtains its water from at least two wells, treats the water by chlorinating it and pumps the water directly to the distribution system without the use of storage facilities.

DETERMINATION OF STORAGE USED AND USEFUL

Q. Is there any storage capacity at all for these systems?

A. There is minimum storage capacity in the form of hydropneumatic tanks ranging in size from 1,000 gallons to 10,000 gallons. No single system has more than 35,000 gallons of storage capacity. These tanks do not provide storage to buffer changes in demand or to supplement supply capacity during peak periods or during the outage of supply or pumping facilities. The demands on the system, and the instantaneous changes in those demands must be met directly by the wells and well pumps. The function

of the hydropneumatic tanks is basically to regulate pumping and maintain system pressure using compressed air. If they were to be used for storage, only one-third of the volume would be available. The rest of the tank space contains compressed air. These tanks would only provide only several minutes of water. However, for the function they are intended, they are necessary and adequate and are 100% used and useful. Exhibit (FS-2) ____ lists the location and capacity of the hydropneumatic storage facilities. I provided the 100% used and useful percentage to Mr. Kramer to be applied to the plant balance in Account 330.4, for each of the respective systems, as well as to the associated accumulated depreciation and depreciation expense accounts.

DETERMINATION OF SUPPLY AND PUMPING CAPACITY FOR EACH SYSTEM

Q. What basis did you use to determine supply and pumping capacity for each system?

A. The basis for determining the capacity of each system, for purposes of analyzing used and useful, is that system's Firm Reliable Capacity. Firm Reliable Capacity is the capacity of the system to

supply and pump water with the largest pump out of service. This is a necessary contingency to consider for reliability since, without storage to supplement capacity, the demand must be met directly from the wells and pumps, even when there is a pump or well out of service.

Q. What basis did you use to determine supply and pumping capacity for each well and pump within a system?

A. I used the gallon per minute (gpm) rating of the pump as the capacity of the well and pump. Each well and pump operate as a team and pump capacity is the limiting factor. The ability of the well itself to deliver water is limited only by the pipe size and the nature of the aquifer which it taps. There may be safe yield limitations also to prevent depleting the source or drawing sand or impurities, but the pump capacity really identifies the useful capacity of the well.

Q. Based on your analysis what is the Firm Reliable Capacity of each of the LUSI systems?

A. The Firm Reliable Capacity of each of the LUSI systems, expressed in gpm, is set out in

Exhibit(FS-3)_____. In that exhibit I have indicated the rated capacity of each well within a system, as well as the Firm Reliable Capacity of the system.

DETERMINATION OF DEMAND ON EACH SYSTEM

Q. What basis did you use to measure demand in each of the systems?

A. I used the instantaneous demand plus a margin reserve. Instantaneous demand is the greatest demand a system attains, and that is what the wells and pumps must be able to meet.

Q. You did not include an allowance for fireflow, while in its MFR, LUSI included a demand for fireflow. Do you disagree that fireflow should be part of customer demand?

A. No. Fireflow is a part of customer demand that must be met. However, in its MFR, LUSI measured customer demand on the basis of maximum day demand rather than instantaneous demand. In Docket No. 911082-WS, the general rulemaking docket for water and wastewater rules, their was a general agreement between the industry and the PSC engineering staff that for small systems with insufficient storage to

buffer instantaneous demand, customer demand could be measured either as being the sum of maximum day demand plus fireflow demand plus margin reserve or as instantaneous demand plus margin reserve. So, if demand is measured in terms of maximum day, fireflow demand must be included as a separate allowance. Although there was no specific discussion as to why fireflow demand was not added to instantaneous demand, I believe it is a conservative recognition that fireflow demand is not instantaneous but must be sustained over a period of several hours, and that adding the two would unduly overstate instantaneous demand. As I stated, this is a conservative interpretation because if a fire occurs at the time of greatest demand, they both must be met.

Q. Is information on instantaneous demand of each system available from the utility's records?

A. No. A utility only records daily demand. However, the relationship of hourly and instantaneous demand to daily and annual demand has been estimated in many technical references. And a generally accepted design criteria for instantaneous demand per ERC was included in the Commission's Notice of

Rulemaking in Docket No. 911082-WS. The table from the Notice of Rulemaking Order No. PSC-93-0455-NOR-WS, entitled Instantaneous Demands per ERC is attached as Exhibit (FS-4)____. It should be noted that the table title is a misnomer. The table does not show demand per ERC directly. It shows total system demand in gpm based on the number of ERCs in the system. However, the demand per ERC for any size system can be determined by dividing the system demand in gpm on any line in the table by the number of ERCs on that line. The table takes into account the increasing diversity of instantaneous demand that is exhibited as a system increases in size. Thus it can be shown from the table that if the system had only one ERC, the instantaneous demand for that one ERC would be 15 gpm. However, for a system with 100 ERCs, the instantaneous demand drops to only 3.51 gpm per ERC.

Q. How did you determine the number of ERCs in each system?

A. I added the average number of residential customers for the test year and the number of ERCS represented by the general service customers. The

number of ERCs represented by general service customers was determined by dividing test year general service gallon sales by the average annual use per residential customer. These calculations are shown for each system on lines 1 through 7 of Exhibit (FS-5) ____.

Q. To determine the average annual use per residential customer, did you use the actual residential sales volume for the test year?

A. No. I reduced the sales volumes from the billing analysis by 10% for the following service areas: Clermont, Amber Hill, Lake Ridge, Crescent West, Highland Point, Crescent Hills, Oranges and Vistas. This reflects the repression adjustment suggested by the PSC staff in its April 2, 1997 Recommendation. LUSI has indicated that it intends to utilize that adjustment in determining its test year revenue requirement.

Q. In determining the instantaneous demand of each system, did you factor in an allowance for unaccounted for water?

A. Yes. I added to the instantaneous demand a factor of 12.5% of pumped water to recognize the 10% floor

of the range historically considered acceptable by the Commission plus 2.5% for leakage, recognized as a design criteria by the American Water Works Association (AWWA). I utilized this low end rather than the amounts shown in the utility's MFR because I do not believe the utility's MFR accurately reflects the difference between unaccounted for water and water that is accounted for but not sold.

Q. How did you determine the margin reserve demand?

A. LUSI projected an annual growth of 101 ERCs in its MFR. In workpapers, it broke that amount down by system. I multiplied the annual growth for each system times the 1.50 year (eighteen months) margin reserve period shown in the MFR and multiplied that amount times the instantaneous demand per ERC found on line 11 of Exhibit (FS-5) ____. The margin reserve period calculations are detailed in Exhibit (FS-6) ____ and carried over to Exhibit (FS-5)____ where the margin reserve demand for each system is shown at lines 13 through 15.

Q. Based on your analysis what is the instantaneous demand on each of the LUSI systems?

A. The instantaneous demand for each of the LUSI systems, including margin reserve is set out in Exhibit(FS-5)_____ at line 16.

Q. Based on your analysis of instantaneous system demand and firm reliable capacity, what are the resulting used and useful percentages?

A. The resulting used and useful percentages for each system, the calculations of which are contained in Exhibit (FS-5)_____ at lines 17 through 22, are:

System No. 1 - 94.07%
System No. 2 - 100.00%
System No. 3 - 100.00%
System No. 4 - 89.28%
System No. 5 - 100.00%
System No. 6 - 68.41%

I provided these percentages to Mr. Kramer to be applied to the plant balances in Account Nos. 307.2, 311.2 and 320.3 of each of the respective systems, as well as to the associated accumulated depreciation and depreciation expense accounts.

SERVICE AVAILABILITY CHARGES

Q. Based on your analysis of system demand and capacity, have you made a determination of the remaining or future ERCs that can be served by existing capacity and number of years to buildout of existing capacity for use in the evaluation of service availability charges?

A. Yes. I have prepared Exhibit(FS-7) _____, which shows the calculation of those parameters. Based on the capacities of the systems, the demand per ERC of each system and the expected annual growth for the systems, there are 156 future ERCs remaining to be served by existing facilities and it will take 1.55 years to reach buildout of the existing facilities. I provided these factors to Mr. Kramer for his analysis of the Service Availability Charge.

Q. Does that complete your direct testimony?

A. Yes it does.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 960444-WU

EXHIBITS

ACCOMPANYING DIRECT TESTIMONY

OF

FRANK SEIDMAN

Lake Utility Services, Inc.
List of Physically Independent Systems Within Service Area

System	Well Site Locations
No. 1	Clermont I Amber Hill Lake Ridge Club
No. 2	Clermont II
No. 3	Crescent Bay Crescent West Crescent Hills Highland Point
No. 4	Oranges Vistas
No. 5	Four Lakes
No. 6	Lake Saunders

Lake Utility Services, Inc.
Hydropneumatic Storage Facilities by System

System	Tank Location	Capacity, Gallons
No. 1	Clermont I	1,000
	Clermont I	1,000
	Amber Hill	7,500
	Lake Ridge Club	8,000
	Total, System No. 1	17,500
No. 2	Clermont II	3,000
No. 3	Crescent Bay	10,000
	Crescent West	10,000
	Crescent Hills	10,000
	Highland Point	5,000
	Total, System No. 3	35,000
No. 4	Oranges	5,500
	Vistas	10,000
	Total, System No. 4	15,500
No. 5	Four Lakes	2,000
No. 6	Lake Saunders	10,000

Source: 1995 Annual Report to PSC, Schedule W-11

Lake Utility Services, Inc.
Firm Reliable Capacity by System

System	Well Identification	Rated Pump Capacity gpm
No. 1	Clermont I, well no.1	236
	Clermont I, well no.2	54
	Amber Hill	750
	Lake Ridge Club	650
	Total Capacity	1,690
	Less: Largest well out of service	(750)
	Firm Reliable Capacity	940
No. 2	Clermont II, well no.1	40
	Clermont II, well no.2	30
	Total Capacity	70
	Less: Largest well out of service	(40)
	Firm Reliable Capacity	30
No. 3	Crescent Bay	700
	Crescent West	600
	Crescent Hills	600
	Highland Point	550
	Total Capacity	2,450
	Less: Largest well out of service	(700)
	Firm Reliable Capacity	1,750
No. 4	Oranges	530
	Vistas, well no.1	1,000
	Vistas, well no.2 (not in service in TY)	0
	Total Capacity	1,530
	Less: Largest well out of service	(1,000)
	Firm Reliable Capacity	530
No. 5	Four Lakes, well no.1	105
	Four Lakes, well no.2	105
	Total Capacity	210
	Less: Largest well out of service	(105)
	Firm Reliable Capacity	105
No. 6	Lake Saunders, well no.1	300
	Lake Saunders, well no.2	300
	Total Capacity	600
	Less: Largest well out of service	(300)
	Firm Reliable Capacity	300
Cumulative Firm Reliable Capacity – All Systems		3,655

Source: FDEP Orlando Office

INSTANTANEOUS DEMANDS PER ERC

No. of ERCs	Instantaneous Demand (GPM)	No. of ERCs	Instantaneous Demand (GPM)	No. of ERCs	Instantaneous Demand (GPM)	No. of ERCs	Instantaneou Demand (GPM)
1	15	26	124	51	203	76	279
2	20	27	128	52	206	77	282
3	25	28	132	53	209	78	285
4	30	29	136	54	212	79	288
5	35	30	140	55	215	80	291
6	40	31	143	56	218	81	294
7	45	32	146	57	221	82	297
8	50	33	149	58	224	83	300
9	55	34	152	59	227	84	303
10	60	35	155	60	230	85	306
11	64	36	158	61	233	86	309
12	68	37	161	62	237	87	312
13	72	38	164	63	240	88	315
14	76	39	167	64	243	89	318
15	80	40	170	65	246	90	321
16	84	41	173	66	249	91	324
17	88	42	176	67	252	92	327
18	92	43	179	68	255	93	330
19	96	44	182	69	258	94	333
20	100	45	185	70	261	95	336
21	104	46	188	71	264	96	339
22	108	47	191	72	267	97	342
23	112	48	194	73	270	98	345
24	116	49	197	74	273	99	348

25 120 50 200 75 276 100 351

For systems greater than 100 ERCs, ID = 351 x ERCs/100 in GPM

Specific Authority: 367.121, F.S.

Law Implemented: 367.081, F.S.

History: New.

25-30.433 Rate Case Proceedings.

In a rate case proceeding, the following provisions shall apply, unless, for good cause shown, the applicant or any intervenor demonstrates that these rules result in an unreasonable burden. In these instances, fully supported alternatives will be considered by the Commission. Any alternatives proposed by the utility must be filed with the minimum filing requirements.

(1) The Commission in every rate case shall make a determination of the quality of service provided by the utility. This shall be derived from an evaluation of three separate components of water and wastewater utility operations: quality of utility's product (water and wastewater); operational conditions of utility's plant and facilities; and the utility's attempt to address customer satisfaction. Sanitary surveys, outstanding citations, violations and consent orders on file with the Department of Environmental Regulation (DER) and county

Lake Utility Services, Inc.
Calculation of Instantaneous Demand, Margin Reserve Demand and
Used and Useful Percentages for Supply, Treatment and Pumping Facilities
For System No. 1

Calculation of number of ERCs	
1. Annual residential sales (repressed)	65,554,200 Gal
2. Avg no. of res. cust.	192 ERC
3. Avg annual use ERC	340,836 Gal
4. Annual general service sales	7,530,000 Gal
5. Avg annual use per ERC	340,836 Gal
6. General Service ERC's	22 ERC
7. Total ERC's	214 ERC

Calculation of Instantaneous Demand	
8. Instantaneous Demand per ERC	3.51 gpm/ERC
9. Unaccounted for multiplier for	
10. 12.5% of water pumped = 1-(1/(1-.125) = 14.29% x sales	0.50 gpm/ERC
11. gpm per ERC, incl. 12.5% unaccounted for water	4.01 gpm/ERC
12. Instantaneous Demand	860 gpm

Calculation of Margin Reserve Demand	
13. Instantaneous gpm/ERC	4.01 gpm
14. x ERCS in 18 Mo. Margin Reserve Period	6
15. Margin Reserve Demand	24 gpm

16. Total Demand [Instantaneous + Margin Reserve]	884 gpm

Calculation of Percent Used and Useful	
Percent Used & Useful, including MR	
17. Demand	884 gpm
18. Capacity	940 gpm
19. Used & Useful	94.07%
Percent Used & Useful, excluding MR	
20. Demand	860 gpm
21. Capacity	940 gpm
22. Used & Useful	91.51%

Lake Utility Services, Inc.
Calculation of Instantaneous Demand, Margin Reserve Demand and
Used and Useful Percentages for Supply, Treatment and Pumping Facilities
For System No. 2

Calculation of number of ERCs	
1. Annual residential sales (repressed)	9,254,700 Gal
2. Avg no. of res. cust.	34 ERC
3. Avg annual use ERC	276,260 Gal
4. Annual general service sales	0 Gal
5. Avg annual use per ERC	276,260 Gal
6. General Service ERC's	0 ERC
7. Total ERC's	34 ERC

Calculation of Instantaneous Demand	
8. Instantaneous Demand per ERC	3.76 gpm/ERC
9. Unaccounted for multiplier for	
10. 12.5% of water pumped = 1-(1/(1-.125) = 14.29% x sales	0.54 gpm/ERC
11. gpm per ERC, incl. 12.5% unaccounted for water	4.30 gpm/ERC
12. Instantaneous Demand	144 gpm

Calculation of Margin Reserve Demand	
13. Instantaneous gpm/ERC	4.30 gpm
14. x ERCS in 18 Mo. Margin Reserve Period	0
15. Margin Reserve Demand	0 gpm

16. Total Demand [Instantaneous + Margin Reserve	144 gpm

Calculation of Percent Used and Useful	
Percent Used & Useful, including MR	
17. Demand	144 gpm
18. Capacity	30 gpm
19. Used & Useful	480.00%
Percent Used & Useful, excluding MR	
20. Demand	144 gpm
21. Capacity	30 gpm
22. Used & Useful	480.00%

Lake Utility Services, Inc.
Calculation of Instantaneous Demand, Margin Reserve Demand and
Used and Useful Percentages for Supply, Treatment and Pumping Facilities
For System No. 3

Calculation of number of ERCs	
1. Annual residential sales (repressed)	83,405,000 Gal
2. Avg no. of res. cust.	342 ERC
3. Avg annual use ERC	243,874 Gal
4. Annual general service sales	2,316,000 Gal
5. Avg annual use per ERC	243,874 Gal
6. General Service ERC's	9 ERC
7. Total ERC's	351 ERC

Calculation of Instantaneous Demand	
8. Instantaneous Demand per ERC	3.51 gpm/ERC
9. Unaccounted for multiplier for	
10. 12.5% of water pumped = 1-(1/(1-.125) = 14.29% x sales	0.50 gpm/ERC
11. gpm per ERC, incl. 12.5% unaccounted for water	4.01 gpm/ERC
12. Instantaneous Demand	1,410 gpm

Calculation of Margin Reserve Demand	
13. Instantaneous gpm/ERC	4.01 gpm
14. x ERCS in 18 Mo. Margin Reserve Period	104
15. Margin Reserve Demand	417 gpm

16. Total Demand [Instantaneous + Margin Reserve	1,827 gpm

Calculation of Percent Used and Useful	
Percent Used & Useful, including MR	
17. Demand	1,827 gpm
18. Capacity	1,750 gpm
19. Used & Useful	104.41%
Percent Used & Useful, excluding MR	
20. Demand	1,410 gpm
21. Capacity	1,750 gpm
22. Used & Useful	80.57%

Lake Utility Services, Inc.
Calculation of Instantaneous Demand, Margin Reserve Demand and
Used and Useful Percentages for Supply, Treatment and Pumping Facilities
For System No. 4

Calculation of number of ERCs	
1. Annual residential sales (repressed)	20,406,600 Gal
2. Avg no. of res. cust.	103 ERC
3. Avg annual use ERC	199,089 Gal
4. Annual general service sales	489,000 Gal
5. Avg annual use per ERC	199,089 Gal
6. General Service ERC's	2 ERC
7. Total ERC's	105 ERC

Calculation of Instantaneous Demand	
8. Instantaneous Demand per ERC	3.51 gpm/ERC
9. Unaccounted for multiplier for	
10. 12.5% of water pumped = 1-(1/(1-.125) = 14.29% x sales	0.50 gpm/ERC
11. gpm per ERC, incl. 12.5% unaccounted for water	4.01 gpm/ERC
12. Instantaneous Demand	421 gpm

Calculation of Margin Reserve Demand	
13. Instantaneous gpm/ERC	4.01 gpm
14. x ERCS in 18 Mo. Margin Reserve Period	13
15. Margin Reserve Demand	52 gpm

16. Total Demand [Instantaneous + Margin Reserve	473 gpm

Calculation of Percent Used and Useful	
Percent Used & Useful, including MR	
17. Demand	473 gpm
18. Capacity	530 gpm
19. Used & Useful	89.28%
Percent Used & Useful, excluding MR	
20. Demand	421 gpm
21. Capacity	530 gpm
22. Used & Useful	79.44%

Lake Utility Services, Inc.
Calculation of Instantaneous Demand, Margin Reserve Demand and
Used and Useful Percentages for Supply, Treatment and Pumping Facilities
For System No. 5

Calculation of number of ERCs	
1. Annual residential sales (repressed)	5,875,000 Gal
2. Avg no. of res. cust.	49 ERC
3. Avg annual use ERC	119,088 Gal
4. Annual general service sales	0 Gal
5. Avg annual use per ERC	119,088 Gal
6. General Service ERC's	0 ERC
7. Total ERC's	49 ERC

Calculation of Instantaneous Demand	
8. Instantaneous Demand per ERC	4.02 gpm/ERC
9. Unaccounted for multiplier for	
10. 12.5% of water pumped = 1-(1/(1-.125) = 14.29% x sales	0.57 gpm/ERC
11. gpm per ERC, incl. 12.5% unaccounted for water	4.59 gpm/ERC
12. Instantaneous Demand	227 gpm

Calculation of Margin Reserve Demand	
13. Instantaneous gpm/ERC	4.59 gpm
14. x ERCS in 18 Mo. Margin Reserve Period	21
15. Margin Reserve Demand	96 gpm

16. Total Demand [Instantaneous + Margin Reserve	323 gpm

Calculation of Percent Used and Useful	
Percent Used & Useful, including MR	
17. Demand	323 gpm
18. Capacity	105 gpm
19. Used & Useful	307.78%
Percent Used & Useful, excluding MR	
20. Demand	227 gpm
21. Capacity	105 gpm
22. Used & Useful	215.88%

Lake Utility Services, Inc.
Calculation of Instantaneous Demand, Margin Reserve Demand and
Used and Useful Percentages for Supply, Treatment and Pumping Facilities
For System No. 6

Calculation of number of ERCs	
1. Annual residential sales (repressed)	2,137,000 Gal
2. Avg no. of res. cust.	34 ERC
3. Avg annual use ERC	62,546 Gal
4. Annual general service sales	0 Gal
5. Avg annual use per ERC	62,546 Gal
6. General Service ERC's	0 ERC
7. Total ERC's	34 ERC

Calculation of Instantaneous Demand	
8. Instantaneous Demand per ERC	4.47 gpm/ERC
9. Unaccounted for multiplier for	
10. 12.5% of water pumped = 1-(1/(1-.125) = 14.29% x sales	0.64 gpm/ERC
11. gpm per ERC, incl. 12.5% unaccounted for water	5.11 gpm/ERC
12. Instantaneous Demand	175 gpm

Calculation of Margin Reserve Demand	
13. Instantaneous gpm/ERC	5.11 gpm
14. x ERCS in 18 Mo. Margin Reserve Period	6
15. Margin Reserve Demand	31 gpm

16. Total Demand [Instantaneous + Margin Reserve	205 gpm

Calculation of Percent Used and Useful	
Percent Used & Useful, including MR	
17. Demand	205 gpm
18. Capacity	300 gpm
19. Used & Useful	68.41%
Percent Used & Useful, excluding MR	
20. Demand	175 gpm
21. Capacity	300 gpm
22. Used & Useful	58.19%

Lake Utility Services, Inc.
ERCs in Margin Reserve Period

System	Expected Annual ERC Growth	Margin Reserve Period [Yrs.]	Margin Reserve Period ERCs
No. 1	4.00	1.5	6
No. 2	0.00	1.5	0
No. 3	69.33	1.5	104
No. 4	8.67	1.5	13
No. 5	14.00	1.5	21
No. 6	4.00	1.5	6
Total	100		150

Note: The estimated future growth per year is 101 ERCs for the total LUSI service area [MFR Sch F-9]. When the amount was allocated to each independent system, the rounded total came to 100 ERCs.

Lake Utility Services, Inc.
Calculation of Service Availability Charge Analysis Parameters
Remaining [Future] ERCs that can be Served and Years to Buildout

Line No.		System No. 1	System No. 2	System No. 3	System No. 4	System No. 5	System No. 6	Totals	Supporting Schedules
1.	Existing Firm Reliable Capacity, gpm	940	30	1,750	530	105	300	3,655	Exh. FS-5, line 18
2.	gpm/ERC	4.01	4.30	4.01	4.01	4.59	5.11		Exh. FS-5, line 11
3	Existing Firm Reliable Capacity, ERCs	234	7	436	132	23	59	891	line 1/line2
4.	ERCs Served	214	34	351	105	49	34	788	Exh. FS-5, line 7
5.	Remaining [Future] ERCs that can be Served	20	0	85	27	0	25	156	*line 3 – line 4 [see Note]*
6.	Expected Annual ERC growth							101	MFR Sch F-9
7.	Years to Buildout							1.55	line 5/line 6

Note: If ERCs served [line 4] is greater than Capacity [line 3], the remaining ERCs in line 5 is zero.