Draft

REPORT

on

WATER RATE STUDY

for

CITY OF OXNARD
CALIFORNIA

JULY 1970

Prepared By

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AGENDA ITEM NO. R-1B

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WATER RATE STUDY

CITY OF OXNARD

I. INTRODUCTION

A. GENERAL

In 1966 the firm of Koebig & Koebig prepared a water rate study for the City of Oxnard. Two alternate rates were recommended, with Alternate B being adopted as follows:

Quantity Rates

0 - 1000 CF	$4.25 Minimum
1,000 - 20,000 CF	25¢ per HCF
20,000 - 100,000 CF	23¢ per HCF
100,000 - 600,000 CF	18¢ per HCF
Over 600,000 CF	11¢ per HCF

Minimum Bill Per 2 Months

5/8" x 3/4" on 3/4" service	$4.25
5/8" x 3/4" on 1" service	6.00
1" on 1" service	7.00
1" on 1-1/2" service	9.00
1-1/2" on 1-1/2" service	11.75
1-1/2" on 2" service	15.00
2"	18.00
3"	28.00
4"	37.00
6"	55.20
8"	73.14
10"	92.00
12"	170.20

For the first year or so City growth followed predictions at the time and water department revenues were adequate. In the last few years City growth has not been maintained as was projected, which has resulted in revenues being less than estimated. Expenses, however, including purchase cost of imported water, have continued

to escalate. As a result the City has been forced to curtail and limit various capital improvement projects because of inadequate revenues.

Last September the City staff prepared a report covering water quality and water costs. Questionnaires were prepared and mailed to selective water users, representing a cross section of City water consumers. The general concensus of the responses to this questionnaire favored higher quality water, even though this would mean water costs would be higher than would be occasioned by normal inflationary trends.

B. SCOPE

Because of the need for the Water Department revenues to accrue additional funds to finance required capital improvements, to purchase increasing quantities of imported water to improve overall City water quality, and to maintain pace with inflation, the City Council authorized this study and report. The following is the general scope of this report:

1. Secure data from City staff regarding water department revenues and expenses since prior rate study.
2. Review current data compiled by City staff regarding water rates.
3. Project the various supply, operating, financing, maintenance and capital improvement expenses of the water system for the next five years to determine total revenue requirements. Growth rate to be utilized will be the current City projection. The revenue requirements per year will be totalized for each of the water quality levels of service the City wishes to consider.
4. Determine rate structures which will provide the required revenues over the next five years for each water quality level of service and which will reasonably distribute water costs to the various classes of water consumers within the City.
5. Review data compiled by the Chamber of Commerce Committee.
6. Submit the results of the study in the form of a report.

The scope did not include investigations of miscellaneous Water Department revenues, such as fire services, flat rate services, construction water, interest and others. In determining the sums of money the water rate structure should earn, reasonable allowances were made for the total annual revenues to be accrued from all miscellaneous sources.

C. STUDY CRITERIA

Analyses of Water Department historical expenses were made for each of the last five fiscal years. Records of the Finance Department were used which show the various detailed costs which comprise the functional expenses of source of supply, pumping, treatment, transmission and distribution, customer accounting, administration and general,

debt service, and capital improvements.

II. POPULATION

A. POPULATION

Data regarding historical and projected populations were secured both from the City Planning Department and the County Planning Department. Historical and projected populations ore shown on Plate I. For the Oxnard Planning Area, exclusive of the Camarillo area, the County projects a population increase of approximately 38,000 persons. The City Planning Department has projected the growth rate to be between 4% and 8% per year, with an anticipated growth rate of 6% per year, or approximately 25,000 persons in the next five years. Such a rate will exceed the average rate of the last four years. It is believed, however, that the growth rate estimated by the City Planning Department is reasonable and has been used in this study.

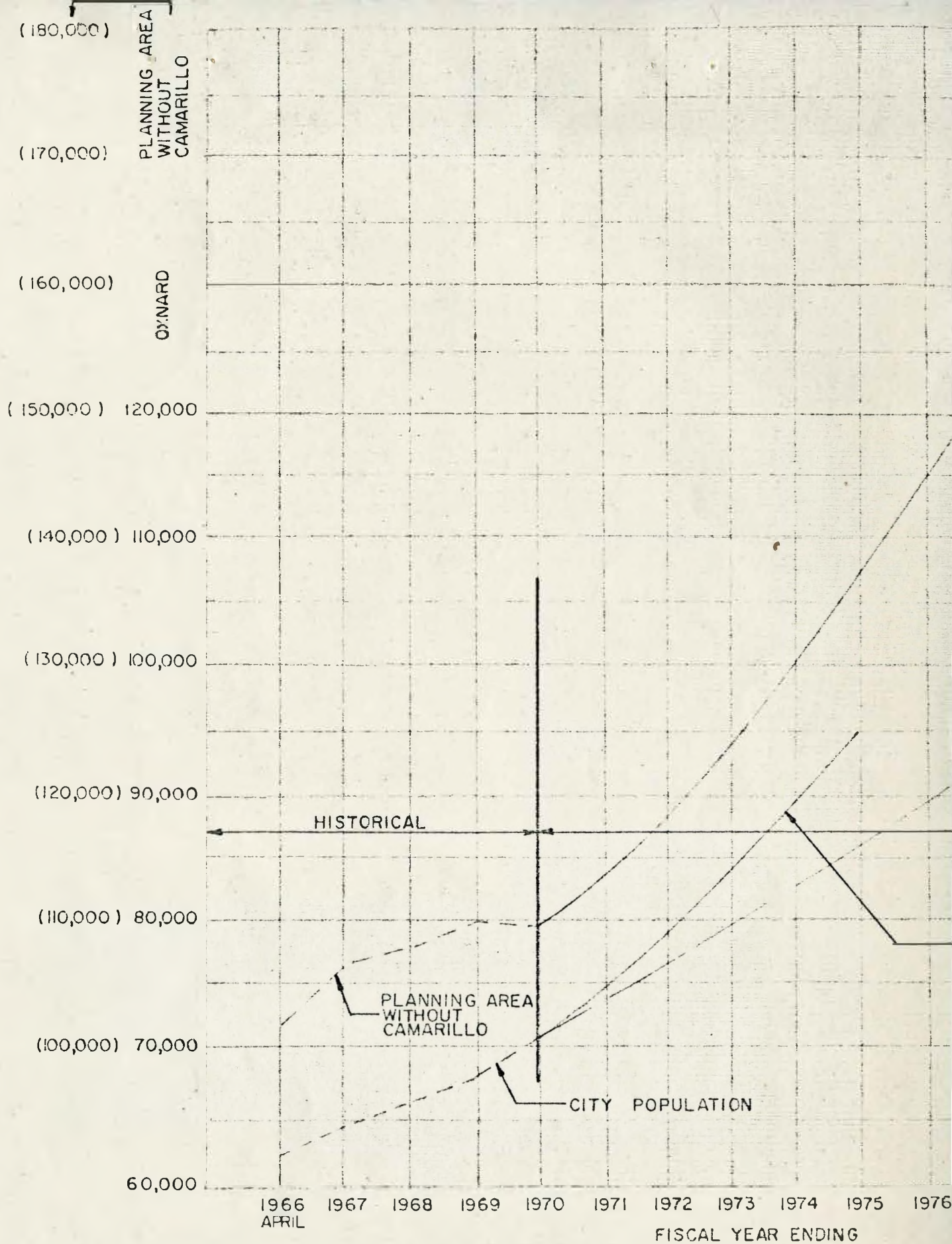
B. WATER ACCOUNTS

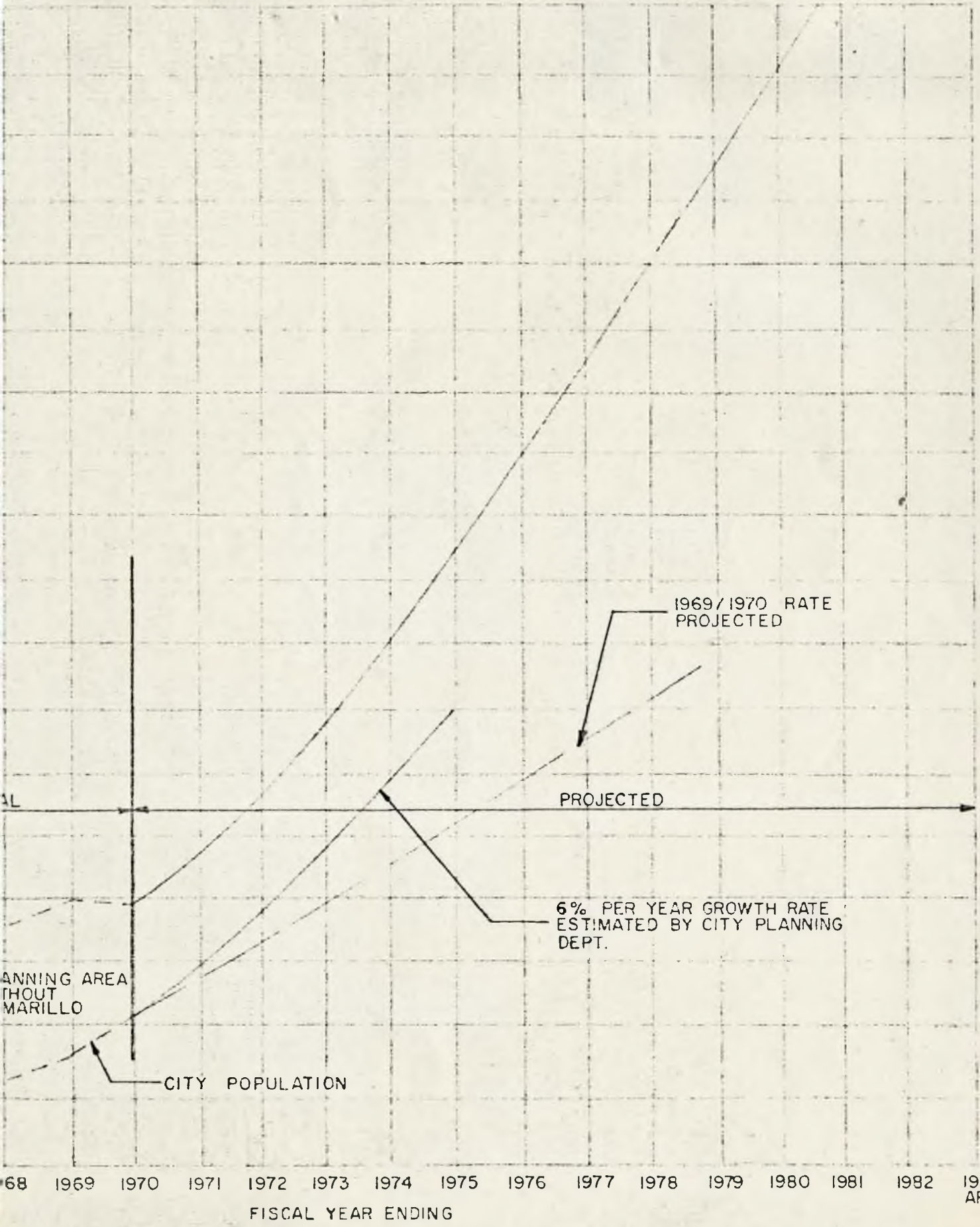
During the last five years the population per water account has varied from a low of 4.17 to a high of 4.37. It is presently 4.17 and has been assumed to remain at 4.2 for the next five years. Table I indicates historical and projected populations and water accounts. Since the City has but approximately 50 outside City accounts, no allowances were made for the added revenues to be earned from this source at the outside City rates.

III. WATER REQUIREMENTS

A. GENERAL

During the last five years per capita water consumption has varied from a low of 149 gallons per day to a high of 164 gallons per day for the fiscal year ending July, 1970. The low amount was experienced in 1967, following the adoption of the most recent rate increase. It is anticipated that a similar decline in water consumption will occur following adoption of a rate increase at this time. Consequently, a per capita consumption of 159 gallons per day has been estimated for next year. This value has been used also for the following four years since it is believed that per capita consumption will not increase as rapidly as it did after the previous decline. Should it begin increasing during the next five years, the City will experience a slightly greater rate of increase in revenue as compared to increase in costs related to increased per capita consumption. Table 2 shows historical and projected water production, consumption and sales, which form the basis of revenue and expense projections. Miscellaneous uses and loss have been a variable amount historically. Currently they are at their highest, 9 percent. It is believed that this amount will decline slightly in the future but will remain higher than the average of the last five years. Should the amount decline and


(180,000)
PLANNING AREA WITHOUT CAMARILLO
(170,000)
(160,000)
OXNARD
(150,000)
120,000
(140,000)
110,000
(130,000)
100,000
(120,000)
90,000
HISTORICAL
(110,000)
80,000
PLANNING AREA WITHOUT CAMARILLO
(100,000)
70,000
CITY POPULATION
60,000
1966 APRIL
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
FISCAL YEAR ENDING



POPULATION PROJECTION

PLATE 1

TABLE I

POPULATIONS AND WATER ACCOUNTS

Fiscal Year	Population	Water Accounts	Population Per Account
1966	62,540	14,843	4.21
1967	64,700	14,914	4.34
1968	66,260	15,149	4.37
1969	68,220	15,770	4.33
1970[1]	71,840	17,200	4.17
1971	75,500	17,980	4.2
1972	80,000	19,040	4.2
1973	84,800	20,200	4.2
1974	89,900	21,400	4.2
1975	95,400	22,700	4.2

1 - Estimated for end of year

TABLE 2

WATER USE

Fiscal Year	Water Production A.F.	Population	Water Production G.P.D.	Unmetered & Misc. Water & Loss % of Prod.	Unmetered & Misc. Water & Loss A.F.	Domestic Sales A.F.	Domestic Sales H.C.F.
1966	10,663	62,540	153	6.3	675	9,988	4,350,825
1967	10,792	64,700	149	4.1	445	10,347	4,507,465
1968	11,231	66,260	152	8.6	961	10,270	4,474,000
1969	11,607	68,220	153	4.7	545	11,062	4,819,005
1970 [1]	13,200	71,840	164	9.0	1,200	12,000	5,220,000
1971	13,400	75,500	159	8.0	1,070	12,330	5,360,000
1972	14,200	80,000	159	8.0	1,140	13,060	5,690,000
1973	15,100	84,800	159	8.0	1,210	13,890	6,050,000
1974	16,000	89,900	159	8.0	1,280	14,720	6,400,000
1975	16,900	95,400	159	8.0	1,350	15,550	6,770,000

1 - Estimated for end of year

a greater amount be sold through domestic meters, City revenues would increase accordingly with little increase in expenses. Water production and sales are illustrated on Plate 2.

B. ALTERNATIVE SOURCES

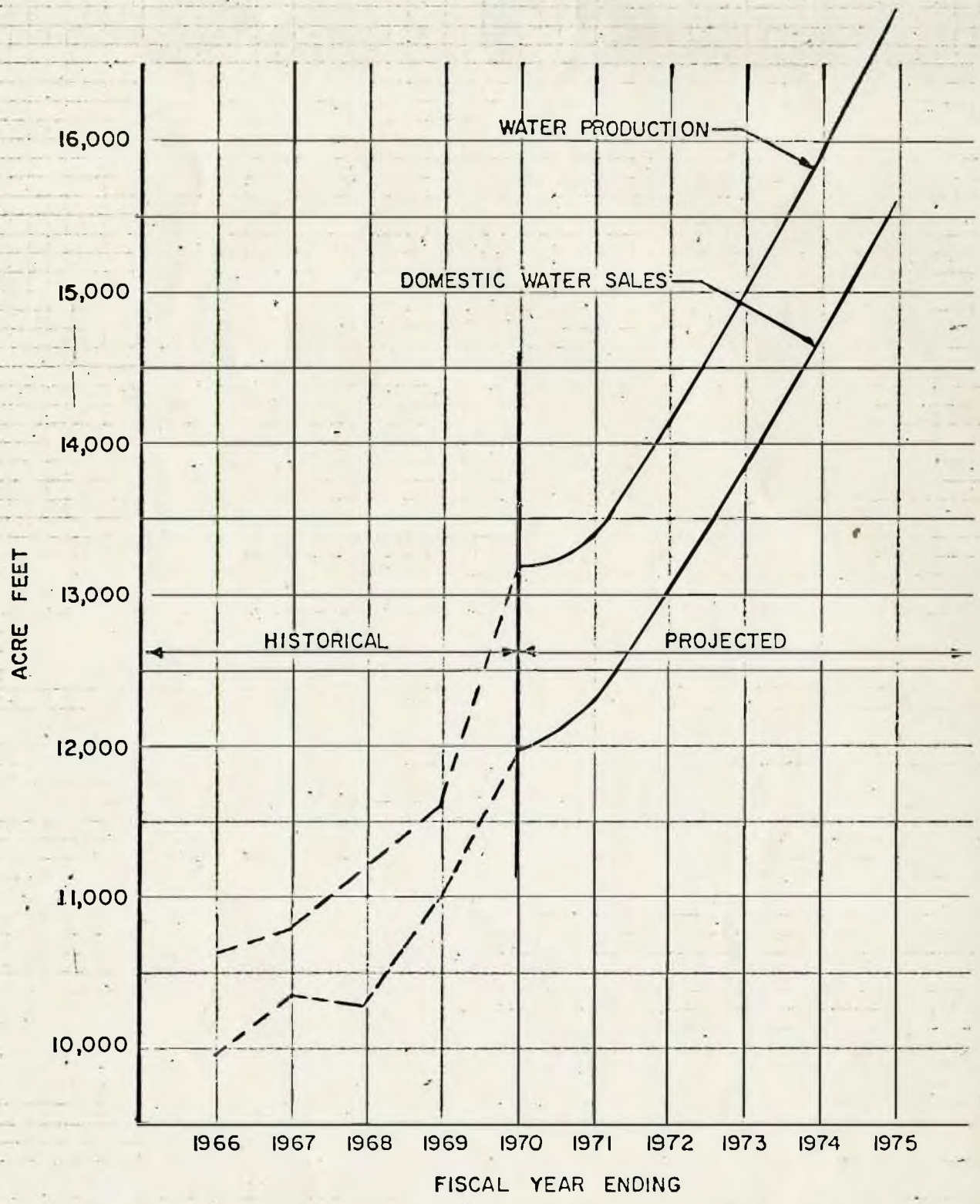
In September, 1969 the City staff prepared a survey report discussing City water quality and various alternative water quality levels of service. The alternatives were numbered I, II, III, IV and V, and are summarized as follows:

Alternative I	1:1 ratio of import water to total local water. Blended water approximately 650 p.p.m. in total minerals and 360 p.p.m. in hardness.
Alternative II	2:1 ratio of import water to total local water. Blended water approximately 510 p.p.m. in total minerals and 263 p.p.m. in hardness.
Alternative III	3:1 ratio of import water to total local water. Blended water approximately 465 p.p.m. in total minerals and 215 p.p.m. in hardness.
Alternative IV	7:1 ratio of import water to total local water. Blended water approximately 343 p.p.m. in total minerals and 143 p.p.m. in hardness.
Alternative V	All import water. Total minerals approximately 220 p.p.m. and hardness 70 p.p.m.

Table 3 lists the source of water for each alternative for the next five years, including the quantities for which penalty payments would be made to United Water Conservation District.

C. CONSUMPTION DISTRIBUTION

To make reasonable predictions of water revenues from the stepped rate structure, it is necessary to know the consumption within each rate block. In the prior rate study City staff prepared a sampling analysis of the metered consumers and tabulated consumption distribution. The City now has this data available from its computer for selected periods. The data was not readily available for the entire fiscal year, but was available for the periods of July and August, 1969 and April and May, 1970. Comparison of these data to the prior data revealed a reasonable degree of similarity and the trend for April and May was used for computation of estimated revenues. Table 4 indicates the consumption distribution of metered accounts. Check computations were made using these statistics, the present rate structure, and water sales quantities for fiscal years 1969 and 1970. These computations indicated water sales revenue approximately 5 percent greater than actually earned. Consequently, computed revenues from this consumption distribution were reduced by 5 percent.



WATER USE

PLATE 2

TABLE 3

WATER REQUIREMENTS

Fiscal Year	Water Production A.F.	Well Production A.F.	U. W. C. D. Purchase A.F.	U. W. C. D. Penalty A.F.	M.W.D. Purchase A.F.
ALTERNATIVE I (1:1 Ratio)					
1971	13,400	3,350	3,350	2,350	6,700
1972	14,200	3,550	3,550	2,150	7,100
1973	15,100	3,775	3,775	1,925	7,550
1974	16,000	4,000	4,000	1,700	8,000
1975	16,900	4,225	4,225	1,475	8,450
ALTERNATIVE II (2:1 Ratio)					
1971	13,400	2,235	2,235	3,465	8,930
1972	14,200	2,365	2,365	3,335	9,470
1973	15,100	2,515	2,515	3,185	10,070
1974	16,000	2,665	2,665	3,035	10,670
1975	16,900	2,815	2,815	2,885	11,270
ALTERNATIVE III (3:1 Ratio)					
1971	13,400	3,350	0	5,700	10,050
1972	14,200	3,550	0	5,700	10,650
1973	15,100	3,775	0	5,700	11,325
1974	16,000	4,000	0	5,700	12,000
1975	16,900	4,225	0	5,700	12,675
ALTERNATIVE IV (7:1 Ratio)					
1971	13,400	1,675	0	5,700	11,725
1972	14,200	1,775	0	5,700	12,425
1973	15,100	1,885	0	5,700	13,215
1974	16,000	2,000	0	5,700	14,000
1975	16,900	2,110	0	5,700	14,790
ALTERNATIVE V (All import)					
1971	13,400	0	0	5,700	13,400
1972	14,200	0	0	5,700	14,200
1973	15,100	0	0	5,700	15,100
1974	16,000	0	0	5,700	16,000
1975	16,900	0	0	5,700	16,900

Ratios are import quantity to total local quantity

TABLE 4

WATER CONSUMPTION OF METERED ACCOUNTS

Water Consumption Block, HCF	Meter Readings			Consumption		
	No.	Accum. No.	Accum. Percent	HCF Units	Accum. HCF Units	Accum. Percent
0	118	118	.770	0	0	.000
1	79	197	1.285	79	79	.008
2	85	282	1.840	170	249	.026
3	97	379	2.473	291	540	.058
4	115	494	3.224	460	1,000	.109
5	132	626	4.086	660	1,660	.182
6	115	741	4.837	690	2,350	.258
7	131	872	5.692	917	3,267	.359
8	126	998	6.514	1,008	4,275	.470
9	159	1,157	7.552	1,431	5,706	.628
10	179	1,336	8.721	1,790	7,496	.826
11	174	1,510	9.857	1,914	9,410	1.038
12	212	1,722	11.241	2,544	11,954	1.320
13	242	1,964	12.821	3,146	15,100	1.669
14	257	2,221	14.499	3,598	18,698	2.068
15	264	2,485	16.223	3,960	22,658	2.507
16	305	2,790	18.215	4,880	27,538	3.048
17	345	3,135	20.468	5,865	33,403	3.698
18	318	3,453	22.544	5,724	39,127	4.333
19	368	3,821	24.947	6,992	46,119	5.109
20	382	4,203	27.441	7,640	53,759	5.956
21	392	4,595	30.001	8,232	61,991	6.869
22	361	4,956	32.358	7,942	69,933	7.750
23	389	5,345	34.898	8,947	78,880	8.742
24	400	5,745	37.510	9,600	88,480	9.807
25	420	6,165	40.253	10,500	98,980	10.972
26	397	6,562	42.845	10,322	109,302	12.117
27	373	6,935	45.281	10,071	119,373	13.234
28	389	7,324	47.821	10,892	130,265	14,442
29	379	7,703	50.296	10,991	141,256	15,661
30	357	8,060	52.627	10,710	151,966	16,849
31	405	8,465	55.272	12,555	164,521	18,242
32	371	8,836	57.695	11,872	176,393	19,559
33	357	9,193	60.026	11,781	188,174	20,866

TABLE 4

WATER CONSUMPTION OF METERED ACCOUNTS

Water Consumption Block, HCF	Meter Readings No.	Meter Readings Accum. No.	Meter Readings Accum. Percent	Consumption HCF Units	Consumption Accum. HCF Units	Consumption Accum. Percent
34	337	9,530	62.227	11,458	199,632	22.137
35	293	9,823	64.140	10,255	209,887	23.275
36	310	10,133	66.164	11,160	221,047	24.513
37	262	10,395	67.875	9,694	230,741	25.588
38	288	10,683	69.756	10,944	241,685	26.802
39	284	10,967	71.610	11,076	252,761	28.031
40	241	11,208	73.184	9,640	262,401	29.100
41	201	11,409	74.496	8,241	270,642	30.014
42	229	11,638	75.991	9,618	280,260	31.081
43	219	11,857	77.421	9,417	289,677	32.126
44	189	12,046	78.655	8,316	297,993	33.048
45	169	12,215	79.758	7,605	305,598	33.892
46	167	12,382	80.848	7,682	313,280	34.744
47	145	12,527	81.795	6,815	320,095	35.500
48	153	12,680	82.794	7,344	327,439	36.315
49	142	12,822	83.721	6,958	334,397	37.087
51	242	13,064	85.301	12,222	346,619	38.443
53	201	13,265	86.613	10,545	357,164	39.613
55	173	13,438	87.742	9,410	366,574	40.657
57	151	13,589	88.728	8,537	375,111	41.604
59	126	13,715	89.550	7,370	382,481	42.421
64	284	13,999	91.404	17,584	400,065	44.372
69	165	14,164	92.481	11,027	411,092	45.595
74	139	14,303	93.388	9,987	421,079	46.703
79	94	14,397	94.001	7,218	428,297	47.504
84	72	14,469	94.471	5,878	434,175	48.156
89	57	14,526	94.843	4,965	439,140	48.707
94	51	14,577	95.176	4,688	443,828	49.227
99	42	14,619	95.450	4,079	447,907	49.679
109	68	14,687	95.894	7,035	454,942	50.459
119	54	14,741	96.246	6,161	461,103	51.142
129	40	14,781	96.507	4,938	466,041	51.690
139	38	14,819	96.755	5,097	471,138	52.255
149	36	14,855	96.990	5,232	476,370	52.835
174	47	14,902	97.296	7,546	483,916	53.672

TABLE 4

WATER CONSUMPTION OF METERED ACCOUNTS

Water Consumption Block, HCF	Meter Readings No.	Meter Readings Accum. No.	Meter Readings Accum. Percent	Consumption HCF Units	Consumption Accum. HCF Units	Consumption Accum. Percent
199	51	14,953	97.629	9,570	493,486	54.734
224	26	14,979	97.798	5,528	499,014	55.347
249	31	15,010	98.000	7,328	506,342	56.160
299	53	15,063	98.346	14,513	520,855	57.770
349	39	15,102	98.600	12,624	533,479	59.171
399	26	15,128	98.769	9,806	543,285	60.259
449	23	15,151	98.919	9,736	553,021	61.339
499	13	15,164	99.003	6,206	559,227	62.027
599	21	15,185	99.140	11,482	570,709	63.301
699	16	15,201	99.244	10,491	581,200	64.465
799	20	15,221	99.374	14,941	596,141	66.123
899	10	15,231	99.439	8,551	604,692	67.072
999	5	15,236	99.471	4,753	609,445	67.599
1999	43	15,279	99.751	59,368	668,813	74.187
2999	6	15,285	99.790	14,740	683,553	75.822
3999	4	15,289	99.816	13,340	696,893	77.302
4999	4	15,293	99.842	18,159	715,052	79.317
5999	5	15,298	99.874	27,712	742,764	82.392
6999	3	15,301	99.893	19,216	761,980	84.524
7999	2	15,303	99.906	14,482	776,462	86.131
8999	1	15,304	99.912	8,163	784,625	87.036
9999	7	15,311	99.957	116,400	901,025	99.954

IV. MISCELLANEOUS REVENUES

During the last five years the City has earned funds from miscellaneous sources, such as flat rate sales, hydrant rental, operating and non-operating miscellaneous income, and interest. Table 5 indicates the annual amount of these revenues, as well as the sums accrued through metered water sales.

TABLE 5

HISTORICAL WATER DEPARTMENT REVENUES[1]

Fiscal Year	Metered Sales	Misc. Revenue	Total Revenue
1966	$ 949,307	$ 98,041	$ 1,047,348
1967	1,016,258	62,328	1,078,586
1968	1,171,362	172,329	1,343,691
1969	1,226,596	159,445	1,386,041
1970[2]	1,289,000	172,000	1,461,000

1 - Cents not shown

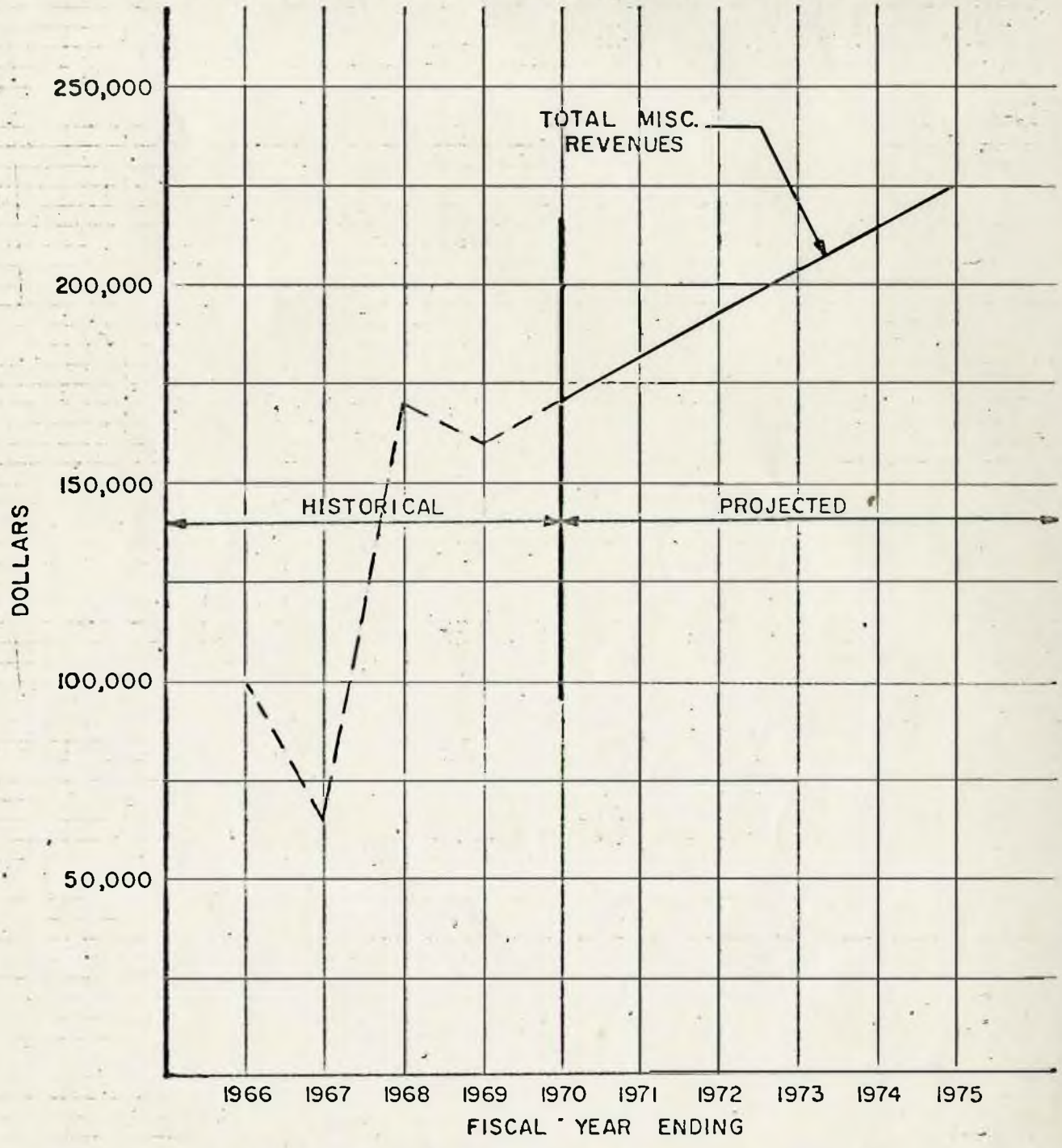
2 - Estimated for End of Year

These miscellaneous revenues have increased an average of $18,000 per year during the last four years, but have varied during the last two years. It is estimated that they will increase at the rate of $10,000 per year in the future. Table 6 lists the estimated miscellaneous revenues for the next five years, which are also plotted on Plate 3.

TABLE 6

MISCELLANEOUS REVENUES

Fiscal Year	Miscellaneous Revenue
1971	$182,000
1972	192,000
1973	202,000
1974	212,000
1975	222,000



MISCELLANEOUS WATER DEPARTMENT REVENUES

PLATE 3

V. REVENUE REQUIREMENTS

A. SOURCE OF SUPPLY

The City will be obtaining its water from the sources listed in Table 3, depending on the water quality alternative selected. Each source of water will have a different cost. Based on data obtained from the various agencies, the following table lists the unit costs involved to obtain the water. Well water cost is basically the cost of power for pumping. Since the wells would be maintained in operating condition regardless of selected alternative, the other City costs pertinent to wells are included under other source of supply items and are included in the cost projections.

TABLE 7

UNIT COSTS OF WATER PURCHASE PER ACRE FOOT

Fiscal Year	Calleguas & MWD	U. W. C. D. Purchase	U. W. C. D. Penalty	Wells
1971	$66.00	$17.28	$7.00	$5.00
1972	70.00	17.28	7.00	5.25
1973	76.00	17.28	7.00	5.50
1974	82.00	17.28	7.00	5.75
1975	88.00	17.28	7.00	6.00

The purchase costs of other agencies are not officially adopted by those agencies for the entire five year period. The costs shown reflect the best information available at this time from the staffs of the other agencies. Combining the unit costs of Table 7 with the quantities of Table 3 results in water production costs as shown in Table 8.

Other items of expense comprising source of supply cost are miscellaneous labor and maintenance for wells, reservoirs and supply mains. Projections of these items were made based on expenses for the past few years. Table 9 shows historical and projected source of supply expenses.

TABLE 8

WATER PRODUCTION COSTS

Fiscal Year	Well Production	U.W.C.D. Purchase	U.W.C.D. Penalty	M.W.D. Purchase	Total
ALTERNATIVE I (1:1 Ratio)					
1971	$16,750	$58,000	$16,450	$441,000	$532,200
1972	18,650	61,400	15,050	497,000	592,100
1973	20,800	65,300	13,480	574,000	673,580
1974	23,000	69,100	11,900	656,000	760,000
1975	25,300	73,000	10,330	744,000	852,630
ALTERNATIVE II (2:1 Ratio)					
1971	11,170	38,700	24,200	589,000	663,070
1972	12,270	40,900	23,300	663,000	739,470
1973	13,850	43,500	22,300	765,000	844,650
1974	15,300	46,100	21,200	874,000	956,600
1975	16,900	48,600	20,200	991,000	1,076,700
ALTERNATIVE III (3:1 Ratio)					
1971	16,750	0	39,900	664,000	720,650
1972	18,650	0	39,900	745,000	803,550
1973	20,800	0	39,900	860,000	920,700
1974	23,000	0	39,900	984,000	1,046,900
1975	25,300	0	39,900	1,115,000	1,180,200
ALTERNATIVE IV (7:1 Ratio)					
1971	8,370	0	39,900	775,000	823,270
1972	9,310	0	39,900	871,000	920,210
1973	10,380	0	39,900	1,003,000	1,053,280
1974	11,500	0	39,900	1,147,000	1,198,400
1975	12,650	0	39,900	1,300,000	1,352,550
ALTERNATIVE V (All import)					
1971	0	0	39,900	885,000	924,900
1972	0	0	39,900	993,000	1,032,900
1973	0	0	39,900	1,147,000	1,147,000
1974	0	0	39,900	1,310,000	1,310,000
1975	0	0	39,900	1,487,000	1,487,000

Ratios are import quantity to total local quantity

TABLE 9

SOURCE OF SUPPLY EXPENSE

Fiscal Year	Expense Alt. I[1]	Alt. II	Alt. III	Alt. IV	Alt. V
1967	$149,749				
1968	220,111				
1969	246,300				
1970	305,740				
1971	549,700	$680,570	$738,150	$840,770	$942,400
1972	611,600	758,970	823,050	939,710	1,052,400
1973	695,080	866,150	942,200	1,074,780	1,168,500
1974	783,500	980,100	1,070,400	1,221,900	1,333,500
1975	878,130	1,102,200	1,205,700	1,378,000	1,512,500

Alt. I does not apply to historical expenses

B. PUMPING

Pumping expense includes labor, supplies, structure maintenance, power and equipment maintenance for the pumping facilities. Projections were made of the various items comprising this expense. Table 10 indicates the historical and projected pumping expenses. The apparent reduction in pumping expense is due to transferring well power costs to the source of supply costs. Well power cost is normally accounted for by the City as pumping expense.

TABLE 10

PUMPING EXPENSE

Fiscal Year	Expense
1967	$51,899
1968	61,563
1969	63,200
1970	75,600
1971	57,400
1972	63,500
1973	69,600
1974	75,700
1975	81,800

C. WATER TREATMENT

Water treatment expenses primarily consist of labor and materials for chlorination. The various water treatment expenses have fluctuated in recent years but are expected to increase gradually each year. Table 11 contains the historical and projected water treatment expenses.

TABLE II

WATER TREATMENT EXPENSE

Fiscal Year	Expense
1967	$13,966
1968	4,672
1969	8,700
1970	10,320
1971	13,000
1972	14,000
1973	15,000
1974	16,000
1975	17,000

D. TRANSMISSION AND DISTRIBUTION

Transmission and distribution expense comprises 11 various accounting items, including supervision and engineering, operation and maintenance of mains and meters, customer services and fire hydrants. Based on historical experience and estimated growth, projections were made of the individual costs of transmission and distribution. Table 12 lists historical and projected expenses for transmission and distribution.

TABLE 12

TRANSMISSION AND DISTRIBUTION EXPENSE

Fiscal Year	Expense
1967	$102,596
1968	114,600
1969	139,100
1970	206,200
1971	221,800
1972	187,100
1973	203,000
1974	219,400
1975	236,300

A decrease is shown for 1972, as compared to 1969 and 1970 due to water line relocations occasioned by the City's storm drain improvements. Relocation of water lines because of storm drain construction is not expected after 1971.

E. CUSTOMER ACCOUNTS

Customer account expense is composed of meter reading, billing and uncollectible accounts. Uncollectible accounts are relatively minor and are assumed to remain constant. Meter reading and billing will increase annually. The historical and projected costs for customer accounts are listed in Table 13.

TABLE 13

CUSTOMER ACCOUNT EXPENSE

Fiscal Year	Expense
1967	$72,607
1968	67,582
1969	73,600
1970	86,630
1971	93,000
1972	102,000
1973	112,000
1974	122,800
1975	134,700

F. ADMINISTRATIVE AND GENERAL

Administrative and general expense includes various account items for office salaries and expenses of various departments which provide services for the water department, supplies, insurance, injuries, retirement, miscellaneous costs, depreciation of water system, and interest on bonded debt. Projections were made of the various costs, predicated on historical experience and anticipated growth. Table 14 shows historical and projected expenses for administrative and general.

TABLE 14

ADMINISTRATIVE AND GENERAL EXPENSE

Fiscal Year	Expense
1967	$630,363
1968	647,603
1969	704,325
1970	743,657
1971	778,000
1972	820,900
1973	867,200
1974	916,500
1975	970,500

G. CAPITAL IMPROVEMENTS

Because of curtailed revenues the City has not expended funds in the last few years for major system improvements. Various minor type capital improvements have been constructed each year. These improvements have been financed from the annual depreciation charges, the function of which is to pay for equipment replacement, main reconstruction, and similar work which a well run water system must continue to do. It is anticipated that this City policy will continue in force and no separate allowance will be made in the revenue requirement for minor capital improvements.

To keep pace with growth and to be able to blend water to the desired level of water quality, the City will be required to construct major capital improvements averaging a little under $300,000 per year. These necessary items have been programmed by City staff to be constructed over the five year period encompassed by this report. Consequently, these sums have been included in the revenue requirement summarized in Table 15 so that the City may "Pay as you go" for the improvements. Should the City elect to finance these improvements by means of bond funds, the capital improvement sums would be deleted from the revenue requirement and an allowance made for another bond and interest payment. The net effect would be to reduce the computed rate structure.

H. BOND PRINCIPAL PAYMENTS

There are four outstanding bond issues for the water system. The annual bond principal payments range from a low of $419,030 to a high of $487,091 and are shown in Table 15. Unless these funds are to be subsidized by general funds, the rate structure must be adequate to earn the indicated amounts.

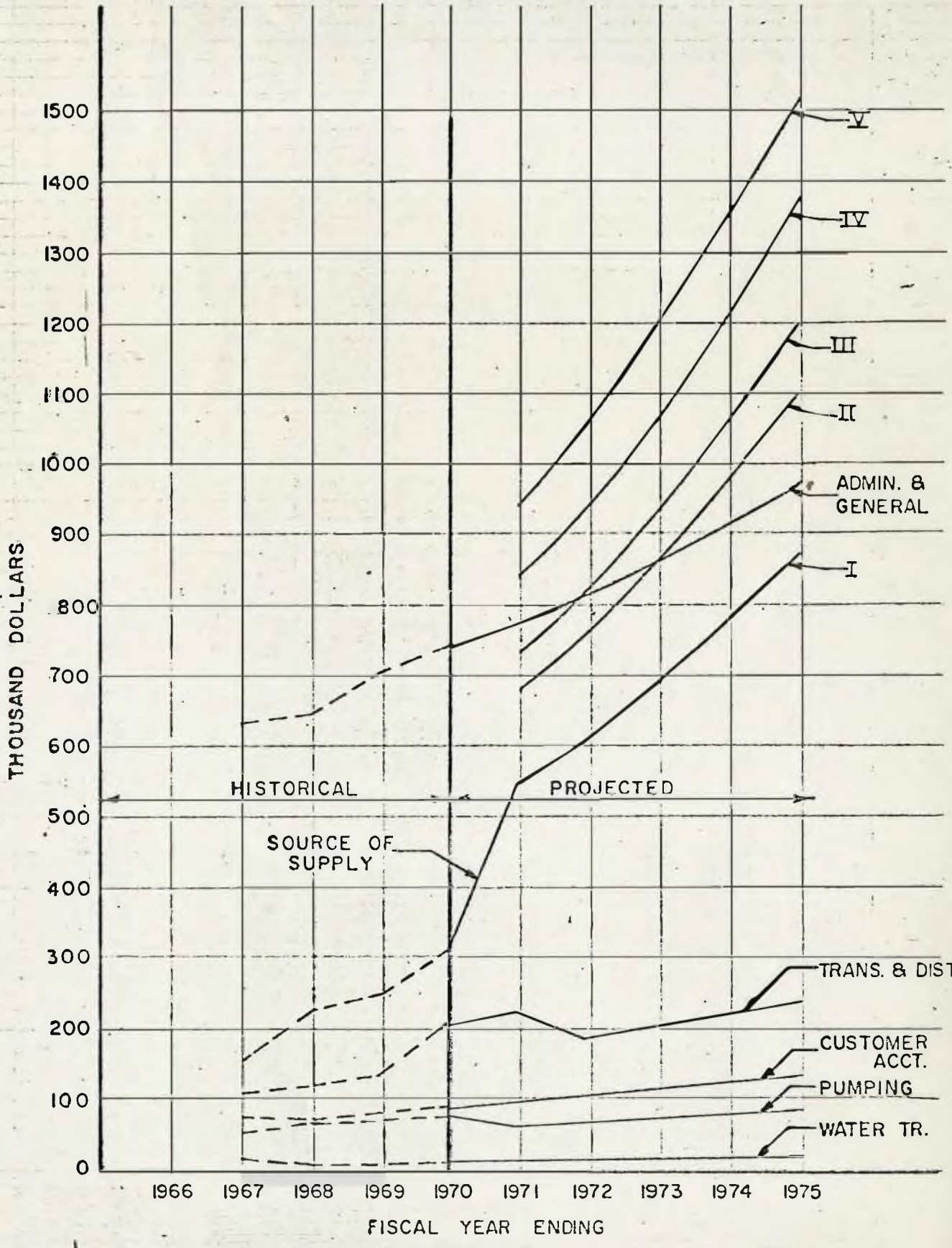
I. REVENUE REQUIREMENT

The revenues required to be earned by the rate structure, based on the projections of the various water system expenses, are summarized in Table 15. The net required revenues indicated were obtained by subtracting the miscellaneous revenue requirements. The various operating expenses which make up the bulk of the revenue requirements for the various alternative water quality levels of service are shown on Plate 5.

TABLE 15

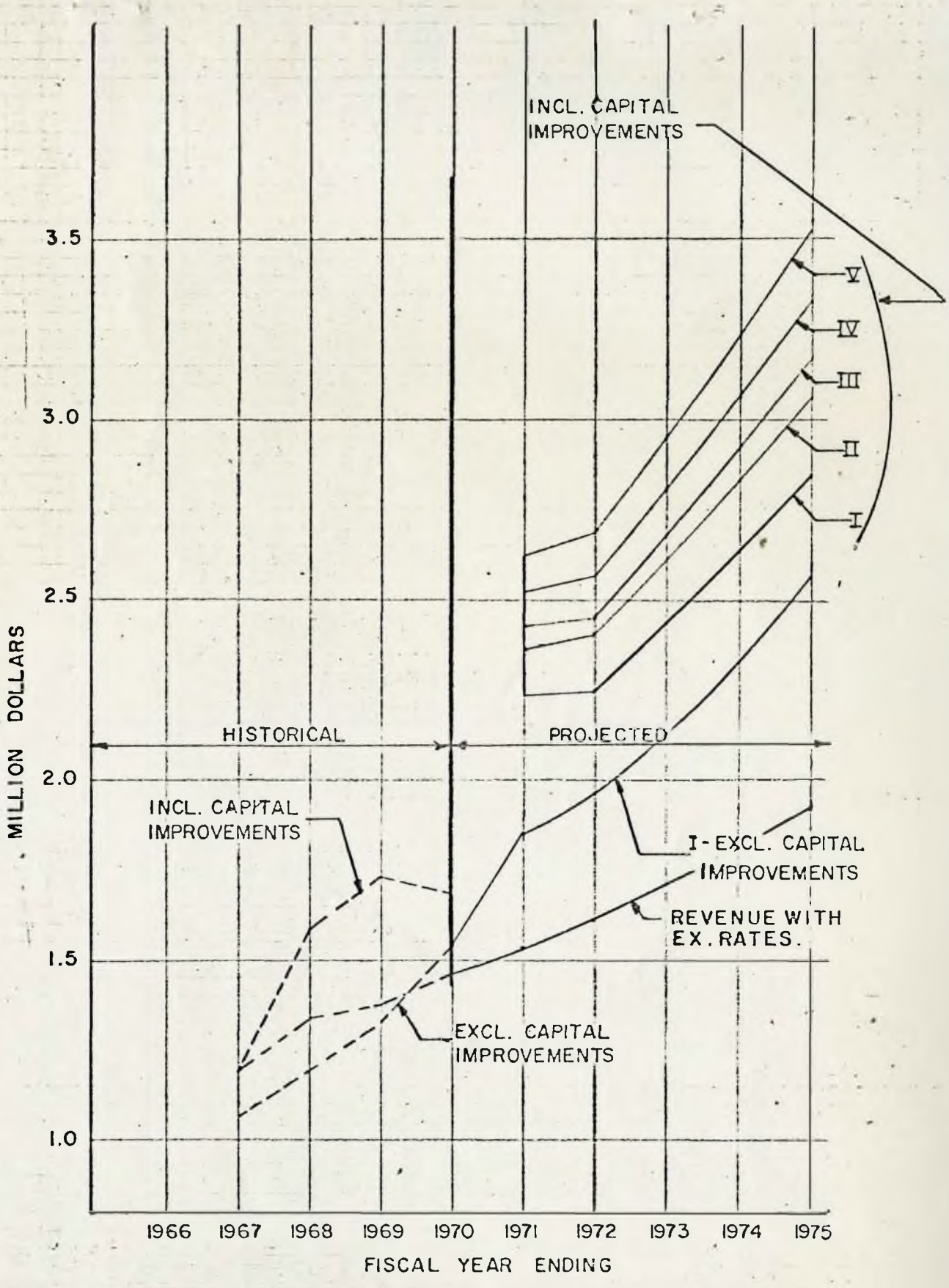
SUMMARY OF REVENUE REQUIREMENT

Item	1971	1972	1973	1974	1975
Source of Supply					
Alt I	$549,700	$611,600	$695,080	$783,500	$ 878,130
Alt. II	680,570	758,970	866,150	980,100	1,102,200
Alt. III	738,150	823,050	942,200	1,070,400	1,205,700
Alt. IV	840,770	939,710	1,074,780	1,221,900	1,378,000
Alt. V	942,400	1,052,400	1,168,500	1,333,500	1,512,500
Pumping	57,400	63,500	69,600	75,700	81,800
Water Treatment	13,000	14,000	15,000	16,000	17,000
Trans. & Dist.	221,800	187,100	203,000	219,400	236,300
Customer Acct.	93,000	102,000	112,000	122,800	134,700
Admin. & Gen.	778,000	820,900	867,200	916,500	970,500
Bond Principal	136,800	156,800	176,800	206,800	236,800
Capital Impr.	313,000	298,000	303,000	296,000	278,000
Misc. Revenue	182,000	192,000	202,000	212,000	222,000
Net Req'd. Revenue					
Alt. I	1,980,270	2,061,900	2,239,680	2,424,700	2,611,230
Alt. II	2,111,570	2,209,270	2,410,750	2,621,300	2,835,300
Alt. III	2,169,150	2,273,350	2,486,800	2,711,600	2,938,800
Alt. IV	2,271,700	2,390,010	2,619,380	2,863,100	3,111,100
Alt. V	2,373,400	2,502,700	2,713,100	2,974,700	3,245,600



WATER SYSTEM EXPENSES

PLATE 4



TOTAL REVENUE REQUIREMENTS

PLATE 5

VI. PROPOSED RATE STRUCTURE

A. GENERAL

The present stepped rate structure consists of four consumption blocks after the minimum quantity. Computations for new rates were made using the same four consumption blocks. Rates have been computed in general accordance with the functional cost basis as suggested by the American Water Works Association. In general the revenue requirement is divided into two categories, one which relates to services without regard to quantity of water used, with the other pertaining to quantity of water. The latter category, generally termed commodity costs, is further segregated into groups so that rates may be determined for each consumption block.

Based on the results of the City questionnaire and discussions with City staff, it has been assumed that the City will adopt a policy of providing water with an average total mineral content of approximately 500 p.p.m., which is basically what Alternative II will provide once State water arrives in Oxnard. While water is still being imported from the Colorado River to Oxnard, Alternative II will not meet this quality criteria. However, for purposes of water rate determination, the revenue requirements shown for Alternative II were used, beginning with the year 1970-1971.

In arriving at necessary water rates in Oxnard and comparing them with other agencies, Oxnard is at a disadvantage. Many other water agencies, which are paying for major importation facilities such as those of Calleguas M.W.D., utilize a tax rate to meet the financial requirements of the importation facilities and pay for all supply, operation and maintenance costs through water system revenues. For Oxnard the water system earns in excess of $400,000 annually to repay importation system capital improvements rather than rely on taxation. Many citizens, unfortunately, do not compare total water cost, where water taxes are involved.

B. RATE STRUCTURE

The revenue requirement for fiscal year 1970-1971, for Alternative II, as shown in Table 15 has been segregated into functional cost items as depicted in Table 16. The net total of $296,500 shown for Accounting, Meters & Services is the cost which pertains to all meters regardless of size or water consumption. Dividing this sum by the average number of meters for 1971, 17,590 results in a service per meter per bi-monthly of $2.22.

From the consumption trends indicated in Table 4 the following table summarizes consumption distribution for the rate blocks.

TABLE 16

DISTRIBUTION OF FY 1970-1971 REVENUE REQUIREMENT (ALT. II)

Expense Item	Production, Pumping Water Treatment & Transmission	Distribution	Accounting, Meters & Services	Office	Total
Source of Supply	$ 680,570				$680,570
Pumping	57,400				57,400
Water Treatment	13,000				13,000
Transmission & Dist.	33,000	$127,300	$61,500		221,800
Customer Acct.			93,000		93,000
Admin. & Gen.	247,000	247,000		$284,000	778,000
Bond Principal	136,800				136,800
Capital Imp.		313,000			313,000
Subtotal	$1,167,770	$ 687,300	$154,500	$284,000	$2,293,570
Distr. of Office	71,000	71,000	142,000		
Deduct Misc. Revenue	- 60,000	- 60,000	- 62,000		- 182,000
Net Totals	$1,178,770	$698,300	$234,500		$2,111,570

TABLE 17

CONSUMPTION DISTRIBUTION

Water Consumption Block, HCF	Percent of Total Meter Readings	Percent of Total Water Consumption
0-10 (Minimum)	8.72	0.83
10-200	88.91	53.90
200-1,000	1.84	12.87
1,000-6,000	0.40	14.79
Over 6,000	0.13	17.61

Applying these factors to the total estimated water sales for 1971 of 5,360,000 HCF yields the distribution of water sales for each rate block as shown in the following table.

TABLE 18

DISTRIBUTION OF 1971 WATER SALES

Water Consumption Block, HCF	Total Water Sales	
	HCF	Percent of Total
0-10	1,025,600	19.13
10-200	2,405,100	44.90
200-1,000	744,100	13.87
1,000-6,000	1,063,200	19.83
Over 6,000	122,000	2.27

Utilizing the consumption totals shown in Table 18 and the cost data of Table 16 the various commodity rates were computed. The net sum for production, pumping, treatment and transmission is the cost which pertains equally to all water used, whether at the beginning or end of the rate structure. The net total for distribution is allocated into the consumption blocks and determines the incrementalsums for each step. The computed rate structure is as follows for a two month period:

0-10	$7.40 minimum
10-200	34¢ per HCF
200-1,000	30¢ per HCF
1,000-6,000	26¢ per HCF
Over 6,000	22¢ per HCF

Check computations using this rate structure and growth projections revealed that rate structure would be adequate until the fiscal year 1974. Based on the computed revenue requirements contained herein, it will be necessary to increase the commodity 2 cents per HCF for each of the four commodity blocks, with the minimum bill remaining unchanged.

The minimum bill has been computed on the basis of a 3/4" meter, since present water department policy is to install nothing smaller than a 3/4" meter. The department is presently gradually replacing existing 5/8" meters with 3/4" meters. It is believed that the same minimum should apply to both 5/8" meters and 3/4" meters, as is done in many water agencies. However, the City may wish to adopt a policy of maintaining a lesser minimum bill for 5/8" meters, in the amount of $6.40 for two months, until the 5/8" meters are actually replaced. At present the City charges different minimum bills for 1" meters based on size of service line. It is believed that consolidating these into a single minimum bill, regardless of service line size, will maintain equity and simplify records and accounting. Applying the foregoing criteria and reflecting increase in commodity costs, the following are the minimum bills:

Meter Size	Minimum Bill for 2 months
5/8"	$6.50
3/4"	7.50
1"	12.00
1-1/2"	18.00
2"	24.00
3"	37.00
4"	50.00
6"	75.00
8"	100.00
10"	125.00
12"	225.00

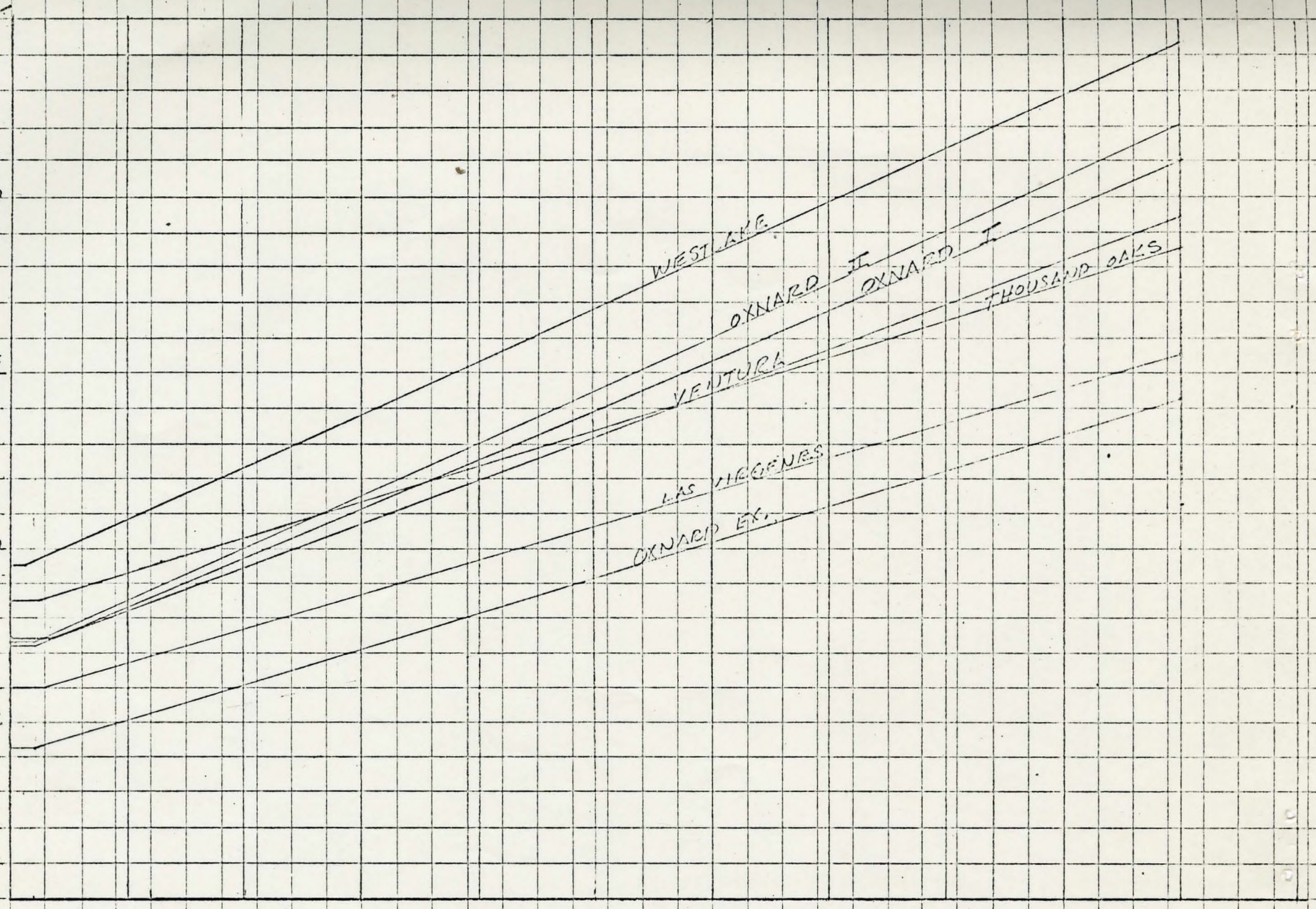
The preceding rate structure was determined using the revenue requirements for Alternative 11. Water quality represented by Alternative I is slightly better but very close to the quality presently available to City consumers, and as previously indicated is inferior to Alternative II. Alternatives III, IV and V would offer increasingly superior quality of water as compared to Alternative II. On the same basis as the computations of rates for Alternative II, computations were made for rate structures which would apply for any other alternative as selected by the City. Table 19 summaries the rate structure for each Alternative. The minimum bills for all sizes of meters for the various alternatives are not listed herein. Should the City select an alternative other than II, appropriate adjustments would be made to the minimum bills listed for Alternative II.

TABLE 19

SCHEDULE OF RATE STRUCTURES

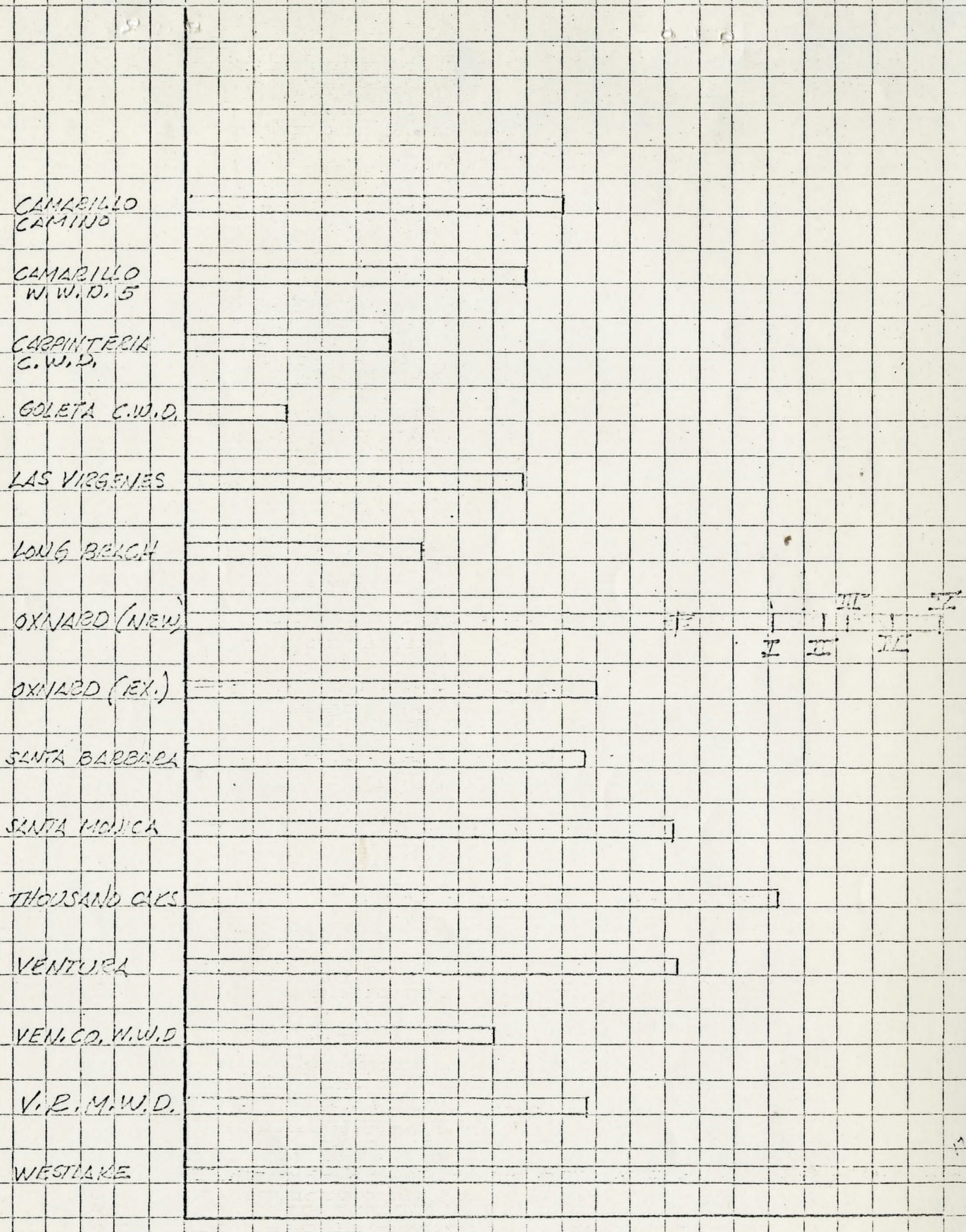
Consumption Block	Alt. I	Alt. II	Alt. III	Alt. IV	Alt. V
0-10	$7.20	$7.40	$7.50	$7.70	$7.90
10-200	32¢	34¢	36¢	38¢	40¢
200-1,000	27¢	30¢	31¢	33¢	34¢
1,000-6,000	23¢	26¢	27¢	29¢	30¢
Over 6,000	20¢	22¢	23¢	25¢	27¢

Whichever alternative and rate schedule is selected, it will be necessary to increase the commodity rate by 2 cents each at the beginning of 1974.



COMPARISON OF BI-MONTHL
WATER BILLINGS

PLATE 7



COMPARISON OF BI-MONTHLY CHARGES FOR 3/4" METER USING 3000 C.F.

PLATE 6