

ORIGINAL

BEFORE THE RAILROAD COMMISSION OF THE STATE OF CALIFORNIA.

S

In the Matter of the Application)
of MADERA CANAL AND IRRIGATION)
COMPANY, for an order authorizing) Application
increases in rates charged for water) No. 2381.
sold for irrigation.)

Decision No. 4478
4478

Robert L. Hargrove and Morrison, Dunne
and Brobeck, by E. E. Phleger, for
Madera Canal and Irrigation Company.

M. K. Harris for certain consumers.

Johnston and Jones, by E. M. Johnston,
for Italian-Swiss Colony.

W. F. Williamson and E. T. Jones, for
San Francisco Theological Seminary.

THELEN, Commissioner.

O P I N I O N

Madera Canal and Irrigation Company, hereinafter
referred to as the Canal Company, asks authority to increase
all its rates for water sold for irrigation in Madera County,
California.

In the prayer of its petition, the Canal Company asks
authority substantially as follows:

1. To charge \$1.00 annually against each acre of land
located within the general area of 24,325 acres within which
area the Canal Company has, from time to time, supplied water
for irrigation. This charge is to be made irrespective of
whether the Canal Company actually delivers water to the land.
2. To charge against all land covered by contract with
the Canal Company, for each acre on which water in excess of
the amount specified in the contract is used, \$3.90 per acre
for the first irrigation and for each subsequent irrigation

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\$1.50 per acre.

3. To charge against all land not covered by contract with the Canal Company \$3.90 per acre for the first irrigation and \$1.50 per acre for each subsequent irrigation.

4. To charge against all land covered by contract with the Canal Company, if a charge on the acre-foot basis is authorized, \$2.00 for each acre foot of water used in excess of the quantity specified in the contract.

5. To charge against all land not covered by contract with the Canal Company, if a charge on the acre-foot basis is authorized, \$2.00 for each acre foot of water delivered.

Public hearings herein were held at Madera on February 13 and 14 and March 13 and 14, 1917. Briefs have been filed and the proceeding has been submitted and is ready for decision.

The subject matter of this opinion will be considered under the following heads:

1. Canal Company a public utility.
2. Canal Company's system and operations.
3. Canal Company's finances.
4. Valuation.
5. Depreciation annuity.
6. Operating and maintenance expenses.
7. Pumping competition.
8. Rates - past and present.
9. Rates herein established.
10. Rules and regulations.

1. CANAL COMPANY A PUBLIC UTILITY.

The Canal Company alleges in the petition herein that it "is, and ever since December 8, 1888 has been, a public service corporation and a public utility." The petition further alleges that "the waters appropriated by said company (the Canal Company) and its predecessors were, in the first instance, dedicated upon a district in Township 11, Ranges 17 and 18 and Township 12, Ranges 17 and 18, in said County of Madera, containing about

35,454 acres of land susceptible of irrigation from the canals of said company, but only about 24,325 acres of said district have been actually irrigated from the canals of said company."

Some question having arisen as to whether petitioner is in fact a public utility, I shall review briefly the evidence bearing on this issue.

The Canal Company claims its entire water by appropriation. The water is diverted from the Fresno River at a point in the South $\frac{1}{2}$ of the Southeast $\frac{1}{4}$ of Section 8, Township 11 South, Range 18 East, M. D. B. & M. The waters of the Fresno River taken by the Canal Company are claimed under a notice of appropriation posted by Isaac Friedlander on October 23, 1872. This notice claimed the waters of the Fresno River to the extent of 25,700 cubic feet per minute and stated that the purpose and place of intended use were the "irrigation of the lands in Township 11 and 12 South, Range 18 East and other lands all situated in Fresno County, California."

From 1872 to 1889, Friedlander and his successors sold water for irrigation to all persons desiring the same within the area specified, without any so-called water right or other contracts, at the rate of \$2.00 per acre for alfalfa and \$1.00 per acre for grain, vines and trees.

On December 8, 1888, the owners of the canal system conveyed the same to the Canal Company, which they had incorporated for the purpose of owning and operating the system. The deed provides in part as follows:

"and the said Corporation (the Canal Company) does hereby covenant and agree to and with the grantors and with each of them separately that it, the said Corporation, shall and will as a condition of receiving the grant of the said water rights, fix its rates for selling water for irrigation of lands at not less than five dollars for each and every acre of land to be paid upon making the contract, for such water rights, and in addition thereto an annual tax of not less than one dollar, for each and every acre of land, to be paid annually on or before the first day of September of each year, and shall and will maintain and enforce the said rates until the same shall be changed by a vote of the stockholders holding three-fourths of the capital stock of the Corporation."

The Canal Company's Articles of Incorporation provide

that the purposes for which the company was formed are "to acquire hold and dispose of water and water rights and to supply by sale, lease or otherwise for compensation water and the use of water to land owners and other persons in the County of Fresno and elsewhere in the State of California for irrigation of lands and for domestic and other uses and to acquire, hold and dispose of and deal generally in other property real and personal in the State of California."

Between March 10, 1890 and January 1, 1911, the Canal Company issued 88 so-called water right contracts agreeing to deliver the amounts of water therein specified, until December 7, 1938 and during the existence of the corporation, at the annual rate of \$1.00 per acre for each acre of land covered by the contract. These contracts were issued on approximately 12,800 acres of land, but are now effective as to only 7,485 acres.

From time to time, the Canal Company also sold water for the irrigation of lands which do not have water right contracts. On February 18, 1899, the Board of Supervisors of Madera County enacted Ordinance No. 50, which ordinance established the rate of \$1.30 per acre for the first irrigation and \$.50 per acre for each subsequent irrigation for all non-contract lands supplied with water by the Canal Company. These rates have been charged by the Canal Company from February 18, 1899 to date for all non-contract lands. Of the total of 24,325 acres which have at some time or other received water from the Canal Company's system, approximately one-half have been non-contract lands. Of the 5,785 acres which the Canal Company irrigated in 1916, 3,474 acres were contract land and 2,311 acres were non-contract land.

In 1913, a large number of water users under the Canal Company's system filed with the Railroad Commission a complaint against the Canal Company alleging that the complainants were water users and water right owners under the Canal Company's system and that the Canal Company is a public utility and praying

that the Railroad Commission direct the Canal Company to give specified relief as to its rates and service. Mordecai et al vs. Madera Canal and Irrigation Company. Vol. 3, Opinions and Orders of Railroad Commission of California, p. 985.

The Canal Company has filed with the Railroad Commission all its rates, rules and regulations and its annual reports subsequent to March 23, 1912 and has responded to numerous informal complaints before the Railroad Commission, without any suggestion by the Canal Company or any consumer, whether the holder of a water right contract or otherwise, that the company is not as to its entire water deliveries a public utility subject to the jurisdiction of the Railroad Commission.

The mere fact that a water company has entered into so-called water right contracts does not prevent the company, even as to the lands covered by such contracts, from being a public utility, subject to the jurisdiction of the Railroad Commission. Palermo Land and Water Company vs. Railroad Commission, 173 Cal. 380; Limoneira Company et al vs. Railroad Commission, 53 Cal. Dec. 86.

I find as a fact that the Canal Company is a public utility under the provisions of Section 23, Article XII of the State Constitution, Section 2 of the Public Utilities Act and Chapter 80, Laws of 1913, and is subject to the jurisdiction of the Railroad Commission with reference to the rates to be charged by it for all water sold by it, whether under contract or otherwise.

2. CANAL COMPANY'S SYSTEM AND OPERATIONS.

The Canal Company owns slightly in excess of 100 miles of main canals and laterals, all located in Madera County. The company sells water only for irrigation and it operates entirely

by gravity.

The Big Creek Ditch diverts water from Big Creek, a tributary of the Merced River, and conveys it to the North Fork of the Fresno River. The Soquel Ditch diverts water from the Soquel Creek, a tributary of the San Joaquin River, and likewise conveys it to the North Fork of the Fresno River. The Chilcoot Ditch diverts water from Rock Creek, a tributary of the San Joaquin River, to Chilcoot Creek, which flows into Soquel Creek above the Canal Company's point of diversion from Soquel Creek. The waters thus diverted, together with the waters of the Fresno River, to the extent of the Canal Company's right, are diverted from the Fresno River into the Canal Company's main canal at the point hereinbefore indicated, and are thence conveyed through the Canal Company's main and distributing canals.

The Canal Company claims the following water rights:

1. All the waters of the Big Creek of the Merced River to the extent of 50 second feet, except during April, and during April all the waters of the Big Creek to the extent of 20 second feet, and except from July 15th to December 1st, during which latter period the Canal Company claims a sufficient amount of the waters of Big Creek, not exceeding 50 second feet, to operate the flume of the Madera Sugar Pine Company.
2. All the waters of the North Fork of the San Joaquin River and of Chilcoot Creek, conveyed through the Soquel Ditch, to the extent of 50 second feet, except during August and September, and during August and September a sufficient amount of said water, not exceeding 50 second feet, to operate the flume of the Madera Sugar Pine Company.
3. All the waters of the Fresno River at and above the intake of the Canal Company's main canal to the extent of 200 second feet.

The average amounts of water available to the Canal

Company under its appropriations, at the intake of its main canal, bearing in mind the limitation of 200 second feet maximum use, have been as follows:

<u>Month</u>	<u>Acre Feet</u>
January	4873
February	7422
March	9414
April	8696
May	8779
June	5668
July	1738
August	73
September	321
October	1068
November	463
December	641

The Canal Company reports that it sustains a loss of 50 per cent of its water between the intake at the Fresno River and the points of delivery at the ditches of its consumers.

The irrigating season under this system is generally considered to be not over 180 days, extending approximately from January 15th to July 15th.

The number of acres irrigated during 1914, 1915 and 1916 were as follows:

	<u>1st.Irrigation</u>	<u>2nd.Irrigation</u>	<u>3rd.Irrigation</u>	<u>4th.Irrigation</u>
1914 -	6,553.7	2,347.	651.	82.5
1915 -	6,279.4	2,204.	702.5	4.
1916 -	5,785.1	2,011.5	123.	--

The bills rendered by the Canal Company for water delivered respectively to contract lands, excess on contract lands, and non-contract lands, and the total bills, in 1914, 1915 and 1916, were as follows:

	<u>Contract lands.</u>	<u>Contract lands.</u> (Excess)	<u>Non-contract lands.</u>	<u>Total</u>
1914	\$7,181.55	\$1,267.71	\$3,725.97	\$12,175.23
1915	7,450.15	772.75	4,367.26	12,590.16
1916	7,485.78	493.97	3,669.96	11,649.71

The principal crops irrigated under this water system are, in order of acreage irrigated, alfalfa, vines, trees and grain. The relative acreage of various crops irrigated appears from the 1914 returns as follows:

Alfalfa	5,363.7	acres
Vines	1,512.	"
Trees	885.	"
Grain	607.7	"
Miscellaneous	<u>1,265.8</u>	"
Total	9,634.2	"

In the foregoing tabulation, each acre is counted as many times as it was irrigated. The total number of acres to which water was applied was 6,553.7.

The number of irrigations necessary for the various crops under this water system varies. Alfalfa should have five or six irrigations, one after each cutting. Old vines are sometimes irrigated once before the middle of April and sometimes not at all. Bearing trees are generally irrigated once in March or April and young trees are frequently given two irrigations. Grain, if irrigated, receives water once, either before the heads appear or when the grain is as high as one's hand. The number and times of irrigation for the various crops is of considerable importance under this system for the reason that its water generally fails before the 15th of July.

In 1916, only 3,473.9 acres of contract lands out of 7,485.78 acres having water right contracts were irrigated. The remaining 4,011.88 acres of contract lands, which received no water, were nevertheless charged the contract rate of \$1.00 per acre. The revenue derived from lands not irrigated was approximately one-third of the Canal Company's total revenue.

In 1916, the Canal Company had approximately 225 customers.

3. CANAL COMPANY'S FINANCES.

The Canal Company has an authorized issue of \$400,000.00 par value of common capital stock, divided into 40,000 shares of the par value of \$10.00 each. This capital stock was all issued, at the time of the Canal Company's incorporation, in exchange for the water system at that time conveyed to the Canal Company. Assessments amounting to \$74,400.00 have been paid on this stock. An assessment of \$10,000.00 was levied and paid in 1916.

The Canal Company has outstanding an issue of \$100,000.00 face value of first mortgage 5 per cent bonds, dated January 1, 1903 and payable January 1, 1933. The interest is payable semi-annually. These bonds were sold at par in cash. Proceeds from their sale amounting to approximately \$89,000.00 were used in purchasing the so-called Adobe and Archibald Reservoir sites and rights of way in connection therewith on the west bank of the Fresno River, in constructing said two reservoirs and in purchasing certain machinery for their operation. Subsequently Miller and Lux enjoined the Canal Company from diverting the waters of the Fresno River which the Canal Company had intended to store in these reservoirs, the reservoirs ~~filled~~ and the investment therein, in so far as operative property of the Canal Company is concerned, is a total loss.

The Canal Company's operating revenues and operating expenses for the fiscal years 1914-15 and 1915-16 and for the calendar year 1916 are shown in Railroad Commission's Exhibits 1 and 2 to have been as follows:

	1914-15	1915-16	1916
Operating revenue	\$12,590.16	\$11,649.71	\$11,649.71
Operating expense	19,259.64	9,832.13	12,563.02
Net operating revenue	6,669.48*	1,817.58	913.31*
Detail of operating expenses			
Distribution expenses	6,921.87	5,261.29	6,415.85
Commercial	1,010.65	963.51	915.21
General	1,870.93	1,443.45	3,121.35
Legal	8,077.73	1,036.60	832.25
Injuries and damages	80.00	-----	-----
Taxes	1,298.46	1,127.28	1,278.36
Total	19,259.64	9,832.13	12,563.02
*Deficit			

The foregoing tabulation makes no allowance for any return on the investment. The returns for the fiscal year ending June 30, 1916, are somewhat misleading for the reason that certain items of operating expenses incurred during the first six months of 1916 were not entered on the books until later in the year. Attention is directed to the very high legal expense for the fiscal year 1914-1915. The Canal Company, from 1899 to December 31, 1915 expended \$45,042.59 for legal expenses, mostly incurred in litigation in defense of water rights against Miller and Lux and affiliated corporations.

4. VALUATION.

The Canal Company makes no claim that the Adobe and Archibald reservoir sites and the property connected therewith should be regarded as used and useful property.

Mr. E. Barnes, the Canal Company's engineer, presented as Petitioner's Exhibit No. 11 an estimate of the cost to reproduce new the physical structures of the Canal Company, together with an estimated present market value of the real estate. The total estimate as presented by Mr. Barnes was \$186,307.24 of which amount over \$50,000.00 represents real estate.

Mr. M. E. Brinkley, one of the Railroad Commission's assistant hydraulic engineers, presented as Railroad Commission's Exhibit No. 3 a similar estimate, totaling \$108,643.00. Mr. Brinkley's estimate of reproduction cost new, with an estimate of depreciation annuity on the 4 per cent sinking fund basis are as follows:

ESTIMATED REPRODUCTION COST AND DEPRECIATION ANNUITY,
as reported by Assistant Hydraulic Engineer, M. E.
Brinkley.

	REPRO- DUCTION COST	PROBABLE: LIFE YEARS	ANNUITY	REMARKS
Transmission and Distribu- tion Right-of-way	\$7150		\$-----	
Timber in gates	6828		-----	Covered in main- tenance and opera- tion.
Concrete in gates	461	50	3	
Weir at Fresno River	4330	12	288	
Lower Siphon Cottonwood Creek	1400	50	9	
Upper " " "	1584	50	10	
Ditch Excavation-Distribution	3114	50	20	
" " "	41614	60	175	
" " - Main	17748	100	14	
Equipment and Tools	<u>770</u>		<u>---</u>	
Total	<u>84999</u>		<u>519</u>	
Collection and Diversion Big Creek Ditch	8904		---	
Sequel Ditch Clearing, grubbing and ditch excavation	9959		---	
Headworks	1120	15	56	
Siphon-concrete	716	20	24	
" - pipe and excavation	2645	25	63	
Chilcoot Ditch	<u>300</u>		<u>---</u>	
Total	<u>23644</u>		<u>143</u>	
Grand Total	108643		662	

The differences in the estimates of Mr. Barnes and Mr. Brinkley result principally from different methods employed for measuring excavation in the distributing canals and from different unit prices for earth excavation and hardpan. For reasons which will hereinafter appear, it is not necessary herein to make a definite finding

with reference to the value of the Canal Company's property. If such finding were necessary, I would be inclined to accept Mr. Brinkley's estimate.

The Canal Company also presented a number of estimates of the value of the company's water rights. In view of the statement of counsel for the Canal Company, made at the hearing herein, that the company desires only a reasonable rate and not one which will drive away its remaining business, it will not be necessary to analyze these claims for water right value.

5. DEPRECIATION ANNUITY.

The engineers of all parties agree that apart from obsolescence and inadequacy no allowance need be made herein for depreciation of the Canal Company's main and lateral canals.

I consider the allowance of \$662.00 made by Mr. Brinkley to be ample.

The Canal Company has never set up a depreciation reserve but has included replacements in operating and maintenance expenses.

6. OPERATING AND MAINTENANCE EXPENSES.

The operating and maintenance expenses incurred by the Canal Company during the fiscal years 1914-15 and 1915-16 and the calendar year 1916 have already been set forth herein. The totals of such expenses were as follows:

1914-15	\$19,259.64
1915-16	9,832.13
1916	12,563.02

Partial estimates of reasonable operating and maintenance expenses for 1917 were presented by Mr. Harry Barnes, for the Canal Company, and Mr. M. H. Brinkley, for the Railroad Commission. Each of these estimates omitted allowances for legal expenses, taxes, and license fees.

The testimony shows clearly that the duties of the manager and the engineer can be satisfactorily performed by one man having an engineering training. At present, the manager receives a salary of \$250.00 per month, which includes his services as attorney, and the engineer \$150.00 per month. An allowance of \$200.00 per month for the manager-engineer would, in my judgment, be sufficient. Further large legal expenses are not to be anticipated. A part of the anticipated expense for materials is provided for in the depreciation annuity. An additional allowance of \$300.00 should be made for maintenance of the measuring weirs which will be installed under the order herein.

I find that a reasonable allowance for operating and maintenance expenses, including taxes, is the sum of \$10,500.00 annually.

7. PUMPING COMPETITION.

One of the most important factors to be considered in the establishment of rates herein is the operation of an increasingly large number of pumping plants in the general territory to the service of which the Canal Company's water has been dedicated.

This territory is underlain with water-bearing sands so that water can be found at almost any point at a depth of from 15 to 40 feet. In order to secure satisfactory landings, the wells are generally drilled to a depth of from 70 to 110 feet. The wells are operated partly by electric motors and partly by gas engines.

The following tabulation shows the acres irrigated by the Canal Company each year from 1889 to and including 1916. The drilling of wells by landowners in this territory began in 1904 or 1905.

<u>Year</u>	<u>Acres irrigated</u>
1889	4,359
1890	8,192
1891	11,174
1892	13,523
1893	13,366
1894	12,037
1895	12,381
1896	12,656
1897	12,539
1898	12,304
1899	12,304
1900	13,105
1901	13,841
1902	13,528
1903	13,448
1904	10,679
1905	11,568
1906	10,088
1907	9,942
1908	9,577
1909	10,703
1910	10,284
1911	9,716
1912	9,966
1913	8,222
1914	6,553
1915	6,279
1916	5,785

Exhibit "I" attached to the petition herein shows that in 1916, 113 pumping plants were operating on 7,454 acres in said 24,325 acre tract. Their rated capacity was 97,655 gallons per minute or 217 cubic feet per second. Petitioner filed herein as Exhibit 14 a supplemental list of pumping plants, consisting of 29 plants, operating on 1449 acres, and having a rated capacity of 18,270 gallons per minute or 40.6 cubic feet per second. In March 1917, there were thus 141 pumping plants in this area, irrigating 8903 acres of land. As already shown, the Canal Company irrigated in 1916 only 5,785 acres.

The petition herein states, in part, "that additional pumping plants are being installed upon the said irrigated area and will continue to be installed from year to year."

The testimony shows that the principal reasons for the installation of the pumps have been the fact that the canal water is not available after about July 15th and the uncertainty of

securing an adequate supply from the Canal Company before July 15th. Pumps installed for these purposes are frequently used during the entire season.

Petitioner's brief herein says in part:

"The value of the company's property, useful to the system, is so high that any fair rate that should be fixed upon the investment would be prohibitive."

"Therefore, the rates should be based upon the comparative cost of pumping water in that district, which Mr. Brinkley found to be, on an average, the sum of \$2.00 per acre foot."

Mr. Brinkley's estimate was based on a 12 inch well producing two second feet of water for 12 hours each day for 180 continuous days. The well was assumed to be electrically operated, to have a small reservoir attached and to lift the water a distance of 35 feet.

Mr. Barnes presented as Petitioner's Exhibit No. 37 an estimate of the cost per acre foot of operating pumps of different sizes, partly by electricity and partly by gas engines. Mr. Barnes' estimate of cost under conditions similar to those assumed by Mr. Brinkley coincides closely with the latter's estimate.

Mr. Brinkley also testified that at the same cost for pumping and canal water, the farmers would all pump for the reason that the pumped water is available much later in the season than the canal water and hence is of much greater value to the irrigationists. He testified that with pumped water costing \$2.00 per acre foot, the Canal Company could not hope to hold its business if its rate was much more than \$1.00 per acre foot.

Quite a number of irrigationists testified that it costs them between 50¢ and 75¢ per acre to pump water. These costs are for electric energy alone and make no allowance for return on the investment, depreciation, repairs or labor.

8. RATES - PAST AND PRESENT.

As already indicated, the rates charged by the predecessors of the Canal Company, prior to 1889, were \$2.00 per acre annually for alfalfa and \$1.00 per acre for vines, trees and grain. These rates were based on the assumption that vines, trees and grain would be irrigated once during the season and alfalfa twice.

The rate of \$1.00 per acre specified in all the so-called water-right contracts, has continued in effect from 1889 to the present time with the exception of one modification established by the Supplemental Order of April 3, 1914 of this Commission, made in Cases 418 and 498 (Vol. 4, Opinions and Orders of Railroad Commission of California, p. 623). This Supplemental Order specified in part that whenever a contract holder used water in excess of the amount specified in his contract, he should pay the same rates as were being paid by non-contract holders. The interpretation placed upon the words "excess water" by the Canal Company has aroused much resentment among its consumers and has been such that almost every contract holder who used water on all his land has been compelled to pay "excess" rates. It is unfortunate that the formal presentation of this matter to the Commission has been so long delayed. The order herein will cure this situation for the future.

Non-contract holders, from February 18, 1899 to the present time, have continuously paid \$1.30 per acre for the first irrigation and \$.50 per acre for each subsequent irrigation, as provided in Ordinance No. 50 of the Board of Supervisors of Madera County.

The testimony shows that the Canal Company makes no difference whatever in service as between a contract holder and a non-contract holder. Each secures in turn, his share of such water as is available. The non-contract holder, under these

circumstances, has the advantage that he pays for water only when he takes it, while the contract holder has been paying \$1.00 per acre annually even though he has taken no water. This situation has caused considerable dissatisfaction among the Canal Company's customers.

9. RATES HEREIN ESTABLISHED.

a. Basis of rates herein established.

In the petition herein, the Canal Company asked for the establishment of a rate of \$3.90 per acre for the first irrigation and \$1.50 per acre for each subsequent irrigation, or a rate of \$2.00 per acre foot per annum. Such rates would undoubtedly drive away practically all the business still remaining to the Canal Company and completely ruin the company.

Common sense as well as the decided cases require that the rates to be charged by the Canal Company shall be reasonable from the point of view of the consumer as well as just to the company in so far as possible. If the rates can not be made high enough to yield a full return to the Canal Company, the Canal Company must be content with a smaller return.

A realization of this situation, as the hearing herein progressed, prompted the following colloquy (Transcript, p. 434):

"COMMISSIONER THELEN: Now, Mr. Hargrove, before we turn to the other features of the case I would like to ask you what the position of the company is on this question: Do you want the Commission to establish rates in this case so high that you will lose practically all of the rest of your business?

MR. HARGROVE: No. All we want is simply a reasonable rate, taking the interests of the company into consideration and the interests of the water consumers. In other words, we want something that is practicable and feasible for this community.

COMMISSIONER THELEN: What I have in mind is this. You are confronted with a very difficult situation here. If we establish rates on the basis of the full value of all your property the chances are that you will lose what little business you have left.

MR. HARGROVE: Yes. Well we want the Commission to use discretion in that, and if we have got more property than the rates will stand we will have to stand for an adjustment, because the interests of the consumer will have to be taken into considera-

tion as well as the company, and if we have got a greater valuation than we ought to have for the system why of course that is a matter or burden that we will have to carry."

As already indicated, the Petitioner in its brief herein reiterates this position and adds that "the rates should be based upon the comparative cost of pumping water in the district."

b. Low rates for early water.

All parties are agreed that it would be desirable, from the point of view both of the Canal Company and of the community, to establish low rates for the use of water during the winter and early spring months.

Prior to the establishment of the rate of \$1.30 for the first irrigation and \$.50 for each subsequent irrigation, a large acreage of grain and other produce was irrigated during the early spring months. The rate of \$1.30 for the first irrigation and \$.50 for each subsequent irrigation is illogical in theory, in that it is highest at the time when the water is most plentiful and least valuable and lowest when the water is least plentiful and most valuable. It was also disastrous in practice because it drove away a large amount of business from the Canal Company.

The establishment of a relatively low rate for the winter and early spring months will be a constructive step forward for all parties concerned.

c. Request for \$1.00 Rate for Entire 24,325 Acres.

In the petition herein, the Canal Company requests authority to charge \$1.00 per acre annually to each acre of land within the area of 24,325 acres hereinbefore referred to, entirely irrespective of whether the land does or does not take water from the Canal Company's canals.

The request is based on the claim that the seepage of

water from the Canal Company's canals raises the water level in the entire district and hence reduces the operating expenses of all pump operators and increases the moisture content of all the land.

The request is, in effect, that this Commission compel the payment of rates to the Canal Company by landowners who pump water which was once in the possession of the Canal Company but is now fugitive water and by other landowners who do not take water from the Canal Company and who do not pump.

Entirely apart from the issue of fact as to the extent to ^{which} Canal Company's operations have raised the water level in this community, as to which there is a conflict of evidence herein, it seems entirely clear that this Commission would have no jurisdiction to make any such order.

Petitioner has reached the same conclusion in its brief and now, in effect, withdraws this request.

d. Form of Rate.

All the engineers who testified in this proceeding urged that the rate to be established herein should be the acre-foot rate (based on the quantity of water used) and not the acre rate (based on the number of acres irrigated). Among the consumers of the Canal Company, opinion on this question was divided.

While I appreciate that the consumers under this system have long been accustomed to a rate based on the number of acres irrigated and hence naturally cling to it, I am convinced that the acre-foot/^{rate}is fundamentally right and should be adopted under this system. The acre-foot rate is right--(1) Because it is fundamentally just that each consumer should pay for what he receives, which can be done only by measuring the water; and, (2) Because the sale of water by measure creates prudence in the use of water and checks waste, increases the amount of water available to the

community and thus helps to develop a large acreage and to increase the general prosperity.

The Canal Company is willing to install and operate the necessary measuring devices in connection with an acre-foot rate and asks authority to do so.

I am satisfied that after a fair test, the consumers under this system will agree that the acre-foot form of rate is more just and constructive than the acre rate heretofore in effect.

e. Reasonable Rates.

In its brief herein, Petitioner suggests the following rates:

From Oct. 1 to Feb. 1. --	\$.60	per	acre	foot	of	water	delivered
During February	.90	"	"	"	"	"	"
During March	1.20	"	"	"	"	"	"
During April	1.30	"	"	"	"	"	"
During May	1.45	"	"	"	"	"	"
During June	1.55	"	"	"	"	"	"
From July 1 to Oct. 1.	1.70	"	"	"	"	"	"

Bearing in mind the amount of water available at the Canal Company's intake, month by month, this schedule is equivalent to an average rate of \$1.20 per acre foot throughout the season.

The consumers in their brief protest that these proposed rates are too high and will not enable the Canal Company to sell its water.

There was considerable testimony at the hearing to the effect that a rate of \$.50 per acre for each irrigation until some time in March, \$.75 per acre for each irrigation until April 15 or May 1, and \$1.30 per acre for each irrigation thereafter would be satisfactory to the consumers.

The Railroad Commission's Hydraulic Division suggests a rate of \$.50 per acre foot from October 1 to March 1, and \$1.00 per acre foot thereafter.

After careful consideration, I am inclined to accept the

Hydraulic Division's suggestion, except that the rate subsequent to May 31 should be \$1.25 per acre foot instead of \$1.00.

I find as a fact that the following rates are just and reasonable rates to be charged and collected by the Canal Company for water delivered by it for irrigation:

October 1 to March 1	--	\$.50 per acre foot
March 1 to June 1	--	1.00 " " "
June 1 to October 1	--	1.25 " " "

f. Revenue from Rates Herein Established.

An average from the records for 1904, 1905, 1911, 1912, 1913, 1914, 1915 and 1916 shows that, with an allowance of 50% for seepage losses, the following amounts of water are available to the Canal Company for delivery in the months indicated:

<u>Time</u>	<u>Acre Feet</u>
Oct. 1 to Feb. 1	2650
February	3700
March	4700
April	4350
May	4300
June	2800
July	850
August	50
	<hr/>
	23,400

The application of the rates herein established would yield the following revenue, assuming that all the available water is sold:

October 1 to March 1	--	6,350 acre feet @ \$.50	--	\$ 3,175.00
March 1 to June 1	--	13,350 " " @ 1.00	--	13,350.00
June 1 to October 1	--	3,700 " " @ 1.25	--	<u>4,625.00</u>
Total				\$21,150.00

It is not reasonable to assume that all the water which the Canal Company is capable of delivering will be sold. Mr. Barnes and Mr. Brinkley have both assumed that 70 per cent will be sold. On this basis, the revenue to be derived from the rates herein established would be \$14,805.00.

2. Water Right Contracts.

That the Railroad Commission has jurisdiction to change the rate specified in contracts made by public utility water companies, for water sold by them, is too well established to justify discussion or citation of authorities.

A more difficult question arises with reference to the contract holders under this system who are not taking water under their contracts.

If any such holders desire to continue to pay \$1.00 per acre annually in return for such priority of right, if any, as such payment may give them as against other persons whose lands are within the area to the use of which the Canal Company's water has been dedicated but who are not making any payment, or for any other reason, no particular difficulty will arise. Such payment would be made as a matter of contract obligation and not under the rates herein established.

But if any such holder should not desire to receive water or to secure such advantage, if any, as the payment of the \$1.00 per acre per annum may bring, a more difficult question may arise. If the Canal Company should be willing to cancel the contract under an equitable arrangement, the problem would be solved. But if the Canal Company should not be willing to cancel the contract, the respective rights and obligations of the parties thereunder would be a matter for the courts and not for this Commission. This Commission has jurisdiction to establish the rate to be paid for water sold by a public utility or the rate to be paid by a customer desiring to establish the relationship of customer and utility (a minimum rate for readiness to serve) but not a rate to be paid by a person who does not desire to purchase water or to be placed in the status of customer of a public utility water company with

the right to call on the utility for water whenever he desires to do so.

10. Rules and Regulations.

The rates herein established will make necessary certain changes in the rules and regulations of the Canal Company, with reference to rates, the making of applications for water and other matters. Within 20 days from the date of the order herein, the Canal Company should submit for approval revised rules and regulations.

The rules and regulations now in effect provide that the Canal Company shall supply no water to lands not heretofore actually irrigated from this system. If the Canal Company desires now or hereafter to supply water to other lands, it may present a revised rule or regulation.

The testimony herein shows that there is considerable friction and ill feeling between the Canal Company and the landowners. The increasing number of pumping installations is in part due to this cause. In letter dated March 22, 1917, to the Canal Company, Mr. A. Griffin, Chief Engineer of the South San Joaquin Irrigation District, who appeared as one of the Canal Company's witnesses herein, says in part:

"The fixing of an adequate rate will not, in itself, solve your problem. Friendly relations, a desire to purchase on the part of the consumer and cooperation in operation between the Company and the consumer must be promoted by sympathetic and well directed efforts on the part of the Company".

This advice is sound and is peculiarly applicable to conditions under this canal system. I recommend it to the consideration of all parties.

The rates herein suggested are, in our opinion, just and reasonable. However, if they should in any respect operate inequitably, complaint on application for their modification may be made after one year's trial.

I submit the following form of order:

O R D E R

Madera Canal and Irrigation Company having applied to the Railroad Commission for an order authorizing the company to increase its rates for water sold for irrigation, a public hearing having been held, briefs having been filed, and this proceeding being now ready for decision,

The Railroad Commission hereby finds as a fact that the rates herein established are just and reasonable rates and that the rates heretofore charged by Madera Canal and Irrigation Company are unjust and unreasonable in so far as they differ from the rates herein established.

Basing its order on the foregoing findings of fact and on the other findings which are contained in the Opinion which precedes this Order,

IT IS HEREBY ORDERED that Madera Canal and Irrigation Company be and the same is hereby authorized to file with the Railroad Commission, within 20 days from the date of this Order, and thereafter charge, the following rates for water sold for irrigation:

Water delivered from

October 1 to March 1	--	\$.50 per acre foot.
March 1 to June 1	--	1.00 " " "
June 1 to October 1	--	1.25 " " "

IT IS FURTHER ORDERED that Madera Canal and Irrigation Company submit to the Railroad Commission, within 20 days from the date of this ORDER, revised rules and regulations applicable to the sale of water by said company for irrigation.

IT IS FURTHER ORDERED that in all other respects the above entitled proceeding be and the same is hereby dismissed.

The foregoing Opinion and Order are hereby approved and ordered filed as the Opinion and Order of the Railroad Commission of the State of California.

Dated at San Francisco, California, this 23^d day of July, 1917.

Max Thelem

Al. Gordon
Edwin C. Edgerton
Stan R. Deems

Commissioners.