LIPPINCOTT

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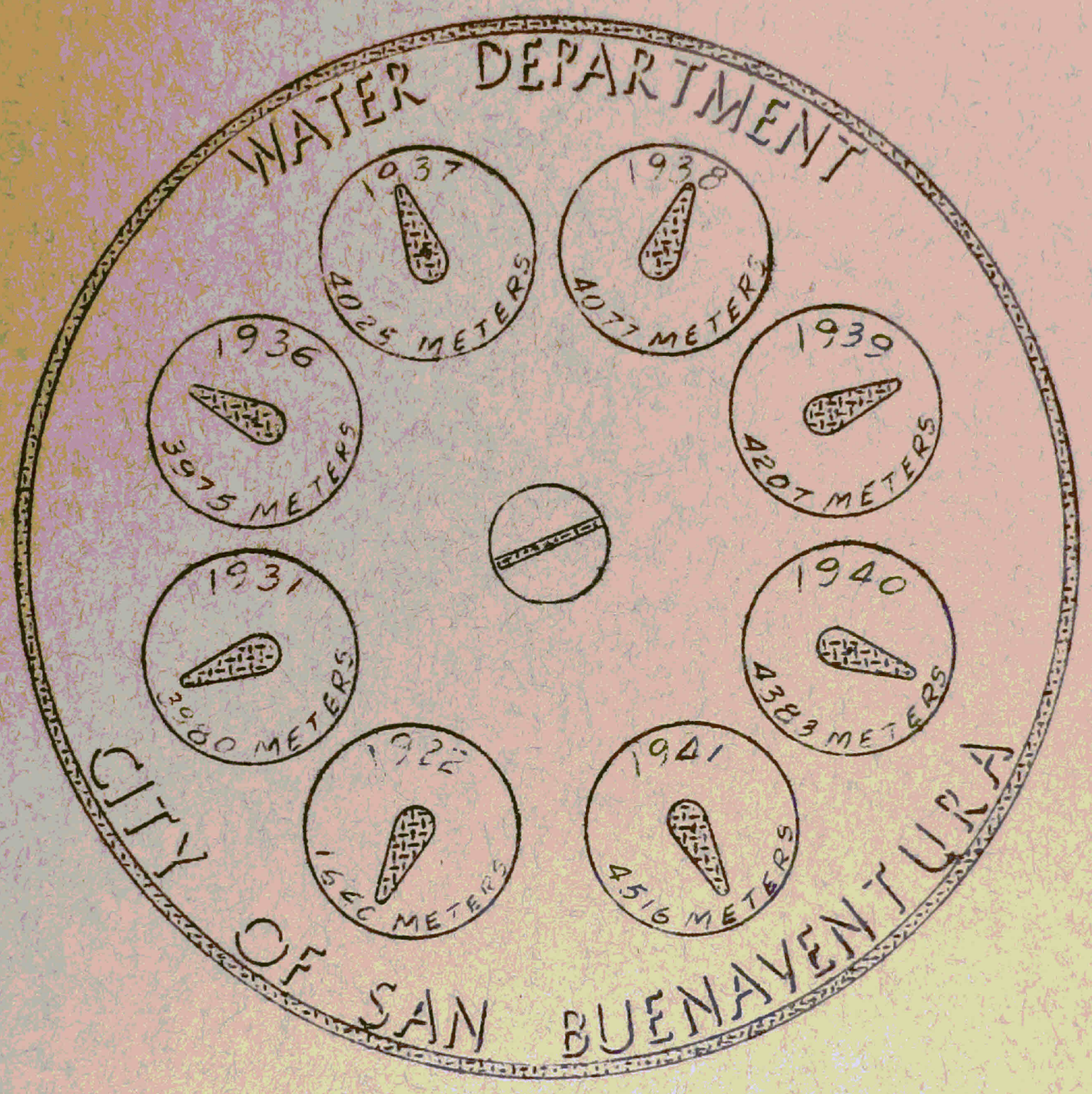
ANNUAL REPORT



FISCAL YEAR — 1940-41

VEN0004050

CITY of SAN BUENAVENTURA

VENTURA COUNTY--CALIFORNIA

Ventura, California,
October 25, 1941.

Mr. D. C. McMillan,
City Manager,
Ventura, California.

Dear Mr. McMillan:

This report, covering the fiscal year 1940-41, is presented in accordance with instructions set forth in Article XVII, Section 20, of the Charter of the City of San Buenaventura.

Other statistical data, such as articles and tables of general interest pertaining to the growth of the system, distribution, quantity and quality of water, and equipment, are included in the report.

As a precautionary measure to assure safe water, the Ventura County Health Department has continued the weekly tests for bacteria content in the water. These samples are taken from mains in areas where contamination at any reservoir or at Casitas Intake would be shown immediately by such tests.

The Department's estimate of the population of Ventura and area served, based on meters in service, is as follows:

	June 30, 1940	June 30, 1941
Population of Ventura	13,264	13,745
Population served	16,765	17,305

Per capita consumption was seventy-five gallons a day.

Very truly yours,

C. F. Zapf, Superintendent,
Water Department.

CFZ:D

VEN0004051

O F F I C I A L S

C I T Y O F S A N B U E N A V E N T U R A

HAROLD Y. CARRICO, MAYOR

WALTER O. CLARK, COUNCILMAN

WM. SCHUMACHER, COUNCILMAN

LOUIS A. SNOW, COUNCILMAN

GLENN D. COREY, COUNCILMAN

JACK ROSE, COUNCILMAN

RALPH A. SNODGRASS, COUNCILMAN

-oOo

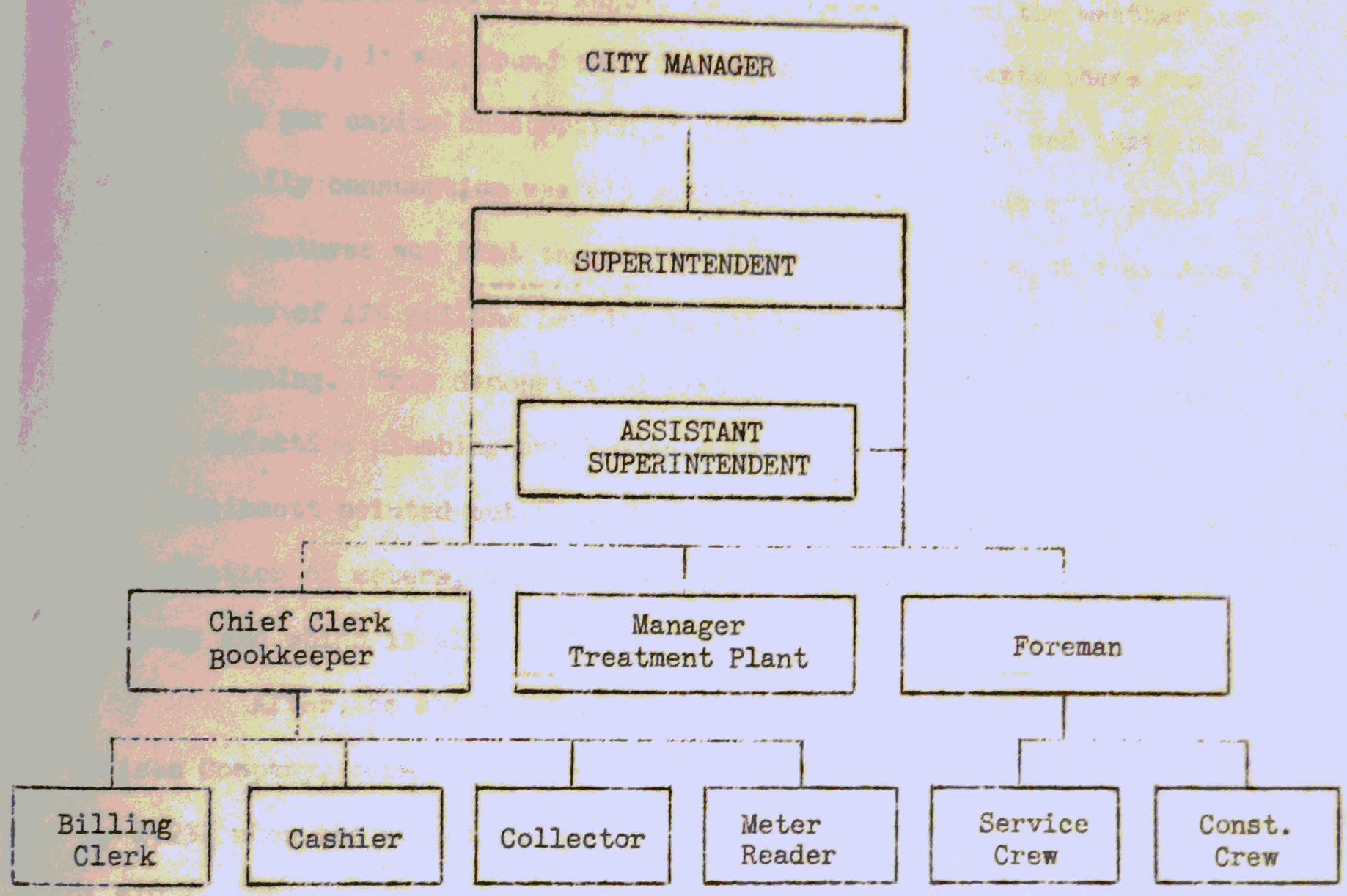
D. C. MCMILLAN, CITY MANAGER

C. F. ZAPF, WATER SUPERINTENDENT

-oOo-

WATER DEPARTMENT ORGANIZATION

CITY OF SAN BUENAVENTURA



THE WATER METER

The great waste of water experienced in its delivery to consumers under the flat rate plan was evident to Mr. J. B. Lippincott, Consulting Engineer, when he made a report on the "Value of Waterworks Properties of the Ventura County Power Company", in 1914. The following is a summary of a paragraph taken from Mr. Lippincott's report.

By tests made from August 17 to 20, 1914, when the weather was cool and foggy, it was found that for the 4,000 inhabitants there was an average per capita consumption of 494 gallons per day, and that the maximum daily consumption was 615 gallons per capita. One of the most striking features was that the minimum consumption for domestic use was at the rate of 425 gallons per day as measured between 2 and 3 o'clock in the morning. This demonstrated that there were wastes in the system due to defective plumbing and hydrants that possibly ran all night. Mr. Lippincott pointed out that "the natural correction for this is the installation of meters, which would involve an additional outlay by the company and which is also resisted by public opinion."

After the above recommendation it was not until 1921 that the Edison Company, owner at that time, started a campaign to install meters. By 1923, when the system was purchased by the City, it is estimated that 1,640 meters were in operation.

Ordinance No. 245, passed in May 1923, fixing uniform rates and prescribing rules and regulations for City operation of the Water Department, sets out the following:

"++++++++ It is hereby declared to be the policy of the Municipal Water Department to install meters on all services as rapidly as possible, and the meter rates herein provided shall be charged upon

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any service from and after the installation of a meter, and the flat rate shall thereupon cease to apply. ++++++++++".

With the meter came an increase in revenue and a decrease in the amount of water used. Per capita consumption during the fiscal year 1940-41 was 75 gallons a day.

The meter has put the department in a position to distinguish between the known and unknown.

The following is taken from the paper "Water Metering and Water Estimating" by C. M. McCord, Director, Memphis Water Division:

"The meter is positive, unbiased, and disinterested. It cannot think and therefore it cannot forget. It is not a generator of power and cannot run of itself. On the other hand, it consumes energy, and can run only when water is forced through it. In passing through the meter, the water is robbed of some of its energy to make the meter disc and gears turn around, and thus register the quantity of water that has passed through, and its speed varies directly with the quantity. Should the meter do more than this, or overrun, it would automatically convert itself into a pump, delivering power to the water, instead of taking power from the water, and therefore would create energy and become the long sought perpetual motion."

VEN0004055

I N D E X

Page No.

GENERAL DESCRIPTION OF SYSTEM

SOURCE OF WATER SUPPLY:

Casitas Intake - 1
Casitas Well - 2
Nye Wells- 2
Front Street Well- 3
Chrisman Well- 3
Mound System Connection- 3
Edison Well- 3

TRANSMISSION MAINS - 4

DISTRIBUTION MAINS:

Untreated Water Mains- 4
Treated Water Mains- 4

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TREATMENT PLANT, STORAGE RESERVOIRS
AND AREAS SERVED:

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Kingston Reservoir - 6
Treatment Plant- 7
Fraser Reservoir - 7
Grapf - Water Softening Process- - - - - - - - - - - - - - - - 8
Grant Park Reservoir - 9
Church Street Reservoir- 9
Mission Reservoir- 9
McElrea Heights Reservoir- - - - - - - - - - - - - - - - - - - 9
Ventura Heights Reservoir- - - - - - - - - - - - - - - - - - - 10

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Facilities Constructed by W.P.A. - - - - - - - - - - - - - - - 12
Value of Principal Materials
Contributed by W.P.A.- 12

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(1) Diagram of Water Sources and Distributing System.

(2) Graph of Water Delivered to the System and Rainfall.

(3) Diagram Showing Pumping Plants, Reservoirs and Principal Distributing Mains.

VEN0004057

GENERAL DESCRIPTION

OF THE

VENTURA WATER SYSTEM

SOURCES OF WATER SUPPLY

The sources of supply for the Ventura Water System are the Ventura River, Coyote Creek, Casitas Well, Nye Wells (waters from which flow by gravity to the City, and are noted in Table No. 1 as "Gravity from Casitas") Front Street, Chrisman and Edison Wells, located in and near the City, waters from which are pumped directly into the gravity system.

Casitas Intake

The headworks of the intake from the Ventura River consists of a concrete submerged dam, 973 feet long and built to bedrock across the Ventura River at a point near the mouth of the Coyote Creek. In the center of the Ventura River on the north or upstream side of the dam is a concrete box or receiving chamber, called the Casitas Intake, into which an open joint pipe line drains the underground water of the Ventura River and the Coyote Creek. A 36" pipe line is also laid near the top of the dam from the receiving chamber westerly to Coyote Creek to intercept the surface flow. To the south and east are the connections to the 36" and 24" transmission mains which conduct the water to the Kingston Reservoir one mile to the south. A concrete trough lies just below the river level across the northerly half of the intake box, and, with the gates at each end, permits control of water into either the 36" or 24" transmission mains, the river water being admitted to the trough through gates in the north side of the inteke box. Two low head pumps are used to raise the underground waters and discharge into the trough.

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During the season of the year when there is ample clear river water no pumping is done. When the supply of the surface water is deficient, or during the rainy season, either of the two pumps is used to augment the supply with underground water.

The Casitas Intake is the principal source of supply of the Ventura Water System. During the past year about 97% of the water delivered to the system came from this source. Water from here flows by gravity to the City with the exception of the low pumping lift at the treatment plant.

Casitas Well

The Casitas Well is located 100 feet east of the end of the submerged dam, in Foster Park. This well, drilled in 1924, is 40 feet deep and the water pumped from it is discharged into the 24" transmission main.

Nye Wells

The Nye Wells are on City owned property located in the Ventura River Valley to the north of and adjoining Foster Park. Pumps on two of the wells on the easterly side of the river discharge into a connection to the 24" transmission main. The third well has no pump installed. Three wells on the westerly side of the river have pumps which discharge into the river channel and this water passes into the system at the Casitas Intake.

Pumps in the Casitas and Nye Wells are operated only at the time of low water and during floods. Those on the west side of the river are not operated. None of this water is metered separately from the other gravity supply.

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Front Street Well

This well is located on East Front Street near Walnut Street in the City and was drilled to a depth of 940 feet in 1933. About one million gallons per day is the capacity. The only treatment of the water before it is delivered to the system is to pass it through a large tank where any heavy particles of sand will settle.

Chrisman Well

A 900 foot well, drilled in 1922 on a 2.7 acre tract of land on South Seaward Avenue at the foot of the bluffs on the beach, the land and well being purchased in 1929. Water is raised from the well to a concrete receiving chamber, from which it is pumped into the distribution system.

Mound System Connection

The Mound Water Company owns a line in Poli Street east from Seaward Avenue and which parallels part of the system. Metered connections are maintained between the two systems at Katherine Drive and also at Brent Street. Water from this source can be delivered into the Grant Park Reservoir by gravity.

Edison Well

Located on a three acre tract of land adjoining South Seaward Avenue at the foot of the bluffs on the beach and adjoining the Chrisman Well site, this well was completed in April 1935 at a depth of 817 feet.

VEN0004061

TRANSMISSION MAINS

1. A 36" concrete line from the source of supply of the Ventura River and Coyote Creek to Kingston Reservoir.

2. A 24" concrete line reinforced for a 100 foot head and paralleling the above 36" line.

DISTRIBUTION MAINS

Untreated Water Mains

The untreated water mains consists of 12", 16", and 24" riveted steel main, laid in 1892, in Ventura Avenue north from the City limits, and a 16" welded steel main from the Avenue School north to Orchard Drive, laid in 1939-40. In 1939 an 18" reinforced concrete pipe was laid from the Mill School to the Kingston Reservoir.

Treated Water Mains

1. A 24" welded steel line in Ventura Avenue from the Power Reservoir to the northerly City limits where it joins two 18" lines.
2. An 18" welded steel line extending from the northerly City boundary towards the easterly side of the City in the following principal streets: North Ventura Avenue, Cedar Street, Poli Street, Chestnut Street, East Meta Street, South Hemlock Street to Thompson Boulevard where it is connected to a 20" main which extends to the easterly City boundary at East Main Street and Thompson Boulevard.
3. An 18" welded steel main from Thompson Boulevard in Jordan Avenue, Channel Drive and South Seaward Avenue to the site of the Edison Well at the foot of the bluffs facing the ocean.

VEN0004062

4. An 18" cast iron line in North Ventura Avenue from the City boundary to Main Street.

5. A 10" cast iron line from the Modella Pumping Plant laid in Wall Street and Poli Street to Laurel Street. This is the pump line to the Grant Park Reservoir.

6. Cast iron lines as follows: From Grant Park Reservoir to Buena Vista Street in Church Street and Fir Street, 16"; Buena Vista Street, 14", 12" and 10"; Rincon Street, 10"; Poli Street to Catalina Street, 10".

7. An 8" line, part standard steel and part cast iron, in Main Street from Ventura Avenue to Chrisman Avenue, and then 10" cast iron to East Main Street and Thompson Boulevard.

8. An 8" cast iron line in Ventura Avenue extending south from Main Street and easterly in Santa Clara Street to East Main Street and Chrisman Avenue.

9. A 10" cast iron line south in Ventura Avenue from Meta Street where it is connected to two 6" lines, one north to Santa Clara Street and the other east in Meta Street, thence east in Front Street to Fir Street with a connection to the Front Street Well.

10. Four inch and 6" distribution mains principally, with some 3" lines which were a part of the system when purchased. The Department does not now install the 3" size of standard pipe as a distribution main.

VEN0004063

METERS AND SERVICES

The standard service for domestic use is 3/4". For all services of 3/4" and 1" size now being installed or replaced, copper pipe is used. The 5/8" x 3/4" meter is standard size for domestic use.

TREATMENT PLANT, STORAGE RESERVOIRS AND AREAS SERVED

Five miles north of the City on the West side of Ventura Avenue the Kingston and Power Reservoirs are located; these are the principal storage reservoirs of the system and the Treatment Plant.

Power Reservoir

The Power Reservoir, lying adjacent to Ventura Avenue, is a 17 million gallon earth filled and concrete lined reservoir completed in August, 1938. High water elevation is 211.0. This reservoir is for storage of treated water. The roof, completed during the last fiscal year is of galvanized iron and supported by concrete posts and beams. The area served directly, without further pumping, is all of the Avenue District below the reservoir (except the area served by the Fraser Reservoir) and that part of the City to the south and west of the following named Streets: Cedar Street, Poli Street, North Chestnut Street, East Main Street, South Ann Street, East Meta Street, South Hemlock Street, Thompson Boulevard, east and south of Pacific Avenue, San Nicholas Street, and East Main Street to the easterly City boundary.

Kingston Reservoir

The Kingston Reservoir adjoins the Power Reservoir on the west and is an 11 million gallon earth filled, concrete lined reservoir. High water elevation is 211.0.

This reservoir is used for storage of untreated water. The area served includes such users as irrigationists and those industrial

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plants, located in the Avenue District north of the City boundary, which do not want treated water. Domestic consumers in this district holding water rights also receive untreated water.

Treatment Plant

The Treatment Plant is on land to the south of and adjoining the sites of the Kingston and Power Reservoirs. Treatment used is the excess lime-soda ash process with recarbonation. A small amount of alum is used in the process.

Water level in the plant is four feet above the high water level of either Power or Kingston Reservoirs. Either of two different sized pumps is used to raise the water from Kingston Reservoir to the plant where it runs by gravity through the several tanks and into the Power Reservoir.

The plant is constructed with duplicate basins and can be operated in parallel or in series. The basins are now being operated in series, necessary chemicals being introduced in the small basins, where the mixture is rapidly stirred.

On the following page is a diagram of the softening process.

Fraser Reservoir

Located on the side of the hills to the east of Ventura Avenue near the end of Holt Street - it is a steel tank set on the ground at an elevated spot and is supplied by an automatically controlled pump from the treated water gravity supply. The area served is Bard Lane, Fraser Lane, Holt Street and McKee Street.

VEN0004065

DIAGRAM OF THE
WATER SOFTENING PROCESS
AT THE
VENTURA TREATMENT PLANT

VEN0004066

Grant Park Reservoir

A concrete lined and roofed reservoir of nine million gallons capacity, built in 1928, underground on a point of the hills above the City near Fir Street and Church Street. Water is pumped into it by the Modella Pumping Plant from the gravity system, the level of the water being kept automatically within one foot of the full mark at all times.

For the area served by the various reservoirs, see the appended diagram showing pumping plants, reservoirs and principal distribution mains of the system.

Church Street Reservoir

Located at Church Street and Laurel Street, it is a concrete lined structure with a wooden roof and is built underground. In 1892, when it was first built, it was an important part of the system, but since the construction of the Grant Park Reservoir its use has been discontinued.

Mission Reservoir

Located north of Mission Street near North Ann Street, on the hills north of the City, it is a concrete lined structure with a wooden roof and is built underground. It was built in 1921 and is kept full automatically by the Church Street Pumping Plant with water from the Grant Park Reservoir.

McElrea Heights Reservoir

This is a concrete lined structure with a wooden roof and is also underground. It is located in the hills above the McElrea Heights subdivision. The reservoir is still owned by the subdividers, but is operated by the Water Department. In 1934 this reservoir developed a

VEN0004067

leak which, under further operation, would have destroyed it beyond repair. Repairs have not been made because of the ownership. A steel tank, set up near by, is now being used and is kept full automatically with water from the Mission Reservoir.

Ventura Heights Reservoir

Located on the hillside above the northeast corner of the Ventura Heights Tract, it is a steel tank set on the ground, and is kept full automatically with water from the Mission Reservoir.

VEN0004068

ADDITIONS AND IMPROVEMENTS

DURING

FISCAL YEAR 1940 - 41

VEN0004069

CHANGES IN CAPITAL VALUE OF SYSTEM FOR WORK COMPLETED DURING THE FISCAL YEAR ENDED JUNE 30, 1941

(For Land and Facilities Constructed by City Forces or by Contract)

Water bearing land (47.28 acres in Ventura River Valley 2 miles north of Casitas Intake)- - - - - -	$18,007.10	
Treatment Plant extension (for sludge beds) 4.13 acres- - - - - - - -	936.25	
	$18,943.35	$ 18,943.35
Nye Wells		
No. 3 -	1,771.24	
No. 6 -	1,687.06	
No. 7 -	1,511.57	
No. 8 -	1,659.91	
	$ 6,629.78	$ 6,629.78
Pumping Units in Nye Wells		
No. 6 -	1,078.26	
No. 7 -	1,445.44	
No. 8 -	894.84	
	$ 3,418.54	$ 3,418.54
Treatment Plant		
Miscellaneous additions and equipment- - - - - - - - - - - - - - - - - - - -	1,077.22	
Sludge Beds - - - - - - - - - - - - - - - - - -	697.12	
Steel pipe (516 ft.) connecting beds to plant- - - - - - - - - - - - - - - - -	273.63	
	$ 2,047.97	$ 2,047.97
Pipelines		
1,270 ft. of 4" Cast Iron main- - - - - - - -	1,236.88	
1,444 ft. of 6" Cast Iron main- - - - - - - -	1,925.86	
Steel Main - 72 ft. 24" x 3/16" San Jose Barranca crossing - - - - - - - - -	953.76	
	$ 4,116.50	$ 4,116.50
		$ 35,156.14

VEN0004070

CHANGES IN CAPITAL VALUE (CON'D)

Carried forward -		$ 35,156.14
Cost to Department for labor and material for facilities constructed by W.P.A.		
1,690 ft. 4" cast iron main - - - - - - - - -	$ 1,562.57	
6,411 ft. 6" cast iron main - - - - - - - - -	5,840.71	
3,308 ft. 8" cast iron main - - - - - - - - -	6,070.64	
4,195 ft.10" cast iron main - - - - - - - - -	7,068.48	
12 standard fire hydrants - - - - - - - - - -	1,202.54	
Services- - - - - - - - - - - - - - - - - - - -	299.83	
	$ 22,044.77	$ 22,044.77
Value of principal materials contributed by W.P.A.		
1,458 ft. of 6" cast iron pipe - - - - - - -	1,163.78	
1,224 ft. of 10" cast iron pipe - - - - - - -	1,953.99	
461 sacks of cement - - - - - - - - - - - -	233.27	
	$ 3,351.04	$ 3,351.04
TOTAL ADDITIONS TO CAPITAL VALUE- - - - - -		$ 60,551.95

VEN0004071

STATISTICS

-oOo-

FISCAL YEAR 1940 - 41

VEN0004072

Table No. 1

COMPARATIVE QUANTITIES OF WATER DELIVERED TO THE SYSTEM

SOURCE OF SUPPLY	Year	WATER DELIVERED Millions of Cubic Feet	WATER DELIVERED Per Cent of Total	POWER COSTS per Million Cubic Feet
Gravity from: Casitas Intake, Casitas Well, and Nye Wells- - - - -	1938-39	175.9592	98.9	$ .55
	1939-40	195.5182	98.0	5.21
	1940-41	169.7267	97.3	10.09
Front St. Well- - -	1938-39	.9919	0.6	97.09
	1939-40	.8221	0.4	85.80
	1940-41	.4640	0.3	65.73
Chrisman Well - - -	1938-39	.8110	0.5	143.65
	1939-40	3.2910	1.6	136.60
	1940-41	3.1852	1.8	131.61
Edison Well - - - - -	1940-41 +	.6854	0.4	141.52
Purchase- Mound Water Company - - - - - -	1940-41 +	.4333	0.2	-
TOTALS- - - - - - -	1938-39	177.7621	100.0	1.69
	1939-40	199.6313	100.0	7.70
	1940-41	174.4946	100.0	12.94
TREATED FOR SOFTENING - - - - -	1939-40	68.4579	50.0 ++	9.84
	1940-41	106.7581	61.2	

-oOo-

\+ No other activity during period shown.

++ During period of operation of treatment plant.

VEN0004073

Table No. 2

WATER DELIVERED TO CLASSIFIED CONSUMERS
FOR THE FISCAL YEAR ENDED JUNE 30, 1941

(Millions of Cubic Feet)

Month	Domestic City	Domestic County	Commercial	Irrigation	Flat Rate (Estimated)	City Depart-ments	Total 1940-41	Per Cent of Previous Year
1940								
July	5.8968	1.0326	6.1717	4.2245	.0239	.1191	17.4686	97.3
August	5.9705	1.1224	5.3986	6.0815	.0346	.1116	18.7192	102.0
September	5.3909	1.0036	4.8322	3.4519	.0346	.1138	14.8270	78.6
October	4.6970	.8530	6.0170	2.5877	.0349	.1119	14.3015	86.5
November	3.8663	.6247	5.8444	1.6419	.0346	.2233	12.2352	74.6
December	3.0886	.6008	5.6502	1.5854	.0346	.0657	11.0253	94.2
1941								
January	3.0748	.7974	5.6649	.0198	.0346	.0684	9.6599	89.5
February	2.8618	.5156	5.4475	.0283	.0346	.0717	8.9595	83.8
March	3.1378	.4901	6.1769	.0290	.0346	.1166	9.9850	94.1
April	3.9014	.6397	6.2922	.0611	.0352	.1108	11.0404	86.9
May	6.0566	1.0353	6.1833	.3829	.0357	.1738	13.8676	88.3
June	5.9815	.8973	5.2927	3.3210	.0346	.1646	15.6917	79.1
TOTALS	53.9240	9.6125	68.9716	23.4150	.4065	1.4513	157.7809	87.2
1939-40	55.3503	9.2826	81.3169	32.6823	.4188	1.1986	180.2495	110.7

Table No. 3

DISTRIBUTION AND POWER COSTS OF WATER DELIVERED TO SYSTEM

FOR THE FISCAL YEAR ENDED JUNE 30, 1941

Classification	1939-40 Millions of Cu.Ft.	1939-40 Power Costs	1940-41 Millions of Cu.Ft.	1940-41 Power Costs	Per Cent of Total
METERED:					
Domestic-inside City	55.3503	$ 969.50	53.9240	$1254.02	30.9
Domestic-outside City	9.2826	162.59	9.6125	223.21	5.5
Commercial	81.3169	1424.32	68.9716	1607.09	39.6
Irrigation	32.6823	572.46	23.4150	543.81	13.4
City Departments	1.1986	20.99	1.4513	32.47	.8
TOTAL METERED	179.8307	$3149.86	157.3744	$3660.60	90.2
UNMETERED:					
Flat Rate (estimated)	.4188	7.34	.4065	8.12	.2
TOTAL UNMETERED	.4188	$ 7.34	.4065	$ 8.12	.2
DISTRIBUTION OF UN-ACCOUNTED FOR WATER:					
2% of Metered	3.5966	$ 63.00	3.1475	73.05	1.8
10% of Unmetered	.0419	.73	.0406	.81	.02
Waste in Treatment Process	3.1420	55.03	.4888	12.17	.3
Estimated Use in Pipeline Construction	-	-	.1100	2.43	.06
Unaccounted for	12.6013	220.73	12.9268	301.14	7.42
TOTAL	19.3818	$ 339.49	16.7137	$ 389.60	9.6
TOTAL WATER DELIVERED TO SYSTEM	199.6313	$3496.69	174.4946	$4058.32	100.0
PER CENT OF PREVIOUS YEAR	112.3	154.5	87.4	116.1	

Note: Treatment Plant power charges are not included

VEN0004075

Table No. 4

POWER COST OF WATER TO DIFFERENT ZONES

FOR FISCAL YEAR ENDED JUNE 30, 1941

Plants	Millions of Cu.Ft.	Power Cost	Power Cost for Plant per Mill. Cu. Ft.	Water Pumped to	Power Cost per Mill. Cu.Ft. in Reservoir
DELIVERED TO SYSTEM (See Table #1 for Source)					
1938-39	177.7621	$ 300.10	$ 1.69	Gravity	$ 1.69
1939-40	199.6313	1,537.74	7.70	System	7.70
1940-41	174.4946	2,258.66	12.94		12.94
DISTRIBUTING PLANTS:					
Modella					
1938-39	22.3856	1,283.20	57.32	Grant	59.01
1939-40	22.6214	1,244.70	55.00	Park	62.70
1940-41	22.8175	1,135.30	49.76	Reservoir	62.70
Church Street					
1938-39	6.3300	399.40	63.07	Mission	122.08
1939-40	6.7137	413.40	61.65	Reservoir	124.35
1940-41	4.9370	380.70	77.11		139.81
McElrea Heights					
1938-39	1.1165	107.80	96.55	McElrea	218.63
1939-40	1.3013	128.40	98.65	Heights	223.00
1940-41	1.0966	115.70	105.51	Reservoir	245.32
Ventura Heights					
1938-39	1.1439	111.39	97.38	Ventura	219.46
1939-40	1.1184	108.75	97.40	Heights	221.75
1940-41	1.0532	108.59	103.10	Reservoir	242.91
Fraser Tract					
1938-39	.7625	60.88	79.84	Fraser	81.53
1939-40	.7517	63.69	84.80	Tract	92.50
1940-41	.7060	59.37	84.09	Reservoir	97.03
TOTALS:					
1938-39		$ 2,262.77			
1939-40		3,496.69			
1940-41		5,108.92			

VEN0004076

Table No. 5

WATER RATES

DOMESTIC AND COMMERCIAL	City Rates per 100 Cubic Feet	County Rates per 100 Cubic Feet
First 500 cubic feet	$ .22	$ .40
Next 500 cubic feet	.17	.19
Next 9000 cubic feet	.11	.15
Next 10000 cubic feet	.09	.13
Over 20000 cubic feet	.09	.09

IRRIGATION

One miners inch (1,728 cu.ft.) - $ .60

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Table No. 6

MINIMUM MONTHLY CHARGES

METER SIZE	CITY RATES Minimum Monthly Charge	CITY RATES Cu. Ft. of Water	COUNTY RATES Minimum Monthly Charge	COUNTY RATES Cu. Ft. of Water
5/8"	$1.10	500	$1.10	300
1 "	1.95	1,000	1.95	450
1 1/2"	2.75	1,700	2.75	900
2 "	3.30	2,200	3.30	1,250
3 "	4.40	3,200	4.40	2,000
4 "	5.50	4,200	5.50	2,750

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VEN0004077

Table No. 7

CLASSIFICATION OF ACCOUNTS IN OPERATION JUNE 30, 1941

Classification	June 30, 1939	June 30, 1940	June 30, 1941
Domestic	3,614	3,768	3,896
Commercial	388	390	396
Industrial	56	58	56
Irrigation	65	68	63
Flat Rate (Domestic)	16	16	12
TOTAL ACTIVE ACCOUNTS	4,139	4,300	4,423
Meters set but not operating	68	83	93
TOTAL METERS SET	4,207	4,383	4,516

Note: The owners of 8 parcels of land comprising 98.05 acres hold water rights which entitle the owners to one irrigation for an annual charge of $ .50 an acre.

Table No. 8

FIRE HYDRANTS

Type	Inside City	Outside City
Wharf Hydrants	117	5
Standard Single Outlet	75	42
Standard Double Outlet	133	21
Steamer Hydrants	38	-
TOTAL	363	68

VEN0004078

Table No. 9

PUMPING STATIONS IN OPERATION JUNE 30, 1941

Plant Name	Location	Source of Supply	Electric Motor Make	Electric Motor H.P.	Pump Make	Pump Kind	Capacity G.P.M.	Head Pumped Against	Discharge to
Casitas Intake	Foster Park	Sump	U. S.	35	Kimball Krogh	#8 Lo-Head Turbine	3,500	25	Transmission Main
			F. M.	20	Kimball Krogh	#10 DF	900	25	Transmission Main
Casitas Well	Foster Park	Well	U. S.	5	Kimball Krogh	#10 MC 2 Stage	325	40	Transmission Main
Nye Well #1	N. Foster Park E. Side River	Well	U. S.	15	Kimball Krogh	Turbine 2 Stage	1,350	30	Transmission Main
Nye Well #2	N. Foster Park E. Side River	Well	U. S.	7.5	Kimball Krogh	#10 2 Stage	400	45	Transmission Main
Nye Well #6	N. Foster Park W. Side River	Well	U. S.	15	Kimball Krogh	#12 2 Stage	700	58	Ventura River
Nye Well #7	N. Foster Park W. Side River	Well	U. S.	30	Kimball Krogh	#12 2 Stage	1,800	45	Ventura River
Nye Well #8	N. Foster Park W. Side River	Well	U. S.	10	Kimball Krogh	#10 3 Stage	700		Ventura River

VEN00040791

Table No. 9 (PUMPING STATIONS IN OPERATION JUNE 30, 1941) - continued

Plant Name	Location	Source of Supply	Electric Motor Make	Electric Motor H.P.	Pump Make	Pump Kind	Capacity G.P.M.	Head Pumped Against	Discharge to
Fraser	Bard Lane E. of Ventura Av.	Distribution Main	U. S.	7.5 +	American	2" Centrif.	120	161	Fraser Tract Reservoir
			Sterling	7.5 +	Kimball Krogh	2- 1½" HKE	100	161	Fraser Tract Reservoir
Park Row Booster	Park Row and Ventura River	Not Connected	Lincoln	100	American	6" Centrif.	1,300	220	Not Connected
Modella Booster	Wall St. and Park Row	Distribution Main	F. M.	20 +	F. M. Kimball	3" Centrif.	470	225	Grank Park Reservoir Grand Park
			U. S.	20 +	Krogh	3" Centrif.	517	225	Reservoir Grant Park
			F. M.	100	American	6" Centrif.	1,300	225	Reservoir
Church St. (2 Units)	Church and Laurel Sts.	Grant Park Reservoir	U. S.	24	Byron Jackson	4" x 3" Centrif.	450	165	Mission Reservoir
Chrisman	Seaward and Vista Del Mar	Well	U. S.	30	Kimball Krogh	#12 MC Turbine	600	120	Sump
Booster		Sump	F. M.	40	American	4" Centrif.	450	210	Distribution Mains

Table No. 9 (PUMPING STATIONS IN OPERATION JUNE 30, 1941) - continued

Plant Name	Location	Source of Supply	Electric Motor Make	Electric Motor H.P.	Pump Make	Pump Kind	Capacity G.P.M.	Head Pumped Against	Discharge to
Edison	Seaward and Vista Del Mar	Well	U.S.	40	Pomona	Turbine 5 Stage	675	130	Distribution Mains
Front	Front and Walnut Sts.	Well	F.M.	70	Kimball Krogh	#12 - 8 Stage Turbine	690	270	Distribution Mains
Ventura Heights	Hyland and Palomar Aves.	Mission Reservoir	Sterling	10	Kimball-ectric	2 - 1½"	108	184	Ventura Hgts. Reservoir
McElrea Heights	North Crimea	Mission Reservoir	Sterling	10	Kimball-ectric	2 - 1½"	110	192	McElrea Hgts. Reservoir
		Mission Reservoir	G.E.	25	Pacific	2½" Centrif.	215	74	McElrea Hgts. Reservoir

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\+ These plants operate on 220 volts; all others on 440 volts

NOTE: F. M. designates Fairbanks Morse; U. S. - U. S. Motor

VEN00040081

VEN00004082

Table No. 10

MINERAL ANALYSIS

(Grains per U. S. Gallon)

Date	Source	Silica SiO_2	Alum. Oxide Al_2O_3	Iron Oxide Fe_2O_3	Calcium Ca	Magnesium Mg	Sodium Na	Sulphate SO_4	Chlorine Cl	Carbonate CO_3	Bi Carbonate HCO_3	Total Solids	Hardness as $CaCO_3$
1/ 5/34	Ventura River	.72	.21	.02	7.59	1.42	3.55	16.76	1.58	None	15.67	47.52	24.82
1/ 5/34	Coyote Creek	.66	.09	.01	5.33	.96	3.45	7.71	1.93	None	17.10	37.24	17.26
10/14/33	Kingston Res.	.91	.33	None	8.71	1.64	4.31	16.54	3.04	None	19.95	55.43	28.50
10/14/33	Chrisman Well	1.31	.26	None	7.01	2.41	6.23	20.32	3.10	None	18.88	59.52	27.45
10/14/33	Front St.Well	1.47	.33	None	8.95	3.41	9.80	28.37	4.85	None	26.01	83.19	36.38
6/17/35	Edison Well #1	1.43	.32	None	8.27	3.80	9.29	28.87	3.21	None	26.71	81.90	36.30
10/14/33	Mound Water	1.47	.26	None	8.41	2.16	7.32	23.83	3.47	None	19.24	66.43	29.93
10/ 3/38	Nye Well #1	1.46	.32	Trace	7.24	2.10	2.00	13.85	1.62	None	17.50	46.20	26.70
12/ 1/38	Nye Well #2	1.34	.22	Trace	7.01	1.97	2.79	14.18	1.64	None	17.81	46.96	25.61
2/16/40	Nye Well #3	.39	.19	Trace	7.47	2.08	2.63	15.08	2.09	None	17.45	47.38	27.25
5/ 3/40	Nye Well #6	.98	.13	Trace	7.40	1.99	3.08	15.64	1.86	None	17.63	48.71	26.69

Table No. 11

AUTOMOBILE COST RECORD
FOR THE FISCAL YEAR ENDED JUNE 30, 1941

Car No.	Description	Date Purchased	Labor	Material and Supplies	Gas and Oil	Insurance	Depreciation	Total Cost	Miles Driven	COST PER MILE For Life of Car	COST PER MILE 1940-1941
16	Ford Pickup	1929	$ 17.98	$ .29	$ 8.68	$ 18.40	$ -	$ 45.35	753	$.0358	$.0602
23	Ford Truck Combined with Compressor	1931 Dec. 1936	83.01	1.12	91.27	18.59	221.59	415.58	-	-	-
36	Chevrolet Pickup	Oct. 1934	167.56	58.41	109.25	18.59	-	353.81	12431	.0322	.0285
38	Dodge Pickup	Feb. 1935	121.21	54.30	53.53	19.42	-	248.46	5344	.0465	.0465
47	Buick Coupe	Aug. 1936	84.61	33.22	67.47	31.60	-	216.90	7459	.0440	.0291
48	Plymouth Coupe	Sep. 1936	75.28	84.98	60.12	29.05	-	249.43	5987	.0529	.0417
53	Chev. 1½ Ton Truck	Jan. 1937	162.29	55.34	73.79	49.34	56.79	397.55	5353	.0762	.0745
67	Chevrolet Pickup	Apr. 1939	88.76	95.71	123.14	43.43	140.00	491.04	14228	.0338	.0345
77	Ford 1½-Ton Truck	Dec. 1940	49.93	14.70	31.64	26.10	112.14	234.51	2366	.0991	.0991
TOTAL 1940-41			$850.63	$398.07	$618.89	$254.52	$530.52	$2652.63	53921		
TOTAL 1939-40								$2565.48	55089		

VEN00040083

Table No. 12

WELLS DRILLED AND OWNED BY VENTURA WATER SYSTEM

Well	Location	Total Depth-ft.	Depth of Water Gravel	Rated Capacity, G.P.M.	Depth of Pumping	Date Drilled
Chrisman	Seaward & Vista Del Mar	900				1922
Edison	Seaward & Vista Del Mar	817	259	675	90	Apr. 1935
Front St.	Front & Walnut	940	148	675	50	Apr. 1933
Casitas Intake	Casitas Dam	24	under drains	720	20	1910
Casitas	Foster Park	40		325	35	1924
(The location of Nye wells is given as on the easterly "E'ly" or westerly "W'ly" side of the Ventura River channel and from the southerly line of the property)						
Nye No. 1	E'ly - 50 ft	150	24	900	18	Sep. 1938
Unnumbered	E'ly 720 ft.	106	-	Dry	-	Oct. 1938
Nye No. 2	E'ly 780 ft.	72	10	400	23	Nov. 1938
Nye No. 3	E'ly 5250 ft.	100	18	630	18	Jan. 1940
Nye No. 4	E'ly 4050 ft.	56	-	Dry	-	Mar. 1940
Nye No. 5	E'ly 4400 ft.	60	-	Dry	-	Mar. 1940
Nye No. 6	W'ly 25 ft.	80	24	675	19	May 1940
Nye No. 7	W'ly 1800 ft.	80	39	1800	19	June 1940
Nye No. 8	W'ly 820 ft.	75	24	700	40	Aug. 1940

VEN00040084

Table No. 13

SUMMARY OF TREATMENT PLANT OPERATING COSTS

FOR THE FISCAL YEAR ENDED JUNE 30, 1941

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COSTS OF	
Lime	$ 11,252.54
Soda Ash	10,235.54
Alum	2,936.13
Calgon	1,189.92
Chlorine	285.96
Carbon Dioxide Gas	491.01
Electricity	1,050.60
Labor	9,910.41
Repairs	2,057.56
Laboratory Supplies and Analyses	1,002.05
Miscellaneous	647.64
DEPRECIATION	
Plant and Equipment	4,574.98
TOTAL COST	$45,634.34
Hundreds of cubic feet of water treated	1,062,693
Cost per hundred cubic feet	$ 0.0429

Average hardness of treated water as delivered to the system is 173.1 parts per million or 10.1 grains per gallon.

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The hardness of the treated water is determined by analysis of a composite sample of proportional daily samples.

VEN0004085

Table No. 14

COMPARATIVE CONDENSED BALANCE SHEET

ASSETS

WATER DEPARTMENT	1939-40	1940-41	Increase or (Decrease) Amount	Per Cent
Land, improvements, buildings and equipment	$2,991,118.74	$3,033,482.88	$42,364.14	1.4
Less depreciation reserve	216,240.97	242,271.10	26,030.13	12.0
NET FIXED ASSETS	$2,774,877.77	$2,791,211.78	$16,334.01	.6
Cash on hand and deposits	13,374.01	4,946.59	(8,427.42)	(63.0)
Notes and Accounts receivable	8,824.13	8,378.15	(445.98)	(5.1)
Materials & Supplies	7,661.84	12,153.84	4,492.00	58.6
Sinking Funds	1,100.00	6,191.25	5,091.25	462.8
Depreciation Fund	26,404.67	8,475.59	(17,929.08)	(67.9)
Construction work in progress	16,527.46	42,304.59	25,777.13	156.0
TOTAL ASSETS	$2,848,769.88	$2,873,661.79	$24,891.91	0.9
GOLF COURSE				
Land, improvements, buildings and equipment	$ 45,032.68	$ 45,315.93	$ 283.25	0.6
Less depreciation reserve	5,096.56	6,001.02	904.46	17.7
NET FIXED ASSETS	$ 39,936.12	$ 39,314.91	$ (621.21)	(1.6)
Cash on hand and deposits	25.00	25.00		
TOTAL ASSETS-GOLF	$ 39,961.12	$ 39,339.91	$ (621.21)	(1.6)
GARAGE				
Materials & Supplies	$ 1,713.95	$ 1,742.14	$ 28.19	1.6
COMBINED TOTAL ASSETS	$2,890,444.95	$2,914,743.84	$24,298.89	0.8

VEN0004086

Table No. 14 - (COMPARATIVE CONDENSED BALANCE SHEET) - Continued

LIABILITIES

	1939-40	1940-41	Increase or (Decrease) Amount	Per Cent
Bonded Indebtedness	$ 375,000.00	$ 357,000.00	$ (18,000.00)	(4.8)
Accounts payable	4,746.43	3,734.60	(1,011.83)	(23.2)
Surplus	2,510,698.52	2,554,009.24	43,310.72	1.7
TOTAL LIABILITIES	$2,890,444.95	$2,914,743.84	$ 24,298.89	0.8

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SURPLUS ANALYSIS 1940-41

Balance July 1, 1940	$2,510,698.52
Contribution to Municipal Improvement Bonds, 1923, 1932	24,007.43
	$2,486,691.09
Contributions from U. S. Gov't.- P.W.A. Project	1,151.66
W.P.A. Project	3,117.77
Net Profit fiscal year ended June 30, 1941	63,015.05
Miscellaneous surplus adjustments	33.67
TOTAL	$2,554,009.24

VEN0004087

Table No. 15

COMPARATIVE CONDENSED BALANCE SHEET

REVENUES

WATER DEPARTMENT	1939-40	1940-41	Increase or (Decrease) Amount	Per Cent
Operating Revenues:				
Water Revenues	$204,764.60	$189,837.96	$ (14,926.64)	(7.3)
Profit on merchandise, sales, piping and connections	2,649.19	6,078.74	3,429.55	129.4
TOTAL OPERATING REVENUE	$207,413.79	$195,916.70	$ (11,497.09)	(5.3)
Non-operating Revenue:				
Cash overs	$ -	$ 5.41		
Recoveries on doubtful accounts	43.45	54.38		
Interest received	290.17	196.37		
Miscellaneous	58.62	203.39		
TOTAL REVENUE	$207,806.03	$196,376.25	$ (11,429.78)	(5.5)
GOLF COURSE				
Golf Course income	$ 7,977.80	$ 5,543.80	$ (2,434.00)	(30.5)
COMBINED INCOME	$215,783.83	$201,920.05	$ (13,863.78)	(6.4)

VEN0004088

Table No. 15 - (COMPARATIVE CONDENSED BALANCE SHEET) - continued

EXPENSES

WATER DEPARTMENT	1939-40	1940-41	Increase or (Decrease) Amount	Per Cent
Operating Revenue:				
Source of water supply	$ 2,581.96	$ 2,224.78	$ (357.18)	(13.8)
Pumping	5,911.90	6,597.76	685.86	11.6
Purification	30,265.78	40,638.27	10,372.49	34.3
Transmission and distribution	20,479.11	9,424.28	(11,054.83)	(54.1)
Commercial expense	4,579.81	4,314.67	(265.14)	(5.8)
General and misc.	23,556.49	24,194.03	637.54	2.7
Depreciation	24,579.98	26,155.26	(1,575.28)	(6.4)
TOTAL OPERATING EXPENSE	$112,512.87	$113,549.05	$ 1,036.18	0.9
Non-Operating Expense:				
Cash shortage	$ 9.71	$ 12.60	2.89	29.8
Reserve for doubtful accounts	196.28	465.64	269.36	137.4
Loss on dry wells	1,267.40	-		
Interest on funded debt	17,600.24	16,497.70	(1,102.54)	(6.3)
Interest on consumers deposits	29.62	25.20	(4.42)	(14.9)
Loss on fixed capital abandoned	4,143.62	278.69	(3,864.93)	(93.3)
Orchard expense	122.43	11.20	(111.23)	(90.9)
Total Expense-Water Dept	$135,324.33	$130,840.08	$(4,484.25)	(3.3)

VEN0004089

Table No. 16

HYPOTHETICAL TAX STATEMENT
FOR THE FISCAL YEAR ENDED JUNE 30, 1941

		VALUATION OR AMOUNT TAXED	TAX RATE	AMOUNT OF TAX
PROPERTY TAX:				
City Taxes		$317,000.00	$1.64931 per $100	$ 5,228.31
County Taxes				
Inside City		317,000.00	4.80501 " "	15,231.88
Arnaz School District		21,000.00	3.9827 " "	836.37
Avenue School District		62,000.00	2.5208 " "	1,562.90
Mill School District		108,000.00	2.5173 " "	2,718.68
				$25,578.14
FRANCHISE FEE:				
Water Revenue - - - -	-$189,837.96			
Add Value of water & services to other departments - - - - - -	9,620.37			
	$199,458.33	$199,458.33	2 per cent	$ 3,989.17
CAPITAL STOCK TAX				
Declared value		$750,000.00	$1.10 per $1000	$ 825.00
BANK AND CORPORATION FRANCHISE TAX:				
Hypothetical Profit		$ 73,888.21		
Tax Deduction				
Property Tax- - - - -	-$ 25,578.14			
Franchise Fee - - - - - -	3,989.17			
Capital Stock Tax - - -	825.00			
	$ 30,392.31	$ 30,392.31		
NET INCOME - TOTAL BANK AND CORPORATION TAX		$ 43,495.90	4 per cent	$ 1,739.84
FEDERAL INCOME TAX:				
Net income (above)- - -	-$ 43,495.90			
Deduct Bank and corporation tax- - - -	1,739.84			
	$ 41,756.06			
		$ 41,756.06	24 per cent	$10,021.45
Defence tax		(25,000.00	6 per cent	1,500.00
Surtax on net income		(16,756.06	7 per cent	1,172.92
Less credit on dividends		22,500.00	2½ per cent	(562.50)
				$12,131.87
TOTAL TAXES - - - - - -

Table No. 17

HYPOTHETICAL PROFIT AND LOSS ACCOUNT
IF PRIVATELY OWNED

Net profit to surplus per Table No. 15		$ 63,015.05
Add		
Actual taxes paid		1,252.79
Value of water furnished to other departments of City:		
By meter to		
Civic Auditorium	$ 103.48	
Fire Department	42.76	
Jail	242.95	
Library	97.64	
Park Department (three meters)	364.01	
Service Yard	37.53	
Sewer Plant	277.96	
Street Department Yard	243.94	
Wharf	20.10	
	$ 1.430.37	
+Fire Hydrant Rental - City 367 hydrants at $1.50	6,966.00	
Fire Hydrant Rental - County 68 hydrants at $1.50	1,224.00	
Total Value of Water and Services	$ 9,620.37	$ 9,620.37
Hypothetical profit before taxes		$ 73,888.21
Deduct hypothetical taxes (Table No. 16)		44,264.02
Hypothetical net profit		$ 29,624.19
Surplus June 30, 1940	$2,510,698.52	
Less water rights and other arbitrary values (See Page 10 1940 Report)	1,235,502.00 $1,275,196.52 at 6%	76,511.79
NET DEFICIT AFTER INTEREST ON INVESTMENT		$ (46,887.60)

+ The rate indicated is one-half that collected by the Bureau of Water and Power of Los Angeles.

VEN0004091

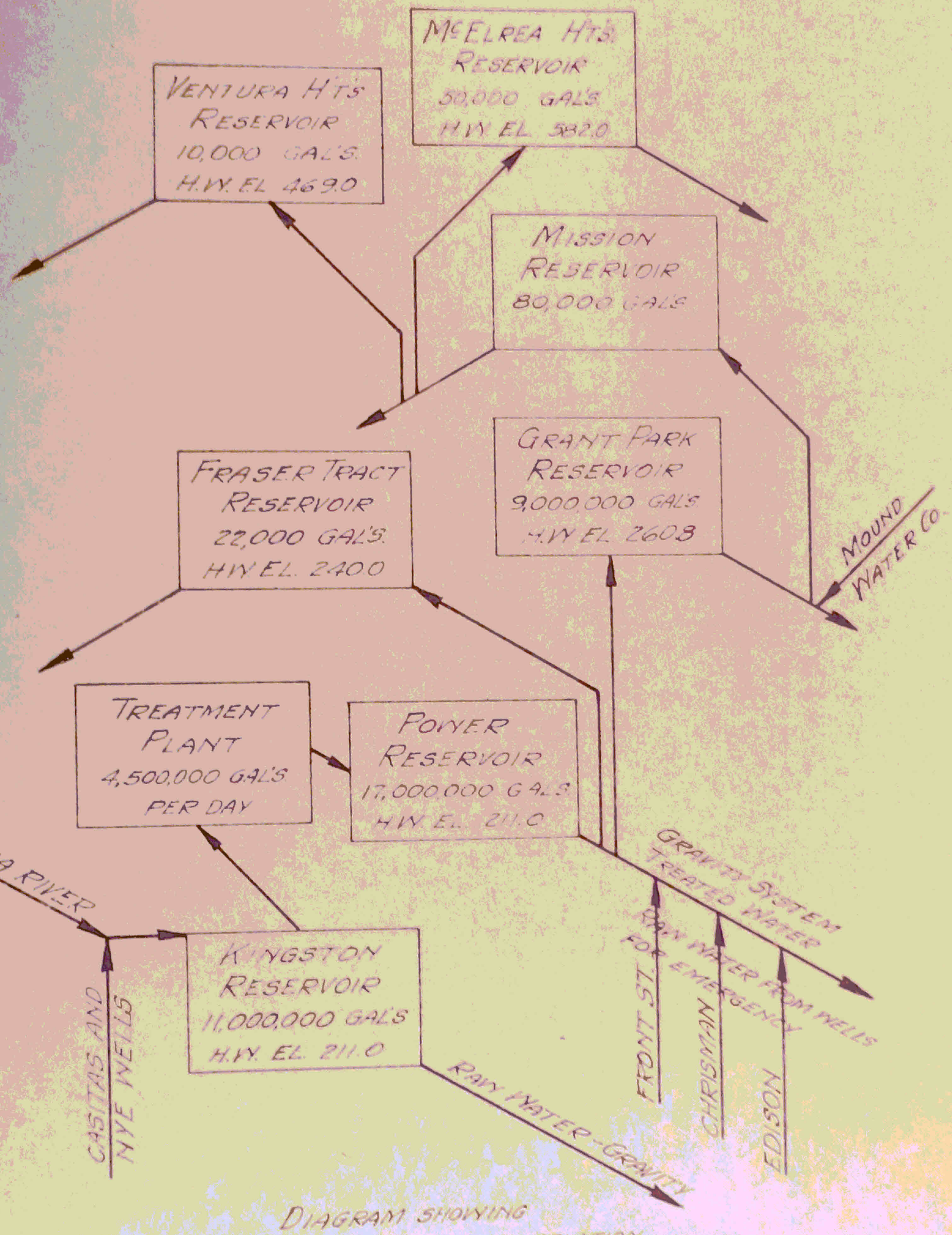
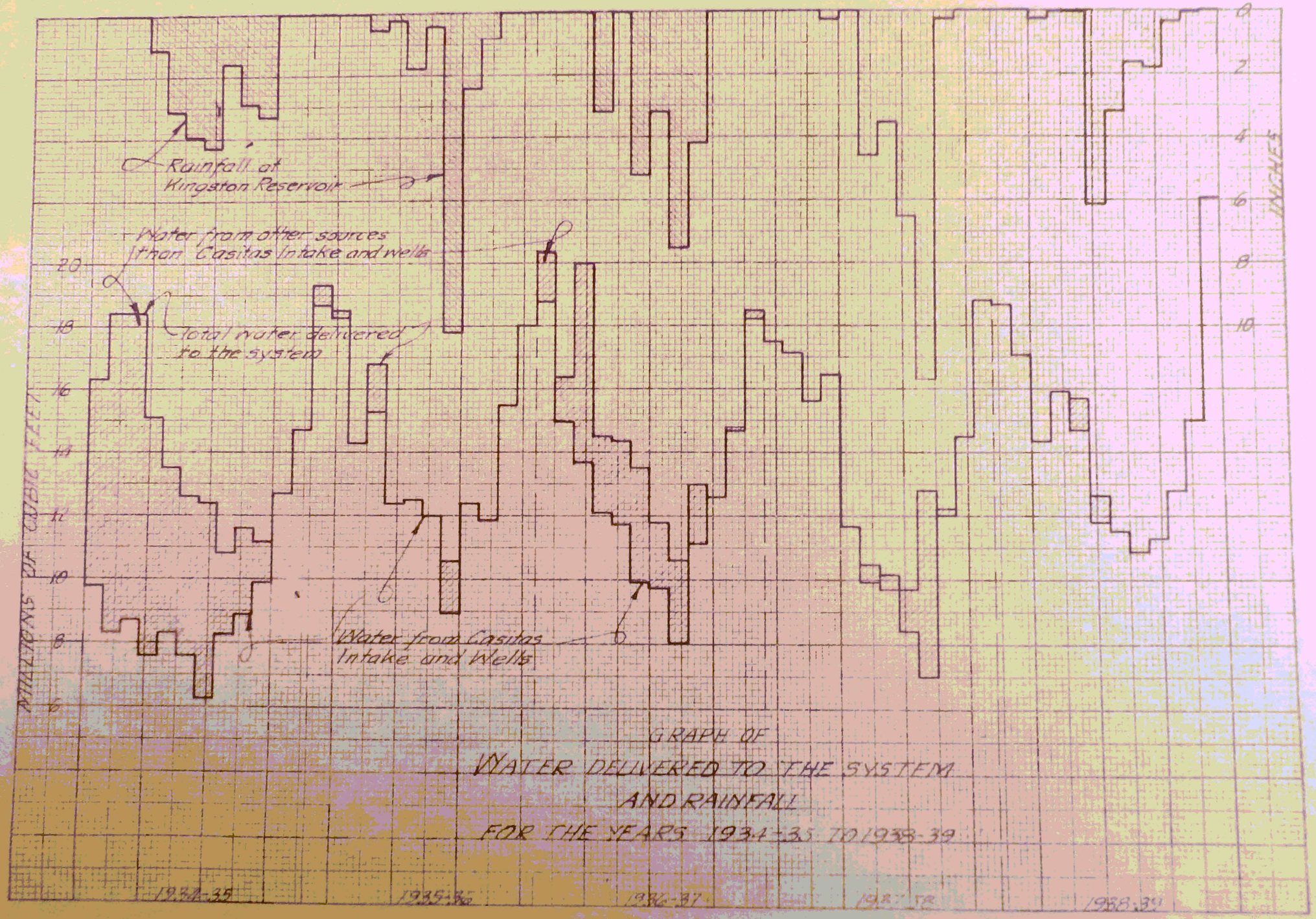


DIAGRAM SHOWING
DISTRIBUTION RESERVOIRS IN RELATION
TO SOURCES OF SUPPLY OF THE
VENTURA WATER DEPARTMENT

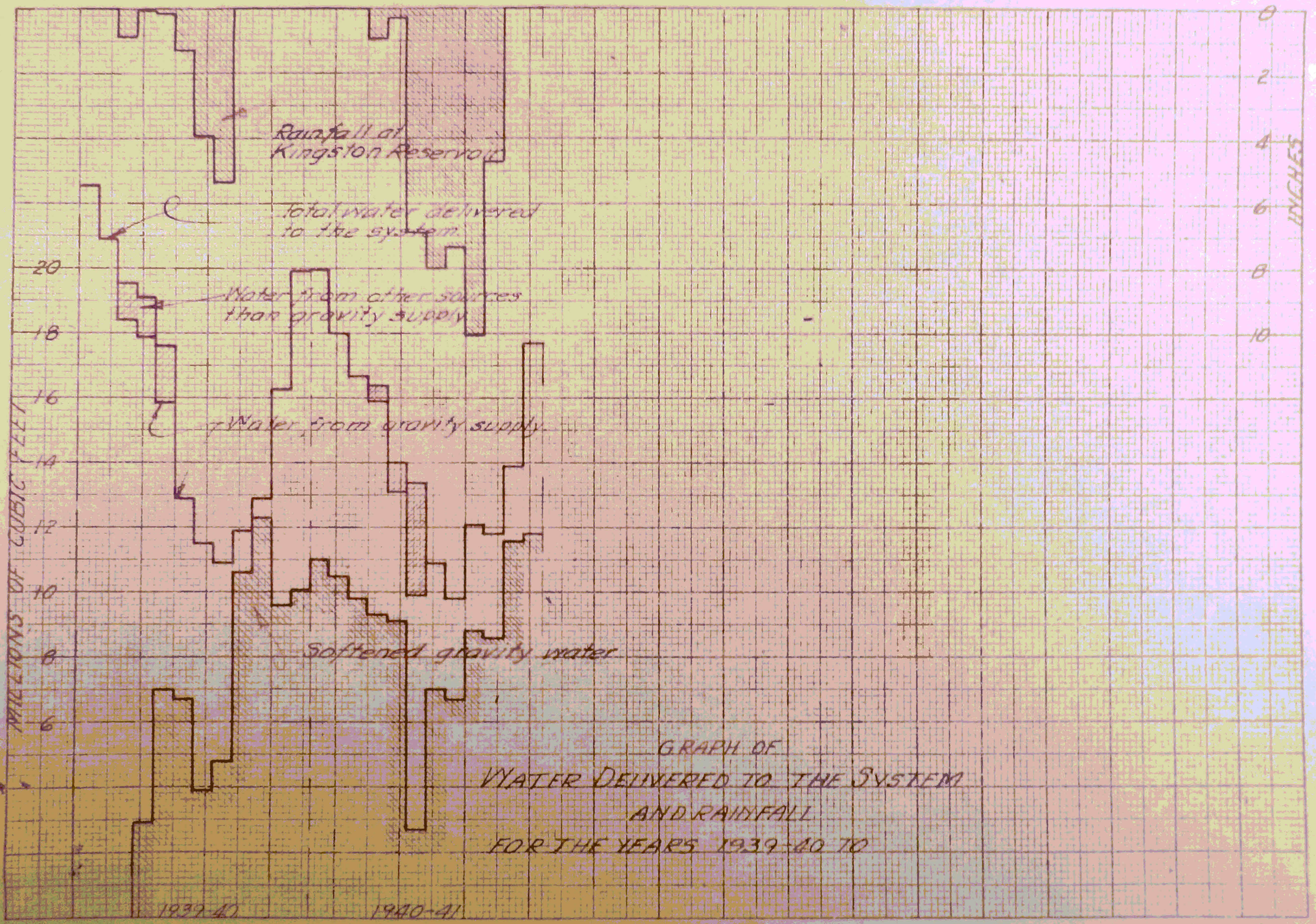
NOTE: ARROWS POINTING UPWARD INDICATE DIRECTION OF FLOW BY PUMPING
ARROWS POINTING DOWNWARD INDICATE DIRECTION OF FLOW BY GRAVITY

6-3-37

VEN0004093



GRAPH OF
WATER DELIVERED TO THE SYSTEM
AND RAINFALL
FOR THE YEARS 1934-35 TO 1938-39



GRAPH OF
WATER DELIVERED TO THE SYSTEM
AND RAINFALL
FOR THE YEARS 1939-40 TO

VEN00004094

VEN00004095

CITY of SAN BUENAVENTURA

VENTURA COUNTY ~ ~ CALIFORNIA

Ventura, California,
October 28, 1941.

Mr. J. B. Lippincott,
543 Petroleum Building,
714 West Olympic Boulevard,
Los Angeles, California.

Dear Mr. Lippincott:

Your 1914 report on the Ventura Water System has provided a source of items, which we feel are interesting for use in our annual reports to help our readers gain momentum before they delve into the statistics.

Last year we included a brief history which was condensed from your report and this year we referred to it again for the story about meters.

A copy of our 1940-41 report is inclosed.

Very truly yours,

C. F. Zapf, Superintendent,
Ventura Water System.

CFZ:d

VEN00040907