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1911 1957

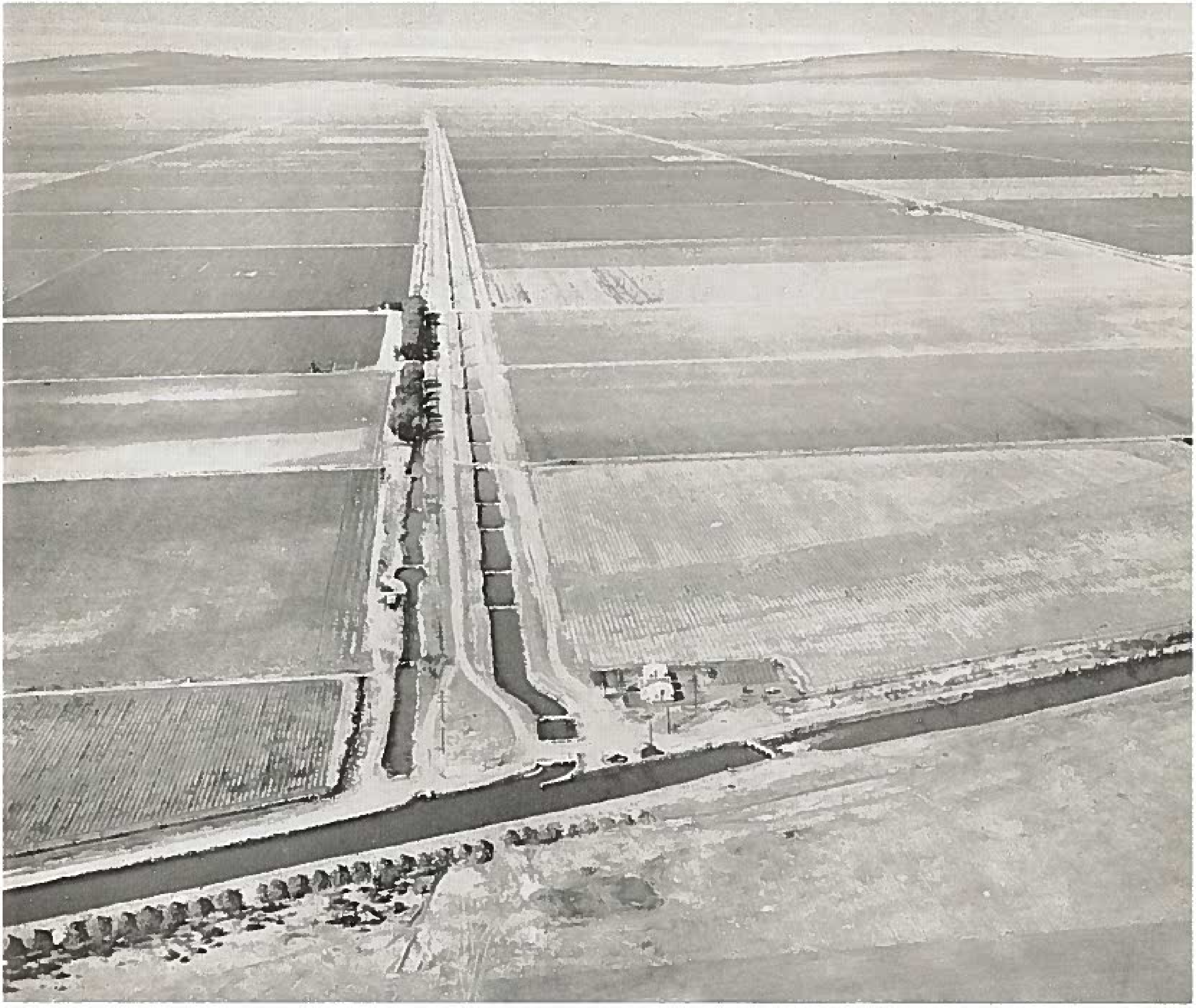
ANNUAL REPORT

of the

PRESIDENT OF THE BOARD OF DIRECTORS

IMPERIAL IRRIGATION DISTRICT

JANUARY 1, 1958



Aerial view of the Vail Supply Canal, looking west from the heading on the East Highline Canal.

1911 1957

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PRESIDENT OF THE BOARD OF DIRECTORS

IMPERIAL IRRIGATION DISTRICT

JANUARY 1, 1958

DIRECTORS

Evan T. Hewes, President of the Board (1-1-57 to 3-13-57)

John M. Bryant, President of the Board (4-9-57 to 12-31-57)

Floyd T. Shank — Martin L. McFarland

Lom Thompson — Carl Bevins

ASSESSOR-COLLECTOR

C. J. Park

SECRETARY

Burton H. Bidwell

TREASURER

Anna T. McManus

To the
Board of Directors of
Imperial Irrigation District
and to All The People We Serve

El Centro, California
January 1, 1958

May I repeat to you here my statement of April 9 that: "It is an honor to be appointed President of this Board. I will do my best to discharge the responsibilities of this office and will work to maintain the progressive policies of the District, which includes the protection of our vital water rights."

In presenting this report on the activities of the District for the year 1957, I will attempt to cover briefly all phases of our operations. In planning for additional plant facilities it is our intention to schedule our construction so as to always provide for the current needs of our District, and to have available sufficient reserve to cover any unusual or unforeseen occurrences.

Test runs of the Pilot Knob Hydro Plant were made between January 14 and January 18, 1957. The plant was formally accepted by the District on January 28, 1957, and first commercial operation was begun on January 31, 1957. Other facilities which were a part of the 1953 Power Development Project were completed a short time thereafter and a completion report on the entire project was issued April 2, 1957.

On October 28, 1957, the new 44,000-kilowatt generating unit of the District's El Centro Steam-Electric Station at El Centro was placed in operation for the first time. Constructed under provisions of the 1955 Power Development project, this third unit was financed entirely from cash reserves accumulated from the sale of electric energy.

The new Rositas Supply Canal, the major item of the Mesquite Lake Area Improvement Plan, was nearing completion at the close of the year. Designed to bring water from the East Highline Canal to some 21,500 acres of farm lands in the Mesquite Lake area, the canal is approximately 10 miles in length, has a capacity of 300 second-feet and will cost $1,100,000.

The case of Arizona vs. California was continued in 1957 before the Honorable Simon H. Rifkind, Special Master, in the Federal Building in San Francisco. Imperial Irrigation District, a codefendant in this case, presented evidence in support of its water rights during the early part of the 1957 session.

Irrigation and drainage operations during 1957 were on a cash basis. All operations including new construction were financed from current revenue. During the year, $488,000 of General Obligation Irrigation Bonds were retired.

The following pages contain the annual report for 1957.

John M. Bryant

JOHN M. BRYANT, President
Board of Directors

TECHNICAL STAFF

General Superintendent	G. E. Tank
Consulting Engineer	M. J. Dowd
Legal Counsel	Harry W. Horton
Assistant Legal Counsel	R. L. Knox, Jr.
Assistant Legal Counsel	J. H. Carter
Business Manager	Vaness Jeffries
Superintendent Right-of-Way	J. E. Welch
Master Mechanic	Patrick Smyth
Chief Civil Engineer	A. J. Boles
Superintendent Irrigation and Drainage Department	O. L. Fudge
Superintendent All-American Canal Department	J. M. Sheldon
Chief Electrical Engineer	J. F. Hesse
Superintendent Power Sales and Service	P. G. Post
Superintendent Coachella Area	R. M. Rinderhagen
Planning Engineer—Electrical	C. H. Youngstrom

THE DISTRICT . . .

Organization and Functions:

Imperial Irrigation District is a public corporation organized in 1911 under the California Irrigation District Act, as supplemented and from time to time amended (now codified as Division 11 of the Water Code of California), and since that date has been continuously in operation. The governing body is a board of five directors, each elected from a separate geographical division of the District for a term of four years by the qualified electors residing therein. The other elective positions are the Treasurer and Assessor-Collector.

The District performs three chief functions: (a) diversion and delivery of Colorado River water for irrigation and domestic uses; (b) operation and maintenance of drainage canals and facilities; and (c) generation and distribution of electricity.

Location and Area:

The District is located entirely in Imperial County, California, approximately 100 miles east of San Diego, and includes all of the cultivated lands in Imperial Valley. In the irrigated area of the District there are 623,539 acres, of which 494,234 acres were in crop in 1957. Due to the fact that the growing season in Imperial Valley extends over the entire year, and double cropping is practiced on a great many acres, the gross acreage of crops actually grown in 1957 amounted to 759,456 acres.

The District is the largest irrigation district in the United States with a present gross area of 907,269 acres. Under full development it is estimated that about 770,000 acres within the District will be irrigated, while the remainder will be occupied by cities, towns, railroads, highways, county roads, airports, canals, drains, rivers, and the Salton Sea drainage area.

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FOREWORD

At the biennial reorganization meeting of the Board of Directors on March 12, 1957, Carl Bevins, well known Holtville rancher, was officially seated as Director of Division No. 5. Mr. Bevins succeeded Frank Watton who had served the District as Director for the past four years. Director John M. Bryant of Calipatria, representing Division No. 3, was reseated. Mr. Bryant has completed two four-year terms as Director from this Division. Director Evan T. Hewes was reseated and re-elected President of the Board. Mr. Hewes had completed six four-year terms as Director representing Division No. 1. Mr. Hewes was reappointed Executive Superintendent of the District, a post he had held for the past 20 years.

Following the death of Mr. Hewes on March 13, 1957, Director John M. Bryant was elected President Pro Tem and served in that capacity until April 9, 1957, at which time he was elected President. Lom Thompson, owner and operator of Thompson Truck Lines, and cattleman, who was appointed by the County Board of Supervisors to serve the unexpired four-year term of Mr. Hewes, was officially seated as Director of Division No. 1 on April 9, 1957.

Mr. G. E. Tank who had held the position of Assistant to the Executive Superintendent since February 15, 1957, was appointed as General Superintendent of the District by the newly organized Board.

On June 1, 1957, L. V. Hess, Master Mechanic for Imperial Irrigation District, retired after having served the District since June 6, 1927. On July 15, 1957, announcement was made of the appointment of Patrick Smyth as Master Mechanic to succeed Mr. Hess.

For the ninth consecutive year, the District has reported a favorable balance in tons removed over tons of salt brought into the area by irrigation water. Based on concentration tests taken from the All-American Canal below Drop No. 1, it was determined that 3,788,958 tons of salt were brought into the Valley by irrigation water. Similar tests taken from Alamo and New Rivers indicate that drainage waters have removed 3,993,008 tons of salt from the lands of the Valley.

General Obligation Bonds totaling $16,000,000 were issued by the District between 1915 and 1923 to finance the acquisition and construction of irrigation, drainage and flood control works and facilities in the United States and Mexico. As of the end of 1957 there remained unmatured and unpaid a total of $8,950,000.

Power Revenue Bonds, payable solely from the sale of electric power, totaling $37,963,000 have been issued since 1937 to finance the acquisition and construction of the District's power system. As of the end of 1957 there remained unmatured and unpaid a total of $31,828,000.

I.

FINANCIAL

A. BONDED INDEBTEDNESS:

Changes in the District's long-term indebtedness for the calendar year ended December 31, 1957, are reflected in the following tabulation prepared by Treasurer Anna T. McManus:

	Total Bond Indebtedness Dec. 31, 1956	Bonds Retired	Total Bond Indebtedness Dec. 31, 1957
General Obligation Bonds	$ 9,438,000	$ 488,000	$ 8,950,000
Power Revenue Bonds	32,658,000	830,000	31,828,000
Total	$42,096,000	$1,318,000	$40,778,000

NOTE: $22,500 First Refunding Bonds, and $2,314 refinanced warrants not included above. These bonds and warrants were called for retirement July 1, 1943, and funds set aside for their retirement.

B. ALL-AMERICAN CANAL CONTRACT

Imperial Dam and the All-American Canal were constructed pursuant to the terms of a contract dated December 1, 1932, between the District and the United States of America. The District is obligated to pay its proportionate share of the cost of the works constructed under the contract, without interest, in annual installments over a period of 40 years. These installments are to be 1 per cent each for the first 5 years, 2 per cent each for the next 10 years, and 3 per cent each for the final 25 years, of the total cost of the District's share of the works.

The District is required, when necessary, to levy and collect assessments so that, regardless of defaults or delinquencies in the payment of assessments, the United States shall receive its money when due.

On July 14, 1954, Imperial Irrigation District was informed by the Secretary of the Interior that its share of the costs of the All-American Canal, to be repaid to the United States under the terms of the contract of December 1, 1932, was $25,020,001. Under the terms of the contract, the District is required to pay the United States the net proceeds from Electric power generated on the All-American Canal and had, prior to March 1, 1955, which is the date the first payment became due, advanced approximately $1,142,000 to be applied and credited against payments as they became due.

After application of the first, second, and third annual payments there remained, as a credit to Imperial Irrigation District, $564,922 from net proceeds; $3,000,000 from Public Law 750, 81st Congress; and $201,483 as a credit for the Gila Project's participation in Laguna Dam cost. This total credit of $3,766,406 will be applied to subsequent payments and will be supplemented each year by additional net power proceeds as they become due and payable.

C. 1957 OPERATIONS AT A GLANCE:

1. Irrigation Division (Not Including Irrigation Division in Mexico)

The District's Irrigation Division Earned		$5,749,483
From Assessments, Penalties and Costs	$1,467,970	
From Sales and Rentals of Land Held Under Assessment Deeds	9,217	
From Interest on Redemption of Delinquent Assessments	2,899	
From Water Deliveries, Gate and Pipe Service Charges	3,972,613	
From Interest on Reserve Funds	67,042	
From Rental of Land, Buildings and Equipment	74,139	
From Sales of Rock and Gravel	1,287	
From Other Sources	154,316	
This is How It Was Used or Set Aside—		
For Operating Expenses	$3,197,160	
For Interest on Bonds	308,352	
For Taxes	1,359	
Which Accounts for Operating Expenses and Income Deductions of	$3,506,871	
Which Leaves a Balance of	$2,242,612	
Which Was Used as Follows:		
For Bonds Retired	$ 488,000	
For Additions to Canal System	1,182,059	
For Additions to Drainage System	368,870	
For Additions to Buildings & Land	54,350	
Payment into All-American Canal Emergency and Replacement Fund	89,007	
For New Equipment	60,326	
	$2,242,612	
Which Accounts for		$5,749,483

2. Power Division

The District's Power Division Earned		$8,156,819
From Power Sales	$8,004,845	
From Interest on Reserve Funds	140,686	
From Rental of Electric Property	6,549	
From Other Sources	4,739	

This is How it Was Used or Set Aside—

For Operating Expenses	$3,926,607	
For Interest on Bonds	900,467	
For Taxes	12,789	
Which Accounts for Operating Expenses and Income Deductions of	$4,839,863	
Which Leaves a Balance of	$3,316,956	
Which was Used as Follows:		
For Additions to Plant	$1,812,473	
For Retirement of Electric Revenue Bonds	840,000	
For Payments into Special Electric Plant Construction Fund	2,369	
For Payments into Bond Reserve Funds	206,729	
For Additions to Other Reserve Funds	7,842	
For Deposit with United States on All-American Canal Contract....	115,501	
For Reductions in Current Liabilities	332,042	
	$3,316,956	
Which Accounts for		$8,156,819

D. CONSOLIDATED STATEMENT OF ASSETS AND LIABILITIES AND NET WORTH, DECEMBER 31, 1957 (INTER-DIVISIONAL ACCOUNTS ELIMINATED):

ASSETS

Funds for:

Operation and Maintenance		$ 4,259,068
Payment of Bond Principal and Interest		3,481,425
New Construction		566,330
Other Special Funds		888,358
Total Funds, Including $3,117,800 Invested in U. S. Securities		$ 9,195,181
Accounts Receivable		1,632,174
Materials and Supplies		1,324,508
Delinquent Assessments and Tax Deed Land		85,181
Advances on All-American Canal Contract		564,922
Deferred Charges and Prepaid Expenses		617,380
Properties (Irrigation and Power Systems)		100,462,605
Total Assets		$113,881,951

LESS LIABILITIES

Current Liabilities	$ 1,403,337	
Outstanding Bonds	40,537,500	
Unpaid Warrants	2,314	
Deferred Contract Installments	21,067,918	
Reserves	124,886	
Deferred Credits	1,816,338	$ 64,952,293
NET WORTH—From Operations	$45,826,477	
Contributed	3,103,181	48,929,658
Total Liabilities and Net Worth		$113,881,951

The Net Worth is 43% of Total Assets.

E. COMPARATIVE INCOME AND EXPENSE STATEMENT AND BALANCE SHEET:

1. Irrigation Division (Accounts of Subsidiary Company in Mexico Not Included)

	1957	Over 1956	Under 1956
Income and Expense			
1. Operating Revenue	$ 5,682,441		$ 83,602
2. Operating Deductions	3,383,885	$ 147,741	
3. Operating Income	$ 2,298,556		
4. Other Income	67,042	23,188	
5. Gross Income	$ 2,365,598		208,155
6. Income Deductions	315,400		18,610
7. Net Income, or Current Earned Surplus	$ 2,050,198		189,545
Balance Sheet			
1a. Current Assets	$ 3,992,590		268,785
2a. Investment and Fund Accounts	1,454,315	216,244	
3a. Fixed Assets	51,128,494	1,235,272	
4a. Other Assets and Deferred Charges	452,769	24,061	
5a. Investment in Subsidiary Mexican Company	5,092,370		2,853,029
Total Assets	$62,120,538		1,646,237
6a. Current Liabilities	$ 627,950		51,000
7a. Long-Term Liabilities	28,698,696		3,936,083
8a. Deferred Credits and Reserves	1,645,424	20,451	
9a. Surplus	31,148,468	2,320,395	
Total Liabilities & Surplus	$62,120,538		1,646,237

2. Power Division:

	1957	Over 1956	Under 1956
Income and Expense			
1. Operating Revenue	$ 8,016,133	$ 554,636	
2. Operating Deductions	5,309,528	566,200	
3. Operating Income	$ 2,706,605		$ 11,564
4. Other Income	140,686		54,739
5. Gross Income	$ 2,847,291		66,303
6. Income Deductions	900,467	187,037	
7. Net Income, or Current Earned Surplus	$ 1,946,824		253,340
Balance Sheet			
1a. Current Assets	$ 5,086,410		2,026,134
2a. Investment and Fund Accounts	2,281,427		1,584,347
3a. Fixed Assets	47,577,799	3,545,664	
4a. Other Assets & Deferred Charges	568,330		161,056
Total Assets	$55,513,966		225,873
5a. Current Liabilities	$ 802,938		1,116,931
6a. Long-Term Liabilities	33,137,222		843,600
7a. Deferred Credits and Reserves	295,379		19,131
8a. Surplus	21,278,427	1,753,789	
Total Liabilities and Surplus	$55,513,966		225,873

F. FUND BALANCES—DEC. 31, 1957, AND DEC. 31, 1956:

	December 31 1957	December 31 1956	Increase or Decrease*
IRRIGATION OPERATING FUNDS:			
Assessments Collected for Following Year	$ 361,329	$ 353,702	$ 7,627
Other Cash Balances	1,185,242	1,494,496	309,254*
Total Cash and Fund Balances	$ 1,546,571	$ 1,848,198	$ 301,627*
COMPANIA OPERATING FUNDS: (1)			
Compania General Fund—Fund Balances	$ 17,842	$ 13,705	$ 4,137
IRRIGATION BOND AND WARRANT FUNDS:			
Assessments Collected for Following Year	$ 515,641	$ 522,084	$ 6,443*
Other Cash Balances	392,650	403,769	11,119*
Total Cash Balances	$ 908,291	$ 925,853	$ 17,562*
Less Unpaid Matured Principal and Interest	(48,808)	(49,774)	(966)*
Less Interest Maturing Next January 1	(151,785)	(160,216)	(8,431)*
Less Bonds Called for Redemption Next January 1	(179,000)	(150,000)	(29,000)
Total Fund Balances	$ 528,698	$ 565,863	$ 37,165*
DRAINAGE FUND:			
Assessments Collected for Following Year	$ 119,248	$ 120,558	$ 1,310*
Other Cash Balances	129,565	127,077	2,488
Total Cash and Fund Balances	$ 248,813	$ 247,635	$ 1,178
MISCELLANEOUS IRRIGATION FUNDS:			
Total Cash and Fund Balances	$ 918,947	$ 720,533	$ 198,414

	December 31 1957	December 31 1956	Increase or Decrease*
POWER OPERATING REVENUE FUNDS:			
Fund Balances	$ 2,957,656	$ 4,897,445	$ 1,939,789*
POWER BOND FUNDS:			
Cash Balances	$ 2,575,447	$ 2,371,709	$ 203,738
Less Unpaid Matured Principal and Interest	(23,652)	(23,844)	(192)*
Less Interest Maturing Next January 1	(483,760)	(497,260)	(13,500)*
Less Bonds Maturing Next January 1	(400,000)	(400,000)	
Fund Balances	$ 1,668,035	$ 1,450,605	$ 217,430
POWER CONSTRUCTION FUNDS:			
Fund Balances	$ 106,583	$ 990,397	$ 883,814*
MISCELLANEOUS POWER FUNDS:			
Fund Balances	$ 178,031	$ 1,090,368	$ 912,337*
ALL FUNDS:			
Assessments Collected for Following Year	$ 996,218	$ 996,344	$ 126*
Other Cash Funds	$ 8,461,963	12,109,499	3,647,536*
Total Cash Balances	$ 9,458,181	$ 13,105,843	$ 3,647,662*
Less Bond Principal and Interest Matured or Due January 1	(1,287,005)	(1,281,094)	5,911
TOTAL FUND BALANCES	$ 8,171,176	$ 11,824,749	$ 3,653,573*

( ) Deduction

* Decrease

(1) Funds of Subsidiary Company in Lower California, Mexico.

Note: Cash and fund balances include securities held.

G. CONSOLIDATED REVENUE AND EXPENSE STATEMENT—JANUARY 1 TO DECEMBER 31, 1957—IMPERIAL IRRIGATION DISTRICT AND COMPANIA DE TERRENOS Y AGUAS DE LA BAJA CALIF., S.A.:

	Consolidated	Imperial Irrig. Power Div.	District Irrig. U.S.	Compania de T. y A. Irrig. Mex.
REVENUE				
OPERATING REVENUES:				
Realized Revenue from:				
Current Year Assessments	$ 1,428,214		$1,428,214	
Penalties and Costs on Assessments	3,420		3,420	
Redemption of Delinquent Assessments	36,336		36,336	
Interest Collected on Redemptions	2,899		2,899	
Total Collected by Assessor-Collector	$ 1,470,869		$1,470,869	
Sales of Land Held under Assessment Deeds	8,060		8,060	
Equivalent of Current Assessment on Tax Deed Land	649		649	
Rental of Land Held under Assessment Deeds	435		435	
Interest on Land Sales Contracts	73		73	
Total Revenues Derived from Assessments	$ 1,480,086		$1,480,086	
Water Sales	4,014,086		3,874,876	$139,210
Gate Service Charges	57,340		57,340	
Pipe Service Charges	40,397		40,397	
Rental of Buildings	52,422	$ 6,549	45,873	
Rental and Sales of Operative Land	6,899		6,899	
Rental of Equipment	21,367		21,367	
Contributions for Oper. and Maint. of All-American Canal	153,059		153,059	
Sales of Rock	1,287		1,287	
POWER SALES:				
Residential or Domestic Sales		2,754,066		
Rural Sales—Agricultural Power		518,104		
Commercial and Industrial Sales		2,846,225		
Public Street and Highway Lighting		69,888		
Other Sales to Public Authorities		79,223		
Sales to Other Electric Utilities		1,663,655		
Interdepartmental Sales		73,684		
Total Power Sales	$ 8,004,845	$8,004,845		
Miscellaneous Revenue	6,092	4,739	1,257	96
TOTAL OPERATING REVENUES	$13,837,880	$8,016,133	$5,682,441	$139,306

	Consolidated	Imperial Irrig. Power Div.	District Irrig. U.S.	Compania de T. y a. Irrig. Mex.
Total Operating Revenue—Brought Fwd.	$13,837,880	$8,016,133	$5,682,441	$139,306
OPERATING REVENUE DEDUCTIONS:				
Operating Expenses:				
Oper. & Maint. of Irrigation System	$ 2,551,425		$2,410,927	$140,498
Oper. & Maint. of All-American Canal	744,562		744,562	
Oper. & Maint. of Imperial and Laguna Dams	34,913		34,913	
Oper. & Maint. of Power System:				
Production Expenses		$1,446,601		
Power Purchased		971,723		
Transmission Expenses		147,924		
Distribution Expenses		557,722		
Accounting and Collecting Exp.		264,138		
Sales Promotion Expenses		84,588		
Administrative & General Exp.		453,911		
Total Power Oper. & Maint.	3,926,607	$3,926,607		
Miscellaneous Expenses	8,128		6,758	1,370
Total Operating Expenses	$ 7,265,635	$3,926,607	$3,197,160	$141,868
Depreciation of:				
Equipment and Facilities	57,163		53,791	3,372
Buildings	34,490		34,485	5
Power System	1,334,165	1,334,165		
Amort. of Canal System and Defense Works, Mexico	145,556			145,556
Amort. of Plant Acquisition Adj.	35,967	35,967		
Losses on Sales and Retirements of Assets	97,090		97,090	
Taxes	16,673	12,789	1,359	2,525
Total Operating Revenue Deductions	$ 8,986,739	$5,309,528	$3,383,885	$293,326
Net Operating Revenue	$ 4,851,141	$2,706,605	$2,298,556	$154,020*
OTHER INCOME:				
Interest on U. S. Bonds and Treasury Notes	$ 100,064	$ 74,374	$ 25,690	
Interest on Bank Deposits and Miscellaneous Interest	107,664	66,312	41,352	
Total Other Income	$ 207,728	$ 140,686	$ 67,042	
GROSS INCOME	$ 5,058,869	$2,847,291	$2,365,598	$154,020*
INCOME DEDUCTIONS:				
Interest on District Bonds	$ 1,208,819	$ 900,467	$ 308,352	
Amortization of Debt Discount	7,048		7,048	
Total Income Deductions	$ 1,215,867	$ 900,467	$ 315,400	
NET INCOME—EARNED SURPLUS, CURRENT YEAR	$ 3,843,002	$1,946,824	$2,050,198	$154,020*

*Deficit

H. 1956 - 57 ASSESSMENT:

The Board of Directors, on August 20, 1956, adopted an irrigation budget of $5,554,824 for the calendar year 1957, and fixed the annual assessment levy for the 1956-57 assessment year at $3.00 per $100 of assessed valuation. This has been the assessment levy since 1949-50. The aggregate assessed value of the lands within the District, as equalized, is $48,667,337 as appears in the assessment rolls for the year 1956. The deduction from the aggregate assessed value of the lands in the District of 15 per cent for anticipated delinquencies, as provided by Section 25801 of the Water Code of the State of California, leaves the net equalized assessed valuation of said lands at $41,367,236.

The amount to be raised by assessment for the 1956-57 assessment year is classified as follows:

Redemption Fund: 15.72 mills on the dollar to raise $650,000 to pay interest on bonds and to provide for their retirement.

Drainage Fund: 3.63 mills on the dollar to raise $150,000 for necessary improvements to and extensions of the District's drainage system.

Operation and Maintenance: 10.65 mills on the dollar to raise $440,561. This amount, together with other revenues of the District, will provide funds to meet the estimated current expenses of the District.

I. ASSESSOR-COLLECTOR'S OFFICE:

The total assessed valuation of all land within the District for the 1956-57 assessment year was $48,667,337, as compared to $47,713,095 for the 1955-56 assessment year. This increase of $954,242 in assessed valuation is brought about by two items; (1) return of tax deed land to the assessment rolls, and (2) the increase in value of land that has been reclaimed. There was no general increase in assessed valuation.

At the close of business on June 25, 1957, the delinquent date for the 1956-57 assessment year, a total of $1,414,638 or 96.29 per cent of the total assessment had been paid. This left unpaid $54,536 or 3.71 per cent. (Delinquent gate charges are included in collections and unpaid balances.)

J. TREASURER'S OFFICE:

In addition to the general office work of the Treasurer's Office, the following business was handled during the year 1957:

83,250 bonds and coupons were paid, for which 1,173 checks were issued and involving an expenditure of	$ 2,609,545
Cashier, Payroll, Compania Payroll and Expense checks amounting to 43,165 checks and involving an expenditure of	15,670,644
Total Expenditures	$18,280,189

K. AUDITOR'S REPORT

The auditor's report for the calendar year 1957 was filed with the District's Board of Directors on May 27, 1958:

Gross Revenue

	1957	1956
Irrigation Division	$ 5,596,424	$ 5,673,204
Power Division	8,156,796	7,612,475
Compania	139,307	123,753
Consolidated	13,892,527	13,409,432

Expenses

Irrigation Division	3,546,977	3,442,051
Power Division	6,220,329	5,431,325
Compania	293,328	282,919
Consolidated	10,060,634	9,156,295

Net Revenue

Irrigation Division	2,049,447	2,231,153
Power Division	1,936,467	2,181,150
*Compania	(154,021)	(159,166)
Consolidated	3,831,893	4,253,137

* Represents amortization, not cash
( ) Deduction

IRRIGATION DIVISION:

Revenue

Assessment Revenues (Current)	$1,431,634	
Assessment Revenues (Delinquent)	48,017	
Water Sales	3,972,614	
Interest, Discounts and Miscellaneous Sales	144,159	
Total Revenue		$5,596,424

Expenses

Operation and Maintenance Costs:		
Canal System	$1,850,127	
Drainage	525,016	
All-American Canal	626,416	
Sundry Property	35,887	$3,037,446
Administration and Overhead Costs:		
Depreciation and Amortization of Facilities	$ 88,276	
Provision for Doubtful Accounts	847	
Miscellaneous Expense, Retirements and Losses	105,008	194,131
Financial Costs:		
Interest on Obligations	$ 308,352	
Amortization of Bond Discounts	7,048	315,400
Total Expenses		$3,546,977

POWER DIVISION:

Revenue

Power Sales	$8,004,845	
Rental of Property and Equipment	6,550	
Interest, Discounts and Miscellaneous Sales	145,401	
Total Revenue		$8,156,796

Expenses

Operation and Maintenance Costs:		
Power Generation and Purchases	$2,386,701	
Power Transmission and Distribution	705,646	$3,092,347
Administration and Overhead Costs:		
Salaries and Expenses	$ 793,037	
Depreciation and Amortization of Facilities	1,370,132	
Provision for Doubtful Accounts	12,000	
Miscellaneous Expenses, Retirements and Losses	52,346	2,227,515
Financial Costs:		
Interest on Obligations		900,467
Total Expenses		$6,220,329

Assets and liabilities of the District at the close of the year 1957, as shown by the audit report, are set forth in the following tabulation which also gives, for comparison, the 1956 totals:

		Irrigation	Power	Compania
Assets	—1957	$68,133,481	$55,517,428	$1,910,929
	—1956	63,709,713	55,726,061	2,057,469
Liabilities	—1957	34,132,736	34,280,957	8,261,205
	—1956	34,889,868	36,243,023	8,253,724
Surplus	—1957	34,000,745	21,236,471	6,350,276*
	—1956	28,819,845	19,483,038	6,196,255*

*Deficit

NOTE: Differences between amounts in the Audit Report and amounts in preceding Tables C, E and G are due to auditor adjustments.

II.

WATER DIVERSIONS AND DELIVERIES

DISPOSITION OF WATER DIVERTED AT IMPERIAL DAM AND TRANSPORTED THROUGH ALL-AMERICAN CANAL DURING 1957:

	Acre-Feet	Acre-Feet
Diverted at Imperial Dam, Metered at Station 60		5,563,238
*Diversions to Yuma Projects	1,218,313	
Diverted to River at Pilot Knob Check	800,475	
Loss from Imperial Dam to Pilot Knob Check	167,282	2,186,070
All-American Canal Below Pilot Knob Check		3,377,168
Diversions to Coachella Branch at Drop No. 1	498,214	
Loss from Pilot Knob to Drop No. 1	97,162	595,376
All-American Canal Below Drop No. 1		2,781,792
Diversions from All-American Canal from Drop No. 1 to and Including East Highline Canal	1,149,472	
Loss from Drop No. 1 to East Highline Canal	25,467	1,174,939
All-American Canal Below East Highline Canal		1,606,853
Diversions from All-American Canal from East Highline Canal to and Including Central Main Canal	908,317	
Loss from East Highline Canal to Central Main Canal	8,092	916,409
All-American Canal Below Central Main Canal		690,444
Diversions from Central Main Canal to and Including West Side Main Canal	684,544	
Loss from Central Main Canal to and Including West Side Main Canal	5,900	690,444

*Water diverted to the Yuma Project and its proportionate share of losses is not charged to nor is it a part of water diverted for Imperial Irrigation District and Coachella Valley County Water District. Imperial Irrigation District Diverts and transports through the upper section of the All-American Canal the Yuma Projects water, in accordance with terms of the All-American Canal Contract dated December 1, 1932, and the contract amendatory of and supplemental to the All-American Canal Contract of December 1, 1932, dated March 4, 1952.

DISPOSITION OF WATER DIVERTED FROM ALL-AMERICAN CANAL BELOW DROP NO. 1 DURING 1957:

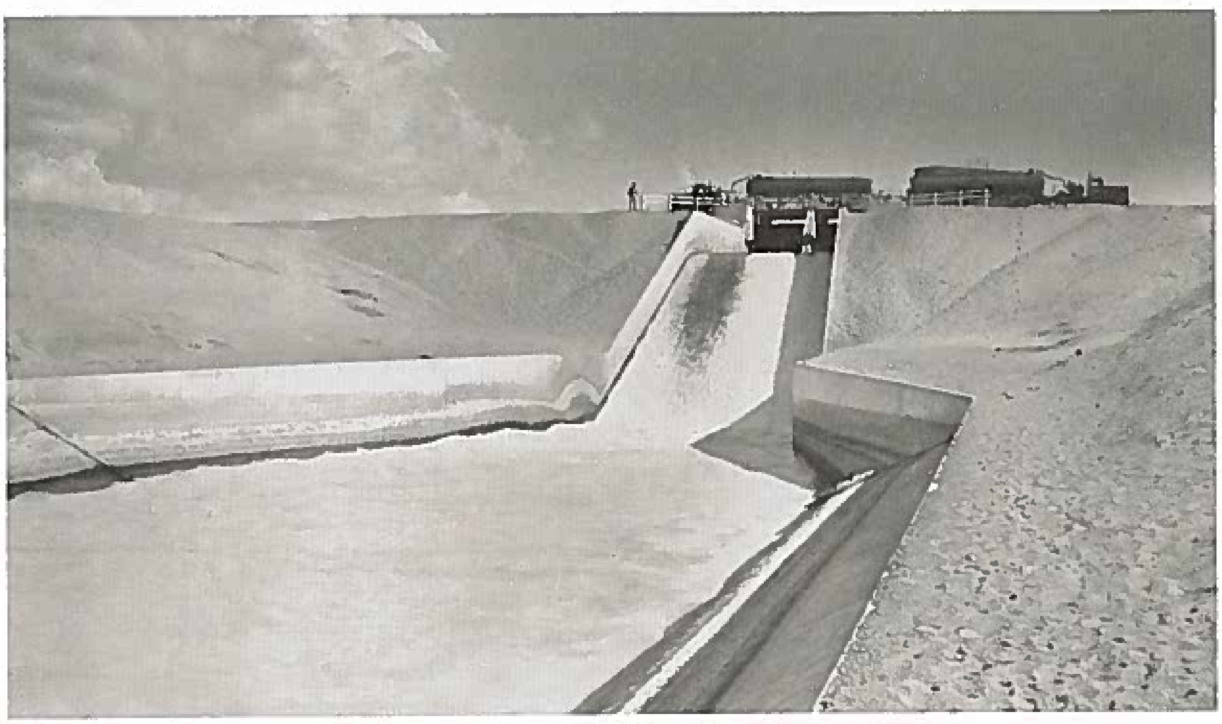
	Acre-Feet	Acre-Feet
All-American Canal Below Drop No. 1		2,781,792
Loss and Unaccounted for in All-American and Other Main Canals	285,669	
Operational Loss from All-American and Other Main Canals	35,646	321,315
Delivered to Lateral Canal System		2,460,477
*Loss and Unaccounted for in Lateral Canal System Before Delivery to Users	455,417	
Operational Loss from Lateral Canals	55,904	511,321
Deliveries to Users		1,949,156

*Deliveries to users are based on gate measurements. Gate measurements are approximately 10 per cent low, resulting in the delivery of 10 per cent more water than is charged for. This difference is included in the total shown as loss and unaccounted for in lateral canal system before delivery to users. The latter also includes unmeasured use of water by some 1,500 service pipes supplying farmsteads, outside subdivisions, etc.

III.

ALL-AMERICAN CANAL

View of combination brick and steel frame building housing All-American Canal Western Division office and materials and supplies for All-American Canal Western Division and Calexico Irrigation and Power Divisions.



Treating of a portion of the Coachella Branch of the All-American Canal with a chemical known as SS-13 which is designed to prevent seepage.

OPERATION AND MAINTENANCE:

GENERAL COMMENTS:

The All-American Canal Department operates and maintains the All-American Canal headworks, desilting basins, the All-American Canal from the headworks to West Side Main Canal, a distance of 79.68 miles; the Coachella Branch of the All-American Canal from the turnout structure at Drop No. 1 on the All-American Canal to a structure designated as 6-A Check, a distance of 48.89 miles; and New Briar Canal from Drop No. 5 on the All-American Canal to the boundary bridge, a distance of 2.60 miles. It also maintains 37.15 miles of open drains, and 8.80 miles of tile drains which are appurtenant to the canals.

The River Division operates and maintains the headworks and the All-American Canal and appurtenant drains down to and including Pilot Knob Check. The Western Division operates and maintains the remainder of the All-American Canal facilities.

Diversion from the Colorado River to the All-American Canal below the desilting works at Imperial Dam was 5,563,238 acre-feet in 1957. The maximum-day diversion for the year was 11,800 c.f.s. November 28; the minimum-day diversion was 1,610 c.f.s. January 13. Disposition of this water is covered in Section II, Water Diversion and Deliveries, found on pages 18 and 19 of this report.

Diversions for testing Pilot Knob Hydro Plant began January 14, 1957, and the first water available for generation was on January 31. Since March 11 the District's All-American Canal water order at Station 60 has been 13,000 c.f.s.; or Station 1117 order plus 8,000 c.f.s. for Pilot Knob Hydro Plant, if the sum of these two is 13,000 c.f.s. or less. Total water available during the year for generation at Pilot Knob was 788,122 acre-feet.

In 1957, $744,562 was expended for operation and maintenance of all facilities referred to in the first paragraph of this section. This compares to $688,158 expended in 1956 and $669,089 in 1955. The increased expenditure in 1957 was for a 4 per cent wage increase and a full-scale field experimental application of a chemical known as SS-13, to control water loss through seepage on approximately 8.28 miles of the Coachella Branch of the All-American Canal from Station 294 to Station 730.

Operations were normal at Imperial Dam during the entire year. Trash accumulation at the Dam was light until November when high flow in the river brought excessive amounts of trash and sand into the headworks; however, the trashrack and disposal system operated without difficulty. The desilting basins operated continuously, except for routine maintenance and regular dewatering January through June, and October and November for moss control.

Maintenance work performed during the year included maintenance of mechanical and electrical equipment, sandblasting and painting of gates and water supply tanks, road maintenance, cathodic protection, structural repairs, weed and brush control, sand-hill control, and erosion control. Maintenance of the canal required 16,216 man-hours, and mechanical equipment 21,518 man-hours.

Weed and brush control required the use of truck and boat equipment to burn and spray chemicals along canals and drains. Equipment was used 3,900 hours for chemical work, and 813 hours for burning operations.

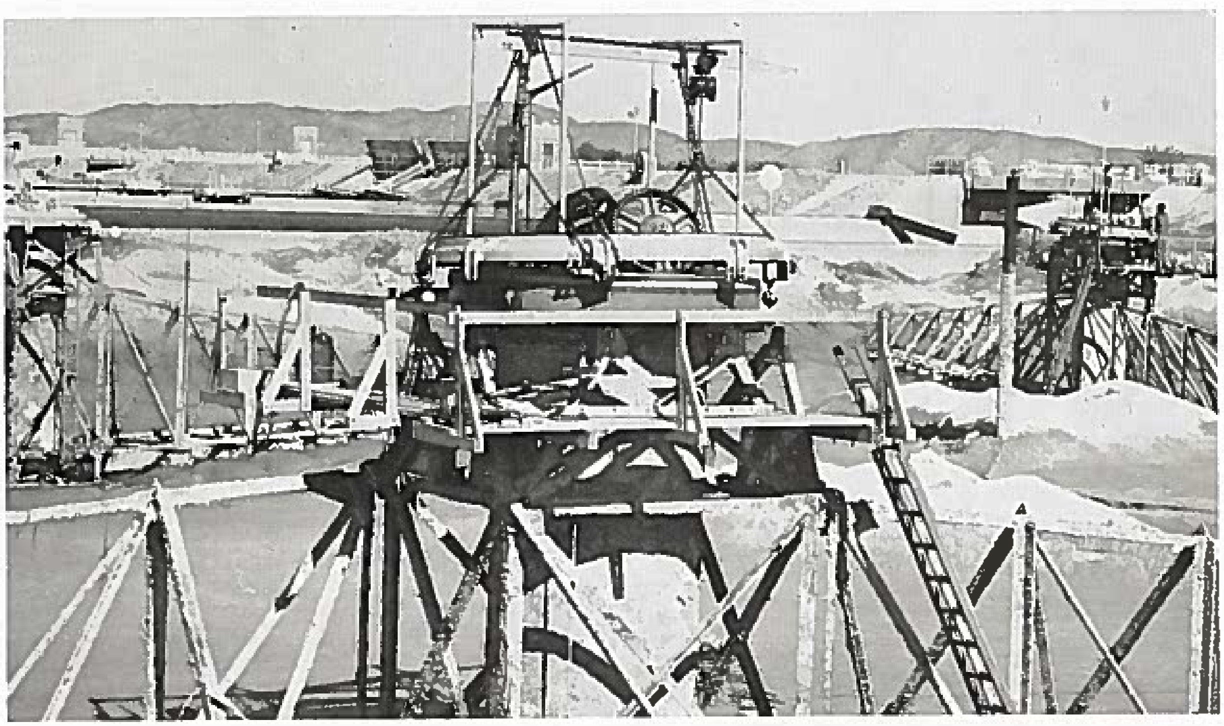
Protection of the canal banks from erosion is accomplished in most locations by placing rock in the affected areas. Such work in 1957 required the use of 5,912 cubic yards of rock. Road surfacing in 1957 required hauling and placing 828 cubic yards of clay. Routine road maintenance is carried on throughout the year requiring the regular use of one motor grader and one sprinkler truck. In locations where sand-hill control is required, a bulldozer is used to supplement the motor grader.

Cathodic protection systems are in use throughout the system to prevent corrosion of the submerged metal gates and other metal parts of the structures that are below the water line. Routine inspection and maintenance of these systems was carried on continuously throughout the year.

During the year, the Engineering Department made a comprehensive water-loss study to determine the amount of water loss through seepage from the Coachella Branch. Laboratory tests on various methods of sediment lining were performed.

From conclusions of the above studies, the following test was made.

All-American Canal Headworks, Desilting Basin No. 3 dewatered, showing south half of basin. When operating, the large sweeps operate slowly causing the silt to be carried to the pedestal in the center from which it is carried through sludge pipes back into the river.



All-American Canal Headworks, Desilting Basin No. 3, Clarifier No. 11. Close up of gear train that operates the sweep.

All-American Canal Drain No. 1-A showing 10 and 30 horsepower pumps which return water to the All-American Canal. Approximately 10 acre feet of water is recovered each day.

Construction scene of new pumping station for All-American Canal Drain 1-A, showing rough subgrade for outlet pipes which consist of one 18 inch line 220 feet long and one 24 inch line 220 feet long. Water recovered by this station is returned to the main canal at the rate of 10 acre feet per day.

Approximately 8.28 miles of the Coachella Branch were treated with Brown Mud Company's chemical, SS-13, as a full-scale field experiment in an attempt to control water loss through seepage. The water was cut out of the Canal October 28, and a dike constructed at Station 720 at 6:15 a.m., October 29. A 400 c.f.s. flow was resumed at 5:40 a.m., October 29. The application of SS-13 was started at 6:30 a.m. and continued at a uniform rate until 2:08 p.m., and then at a diminishing rate until 4:35 p.m. During that time, 306,620 pounds of SS-13 were applied. The treated water was held in the reach until 9:30 a.m., October 31. The mechanics of this application were very successful. Reports on effect of treatment will be made as results from studies become available.

Stairways were installed for safer access to Drops No. 2, 3, 4 and 5 control bridges to replace ladders which were part of the original construction.

A locker and washroom 10 feet by 21 feet with concrete-slab floor and cement-block walls has been constructed as an addition to Basin 2 control house at Imperial Dam.

Prefabricated metal remote control houses 16 feet by 16 feet have been erected and stand-by power generators installed at New River Siphon, Wistaria Check, and West Side Main Turnout. Remote control equipment is to be installed in 1958.

To stabilize the right bank of the All-American Canal between Stations 3097+00 and 3156+40, 5,904 lineal feet of 8-inch tile have been installed.

On February 18, 1957, the Western Division office and yard were moved from Imperial Avenue in Calexico to the new office and yard north of the All-American Canal near Station 3580 at State Highway 98.

IV.

WATER DISTRIBUTION SYSTEM OPERATION AND MAINTENANCE

OPERATION AND MAINTENANCE:

MAIN CANALS

General Comments:

The demand for water during 1957 was 62,904 acre-feet less than in 1956. There were 230,897 orders for water processed, requiring the delivery of 1,949,156 acre-feet of water to the water users. In 1956, there were 245,264 orders processed and 2,012,060 acre-feet of water delivered.

Of the number of orders received in 1957, there were 185,181 for irrigation water and 45,716 for stock water, compared to 198,250 orders for irrigation water and 47,014 orders for stock water in 1956.

Under the regulation for delivery of water to users, which was instituted on March 1, 1956, 89.37 per cent of the total orders for water was delivered on the date for which it was ordered, 10.42 per cent was carried over one day, and 0.21 per cent was carried over two days.

The variation of diversions at Pilot Knob Check in relation to the advanced orders was less than 3.00 per cent.

The elevation of Salton Sea as of December 31, 1957, was .05 lower than on December 31, 1956.

No incident occurred in the operation of the main canal system during the year requiring a major water cutout.

The program of weed control was continued throughout the year on the entire system, by the use of chemicals and burning. This program was expanded considerably over 1956.

The major portion of this work was directed toward the elimination of perennial growth by application of chemicals. The principal operations on burning were on removal of debris following application of chemicals, and on mature annual growth on the channels.

Patrolmen covered 20,576 miles on the canal system on rodent control work.

East Highline Canal:

East Highline Canal is approximately 50 miles in length, with 189 operational structures required for the delivery of water to the lateral canal system. The maximum daily diversion to East Highline Canal from the All-American Canal for 1957 was 2,421 second-feet, compared to 2,108 second-feet for 1956, and 2,115 second-feet for 1955.

The water was out of the East Highline Canal system from January 14 to 18, inclusive, for general inspection and repairs to structures.

The operation and maintenance of East Highline Canal for 1957 required an expenditure of $110,860, compared to $132,962 for 1956, and $101,781 for 1955.

East Highline No. 1 Side Main Canal:

East Highline No. 1 Side Main Canal was transferred to the lateral canal classification in 1957.

Central Main Canal:

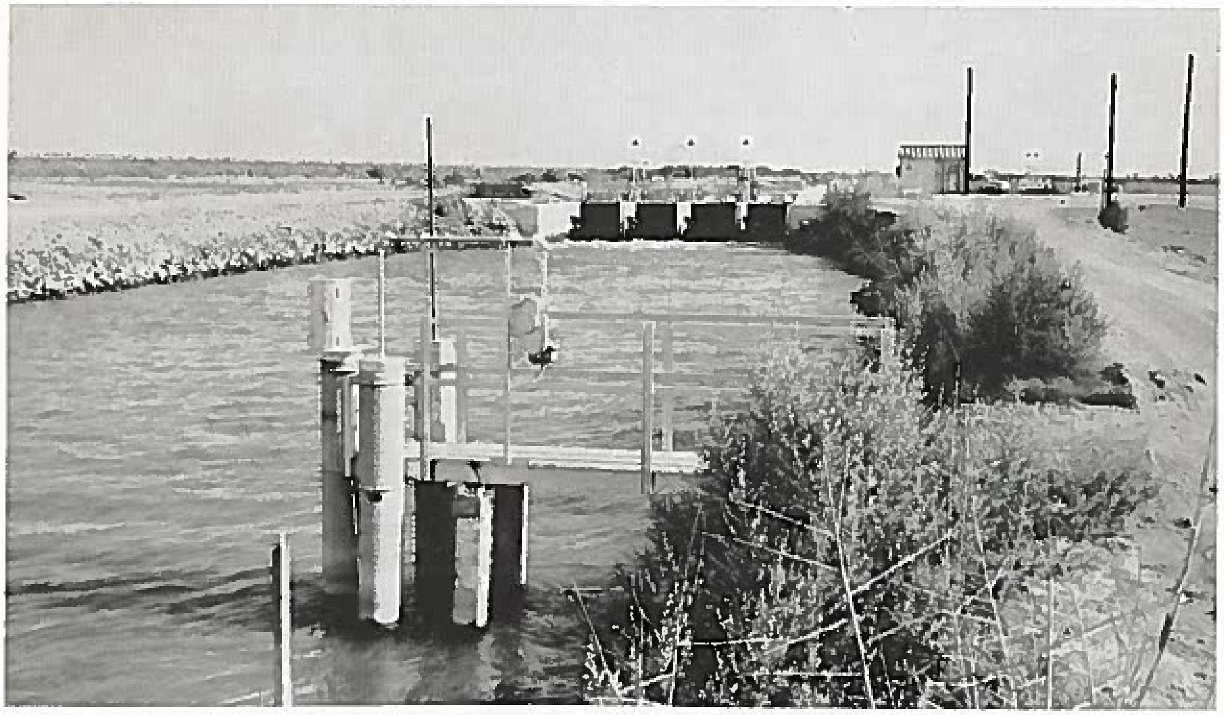
Central Main Canal is approximately 29 miles in length, with 79 operational structures required for delivery of water to the lateral canals. The maximum daily diversion to Central Main Canal from the All-American Canal for 1957 was 1,325 second-feet, compared to 1,135 second-feet for 1956, and 1,256 second-feet for 1955.

The operation and maintenance of Central Main Canal for 1957 required an expenditure of $64,408, compared to $62,172 for 1956, and $70,168 for 1955.

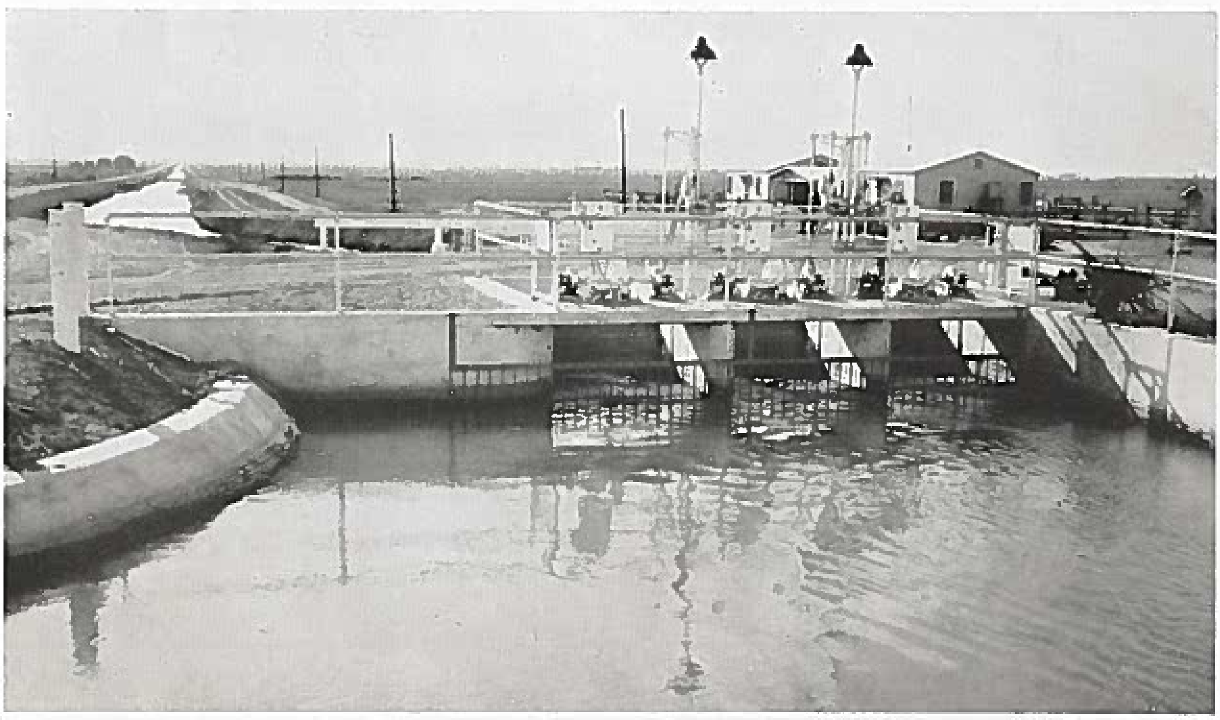
West Side Main Canal:

West Side Main Canal is approximately 45 miles in length, with 168 operational structures required for the delivery of water to the western part of the Calexico and Imperial Divisions and all of the Westmorland Division. The maximum daily diversion for water on West Side Main Canal for 1957 was 1,175 second-feet, compared to 1,160 second-feet for 1956, and 1,197 second-feet for 1955.

The operation and maintenance of West Side Main Canal for 1957 required an expenditure of $59,048, compared to $71,445 for 1956, and $80,916 for 1955.



View of floatwell platform and down stream controls for operation of the Vail and East Highline Canals by remote control from Imperial Headquarters. Installation is in the East Highline Canal below the Nectarine Check.



View of Vail Supply Canal Heading at East Highline Canal showing controls for operation by remote control from Imperial Headquarters.

Vail Canal:

Vail Canal is approximately 18 miles in length, with 93 operational structures required for the delivery of water to Vail Lateral Canals. The Vail System serves the area west of Alamo River to Salton Sea in the Calipatria Division. The maximum daily diversion for water on Vail Canal for 1957 was 256 c.f.s., compared to 290 c.f.s. for 1956, and 325 c.f.s. for 1955. No diversions were made from Alamo River to Vail Canal in 1957.

The operation and maintenance of Vail Canal for 1957 required an expenditure of $35,393, compared to $23,661 for 1956, and $23,573 for 1955.

Brush and Weed Control:

Brush and Weed Control on main canals by burning for 1957 covered 3 miles, compared to 7 miles in 1956, and 759 miles in 1955. Labor, equipment, and material costs for burning in 1957 were $267, compared to $246 for 1956, and $21,181 for 1955.

The use of chemicals on brush and weed control work on channels and right of way for 1957 covered 1,730 acre miles, compared to 1,661 acre miles for 1956, and 1,204 acre miles for 1955. Labor, equipment, and material costs in 1957 were $54,646, compared to $48,613 for 1956, and $33,215 for 1955. Three kinds of chemicals were used on weed and brush control work for the different types of growth. The type and stage of growth, and the season of the year applications are made, determine the kind of chemical to be used.

Moss Control:

Work on the control of moss on the main canals for 1957 required an expenditure of $7,744, compared to $2,227 for 1956, and $3,710 for 1955.

LATERAL CANALS

General Comments:

The lateral canal system consists of 1,524 miles, the operation and maintenance of which is carried on by the 7 operating divisions. There are 11,049 structures on the lateral canal system, of which 6,587 are concrete, 913 are rubble, and 3,549 are wooden. Each year a portion of the existing wooden structures is being replaced with concrete structures. Minor repairs were made to 1,338 structures, and major repairs to 139 structures.

General maintenance of the lateral canals required 140 miles of cleaning by labor crews, 148 miles of cleaning by draglines, and 399 miles of cleaning by bucket-line dredges. The Brisco sloper was used to clean 209 miles, and 1,214 miles of canal banks and operational roads were graded in connection with maintenance operations.

Brush and Weed Control:

Brush and weed control work by burning on the lateral canals in 1957 was 218 miles, compared to 716 miles for 1956, and 3,221 miles for 1955. Labor, material, and equipment costs for 1957 were $9,848, compared to $18,824 for 1956, and $72,957 for 1955.

Aromatic-oil spray in 1957 was applied on 547 miles, compared to 275 miles for 1956, and 253 miles for 1955. Labor, material, and equipment costs for 1957 were $17,700, compared to $12,069 for 1956, and $10,242 for 1955.

Brush and weed control by chemical spraying on channel and right of way in 1957 covered 5,800 acre miles, compared to 4,839 acre miles for 1956, and 3,832 acre miles for 1955. Labor, material, and equipment costs for 1957 were $202,357, compared to $145,236 for 1956, and $111,549 for 1955. The same methods of chemical control were used on the lateral canals as on the main canal system. The kind of chemical used is subject to the type of growth to be treated and the season of the year the applications are made.

Moss Control:

Moss control work on the lateral canal system for 1957 required an expenditure of $72,021, compared to $62,668 for 1956, and $55,824 for 1955. Four methods of control were used on moss work: moss plow, burning, chemical, and hand labor. The expenditure for each type of operation was moss plow $20,317, burning $118, chemical $43,325, and hand labor $8,261.

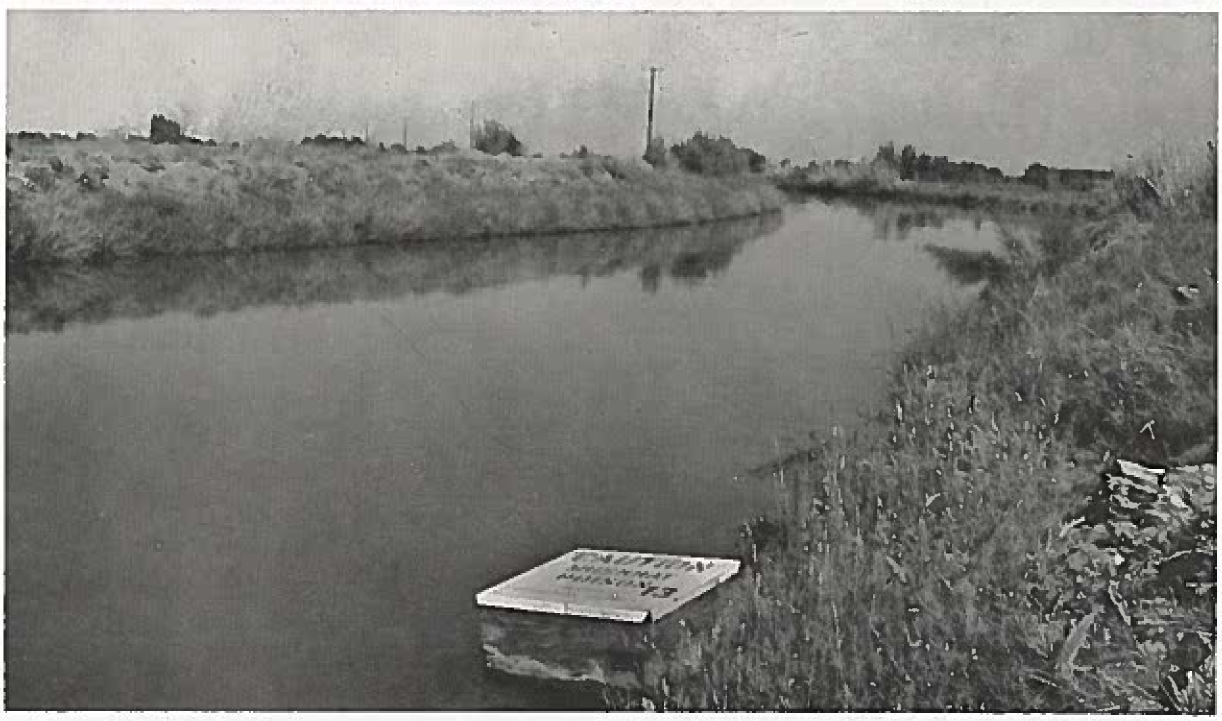
CONSTRUCTION:

MAIN CANALS

General Comments:

Construction work on main canals in 1957 required an expenditure of $499,688, compared to $648,402 for 1956, and $368,497 for 1955.

"Z" Lateral. Installing concrete lined section which is 1.75 miles in length and has a capacity of 25 cubic feet per second.



Box containing poison used in rodent control work for eliminating muskrats from canal system.

East Highline Canal:

Construction work on East Highline Canal for 1957 required an expenditure of $28,163, compared to $11,095 for 1956, and $68,249 for 1955.

The major items of construction on East Highline Canal consisted of replacement of 4 deliveries and 4 headings: Standard, Malva Lateral 2, Marigold and Mullen, at a cost of $18,689. Oasis and Orient Headings were replaced on prior year's budget at a cost of $6,604, and the completion of Myrtle Weir at a cost of $2,870.

Central Main Canal:

The expenditure on construction and reconstruction work on Central Main Canal for 1957 was $16,616, compared to $59,227 for 1956, and $60,227 for 1955. A new control structure, Drop No. 8, was installed north of Tamarack Road at a cost of $7,813. Replacement of Drop No. 3 at McCabe Road was started the latter part of the year with an expenditure of $1,103 on 1957 budget and $7,700 nonbudget.

West Side Main Canal:

The construction work on West Side Main Canal for 1957 required an expenditure of $5,070, compared to $8,030 for 1956, and $26,729 for 1955.

The major items consisted of the replacement of a new control structure below Spruce Heading at a cost of $3,488, and replacement of Trifolium Lateral 2 Heading at a cost of $1,582.

Vail Canal:

The construction work on Vail Canal for 1957 required an expenditure of $7,754, compared to $319,018 for 1956, and $186,723 for 1955. The check at Vail Lateral 2 Heading was replaced at a cost of $2,169, and $5,558 was expended on right of way and railroad crossings on prior year's budget.

Rositas Supply Canal:

The Board of Directors on July 5, 1955, approved plans for the Rositas Supply Canal Project, and during 1957 an expenditure of $442,085 was made, and by December 31, 1957, was approximately 75.0 per cent complete, with that portion from East Highline Canal to the connection with the old Rositas Canal being 99.0 per cent complete.

Rositas Supply Canal with turnout structure in the west bank of East Highline Canal parallels Palmetto Lateral Canal to Alamo River, approximately 9.50 miles, and upon completion, will furnish water to approximately 21,500 acres in the Mesquite Lake area, which now receives water from the Alamo River.

LATERAL CANALS

The construction program on replacement of existing wooden checks and delivery gates on the lateral canal system, as they become inoperative, required an expenditure of $332,083 in 1957, compared to $330,145 for 1956, and $288,-646 for 1955.

During 1957, the new construction items required an expenditure of $81,378, compared to $88,604 for 1956. Of the 682 structures installed, as listed below, 77 were additions to the system and 605 were replacements:

Nine new concrete deliveries were installed, 378 wooden deliveries replaced with concrete, 2 replaced with wood, and 1 replaced with rubble; 7 new concrete checks were installed, 214 wooden checks replaced with concrete, and 1 replaced with wood; 1 new spillway was installed, 1 bridge, 3 spillways, and 1 road crossing were replaced; 60 new concrete control structures were installed and 4 wooden control structures replaced with concrete.

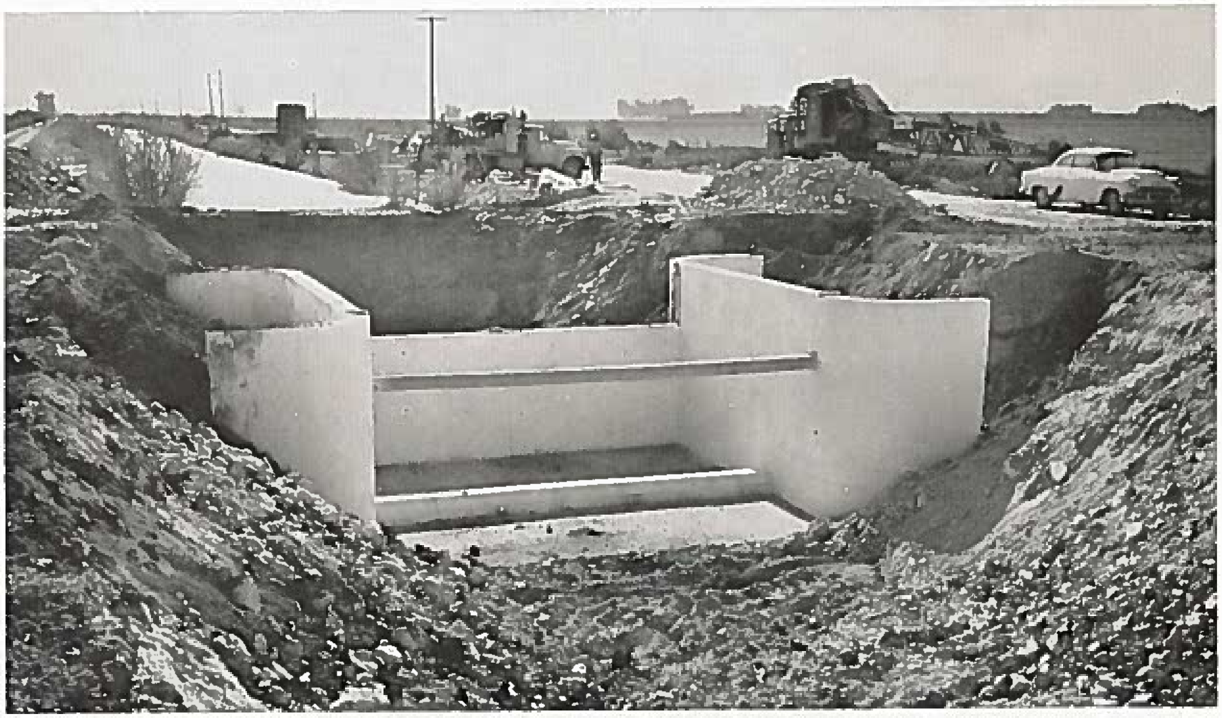
Under special construction, 1 flume, 1 check (nonbudget), and 1 crossover were replaced.

In connection with betterment of District's and landowners' facilities, District's Regulation No. 34 of Rules and Regulations Governing the Distribution and Use of Water provides for the rearrangement or exclusion of irrigation lateral termini to reduce or eliminate maintenance costs. There was a recorded agreement to cover each individual job with the District's participation being $19,793, covering 6.29 miles. The District's participation in this 6.29 miles resulted in the decrease of 4.05 miles of lateral canals to be operated and maintained by the District.

Private contractors installed 135.40 miles of private concrete-lined ditches for the landowners during 1957, compared to 130.10 miles in 1956, and 105.54 miles in 1955; this, added to installation in prior years, makes a total of 566.60 miles of concrete-lined ditches installed to date. The District furnished the engineering required prior to installation of the lining. There were 308 field investigations made in 1957 in connection with the concrete-lined head ditches, compared to 321 in 1956, and 297 in 1955.

V.

DRAINAGE SYSTEM



Construction Central Main Drop No. 8. View upstream before backfilling. Installed for erosion control. structure is 25 feet wide, 12 feet deep and 29.5 feet long.

Central Main Canal Drop No. 8. View upstream of completed structure which was installed for erosion control. Structure is of reinforced concrete, 25 feet wide, 12 feet deep and 29.5 feet long.

OPERATION AND MAINTENANCE:

MAIN DRAINS

General Comments:

The District's program on the development of a drainage system contemplates the operation and maintenance of a drain outlet to each Governmental subdivision of approximately 160 acres; 93 per cent of the land is now so served. The main drain system is distributed over the area and serves as a transportation channel for the lateral system and drain outlets for the area in which they are located. The main drain system, exclusive of New River and the Alamo River, consists of 558 miles of channels.

The expenditure for the operation and maintenance of the main drain system in 1957 was $362,482, compared to $311,904 for 1956, and $344,293 for 1955. Of this expenditure in 1957, $203,249 was for maintenance of main drains; $70,088 for maintenance of main drain structures; $29,382 for maintenance of drain pumps; $16,066 for maintenance of the Alamo and New Rivers, which serve as drainage outlets for the drainage system; and $6,688 for salinity investigations.

General maintenance on main drains included 14,115 man-hours on general cleaning of drains with labor crews. There were 132 miles cleaned with draglines, and motor graders and bulldozers were used to grade 155 miles on main drain banks and operational roads.

Brush and Weed Control:

Brush and weed control work on the main drain system was carried on by burning and chemical control.

Burning operations in 1957 covered 235 miles, compared to 689 miles for 1956, and 1,540 miles for 1955. Labor, material, and equipment costs in 1957 were $5,930, as compared to $16,914 for 1956, and $31,527 for 1955.

There was no aromatic-oil spraying during 1957 as it was found that chemicals were more economical and furnished control for a longer period.

Chemical control in 1957 covered 1,372 acre miles, compared to 787 acre miles for 1956. Labor, material, and equipment costs in 1957 were $53,512, as compared to $27,434 in 1956.

Three kinds of chemical control were used on the main drains; the type and stage of the growth and the season of the year applications are made determine the kind of chemical to be used.

Moss Control:

Moss control work on the main drain system in 1957 required an expenditure of $47,530, compared to $60,144 for 1956, and $53,170 for 1955. Of this cost for 1957, $36,495 was for chemical control and $11,035 for hand labor and mechanical methods.

LATERAL DRAINS

General Comments:

The District's lateral drain system is designed to provide outlets for open or tile drains for each Governmental subdivision of approximately 160 acres. The lateral drain system is operated and maintained by the 7 operating divisions, and consists of 814 miles. There are 597 structures located throughout the lateral drain system, of which 417 are concrete, 45 rubble, 87 wooden, and 48 a combination of wood and other material.

General maintenance on the lateral drains included cleaning 32 miles with labor crews, 202 miles with draglines, and 36 miles with bucket-line dredges. Motor graders and bulldozers were used to grade 305 miles on lateral drain banks and operational roads.

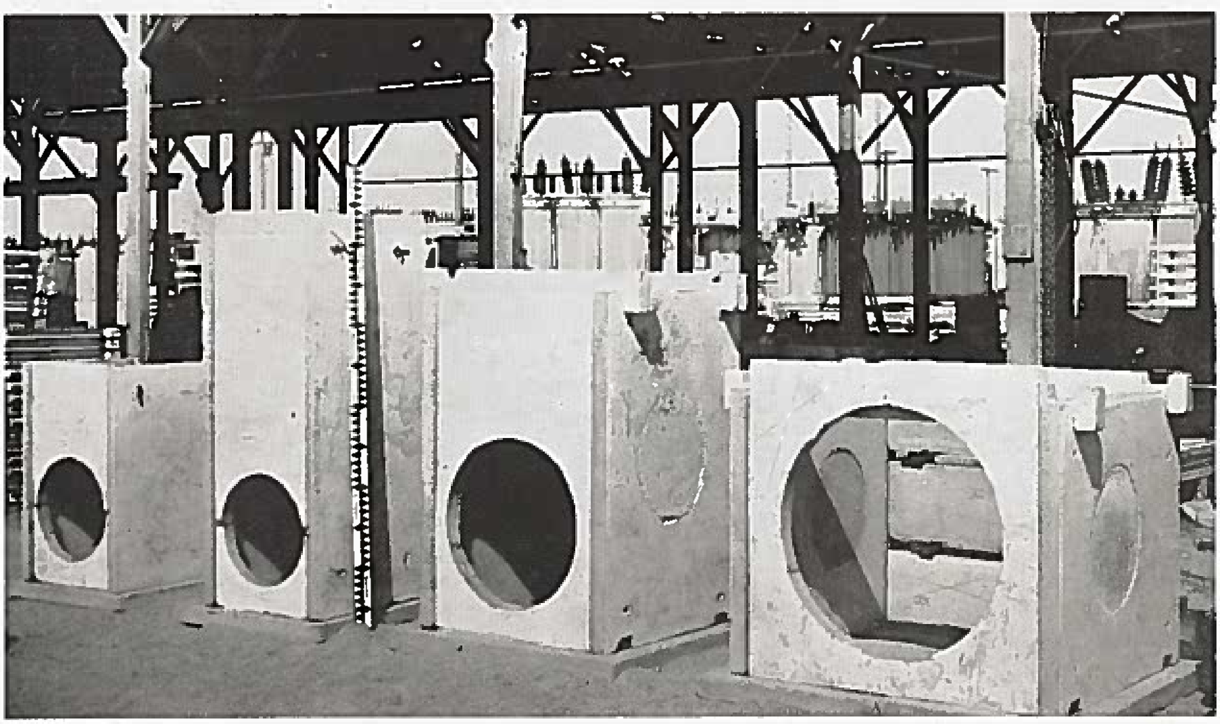
Brush and Weed Control:

Brush and weed control work on the lateral drain system in 1957 consisted of burning 84 miles of lateral drains, compared to 751 miles for 1956, and 979 miles for 1955. Labor, material, and equipment costs in 1957 were $3,044, compared to $20,850 for 1956, and $18,349 for 1955.

Aromatic-oil spray was used in places where the chemicals could not be used, and in 1957, 45 miles of drains were sprayed, as compared to 10 miles for 1956, and 61 miles for 1955. Labor, material, and equipment costs in 1957 were $4,197, compared to $2,280 for 1956, and $2,815 for 1955.

Chemical control work on lateral drains for 1957 covered 669 acre miles, compared to 1,427 acre miles for 1956, and 1,153 acre miles for 1955. Labor, material, and equipment costs in 1957 were $28,858, compared to $64,560 for 1956, and $35,401 for 1955.

Spray rig in operation along Strout Drain for weed and brush control with chemical solution.

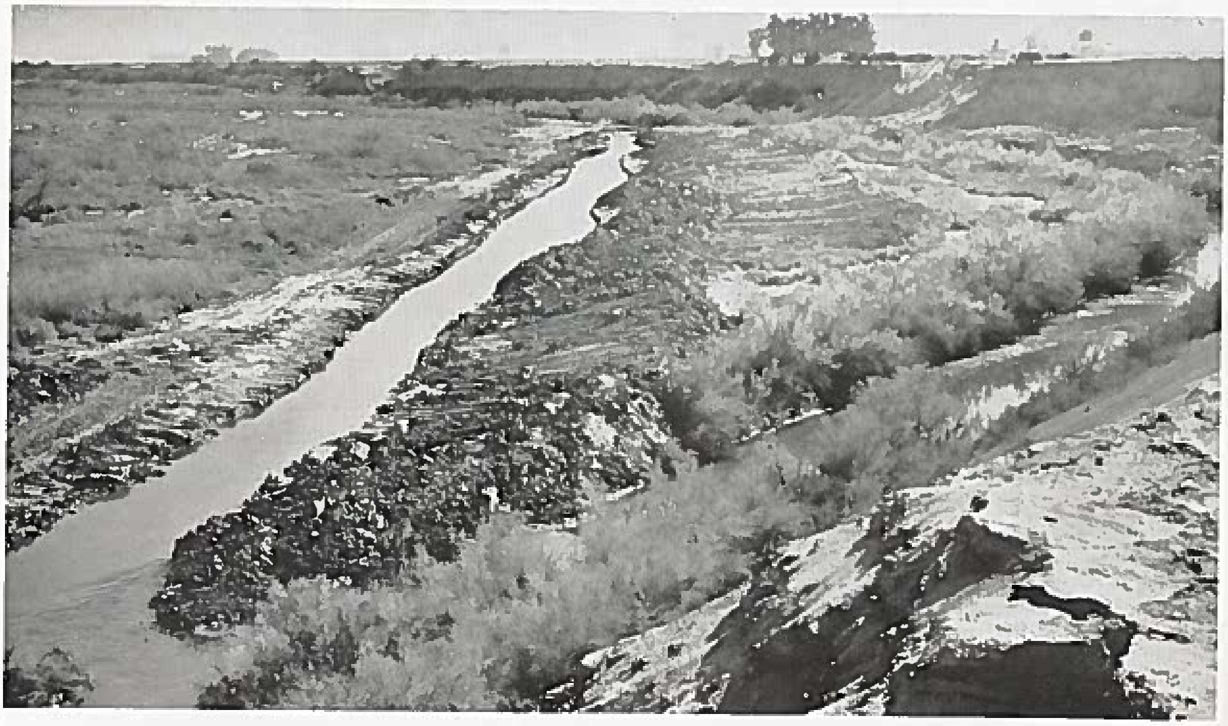


Prefabricated concrete well boxes for use with concrete pipe as drain outlets. Boxes are of various sizes in order to accommodate the different sizes of pipe used.

Construction of Holtville Main Drain Drop No. 5 (at Holtville 8 Drain outlet). Installed to control erosion of channel, structure is 25 feet long, 12 feet deep, 20 feet 3 inches wide.

Construction of Holtville Main Drain, Drop 5A, Station 182 (east of railroad). Installed to control erosion of channel. Structure is 25 feet long, 12 feet deep, 20 feet 3 inches wide.

New River channel change near center of Section 1, 17-13, completed December 1957. The river channel was changed for a distance of approximately 1,000 feet in order to alleviate an erosion condition caused by drainage return flow from the adjoining land.



Channel change of New River near center of Section 1, 17-13. Completed December 1957.

Moss Control:

Moss control work on the lateral drain system for 1957 required an expenditure of $13,145, compared to $7,197 for 1956, and $5,765 for 1955. Three methods of control were used on moss work: moss plow, chemical, and hand labor. The expenditure for each type of operation was moss plow $3,687, chemical $7,907, and hand labor $1,551.

CONSTRUCTION:

MAIN AND LATERAL DRAINS

The total expenditure on construction work on the main and lateral drain system for 1957 was $365,907, compared to $392,709 for 1956, and $347,943 for 1955. The distribution of the total cost for the year is as follows: $56,599 for engineering on District drains; $126,002 for engineering on private drains, the major portion of which was in connection with farm-tile installations; $15,079 for acquisition of right of way; $12,939 for equipment and facilities; $158,351 for construction costs, which include $2,444 for railroad crossings; and $6,724 for County road crossings.

There were 1.80 miles of main drains and 2.95 miles of lateral drains constructed during the year. To provide a more efficient drainage system, there were 3.99 miles of lateral drains reconstructed and 13.36 miles of lateral drains deepened.

In those instances where it was not practical to provide gravity outlets for farm-tile drains, the District installed 5 tile effluent sump-pump outlets in 1957, making a total of 85 sump pumps in operation on December 31, 1957.

There were 2 drain crossings replaced under the Southern Pacific railroad.

Private contractors installed 560.97 miles of private farm tile for the landowners during 1957, on which the District and the Soil Conservation Service co-operated with the landowners by supplying the engineering required and inspection of the material and workmanship during the installation.

The total mileage of drains constructed during 1957 is as follows:

Miles of open drains constructed by Imperial Irrigation District	4.75
Miles of open drains reconstructed and deepened by Imperial Irrigation District	17.35
Miles of private drains constructed by contractors	.98
Miles of private drains cleaned by contractors	31.50
Miles of farm-tile drains constructed by contractors	560.97

The total mileage of drains as of December 31, 1957, is as follows:

Miles of District main drains	558.28
Miles of District lateral drains	813.95
Miles of farm-tile drains	6,339.95

VI.

INVENTORY OF AREAS RECEIVING WATER SERVICE DURING 1957

GENERAL COMMENTS:

The annual inventory of areas receiving water service, including crop plantings and other data pertaining to the area served by the District, was issued in December 1957. The gross area in crops in 1957 was $759,456, an increase of 7,249 acres over 1956. The net area irrigated also increased; the 1957 area being 494,234 acres as compared to 482,374 in 1956.

The following tabulation lists the many crops under cultivation in the irrigated area served by Imperial Irrigation District and also includes a summary of the area served and the present undeveloped area.

CROP SURVEYS:

Field Crops:	March	June	Sept.	Dec.
Alfalfa	161,206	155,308	107,808	134,326
Alfalfa (Seed)		3,328	834	172
Atlas Sargo		110	110	
Barley	101,084	24,800	402	35,194
Bermuda	496	498	547	605
Blue Panicum Grass (Seed)		8	8	8
Broom Corn	82	102	55	
Cattails & Millett		680		640
Clover	648	445		1,264
Clover (Seed)		98		
Cotton	11,353	40,834	42,496	34,915
Field Corn	532	308	445	70
Flax	27,776	27,558		18,171
Flowers (Mixed)	10	10		29
Flowers (Seed)	2	2		2
Hegari		60	75	
Milo	1,091	18,989	31,402	5,096
Oats	2,003	708		900
Red Top Cane				133
Rex Cane	150	447	447	
Rice			148	48
Sesbania		1,072	2,569	474
Sorghum		16	16	
Soy Beans		132	80	10
Sudan	27	1,720	3,999	833
Sugar Beets	46,433	31,666	6,393	48,697
Sugar Cane		300	300	
Sunflowers		15		
Wheat	1,464	73		429
Wild Millett			1,140	160
TOTALS	354,357	309,287	199,349	282,176

Garden Crops:	March	June	Sept.	Dec.
Banana Squash	40			
Black-Eyed Peas			71	
Broccoli	21	15	193	489
Broccoli (Seed)	6	2		
Cabbage	516		788	1,370
Cantaloupes	4,430	3,405	395	1,777
Carrots	3,627	153	922	3,609
Cauliflower				2
Celery	2	2		
Cucumbers			301	
Egg Plant	5	15		
Endive				7
Fava Beans	68			40
Garlic	370	115		457
Horse Beans	15	15		87
Lettuce	4,817		8,701	34,367
Lettuce (Seed)	220	449		11
Melons (Mixed)	85	71		9
Mustard			116	116
Okra	7	35		
Onions	1,002	315	226	1,530
Onions (Bulb)	54			
Onions (Seed)	367	470	55	231
Persian Melons	5	5		
Potatoes	180	20		
Radishes (Seed)				10
Romaine Lettuce	38		50	80
Safflower	80			
Spring Peas				75
Squash	885	30	605	1,370
Stock	16			18
Strawberries				3
Sweet Potatoes	68	68	3	1
Swiss Chard	5			
Swiss Chard (Seed)		5		
Table Beets	10	10		46
Table Beets (Seed)	33	33		
Tomatoes	5,051	2,662	1,680	2,831
Vegetables (Mixed)	18	16		91
Vegetables (Seed)		1		
Watermelons	4,581	3,356		486
TOTALS	26,622	11,268	14,106	49,113

Garden Crops:	March	June	Sept.	Dec.
Banana Squash	40			
Black-Eyed Peas			71	
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Broccoli (Seed)	6	2		
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Safflower	80			
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Squash	885	30	605	1,370
Stock	16			18
Strawberries				3
Sweet Potatoes	68	68	3	1
Swiss Chard	5			
Swiss Chard (Seed)		5		
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Table Beets (Seed)	33	33		
Tomatoes	5,051	2,662	1,680	2,831
Vegetables (Mixed)	18	16		91
Vegetables (Seed)		1		
Watermelons	4,581	3,356		486
TOTALS	26,622	11,268	14,106	49,113

Permanent Crops:	March	June	Sept.	Dec.
Asparagus	752	852	822	966
Citrus (Mixed)	113	113	113	114
Citrus (Nursery)		1	1	1
Dates	194	120	120	120
Grapefruit	1,017	853	853	853
Grapes	163	78	78	78
Lemons	290	289	89	91
Lemons (Nursery)		7	1	1
Lemons (Seedlings)	6			
Nursery	5	5		
Nursery Stock	1	1		
Oranges	307	310	310	310
Pecans	107	97	97	97
Permanent Pasture	160	168	346	307
Tangerines	226	223	223	223
TOTALS	3,341	3,117	3,054	3,162
GRAND TOTALS	384,320	323,672	216,509	334,451

Average Number of Farms Reported	6,038
Average Number of Owner-Operated (57.45%)	3,469
Average Number of Tenant-Operated (42.55%)	2,569
Average Area-Acres	86.17

SUMMARY OF AREAS SERVED:

Gross Area In:

Field Crops	679,317
Garden Crops	76,386
Permanent Crops	3,753
Total Gross Area in Crops	759,456
Less Duplicate Area	265,222
Net Area Irrigated	494,234
Area of Farms in Feed Lots, Homes, Corrals, Etc.	12,945
Area in Cities, Towns, Airports	10,554
Area Being Reclaimed	3,338
Total Area Receiving Water	521,071
Area in Rivers, Canals, Drains, Roads, Railroads	61,208
Area Below -230 Salton Sea Reserve Boundary and Area Covered by Salton Sea	42,000
Undeveloped Area of Imperial, West Mesa, East Mesa and Pilot Knob Mesa	282,990
Gross Area of District	907,269

VII.

POWER DIVISION

GENERAL COMMENTS:

The service area of the District includes all of Imperial County and a large part of Riverside County, in which is located the Salton Sea and a large expanse of unpopulated desert area, a small portion of which is currently under development. Development within the 6,614 square mile power service area has resulted in widely dispersed settlements; however, it is estimated that 99 per cent of all the people residing within the area receive electric service from the District.

The average number of customers receiving service in 1957 was 30,761, compared to 20,392 in 1947; at the close of the year there were 31,020 customers receiving electric service. Sales of electric energy for the year were 544,186,685 kilowatt-hours for all classes of customers, compared to 491,605,688 kilowatt-hours in 1956.

Total generating capacity reached a new peak on October 28, 1957, when Unit No. 3 of the El Centro Steam-Electric Station was placed in service, thus, making the installed capacity 173,400 kilowatts. The completion of this unit marked the first time since 1946 that the District has not been engaged in a major construction program involving generation facilities.

During the past 12 years the District has continued to expand its system to meet the increased demand for service so that power would be available at any point in the service area without undue delay. Plans are now underway which will provide facilities to meet the demand for power whenever the need arises.

OPERATION AND MAINTENANCE:

The cost of operation and maintenance of the District's power system in 1957 was $3,926,607, compared to $3,603,492 in 1956, an increase of $323,115. Major items where an increase occurred were fuel costs and purchased power.

The cost of hydraulic generation increased $42,230 in 1957, primarily as a result of the operation of Pilot Knob Hydro Plant which was completed January 28, 1957. Operation and maintenance costs at Brawley Diesel Plant were reduced $10,604 in 1957, the total cost for the year being $71,235. Steam generation costs were reduced $74,850, the total cost for the year being $1,187,817. These reductions in Diesel and steam generation costs were possible as a result of energy generated at Pilot Knob Hydro Plant and because of additional energy being made available to the District from Davis Dam.

As a result of the additional energy available to the District from Davis Dam, the cost of purchased power in 1957 was $971,723, an increase of $316,786.

The cost of operation and maintenance of the District's transmission system was $147,924 in 1957, a reduction of $11,496 over 1956. Distribution expense in 1957 was $557,722, an increase of $19,143 over 1956 costs. Customer accounting and collecting for 1957 was $264,138, an increase of $8,632; sales promotion increased from $70,045 to $84,588, and administration and general expense decreased from $464,039 to $453,911, when compared to 1956.

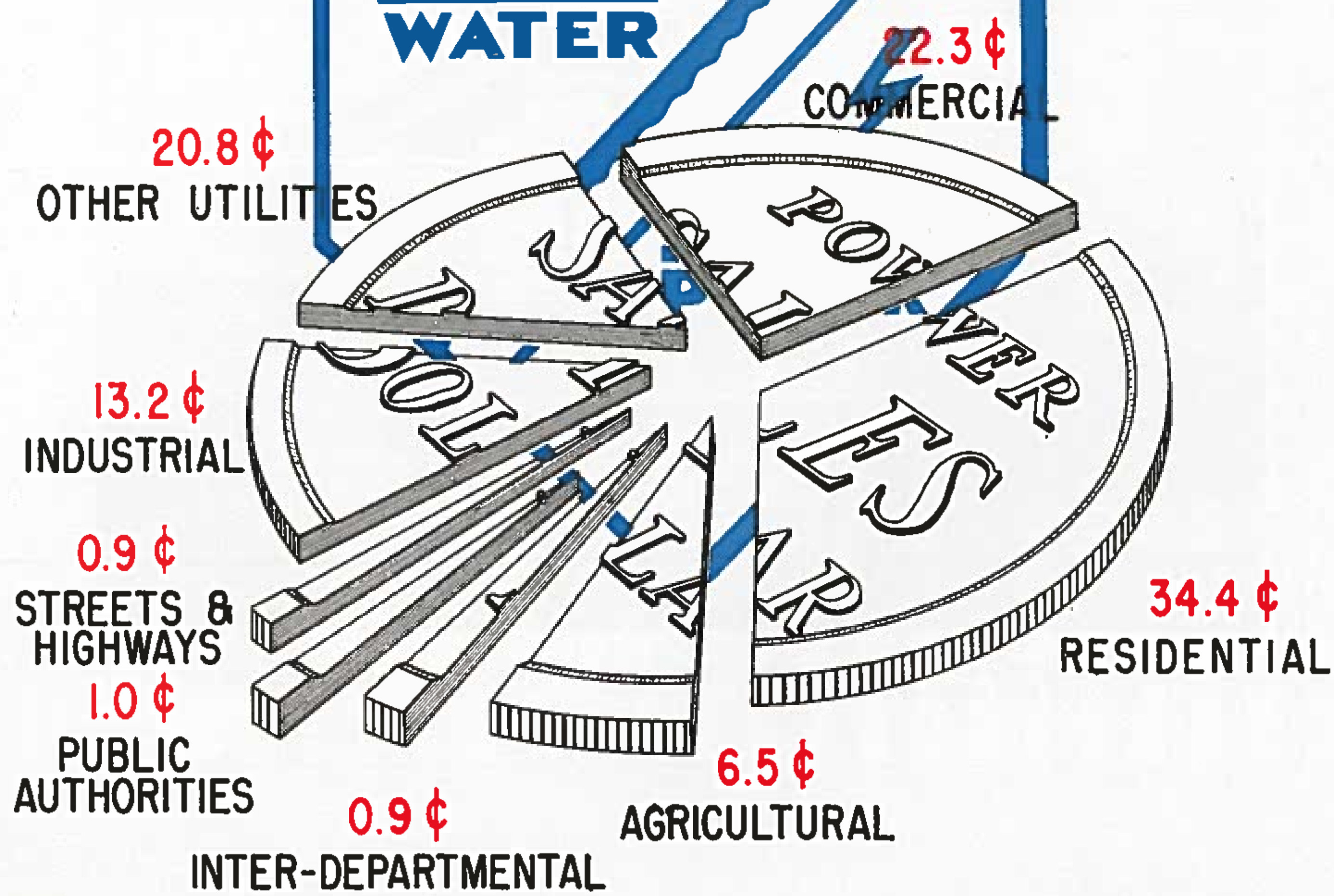
In accordance with the District's operating procedure, each generating unit is taken out of service at some time during the year and disassembled for inspection. At that time, maintenance or replacement of parts is accomplished thereby more nearly assuring trouble-free operation for the ensuing 12-month period. In accordance with this procedure, all generation units were inspected during the year and routine maintenance performed.

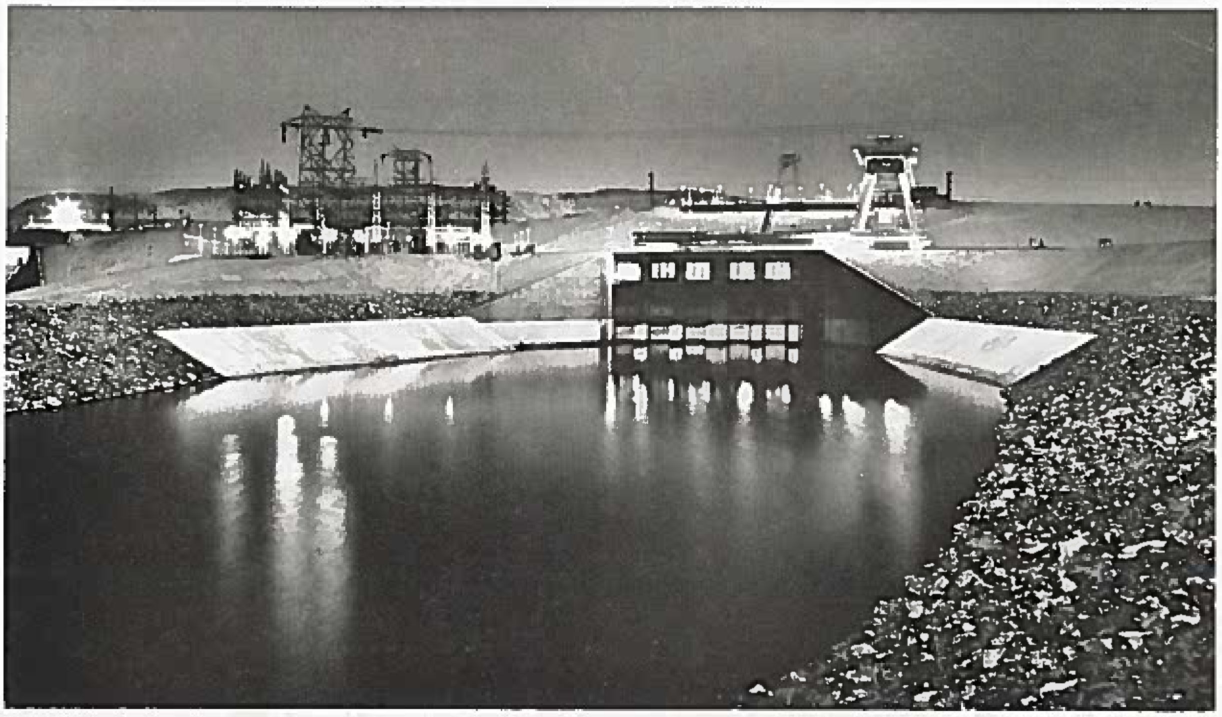
Under the District's meter test program, 5,012 meters were tested in the meter shop in 1957, and with use of mobile test equipment 196 were tested in the field. Transformer shop personnel rewound 20 distribution transformers having a capacity of 293½ kva; tested, painted, and reconditioned 856 others.

IMPERIAL IRRIGATION DISTRICT

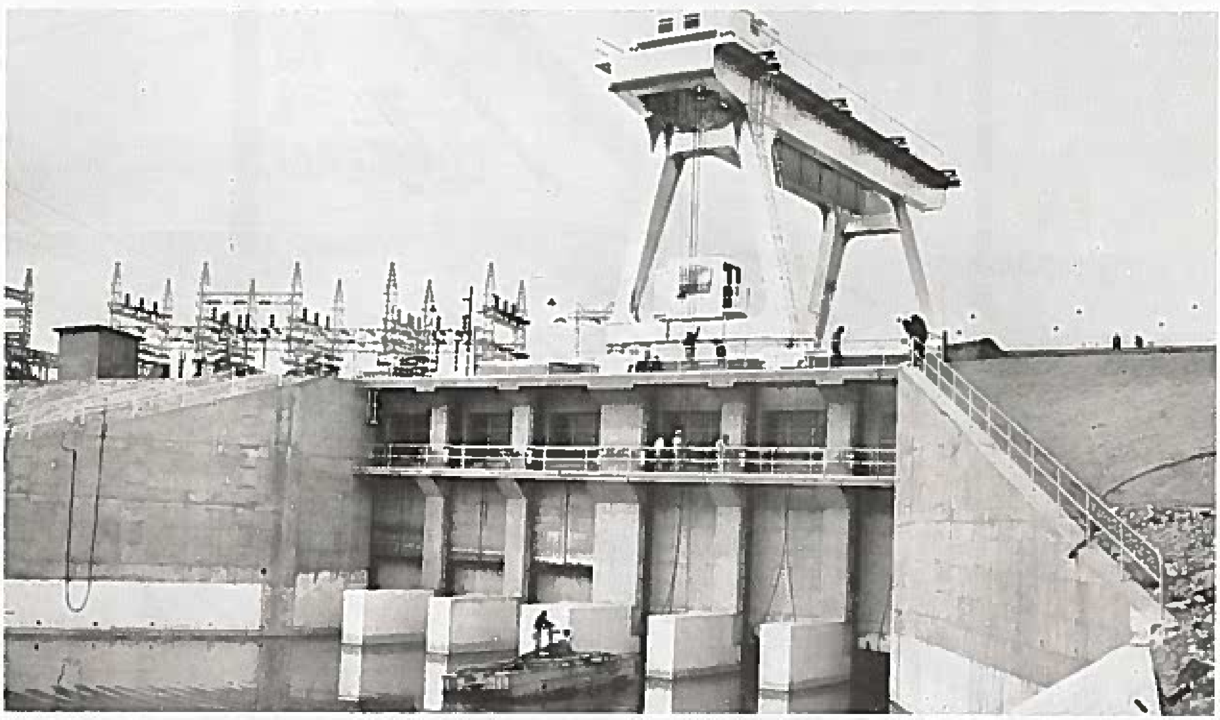
Power Sales 1957

RESIDENTIAL	$ 2,754,066	34.4 %
COMMERCIAL	$ 1,786,141	22.3 %
OTHER UTILITIES	$ 1,663,655	20.8 %
INDUSTRIAL	$ 1,060,084	13.2 %
AGRICULTURAL	$ 518,104	6.5 %
PUBLIC AUTHORITIES	$ 79,223	1.0 %
INTER-DEPARTMENTAL	$ 73,684	0.9 %
STREET & HIGHWAY	$ 69,888	0.9 %
TOTAL	$ 8,004,845	100.0 %

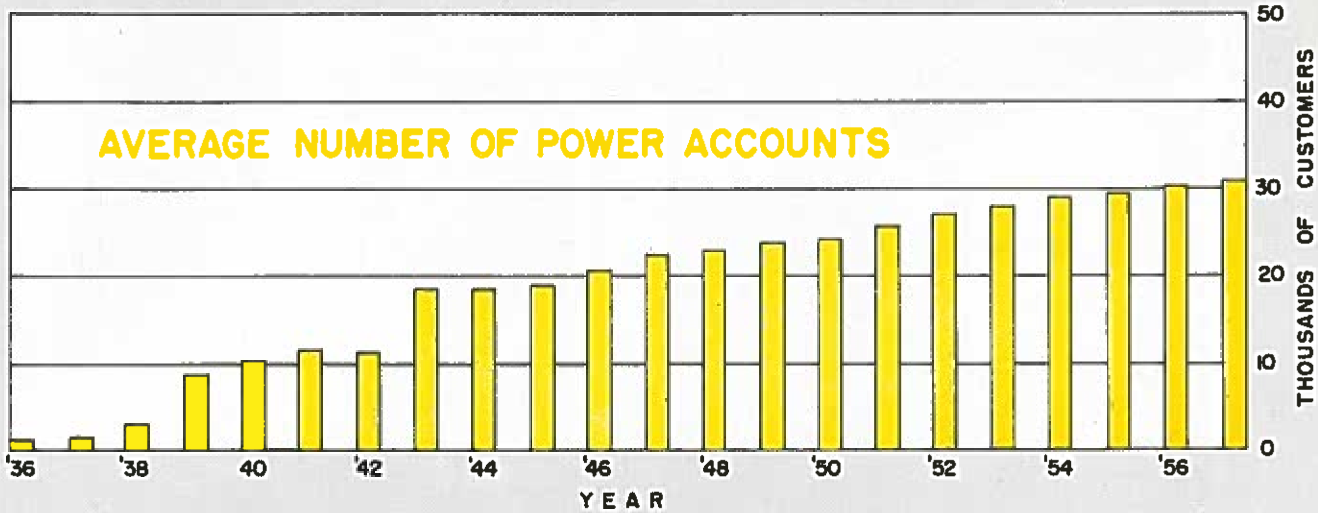


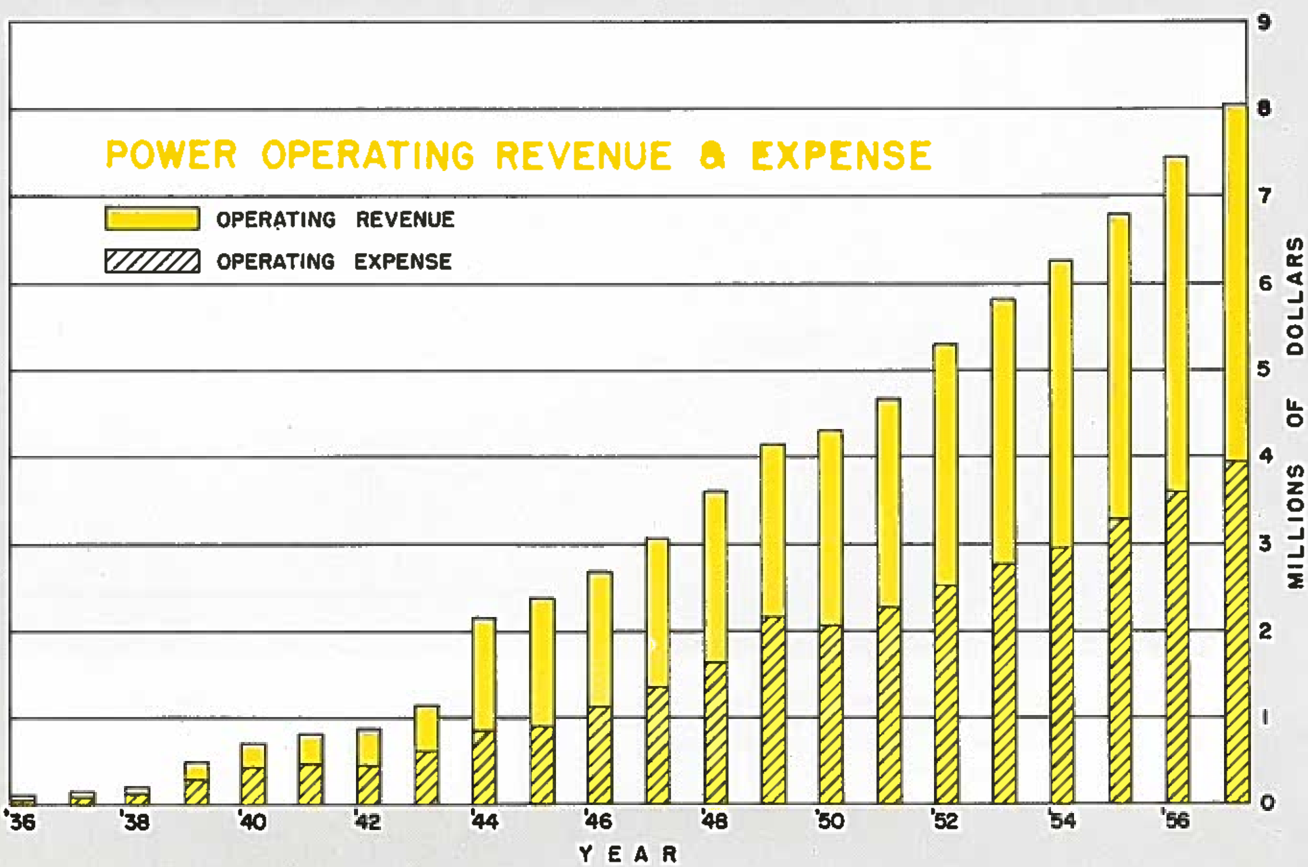


Pilot Knob Hydro Plant. Night view of project. Completed January 28, 1957, first placed in operation January 31, 1957. This plant has a capacity of 33,000 kilowatts.

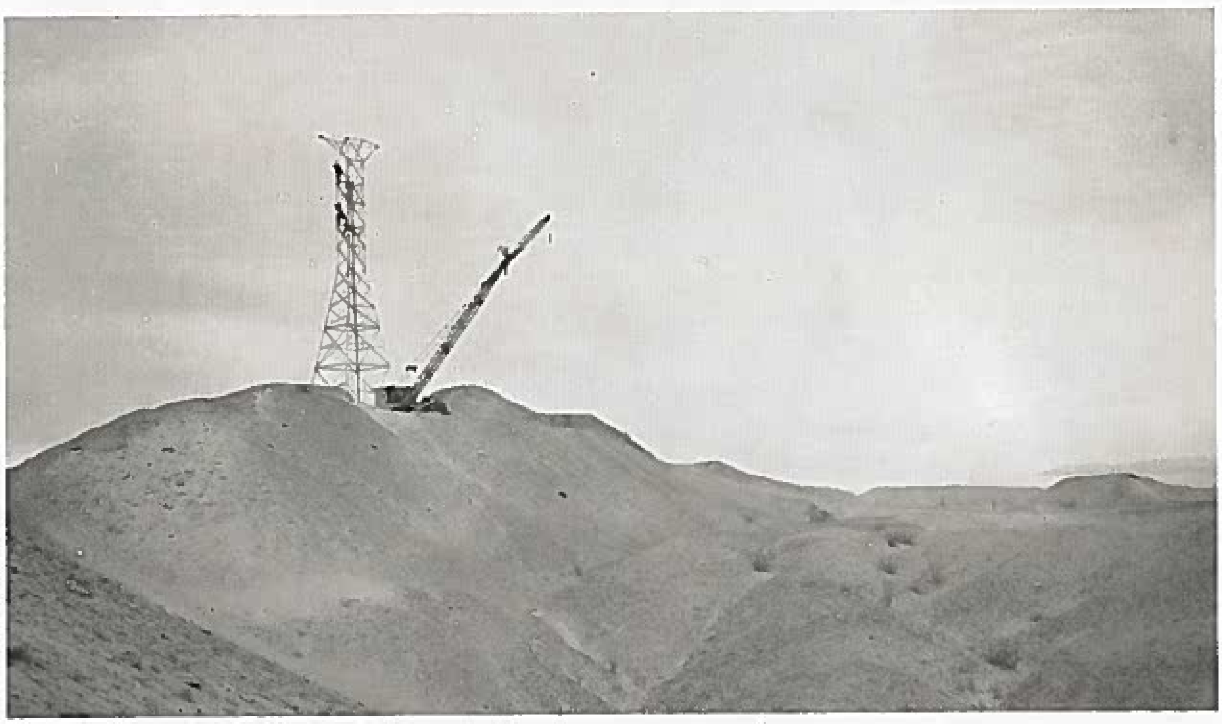


Pilot Knob Hydro Plant. Downstream face of power house during removal of temporary stop logs from draft tube.


AVERAGE NUMBER OF POWER ACCOUNTS
THOUSANDS OF CUSTOMERS
50
40
30
20
10
0
'36
'38
40
'42
'44
'46
'48
'50
'52
'54
'56
YEAR

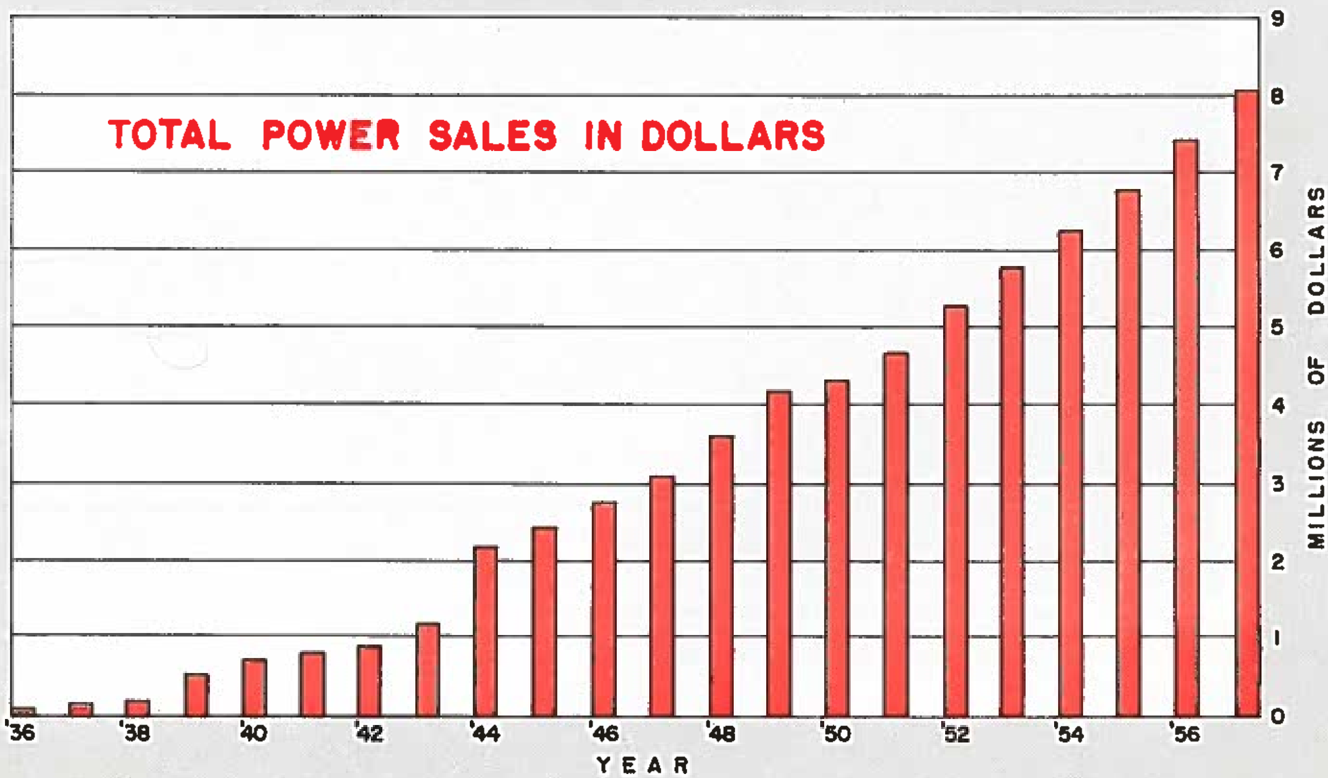

POWER OPERATING REVENUE & EXPENSE
OPERATING REVENUE
OPERATING EXPENSE
MILLIONS OF DOLLARS
9
8
7
6
5
4
3
2
1
0
'36
'38
'40
'42
'44
'46
'48
'50
'52
'54
'56
YEAR

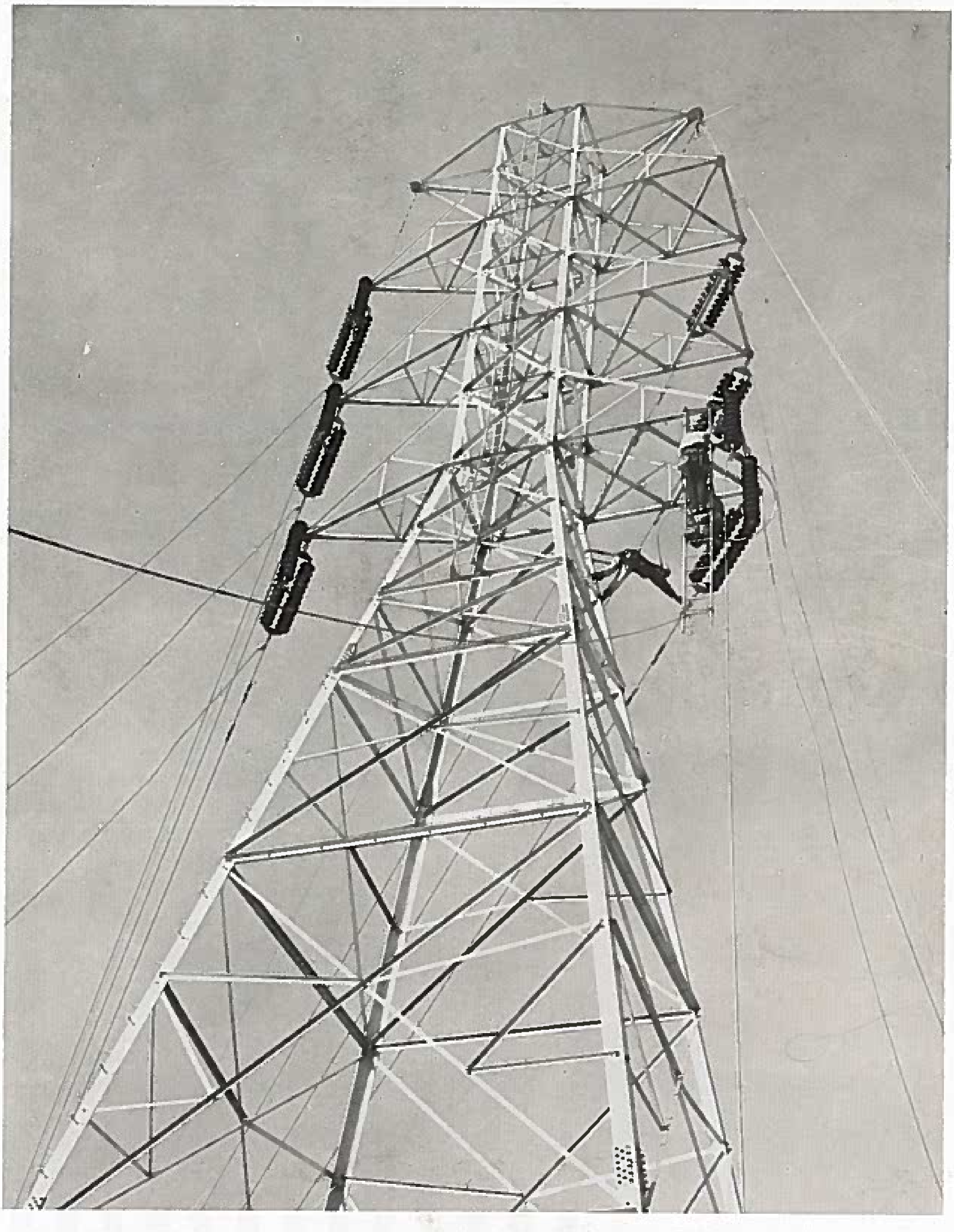
Pilot Knob Hydro Plant power house. Generator floor elevation 132, looking along front of control room toward generator Unit No. 2.



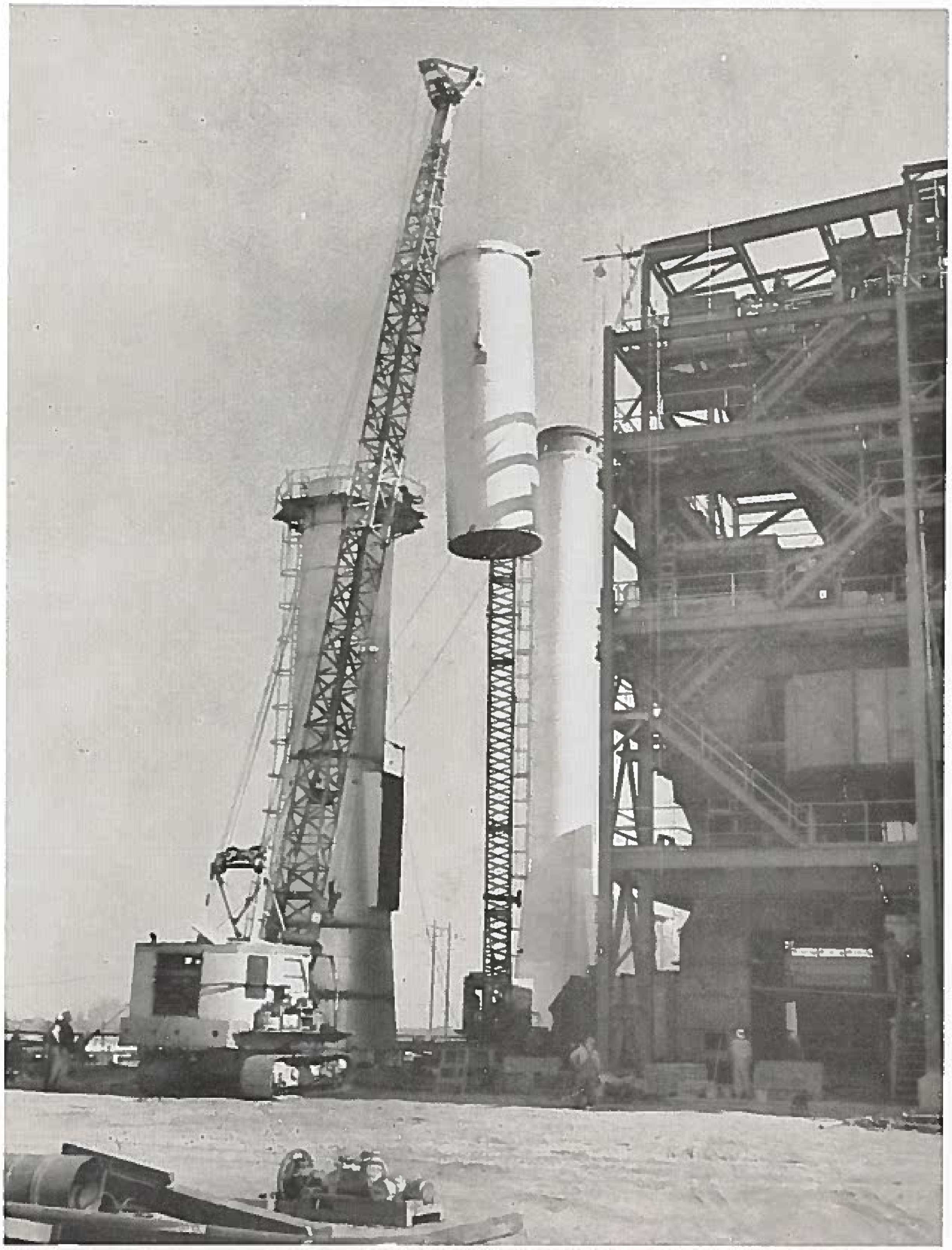
A and D Transmission Lines steel tower section. Installing arms on tower. This line operates at 161,000 volts and connects Pilot Knob Substation to the Knob Substation of the United States Bureau of Reclamation.


TOTAL POWER SALES IN K.W.H.
550
500
450
400
350
300
250
200
150
100
50
0
MILLIONS OF K.W.H.
'36
'38
'40
'42
'44
'46
'48
'50
'52
'54
'56
YEAR


TOTAL POWER SALES IN DOLLARS
9
8
7
6
5
4
3
2
1
0
MILLIONS OF DOLLARS
'36
'38
'40
'42
'44
'46
'48
'50
'52
'54
'56
YEAR



A and D Transmission Lines. Installing conductors and insulators on steel tower. This line is a 161,000 volt transmission line from Pilot Knob Substation to the Knob Substation of the United States Bureau of Reclamation.



Hoisting top section of stack to position. El Centro Steam Station, Unit No. 3.

CONSTRUCTION AND IMPROVEMENTS:

1953 Power Development Project

The 1953 Power Development Project provided for the following:

Preliminary Expense		$ 70,000
Generating Facilities		
Pilot Knob Hydro Plant		6 1,440,890
Transmission Facilities		
Pilot Knob Substation	$680,090	
Transmission Line—Pilot Knob to Drop No. 4	352,000	
Transmission Line—Pilot Knob to Knob	88,270	
Drop No. 4 Substation Additions	30,000	1,150,360
Distribution Facilities		
Miscellaneous Additions		1,510,750
		$ 9,172,000
Interest During Construction		828,000
		$10,000,000

The first feature of the 1953 Power Development Project to be completed and placed in operation was the 92-kv transmission line between Pilot Knob and Drop No. 4 Switching Station. Pilot Knob Hydro Plant and substations were completed as to construction work and preliminary testing on January 28, 1957. First operation of the plant occurred on January 31, 1957. Completion of the lines between Pilot Knob and Knob was accomplished on February 15, 1957. This completed all the construction items of the 1953 Power Development Project, and all proposed expenditures from funds provided for the project were completed in March, 1957.

1955 Power Development Project

The main feature of the 1955 Power Development Project was the construction of Unit No. 3 at El Centro Steam-Electric Station. Construction of this unit, the cost of which was estimated at $6,266,651, was financed from funds on hand in the District's Special Plant Construction Fund, Power Reserve Fund, and Power Revenue Fund, Prior Years.

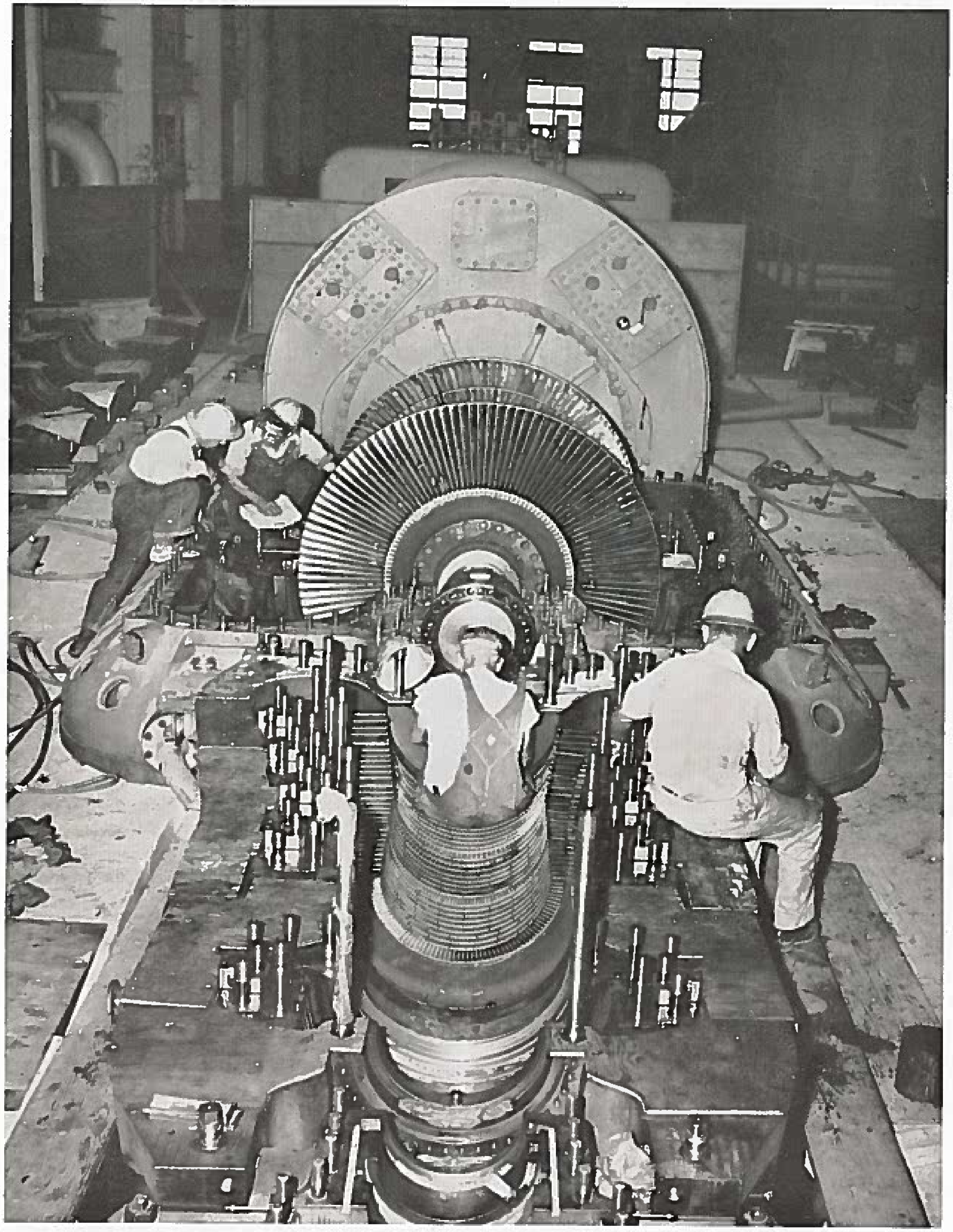
Financing of this construction from funds on hand made it possible to complete the plant approximately 18 months earlier than if the project had been financed by a revenue bond issue.

It was necessary to plan and construct this unit in as short a time as possible because the District was faced with a reduction in power available from the Bureau of Reclamation as a result of the continued low runoff from the Colorado River, together with the fact that requests for electric service continued to increase the demand on the District's system. On October 28, 1957, construction was completed and the 44,000-kilowatt generating unit placed in service.

During 1957, $1,798,412 was expended from current revenue funds for additions and betterments to electric plant in service. The largest amount $919,177, was for distribution facilities including transformers, meters, and conductor. Transmission facilities were expanded or improved at a cost of $107,980; generation facilities, $27,626; general plant, $12,627; and engineering and superintendence, $67,076. Expenditures from current revenue in connection with the 1953 Power Project was $152,620 and $511,306 for the 1955 Power Project.

Retirements from electric plant in service in 1957 were valued at $106,944. Value of material returned to stock for reissue was $60,092 and material sold for salvage, $25,324.

At the end of the year, there were 14,668 distribution transformers with a capacity of 230,997½ kva in service, an increase of 902 with a capacity of 13,042½ kva. Approximately 40 miles of distribution lines were added to the system, making 2,160 miles in service. One new substation was added, and at the end of the year there were 164 power transformers with a total capacity of 645,235 kva in service.



El Centro Steam Station, Unit No. 3. Installing high pressure stator rings. Low pressure spindle installed in background.

El Centro Steam Station during construction of Unit No. 3. Aerial view southwest. Following completion of third unit this station has a capacity of 94,000 kilowatts.

POWER SALES:

In 1957, the District's power system recorded satisfactory increase in the number of customers served, revenues from sale of electrical energy, and the average annual kilowatt-hours used by domestic residential customers.

There was an increase of 530 customers in 1957 over the average number served during 1956. As in the past several years, Coachella Area recorded the major portion of this increase with a gain of 397 customers. Imperial Valley's average customer count increased by 117, the smallest increase in recent years. The Bard and Winterhaven area showed an increase of 16 customers.

Revenue from sales of electrical energy passed the eight-million mark with a total of $8,004,845, a gain of $557,798 over 1956. Sales to residential consumers of $2,754,066 accounted for 34.4 per cent; commercial, $1,786,141 or 22.2 per cent; other electric utilities, $1,663,655 or 20.8 per cent; industrial customers, $1,060,085 or 13.3 per cent; agricultural pumping, $518,104 or 6.5 per cent; and $222,794 or 2.8 per cent was interdepartmental, public authority, and street and highway lighting.

The average annual kilowatt-hours used by domestic residential consumers in 1957 was 5,892 kilowatt-hours, compared to 5,700 in 1956, and 2,251 in 1955. The national average in 1957 was 3,164. Segregated according to service areas the averages were, 6,205 in Imperial Valley, 5,030 in Coachella Area, and 4,510 in the Bard and Winterhaven area. The steady increase in average usage by residential consumers is a very desirable type of load growth.

During 1957, the Power Sales and Service Department carried on an aggressive promotional program which was primarily designed to increase residential use of electricity. The theme of the industry-wide "Live Better—Electrically" program was incorporated into all District promotions.

Cooking schools, programs in the Demonstration Kitchen, home demonstrations on proper use of electric ranges, bill enclosures, newspaper advertising, and direct customer contacts were used to sell the advantages of electrical living. A special promotion on electric clothes dryers proved very successful. The District's home economist conducted a half-hour television program every other week. Classroom demonstrations on electric ranges, home freezers, and laundry equipment were given home economics classes in all high schools in our service area. It is believed that results of the continuation of this promotional program will increase the residential use of electrical energy.

VIII.

LEGAL DEPARTMENT

GENERAL:

The legal problems of the District are handled by the Chief Counsel and two assistants. They represent the District and its Board of Directors in all legal actions and proceedings for or against the District, or in which the District may be legally interested. The legal department also gives advice and opinions to the Board of Directors, and to the heads of departments acting in their official capacities. Contracts, acquisition of rights of way, purchase and sale of real and personal property, inclusions of territory within District boundaries, assessments, financing and other problems insofar as legal features are involved, are all handled by the legal department. Except for litigation in court, the activities of the legal department are in large part reflected in the activities of the other departments of the District.

ARIZONA VS. CALIFORNIA:

The trial of the case of Arizona vs. California, et al., continued during 1957, with evidence being received at several hearings during the year in San Francisco, before the Special Master appointed by the United States Supreme Court, to hear the case.

As has been stated in earlier reports, the parties to the litigation include the states of Arizona, California, Nevada, Utah, and New Mexico, the United States of America, and the several local agencies within the State of California, using the waters of the Colorado River, including Imperial Irrigation District.

Presentation of Imperial Irrigation District's case in chief was made between February 12 and May 15 by oral testimony and the introduction of more than two hundred and fifty exhibits in evidence. The presentation of the case was the culmination of five years' preparation contributed to by the efforts of almost all departments of the District.

During the year, evidence was presented on behalf of all of the California defendants, and was commenced as to the interests of the United States of America. It is anticipated that the actual taking of evidence will be concluded during the late summer of 1958, after which arguments, both oral and written, will be presented to the Special Master for his consideration in rendering a decision. In all probability, a decision by the Special Master will be forthcoming sometime during 1959. However, it is unlikely that a final decree of the Supreme Court of the United States will be entered before 1960 or possibly 1961.

SALTON SEA DAMAGE CLAIMS:

The level of Salton Sea has remained nearly constant during 1957, and no new damage claims have been filed by adjacent property owners. As stated in previous reports, the two actions pending in the Superior Court of Riverside County, by Desert Beach Corporation, and Ralvert and Company, were still pending at the close of the year. However, preparations were under way to bring both actions to trial, and it is anticipated that both cases will be tried sometime during the fall of 1958. With the continuing development of the area for recreational purposes, it is likely that additional damage claims will be received from time to time in the event the elevation of the sea continues to rise.

CENTRAL VALLEY PROJECT LITIGATION:

As stated in previous reports, the so-called Ivanhoe case and other similar cases have been pending since 1950. During 1957, the California Supreme Court rendered its decision holding the so-called 9 (e) contracts between the Bureau of Reclamation and irrigation districts in the Central Valley Project to be invalid, under state law, because the contracts failed to recognize the rights of landowners and water users under California Law. The decision of the California Supreme Court is a valuable precedent and protection to the lands within Imperial Irrigation District against attempts to encroach on local rights.

However, by the end of the year the decision of the California Supreme Court was appealed to the Supreme Court of the United States by the Attorney General of California, in an attempt to reverse the decision. It is anticipated that the cases will be argued before the Supreme Court of the United States during 1958, and every attempt will be made by District Counsel to uphold the decision of the California Supreme Court.

CONDEMNATION SUITS:

During the year, four condemnation suits brought by the District for the acquisition of necessary right of ways were satisfactorily concluded by settlement out of court, and without the necessity of actual trial.

MISCELLANEOUS LITIGATION:

A variety of other litigation was handled by the legal department during the year including quiet title actions, damage claims, collection of delinquent power accounts, and the recovery of taxes.

These actions were handled in various courts in Imperial and Riverside Counties, as well as the Federal Courts. The legal departments also actively participated in a number of proceedings involving the District's interests before administrative tribunals of the State of California, including the Public Utilities Commission and the State Department of Water Resources.

IX.

EAST MESA

EXPERIMENTAL FARM NO. 1

Experimental Farm No. 1 was originally established by the Bureau of Reclamation and is located on the south side of the All-American Canal at Drop No. 3. When the District assumed operation of this farm in 1947, the canals, laterals, and other irrigation works were in operation. This farm contains 537 acres. In 1957, the District renewed the lease on this farm for an additional 10-year period with a provision allowing for subleasing to private parties.

From January 1, 1957, to September 1, 1957, this farm was operated by Eldridge and Johnson of El Centro under a sublease entered into August 1, 1954. During 1957, the entire farm was in alfalfa and produced 1,503 tons of hay. The average water duty during the period January 1 to August 31 was 10.8 acre-feet per acre.

On September 1, 1957, Experimental Farm No. 1 was subleased to Julian S. Danenberg for a period of 10 years. The remainder of the year was spent in renovating, reseeding, and fertilizing the entire acreage. The average water duty during the period September 1 to December 31 was 3.2 acre-feet per acre.

EXPERIMENTAL FARM NO. 2

The lease with the Bureau of Reclamation on Farm No. 2 was renewed in 1957 for a period of 10 years. This lease also contained a provision allowing the District to sublease to private operators. This farm was operated by the District from January 1, 1957, to September 1, 1957, after which it was also subleased to Julian S. Danenberg of El Centro for a period of 10 years.

Results of the District's operation from January 1 to September 1, 1957, are as follows:

Unit No. 1 (31 acres) is irrigated by a wheel-move sprinkler system. It was in alfalfa during the eight months' period and produced 3,863 bales of hay which were sold for $4,548, and required 5.63 acre-feet of water per acre.

Unit No. 2 (28.5 acres) is irrigated by a wheel-move sprinkler system. It was in alfalfa during the eight months' period and produced 3,338 bales of hay which were sold for $3,806. The average water duty on this unit was 5.63 acre-feet per acre.

Unit No. 3 (39.6 acres) is irrigated by a wheel-move sprinkler system. It was in alfalfa during the eight months' period and produced 2,443 bales which sold for $3,104. The average water duty was 5.06 acre-feet per acre.

Unit No. 4 (38.9 acres) is irrigated by a wheel-move sprinkler system. It produced 2,171 bales of alfalfa hay, 2,071 of which were sold for $2,435. The average water duty on this unit was 5.62 acre-feet per acre.

Unit No. 5 (40 acres) is irrigated by a wheel-move sprinkler system. It was in alfalfa during the eight months' period and produced 2,989 bales of hay, 2,789 of which were sold for $2,944. A total of 7.19 acre-feet of water per acre was used on this unit.

Unit No. 6 (42 acres) was in alfalfa during the eight months' period and was irrigated by a wheel-move sprinkler system. It produced 2,487 bales of hay, 2,287 of which were sold for $2,813. The average water duty on this unit was 7.19 acre-feet per acre.

Unit No. 8 (40 acres) was in alfalfa during the eight months' period and produced 1,032 bales of hay which were sold for $1,818. The water duty on this unit was 5.34 acre-feet per acre and irrigation was by wheel-move sprinkler system.

Unit No. 9 (38 acres) was in alfalfa, 10 acres of which was reseeded in February. It produced 4,007 bales of hay, 3,607 of which were sold for $4,147. The water duty on this unit was 7.18 acre-feet per acre and irrigation was by wheel-move sprinkler system.

Unit No. 10 (34 acres) is flood irrigated and used 11.99 acre-feet of water per acre. It produced 1,630 bales of alfalfa hay and 8,531 pounds of alfalfa seed, all of which were sold for $2,983.

Unit No. 12 (40 acres) is sprinkler irrigated by a wheel-move system and used 7.18 acre-feet of water per acre. It produced 2,197 bales of alfalfa hay, 1,897 of which were sold for $2,312.

Unit No. 13 (40 acres) was in alfalfa, 10 acres of which were reseeded in February. It is sprinkler irrigated by a wheel-move system and required 5.65 acre-feet of water per acre. It produced 3,189 bales of alfalfa hay and 9,907 pounds of seed. The seed and 2,889 bales of hay were sold for $4,295.

Experimental Farm No. 2, Unit 1, view of windrowed alfalfa. This unit produced 3,863 bales of alfalfa during the first nine months of the year.

Experimental Farm No. 2, Unit 2, adjusting sprinkler heads. This unit produced 3,338 bales of alfalfa during the first nine months of the year.

Unit No. 14 (36 acres) is flood irrigated and required 11.99 acre-feet of water per acre. It produced 1,739 bales of alfalfa hay and 9,082 pounds of seed. The seed and 1,689 bales of hay were sold for $2,862.

There were 1,550 bales of hay on hand at the end of the year.

Terms of the Danenberg lease provided for planting of some citrus and grapes with a minimum of 200 acres of land under sprinkler system at all times. Work was begun immediately on the installation of concrete head ditches to serve an area being releveled for flood irrigation of citrus.

During the remainder of the year, 4,510 bales of alfalfa were produced on 8 units of the farm. Some of the units were reseeded to alfalfa, while the others were cultivated and then reseeded to alfalfa and barley. Unit 1 was releveled and prepared for citrus.

Experimental Farm No. 2, Unit 6. This unit produced 2,487 bales of alfalfa in the first nine months of the year.

Experimental Farm No. 2, Unit 7. General view of undeveloped land.

X.

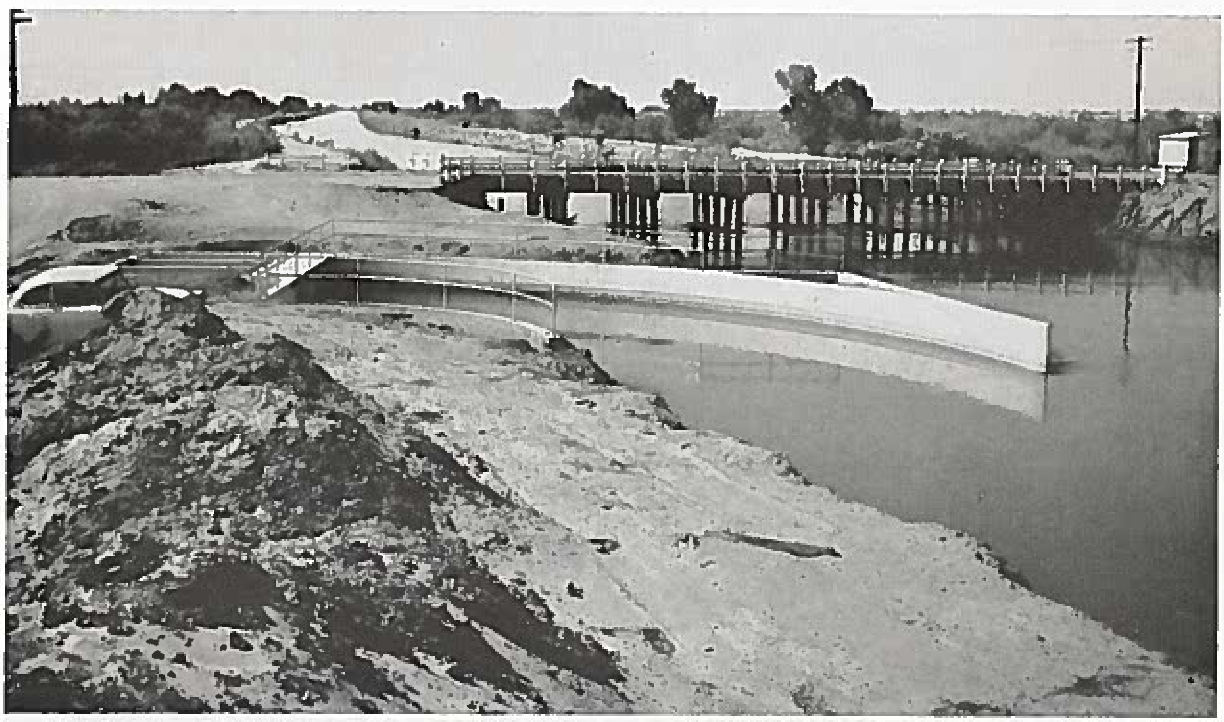
MESQUITE LAKE AREA IMPROVEMENT PLAN

GENERAL COMMENTS:

For the past several years, a program of construction work on East Highline Canal has been carried on wherein capacity was provided to supply the Mesquite Lake area with water direct from East Highline Canal. The final phase of the program called for construction of Rositas Supply Canal which is approximately 9.5 miles in length and which will have a capacity of 300 cubic feet per second to serve 21,500 acres of land in the Mesquite Lake area.

Construction work was begun late in 1956 and continued throughout 1957, being 75 per cent complete at the end of the year. Construction is expected to be completed within the first two months of 1958, and water deliveries will be made through the new facility immediately following completion.

Installation of three barrel—48 inch diameter reinforced concrete pipe siphon where Rositas Canal crosses yard adjacent to dwelling.



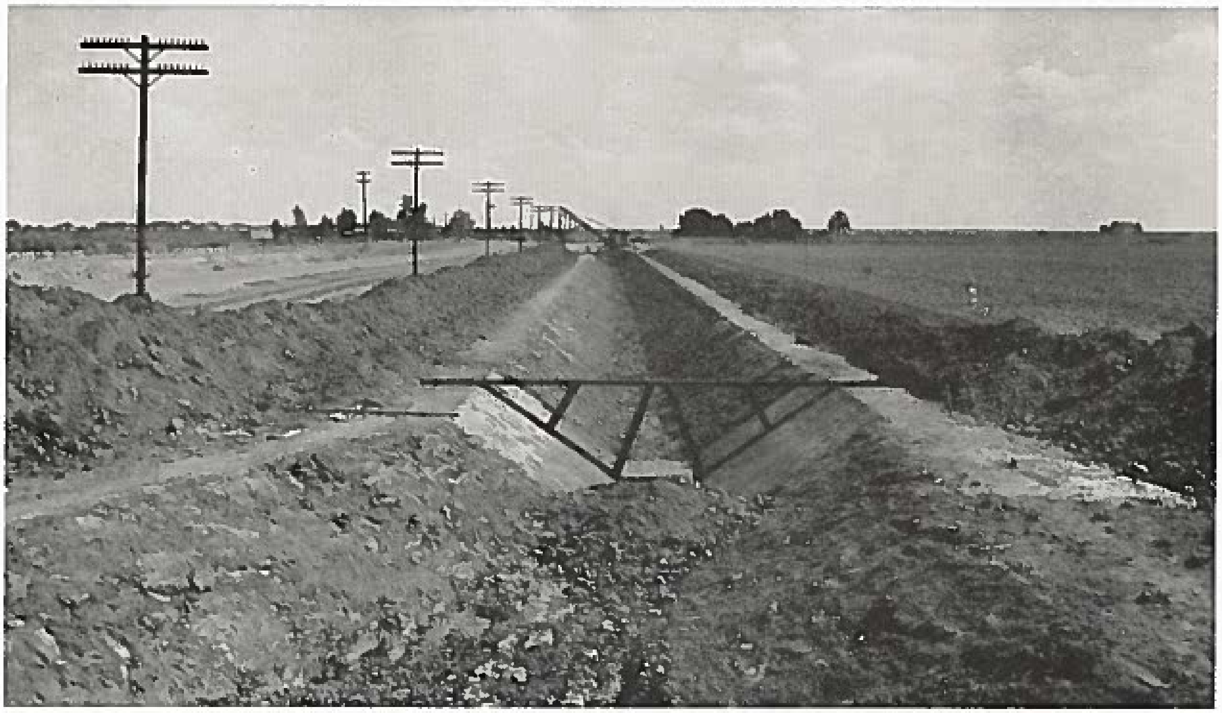
Rositas Supply Canal intake heading at East Highline Canal prior to installation of radial gates and hoists. Structure will have three 6 foot wide by 12.9 foot high radial gates—electrically operated. Long curving intake designed to equalize the silt load between East Highline and Rositas Canal.

Rositas Supply Canal. View of completed lining. Lined section is 1.25 miles in length, is 5.4 feet deep and has a capacity of 300 cubic feet per second.

Rositas Supply Canal. Initial water to lined section. View downstream from heading. Lined section is 1.25 miles long, has a depth of 5.4 feet, bottom width of 4 feet and side slopes of 1½ to 1. Maximum capacity 300 cubic feet per second.

Rositas Supply Canal. Sprinkling and compacting fill prior to excavation of channel for concrete lining.

Rositas Supply Canal lining. Sprinkling subgrade prior to placing lining.



Rositas Supply Canal. View of dragline excavation of channel.

Rositas Supply Canal lining. Front view of liner and supply trucks placing lining.

XI.

IRRIGATION DIVISION
FEDERAL CONTRACTS

PUBLIC LAW 750 — 81st CONGRESS:

On April 12, 1957, the District received information to the effect that a credit of $3,000,000 had been allowed by the United States under the provisions of Public Law 750—81st Congress. This credit will be applied against the next succeeding annual payments on the All-American Canal as they become due and payable from Imperial Irrigation District to the United States.

This credit was to cover costs paid or incurred by the District in connection with the construction, operation, and maintenance of a flood-protective levee system along or adjacent to the lower Colorado River in Arizona, California, and Lower California, Mexico.

ALL-AMERICAN CANAL CONTRACT:

Imperial Dam and the All-American Canal were constructed pursuant to the terms of a contract dated December 1, 1932, between the District and the United States of America. The District is obligated to pay its proportionate share of the cost of the works constructed under the contract, without interest, in annual installments over a period of 40 years. These installments are to be 1 per cent each for the first 5 years, 2 per cent each for the next 10 years, and 3 per cent each for the final 25 years, of the total cost of the District's share of the works.

The District is required, when necessary, to levy and collect assessments so that the United States shall receive its money when due.

On July 14, 1954, Imperial Irrigation District was informed by the Secretary of the Interior that its share of the costs of the All-American Canal, to be repaid to the United States under the terms of the contract of December 1, 1932, was $25,020,000.90. Under the terms of the contract, the District is required to pay the United States the net proceeds from electric power generated on the All-American Canal and had, prior to March 1, 1955, which is the date the first payment became due, advanced approximately $1,142,000 to be applied and credited against payments as they became due.

After application of the first, second, and third annual payments there remained, as a credit to Imperial Irrigation District, $564,922 from net proceeds; $3,000,000.00 from Public Law 750, 81st Congress; and $201,483 as a credit for the Gila Project's participation in Laguna Dam cost. This total credit of $3,766,406 will be applied to subsequent payments and will be supplemented each year by additional net proceeds as they become due and payable.

Three items which the District has had before the Secretary of the Interior for some time which relate to the construction costs of the All-American Canal Project and which remain unsettled as of this date are:

1. That the Gila (Arizona) Project should share in the cost of the Imperial Dam Sluiceway to the extent of $140,000.

2. That the Gila Project should share in the cost of providing 2,000 second-feet of capacity for the Yuma Project in the All-American Canal down to Siphon Drop, which had to be provided without cost to the Yuma Project. The Gila Project share of this cost would be $220,000.

3. That, as an experiment, Imperial Irrigation District should be permitted to operate the sluiceway at Imperial Dam for one year, thereby saving all the users of the dam $25,000 a year in operating costs.

XII.

COLORADO RIVER BOARD

COLORADO RIVER BOARD OF CALIFORNIA:

During the year 1957, the Board held regular monthly meetings and continued with its many activities pertaining to water and water rights of the Colorado River.

The trial of the Supreme Court case of Arizona vs. California, after having adjourned on August 27, 1956, was resumed in San Francisco on February 11, 1957. At the end of the first week of the new session, Special Master Rifkind became ill, making it necessary to recess the trial. It was not resumed again until May 6. In addition to the one week in February, there were three sessions during the summer, making a total of nine weeks of trial time. The trial adjourned on August 23, 1957, for the remainder of the year.

At the start of the trial in February, Imperial Irrigation District commenced the presentation of its case, which continued into the next session. Next came Coachella Valley County Water District, followed by Palo Verde Irrigation District, The Metropolitan Water District, and last, the State of California, which completed the presentation of the cases of all of the California defendants. The United States then commenced its case, which was still in progress when the trial was adjourned.

During the year, the Colorado River Board staff worked closely with that of the Attorney General and with the attorneys and engineers of all the California defendants in the preparation of California's case. This work included the gathering of basic engineering and economic data, making studies of water supply and use in the Colorado River Basin, furnishing engineering opinions, preparing exhibits, and assisting in the organization of testimony. As in the past, fine co-operation and assistance was received from the Director of the Department of Water Resources and his staff in this work.

The Colorado River Board was represented throughout the entire session of the court by one or more of its members and a number of its staff.

During the year, there was considerable activity by the Board and its staff in connection with the Colorado River Storage Project, authorized by Public Law 485. Specifications for the construction of Glen Canyon Dam were completed by the Bureau of Reclamation, and bids were called for to be opened April 11, 1957. These specifications were studied by the Board's staff, and several questionable items were noted. Among these was the design of the dam itself, and another was the proposed method of closure and release of water during closure operations and the filling period.

As a result, the Board requested that the plans be reviewed by a consulting board of engineers and geologists prior to the letting of any contracts. Furthermore, the Board requested that the specifications be revised to provide for a greater release of water during the closure period and thereafter. These requests were joined in by other Lower Basin States.

A consulting board did review the plans for the dam and approved them with certain changes. Also, the Bureau of Reclamation agreed to revise its closure procedures, making it possible to release much larger quantities of water during closure.

Another result was the development of criteria for the operation of Glen Canyon Dam during the filling period and afterward, such being prepared both by the Government and the Lower Basin States. In October, a meeting was held by representatives of all seven Colorado River Basin States with the Secretary of the Interior, at which the criteria prepared by the Government were reviewed and those prepared by the Lower Basin States were submitted for consideration. While the year closed with no agreement having been reached in the matter, plans were underway for further meetings, out of which it is hoped that criteria will be developed which will be acceptable to all seven Basin States and the Federal Government.

Public Law 485 also provided for studies of the future quality of water in the Colorado River Basin. The Board requested of the Secretary of the Interior that such studies in the Lower Basin be made concurrently with those in the Upper Basin, the Colorado River Development Fund to be drawn on to help finance the studies. Although this request was denied, the Secretary indicated that studies in the Upper Basin would be started soon after July 1, 1957, and in the Lower Basin in about a year.

Considerable work was done during the latter part of the year by the Board's engineers in the review of Federal reports on the proposed Navajo irrigation project and the San Juan-Chama transmountain diversion project, both New Mexico projects. If authorized, they will become participating projects in the Colorado River Storage Project.

Early in the year, H. R. 594 and S. 60, again seeking authorization of the Fryingpan-Arkansas Project in Colorado, were introduced in

Congress. The Colorado River Board drafted several amendments which it deemed essential to protect California's interests. Agencies on the west slope in Colorado proposed an amendment to limit the total amount of water to be taken by transmountain diversions out of the Colorado River Basin in that State. Following hearings, the Senate Interior and Insular Affairs Committee, on April 30, 1957, reported favorably on S. 60, after rejecting all of the California amendments, as well as that proposed by the west slope agencies in Colorado. On May 15, Senator Kuchel of California filed a minority report opposing the project. However, the Senate passed S. 60 on June 28, after rejecting the California amendments presented by Senator Kuchel.

Although hearings on H. R. 594 were held by the subcommittee on Irrigation and Reclamation of the House Committee on Interior and Insular Affairs, no action was taken.

The Colorado River Board, at its meeting on October 1, approved including with the other California amendments to the Fryingpan-Arkansas bill, one which would require the State of Colorado to agree to a limit on the total amount of water for transmountain diversions in that State. This amendment was quite similar to that which had been proposed by the west slope agencies in Colorado. The new amendment was presented to a special subcommittee of the House Interior and Insular Affairs Committee at a hearing held in El Centro on October 3. It is believed to be of very great importance to the Lower Basin in the protection of the quality of its water supply.

At various times since 1952, the Board has called the attention of the Department of the Interior to the unauthorized uses of water along the Lower Colorado River, with the request that action be taken to stop such uses. Although the Government made an investigation to determine the location and amount of such uses, no action to remedy the situation has been taken to date. This matter was also brought to the attention of the special subcommittee of the House Interior and Insular Affairs Committee at a hearing held in Blythe on October 4 and 5. The Chief Engineer of the Board testified on this matter at the Blythe hearings, as did also the Chief Counsel of the Arizona Interstate Stream Commission. Arizona apparently concurs with the position on this matter taken by California.

The Board also continued its opposition to the permanent use of Colorado River water for fish and wildlife purposes, at least until a decision is had in the case of Arizona vs. California. The Board's position was made known both to the Department of the Interior and the California Department of Fish and Game. These agencies assured the Board that they would delay all such projects until the litigation is resolved.

Bulletin No. 3—Report on the California Water Plan—was completed by the State and published this year. It was noted that practically all of the revisions requested by the Board had been made in the final report.

The Board, through its Legal Counsel, kept in contact with the work of the Joint Boundary Commissions of California and Arizona during the year. At the close of the year, a tentative agreement had been reached as to the location of the boundary from the common point with the State of Nevada downstream to Laguna Dam, to follow in general the present course of the River. But below the latter point the location was still in controversy, particularly as to that section between Laguna Dam and Yuma.

There were several changes in membership on the Board during the year. On January 10, Mr. Newman, representing Coachella Valley County Water District, resigned and Raymond R. Rummonds was appointed by Governor Knight to take his place. Evan T. Hewes, representing Imperial Irrigation District, who had been a member of the Board continuously since its creation in 1937 and its first Chairman, died on March 13. His passing was a great loss to the Board, and this was recognized by an appropriate resolution adopted by the Board on April 3, 1957. On March 29, Governor Knight appointed M. J. Dowd to take the place of Mr. Hewes on the Board.

XIII.

CONCLUSION

CONCLUSION:

Our progress during the year 1957 has been recorded on the preceding pages. We have established new records for production and consumption of electric energy. Revenues from water service and from electric service reached new levels. The irrigation and drainage system and the electric system were improved and expanded during the year.

The area we serve is continuing to expand and there is no reason why we shouldn't in 1958 again establish new records of production. Our plans have provided for facilities to meet this demand on our system not only in 1958 but in the years to come.

The untiring efforts of the Department Heads and the loyal service of all employees of the District are reflected in the achievements recorded herein. The people of the Valley by their co-operation and continued support have contributed greatly to our success.

I wish to express my appreciation to the officers and personnel of the District for their assistance in preparing this report.

John N. Bryant

President, Board of Directors