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JACK SHREVE
PUBLIC COUNSEL

STATE OF FLORIDA
OFFICE OF THE PUBLIC COUNSEL

c/o The Florida Legislature
111 West Madison St.
Room 812
Tallahassee, Florida 32399-1400
850-488-9330

August 11, 2000

Ms. Blanca S. Bayó, Director
Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0870

RE: Docket No. 990080-WS

Dear Ms. Bayó:

Enclosed are an original and fifteen copies of the Direct Testimony of Ted L. Bidy, P.E./P.L.S. for filing in the above referenced docket.

Also Enclosed is a 3.5 inch diskette containing the Direct Testimony of Ted L. Bidy, P.E./P.L.S. in MS Word format. Please indicate receipt of filing by date-stamping the attached copy of this letter and returning it to this office. Thank you for your assistance in this matter.

Sincerely,

Stephen C. Burgess
Deputy Public Counsel

SCB/dsb
Enclosures

- APP _____
- CAF _____
- CMP _____
- COM 3 tolg
- CTR _____
- ECR _____
- LEG 1
- OPC _____
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FPSC-BUREAU OF RECORDS

DOCUMENT NUMBER-DATE
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FPSC-RECORDS/REPORTING

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**PREFILED TESTIMONY
OF
TED L. BIDDY, P.E. / P.L.S.**

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

ON BEHALF OF THE

CITIZENS OF THE STATE OF FLORIDA

DOCKET NO. 990080-WS

August 11, 2000

DOCUMENT NUMBER-DATE

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FPSC-RECORDS/REPORTING

1 **Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?**

2 A. My name is Ted L. Bidby. My business address is 2308 Clara Kee Boulevard,
3 Tallahassee, Florida 32303.

4 **Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?**

5 A. I am currently self-employed as a professional engineer and land surveyor.

6 **Q. WHAT IS YOUR EDUCATIONAL BACKGROUND AND WORK
7 EXPERIENCE?**

8 A. I graduated from the Georgia Institute of Technology with a B.S. degree in Civil
9 Engineering in 1963. I am a registered professional engineer and land surveyor
10 in Florida, Georgia, Mississippi and several other states. I was the vice-
11 president of Baskerville-Donovan, Inc. (BDI) and the regional manager of their
12 Tallahassee Office from April 1991 until February 1998. I left the employment
13 of BDI on September 30, 1998. Before joining BDI in 1991, I had operated my
14 own civil engineering firm for 21 years. My areas of expertise include civil
15 engineering, structural engineering, sanitary engineering, soils and foundation
16 engineering and precise surveying. During my career, I have designed and
17 supervised the master planning, design and construction of thousands of
18 residential, commercial and industrial properties. My work has included: water
19 and wastewater facility design; roadway design; parking lot design; stormwater
20 facilities design; structural design; land surveys; and environmental permitting.

1 I have served as the principal and chief designer for numerous utility projects.
2 Among my major water and wastewater facilities designs have been a 2,000 acre
3 development in Lake County, FL; a 1,200 acre development in Ocean Springs,
4 MS; a 4-mile water distribution system for Talquin Electric Cooperative, Inc.
5 and a 320-lot subdivision in Leon County, FL.

6 **Q. WHAT ARE YOUR PROFESSIONAL AFFILIATIONS?**

7 A. I am a member of the Florida Engineering Society, National Society of
8 Professional Engineers, Florida Institute of Consulting Engineers, American
9 Consulting Engineers Council, American College of Forensic Examiners and the
10 Florida Society of Professional Land Surveyors.

11 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE A STATE OR
12 FEDERAL COURT AS AN ENGINEERING EXPERT WITNESS?**

13 A. Yes, I have had numerous court appearances as an expert witness for cases
14 involving roadways, utilities, drainage, stormwater, water and wastewater
15 facilities designs.

16 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE FLORIDA
17 PUBLIC SERVICE COMMISSION (PSC OR COMMISSION) FOR USED
18 AND USEFUL ANALYSIS AND OTHER ENGINEERING ISSUES?**

19 A. Yes, I have testified before the PSC for Docket Nos. 940109-WU, 950495-WS,
20 950387-SU, 951056-WS, 950387-SU, 960329-WS, 971065-SU and 991643-SU

1 on various engineering issues and used and useful analyses.

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

3 A. The purpose of my testimony is to provide engineering testimony on the used
4 and useful calculation issues for this Shangri-La by the Lake Utilities, Inc.
5 (Shangri-La or Utility) case. My testimony will also address the estimated costs
6 of existing water and wastewater facilities at the Shangri-La Mobile Home Park.

7 **Q. DURING YOUR REVIEW OF THIS CASE WHAT DOCUMENTS DID**
8 **YOU REVIEW AND WHAT INVESTIGATIONS DID YOU MAKE?**

9 A. I reviewed all the Utility filed and PSC staff generated case materials from the
10 prior certificate case, Docket No. 940653-WS, and all the case materials from
11 the current case. I further obtained copies of the original water and wastewater
12 systems construction plans from the Lake County Public Works office. I also
13 interviewed the Orlando FDEP permitting and enforcement personnel and
14 obtained copies of pertinent documents from their files. I performed a detailed
15 inspection of the water distribution and wastewater collection systems at
16 Shangri-La and met with residents of Shangri-La on two occasions to discuss the
17 existing utility systems. I then performed an engineering analysis of the original
18 cost of the water and wastewater total plants and performed appropriate used and
19 useful calculations.

20 **Q. WHAT ENGINEERING ANALYSIS DID YOU PERFORM FIRST IN**

1 **CONNECTION WITH THE ORIGINAL COST OF THE WATER AND**
2 **WASTEWATER FACILITIES AT SHANGRI-LA?**

3 A. Both the PSC Staff and I, independently, realized that the original cost study
4 submitted by the Utility, as prepared by Wicks Consulting Services, Inc. in
5 1983, was in error. The error was due to Wicks' inclusion of all the utility
6 facilities shown on the utility's plans for all phases of Shangri-La, when in fact,
7 only a portion of these facilities were actually constructed. Therefore, after
8 studying the original utility plans and performing an onsite inspection of the as-
9 built utilities, I prepared a detailed cost estimate of the actually installed utilities.
10 This cost estimate was based on quantities, which I calculated from the utility
11 plans and confirmed, by field inspection. I then used the original 1983 unit
12 prices as used by Wicks to complete the estimate. This cost estimate amounted
13 to \$54,017 for total water plant and \$80,060 for total wastewater plant. I attach
14 the cost estimate of the original construction hereto as Exhibit TLB-1.

15 **Q. DO YOU CONSIDER YOUR ESTIMATE TO BE ACCURATE AND**
16 **HOW DOES YOUR ESTIMATE COMPARE WITH THE ESTIMATE**
17 **PREPARED BY THE PSC STAFF?**

18 A. Yes, I believe my estimate is accurate because I confirmed the as-built utilities
19 by field inspection and I used 1983 dollars for unit prices in the estimate. The
20 difference in my estimate as compared to the PSC Staff estimate for water plant

1 is very small. Staff's estimate for all water plant constructed through 1983 is
2 \$53,453 as compared to my estimate of \$54,017. Staff then adds a total of
3 \$25,675 to their estimate to arrive at \$79,128 for total water plant in service.
4 The \$25,675 amount consists of additions to the water plant by Shangri-La from
5 1983 to June 30, 1994 plus an amount of \$16,875 for future meters to be
6 installed. These amounts are appropriate and I have no problem with Staff's
7 proposed total water plant in service of \$79,128.

8 The difference in my estimate as compared to the PSC Staff estimate for
9 wastewater plant is also very small. Staff's estimate for all wastewater plant
10 constructed through 1983 is \$79,266 as compared to my estimate of \$80,060.
11 Staff then adds a total of \$7,066 to their estimate to arrive at \$86,332 for total
12 wastewater plant in service. The \$7,066 amount consists of additions to the
13 wastewater plant by Shangri-La from 1983 to June 30, 1994 for various
14 necessary improvements. This \$7,066 addition is appropriate and I have no
15 problem with Staff's proposed total wastewater plant in service of \$86,332.

16 **Q. DO YOU AGREE WITH THE PSC PROPOSED AGENCY ACTION OF**
17 **FEBRUARY 8, 2000 THAT, "THE ONLY ADJUSTMENT THAT**
18 **SHOULD BE MADE TO THE RATE BASE AT THIS TIME IS AN**
19 **ADJUSTMENT TO REMOVE THE OVERSTATED LINES?"**

20 **A. No, I do not agree that the overstated lines cost is the only adjustment that**

1 should be made to the rate base. There are significant used and useful
2 adjustments that should be made to the rate base for the water distribution
3 system, the wastewater collection system, and the wastewater treatment and
4 disposal system. In particular, as discussed below, the used and useful
5 percentage for the wastewater treatment and disposal system is very low.

6 The proposed agency action reasons that the proper assessment of the utility's
7 used and useful status would be more appropriately handled in a rate case
8 proceeding. While this statement may be true if such a rate case was pending in
9 the near future so that the proper used and useful adjustments could be made,
10 unfortunately no such rate case is pending. The proper used and useful
11 adjustments need to be made now so that the ratepayers do not continue to pay
12 excessive rates while waiting for the next rate case. Moreover, since the utility
13 has been collecting excessive rates for some time now, due to the overstated
14 original cost study and the lack of adjustment for used and useful percentages,
15 the ratepayers are no doubt entitled to a refund of some amount.

16 **Q. DO YOU AGREE WITH THE 100% USED AND USEFUL**
17 **PERCENTAGE PROPOSED BY THE PSC STAFF FOR THE SHANGRI-**
18 **LA WATER DISTRIBUTION SYSTEM? IF NOT, PLEASE EXPLAIN**
19 **WHY YOU DO NOT AGREE AND WHAT IS THE APPROPRIATE**
20 **METHODOLOGY FOR CALCULATING THE USED AND USEFUL**

1 **PERCENTAGE?**

2 Q. No, I do not agree that the water distribution system for the Shangri-La system is
3 100% used and useful. First, we need to recognize that the occupation of the
4 Shangri-La by the Lake Mobile Home Park has been stagnant for several years
5 now and that a zero growth percentage is warranted for the existing system.
6 Therefore, the five year margin reserve growth factor would not apply to
7 Shangri-La since we have historical evidence of no growth from June 30, 1994
8 through June 30, 1999. By actual field count on October 12, 1999, I found 127
9 mobile home lots occupied with water connections and 5 single family
10 residential water service connections existing. Therefore, only 132 active
11 connections existed on October 12, 1999 while the original 1994 certificate case
12 (Docket No. 940653-WS) stated that Shangri-La was currently providing water
13 and wastewater service to 135 mobile homes and 5 single family residences (140
14 connections). This evidence shows that Shangri-La actually lost 8 connections
15 over the five year margin reserve period.
16 Shangri-La by the Lake has 155 lots with water service available and 5 adjacent
17 property single family residences for a total of 160 available water services.
18 With only 132 active connections, the used and useful percentage for the water
19 distribution system would be 132/160 or 82.5% using the comparison of
20 connected lots to total available lots. Exhibit TLB-2 sets forth the used and

1 useful methodology and Exhibit TLB-3 shows the used and useful calculations.

2 **Q. DO YOU AGREE THAT THE WATER WELL AND WATER**
3 **TREATMENT PLANT SHOULD BE CONSIDERED 100% USED AND**
4 **USEFUL?**

5 A. Since the system, during the 1994 to 1999 period, had only one well, we will
6 have to assign a 100% used and useful percentage to the well and water
7 treatment plant. My rationale for used and useful calculations is based on
8 established design criteria for wells considering the firm reliable capacity which
9 is the well supply capacity with the largest well out of service. For used and
10 useful calculations, I compare existing demand to the firm reliable capacity.
11 Since only one well existed for this period, we can not compute a firm reliable
12 capacity for the system.

13 During my inspection in October, 1999, I noted that an additional well was
14 being installed. Therefore, future used and useful calculations will need to
15 consider the existing system demand compared to the system's firm reliable
16 capacity.

17 I have serious questions that will be discussed below concerning the historical
18 volume pumped by the existing well as compared to the extremely low volume
19 received by the wastewater treatment plant. However, for now, the well and
20 water treatment facilities must be considered 100% used and useful.

1 **Q. DO YOU AGREE THAT THE WASTEWATER COLLECTION SYSTEM**
2 **SHOULD BE CONSIDERED 100% USED AND USEFUL AS PROPOSED**
3 **BY THE PSC STAFF FOR THE SHANGRI-LA SYSTEM? IF NOT,**
4 **PLEASE EXPLAIN WHY YOU DO NOT AGREE AND WHAT IS THE**
5 **APPROPRIATE METHODOLOGY FOR CALCULATING THE USED**
6 **AND USEFUL PERCENTAGE?**

7 A. No, I do not agree that the Shangri-La wastewater collection system is 100%
8 used and useful. For the same reasons as I discussed above for the water
9 distribution system, the collection system must be assigned a zero growth factor
10 for the five year margin reserve growth period. By my count on October 12,
11 1999, I found 127 mobile homes connected to the wastewater collection system
12 out of a total of 155 available connections to the system. The adjacent five
13 single family residences served with water by Shangri-La do not have
14 wastewater service. Therefore, using the connected lots to total available lots
15 methodology, the used and useful percentage for the wastewater collection
16 system would be 127/155 or 81.94%.

17 **Q. DO YOU AGREE THAT THE WASTEWATER TREATMENT PLANT**
18 **SHOULD BE CONSIDERED 100% USED AND USEFUL? IF NOT,**
19 **PLEASE EXPLAIN WHY YOU DO NOT AGREE AND EXPLAIN THE**
20 **APPROPRIATE METHODOLOGY FOR CALCULATING THE USED**

1 **AND USEFUL PERCENTAGE?**

2 A. No, I do not agree that the treatment plant should be considered 100% used and
3 useful. It has a very low used and usefulness for reasons that I will address.

4 First, however, I would like to address the 5 year margin reserve issue. For the
5 same reasons as discussed above concerning the lack of growth at Shangri-La
6 during the 5 year margin reserve period, the wastewater flow to the treatment
7 plant has been stagnant and a zero growth factor is warranted for the five years
8 ending June 30, 1999. Both the Shangri-La annual reports and available FDEP
9 records confirm that flows to the Wastewater Plant “have decreased slightly”
10 during the past 4 years. The annual average daily flows (AADF) from FDEP
11 records and Shangri-La annual reports are as follows:

12	<u>YEAR</u>	<u>FDEP RECORDS</u>	<u>SHANGRI-LA</u>	<u>REPORTS</u>
13	1996	7,100 GPD		7,109 GPD
14	1997	7,100 GPD		7,249 GPD
15	1998	7,600 GPD		6,654 GPD
16	1999	5,900 GPD		-----

17 The average of the four years of FDEP records would be 6,925 GPD for the
18 AADF. These four years of records were all the data available at the Orlando
19 office of FDEP when I visited with them in December, 1999. Prior records have
20 been archived.

1 The treatment plant is permitted by FDEP at an AADF of 50,000 GPD.
2 Therefore, the used and useful percentage for the treatment plant would be
3 6,925/50,000 or 13.85%. With such a low used and useful percentage, it would
4 not be equitable or fair to the ratepayers to delay the used and useful adjustment
5 to the rate base for the wastewater treatment plant because the ratepayers are
6 already paying excessive rates.

7 **Q. DO YOU BELIEVE THAT A USED AND USEFUL ADJUSTMENT**
8 **SHOULD BE MADE TO THE EFFLUENT DISPOSAL FACILITIES?**

9 A. The FDEP Effluent Disposal Permit for the Shangri-La Wastewater Treatment
10 Plant is for a 0.013 MGD percolation pond and a 0.037 MGD sprayfield.
11 Though the effluent disposal facilities (reuse) are required to comply with the
12 FDEP requirements, I believe that equity and fairness would dictate that existing
13 customers should only pay for their own share of these facilities but not for the
14 future customers. The used and useful adjustment should be applied to all the
15 effluent disposal facilities. Since there is no detail design information available,
16 the treatment plant used and useful percentage (13.85%) should be applied to all
17 the effluent disposal system.

18 **Q. WHAT IS THE EFFECT OF SECTION 367.0817, FLORIDA STATUTES,**
19 **ON THE PERMISSIBILITY OF MAKING USED AND USEFUL**
20 **ADJUSTMENTS ON REUSE FACILITIES?**

1 A. I am aware that Section 367.0817 addresses this issue. That provision was only
2 recently passed and, to my knowledge, it has not been interpreted by a Florida
3 court. Since I am not a lawyer, I do not feel qualified to render a legal opinion
4 as to how that statutory provision would be applied in this particular situation. It
5 is inconceivable to me, however, that the Florida legislature could have intended
6 that today's customers should be saddled with the capital carrying costs for
7 facilities that will not be needed until the distant future.

8 **Q. DO YOU HAVE FURTHER TESTIMONY TO OFFER TO THE**
9 **COMMISSION?**

10 A. Yes, I would like to discuss the abnormal relationship at Shangri-La between the
11 water usage and the wastewater flow which reaches the treatment plant. The
12 average daily flow (ADF) for water usage has been many times higher than the
13 wastewater flow and is a puzzle. The following table shows the comparison of
14 water usage to wastewater flow at the treatment plant.

15	<u>YEAR</u>	<u>WATER USAGE</u>	<u>WASTEWATER TREATED</u>
16	1996	57,981 GPD (ADF)	7,100 GPD (ADF)
17	1997	53,728 GPD (ADF)	7,100 GPD (ADF)
18	1999	25,083 GPD (ADF)	5,900 GPD (ADF)

19 The water usage during the time periods charted above amounts to as much
20 as eight times the wastewater flow received at the treatment plant down to four

1 times the wastewater flow after meters were installed in 1999. This water
2 usage is highly unusual since a normal rule of thumb is that 70 to 80 percent of
3 water usage is returned to the sewers. While it is true that the Shangri-La
4 Mobile Home water services were not metered until 1999, extensive irrigation
5 and/or leaks in the water distribution system would have had to occur for this
6 much water usage. Even after meters were installed, the water pumped to the
7 distribution system amounts to more than four times the flow received at the
8 wastewater treatment plant. Unaccounted for water to these levels is obviously
9 unacceptable.

10 There is another possible answer to the unusually high water usage at Shangri-
11 La. The 1998 annual report submitted by Shangri-La on page W-3 under water
12 customers lists five 5/8" meters for the single family residential connections;
13 129 unmetered mobile home connections; and one 4" meter counted as a single
14 customer equal to 30 meter equivalents. The one customer counted for the 4"
15 meter is then added to the 5 single family customers and the 129 mobile home
16 customers to give a total of 135 customers.

17 If Shangri-La truly means that it was serving 135 customers in 1998, one of
18 which was equal to 30 meter equivalents for a total of 164 meter equivalents,
19 then it is obvious that Shangri-La was providing water service to others outside
20 the Shangri-La Mobile Home Park and outside their authorized service area. If

1 this annual report is true as stated, then the mystery of the excessive water flow
2 is solved.

3 During my field inspection of the well facilities, I had to observe the well from
4 the adjacent public roadway because, at that time, the Office of Public Counsel
5 could not get permission for me to go onsite for my inspection. I could not get
6 close enough to the well to determine if another water supply line with a 4"
7 meter was piped toward one of the adjacent developments.

8 I would recommend that the answer to this mystery of the excessive water use be
9 pursued through further discovery from Shangri-La. If the additional customers
10 do not exist, then the answer could be as simple as a very leaky distribution
11 system that is in great need of repair.

12 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

13 **A. Yes.**

EXHIBIT LIST

EXHIBIT TLB-1	COST ESTIMATE OF ORIGINAL CONSTRUCTION
EXHIBIT TLB-2	USED AND USEFUL METHODOLOGY
EXHIBIT TLB-3	USED AND USEFUL CALCULATIONS

SHANGRI-LA BY THE LAKE UTILITIES, INC

CONSTRUCTION COST ESTIMATE USING 1983 PRICES FOR WASTEWATER & WATER UTILITY SYSTEMS

(BASED ON RECORD DRAWINGS OF SPRINGSTEAD ENGINEERING DATED 9-25-75 & 5-3-79 AND FIELD INSPECTION)

NOTE: Unit Prices used are same as used by Utility's Engineer, Wicks Consulting in preparing original cost estimate.

WASTEWATER COLLECTION SYSTEM

ITEM	QUANTITY	UNIT PRICE	ITEM AMOUNT	COMMENTS
Lift Stations	2 EA.	\$8,000.00	\$ 16,000.00	Only 2 lift stations constructed
6" F.M-From Park to WWTP	210 L.F..	\$3.00	\$ 630.00	only 210 l.f.of 6" F.M. existing
Manholes	7 EA.	\$500.00	\$ 3,500.00	7 total manholes
Lateral Cleanouts	21 EA.	\$50.00	\$ 1,050.00	21 total cleanouts
8 " Gravity Sewer Main	1,681 L.F.	\$3.00	\$ 5,043.00	only 1,681 l.f of 8" gravity main existing
6" Gravity Sewer Lateral	4,895 L.F.	\$2.00	\$ 9,790.00	only 4,895 l.f. of 6" gravity lateral existing
4" Force Main	2,110 L.F.	\$1.75	\$ 3,692.00	only 2,110 l.f. of 4" force main existing
Sewer Connections	153 EA.	\$35.00	\$ 5,355.00	153 total sewer connections
		SUBTOTAL =	\$ 45,060.00	

WATER DISTRIBUTION SYSTEM

ITEM	QUANTITY	UNIT PRICE	ITEM AMOUNT	COMMENTS
6" C.I.D.I.P. CANAL CROSSING	1 EA.@ 50'.	\$4.00	\$ 200.00	Hung from bridge, not sub-aqueous
2" Galv. I.P. Canal Crossing	0	\$2.00	\$ -	Does not exist
6" Water Line	668 L.F.	\$3.00	\$ 2,004.00	668 l.f. of 6" existing
6" Gate Valves	3 EA.	\$150.00	\$ 450.00	Only 3 - 6" gate valves existing
6"x 4"x 6"x 4" Cross	2 EA.	\$30.00	\$ 60.00	-
6" x 4" x 6' Tee	1 EA.	\$30.00	\$ 30.00	-
6" x 4" x 2" Tee	1 EA.	\$30.00	\$ 30.00	-
4" Water Line	4,952 L.F.	\$2.65	\$ 13,123.00	Only 4,952 l.f. of 4" water line existing
4" Gate Valves	9 EA.	\$75.00	\$ 675.00	9 total 4" gate valves
4" x 4" x 4' Tee	1 Ea.	\$25.00	\$ 25.00	-
4" x 4" x 2" Tee	1 EA.	\$25.00	\$ 25.00	Only 1 - 4" x 4" x 2" tees exists
4" x 4" x 1 1/2" Tee	27 EA.	\$15.00	\$ 405.00	Only 27 - 4" x 4" x 1 1/2" Tees exist
4" x 2" x 1 1/2" Tee	0	\$15.00	\$ -	none exist
4" - 90 degree bend	7 EA.	\$15.00	\$ 105.00	-
4" - 45 degree bend	0	\$15.00	\$ -	none exist
4" - 22 degree bend	0	\$15.00	\$ -	none exist
2" Water Line	0	\$1.50	\$ -	none exist
2" x 2" x 1 1/2" Tee	0	\$5.00	\$ -	none exist
2" x 1 1/2" x 1 1/2" Tee	0	\$5.00	\$ -	none exist
2" Gate Valve	1	\$15.00	\$ 15.00	Only 1 - 2" gate valve exists
2" - 90 degree bend	0	\$4.00	\$ -	none exist
2" x 1 1/2 - 90 degree bend	0	\$4.00	\$ -	none exist
1 1/2" Water Line	5,656 L.F.	\$1.00	\$ 5,656.00	Only 5,656 l.f. of 1 1/2" water line exists
1 1/2" Gate Valve	1 EA.	\$8.00	\$ 8.00	-
1 1/2" - 90 degree bend	1 EA.	\$4.00	\$ 4.00	Only 1 - 1 1/2" - 90 degree bend exists
1 1/2" Blowoff Valve	1	\$52.00	\$ 52.00	-
Water Service Connections	153	\$50.00	\$ 7,650.00	Includes all prepared lots in mobile home park
		SUBTOTAL =	\$ 30,517.00	

WATER PLANT

ITEM	QUANTITY	UNIT PRICE	ITEM AMOUNT	COMMENTS
6" Well w/ 270 GPM, 2 HP, 20" TDH Allis Chalmers Center Pump w/ Elect. Panel, Piping, Valving and Concrete Slab.	1 Ea.	Lump Sum	\$ 12,500.00	Same as Utility's estimate
Aeration Structure with 775 S.F. x 6" Conc. Slab (Sloped 1/4"/ft to Center Drain), 5.3' High Conc. Block Wall Section @ 1,056' Length, 1,054 S.F. x 2' High Alum. Cover w/ Screen.	1 Ea.	Lump Sum	\$ 7,000.00	Same as Utility's estimate
4" C.I. Pipe	16 L.F.	\$3.50	\$ 56.00	Same as Utility's estimate
4" PVC Pipe	61 L.F.	\$2.65	\$ 162.00	Same as Utility's estimate
4" Gate Valve	4 EA.	\$75.00	\$ 300.00	Same as Utility's estimate
4" C.I. Cross	1 EA.	\$15.00	\$ 15.00	Same as Utility's estimate
4" C.I. Tee	1 EA.	\$15.00	\$ 15.00	Same as Utility's estimate
4' x 4" x 2" PVC Tee	1 EA.	\$25.00	\$ 25.00	Same as Utility's estimate
2", 1/16" diameter Holes Drilled PVC Pipe w/ strapping to support beams	140 L.F.	Lump Sum	\$ 227.00	Same as Utility's estimate
High Service Pumps, 150 GPM, 7.5 HP, 140" TDH Allis-Chalmers, w/ associated piping, valves	2 EA.	\$400.00	\$ 800.00	Same as Utility's estimate
Hydro-pneumatic tank w/associated plumbing and controls (1500 gal. Capacity)	1 Ea.	\$1,500.00	\$ 1,500.00	Same as Utility's estimate
Chlorination Room within Water Plant Structure with fans, scales, dual Wallace & Tierman Model V-100A-12 Chlorinator, Booster Pump, C/2 Ejector w/piping, hardware, electrical wiring and controls	1 EA.	Lump Sum	\$ 900.00	Same as Utility's estimate
		SUBTOTAL =	\$ 23,500.00	
WASTEWATER TREATMENT PLANT				
ITEM	QUANTITY	UNIT PRICE	ITEM AMOUNT	COMMENTS

O.O50 MGD Secondary Treatment Steel Plant	1 Ea.	Lump Sum	\$ 25,000.00	Same as Utility's Estimate
		SUBTOTAL =	\$ 25,000.00	
				Exhibit TLB-1 (page 3 of 3)
EFFLUENT DISPOSAL SYSTEM				
ITEM	QUANTITY	UNIT PRICE	ITEM AMOUNT	COMMENTS
3500 s.f. Percolation Pond	1 Ea.	Lump Sum	\$ 3,500.00	Same as Utility's Estimate
3.2 Acre Spray-field w/pump, valves, piping	1 Ea.	Lump Sum	\$ 6,080.00	Same as Utility's Estimate
Pump w/controls	1 Ea.	Lump Sum	\$ 420.00	Same as Utility's Estimate
		SUBTOTAL =	\$ 10,000.00	
	TOTAL	ESTIMATE =	\$ 134,077.00	

EXHIBIT TLB-2

USED AND USEFUL METHODOLOGY

I. WATER DISTRIBUTION SYSTEM

Used & Useful % = **Total Connected Lots/Total Available Lots in System**

Where total connected lots includes a 5-year margin reserve period.

II. WASTEWATER COLLECTION SYSTEM

Used & Useful % = **Total Connected Lots/Total Available Lots in System**

Where total connected lots includes a 5-year margin reserve period.

III. WATER WELLS AND WATER TREATMENT PLANT

Used & Useful % = **Average Daily Flow Demand/Firm Reliable Capacity**

Where ADF demand includes a 5-year margin reserve period and firm reliable capacity is the well supply capacity with the largest well out of service. Also where ADF demand has been decreased for any excess unaccounted for water.

IV. WASTEWATER TREATMENT PLANT

Used & Useful % = **Annual ADF/Total Plant Capacity**

Where annual ADF includes a 5-year margin reserve period and the plant FDEP permit is stated in terms of annual ADF. Also where annual ADF has been decreased for any excess I/I.

V. EFFLUENT DISPOSAL FACILITIES

Used & Useful % = **Annual ADF/Total Plant Capacity**

Where annual ADF includes a 5-year margin reserve period and the plant FDEP permit is stated in terms of annual ADF.

Since no detail design information is available for the effluent disposal facilities, the treatment plant used & useful percentage was applied to the effluent facilities.

SHANGRI-LA BY THE LAKES UTILITIES, INC.
 Docket No. 990080-WS
 Test Year Ending June 30, 1994
 Five Year Margin Reserve Period Ending June 30, 1999

Exhibit TLB-3
 Page 1 of 1

	SHANGRI-LA	
	W W	SHANGRI-LA
SHANGRI-LA	COLLECTIO	WATER DIST
WWTP	N SYSTEM	SYSTEM

OPC USED AND USEFUL CALCULATIONS

WATER DISTRIBUTION SYSTEM

TOTAL CONNECTED LOTS	132
TOTAL AVAILABLE LOTS	160
USED & USEFUL %	82.50%

WASTEWATER COLLECTION SYSTEM

TOTAL CONNECTED LOTS	127
TOTAL AVAILABLE LOTS	155
USED & USEFUL %	81.94%

WASTEWATER TREATMENT PLANT

PERMITTED PLANT CAPACITY, AADF (GPD)	50,000
AADF AT END OF MARGIN RESERVE PERIOD (GPD)	6,925
USED & USEFUL %	13.85%

EFFLUENT DISPOSAL FACILITIES

PERMITTED PLANT CAPACITY, AADF (GPD)	50,000
AADF AT END OF MARGIN RESERVE PERIOD (GPD)	6,925
USED & USEFUL %	13.85%

**CERTIFICATE OF SERVICE
DOCKET NO. 990080-WS**


I HEREBY CERTIFY that a true and correct copy of the foregoing Direct Testimony of Ted L. Bidy, P.E./P.L.S. has been furnished by U.S. Mail or *hand delivery to the following parties, this 11th day of August, 2000.

Tyler VanLeuven, Esquire
Division of Legal Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Martin S. Friedman, Esquire
Rose, Sundstrom & Bentley, LLP
2548 Blairstone Pines Drive
Tallahassee, Florida 32301

Linda J. McKenna
134 Shanghai Island Road
Leesburg, FL 34788

Shangri-La by the Lake Utilities, Inc.
11654 Long Lake Drive
Sparta, MI 49345



Stephen C. Burgess
Deputy Public Counsel