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Lake Ozark, Missouri

Harold Koplar, President
Four Seasons Lakesites
Water and Sewer Co.
Lake Ozark, Missouri 65049

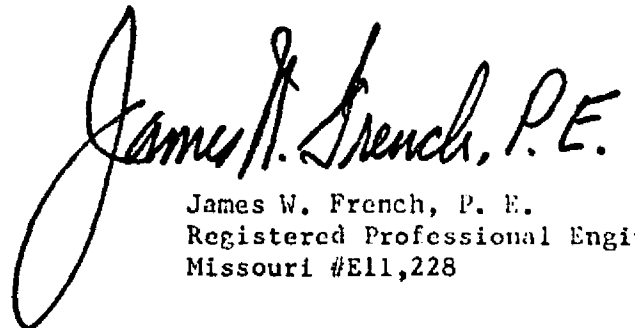
Dear Mr. Koplar:

Transmitted herewith is the "Engineering Report, Water Supply and Distribution, Land of the Fifth Season", which I have prepared at your direction.

This report outlines the general scope of the project, engineering and geological background, and basic engineering design criteria, and economic analysis.

Based on the projections in the report I find the project feasible from an engineering, construction, and economic standpoint.

Sincerely,


James W. French, P. E.
Registered Professional Engineer
Missouri #E11,228

JWF/em

Co. Exhibit No. 13
Date 6/24/10 Reporter PF
File No. SR-2010-011
WR-2010-011

ENGINEERING REPORT

Water Supply and Distribution System

Land of the Fifth Season, Lake of the Ozarks

Camden County, Missouri

I SCOPE AND GENERAL CONDITIONS

The scope of this report is to investigate the feasibility of a regulated investor - owned water utility company to serve the Land of the Fifth Season, a private planned recreational-resort community presently being developed on Horseshoe Bend, on Lake of the Ozarks, Camden County, Missouri. The project, at ultimate development, will encompass approximately 3500 acres, and will include approximately 5100 dwelling units. Included in the community will be a central recreation complex with a clubhouse, swimming pool, tennis courts, a marina, beach and boat dock facilities and an eighteen hole championship golf course. Also, located in the development is the Lodge of the Four Seasons, a 230 room luxury resort hotel, and its ancillary facilities. Additional resort hotels and light commercial uses are also anticipated in the master plan for the development. No industrial development is contemplated in the development.

Approximately 2500 lots have been recorded, staked, and are in

various stages of construction development. Approximately 1500 of these lots have been sold and there are 24 houses under construction or completed in the initial development area.

II LEGAL DESCRIPTION OF THE PROPOSED SERVICE AREA

The legal description of the proposed service area requested for certification is as follows:

A tract of land in sections 16, 17, 20, 21, 27, and 28, ²⁹ Township 40 North, Range 16 West, Camden County described as follows:
Lot's 1 thru 223 inclusive, lot's 258 thru 468 inclusive, *Except Lots 345, 346, 347*
in Kay's Point No. 1, a subdivision, recorded on page 57, in book 12.
Lot's 469 thru 638 inclusive, lots 717 thru 776 inclusive, lots 838 thru 843 inclusive, lots 845 thru 876 inclusive in Kay's Point No. 2, a subdivision recorded on page 13, in book 41.
Lot's 537 thru 539(a) inclusive and lot's 556 thru 558 (a) inclusive in Kay's Point No. 7, a subdivision recorded on page 35, in book 14.
ALSO, a strip of land being the right of way of State Route HH and a strip of land 10 ft. wide and immediately adjacent to said right of way on the North from station 86 + 71.9 to station 153 + 00, according to the Missouri State Highway Department plans thereof.

Exhibit Ia & Ib are maps showing the location of the proposed service area.

III BASIC DESIGN CRITERIA:

The design of the water system is predicated on providing potable water for domestic and resort consumption. The estimated consumption is 64 gallons per person per day and 3.5 persons per

domestic user connection, giving an estimated 225 gallons per day per user connection. No provisions are being made for fire flow. Scattered location of houses and the projected time period to reach a significant degree of development do not make provision of a fire flow system economically feasible.

IV SOURCE OF SUPPLY

The source of supply for the water system will come from deep wells in the Potosi formation. The initial well has been drilled, and test pumped and raw water analysis have been completed. The well was test pumped at 500 gallons per minute for 8 hours. Exhibit II, consisting of three pages, shows the well drawdown and recovery observed. Exhibit III is the Bacteriological Analysis of water samples and Exhibit IV is the Chemical Analysis of the water from the supply well. Both the bacteriological and chemical water quality meet the standards for public water supply of the Missouri Division of Health, without treatment.

The well is located in the SE $\frac{1}{4}$, NE $\frac{1}{4}$, of Section 28, Twp.40N, Rng. 16W. There are no other known wells within 1000 ft. of the well. The well is drilled to a total depth of 1158 ft., and is cased to a depth of 610 ft. with a 10 inch I.D. steel casing. The annular space between the casing and the drill hole was sealed by the pressure grout method.

A 40 horsepower vertical turbine pump having a capacity of 250 gallons per minute at a total dynamic head of 405 ft. is installed in the well. The pump initially installed will be adequate to serve the estimated consumption for a 10 year projection, based on the pump operating 12 hours per day.

Additional wells, similar to the one now completed, will be used as the area develops. Based on the quantity and quality of the water from the first well, and the reliability, in general, of the Potosi formation as an aquifer in this area, there is an adequate source of supply for ultimate development of the service area.

V STORAGE FACILITIES

A steel standpipe storage reservoir, having a diameter of 12 ft. and a height of 100 ft., has been constructed adjacent to the supply well. This standpipe has a capacity of approximately 85,000 gallons. The over flow elevation of the standpipe is 938 above M.S.L. This storage standpipe will provide 50% of average daily consumption on a 10 year projection, including the Lodge of the Four Seasons resort, which has a standby independent well. The storage capacity for projected residential consumption only, over a 10 year projection, is 2.6 times average daily use.

As development progresses, additional storage reservoirs will be necessary to provide uniform operation pressure and emergency storage.

VI DISTRIBUTION SYSTEM

The distribution system is being constructed to serve approximately 700 lots and the Lodge of the Four Seasons in the initial phase. The distribution system is being constructed using P.V.C. plastic pipe in diameters ranging from 2 inches to 6 inches. The pipe is being bedded in granular backfill material in all areas where excavation does not yield clean earth, free of rocks. Gate valves, blow-offs, automatic air release valves, and other appurtenances are incorporated in the system where applicable. The pipes in the distribution system have been sized to provide for peak flow at ultimate development. Peak flow requirements were determined using the expression:

$$y=12 \times 0.515$$

where y = peak demand

x = number of user connections

The distribution system will provide for a minimum residual pressure in the system of 20 pounds per square inch at peak flow. Exhibit V is a map of the distribution system showing pipe sizes.

VII PERMITS AND APPROVAL

The detailed plans and specifications have been submitted to, and approved by the Missouri Division of Health. The existing construction has been approved and Permit of Approval for Supplying Water to the Public, Permit No. 6157 has been issued by the Missouri Division of Health. Exhibit VI is a copy of the permit.

VIII SERVICE AGREEMENTS

Approximately 1500 lots have been sold in the development. The restrictive covenants and separate use agreements executed by the property owner, provide for the payment of an availability charge when the water lines are installed, and a regulated rate for service, when they build and connect to the water lines. No charge for the right to connect to the water line will be made to the property owners. Each property owner will bear the cost of his own service line from his property line to his building.

IX ECONOMIC ANALYSIS

Corporate Structure:

Four Seasons Lake Sites Water and Sewer Company has been incorporated as a Missouri corporation. The capital stock is owned by the Chase Hotel, Inc, a Missouri corporation, with headquarters in St. Louis, Missouri. Construction of the water system has been financed by Four Seasons Lake Sites Water and Sewer Company from proceeds of

the capital stocks and short term loans. The estimated initial investment in utility plant of \$225,000 will be comprised of \$150,000 in common stock and a long-term loan of \$75,000.

Explanation of Tables:

Table 1 is the proposed schedule of rates for water to be sold to the various customers in the service area. Rate schedule W-1 for metered general service will be for all full-time residents and resort or commercial customers. Rate schedule W-2 for unmetered general service will be for unmetered vacation or secondary residence service.

Table 2 is the estimated initial utility plant investment to serve approximately 700 lots and the Lodge of the Four Seasons resort. The estimate has been rounded off to \$225,000 in subsequent tables.

Table 3 is the estimated investment in utility plant under an assumed on-going expansion of the distribution system during the first 5 years and showing no expansion in the sixth year. It is expected that the system will continue to expand for about 9 years, adding service to approximately 550 lots or building units per year. However, we have shown the 6th year with no expansion to reflect a typical year after expansion is completed. Depreciation for the PVC plastic system was figured at 3%.

Table 4 shows the estimated number of customers for the 6 year projection period. The total number of customers shown includes both availability contract customers and regulated rate users. It is estimated that 2% of the total number of customers serviced will build each year. This estimated building rate is based on similar projects and is on the conservative side. These building additions are shown as the total regulated rate customers. Of the total estimated rate customers it is estimated that 20% will be permanent residences or metered service, shown as rate schedule W-1 customers. The balance are estimated to be vacation or secondary homes and are shown as rate schedule W-2 customers. The availability contract customers are shown as the difference between the total number of customers and the total regulated rate customers.

Table 5 indicates the estimated annual water consumption. The estimates are based on 225 gallons per day per user for W-1 metered residential service or 81000 gallons per year. Additions during the year are shown at an average of 40,500 gallons per year. Consumption for W-2 unmetered vacation or secondary homes are estimated at 36,000 gallons per year and additions during the year are shown at an average of 18,000 gallons per year. Consumption for the Lodge of the Four Seasons resort is estimated at 60,000 gallons per day or 21,600,000

gallons the first year with a 5% yearly increase each year. The estimated power cost is shown using a pumping cost of six cents per thousand gallons.

Table 6 shows the estimated revenue for the system based on the rate schedule in Table 1. Rate schedule W-1 residential customers are estimated as using 6750 gallons per month which would generate \$6.88 per month or \$82.56 per year in revenue. Additions during the year are shown as an average of \$41.28 per year. Rate schedule W-2 customers would generate revenue of \$5.00 per month or \$60.00 per year. Additions during the year are shown as an average of \$30.00 per year. Rate schedule W-1 resort revenue was calculated using \$0.50 per thousand gallons and consumption estimated on Table 5. The revenue from rate schedule W-1 and W-2 customers is shown as total operating revenue. Revenue from availability contract customers has been shown at \$4.00 per month or \$48.00 per year and additions during the year have been averaged at \$24.00 per year. Collection history for availability charges on large scale developments is not ready available. Inquiries to several large national developers with experience in this field indicate that 80% collection is a safe estimate and we have used this estimate for the availability contract revenue estimates. The total of operating revenues from

regulated rates and revenue from availability contracts is shown as total revenue.

Table 7 shows the estimated operating and maintenance expenses. Plant maintenance has been estimated at 1% of investment in plant. Insurance was estimated at $\frac{1}{4}$ % of investment in plant. Uncollectable accounts have been figured as 1% of operating revenues.

Table 8 is the estimated operating statement, which is a consolidation of the information on Tables 3, 6, 7, & 9. During each year the operating and maintenance expense, depreciation, and taxes were deducted from the total revenue and shown as net operating income. By using the net operating income in relation to net cost rate base from Table 3 a per cent return for each year was determined. This range from 5.9% the first year to 10.7% in the sixth year.

The interest expense from long-term debt from Table 9 was deducted from net operating income to arrive at total net income. By using the total net income in relation to total equity from Table 9, a per cent return to equity was determined for each year. This ranged from 5.07% the first year to 11.21% the sixth year.

Table 9 is a tabulation showing the estimated cash flow, debt, interest expense, and equity. The source of funds includes net income retained, depreciation, property taxes accumulated during the

year, but payable the next year, and long term loans. From this have been deducted payment of property tax, plant additions, and repayment of long term loans, to show the increase or decrease in cash position. The cash position at the end of the sixth year is \$27,090. During the year no expansion of the system was shown, This indicated that a debt repayment of \$40,000 could be made that year without a decrease in cash position for the year. Total debt has been tabulated using an initial debt of \$75,000 and yearly additions to the debt of \$75,000 as indicated in the estimated cash flow. Interest has been calculated using 10% on the beginning of the year debt and 5% on the additions to debt during the year. Investors equity has been tabulated showing the initial \$150,000 capital stock and adding the net income as retained earnings each year to show net equity. The debt to equity ratio is also shown on Table 9. This ranges from 49.6% in the first year to 69.5% in the fifth year.

Table 1

FOUR SEASONS LAKESIDES WATER AND SEWER COMPANY

RATE SCHEDULES

Rate Schedule W-1 ----- General Service Metered
 First 3000 gallons or less per month ----- \$5.00
 Additional water \$0.50 per thousand gallons

<u>Minimum Per Customer</u>	<u>Minimum Monthly Charge</u>
size of Meter	
3/4 inch	5.00
1 inch	7.50
2 inch	15.00
3 inch	30.00
4 inch	60.00

Rate Schedule W-2 ----- General Service Unmetered
 Flat rate of \$5.00 per month

Four Seasons Lakesites Water and Sewer Company

Estimated Initial Utility Plant Investment

Table 2

<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL</u>
2" P.V.C. pipe	11,850 L.F.	\$0.82	\$ 9,717
2 1/2" P.V.C. pipe	2,150 L.F.	0.90	1,935
3" P.V.C. pipe	6,750 L.F.	1.02	6,885
4" P.V.C. pipe	7,100 L.F.	1.24	8,804
6" P.V.C. pipe	18,310 L.F.	1.80	32,958
6" C.I.P. pipe	54 L.F.	4.50	243
TOTAL PIPE	46,214 L.F.		\$60,542
2" G.V.	12 ea.	\$39.00	\$ 468
2 1/2" G.V.	3 ea.	78.00	234
3" G.V.	6 ea.	75.00	450
4" G.V.	6 ea.	88.00	528
6" G.V.	19 ea.	107.00	2,033
TOTAL VALVES			\$ 3,953
AARV	11 ea.	\$118.00	\$1,298
2" B.O.	24 ea.	60.00	1,440
4" B.O.	7 ea.	105.00	735
3/4" service	12 ea.	24.00	288
1" service	143 ea.	44.00	6,292
1" service line	2,000 L.F.	.92	1,840
3/4" service line	400 L.F.	.82	328
Concrete enclosure	5 CY	50.00	250
Granular backfill	13,000 T	4.00	52,000
Highway crossing	1 ea.	700.00	700
Total appurtenance			\$ 65,171
Total distribution system & appurtenance			\$129,666
Well and pump			\$ 36,000
Storage tank			22,000
Total supply and storage			\$ 58,000
Total distribution, supply and storage			\$187,666
Engineering 6%			\$ 11,260
Construction interest 8% on 90,000 for one year			7,200
Contingencies 5%			9,383
Organization and legal			5,000
Land and R/W.			2,500
			\$ 35,343
Total estimated plant investment			\$223,009

24

Four Seasons Lakesites Water and Sewer Company

Estimated Investment in Utility Plant

Table 3

	<u>First Year</u>	<u>Second Year</u>	<u>Third Year</u>	<u>Fourth Year</u>	<u>Fifth Year</u>	<u>* Sixth Year</u>
1. Investment - beginning of year	\$225,000	\$332,350	\$435,463	\$544,578	\$660,049	\$781,941
2. Additions - supply and storage	-0-	-0-	-0-	-0-	-0-	-0-
3. Additions - distribution	95,250	101,063	105,115	111,421	116,992	-0-
4. Additions - road service lines	900	1,550	2,400	3,150	3,900	4,650
5. Additions - meters	<u>200</u>	<u>400</u>	<u>700</u>	<u>800</u>	<u>1,000</u>	<u>1,500</u>
6. Total addition for year	\$ 57,350	\$103,113	\$109,215	\$115,371	\$121,892	\$ 6,050
7. Investment end of year	<u>\$332,350</u>	<u>\$435,463</u>	<u>\$544,578</u>	<u>\$660,049</u>	<u>\$781,941</u>	<u>\$787,991</u>
8. Depreciation for year, 3% (1) + 1 1/2% (6)	8,210	11,518	15,242	18,070	21,629	23,549
9. Depreciation reserve - cumulative	<u>8,210</u>	<u>19,728</u>	<u>34,970</u>	<u>53,040</u>	<u>74,669</u>	<u>98,218</u>
10. Net cost rate base (7) - (9)	<u>\$324,140</u>	<u>\$415,735</u>	<u>\$509,708</u>	<u>\$607,009</u>	<u>\$707,272</u>	<u>\$689,773</u>

* Sixth year is shown assuming no continued expansion in distribution system.

25

Four Seasons Lakesites Water and Sewer Company

Estimated Number of Customers

Table 4

	<u>First Year</u>	<u>Second Year</u>	<u>Third Year</u>	<u>Fourth Year</u>	<u>Fifth Year</u>	<u>Sixth Year</u>
<u>Total Number of Customers</u>						
Beginning of year	800	1,100	1,600	2,100	2,600	3,100
Additions	500	500	500	500	500	750
End of year	<u>1,300</u>	<u>1,600</u>	<u>2,100</u>	<u>2,600</u>	<u>3,100</u>	<u>3,850</u>
<u>Total Regulated Rate Customer</u>						
Beginning of year	24	36	58	90	137	184
Additions	12	22	32	42	52	77
End of year	<u>36</u>	<u>58</u>	<u>90</u>	<u>132</u>	<u>189</u>	<u>261</u>
<u>Rate Schedule W-1 Customers</u>						
Beginning of year	5	7	11	18	26	36
Additions	7	4	7	8	10	14
End of year	<u>12</u>	<u>11</u>	<u>18</u>	<u>26</u>	<u>36</u>	<u>50</u>
<u>Rate Schedule W-2 Customers</u>						
Beginning of year	19	29	47	72	106	148
Additions	10	18	25	34	42	48
End of year	<u>29</u>	<u>47</u>	<u>72</u>	<u>106</u>	<u>148</u>	<u>196</u>
<u>Availability Contract Customer</u>						
Beginning of year	576	2,064	3,543	2,010	2,458	2,918
Additions	448	478	468	458	448	783
End of year	<u>2,064</u>	<u>2,542</u>	<u>4,011</u>	<u>2,468</u>	<u>2,906</u>	<u>3,701</u>

26
-15-

26

Four Seasons Lakesites Water and Sewer Company

Estimated Water Consumption (In Gallons)

Table 8

	<u>First Year</u>	<u>Second Year</u>	<u>Third Year</u>	<u>Fourth Year</u>	<u>Fifth Year</u>	<u>Sixth Year</u>
<u>Rate Schedule W-1 Customers</u>						
Full year at 81,000 gallons/year	405,000	567,000	810,000	1,458,000	2,106,000	2,916,000
Addition at 40,500 gallons/year	81,000	162,000	243,500	374,000	405,000	567,000
<u>Rate Schedule W-2 Customers</u>						
Full year at 35,000 gallons/year	584,000	1,044,000	1,693,000	2,592,000	3,816,000	5,328,000
Additions at 18,000 gallons/year	<u>180,000</u>	<u>324,000</u>	<u>451,000</u>	<u>622,000</u>	<u>756,000</u>	<u>864,000</u>
Total regulated domestic customers	1,350,000	2,097,000	3,314,500	4,986,000	7,063,000	9,875,000
<u>Resort Customers W-1</u>	<u>21,500,000</u>	<u>22,680,000</u>	<u>23,811,000</u>	<u>25,000,000</u>	<u>26,250,000</u>	<u>27,561,000</u>
<u>TOTAL Gallons Consumed</u>	<u>22,950,000</u>	<u>24,777,000</u>	<u>27,135,500</u>	<u>29,986,000</u>	<u>33,333,000</u>	<u>37,238,000</u>
Power cost at .06/thousand gallons	\$1,377	\$1,487	\$1,628	\$1,799	\$2,000	\$2,234

Four Seasons Lakesites Water and Sewer Company

Estimated Total Revenue

Table 6

	<u>First Year</u>	<u>Second Year</u>	<u>Third Year</u>	<u>Fourth Year</u>	<u>Fifth Year</u>	<u>Sixth Year</u>
<u>W-1 Customers</u>						
Full year at \$82.56	\$ 413	\$ 578	\$ 908	\$ 1,486	\$ 2,147	\$ 2,972
Additional at \$41.28	83	165	289	330	419	578
<u>W-2 Customers</u>						
Full year at \$60.00	1,140	1,740	2,820	4,320	6,360	8,880
Additional at \$30.00	300	540	750	1,020	1,260	1,440
<u>W-1 Resort Customers</u>	<u>10,800</u>	<u>11,340</u>	<u>11,907</u>	<u>12,500</u>	<u>13,125</u>	<u>13,782</u>
<u>Total operating revenue</u>	<u>12,736</u>	<u>14,363</u>	<u>16,674</u>	<u>19,656</u>	<u>23,305</u>	<u>27,582</u>
<u>Availability contracts</u>						
Full year at \$48.00 x 80%	22,118	40,858	59,213	77,284	94,771	111,974
Additional at \$24.00 x 80%	8,502	9,178	8,986	8,704	8,602	5,530
<u>Total available contract revenue</u>	<u>30,720</u>	<u>50,036</u>	<u>68,199</u>	<u>86,978</u>	<u>103,373</u>	<u>177,504</u>
<u>Total revenue</u>	<u>\$43,456</u>	<u>\$64,399</u>	<u>\$84,873</u>	<u>\$105,634</u>	<u>\$126,678</u>	<u>\$145,156</u>

Four Seasons Lakesites Water and Sewer Company

Estimated Operating and Maintenance Expense

Table 7

	<u>First Year</u>	<u>Second Year</u>	<u>Third Year</u>	<u>Fourth Year</u>	<u>Fifth Year</u>	<u>Sixth Year</u>
<u>Plant operating and maintenance</u>						
Salaries and wages	\$ 2,600	\$ 2,730	\$ 2,867	\$ 3,010	\$ 3,160	\$ 3,318
Pumping power	1,377	1,487	1,625	1,799	2,000	2,234
Plant maintenance (1% total investment)	<u>2,750</u>	<u>3,324</u>	<u>4,355</u>	<u>5,447</u>	<u>6,600</u>	<u>7,819</u>
Subtotal	<u>6,227</u>	<u>7,541</u>	<u>8,847</u>	<u>10,256</u>	<u>11,760</u>	<u>13,371</u>
<u>General operating expense</u>						
Salaries and wages	2,600	2,730	2,867	3,010	3,160	3,318
Supplies and postage	1,100	1,600	2,100	2,600	3,100	3,450
Office rent	1,200	1,200	1,200	1,200	1,200	1,200
Outside services	500	600	700	800	900	1,000
Insurance (1/4%)	810	1,039	1,274	1,518	1,768	1,774
Miscellaneous expense	600	650	700	750	800	850
Uncollectable accounts	<u>127</u>	<u>144</u>	<u>167</u>	<u>197</u>	<u>233</u>	<u>277</u>
Subtotal	<u>6,937</u>	<u>7,963</u>	<u>9,008</u>	<u>10,075</u>	<u>11,161</u>	<u>11,819</u>
Total operating and maintenance	<u>\$13,164</u>	<u>\$15,504</u>	<u>\$17,855</u>	<u>\$20,331</u>	<u>\$22,921</u>	<u>\$25,190</u>

Four Seasons Lakesites Water and Sewer Company

Estimates Operating Statement

Table 8

	<u>Reference Table</u>	<u>First Year</u>	<u>Second Year</u>	<u>Third Year</u>	<u>Fourth Year</u>	<u>Fifth Year</u>	<u>Sixth Year</u>
Total revenue	6	\$44,356	\$64,399	\$84,873	\$105,634	\$126,678	\$145,156
<u>Operating Expenses</u>							
Total operating and maintenance	7	13,164	15,504	17,855	20,331	22,921	25,190
Depreciation	3	8,210	11,518	15,742	18,070	21,629	23,549
Payroll tax (9%)		468	497	518	542	569	597
Property tax (1.32%)		2,970	4,327	5,748	7,190	8,713	10,322
Gross profit from operations		\$24,812	\$31,900	\$39,361	\$46,133	\$53,832	\$59,658
Net operating income before taxes and interest		19,544	32,499	45,512	59,501	72,846	85,498
Interest on long-term debt	9	11,500	19,750	26,750	36,750	45,750	49,500
Taxable income		8,044	12,749	17,262	22,751	27,596	35,998
Federal and state income taxes		2,549	3,197	4,373	5,706	7,553	11,747
Net income after taxes		\$ 5,495	\$ 9,552	\$12,312	\$ 17,057	\$ 20,045	\$ 24,251
Net operating income after taxes and before interest		\$19,113	\$29,302	\$41,182	\$ 53,797	\$ 65,295	\$ 73,847
Return on net cost rate base		5.90 %	7.05 %	8.68 %	8.86 %	9.23 %	10.7 %
Return to equity		5.07 %	6.06 %	7.74 %	9.47 %	10.17 %	11.21 %

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Four Seasons Lakesites Water and Sewer Company

Estimated Cash Flow - Debt, Interest, and Equity

Table 9

<u>Funds Provided</u>	<u>Reference Table</u>	<u>First Year</u>	<u>Second Year</u>	<u>Third Year</u>	<u>Fourth Year</u>	<u>Fifth Year</u>	<u>Sixth Year</u>
Net Income	8	\$ 7,613	\$ 9,552	\$ 12,932	\$ 17,057	\$ 20,045	\$ 23,442
Depreciation	3	8,210	11,518	15,242	18,070	21,629	23,549
Property tax	8	2,970	4,387	5,748	7,190	8,713	10,322
Long term loan		80,000	85,000	85,000	85,000	85,000	-0-
Total		\$ 98,793	\$110,457	\$118,922	\$127,317	\$135,387	\$158,213
<u>Funds Used</u>							
Repayment of long term loan		-0-	-0-	-0-	-0-	-0-	40,000
Payment of property tax		-0-	2,970	4,387	5,748	7,190	8,713
Plant additions	3	97,350	103,113	109,215	115,371	121,982	128,050
Total		\$ 97,350	\$106,083	\$113,602	\$121,119	\$129,082	\$154,763
Increase or decrease		1,443	4,374	5,322	5,198	6,305	3,450
Cash position at beginning of year		-0-	1,443	5,817	11,117	17,335	23,640
Cash position at end of year		<u>1,443</u>	<u>5,817</u>	<u>11,117</u>	<u>17,315</u>	<u>23,640</u>	<u>27,090</u>
Debt at beginning of year		75,000	155,000	240,000	325,000	410,000	495,000
Additional debt or (repayment)		80,000	85,000	85,000	85,000	85,000	(40,000)
Debt at end of year		<u>\$155,000</u>	<u>\$240,000</u>	<u>\$325,000</u>	<u>\$410,000</u>	<u>\$495,000</u>	<u>\$455,000</u>
Interest 10% at beginning of year + 5% of additional		\$ 11,500	\$ 19,750	\$ 28,750	\$ 36,750	\$ 45,750	\$ 49,500
Equity at beginning of year		\$150,000	\$157,613	\$167,165	\$180,097	\$197,154	\$217,119
Retained Earnings		7,613	9,552	12,932	10,757	20,045	24,342
Equity at end of year		<u>\$157,613</u>	<u>\$167,165</u>	<u>\$180,097</u>	<u>\$197,154</u>	<u>\$217,119</u>	<u>\$241,541</u>
Debt / net cost rate base	563	47.8 %	55.7 %	63.8 %	67.8 %	71.2 %	64.8 %
Debt / Debt + Equity		49.6 %	58.9 %	64.3 %	67.8 %	69.5 %	64.8 %

X DISCUSSION OF THE ANALYSIS:

This water system is unusual in that it will derive the major portion of its revenue from availability contracts from customers in the service area. The revenue from regulated rates in relation to total revenue varies from approximately 30% in the first year to 20% in the sixth year. While the availability charge revenue is based on contracts with the property owners and provisions for the availability charges in the restrictive covenants on the property, the collection records of these charges is difficult to estimate reliably. Interest rates, in general, are in a great state of flux. An interest rate of 10% has been used in these projections. This combined with the lack of a track record on a new system based largely on revenue from availability contracts make it quite difficult to predict an interest rate that would be available in the open money market. However, the owner of the water company, the Chase Park Plaza Hotel, has substantial assets and would be capable of securing or guaranting the debt for the water company. Table 8 of the analysis indicates that even at a 64.5% debt to net cost rate base leverage ratio, and a return of 10.7% of net operating income to net cost rate base, an 11.2% return of net income to net equity will result, using an interest rate of 10% on debt.

Since this is a new system, and none of its long term debt consists of any carry over from the days of 5% to 6% interest rates, the effect of the current high interest rates is accentuated, in the return to equity figures. Traditional guidelines for the return of net operating income to net cost rate base must be re-evaluated, in light of the increased cost of debt. Return of total net income to investors equity must be sufficient to attract capital to pay a fair and equitable return to the investor.

XI CONCLUSION:

There are already 24 homes under construction or completed in the proposed service area, along with the Lodge of the Four Seasons. The source of supply is adequate to service the projected growth of the service area. The developer has obtained user agreements with the property owner in the development for an availability charge when the system is constructed and a regulated rate when they build.

Based on our findings, as reflected in the tables and exhibits of this report, the project is feasible from both an engineering and economic standpoint.

LIST OF EXHIBITS

Exhibit Ia----Map of Proposed Service Area

Exhibit Ib----Map of Proposed Service Area

Exhibit II----Aquifer Test

Exhibit III---Bacteriological Analyses

Exhibit IV----Chemical Analyses

Exhibit V----Distribution Line Map

Exhibit VI----Permit of Approval-Missouri Division
of Health.

AQUIFER TEST

Four Seasons

DATE Nov 10, 1971JOB NAME Water & Sewer Co.WELL NO. OneJOB NO. Lake Ozark, Mo.

TIME OF DAY	ELAPSED TIME IN MINUTES	TAPE READING	WATER LEVEL BELOW MG FT	DRAWDOWN IN FEET	PUMPING RATE OF TEST WELL
11:30	S.W.L.		185'	0	0
Pump Turned On					
11:31	1		330'	145'	500
11:32	2		345	160	500
11:33	3		350	165	A
11:34	4		355	170	
11:35	5		360	175	
11:36	6		365	180	
11:37	7		370	185	
11:38	8		375	190	
11:39	9		380	195	
11:40	10		382	197	
11:45	15		385	200	
11:50	20		390	205	
11:55	25		398	213	
12:00	30		402	217	
12:05	35		405	220	
12:10	40		405	220	
12:15	45		405	220	
12:20	50		405	220	
12:25	55		405	220	
12:30	60		405	220	
12:40	70		407	222	
12:50	80		407	222	
13:00	90		408	223	
13:10	100		408	223	
13:20	110		408	223	
13:30	120		409	224	
14:00	150		412	227	
14:30	180		416	231	
15:00	210		418	233	
15:30	240		420	235	
16:00	270		421	236	
16:30	300		422	237	
17:00	330		424	239	
17:30	360		425	240	
18:00	390		426	241	
18:30	420		426	241	Y
19:00	450		427	242	500
19:30	480		428	243	500
Pump Turned Off - Recovery					
19:31	1		360	175	0
19:32	2		345	160	
19:33	3		330	135	
19:34	4		295	110	
19:35	5		275	90	

AQUIFER TEST

DATE Nov. 10, 1971JOB NAME Four Seasons Water & Sewer Co.WELL NO. OneJOB LOC Lake Ozark, Mo.

TIME OF DAY	ELAPSED TIME IN MINUTES	TAPE READING	WATER LEVEL BELOW MS FT	DRAWDOWN IN FEET	PUMPING RATE OF TEST WELL
19:40	10		265'	80'	0
19:45	15		255	70	
19:50	20		245	60	
19:55	25		235	50	
20:00	30		225	40	
20:10	40		220	35	
20:20	50		213	28	
20:30	60		205	20	

Orifices: 5"x6"

Static Water Level is 125' As Measured From
Top Of 10" Casing Which Was 5' Above
Ground Level

Note: 24 Hr Clock Used On Time Of Day

RECOVERY IN FEET

10,000

Four Seasons
Water & Sewer Co.
Lake Ozark, Mo.
Well No. 1
Nov. 10, 1971

1,000

100

10

TIME-DRAWDOWN SEMI-LOG PLOT

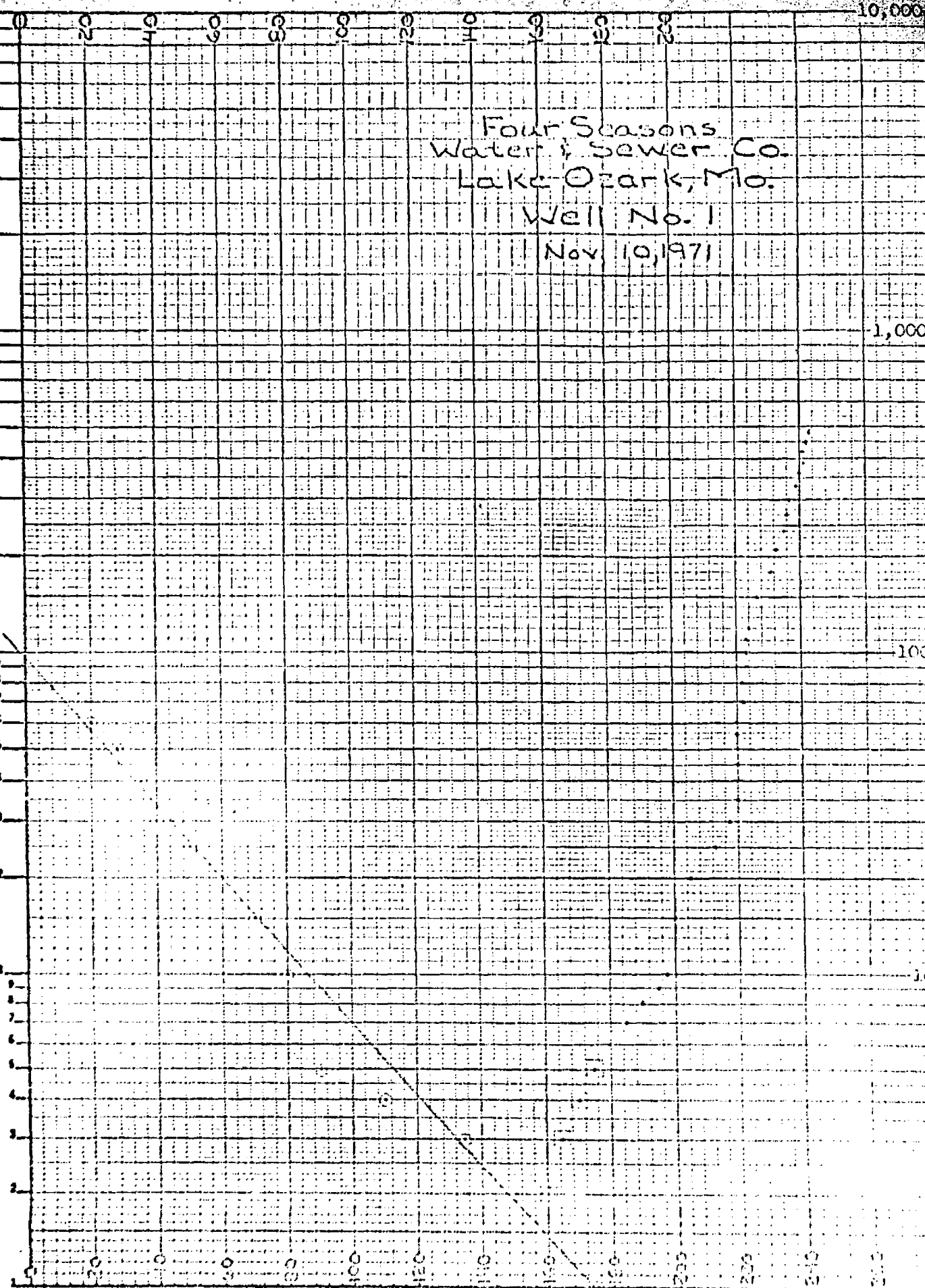
EXHIBIT II PAGE 3

ELAPSED TIME IN MINUTES

DRAWDOWN IN FEET

LAYNE-WESTERN COMPANY, INC.

LW-106



DEPARTMENT OF PUBLIC HEALTH AND WELFARE OF MISSOURI
DIVISION OF HEALTH

SUMMARY OF BACTERIOLOGICAL ANALYSES OF WATER SAMPLES

4/12/73
DATE

Name of Supply Camden County-Four Seasons Lakesites Water & Sewer Co., Inc.
(MUNICIPAL, COMMUNITY, OTHER)

Bacteriological examinations of water samples were made by the Division of Health Laboratories by the Millipore Filter Technique in accordance with the latest edition of Standard Methods for the Examination of Water and Waste Water.

The following is a summary by month of the bacteriological analyses of water samples submitted to the Division of Health from the public water supply during the first Quarter of 1973:

Month	Number of Samples	Mean Density Per 100 ML (1) & (2)	Samples Having Coliform Colonies (1) Number (3)	Per cent (4)
1	8	less than one	0	0
2	2	less than one	0	0
3	2	less than one	0	0
Total	12		0	0

- (1) Any member of the coliform group of bacteria
- (2) The arithmetic mean coliform density of all standard samples examined per month shall not exceed 1 per 100 ml.
- (3) Coliform colonies per 100 milliliter standard sample shall not exceed 1 colonies in more than 5 % of the samples when 20 or more are examined per month, not more than one standard sample when less than 20 are examined per month.

The analyses indicate the supply did meet bacteriological standards for 3 months of this quarter.

jkm

James French
Dist. #3

L. F. Garber

L. F. GARBER, Director
Section of Environmental Health Services

EXHIBIT III

THE DEPARTMENT OF PUBLIC HEALTH AND WELFARE OF MISSOURI
DIVISION OF HEALTH

REPORT OF CHEMICAL ANALYSIS OF WATER SAMPLE

PARTS PER MILLION

Place Camden County
Land of the Fifth Season Date 6/14/72 Lab. No. 3247

Date Collected 6/1/72 Collected By Schaefer Analysis By _____

Source of Sample (give detailed information such as, direct from well, distribution system, treated water, etc.) _____

direct from well

Turbidity 0.1 Odor: (Cold) _____ Color _____

Carbon Dioxide (CO_2) _____ pH 7.6

Alkalinity (CaCO_3) _____

Phenolphthalein _____

Total _____

Bicarbonates (HCO_3) _____

Carbonates (CO_3) _____

Hydroxide (OH) _____

Insoluble _____

Silica (SiO_2) _____

Iron and Aluminum Oxides ($\text{Al}_2\text{O}_3\text{Fe}_2\text{O}_3$) _____

Iron (Fe) _____

Total (0.3)* _____

Dissolved _____

Precipitated _____

Aluminum (Al) _____

Manganese (Mn) (0.05)* _____

Sodium (Na) _____

Potassium (K) _____

Calcium (Ca) _____

Magnesium (Mg) _____

Nitrate (NO_3) (45)* _____

Sulfates (SO_4) (250)* _____

Chlorides (Cl) (250)* _____

Fluorides (F) (1.8)* _____

Residue on Evaporation

Total _____

Dissolved (500)* _____

Suspended _____

Loss on Ignition _____

Total Hardness (CaCO_3) _____

Carbonate Hardness (CaCO_3) _____

Non-Carbonate Hardness (CaCO_3) _____

Special Determinations:

* These chemical substances (parts per million) should not be present in a water supply in excess of these concentrations. For additional requirements pertaining to chemical and physical characteristics, consult with the Missouri Division of Health.

Remarks:

hw

Schaefer

District No. 3

EXHIBIT IV

L. F. Garber
L. F. GARBER, Director
Section of Environmental Health

DIVISION OF HEALTH
OF THE DEPARTMENT OF PUBLIC HEALTH AND WELFARE
STATE OF MISSOURI



PERMIT OF APPROVAL

FOR SUPPLYING WATER TO THE PUBLIC

PERMIT NO. 6157

GRANTED TO

FOUR SEASONS LAKESITES WATER AND SEWER COMPANY, INC., CAMDEN COUNTY, MISSOURI

(Name of Municipality, Corporation, Company, Person or Institution)

ISSUED IN ACCORDANCE WITH SECTION 192.200
MISSOURI REVISED STATUTES AND RULES AND REGULATIONS
PROMULGATED UNDER SECTION 192.180.

By *Herbert R. Lenz*
Director of Division of Health

EXHIBIT VI

Date **February 27, 1973**

Application No. 6
Date 11-30-73 Case No. 12,954
Reported by J. Johnston

Lot

Subdivision

County

As the Owner or Owners of the above described lot (Lot) I/We agree on behalf of our heirs, successors, and assigns to pay to the Owner or Owners of the sewage disposal system and water works system to be constructed within the Development, an availability charge for water, water service and the accommodations afforded me/us by said water works system, commencing upon the availability of water in a water works system distribution main provided for the lot and continuing thereafter so long as water is available for use, whether or not tap or connection is made to a water works system distribution main and whether or not I/We actually use or take water; and, an availability charge for sewage disposal and treatment and the accommodations afforded me/us by said sewage disposal system, commencing upon the availability for use of a sewage collection main provided for the lot which leads to an operating sewage treatment facility, and continuing thereafter so long as such sewage collection main is so available for use, irrespective of whether or not connection is made to or use made of said sewage collection main in connection with or for the purposes of any said lot. No charge will be made to the lot owner for the right to connect to the sewer and/or water system. Each lot owner will bear the cost of the service line from his building into the sewer or water main. The Owner or Owners of said water works system and sewage disposal system will be a privately owned public utility authorized by a Certificate of Public Convenience and Necessity issued by the State of Missouri Public Service Commission to operate sewage disposal systems and/or water works systems, the aforesaid amounts of said availability charges, times and methods of payment thereof by said owners and other matters shall be as provided in Schedules of Rates and Rules, Regulations and Conditions of Services for Water Services and for Sewer Service filed and published by said public utility or utilities with said Missouri Public Service Commission, or any successor Regulatory Body of the State of Missouri, in accordance with law and

passed to file or formally approved by said Commission as the then effective Schedule of Rates and Rules, Regulations and Conditions of Service of said public utility or public utilities. The amount of said availability charges and other charges are subject to change hereafter by order of the said Missouri Public Service Commission or its successors in accordance with then existing law and the structure of said availability charges are likewise and in the same manner subject to change from availability rates to another type of rate or rates. Unpaid charges shall become a lien upon the lot or lots to which they are applicable as of the date the same become due.

Dated this _____ day of _____, 19____

STATE OF MISSOURI

OFFICE OF THE PUBLIC SERVICE COMMISSION

I have compared the preceding copy with the original on file in this office and I do hereby certify the same to be a true copy therefrom and the whole thereof.

WITNESS my hand and seal of the Public Service Commission, at Jefferson City, Missouri, this 18th day of June 2010.





Steven C. Reed
Secretary