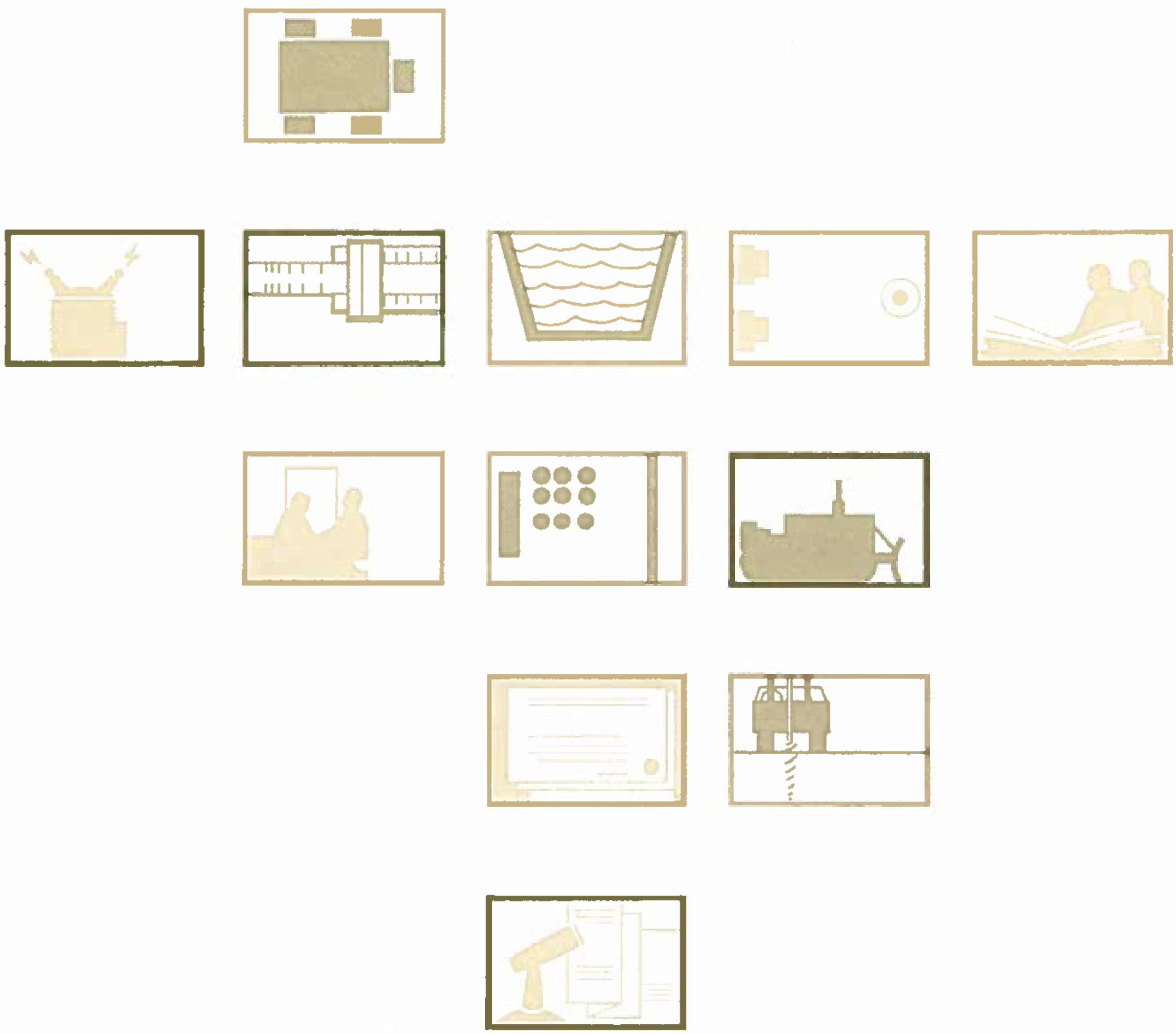
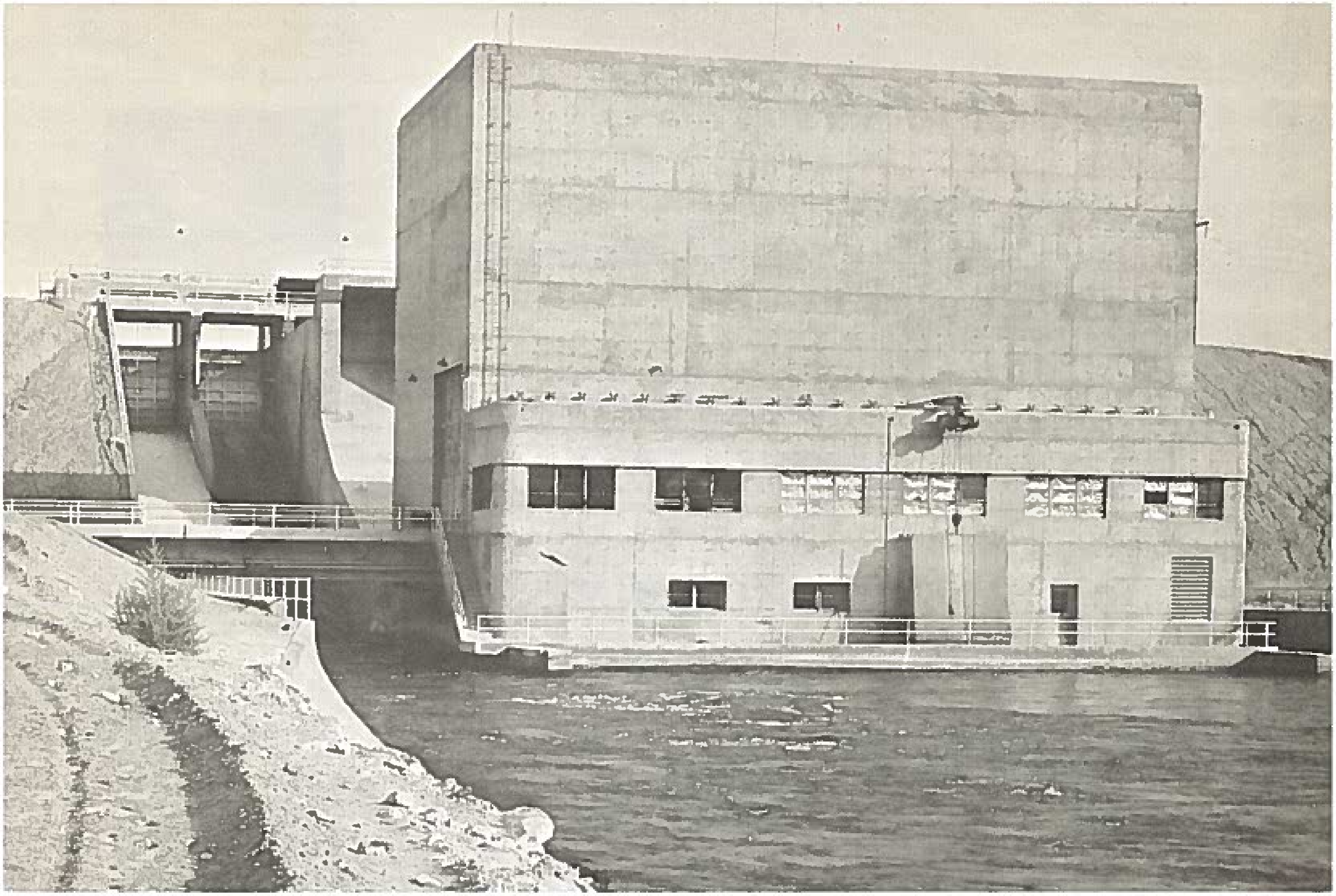
1963

ANNUAL REPORT

IMPERIAL IRRIGATION DISTRICT





Drop 4 Hydroelectric Plant on All-American Canal

Contents

RAYMOND L. (LOM) THOMPSON
President
Board of Directors

Foreword

Imperial Irrigation District is a public agency serving water and power to a half-million-acre agricultural empire and power to a rapidly expanding winter-resort area equal in size to the States of Connecticut and Rhode Island. During 1963 the District placed greater emphasis on water conservation through an expanded program of concrete-lining canals and extended its power facilities to accommodate increasing residential and commercial construction.

Additions and betterments to the water and power systems during the year — paid from current revenue — cost almost three and a quarter million dollars, of which over forty per cent was invested in additional power distribution plant. Also, the program of modernizing its buildings was continued, and a schedule providing for increased wages and salaries was adopted.

Total income from all sources during the year was $17,935,511, an increase of $515,579 over the previous year. Of this amount, $15,540,533 was expended for fixed charges, capital expenditures, and operating expenses; and $2,394,978 was placed in reserve funds to assist in financing additions and betterments which will be required in the next two or three years.

Property was purchased for new division offices in the cities of Calexico and Calipatria, it being expected that new buildings will be completed at these sites in late 1964 or early 1965. Plans for the new Executive Office Building in El Centro were in final stages of completion at year-end, with construction expected to start sometime in the late spring of 1964.

Exploration and experimentation in the geothermal potentials of the Valley along the south perimeter of Salton Sea were continued. Shell Oil Company took over the District's lease to the firm of O'Neill and Ashmun & Hilliard, Midland, Texas, and late in the fall drilled a third steam well under the terms of the lease.

During the year, revenue from increased sales to retail power customers, coupled with a reduction in operation and maintenance costs, almost offset the loss in revenue from the reduction of approximately 85,000,000 kilowatt-hours of sales to other utilities. This loss of load was occasioned by the start of operation, in July, of the new steam generating plant of the Mexican Government, which serves Lower California, including the Mexicali Valley. Despite this loss of load, revenue from the sale of electric energy for the year totaled $9,973,966, a decrease of only $65,200 from the record year of 1962.

Bonded indebtedness of the District as of December 31 was $31,570,000, of which $5,622,000 was in General Obligation Bonds and $25,948,000 in Electric Revenue Bonds. This represents a reduction in bond principal of $1,755,000 during the year.

Experimental work was continued at the two farms on the East Mesa leased from the Federal Government by the District and subleased to Brock Ranches and D. M. Haggard.

Warren Brock, President of Brock Ranches and leaseholder of the 640-acre Drop 2 Farm, has reported that five-year tests just concluded have demonstrated conclusively the feasibility of sugar cane as a major Imperial Valley crop. His East Mesa farm has been the source of cane cuttings sufficient to plant an additional 500 acres in various parts of the Valley.

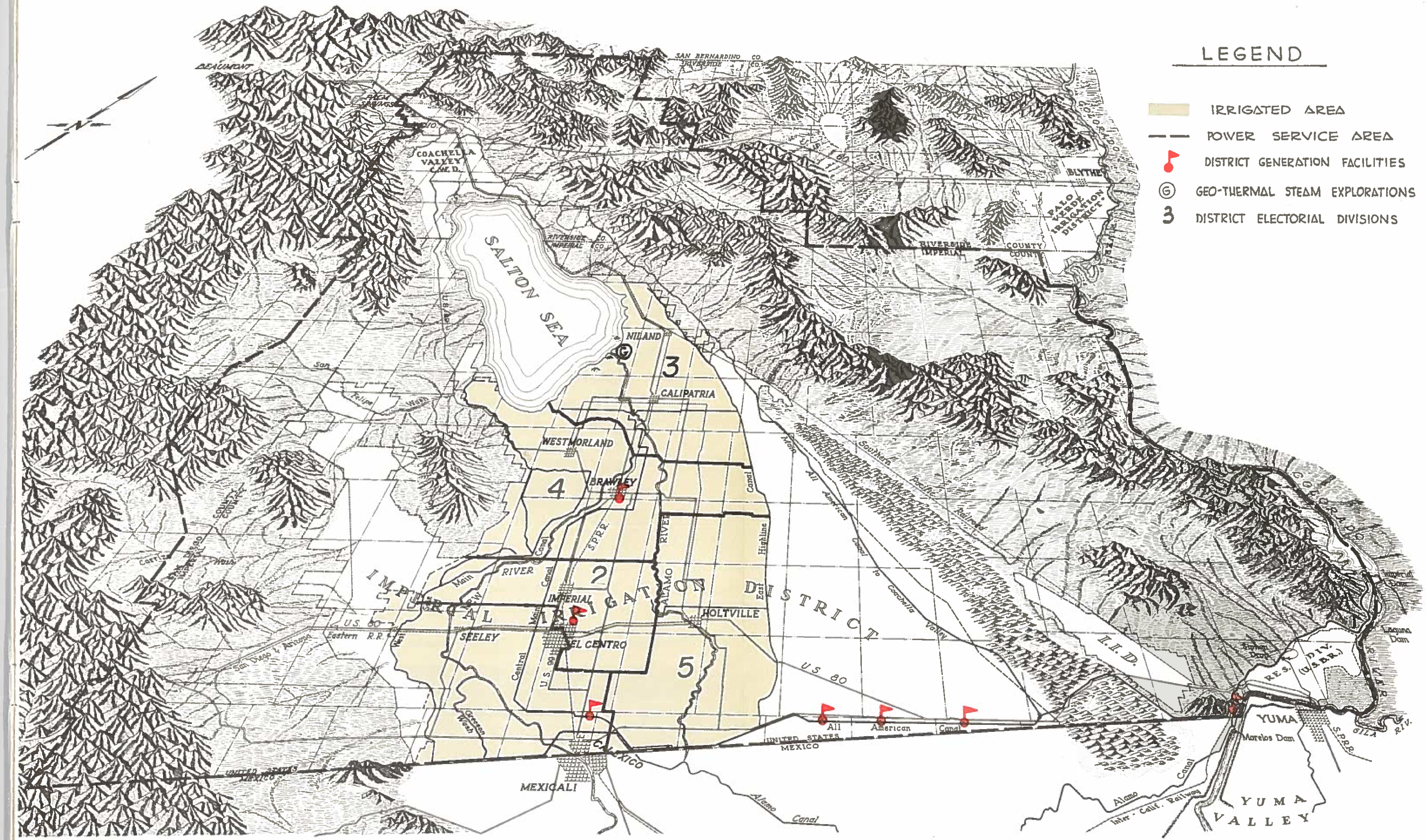
The Drop 3 Farm leased to Mr. Haggard is planted to permanent pasture and is feeding approximately 1,500 head of cattle.

The successful operation of the District during 1963 would have been impossible without the dedication, loyalty and co-operation of management and personnel.

ROBERT F. CARTER
General Manager

Lom Thompson
President, Board of Directors

R. F. Carter
General Manager



LEGEND
IRRIGATED AREA
POWER SERVICE AREA
DISTRICT GENERATION FACILITIES
GEO-THERMAL STEAM EXPLORATIONS
3 DISTRICT ELECTORIAL DIVISIONS
SALTON SEA
IMPERIAL IRRIGATION DISTRICT
NILAND
CALIPATRIA
WESTMORLAND
BRAWLEY
IMPERIAL
EL CENTRO
SEELEY
HOLTVILLE
CALEXICO
MEXICALI
YUMA
YUMA VALLEY
BLYTHE
PALO VERDE IRRIGATION DISTRICT
COACHELLA VALLEY C.W.D.
BEAUMONT
SAN BERNARDINO CO.
RIVERSIDE CO.
RIVERSIDE CO.
IMPERIAL CO.
RIVERSIDE COUNTY
IMPERIAL COUNTY
UNITED STATES
MEXICO
All American Canal
Coachella Canal
Southern Pacific Railroad
Alamo Canal
Inter-Calif. Railway
Morelos Dam
Laguna Dam
Imperial Dam
RES. DIV. (U.S.B.R.)
I.I.D.
GILA RIV.
COLORADO RIVER
S.P.R.R.
U.S. 80
U.S. 99
San Diego & Arizona Eastern R.R.
East Highline Canal
Central Main Canal
ALAMO RIVER
NEW RIVER
San Felipe Wash
Carrizo Wash
Greeson Wash
1
2
3
4
5

Board of Directors

RAYMOND L. (LOM) THOMPSON

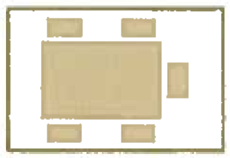
President
Division 1

H. FRANK HOWINGTON

Division 3

PAUL A. MITCHELL

Division 4

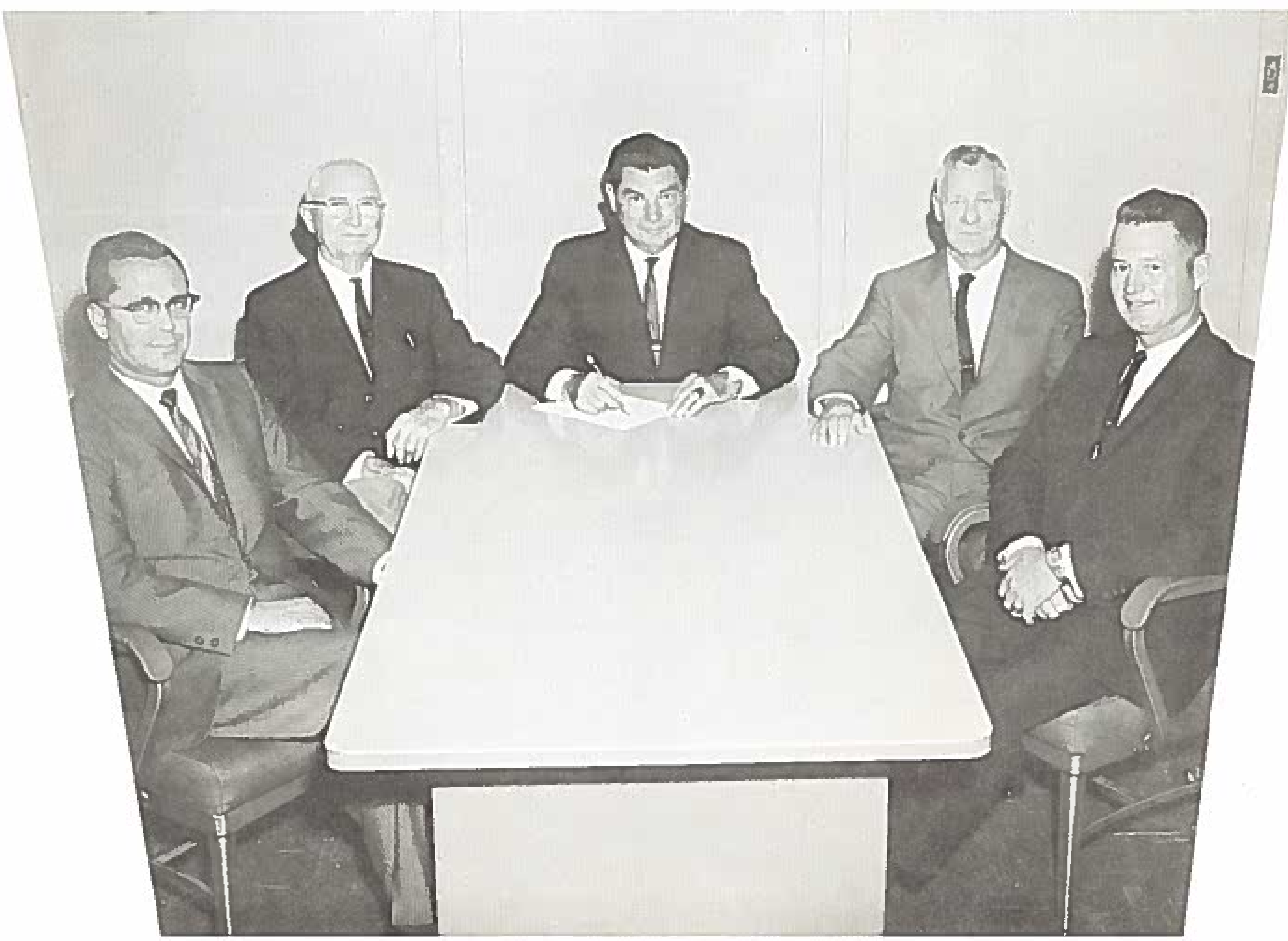


JOSEPH D. MOORE

Division 2

CARL C. BEVINS

Division 5



Financial

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POWER

The District's Power Department Earned		$10,407,335
From: Power Sales	$9,973,966	
Interest on Reserves	284,457	
Rental of Electric Property	33,800	
Other Sources	115,112	
Which was Used or Set Aside for:		
Operating Expenses	$5,104,789	
Interest on Bonds	790,620	
Lease of Power Rights	29,447	
Taxes	15,819	
Accounting for Operating Expenses and Income Deductions of	$5,940,675	
Leaving Net Earnings of	4,466,660	
Which were Used for:		
Retirement of Electric Revenue Bonds	$1,220,000	
Additions to Plant	1,592,856	
Increase of Materials and Supplies	53,727	
Payment into Special Electric Plant Construction Fund	1,245,807	
Additions to Other Reserve Funds	55,633	
Deposit with the United States on All-American Canal Contract	134,936	
Payment into Contract Fund — All-American Canal	105,064	
Additions to Operating Funds	58,637	
	$4,466,660	
Which Accounts in Full for		$10,407,335

More All-Electric Homes

Four-Story Office Building

Extending Power Service

Highlights

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WATER

The District's Water Department Earned		$ 6,593,324
From: Assessments, Penalties and Costs	$1,533,234	
Sales and Rentals of Land Held Under Assessment Deeds	16,025	
Interest on Redemption of Delinquent Assessments	3,862	
Water Deliveries, Gate and Pipe Service Charges	4,613,863	
Interest on Reserves	219,546	
Rental of Land, Buildings and Equipment	105,101	
Other Sources	101,693	
Which was Used or Set Aside for:		
Operating Expenses	$3,590,213	
Interest on Bonds	193,619	
Taxes	8,111	
Accounting for Operating Expenses and Income Deductions of	$3,791,943	
Leaving Net Earnings of	2,801,381	
Which were Used for:		
Retirement of Bonds	560,000	
Additions to Canal System	703,453	
Additions to Drainage System	442,929	
Additions to Buildings and Land	218,464	
New Equipment	197,282	
Paid United States Bureau of Reclamation for Share of Operation and Maintenance of Imperial and Laguna Dams	65,008	
Additions to Operating Funds	614,245	
Which Accounts in Full for		$ 6,593,324

Drop 3—New River

All-American Canal at Coachella Turnout

Turnip Hydro-Check

WALTER E. LANCASTER
Assessor-Collector

Assessor—Collector

Assessed valuation of land within the boundaries of the District increased $390,760 for 1962-63 due to land improvements, such as tiling and leveling, which increased productivity of the land. Total valuation for the assessment year was $50,728,840 as compared to $50,338,080 for 1961-62.

Collections totaled $1,481,669.22, or 96.86% of the total assessment by June 20, 1963, the date after which assessments become delinquent. The unpaid $47,974.62, or 3.14 per cent of the total, included delinquent assessments, assessments and unpaid balances. The small delinquency is attributed to a fair equalized assessment and a realistic tax rate. The first installment collection for 1963 assessment was the greatest in the Imperial Irrigation District's history, totaling $1,064,151.29.

The Assessor-Collector's Office makes available to the public the following services:

1. Country property Map Index showing the owner's name on property.
2. Country valuation reference.
3. Country property Tile Map Index.
4. Aerial Maps scaled at 1" — 660 ft.
5. Contour Maps.

The assessment rate of $3.00 per $100 valuation — first established by the Board of Directors for the year 1949-50 — was again fixed by the Board for the 1962-63 assessment year.

As required by the Water Code of the State of California, in fixing the rate, a 15 per cent deduction for anticipated delinquencies was applied to the equalized aggregate assessed value of $50,728,840. Thus the net equalized assessed valuation for the year 1962-63 was $43,119,514.

The amount to be raised for the 1962-63 assessment year was classified by the Board of Directors as follows:

Redemption Fund: 15.08 mills on the dollar to raise $650,000 for payment of interest and principal on general obligation bonds.

Drainage Fund: 3.48 mills on the dollar to raise $150,000 for necessary improvements to, and extensions of, the District's drainage system.

Operation and Maintenance: 11.44 mills on the dollar to raise $493,287.24. This amount combined with other revenues will provide funds to meet current expenses of the District for the year 1963.

ASSESSMENT RECORD

				Delinquencies	
	Assessed Valuation	Assessment	Rate per $100	Total	Per Cent
1951-52	$44,183,929	$1,327,129.56	$3.00	$46,499.80	3.50%
1952-53	45,203,102	1,357,973.04	3.00	41,440.95	3.05%
1953-54	46,487,492	1,397,809.78	3.00	60,659.68	4.33%
1954-55	47,129,065	1,418,602.99	3.00	50,713.56	3.57%
1955-56	47,713,095	1,436,100.38	3.00	54,524.54	3.79%
1956-57	48,667,337	1,469,174.41	3.00	54,536.46	3.71%
1957-58	49,250,368	1,485,476.36	3.00	60,411.13	4.06%
1958-59	49,480,302	1,492,499.61	3.00	48,774.71	3.27%
1959-60	49,530,730	1,493,606.64	3.00	51,086.85	3.42%
1960-61	50,303,716	1,516,950.76	3.00	47,419.06	3.13%
1961-62	50,338,080	1,516,899.36	3.00	54,975.32	3.62%
1962-63	50,728,840	1,529,643.84	3.00	47,974.62	3.14%

ANNA T. McMANUS
Treasurer

Treasurer

The Treasurer of Imperial Irrigation District, elected by the people within District boundaries, is charged with the responsibility of safeguarding all District funds and, in compliance with the provisions of the Water Code of the State of California, is obligated to furnish an Indemnity Bond guaranteeing personal integrity and good faith in the handling of all District cash assets. The amount of the bond is determined by the Board of Directors.

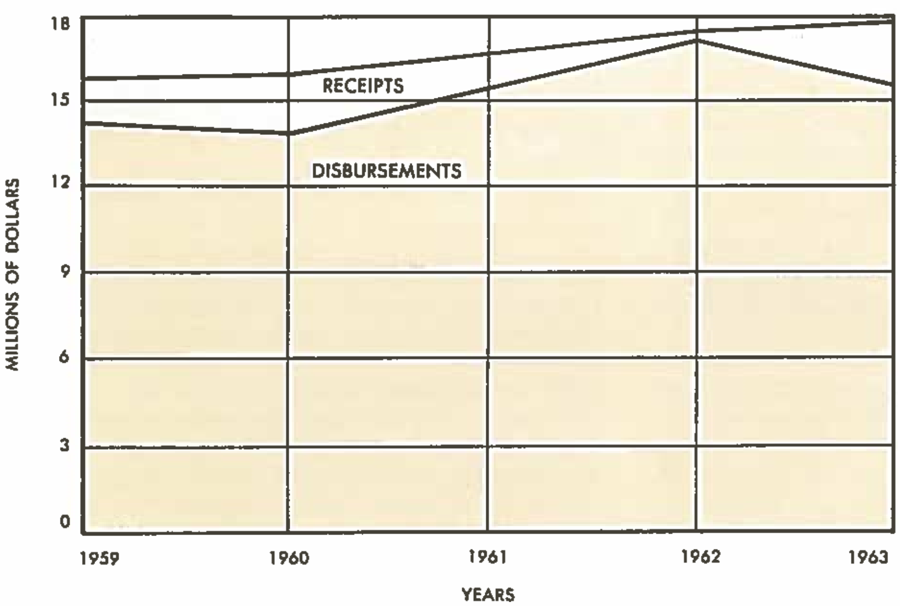
The total annual income from the sale of water and power, assessment collections, earned-interest on investments and miscellaneous sources flows into the Treasurer's office and is retained in specified funds until such time as expenditures are approved by the Board of Directors.

The income from all sources during 1963 totaled $17,935,511 — an increase of $515,579 over the previous year. Of this amount, $15,540,533 was expended for payment of bond principal and interest, payrolls, and operating expenses including materials and services.

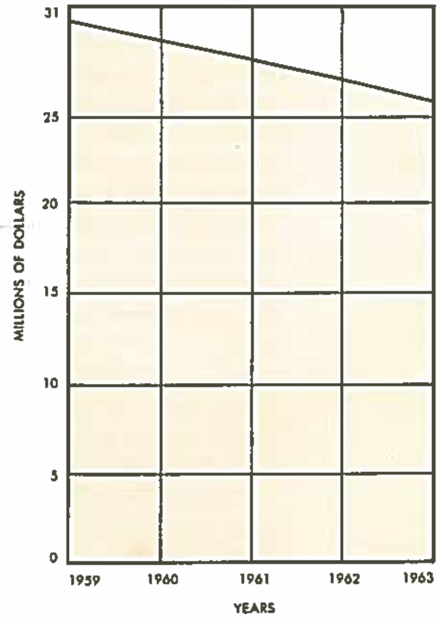
Sufficient funds were set aside to meet the annual budget requirements, such as water and power department operations, payments on bonds, and coverage of various reserves and sinking funds, as required by law. Cash funds not needed for current expenses were placed in interest-bearing accounts with banks in Imperial and Coachella Valleys. Those accounts, together with government bonds purchased in previous years with reserve funds, provided the District with a total earned-interest income of $493,140.

The Treasurer's office maintains contact with investment companies in the major financial centers throughout the United States. Daily studies are made of the government bond market in order to secure the highest possible return on District funds held in 112 separate treasury accounts.

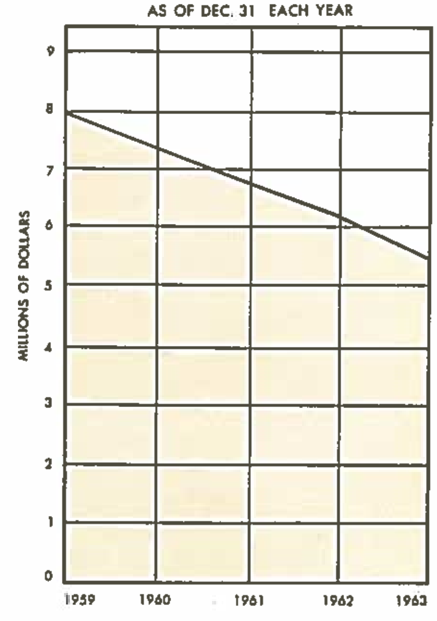
During 1963 payments amounting to $1,755,000 substantially reduced the bonded indebtedness of the District to a new low of $31,570,000, comprised of $5,622,000 in General Obligation Bonds and $25,948,000 in Electric Revenue Bonds. The bond work of the Treasurer's office is one of the important parts of its operation.



ELECTRIC REVENUE BONDED INDEBTEDNESS
AS OF DEC. 31 EACH YEAR



GENERAL OBLIGATION BONDED INDEBTEDNESS
AS OF DEC. 31 EACH YEAR



M. J. DOWD
Executive Officer to the Board of Directors
Chairman, Colorado River Board, State of California

Executive Officer to th

The Executive Officer to the Board of Directors is consultant to the Board and Management on policy matters affecting all phases of District operations and is in general charge of the District's Public Information Office. It is his responsibility, among others, to follow legislative matters, both in Sacramento and Washington, D.C., to protect District interests. Also, he represents the District in such organizations as the Colorado River Board of California, the Irrigation Districts Association of California, the National Reclamation Association, the American Public Power Association.

COLORADO RIVER BOARD

As Chairman of the Colorado River Board of California, he is a leader in the work of protecting California's interests in the Colorado River. During the year, the Board and its staff have participated in many conferences on Colorado River matters with State and Federal Government officials and representatives of other Colorado River Basin States, analyzed plans for proposed Colorado River projects, and attended and testified at Congressional committee hearings on project authorization bills.

Some of the more important matters on which the Board has worked in the past year are summarized below:

Arizona vs. California

Early in June, the U.S. Supreme Court delivered its Opinion in *Arizona v. California*. Arizona initiated this case in 1952, to have the rights of the Lower Basin States to Colorado River water determined. While California won on a few important points, in large part the Opinion was unfavorable to the State. California petitioned the Court for rehearing on the points to which it objected most seriously, but the petition was denied. In response to the Court's request for a form of decree from the various parties to effectuate the Opinion, a number of meetings were held at which agreement was reached by all parties on certain parts of a proposed Final Decree. On December 18, California filed its proposals for the parts of the proposed Final Decree on which agreement had not been reached. The Final Decree from the Court has not yet been received.

Central Arizona Project

In January 1962, the Bureau of Reclamation released an Appraisal Report and in June 1963 a Supplemental Report updating and revising its 1947 report on the proposed Central Arizona Project. Extensive studies of these reports were made by the Board's staff. In June 1963, immediately after receipt of the U.S. Supreme Court Opinion in *Arizona v. California,* Senators Hayden and Goldwater introduced a bill (S. 1658) to authorize construction of the project. Hearings on the bill before the Subcommittee on Irrigation and Reclamation of the Senate Interior and Insular Affairs Committee were held in August, at which Bureau of Reclamation officials testified, and in October, at which Arizona witnesses testified. Representatives of the Colorado River Board attended these hearings, but California witnesses have not yet had the opportunity to testify.

Pacific Southwest Water Plan

In August, Secretary of the Interior Udall released his Pacific Southwest Water Plan to conserve and augment the water supply of the Colorado River. The report was submitted to the affected States for review and comment. The Board studied the report and submitted its comments to Governor Brown, and also assisted in the preparation of the State's comments for submission to the Secretary. As a result of comments received from the various States, the Secretary is revising the plan and a revised report is expected to be released early in 1964.

Dixie Project, Utah

In May, Senate subcommittee hearings were held on bills to authorize construction of the Dixie Project. The Chief Engineer of the Board testified at the hearings on two points: (1) use of Hoover Dam power revenues after 1987 to subsidize the project should not be considered at this time; and (2) a basin-wide water inventory should precede authorization of any more Colorado River projects. The bill passed the Senate, but House hearings have not yet been scheduled. The project is now proposed as a part of the Pacific Southwest Water Plan.

Board of Directors

Salinity Problem

In February, the Secretary of the Interior issued a report proposing means for improving the quality of water being delivered to Mexico, in answer to the protest which had been made by Mexico. In accordance with one of the recommendations of the report, additional wells were constructed in the Wellton-Mohawk area (the source of a large part of the salt creating the problem) to permit pumpage of wells with lower salt content during winter low-flow periods. Also, tile drains to serve 8,000 acres in this area will be installed.

During the start of the 1963-64 low-flow period (Oct.-Dec. 1963), water in excess of the amount ordered by Mexico was released from Parker reservoir to dilute the salinity of the discharges from the Wellton-Mohawk Project. This improved the quality of the water sufficiently to satisfy Mexico, but was protested by water users in the United States as a waste of water required in the United States.

A permanent solution to the problem is still pending.

Bridge-Marble Canyon Power Project

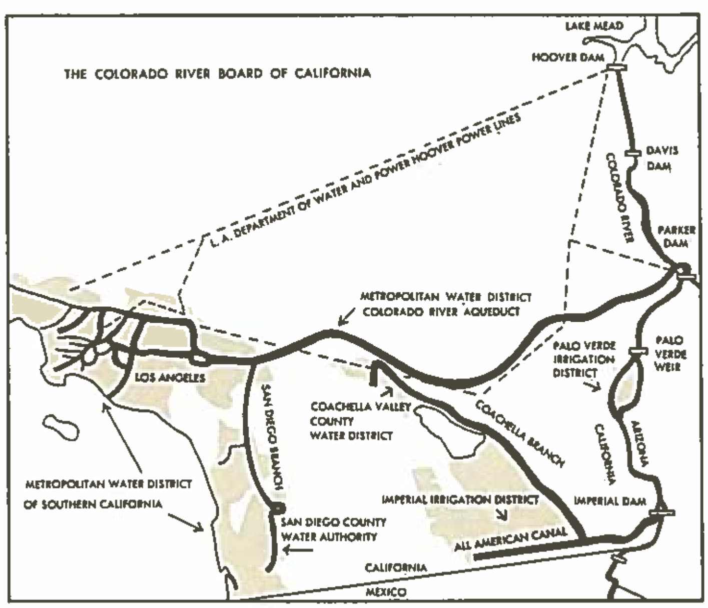
While proceedings were still pending before the Federal Power Commission on applications of the Arizona Power Authority and the City of Los Angeles for licenses to construct this project, Congressman Hosmer introduced a bill to authorize the Secretary of the Interior to build Bridge Canyon Dam. Senators Hayden and Engle joined in the introduction of a bill to suspend the power of FPC to issue any licenses for a ten-year period in the reach of the River between Glen Canyon Dam and Lake Mead. These bills are still pending. Also, Secretary Udall of the Interior Department intervened on the basis that both Marble and Bridge Canyon projects were essential to the Pacific Southwest Water Plan and should be built by the Federal Government. He was granted until February 15, 1964, to submit his plans to FPC.

Glen Canyon Filling Criteria

In March, the left diversion tunnel at Glen Canyon Dam was closed and the Filling Criteria became applicable to operations of Glen Canyon, Flaming Gorge, Navajo, and Hoover Dams. By April, due to low runoff forecast, it appeared that Lake Mead might be drawn down to the minimum level of 14.5 million acre-feet prescribed by the Criteria before Lake Powell is filled to its minimum power pool. The content of Lake Mead decreased 7.0 million acre-feet during 1963 and was still being drawn down at the year's end. If runoff is less than average in 1964, major filling problems will develop.

Collection of Hydrologic Data

Runoff in the Colorado River Basin for 1963 was one of the three lowest in the past sixty years. This, together with the filling process at new dams in the Upper Basin, the Court's Opinion in *Arizona v. California*, Colorado River project bills pending in Congress, and the controversy with Mexico over water quality, makes the need for accurate hydrologic data more acute than ever. In addition to carrying on its own studies of water supply and demands, the Board made efforts to have the Bureau of Reclamation, Geological Survey, International Boundary and Water Commission and others expand their work in this field and to speed up dissemination of information.



OSCAR L. FUDGE
Manager

Water Department

The Water Department is responsible for diversion, transmission and delivery of agricultural and domestic water from the Colorado River to serve the fourth most productive farming area in the United States. In 1963, a total of over $213 million of food and fibre was produced in Imperial Valley, which was a desert wasteland less than seventy years ago.

Although District boundaries include over 900,000 acres of land, the irrigated area contains 430,000 acres (see table on page 11 for a more detailed inventory of areas receiving water). This irrigated area is served by a network of over 3,100 miles of gravity-flow canals and drains operated and maintained by the Water Department.

Water from the Colorado River is diverted into the All-American Canal system at Imperial Dam, located about 20 miles north of Yuma, Arizona. In addition to water for Imperial Valley, the Canal supplies the Yuma Project and Coachella Valley. Water for the latter projects is delivered to users by other agencies.

Administratively, the department is divided into six sections: All-American Canal, Civil Engineering, Drainage Construction and Maintenance, North and South-end Irrigation and Drainage, Water Control, and Heavy Equipment Operations.

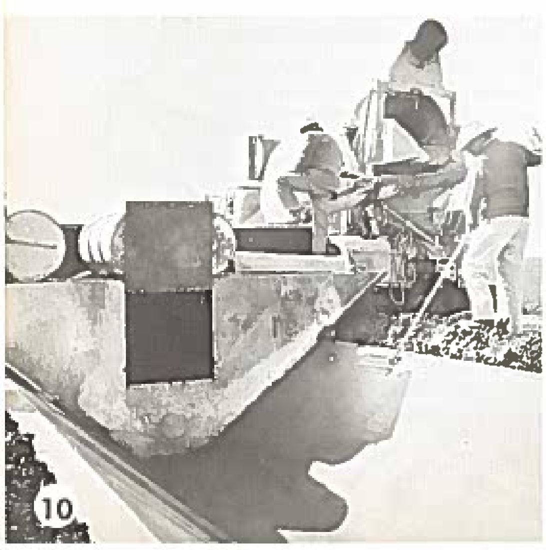
The All-American Canal Section, which is composed of two divisions, operates and maintains the headgates and desilting basins at Imperial Dam and appurtenant works, the 80-mile All-American Canal, and the first 49 miles of the Coachella Branch of the All-American Canal.

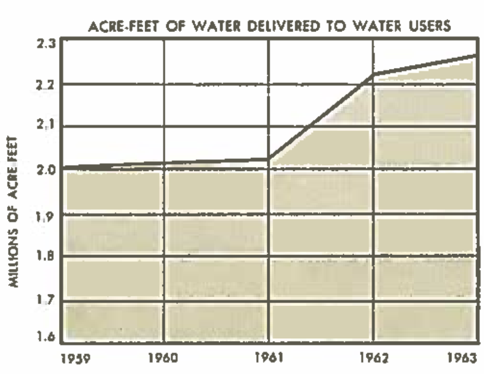
The Civil Engineering Section, which plans and designs irrigation and drainage facilities and performs other related functions, is divided into three subsections: Office Engineering, Field Engineering, and Drainage Design Units. Other important functions of the section include providing technical assistance to farmers on their farm drainage problems and correlating data and interchanging information with U. S. Soil Conservation Service.

The Drainage Construction and Maintenance Section operates and maintains the main drainage system. This section is also responsible for all major construction on the canal and drainage systems.

Functioning under North or South-end Irrigation and Drainage Sections, seven geographical divisions operate and maintain the lateral canal and drainage systems. These divisions receive individual water orders and deliver water to farmers. Wholesale deliveries to city water systems are also a divisional responsibility.

Lining Lateral Canal





Dredge below Imperial Dam

The Water Control Section, under the supervision of a general Watermaster, is responsible for distribution of water through the main canal system and deliveries to lateral canals, preparation of advance weekly water demands at Imperial Dam and interim adjustments in orders to the U. S. Bureau of Reclamation, and maintenance of statistical data required to prepare such orders. Another important function of the section is operation of intra-District Radio Station KME 558, used to maintain communication with over 75 mobile units in vehicles.

The Heavy Equipment Operations Section maintains a pool of equipment and qualified operators for use as needed in construction and upkeep of the canal and drainage systems. The equipment pool includes draglines, dredges, motor graders, trucks and other miscellaneous materiel.

DEPARTMENTAL HIGHLIGHTS

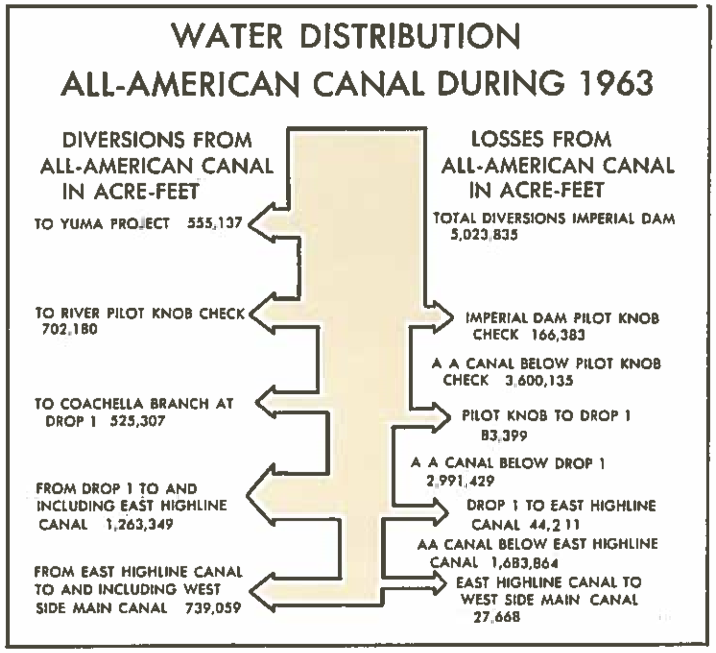
... *Remote Control Operation* — With the installation of remote-control equipment at Drop 1 and the Coachella Turnout of the All-American Canal, all water arriving in both Imperial and Coachella Valleys is controlled by operators at Operating Headquarters in Imperial using a telemetering system. Drop 1 is approximately 38 miles from Imperial. Prior to the extension of remote control operations to Drop 1 and other points on the All-American Canal, hydrographers were on duty around the clock.

The District's first telemetering unit was installed in March 1957 at the Nectarine (Vail) Check on the East Highline Canal, permitting operation of diversions to the Vail Canal from the Watermaster's office at Imperial, a distance of approximately 21 miles.

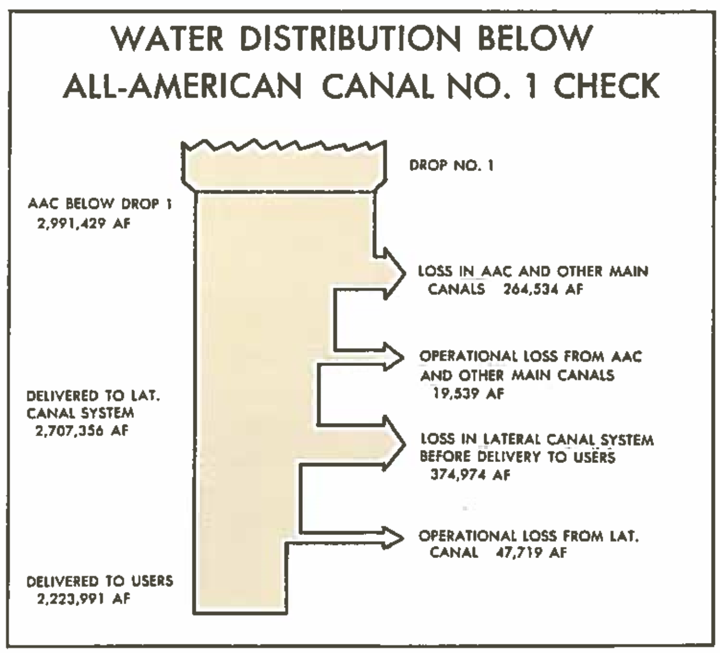
Since that time, remote-control stations have been added on the All-American Canal at Allison Heading, Wisteria Check, New River Siphon, West Side Main Check, and East Highline Check and Turnout. In addition, the Dahlia Check on the Central Main Canal, southwest of El Centro, is remote-controlled.

Control by remote operation has proved highly successful and economical, making possible a reduction in personnel.

... *Concrete Lining* — In order to encourage the concrete lining of District canals in the system, the Board of Directors liberalized the regulation permitting District participation with landowners. Heretofore, the concrete lining regulation applied only to lateral canal termini, which after lining would be maintained by private landowners.



**Water diverted to the Yuma Project and its proportionate share of losses are not charged to nor are such 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 Project water, in accordance with terms of the All-American Canal Contract dated December 1, 1932, and the contract amendatory of and supplemental to that contract, which is dated March 4, 1952. The figures shown in the graph represent the combined Imperial Irrigation District, U.S. Bureau of Reclamation, and U.S. Geological Survey check measurements and shall be considered as provisional pending final reports.*



**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 charged for. This difference and water for some 1,500 service pipes supplying farmsteads, outside subdivisions, etc., are included in the total shown as loss and unaccounted for in lateral canal system before delivery to users.*

Under the modified program, the District will participate in the lining of any portion of a canal, of any size, and will pay all engineering costs, cost of filling the ditch, compacting the fill, preparing the plow-out, installation of the joint-sealing compound, and one-half the cost of concrete installation. The landowner is obligated to pay only one-half the cost of concrete installation.

During the year, 31.7 miles of lateral canals were concrete lined; of this total, operation and maintenance of 5.2 miles was assumed by the landowners, after lining was completed.

Since 1954, the District has installed 67.7 miles of concrete-lined canals, and it is expected that the liberalized program will add increased impetus to new installations.

...*Major Construction* —Work was started by District crews on construction of the second combination check-hydroelectric plant to be built on a main canal in the floor of the Valley. By year end, the new structure was 40 per cent completed.

This construction project covers replacement of an existing irrigation structure built in 1922 on the West Side Main Canal at a point known as the Turnip Check, about three miles southwest of Brawley.

...*Water Diversion* —A total of 5,202,403 acre-feet of water was diverted at Imperial Dam into the All-American Canal headworks, including 178,568 acre-feet used in desilting operations. The net diversion of 5,023,835 acre-feet for all agencies served by the All-American Canal represents a decrease of 16,978 acre-feet over the previous year.

Water delivered to Imperial Valley users totaled 2,384,666 acre-feet, 60,675 acre-feet more than for 1962. Of over one-quarter million individual orders for water, 83½ per cent were delivered on the day requested by the user, 15½ per cent were carried over one day, and one per cent were carried over two days.

...*Employees* — During 1963 a total of 426 full-time employees was assigned to the department.

...*Favorable Salt Balance* —As a result of increasing efficiency of the farm drainage systems in Imperial Valley, approximately 16 per cent more salts were carried out of the Valley into Salton Sea than were brought in by the irrigation water.

In instances where it was impractical to provide gravity outlets to District drains for tile drains, the District installed tile effluent sump pump outlets. As of December 31, there was a total of 219 such pumps in operation, of which 23 were installed during the year. Two pumps were installed under Salton Sea classification, i.e., between the -224 and -230 contours, which increased the total in operation under this classification to 27.

During the year, private contractors installed a total of 766.02 miles of drainage tile on Valley farms, making a three-year total of 2,234.54 miles. To date, a total of 10,404.96 miles of farm tile drains has been installed (see Soil and Water Conservation, page 25).

...*Salton Sea* — Salton Sea, which collects drainage and storm run-off water from approximately a 6,500-square-mile area in Imperial and Riverside Counties and an additional area of about 1,000 square-miles in the Mexicali Valley of Baja California, Mexico, is fed by the New and Alamo Rivers in Imperial Valley and several drains in Coachella Valley.

The salinity of the Sea is approximately the same as ocean water — 47.18 tons per acre-foot as compared to 47.8 tons per acre-foot for ocean water.

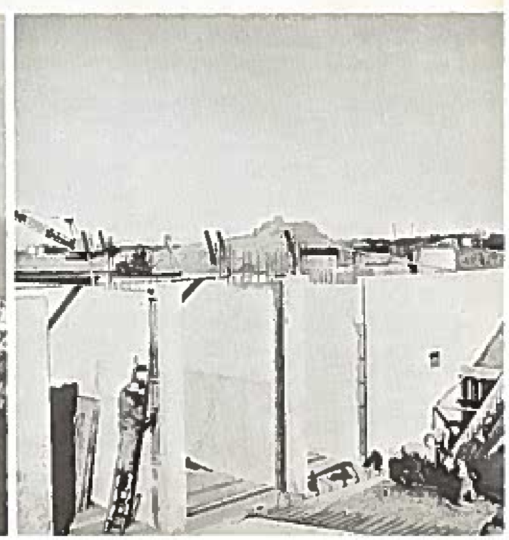
The elevation of the Sea on December 31, 1963, was 231.20 feet below sea level, a rise of 1.45 feet during the preceding year. This rise was the result of a mild summer with less than normal evaporation, increased rainfall in the basin, and increased flow of drainage water crossing the International Boundary in New River.

...*Concrete Pipeline Drains* — Landowners showed greater interest in a heretofore little-used regulation permitting installation of pipeline drains to replace open District drains. During the year, a total of 9.74 miles of pipeline drains was installed compared with 1.38 miles installed in 1962.

Remotely controlled Water Distribution

Soil & Water Test Laboratory

Construction New Turnip Check-Hydro Plant



Under this regulation, landowners pay the total cost of the installation in return for elimination of an open drain ditch and resultant increased farming acreage.

. . . *Weed Control* — Unless controlled, weeds in ditches and on ditchbanks can seriously hamper water movement. Through the years, chemicals have proved the most effective means of control where they can be used.

Burning was the chief control measure for many years, but recently principal burning operations have been confined to removal of debris following chemical application and on mature annual growth.

Since water in the canal system is used for both domestic and agricultural purposes, chemicals are not used to control moss or water weeds except in very severe cases. Normally, moss can be controlled by drying the canal for a three-day period.

There is water constantly flowing in the drainage system, thus different moss-control techniques must be applied. Both mechanical and chemical means are employed in the drainage system control program. Use of bucket rakes for channel work is proving effective in the control of both moss and cat-tails in the drainage system, permitting a reduction in the use of chemicals.

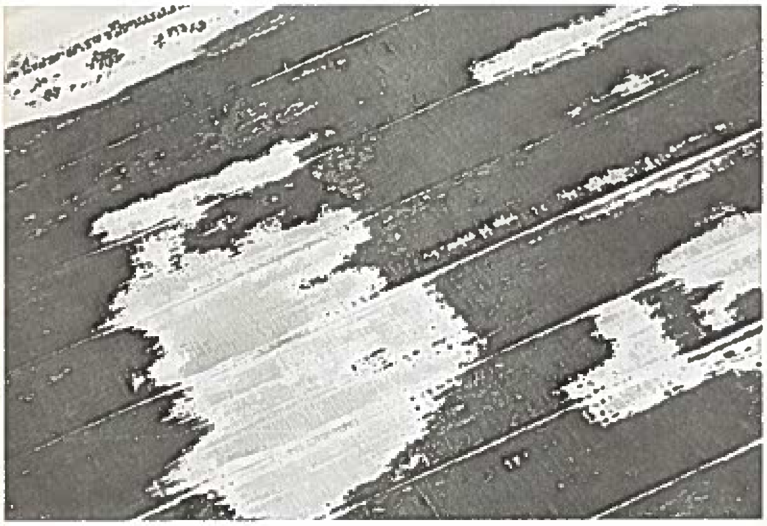
During the year, a total of 11,811 acre-miles of canals and drains was treated with chemicals, 796 acre-miles less than in 1962. A total of 2,995 acre-miles of the lateral canal system and the main and lateral drainage systems was treated for aquatic growth.

Site, New Senator Wash Reservoir

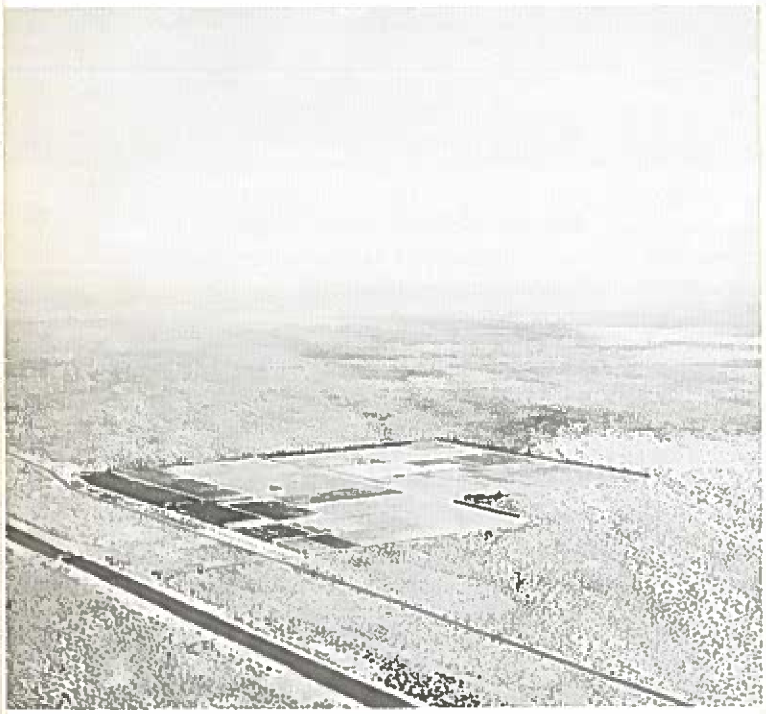
IRRIGATION AND DRAINAGE SYSTEM MAINTENANCE AT A GLANCE

	All-American Canal	Other Main Canals	Lateral Canals	All-American Drains	Main Drains	Lateral Drains
Total Miles	131	153	1,496	51	552	816
Number of Operational Structures	144	562	10,427	–	1,600	641
Concrete	144	470	9,264	–	1,528	460
Rubble	–	54	686	–	–	46
Wood	–	38	464	–	72	79
Combination	–	–	13	–	–	56
MAINTENANCE OPERATIONS						
Draglines	391.50 Oper. Hrs. 65.30 Miles	903.50 Oper. Hrs. 11.00 Miles	5,714.00 Oper. Hrs. 140.22 Miles	253.50 Oper. Hrs. 17.90 Miles	2,676.00 Oper. Hrs. 182.21 Miles	5,455.50 Oper. Hrs. 297.04 Miles
Bucket-line Dredges	– –	– –	800.50 Oper. Hrs. 77.50 Miles	– –	– –	64.00 Oper. Hrs. 5.00 Miles
Bulldozers	349.50 Oper. Hrs. 46.50 Miles	1,792.00 Oper. Hrs. 46.32 Miles	6,026.50 Oper. Hrs. 524.42 Miles	81.00 Oper. Hrs. 8.90 Miles	758.00 Oper. Hrs. 266.33 Miles	1,675.50 Oper. Hrs. 322.30 Miles
Motor Graders	618.50 Oper. Hrs. 240.20 Miles	208.60 Oper. Hrs. 153.20 Miles	1,707.50 Oper. Hrs. 701.50 Miles	227.00 Oper. Hrs. 198.50 Miles	– –	24.00 Oper. Hrs. 9.50 Miles
Miscellaneous Equipment	867.50 Oper. Hrs.	884.50 Oper. Hrs.	2,857.00 Oper. Hrs.	334.00 Oper. Hrs.	2,263.50 Oper. Hrs.	668.00 Oper. Hrs.
Weed and Brush Control	778.40 Acre Miles	1,306.75 Acre Miles	6,406.31 Acre Miles	327.00 Acre Miles	1,396.50 Acre Miles	1,592.58 Acre Miles
Moss Control						
Mechanical	86 Man Hrs. 5.60 Miles	– –	8,784.50 Man Hrs. 1,146.75 Man Hrs.	– –	122.50 Man Hrs. 16.83 Miles	4,048.00 Man Hrs. 314.50 Miles
Chemical	73 Man Hours 430 Miles	– –	2,174.50 Man Hrs. 672.75 Man Hrs.	– –	2,700.50 Man Hrs. 762.59 Miles	199.00 Man Hrs. 81.75 Miles
Rodent Control	724 Man Hrs. 266 Miles	24,485.50 Man Hrs. 4,680.50 Miles	* *	– –	– –	– –

**Other Main Canals and Lateral Canals Combined*

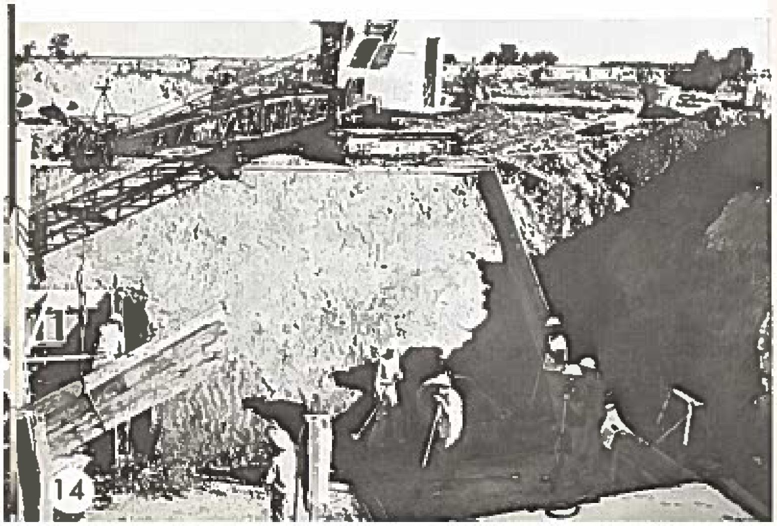


Salt Accumulation



East Mesa Experimental Farm

Major Construction on Main Canal



ALL-AMERICAN CANAL SECTION

The All-American Canal Section, in addition to the headworks and desilting basins at Imperial Dam, operates and maintains 131 miles of major canals, including approximately 80 miles of the All-American Canal, 49 miles of the Coachella Branch of the All-American, and the New Briar Canal for a distance of over 2½ miles.

The section also maintains 39 miles of open drain channels and 11 miles of tile drains appurtenant to the All-American.

The section, as mentioned previously, is divided into two divisions. The River Division is responsible for the first 20 miles of the All-American. The Western Division assumes operation and maintenance responsibility at the Pilot Knob Check, operating the remainder of the All-American, the Coachella Branch of the All-American, and the New Briar Canal.

Normally, the demand for irrigation water is greater during the summer months in the areas served by the 15,155-cubic-foot-per-second All-American Canal. In 1963, a maximum diversion of 11,400 second-feet was made at Station 60 on August 2 and September 18. The year's minimum diversion of 1,650 second-feet was made on January 6.

Water arriving at Imperial Dam has been released from upstream reservoirs by the U. S. Department of Interior, Bureau of Reclamation, having been ordered in advance by the various water agencies.

The District's gross order for delivery at All-American Canal Station 60, which is approximately one mile downstream from Imperial Dam, includes requirements for the Yuma Project and Imperial and Coachella Valleys, and at times Treaty water for Mexico, which is carried in the All-American and returned to the river through Pilot Knob Hydroelectric Plant.

Total water during the year available for diversion through Pilot Knob Hydroelectric Plant was 702,180 acre-feet. Of this amount, 424,334 acre-feet was transferred from the Yuma Project Siphon Drop Hydroelectric Plant under a contract between the District, Yuma County Water Users' Association, and the Bureau of Reclamation.

Since completion of Hoover Dam and other dams upstream, sediment loads arriving at Imperial Dam have been substantially reduced. In general, silt arriving at Imperial Dam is the result of rains below Parker Dam and scouring of the river bed and banks.

Desilting operations resulted in the removal of 414,033 tons of sediment from the water prior to diversion into the All-American Canal. Silt removed was returned to the river. The heaviest silt load was recorded in July with 100,802 tons removed. December was the low month with 551 tons.

Of interest in connection with desilting operations, under a new program by the Bureau of Reclamation, sediment removed from the water at Imperial Dam and returned to the river will be retained upstream from Laguna Dam. The suction dredge "Gila," with a 400-cubic-yard capacity, was moved to the site and commenced operations in August.

The river is being realigned and a silt detention reservoir built as a base of permanent operation for the dredge.

Demand for water during the year was slightly greater than in 1962. The average daily departure from the estimated discharge at Pilot Knob Check was 1.57 per cent greater.

Maintenance operations included mechanical upkeep of structural equipment, electrical maintenance, sandblasting and painting radial gates, cathodic protection, and structural repairs. Other maintenance operations along the canals were road repairs and weed, brush, sandhill and erosion control.

Mechanical maintenance required a total of 27,308 man-hours; canal, drain and other maintenance required 12,213 man-hours.

A total of 27 radial gates at major structures was sandblasted and painted during the year.

IRRIGATION CONSTRUCTION

In addition to major construction previously mentioned, work on the main canal system consisted of improving existing facilities as follows:

East Highline Canal — Replaced Oat Heading and operating gates on the Orchid Weir, both located northeast of Holtville.

Westside Main Canal — Constructed a meter bridge above No. 8 Heading, located five miles northwest of Imperial.

Vail Canal — Replaced Vail Lateral 3 Heading, inlet structure on Vail Lateral 2 Heading, and flume over Vail Canal for Rockwood Canal.

Briar Canal — Replaced Birch Heading, two checks, and three deliveries.

LATERAL CANAL SYSTEM

Other than the modified concrete lining program previously outlined, maintenance of the lateral canal system was confined to replacement and installation of structures necessary to efficient operation.

A total of 150 structures was installed during the year, of which 37 were new and 113 replacements. New installations included: 25 deliveries, 8 checks, 3 control structures, and one siphon. Replacement construction included: 60 deliveries — both wood and concrete, 36 checks and heading, 13 control structures, 3 siphons, and one outlet structure.

The program of replacement of wood or metal road crossings with concrete siphons in cooperation with Imperial County was continued, with 77 crossings completed during the year.

Since the program was initiated in 1947 under an arrangement whereby the District pays installation costs and the County pays material costs, a total of 1,823 road crossings has been completed.

In order to secure more efficient water management, Imperial Valley farmers have installed 1,227.5 miles of concrete-lined head ditches on private land since 1949. For the protection of landowners and the District and to provide uniform installation, assuring a proper flow of water, the District provides preliminary engineering investigation prior to installation of concrete lining.

Leeching washes salts into drains

New "slip plow" aids water movement in soil

Level land produces better crops

Pre-fab forms speed gate installations

INSTALLATION — CONCRETE LATERALS AND HEAD DITCHES

(In Miles)

	1959	1960	1961	1962	1963
Private Head Ditches	122.9	126.8	93.8	95.0	123.5
District Laterals	4.0	3.6	9.1	17.6	26.9
Number of Field Investigations for Concrete Lining	269	294	195	252	230

Note: A grand total of 1,295.2 miles of private concrete-lined head ditches and District lateral canals has been installed to date in Imperial Valley.

DRAINAGE CONSTRUCTION

The key to maintaining continuing high crop yields and a favorable salt balance in Imperial Valley is an efficient drainage system. The District's drainage system development program, which is about 95 per cent complete, contemplates a drainage outlet to serve each unit of approximately 160 acres.

The 1963 rate of expansion of the drainage system was somewhat less than in previous years since a large portion of the land is presently served.

The Drainage Design Unit completed 60 requests for tile drainage investigations and recommendations. There were 53 requests received during the year for drainage design.

During the year, 11.7 miles of laterals and 7.6 miles of main drains were reconstructed. A total of 5.24 miles of lateral drains was deepened and 1.46 miles of main drains constructed.

Erosion control on the drainage system required installation of two concrete siphons to replace two bridges, installation of a control structure to replace a bridge and an old metal flume, installation of two control structures, and the replacement of one outlet.

A reinforced-concrete overpour weir-type structure was installed in New River at Drop 3 north of Brawley. The 43-foot-long erosion control structure has a maximum height of 16 feet, an over-all width of 119 feet, and a weir width of 70 feet. The structure has a capacity before overtopping of 3,150 cubic feet per second.

The "B" Lateral Canal crossing at the Southern Pacific Railroad south of Calipatria was replaced.

In connection with conversion of portions of U.S. Highway 99 and State Highway 111 to freeway status, irrigation and drainage facilities were rearranged from the City of Calexico north to the proposed new Highway 80 freeway. The construction cost for rearrangement of District facilities was about $300,000.

Other construction work for the State Division of Highways — at its expense — included replacement of the Rockwood Canal bridge on State Highway 111; installation and removal of a 60-inch by 54-foot corrugated metal pipe used as a temporary siphon in the Foxglove Canal during construction of a bridge on U.S. Highway 80 over the West Side Main Canal; and replacement of the Foxglove Canal crossing under U.S. Highway 80.

On request of the County of Imperial Road Department, approximately nine miles of District facilities were rearranged at various locations on the canal and drainage systems.

ANNUAL INVENTORY OF AREAS RECEIVING WATER SERVICE
CROP SURVEYS

GARDEN CROPS	Acres Being Served Gross	Dup.	Net
Beans	24		24
Broccoli	35		35
Cabbage	2,025	1,527	498
Cantaloupes	3,654	727	2,927
Carrots	3,526	2,195	1,331
Carrot (Seed)	80		80
Cauliflower	9	4	5
Fava Beans	73		73
Garlic	295		295
Lettuce	34,477	26,034	8,443
Lettuce (Seed)	1		1
Melons (Mixed)	37		37
Mustard	163	60	103
Okra	12		12
Okra (Seed)	5	5	
Onions	2,559	2,032	527
Onion (Seed)	183	20	163
Romaine	48	38	10
Squash	1,035	285	750
Table Beets	27		27
Tomatoes	912	285	627
Vegetables (Mixed)	115	86	29
Watermelons	4,722		4,722
Total	54,017	33,298	20,719

FIELD CROPS	Acres Being Served Gross	Dup.	Net
Alfalfa	189,195	48,697	140,498
Alfalfa (Seed)	6,723	6,486	237
Bamboo Cane	10		10
Barley	75,008	202	74,806
Bermuda	6,219	222	5,997
Bermuda (Seed)	325		325
Cane	1,271	265	1,006
Clover	1,837	13	1,824
Clover (Seed)	11		11
Cotton	63,065	2,501	60,564
FIELD CROPS (Cont.)			
Ear Corn	80	75	5
Flax	8,668		8,668
Head Corn	54,154	19,396	34,758
Millet	620		620
Oats	1,917		1,917
Rice	45		45
Safflower	6,466	35	6,431
Sesbania	1,509	1,184	325
Soy Beans	2		2
Sudan	10,439	6,549	3,890
Sugar Beets	60,093	293	59,800
Wheat	640	80	560
Total	488,297	85,998	402,299

PERMANENT CROPS	Gross	Dup.	Net
Apricots	25		25
Asparagus	1,794	57	1,737
Citrus (Mixed)	337		337
Dates	106		106
Grapefruit	777	5	772
Grapes	3		3
Lemons	157	40	117
Nursery	13		13
Oranges	699	30	669
Palms (Decorative)	16	3	13
Pasture (Permanent)	445	76	369
Pecans	92		92
Tangerines	369	10	359
Total	4,833	221	4,612
GRAND TOTALS	547,147	119,517	427,630

Average No. of Farms Reported	5,114
Average No. of Owner Operated (47%)	2,413
Average No. of Tenant Operated (53%)	2,701
Average Area Acres	95.24

SUMMARY OF AREA SERVED

Crops	Gross	Duplicate	Net
Field Crops	488,297	85,998	402,299
Garden Crops	54,017	33,298	20,719
Permanent Crops	4,833	221	4,612
TOTALS	547,147	119,517	427,630

Area Being Reclaimed (Leaching)	2,851
Net Area Irrigated	430,481
Area Farmable but not Farmed during 1963 (Fallow Land)	41,734
Total Area Farmable	472,215
Area of Farms in Homes, Feed Lots, Corrals, Etc.	13,905
Area in Cities, Towns, and Airports	11,207
Area of Farms having less than Two Acres	959
Total Area Receiving Water	498,286
Area in Drains, Canals, Rivers, Railroads, and Roads	70,795
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 Units	298,292
GRAND TOTAL	909,373

J. FRED HESSE
Manager

Power Department

In 1963, the District's power system recorded the largest increase in average number of customers since 1951, serving an average of 33,182 customers for an increase of 1,363 over the previous year.

Consumption of electric energy by the average District residential customer was 8,014 kilowatt-hours, which was almost double the national average and the highest of all utilities in Arizona and California.

The District's 1,430-square-mile power service area, which in general is the same region served by the All-American Canal, includes three widely spaced population centers. The service area, which is equivalent in size to the States of Connecticut and Rhode Island, includes Coachella Valley in Riverside County and Imperial Valley and the Winterhaven area along the Colorado River in Imperial County.

Of the area served, approximately 20 per cent is populated. The irrigated region includes some of the most productive farmland in the United States. The mild winter climate is attracting many visitors and is the basis for a growing resort-type development both in Imperial and Coachella Valleys.

Sales to other utilities in 1963 decreased by approximately 85,000,000 kilowatt-hours when, in July, the Mexican Government's steam generating plant at Rosarito Beach, Baja California, Mexico, went on the line to supply the Mexicali Valley. Even so, District revenue from the sale of electric energy totaled $9,973,966 — a decrease of only $65,200 from the previous year.

GENERATION AND POWER SOURCES

During the year, District owned and operated generating plants, with a combined nameplate rating of 196,460 kilowatts, supplied 55 per cent of its system's power requirements. Of this District-generated power, hydroelectric plants, which include Pilot Knob and Drops 2, 3, and 4 on the All-American Canal and the Double Weir on the Central Main Canal, produced 36 per cent and the El Centro Steam Plant and the Brawley Diesel Plant 19 per cent.

Of the remainder, 20 per cent was supplied by the U.S. Bureau of Reclamation from Davis Dam, 24 per cent by California Electric Power Company (now Southern California Edison Company) under a 3-party pool agreement between that Company, Arizona Public Service, and the District, for power produced at the Axis Steam Station near Yuma, and one per cent from other sources.

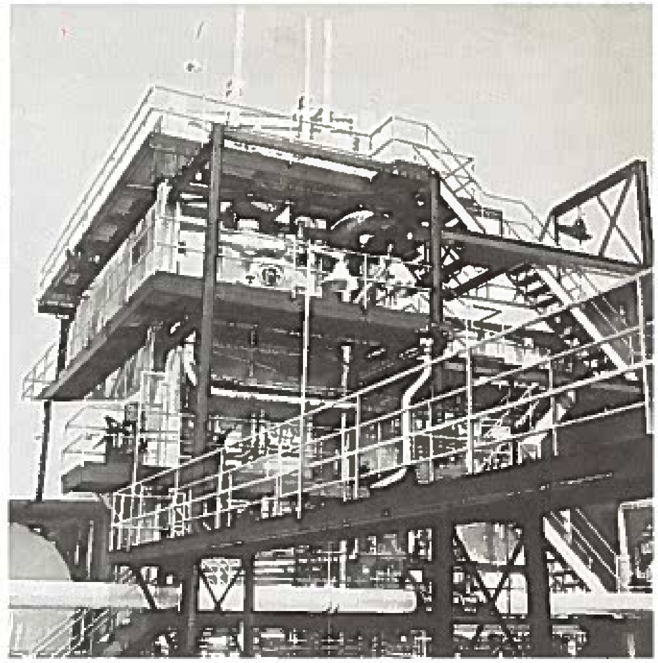
MILES OF POWER LINES IN SERVICE
DECEMBER 31, 1963

	No. Miles Added 1963	Total Miles
Transmission (92-161 kv)	—	519.6
Sub-transmission (33 kv)	10.0	368.0
Primary Distribution	61.0	2,501.0

COST OF OPERATION AND MAINTENANCE

	1963	1962	Increase Decrease*
Steam Generation	$1,062,252	$1,228,107	$165,855*
Hydro Generation	123,401	146,032	22,631*
Other Generation	70,400	57,612	12,788
Purchased Power & Other	1,715,251	2,184,262	469,011*
Transmission	209,408	196,920	12,488
Distribution	744,899	671,562	73,337
Customer Accounting and Collecting	364,903	362,661	2,242
Sales Promotion	139,784	127,431	12,353
Administrative & General	674,491	635,449	39,042
Total	$5,104,789	$5,610,036	$505,247*

*Decrease is accounted for by decreased production costs due to termination of the Mexican load on July 1, 1963.



Interior and Exterior Views, El Centro Steam Generating Plant

OPERATION AND MAINTENANCE

Total cost of operation and maintenance was $5,104,789 — a decrease of $505,247 from the previous year. The greater portion of this reduced cost was a result of termination of the Mexican load, previously mentioned.

As could be expected with the increase of average number of customers, there were slight increases in costs of transmission, distribution, customer accounting and collecting, sales promotion, and administrative and general expenses. However, these increases were more than offset by decreases in generation and purchased-power costs.

As of December 31, there was a total of 19,447 distribution transformers in service with a capacity of 342,245.5 kva. The transformer shop tested, painted, and reconditioned 1,003 transformers and rewound 53.

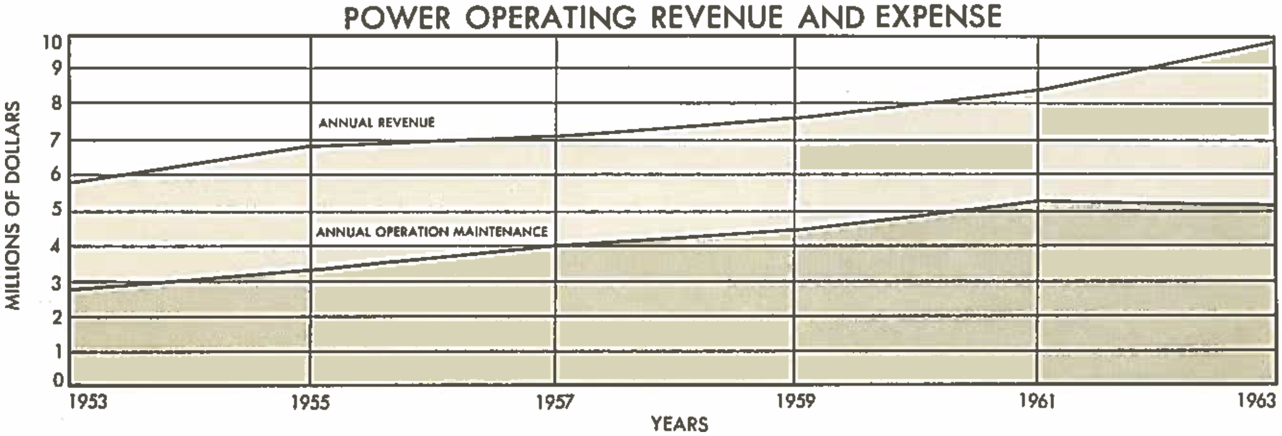
The inventory of watt-hour meters as of year-end totaled 37,574, an increase of 962 over the previous year. During the year, a total of 4,490 meters was tested in the shop and an additional 465 in the field.

SYSTEM ADDITIONS AND IMPROVEMENTS

Reflecting the increased customer growth, additions and improvements to the system were confined mainly to expansion of the distribution system. Of the $1,563,491 invested in plant facilities, a total of $1,262,285 was expended on distribution plant. Other plant investment included $199,596 for transmission plant, $7,261 general plant, $90,292 for engineering and supervision, and $4,057 for production plant.

A total of 61 miles of 4-wire distribution lines was added to the system, of which 42.2 miles were built in Imperial Valley, one-half mile in the Bard-Winterhaven area, and 18.3 miles in the Coachella Valley.

POWER OPERATING REVENUE AND EXPENSE



Extension of Distribution System

New Medallion Apartment

During the year, construction was started on a 20.5-mile transmission line to serve the Pacific Telephone and Telegraph Company microwave relay station located on Black Mountain on the eastern rim of the Valley, to be completed early in 1964.

The engineering section designed the new 400-kilowatt low-head hydroelectric plant to be installed on the Westside Main Canal in connection with a check at the Turnip Heading. When completed in 1964, the plant will be the second automatically-operated hydro plant on the floor of the Valley.

SALES AND SERVICE

Increases in sales to the ultimate consumer almost offset the loss in revenue from decreased sales to other utilities. Revenue from sale of energy to other utilities totaled \$516,550, a decrease of \$653,774 from 1962. However, sales to ultimate consumers totaled \$9,457,416, an increase of \$589,574 over the previous year.

The annual use per domestic customer in each of the ten power divisions showed an increase. Total use ranged from a high of 9,985 kilowatt-hours per customer for the Holtville Division to a low of 5,393 kilowatt-hours for the Salton Division. Nine of the ten divisions showed increases in revenue from sale of electric energy.

Kilowatt-hour sales totaled 670,576,194 — an increase of 47,492,694 over 1962. A load peak of 172,500 kilowatts was recorded June 17, 1963.

An attempt is made wherever possible to co-ordinate the District's advertising program for appliance promotion to the national campaign of National Electrical Manufacturers Association. Dealers are also encouraged to tie in with the District's advertising program.

The advertising program includes use of direct mail, point of sale, custom outdoor painted bulletins and 24-sheet posters, newspaper, radio and other miscellaneous media.

For the past four years the greater portion of sales promotion efforts has been devoted to stimulating more use of appliances which have their greatest use during the off-peak season. With the almost universal use of air-conditioning, sale of electric energy during the summer months is no problem.

This program is meeting with great success. Approximately 85 per cent of all new dwelling units built in the District's service area are either Gold or Bronze Medallion or all-electric homes.

An even more impressive clue to market penetration for competitive-type electrical appliances. Where new electric ranges or electric water heaters are installed in homes not heretofore wired for these appliances, the District pays a reimbursement on a portion of the wiring cost. Reimbursements, of course, do not reflect replacement range sales. However, wiring reimbursements paid in 1963 for water heaters and ranges were approximately three times greater than 1960.

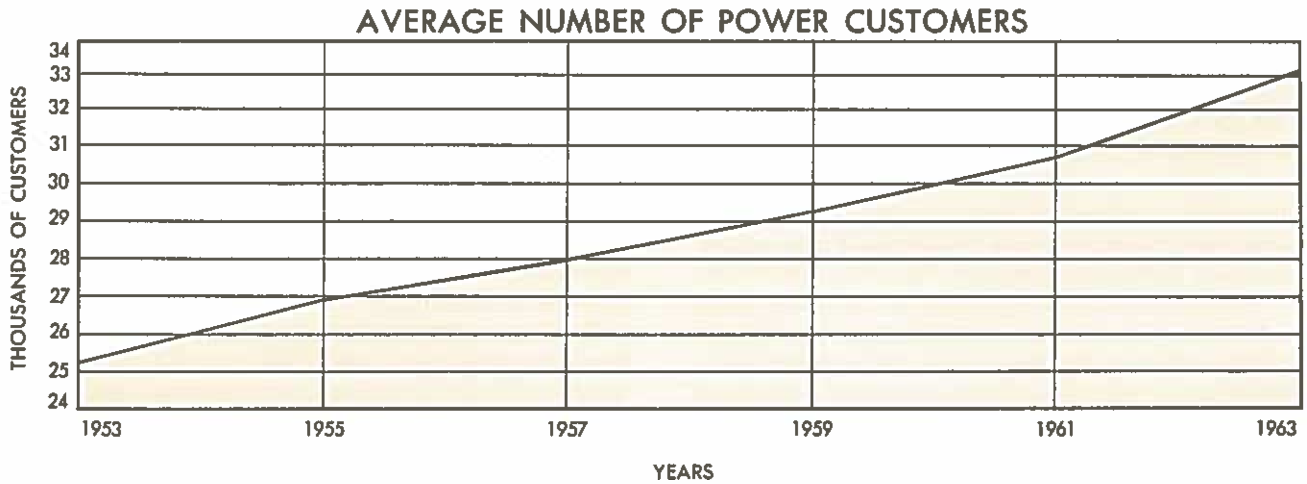
As an aid to dealers and to assure that homemakers understand the operation of new appliances, the sales department maintains a Home Service Section in both Imperial and Coachella Valleys. Home Service Representatives call on new appliance buyers to provide after-sale demonstrations.

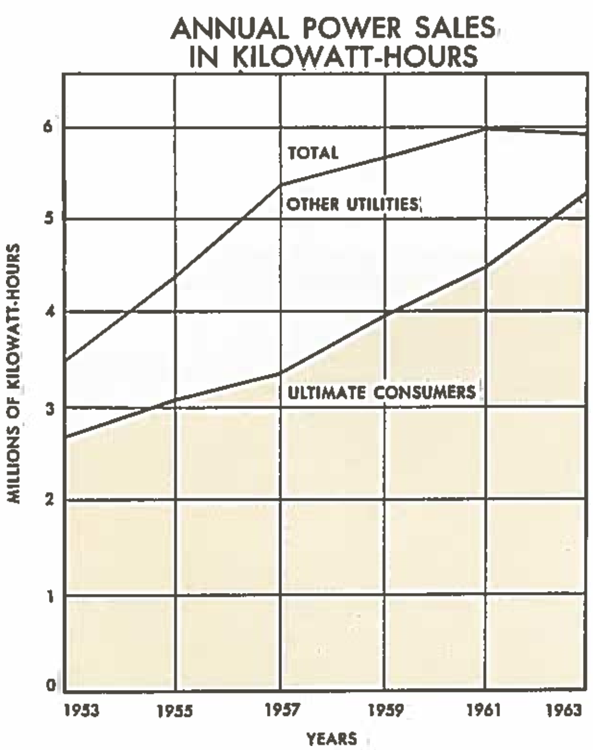
A highly successful program which was instituted five years ago is a Teen-age Cooking School. The program starts after the close of school and is attractive to both boys and girls. During the regular school year, the Home Service Section works closely with home economics instructors in the various Junior High and High Schools.

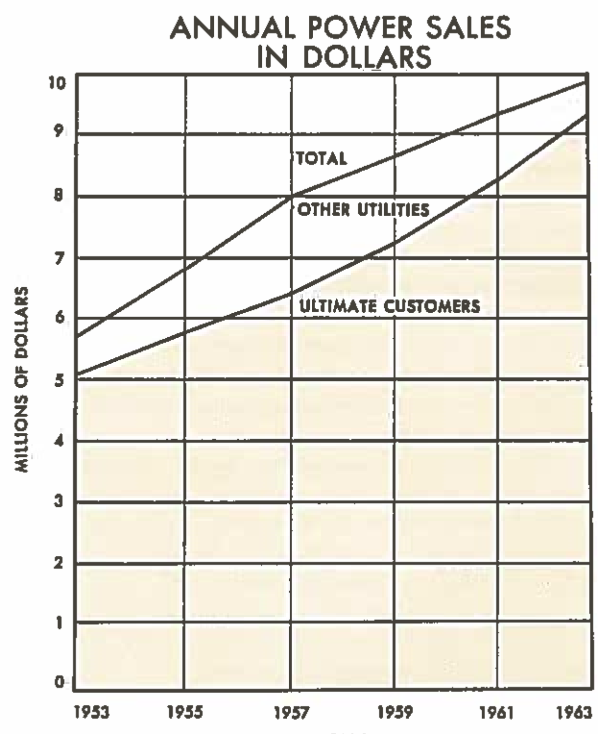
In addition, the section provides assistance to customers on kitchen planning and recipes. Material of interest to homemakers is disseminated through various media.

POWER SALES

Ultimate Consumers	1963	Per Cent	1962	Per Cent
Domestic	$4,086,936	41.0	$ 3,844,843	38.3
Commercial	3,213,058	32.2	2,937,836	29.2
Industrial	1,259,066	12.6	1,153,630	11.5
Agricultural	606,787	6.1	650,044	6.4
Street Lighting, Public Authorities, Inter-Departmental	291,569	2.9	281,489	2.8
Total Ultimate Consumer	$9,457,416	94.8	$ 8,867,842	88.2
Other Utilities	516,550	5.2	1,170,324	11.8
Total Sales	$9,973,966	100.0	$10,038,166	100.0







ROBERT D. REYNOLDS
Manager

Operations Services

Logistic support necessary to operate and maintain the District's vast canal, drainage and power systems and to provide facilities and supplies for other Departments is the responsibility of the Operations Services Department. The Department is organized as follows: Right-of-Way, Buildings and Grounds, Purchasing and Stores, and Mechanical Sections.

The Right-of-Way Section — the District's real estate unit — prepared and negotiated necessary rights of way and agreements with landowners for concrete lining lateral canals, pipe-lining drains, construction of power lines, and relocation of facilities required by the State of California Division of Highways and the County of Imperial in connection with the highway development program. In addition, properties were exchanged and lease agreements negotiated in connection with the new Turnip Check and associated hydroelectric plant.

Another important function of the Right-of-Way Section during the year was acquisition of property for the new Executive Office building in El Centro and new division office building sites in Calexico and Calipatria. Other property transactions included acquisition of sites for various new substations and sales of property no longer needed for operations.

The Buildings and Grounds Section, responsible for building construction, remodeling and maintenance, erected a new rigid-frame stores warehouse and an addition to the auto shop. A major construction project started and about 90 per cent completed during the year was a new 9,200-square-foot concrete-block addition to Headquarters Building J-2 to provide larger quarters for the Customer Accounting and Water Control Sections and a Soil Laboratory.

The program of modernization of District facilities was continued with work completed at Holtville Division Yard, Brawley Water Division Office, and the El Centro Terminal Station, in addition to refurbishing shops and stores buildings in Headquarters Yard.

Two houses no longer necessary in the Drop 3 housing community were moved and remodeled for use by personnel at other operating locations.

Salable salvage materials and equipment no longer required were sold for over $30,000, either at public auction or by sealed bid. The Stores Section deleted 964 obsolete inventory items, adding 174 new items, which resulted in a total of 8,728 items carried in combined stores as of the end of 1963, as compared with 9,518 at the end of 1962.

Another important service of the section concerned research to supply answers for the Legal Department in connection with inquiries resulting from electrical equipment anti-trust suits.

The Mechanical Section maintained an automotive fleet of 409 vehicles which traveled over 5,000,000 miles during the year, an increase of more than 600,000 miles over 1962. The policy of replacing automotive equipment after four years and 65,000 miles was continued. Lighter trucks are replaced at 80,000 miles or ten years, and heavy equipment, such as Caterpillars, is replaced after 25,000 operating-hours, or as necessary.

The Shop Unit manufactured gates, gear boxes, and automatic floatation equipment for use on the Turnip Hydroelectric Plant. The Unit manufactured gates and gear boxes for use at other locations. Sump pumps and other equipment necessary were also made.

The Heavy Equipment Unit maintained an equipment fleet consisting of draglines, bulldozers, graders, and Ruth Dredges which operated approximately 53,000 equipment hours.

New Building to House Water Control, Customer Accounting, and Laboratory

JAMES LLOYD
Manager

Personnel

The principal purpose of the Personnel Department is to provide operating departments with the best possible employees to achieve the District's over-all objective . . . service to our customers.

Departmental functions include organization planning, recruitment and selection of new personnel, allocation, development, and compensation of the work force.

A district-wide employment procedure was activated during the year, refining and continuing previously established recruitment and selection procedures. Applicants were evaluated in a highly structured personal interview, and screened by aptitude and performance test batteries. Further screening was accomplished through personal reference checks and a medical examination for those persons tentatively selected for employment.

Although the actual number of prospective employees rejected medically has been small in relation to the number employed, there is no doubt that the pre-employment physical examination has prevented employment of some potentially costly Workmen's Compensation and Group Insurance claimants.

Prospective Employees at Career Fair

In general, new employees were recruited to fill vacancies caused by normal attrition. Although District service continues to expand, total manpower requirements in 1963 were approximately the same as for the previous year.

Long-time employees are honored at semi-annual service award ceremonies after completing their tenth anniversary, and each five years thereafter. Last year, 135 employees, representing some 2,000 years of service, were so honored.

Regular monthly meetings of representatives of the Employees Association and Management have proved highly satisfactory in solving employee relations problems.

Several new activities were initiated during the year:

- Job descriptions containing specifications of mental and physical skills required and the duties and responsibilities of each position were completed and distributed to respective departments. These descriptions are now being used in employee orientation, training, and appraisal.
- Personal history records of each employee were completed and are now being used in conjunction with employee promotion and individual development.
- An organization manual was in preparation during the year and will be distributed to management personnel early in 1964.
- Research continued on providing a more satisfactory retirement plan at economical rates for the employees.

	December 31, 1963			Dec. 31, 1962
Dept. Distribution of Employees	Full Time	Temp. & Part Time	Total	Total
Executive	29	3	32	31
General Manager's	7	—	7	7
Finance & Accounting	71	13	84	83
Personnel	7	—	7	7
Operations Services	124	5	129	128
Power	301	—	301	301
Water	424	2	426	430
Total	963	23	986	987

REGINALD L. KNOX, JR.
Chief Counsel

Legal Department

The Legal Department consists of the Chief Counsel, two Assistant Counsels, and a Special Counsel on Water Matters.

This Department represents Imperial Irrigation District and its Board of Directors and officers in all legal proceedings, and on any matters in which the District may have a legal interest.

This Department functions in an advisory capacity to the Board of Directors and the executives of the Imperial Irrigation District, and all contracts, right-of-way acquisitions, purchases and sales of real and personal property, inclusions of territory within District boundaries, assessments, financing, and any other matters requiring consideration of the legal features involved are processed through this Department. With the exception of litigation in the Courts and administrative tribunals, the activities of this Department are largely reflected in the functions and operations of the other departments.

ARIZONA VS. CALIFORNIA

On June 3 the United States Supreme Court handed down a decision in the long-standing suit over a division of water in the Lower Basin of the Colorado River. By a seven-to-one decision, the Court ruled that water in tributaries of the Colorado shall be excluded from consideration in the division of the 7.5 million acre-feet of main-stream water.

A second ruling, adopted unanimously by the Court, rejected the Special Master's formula for prorating shortages if the main river cannot supply 7.5 million acre-feet. By a five-to-three majority, the Court ruled that the Secretary of Interior had the authority to devise a shortage formula, based on a system of either proration or priority.

During 1963 meetings were held between all of the parties to the litigation in an attempt to agree on certain phases of the proposed Decree. The areas of disagreement between the various parties have been thoroughly briefed and the briefs in the areas of disagreement have been presented to the Supreme Court.

It is anticipated that the Supreme Court will render its Decree in this matter during 1964; however, due to the nature of the action and the complexities of the proposed Decree and of the areas of disagreement therein, it is difficult to determine when this action may be concluded.

ELECTRICAL ANTITRUST SUITS

The eleven electrical equipment antitrust lawsuits filed during 1961 on behalf of the District are still pending in the United States District Court of California, Southern District. There have been various hearings, preliminarily, in these matters during the past year and all of these electrical equipment antitrust cases are at issue.

The cases in which the District is plaintiff will probably be set for trial sometime during the latter part of 1964 or early part of 1965.

SALTON SEA DAMAGE CLAIMS

There are presently pending two actions against the District and the Coachella Valley County Water District based on claims heretofore filed for damages caused by the rise of the level of the Sea. These actions presently are at issue and are pending.

CONDEMNATION ACTIONS

Condemnation actions during the year included acquisition of certain lands north of Brawley for use in connection with maintenance of New River and construction of a control structure, and defense against two actions filed by the State of California which included the District and other landowners. The former case is still pending; the latter cases were settled by negotiation.

MISCELLANEOUS LITIGATION

Other litigation handled included quiet title actions, collection of delinquent power accounts, personal injury damage claims, claims for damage to crops and other property and bankruptcy claims.

These actions were handled in various Courts in Imperial and Riverside Counties and in the Federal Courts.

The Department participated in a number of proceedings before administrative tribunals of the State of California and legislative committees, both State and Federal.

The Department reviewed Federal legislative work, activities of the National Reclamation Association, State legislative work and activities of the Irrigation Districts Association of California and other interested agencies.

JACK F. SMITH
Work Unit Conservationist
U. S. Soil Conservation Service

Soil Conservation

Since the days of Babylon, the major causes of failure of irrigation projects have been silt and salt in the water. Although irrigation water arriving at an Imperial Valley farmer's gate contains just slightly over one ton of salt per acre-foot, approximately four tons of salt per acre-foot is found in drainage water leaving the Valley. The achievement of a favorable salt balance is the result of installing adequate field drainage tile.

This year 766 miles of tile drains were installed on Valley farms, making a grand total of over 10,400 miles to date. Drainage tile has been installed on 317,178 acres to date. It is believed that eventually all Valley farms will have to be tiled.

In the early 1940's the District requested the U.S. Department of Agriculture, Soil Conservation Service, to provide engineers, soil scientists and agronomists to conduct research studies of the Imperial Valley drainage and salt-control problems. Several years of research resulted in the development of formula which proved satisfactory and are still being used today.

Under a special Memorandum of Understanding between the USDA and the District, the latter became the Soil Conservation District for Imperial Valley. The District Board of Directors sets the policy for assistance which both organizations give to farmers with soil surveys and drainage tile designs. Survey and design data developed by either agency are freely exchanged.

Soil conservationists work with farmers in the scientific approach to formulating farm plans so that each acre of land is treated according to its needs and within its capabilities. These plans are recorded and become the "blueprints" for the individual conservation program.

During 1963, sixty-nine farm plans were prepared by the Work Unit, covering 10,582 acres. To date, 1,126 basic farm plans have been completed, covering 167,762 acres within the boundaries of Imperial Irrigation District.

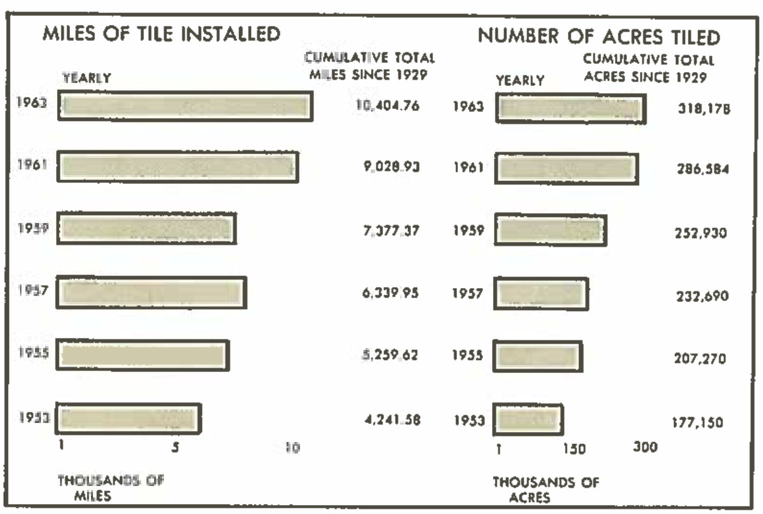
Soil surveys have been made on the irrigated land since the 1920's. Imperial Irrigation District and the Soil Conservation Service are cooperating on the survey work.

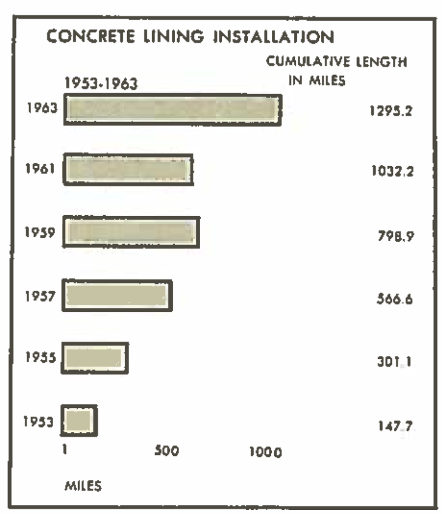
In 1963, 17,600 acres were surveyed with soil profile depths to 7 feet. To date, 452,278 acres have been thus surveyed.

Irrigation water management is being studied to determine areas in which water savings can be made. This work is being done to make a revised irrigation guide for the Imperial Valley.

A joint training program with the District Public Information Office has proved very useful. Many foreign agricultural specialists training in the United States have visited the Imperial Valley to gain a greater knowledge of efficient water use and the control of excess salts. Out of 400 visitors in 1963, 77 spent one or more days with Soil Conservation Service technicians.

An important contribution during the fall to conservation education was made with members of the SCS staff serving as technical lecturers in a San Diego State College-Imperial Irrigation District course on Imperial Valley for teachers.





JACK B. BROCKETT
Controller

Finance & Accounting

The Finance and Accounting Department is divided into five sections which include: General Accounting, Internal Auditing, Customer Accounting and Billing, Cost Accounting and Administrative Services. The General Accounting Section follows the Uniform System of Accounts as prescribed for utilities by the Federal Power Commission and standard accounting procedures in maintaining accounts receivable and accounts payable. This Section also prepares monthly financial statements, detailed balance sheets, and all published financial reports.

The Internal Auditing Section verifies cash and accounts receivable at Headquarters and at all division offices monthly. All journal entries and financial reports are audited monthly. An annual physical inventory is made of all stores. In the interest of uniformity, this Section exercises forms control over all published forms.

The Customer Accounting Section computes, checks, and bills some 40,000 power and water accounts monthly. Using a 20-cycle billing system, approximately 32,000 power meter readings are checked and computed monthly. Water deliveries are reported three times a month and billed monthly.

An innovation which has not only proved popular with the customers, but has also increased departmental efficiency, is the inclusion of an addressed return envelope with all statements. Payments are now made to a centralized point, relieving traffic congestion in the Division Offices and speeding collections.

The Cost Accounting Section has the responsibility of summarizing final cost monthly of various District projects. Another important function of the Section is preparation of semi-monthly pay roll checks, using the NCR Computronic Machine. The Section, using the machine, also makes a labor distribution, prepares the assessment rolls and billing for the Assessor-Collector, and prepares State and Federal pay roll reports.

The Administrative Services Section supervises department personnel working in the various division offices, collectors and adjustment agents, property record custodian, the mail and general files, and reproduction units. The section also is responsible for the investigation of all accidents presenting a potential liability to the District.

District books are audited annually by a firm of Certified Public Accountants. The following is quoted from the 1963 audit report:

CERTIFICATE

We have examined the balance sheet of the Imperial Irrigation District as of December 31, 1963, and the related statements of revenue and surplus for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures that we considered necessary in the circumstances, except that the actual count of the physical inventories of materials and supplies was limited to a test check of the perpetual inventory card records, and no written confirmation of the receivables was made. We considered the systems of controls in effect adequate to properly reflect the balance of these accounts.

In our opinion, the accompanying Balance Sheet and Statements of Revenue and Surplus present fairly the financial position of the Imperial Irrigation District at December 31, 1963, and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

HUTCHINSON AND BLOODGOOD

Paul G. Taylor/Signed/
Certified Public Accountant

CONSOLIDATED STATEMENT OF ASSETS AND LIABILITIES AND NET WORTH

December 31, 1963

ASSETS

Funds for:		
Operation and Maintenance	$ 7,809,086	
Payment of Bond Principal and Interest	4,235,778	
New Construction	3,730,929	
Reserve Funds for Replacements and Emergencies	2,726,427	
Other Special Funds	415,414	
Total Funds	$ 18,917,634	
Accounts Receivable and Current Assessments	1,986,524	
Notes Receivable	134,400	
Materials and Supplies	980,561	
Delinquent Assessments and Tax Deed Land	75,726	
Prepayments on All-American Canal Contract	2,066,139	
Deferred Charges and Prepaid Expenses	791,304	
Properties (Water and Power Systems)	106,537,567	
Total Assets	$131,489,855	

LIABILITIES

Current Liabilities	$ 1,545,960	
Outstanding Bonds	31,560,000	
Deferred Contract Installments	21,767,401	
Reserves	33,572	
Deferred Credits	2,099,418	$ 57,006,351
NET WORTH		74,483,504
Total Liabilities		$131,489,855

The Net Worth is 56.6% of Total Assets

COMPARATIVE INCOME AND EXPENSE STATEMENT AND BALANCE SHEET

WATER

	1963	Over 1962	Under 1962
Operating Revenue	$ 6,373,778	$ 182,180	
Operating Deductions	3,769,155		$ 77,271
Operating Income	$ 2,604,623	$ 259,451	
Other Income	219,546	54,724	
Gross Income	$ 2,824,169	$ 314,175	
Income Deductions	200,667		19,255
Net Income	$ 2,623,502	$ 333,430	
BALANCE SHEET			
Current Assets	$ 5,983,930	$ 398,586	
Investment and Fund Accounts	3,512,676	652,701	
Fixed Assets	58,474,329	1,414,191	
Other Assets and Deferred Charges	2,692,561		$ 309,478
Total Assets	$70,663,496	$2,156,000	
Current Liabilities	$ 759,245	$ 78,343	
Long-Term Liabilities	26,206,181		$1,033,199
Deferred Credits and Reserves	1,718,240	16,803	
Surplus	41,979,830	3,094,053	
Total Liabilities and Surplus	$70,663,496	$2,156,000	

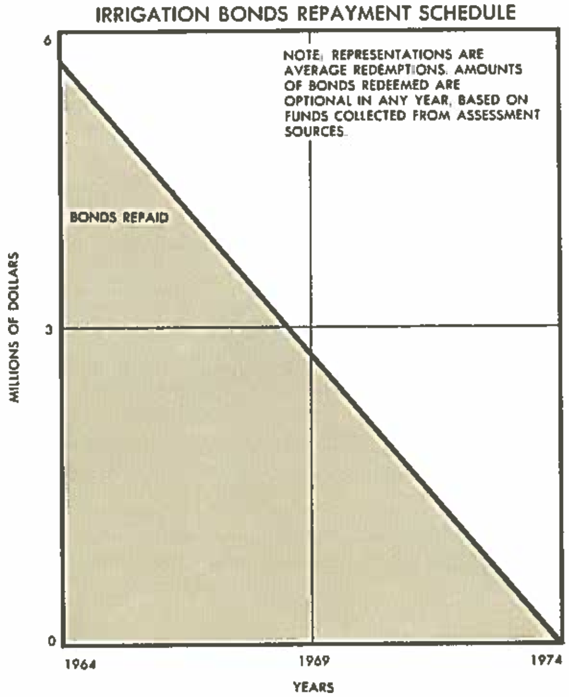
POWER

	1963	Over 1962	Under 1962
Operating Revenue	$10,122,878		$ 51,330
Operating Deductions	7,147,888		398,470
Operating Income	$ 2,974,990	$ 347,140	
Other Income	284,457	7,345	
Gross Income	$ 3,259,447	$ 354,485	
Income Deductions	820,067		$ 32,620
Net Income	$ 2,439,380	$ 387,105	
BALANCE SHEET			
Current Assets	$ 6,064,537	$ 363,331	
Investments and Fund Accounts	6,690,172	1,208,871	
Fixed Assets — Electric Plant	48,061,044		$ 382,409
Other Assets and Deferred Charges	10,606	1,128	
Total Assets	$60,826,359	$1,190,921	
Current Liabilities	$ 786,715		$ 27,509
Long-Term Liabilities	27,121,220		1,217,200
Deferred Credits and Reserves	414,750	174,891	
Surplus	32,503,674	2,260,739	
Total Liabilities and Surplus	$60,826,359	$1,190,921	

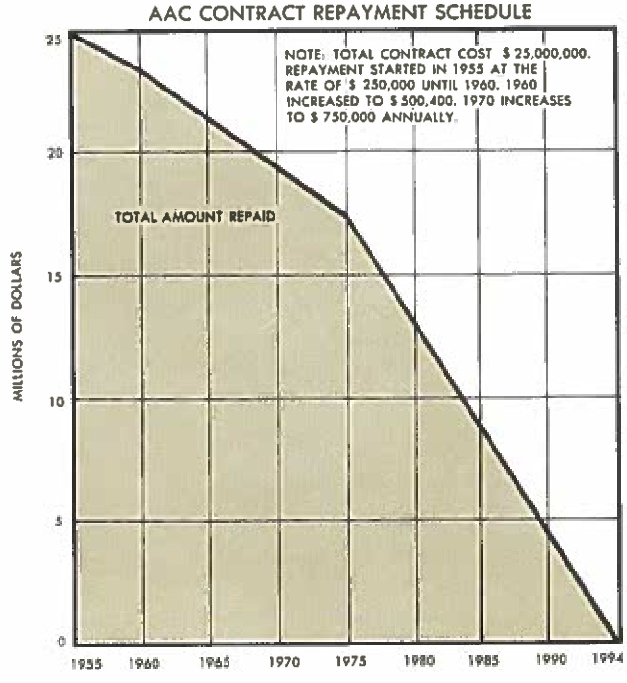
FUND BALANCES—DECEMBER

	December 31 1963	December 31 1962	Increase or Decrease
WATER OPERATING FUNDS:			
Assessments Collected for Following Year	$ 414,747	$ 392,389	$ 22,358
Other Cash Balances	3,440,547	3,214,845	225,702
Total Cash Balances	$3,855,294	$3,607,234	$ 248,060
WATER BOND FUNDS:			
Assessments Collected for Following Year	$ 526,190	$ 517,318	$ 8,872
Other Cash Balances	314,507	282,410	32,097
Total Cash Balances	$ 840,697	$ 799,728	$ 40,969
WATER CONSTRUCTION FUNDS:			
Assessments Collected for Following Year	$ 121,429	$ 119,374	$ 2,055
Other Cash Balances	1,413,514	989,680	423,834
Total Cash Balances	$1,534,943	$1,109,054	$ 425,889
MISCELLANEOUS WATER FUNDS:			
Total Cash Balances	$1,579,433	$1,413,274	$ 166,159
TOTAL WATER DEPARTMENT CASH BALANCES	$7,810,367	$6,929,290	$ 881,077

IRRIGATION BONDS REPAYMENT SCHEDULE



AAC CONTRACT REPAYMENT SCHEDULE

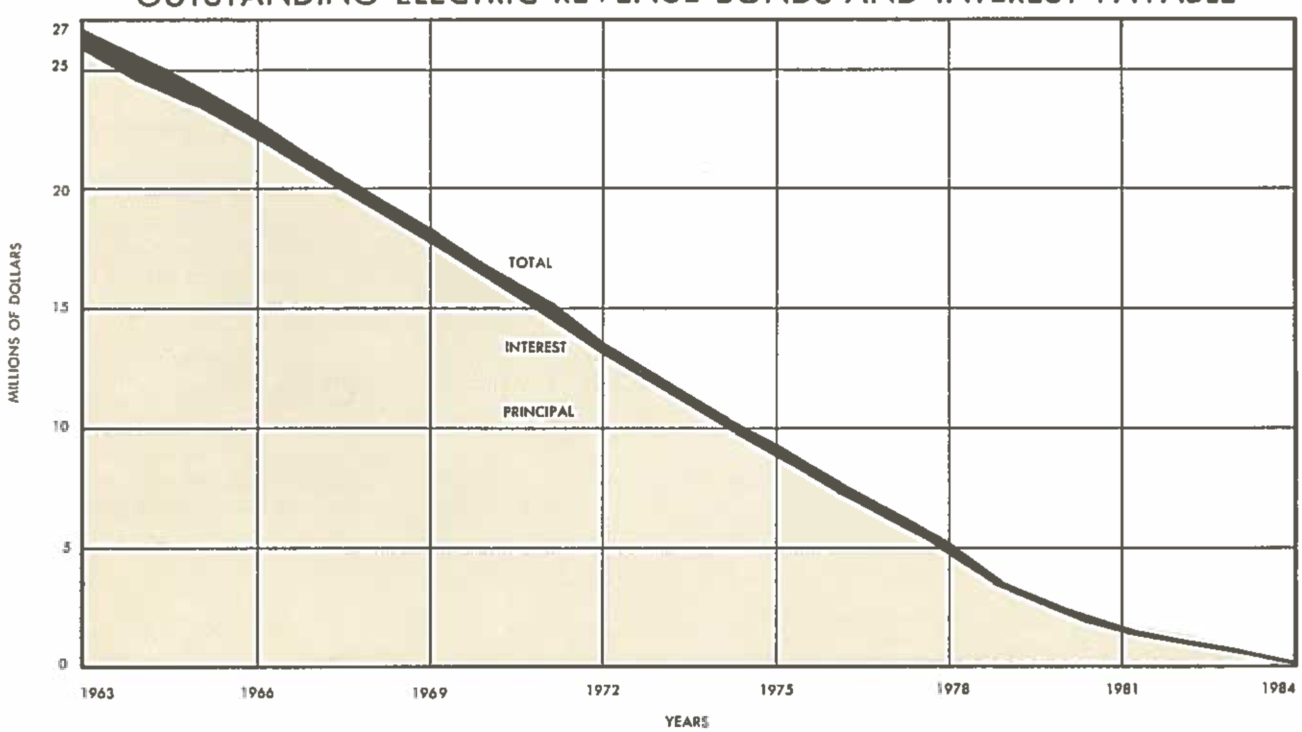


1, 1963, AND DECEMBER 31, 1962

	December 31 1963	December 31 1962	Increase
POWER OPERATING REVENUE FUNDS:			
Cash Balances	$ 3,953,792	$ 3,605,487	$ 348,305
POWER BOND FUNDS:			
Cash Balances	3,395,081	3,390,639	4,442
POWER CONSTRUCTION FUNDS:			
Cash Balances	2,195,985	1,062,749	1,133,236
MISCELLANEOUS POWER RESERVE FUNDS:			
Cash Balances	1,562,409	1,540,439	21,970
TOTAL POWER DEPARTMENT CASH BALANCES	$11,107,267	$ 9,599,314	$1,507,953
ALL FUNDS:			
Assessments Collected for Following Year	$ 1,062,366	$ 1,029,081	$ 33,285
Other Cash Funds	17,855,268	15,499,523	2,355,745
Total Cash Balances	$18,917,634	$16,528,604	$2,389,030

Note: Cash Balances Include Securities Held.

OUTSTANDING ELECTRIC REVENUE BONDS AND INTEREST PAYABLE



CONSOLIDATED REVENU

(January 1, 1963-

OPERATING REVENUES:	Consolidated	Power Dept.	Water Dept.
Realized Revenue from:			
Current Year Assessments	$ 1,492,352		$ 1,492,352
Penalties and Costs on Assessments	3,469		3,469
Redemption of Delinquent Assessments	37,413		37,413
Interest Collected on Redemptions	3,862		3,862
Total Collected by Assessor-Collector	$ 1,537,096		$ 1,537,096
Sales of Land Held under Assessment Deeds	$ 11,260		$ 11,260
Equivalent of Current Assessments on Tax Deed Land	587		587
Rental of Land Held under Assessment Deeds	2,148		2,148
Interest on Land Sales Contracts	2,030		2,030
Total Revenues Derived from Assessments	$ 1,553,121		$ 1,553,121
Water Sales	$ 4,513,815		$ 4,513,815
Gate Service Charges	62,665		62,665
Pipe Service Charges	37,383		37,383
Rental of Buildings	82,203	$ 33,800	48,403
Rental and Sales of Operative Land	35,560		35,560
Rental of Equipment	21,138		21,138
Contributions for Operation and Maintenance of All-American Canal	98,844		98,844
POWER SALES:			
Residential or Domestic Sales	$ 4,086,936	$ 4,086,936	
Rural Sales — Agricultural Power	606,787	606,787	
Commercial Sales	3,213,058	3,213,058	
Industrial Sales	1,259,066	1,259,066	
Public Street and Highway Lighting	104,686	104,686	
Other Sales to Public Authorities	94,189	94,189	
Sales to Other Electric Utilities	516,550	516,550	
Interdepartmental Sales	92,694	92,694	
Total Power Sales	$ 9,973,966	$ 9,973,966	
Miscellaneous Revenue	117,961	115,112	2,849
TOTAL OPERATING REVENUE	$16,496,656	$10,122,878	$ 6,373,778

AND EXPENSE STATEMENT
ecember 31, 1963)

	Consolidated	Power Dept.	Water Dept.
Total Operating Revenue — Brought Forward	$16,496,656	$10,122,878	$ 6,373,778
OPERATING REVENUE DEDUCTIONS:			
Operating Expenses:			
Operation and Maintenance of Water System	$ 2,803,050		$ 2,803,050
Operation and Maintenance of All-American Canal	711,734		711,734
Operation and Maintenance of Imperial and Laguna Dams	62,932		62,932
Operation and Maintenance of Power System:			
Production Expenses	$ 1,284,159	$ 1,284,159	
Power Purchased	1,687,145	1,687,145	
Transmission Expenses	209,408	209,408	
Distribution Expenses	744,899	744,899	
Accounting and Collecting Expenses	364,903	364,903	
Sales Promotion Expenses	139,784	139,784	
Administrative and General Expenses	674,491	674,491	
Total Power Operation and Maintenance	$ 5,104,789	$ 5,104,789	
Miscellaneous Expenses	12,497		12,497
Total Operating Expenses	$ 8,695,002	$ 5,104,789	$ 3,590,213
Depreciation and Amortization:			
Depreciation of Equipment and Facilities	$ 51,155		$ 51,155
Depreciation of Buildings	56,297		56,297
Depreciation of Power System	1,998,206	$ 1,998,206	
Amortization of Plant Acquisition Adj.	29,074	29,074	
Losses on Sales and Retirements of Assets	63,379		63,379
Taxes	23,930	15,819	8,111
Total Operating Revenue Deductions	$10,917,043	$ 7,147,888	$ 3,769,155
Net Operating Revenue	$ 5,579,613	$ 2,974,990	$ 2,604,623
OTHER INCOME:			
Interest on U. S. Securities	$ 31,232	$ 28,742	$ 2,490
Interest on Bank Deposits	455,104	252,713	202,391
Miscellaneous Interest	17,667	3,002	14,665
Total Other Income	$ 504,003	$ 284,457	$ 219,546
GROSS INCOME	$ 6,083,616	$ 3,259,447	$ 2,824,169
INCOME DEDUCTIONS:			
Interest on District Bonds	$ 984,239	$ 790,620	$ 193,619
Amortization of Debt Discount	7,048		7,048
Lease of Power Rights	29,447	29,447	
Total Income Deductions	$ 1,020,734	$ 820,067	$ 200,667
NET INCOME	$ 5,062,882	$ 2,439,380	$ 2,623,502

WILLIAM J. STADLER
Public Information Officer

Public Information

The Public Information Officer is responsible for maintaining a flow of internal and external communication. He is responsible for developing programs, publications, and other informational techniques to provide liaison between the District, the communities it serves, and other sections of the state and nation.

The department, in cooperation with operating department heads, is responsible for preparation and publication of all advertising and for developing sales promotional programs for use by the power sales department.

The Public Information Officer also performs the function of legislative representative, attending certain hearings and legislative sessions under the direction of the Executive Officer. The District is represented at certain state and national association meetings on water and power.

In the field of community relations, a college course on Imperial Valley was offered by the Imperial Valley Campus, San Diego State College, at the suggestion and with the cooperation of the department. On the theory that teachers needed factual information on the area, the course covered history, geology, geography, agriculture, irrigation, etc. The course included not only classroom lectures, but also field trips to various sections of the Valley. The enrollment was higher than anticipated, and attendance was excellent.

The course was cited by Public Relations News, a national public relations journal, as an excellent program and one that could be adapted by other organizations in other areas.

The annual Canal Safety Program was again conducted by a member of the department in each public and private elementary and secondary school in Imperial County. During the month of May, 160 individual programs on water safety were presented. The County Board of Supervisors designated May as Canal Safety Month, and wide publicity was given to canal hazards.

A new, and more stringent, county ordinance was passed prohibiting swimming or water sports in canals.

To assist nearby agencies having canal safety problems, programs were presented outlining the type of educational program used in Imperial Valley.

As a result of efforts in teaching mouth-to-mouth resuscitation, there were three instances of lives having been saved by persons who had seen our program. Schools, emergency groups, and first-aid training instructors throughout the area have found that our life-sized inflatable plastic dummy, "Rescue Annie," is an invaluable assist in teaching mouth-to-mouth resuscitation.

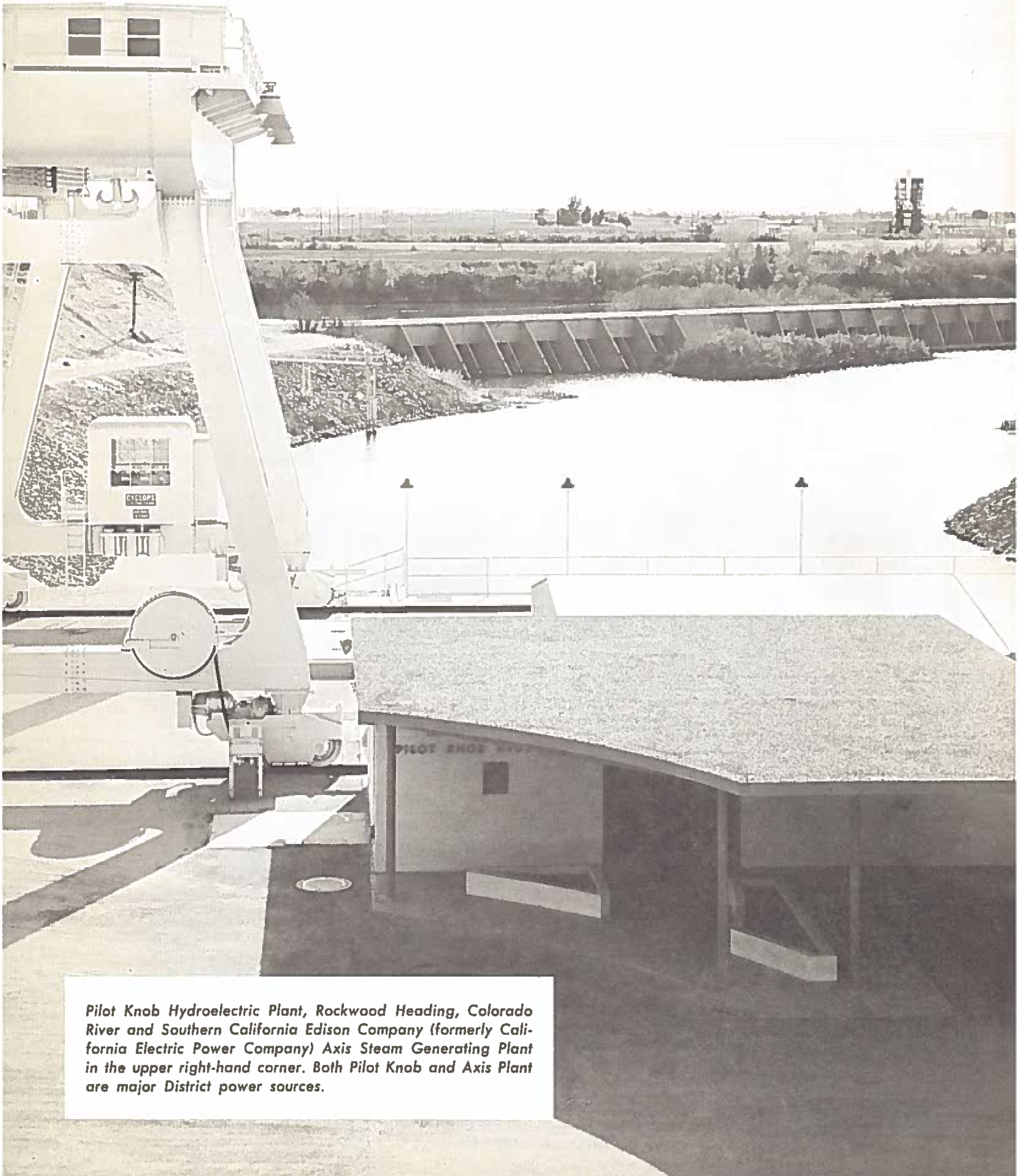
Tours of District facilities, escorted by a representative of the Public Information Office, are becoming increasingly popular. During the year over 500 persons — both local residents and residents of nearby regions — inspected the system. In addition, approximately 250 officials of foreign governments representing some 30 countries, visiting the United States under one of the various leader programs, studied irrigated agriculture and the District's irrigation system under programs arranged through this office.

In addition to editing and publishing a monthly employee paper, HERE'S THE SCOOP, and a customer paper, DISTRICT NEWS, numerous special releases, feature articles, and photo features were prepared for various local and national media.

After the U. S. Supreme Court decision in the lengthy Arizona-California suit was announced, about 250 farmers and community leaders were invited to a Water Conference. A highlight of the meeting was a discussion of the implications of the Court's decision by Northcutt Ely, Assistant Attorney General, State of California, who represented California.

Over 50 programs were provided for school groups, and civic and service clubs. These programs included speakers and films from the department's growing film library.

Visitors at fair booth



Pilot Knob Hydroelectric Plant, Rockwood Heading, Colorado River and Southern California Edison Company (formerly California Electric Power Company) Axis Steam Generating Plant in the upper right-hand corner. Both Pilot Knob and Axis Plant are major District power sources.

IMPERIAL PRINTERS LITHO