# IMPERIAL IRRIGATION DISTRICT

# ANNUAL REPORT 1973

# IMPERIAL IRRIGATION DISTRICT

*annual report for the year*

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## COVER

*Photograph appears to be a fusion of two of nature's forms of energy, geothermal and solar. The picture, taken by E. E. Hertzog of the U.S. Bureau of Reclamation, shows the USBR geothermal well in the East Mesa seven miles east of Holtville as it was "bottomed out" at a depth of 8,030 feet and left to "blow in" before further testing. Hot brines underlying Imperial Valley are a potential source for augmenting the Colorado River with a high quality desalted water. Also, there is a possibility of using the steam for electrical energy generation.*

## Board of Directors

| | |
|---|---|
| Carl C. Bevins | *President, Division 5* |
| Raymond L. Thompson | *Vice-President, Division 1* |
| Joseph D. Moore | *Division 2* |
| Bernard Galleano | *Division 3* |
| A. Neal Jack | *Division 4* |

## Management

| | |
|---|---|
| Robert F. Carter | *General Manager* |
| J. Fred Hesse | *Power Manager* |
| J. Melvin Sheldon | *Water Manager* |
| Robert D. Reynolds | *Operations Services Manager* |
| Richard W. Wheeler | *Finance and Accounting Manager* |
| L. R. McGlocklin | *Personnel Manager* |

## Executive

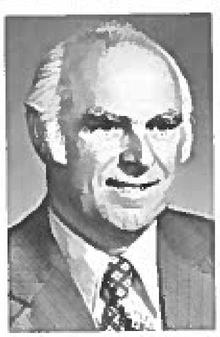
| | |
|---|---|
| Larry E. Beck | *Secretary to the Board* |
| Anna T. McManus | *Treasurer* |
| Reginald L. Knox, Jr. | *Chief Legal Counsel* |
| William J. Stadler | *Director, Community and Special Services* |

# Directors

Carl C. Bevins
President
Division 5

Raymond L. Thompson
Vice President
Division 1

Joseph D. Moore
Division 2



Bernard Galleano
Division 3

A. Neal Jack
Division 4

# President's Message

The stability of a public utility can be measured best by the way it overcomes the obstacles which may be blocking its path. It is with this in mind that we take pride in bringing you the 63rd annual report, a condensed account of District activities in 1973, which shows the District's ability to continue its steady growth and development despite the grave energy crisis which struck the nation.

Our financial picture in 1973 remained stable. The District operated its properties and business in an efficient manner, and has closely adhered to its operating budget throughout the year. It has maintained a competent staff to provide efficient operation of all systems.

The challenges of the past year carry forward in 1974. With the help of all the employees, management and directors, we will do our utmost to meet these challenges. We look forward to the future with confidence that Imperial Valley will continue to grow and prosper.

# GENERAL MANAGER'S REPORT

Energy problems, rising costs, water quality, and conservation of resources all played important roles as the District endeavored to maintain its high level of service to water and power consumers in 1973.

Although faced with increased fuel and materials costs, threatened with impending shortages, and with the initiation of energy conservation measures in the last quarter, the year 1973 produced a record for power sales to the ultimate consumer. This was accomplished with the remarkably low annual cost to residential customers of 1.67 cents per kilowatt hour, as compared to the national average of 2.37 cents. Unfortunately, because of soaring fuel costs, we cannot expect to continue achieving such a low rate.

Two units of the gas turbine installation at Coachella went on line in early summer, and a third unit is scheduled for installation in 1974 to meet projected demands for electrical energy.

Colorado River salinity control came into sharper focus as the President's special representative made his formal recommendations on August 30, 1973, for a "permanent, definitive and just" solution to the international salinity problem arising from delivery of Colorado River treaty water to Mexico. The District's Board of Directors joined sister California agencies and representatives of the seven basin states in urging Congress to protect the rights of domestic users in any enabling legislation, and urged the inclusion of the salinity control program as described by the Department of the Interior in its report entitled, "Colorado River Water Quality Improvement Program," dated February 1972.

The District's water conservation program was vigorously pursued, but much remains to be done in the area of irrigation management and improved methods of water use. However, measurable progress is being made in the efficient use of water, in that 88.8 per cent of the 3,008,661 acre-feet of water received at Pilot Knob was delivered to users. This compares to 87.23 per cent in 1972 and 86.25 per cent in 1971.

Negotiations continued in regard to stipulation of present perfected rights under Arizona vs. California with certain points remaining to be clarified.

Robert F. Carter
General Manager

Employer-employee relations continued on a high plane with regular meet-and-confer sessions resulting in improved benefits in the areas of maternity leave, bereavement leave, overtime during emergencies, and vacation accumulation. Salary adjustments were effected within the guidelines of the federal economic stabilization program.

Stipulations in the consent decree concerning employment practices are being studiously observed, and all departments are cooperating in attempting to achieve the stated goals.

The employees of the District who provide its brain, muscle, and personality have once again registered a good year of performance, through the several departments, working as one harmonious unit in providing service to the people of the District.

The District's 1973 cash receipts totalled $25,845,444, an increase of $1,645,006 over 1972. Expenditures for 1973 were $29,468,004, an increase of $5,822,560 over 1972, which covered payment of bond principal and interest, payrolls, and all other operating expenses, including purchase of gas turbine power units.

Cash receipts from water and power sales, earned-interest on bank deposits, and miscellaneous sources are deposited in local banks and retained in specified fund accounts in the Treasurer's office until expenditures are approved by the Board of Directors.

Funds were retained for annual budget requirements, including water and power department operations, bond principal and interest, and coverage of reserves. Cash funds not needed for current expenses were placed in interest-bearing inactive accounts with local banks. These accounts, together with repurchase agreements, provided the District with a total earned-interest income of $924,929 during 1973.

As of December 31, 1973, inactive accounts with banks amounted to $9,663,000. Interest rates on inactive accounts ranged from 4¾ per cent to 9½ per cent. Daily surveillance of changing interest rates is maintained by the Treasurer's office.

Repurchase agreements (purchase and sale of U.S. securities by the District on a day-to-day and over-a-weekend basis) with banks continued during the year. Interest rates on repurchase agreements ranged from 4½ per cent to 9½ per cent during the year. The District earned $88,783 in interest on this investment. Active cash funds are used for these purchases until needed for District expenses.

The Treasurer's office studies financial and economic reports to keep informed of prevailing interest rates and yields so as to make a comparison with bank interest, assuring highest return on District funds.

Electric revenue bond principal and interest totalling $1,982,932 were paid during 1973, which included $1,587,000 principal and $395,932 interest.

Electric revenue bonds, issued from 1937 to 1954 to aid in financing the District's long-range power development program, including additions and improvements to its expanding power system, amounted to $37,963,000. The total remaining unpaid on December 31, 1973, was $11,635,000. Funds used to retire the electric revenue bonds are obtained from sale of electric energy in Imperial and Coachella Valleys.

Anna T. McManus
Treasurer

**FIVE-YEAR COMPARISON**

**1969 - 1973**

| *Year* | *Receipts* | *Expenditures* |
|---|---|---|
| 1969 | $20,906,260 | $19,798,848 |
| 1970 | 21,375,018 | 20,739,681 |
| 1971 | 22,910,742 | 21,274,791 |
| 1972 | 24,200,438 | 23,645,444 |
| 1973 | 25,845,444 | 29,468,004* |

**Includes purchase of gas turbine power units.*

**ELECTRIC REVENUE BONDED INDEBTEDNESS**

| *Year* | *Indebtedness Beginning of Year* | *Bonds Retired* | *Indebtedness End of Year* |
|---|---|---|---|
| 1969 | $19,232,000 | $1,391,000 | $17,841,000 |
| 1970 | 17,841,000 | 1,529,000 | 16,312,000 |
| 1971 | 16,312,000 | 1,520,000 | 14,792,000 |
| 1972 | 14,792,000 | 1,570,000 | 13,222,000 |
| 1973 | 13,222,000 | 1,587,000 | 11,635,000 |

# FUND BALANCES

| POWER FUNDS | December 31, 1973 | December 31, 1972 | Increase or (Decrease) |
|---|---|---|---|
| POWER OPERATING REVENUE FUNDS: | | | |
| Cash Balances | $ 1,899,476 | $ 900,138 | $ 999,338 |
| POWER BOND FUNDS: | | | |
| Cash Balances | 2,795,214 | 3,094,758 | ( 299,544) |
| POWER CONSTRUCTION FUNDS: | | | |
| Cash Balances | 784,249 | 5,048,023 | ( 4,263,774) |
| MISCELLANEOUS POWER RESERVE FUNDS: | | | |
| Cash Balances | 265,816 | 238,604 | 27,212 |
| TOTAL POWER DEPARTMENT CASH BALANCES | $ 5,744,755 | $ 9,281,523 | ($3,536,768) |

| WATER FUNDS | | | |
|---|---|---|---|
| WATER OPERATING FUNDS: | | | |
| Cash Balances | $ 2,184,950 | $ 2,417,158 | ($ 232,208) |
| WATER CONSTRUCTION FUNDS: | | | |
| Cash Balances | 1,858,888 | 1,676,720 | 182,168 |
| MISCELLANEOUS WATER FUNDS: | | | |
| Cash Balances | 2,261,116 | 2,296,868 | ( 35,752) |
| TOTAL WATER DEPARTMENT CASH BALANCES | $ 6,304,954 | $ 6,390,746 | ($ 85,792) |

| ALL FUNDS | | | |
|---|---|---|---|
| TOTAL CASH BALANCES | $12,049,709 | $15,672,269 | ($3,622,560) |

# COMPARATIVE STATISTICS
## WATER

| WATER DEPARTMENT EARNED FROM: | 1973 | 1972 | 1971 | 1970 | 1969 |
|---|---|---|---|---|---|
| Redemption of Delinquent Assessments | | | | $ 3,351 | $ 6,248 |
| Interest on Redemption of Delinquent Assessments | | | | 828 | 1,119 |
| Sales and Rentals of Land Held Under Assessment Deeds | $ 14,698 | $ 9,062 | $ 15,675 | $ 14,488 | $ 9,583 |
| Water Deliveries and Gate and Pipe Service Charges | 6,093,961 | 5,780,560 | 5,797,188 | 5,864,697 | 5,786,741 |
| Water Availability Charges | 805,991 | 799,476 | 790,403 | | |
| Rental of Land, Buildings and Equipment | 224,347 | 176,667 | 155,162 | 164,322 | 148,642 |
| Other Sources | 163,643 | 154,159 | 135,201 | 129,678 | 125,014 |
| Earned from Operations | $7,302,640 | $6,919,924 | $6,893,629 | $6,177,364 | $6,077,347 |
| Interest on Reserves | 406,880 | 315,945 | 378,180 | 404,830 | 313,367 |
| Total Earned from All Sources | $7,709,520 | $7,235,869 | $7,271,809 | $6,582,194 | $6,390,714 |
| **WHICH WAS USED OR SET ASIDE FOR:** | | | | | |
| Operating Expenses | $5,692,991 | $5,253,945 | $4,956,516 | $5,129,150 | $4,730,587 |
| Taxes | 8,906 | 7,338 | 6,701 | 5,715 | 13,076 |
| Accounting for Operating Expenses and Income Deductions of | $5,701,897 | $5,261,283 | $4,963,217 | $5,134,865 | $4,743,663 |
| Leaving a Differential of | $2,007,623 | $1,974,586 | $2,308,592 | $1,447,329 | $1,647,051 |
| **WHICH WAS USED FOR:** | | | | | |
| Additions to Canal System | $ 856,040 | $ 941,748 | $1,148,860 | $ 791,648 | $ 874,761 |
| Additions to Drainage System | 624,296 | 483,846 | 475,215 | 513,656 | 506,189 |
| Additions to Buildings and Land | 16,233 | 9,262 | 176 | 8,372 | 3,096 |
| New Equipment | 463,847 | 503,962 | 489,153 | 62,617 | 159,106 |
| Additions to Inventory | | | 7,031 | | |
| Additions to Operating Funds | 47,207 | 35,768 | 188,157 | 71,036 | 103,899 |
| | $2,007,623 | $1,974,586 | $2,308,592 | $1,447,329 | $1,647,051 |
| **WHICH ACCOUNTS IN FULL FOR** | $7,709,520 | $7,235,869 | $7,271,809 | $6,582,194 | $6,390,714 |

| POWER DEPARTMENT EARNED FROM: | *1973* | *1972* | *1971* | *1970* | *1969* |
|---|---|---|---|---|---|
| Power Sales | $16,458,403 | $15,445,996 | $14,211,391 | $13,652,153 | $13,147,188 |
| Rental of Electric Property | 33,378 | 30,633 | 26,637 | 26,340 | 25,749 |
| Other Sources | 450,343 | 136,803 | 94,098 | 133,466 | 126,769 |
| Earned from Operations | $16,942,124 | $15,613,432 | $14,332,126 | $13,811,959 | $13,299,706 |
| Interest on Reserves | 472,222 | 425,428 | 430,457 | 460,937 | 282,864 |
| Total Earned from All Sources | $17,414,346 | $16,038,860 | $14,762,583 | $14,272,896 | $13,582,570 |
| **WHICH WAS USED OR SET ASIDE FOR:** | | | | | |
| Operating Expense | $11,476,331 | $ 9,874,320 | $ 8,884,839 | $ 8,207,710 | $ 7,921,612 |
| Interest on Bonds | 373,113 | 418,512 | 462,787 | 507,735 | 551,203 |
| Lease of Power Rights | 23,340 | 31,272 | 25,286 | 27,027 | 81,950 |
| Taxes | 26,318 | 25,974 | 24,793 | 22,887 | 21,464 |
| Accounting for Operating Expenses and Income Deductions of | $11,899,102 | $10,350,078 | $ 9,397,705 | $ 8,765,359 | $ 8,576,229 |
| Leaving a Differential of | $ 5,515,244 | $ 5,688,782 | $ 5,364,878 | $ 5,507,537 | $ 5,006,341 |
| **WHICH WAS USED FOR:** | | | | | |
| Retirement of Electric Revenue Bonds | $ 1,315,000 | $ 1,422,500 | $ 1,542,500 | $ 1,510,000 | $ 1,460,000 |
| Additions to Plant | 2,130,418 | 2,182,576 | 2,137,579 | 2,078,252 | 1,522,959 |
| Increase of Materials and Supplies | 652,626 | 237,053 | | | |
| Payment into Special Electric Plant Construction Fund | 639,324 | 1,235,065 | 1,045,040 | 1,290,070 | 1,569,342 |
| Additions to Other Reserve Funds | 23,203 | 16,466 | 17,244 | 14,155 | 12,038 |
| Deposit with the United States on All-American Canal Contract | 92,312 | 83,553 | 100,714 | 101,356 | 237,117 |
| Payment into Contract Fund — All-American Canal | 507,688 | 476,447 | 419,286 | 348,644 | 182,883 |
| Additions to Operating Funds | 154,673 | 35,122 | 102,515 | 165,060 | 22,002 |
| | $5,515,244 | $ 5,688,782 | $ 5,364,878 | $ 5,507,537 | $ 5,006,341 |
| **WHICH ACCOUNTS IN FULL FOR** | $17,414,346 | $16,038,860 | $14,762,583 | $14,272,896 | $13,582,570 |

| OPERATING REVENUES: | Power | Water | Consolidated |
|---|---|---|---|
| Realized Revenue from: | | | |
| Sales of Land Held Under Assessment Deeds | | $ 12,241 | $ 12,241 |
| Interest on Tax Deed Sales Contracts | | 1,330 | 1,330 |
| Rental of Land Held Under Assessment Deeds | | 1,127 | 1,127 |
| Total Revenues Derived from Delinquent Assessments | | $ 14,698 | $ 14,698 |
| Water Sales | | $5,990,583 | $ 5,990,583 |
| Gate Service Charges | | 62,288 | 62,288 |
| Pipe Service Charges | | 41,090 | 41,090 |
| Water Availability Charges | | 805,991 | 805,991 |
| Rental of Buildings | | 92,413 | 92,413 |
| Rental of Electrical Property | $ 33,378 | | 33,378 |
| Rental and Sales of Operative Land | | 105,800 | 105,800 |
| Rental of Equipment | | 26,134 | 26,134 |
| Contributions for Operation and Maintenance of All-American Canal | | 160,082 | 160,082 |
| Power Sales: | | | |
| Residential or Domestic Sales | $ 7,413,205 | | $ 7,413,205 |
| Rural Sales — Agricultural Power | 634,675 | | 634,675 |
| Commercial Sales | 6,810,208 | | 6,810,208 |
| Industrial Sales | 1,088,060 | | 1,088,060 |
| Public Street and Highway Lighting | 185,291 | | 185,291 |
| Other Sales to Public Authorities | 211,683 | | 211,683 |
| Interdepartmental Sales | 113,478 | | 113,478 |
| Sales to Other Electric Utilities | 1,803 | | 1,803 |
| Total Power Sales | $16,458,403 | | $16,458,403 |
| Miscellaneous Revenue | 450,343 | 3,561 | 453,904 |
| TOTAL OPERATING REVENUES | $16,942,124 | $7,302,640 | $24,244,764 |

## TED REVENUE AND EXPENSE STATEMENT

January 1, 1973 – December 31, 1973

| | Power | Water | Consolidated |
|---|---|---|---|
| Total Operating Revenue — Brought Forward | $16,942,124 | $7,302,640 | $24,244,764 |
| **OPERATING REVENUE DEDUCTIONS:** | | | |
| Operating Expenses: | | | |
| Operation and Maintenance of Water System | | $4,690,024 | $ 4,690,024 |
| Operation and Maintenance of All-American Canal | | 923,022 | 923,022 |
| Operation and Maintenance of Imperial and Laguna Dams | | 72,488 | 72,488 |
| Operation and Maintenance of Power System: | | | |
| Production Expenses | $ 4,697,252 | | $ 4,697,252 |
| Power Purchased | 2,477,701 | | 2,477,701 |
| Transmission Expenses | 383,676 | | 383,676 |
| Distribution Expenses | 1,497,184 | | 1,497,184 |
| Accounting and Collecting Expenses | 625,270 | | 625,270 |
| Sales Promotion Expenses | 75,306 | | 75,306 |
| Administrative and General Expenses | 1,719,942 | | 1,719,942 |
| Total Power Operating and Maintenance | $11,476,331 | | $11,476,331 |
| Miscellaneous Expenses | | 7,457 | 7,457 |
| Total Operating Expenses | $11,476,331 | $5,692,991 | $17,169,322 |
| Depreciation and Amortization: | | | |
| Depreciation of Equipment and Facilities | | $ 69,779 | $ 69,779 |
| Depreciation of Buildings | | 68,142 | 68,142 |
| Depreciation of Canal Structures | | 333,424 | 333,424 |
| Depreciation of Power System | $ 2,796,052 | | 2,796,052 |
| Losses on Sales and Retirements of Assets | | 4,755 | 4,755 |
| Taxes | 26,318 | 8,906 | 35,224 |
| Total Operating Revenue Deductions | $14,298,701 | $6,177,997 | $20,476,698 |
| Net Operating Revenue | $ 2,643,423 | $1,124,643 | $ 3,768,066 |
| **OTHER INCOME:** | | | |
| Interest on Bank Deposits | $ 471,350 | $ 402,301 | $ 873,651 |
| Miscellaneous Interest | 872 | 4,579 | 5,451 |
| Total Other Income | $ 472,222 | $ 406,880 | $ 879,102 |
| GROSS INCOME | $ 3,115,645 | $1,531,523 | $ 4,647,168 |
| **INCOME DEDUCTIONS:** | | | |
| Interest on Power Bonds | $ 373,113 | | $ 373,113 |
| Lease of Power Rights | 23,340 | | 23,340 |
| Total Income Deductions | $ 396,453 | | $ 396,453 |
| INCOME RETAINED FOR PLANT EXPANSION | $ 2,719,192 | $1,531,523 | $ 4,250,715 |

| WATER | 1973 | 1972 |
|---|---|---|
| Operating Revenue | $ 7,302,640 | $ 6,919,924 |
| Operating Deductions | 6,177,997 | 5,735,982 |
| Operating Income | $ 1,124,643 | $ 1,183,942 |
| Other Income | 406,880 | 315,945 |
| Gross Income | $ 1,531,523 | $ 1,499,887 |
| Retained for Plant Expansion | $ 1,531,523 | $ 1,499,887 |

| BALANCE SHEET | | |
|---|---|---|
| Current Assets | $ 3,986,201 | $ 3,886,733 |
| Investment and Fund Accounts | 4,120,004 | 3,973,588 |
| Fixed Assets | 76,058,911 | 74,264,503 |
| Other Assets and Deferred Charges | 714,618 | 682,227 |
| Total Assets | $84,879,734 | $82,807,051 |
| Current Liabilities | $ 915,690 | $ 770,381 |
| Long-Term Liabilities | 14,905,786 | 15,615,585 |
| Deferred Credits and Reserves | 964,355 | 573,661 |
| Net Worth | 68,093,903 | 65,847,424 |
| Total Liabilities and Net Worth | $84,879,734 | $82,807,051 |

| POWER | | |
|---|---|---|
| Operating Revenue | $16,942,124 | $15,613,432 |
| Operating Deductions | 14,298,701 | 12,641,980 |
| Operating Income | $ 2,643,423 | $ 2,971,452 |
| Other Income | 472,222 | 425,428 |
| Gross Income | $ 3,115,645 | $ 3,396,880 |
| Income Deductions | 396,453 | 449,784 |
| Retained for Plant Expansion | $ 2,719,192 | $ 2,947,096 |

| BALANCE SHEET | | |
|---|---|---|
| Current Assets | $ 5,155,275 | $ 3,638,846 |
| Investments and Fund Accounts | 3,530,652 | 8,062,518 |
| Fixed Assets — Electric Plant | 60,175,957 | 55,979,053 |
| Other Assets and Deferred Charges | 13,220 | 12,871 |
| Total Assets | $68,875,104 | $67,693,288 |
| Current Liabilities | $ 1,187,272 | $ 581,994 |
| Long-Term Liabilities | 12,481,815 | 14,117,615 |
| Deferred Credits and Reserves | 380,219 | 505,790 |
| Net Worth | 54,825,798 | 52,487,889 |
| Total Liabilities and Net Worth | $68,875,104 | $67,693,288 |

| | | |
|---|---|---|
| **ASSETS** | | |
| Funds for: | | |
| Operation and Maintenance | $ 4,084,426 | |
| Payment of Bond Principal and Interest | 2,795,214 | |
| New Construction | 2,643,137 | |
| Reserve Funds for Replacement and Emergencies | 1,951,338 | |
| Other Special Funds | 575,594 | |
| Total Funds | | $ 12,049,709 |
| Accounts Receivable | | 1,658,144 |
| Water Availability Accounts Receivable | | 759,805 |
| Materials and Supplies | | 2,307,741 |
| Tax Deed Land | | 8,940 |
| Deferred Charges and Prepaid Expenses | | 735,631 |
| Properties (Water and Power Systems) | | 136,234,868 |
| Total Assets | | $153,754,838 |
| **LIABILITIES** | | |
| Current Liabilities | $ 2,092,962 | |
| Outstanding Bonds | 11,635,000 | |
| Deferred Contract Installments | 15,762,601 | |
| Reserves | 24,687 | |
| Deferred Credits | 1,319,887 | $ 30,835,137 |
| NET WORTH | | 122,919,701 |
| Total Liabilities and Net Worth | | $153,754,838 |

The Net Worth is 79.9 per cent of Total Assets

*We have examined the balance sheet of the Imperial Irrigation District as of December 31, 1973, and the related statements of revenue and expense, surplus, and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, except as noted, and accordingly included such tests of the accounting records and such other auditing procedures that we considered necessary in the circumstances. The verification of the physical inventories of materials and supplies was limited to a sampling of the counts shown by the perpetual inventory card records and a test of the reconciliation thereof to the general ledger balance. No written confirmation of the receivables was made. We considered the systems of controls in effect adequate to properly reflect the balances of these accounts.*

*In our opinion, the accompanying balance sheet and statements of revenue and expense, surplus, and changes in financial position present fairly the financial position of the Imperial Irrigation District at December 31, 1973, 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*
*Certified Public Accountant*

# WATER

Water Department responsibilities include operation and maintenance of the All-American Canal headworks and desilting basins, 80 miles of All-American Canal, 49 miles of the Coachella Branch of the All-American Canal, the three-mile New Briar Canal, a 1,639-mile network of other main canals and laterals, and a 1,396-mile drainage system.

Water conveyed in the District's canal system serves agricultural, industrial and domestic requirements. All Imperial Valley cities and towns receive Colorado River water from District canals.

Total diversion through the All-American Canal headworks in 1973 was 4,893,553 acre-feet (an acre-foot equals 326,000 gallons), including 165,821 acre-feet used in desilting operations and returned to the river.

Water diversions for all agencies served by the All-American Canal totaled 4,727,732 acre-feet, an increase of 63,176 acre-feet over 1972. Of the 3,008,661 acre-feet received at Pilot Knob Check, 88.80 per cent was delivered to users.

The total diversion to the District system was 2,956,013 acre-feet, of which 2,670,313 acre-feet were delivered to water users in Imperial Valley. Comparable figures for 1972 were 2,856,613 and 2,531,343 acre-feet, respectively.

A total of 12,801 acre-miles of canals and drains were treated with herbicides, a reduction of 127 acre-miles from 1972. Weed burning was confined to debris removed from channels.

Normally, drying canals for three days each month controls moss and aquatic growth in canals and drains; however, in the interest of water conservation, mechanical methods — chaining, disking and plowing — were substituted whenever possible. During the year, 4,922 miles of channel in the main and lateral canal and drainage systems were treated mechanically for aquatic weed control.

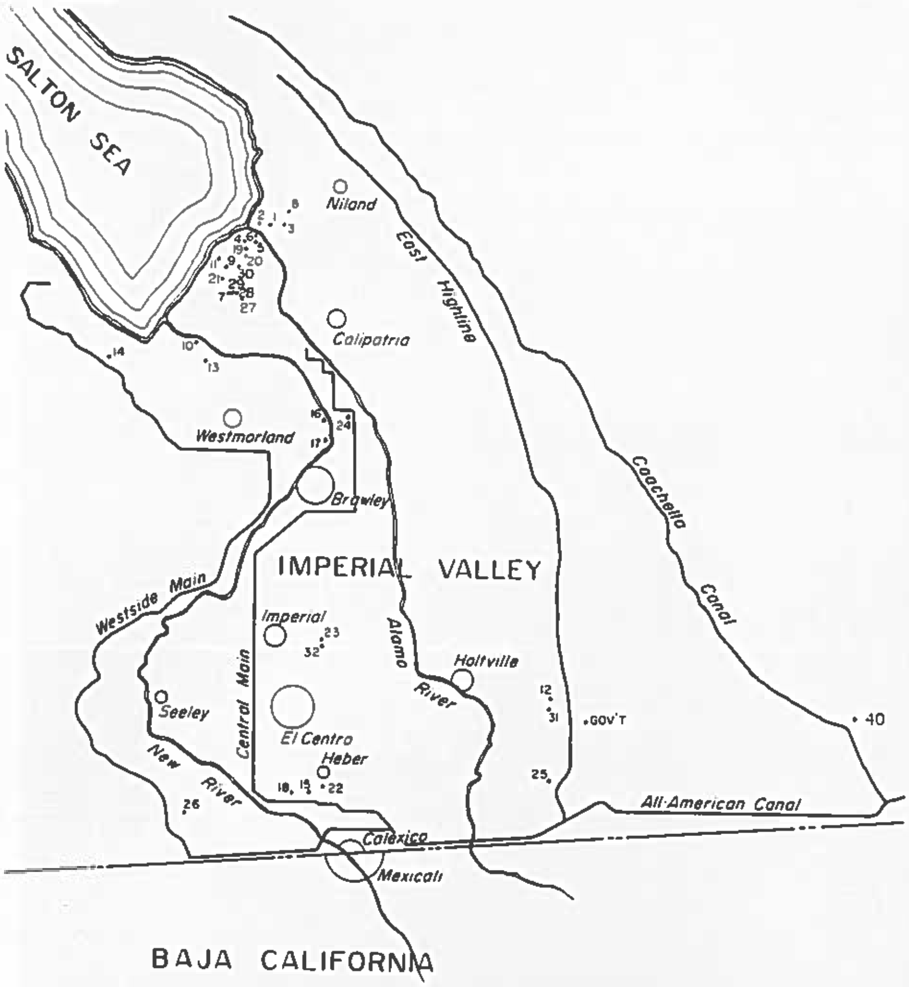
Early in the year, an agreement was executed between the University of California, Coachella Valley County Water District, Palo Verde Irrigation District and Imperial Irrigation District for continuation of research of biological control of aquatic weeds in the Lower Colorado River Basin. In March, one hundred *Tilapia zillii* fish were introduced into rearing ponds. Approximately 28,270 fish were produced and released into various drains and canals for study.

Salton Sea, located in Riverside and Imperial Counties, is the repository of drainage and storm runoff water from both counties and from Mexicali Valley, Baja California, Mexico. The present salinity of the sea is slightly greater than ocean water, with 53.29 tons of salt per acre-foot of water, compared to the ocean's 47.80 tons.

For the 24th straight year, a favorable salt balance was maintained in Imperial Valley soils. A gain of 13.98 per cent was registered in the removal of salt from Imperial Valley farmland through the District's drainage system. A major portion of the salt removed resulted from installation of underground drain tile in individual fields.

All-American Canal at Imperial Dam.

Geothermal steam continues to be an important possibility for electrical development and is in a stage of concentrated exploration. The exact amount of heat, steam and mineral resources lying within the reach of known drilling techniques is still not known, but geothermal development has been greatly accelerated in Imperial Valley, as can be seen from the map below on which various exploration sites are indicated. The Bureau of Reclamation is exploring geothermal resources about 10 miles east of Holtville. It is searching for an additional water supply with which to augment the Colorado River. The Reclamation Bureau's long-range research and development program will investigate the feasibility of desalting mineralized geothermal fluids and delivering the fresh water to the river system to help meet the needs of the arid Southwest. The addition of large amounts of water of high quality would also counteract the increasing salinity of the river.




1. Sportsman (J. I. O'Neil)
2. IID (J. I. O'Neil)
3. River Ranch (Union Oil)
4. J. J. Elmore No. 1 (Union Oil)
5. J. I. O'Neil
6. Shell Oil Co.
7. Western Geothermal
8. Hudson (Union Oil)
9. Magmamax No. 1 (Magma)
10. Dearborn No. 1 (Magma)
11. Woolsey No. 1 (Magma)
12. Sharp No. 1 (Magma)
13. Willey No. 1 (Magma)
14. Heise No. 1 (Magma)
15. Holtz No. 1 (Magma)
16. Veysey No. 1 (Magma)
17. Veysey No. 2 (Magma)
18. Holtz No. 2 (Magma)
19. Elmore No. 2 (Magma)
20. McKelvey No. 2 (Magma)
21. Elmore No. 3 (Magma)
22. McKelvey No. 1 (Magma)
23. Woolsey No. 2 (Magma)
24. Magmamax No. 2 (Magma)
25. Magmamax No. 3 (Magma)
26. Magmamax No. 4 (Magma)
27. Nowlin Partnership No. 1 (Chevron Oil Co.)
28. Nowlin Partnership No. 2 (Chevron Oil Co.)
29. Bonanza No. 1 (Magma)
30. Casey Well No. 1 (Magma)
31. Sharp Well No. 2 (Magma)
32. Fed Rite Well No. 1 (Magma)
33. Sinclair No. 1 (Phillips Petroleum)
34. Sinclair No. 3 (Phillips Petroleum)
35. Sinclair No. 4 (Phillips Petroleum)
36. Hill Bros. Chem. Co.
37. San Diego Gas and Electric Issued permit to test Holtz No. 1 and No. 2 and Nowlin Partnership No. 1 to Chevron Oil.
38. Sharp Well No. 3 (Magma)
39. Bonanza No. 2 (Magma)
40. USBR Test Well

# POWER

The year 1973 brought a host of new challenges – fuel shortages, continually increasing construction and equipment costs, soaring fossil fuel prices and, particularly late in the year, shortages and slow deliveries of vital materials and equipment.

The major energy problem confronting the District, as other utilities, was the curtailment of natural gas for generation and the resulting dependency on low-sulphur residual fuel oil.

The price of this oil spiraled upward from $4.00 per barrel in the early part of the year to $5.80 per barrel in December. Indications are that a price of $10.00 per barrel will be reached in 1974.

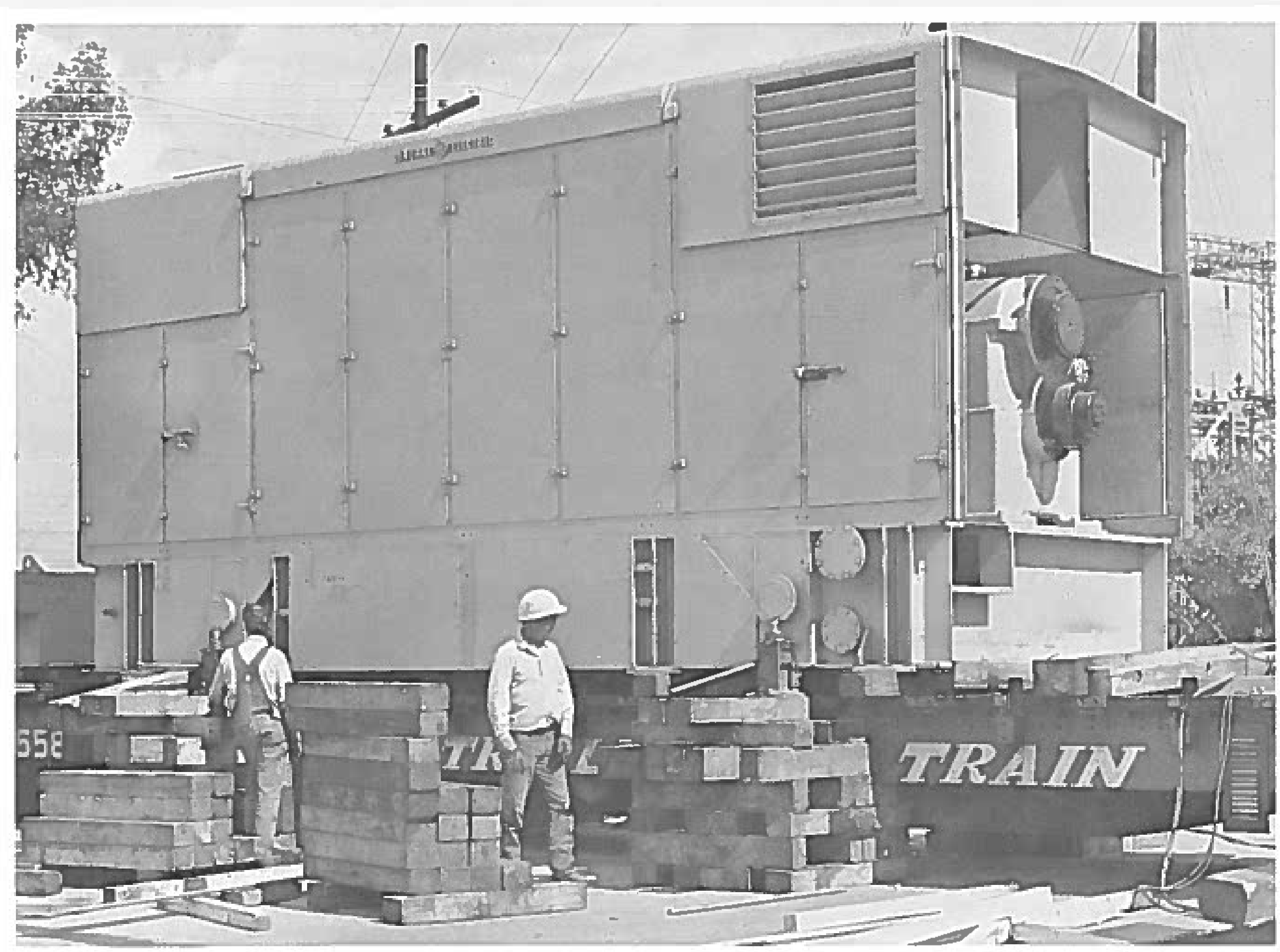
These developments necessitated the initiation of a fuel and energy adjustment billing factor to be applied to power bills starting in January 1974.

As of the end of 1973, two of the three gas turbine generating units under construction in the Coachella-Indio area were operable. When completed, the three units will be capable of supplying an additional 60,000 kilowatts.

Early in 1973, the District contracted for construction of storage facilities for an additional 110,000 barrels of oil at the El Centro Steam Plant. The estimated final cost of the storage tanks is approximately $400,000.

The average cost of electricity to the residential customer per kilowatt-hour in 1973 was 1.67 cents, as compared with a national average of 2.37 cents. Comparable figures for the previous year were 1.68 cents and 2.30 cents, respectively.

Capital improvements amounted to $7,008,122, an increase of $4,786,905 over 1972. (From Revenue Fund, $2,130,418, a decrease of $52,157 from 1972; from Special Electric Plant Construction Fund, $4,877,704, an increase of $4,839,062 over 1972.)

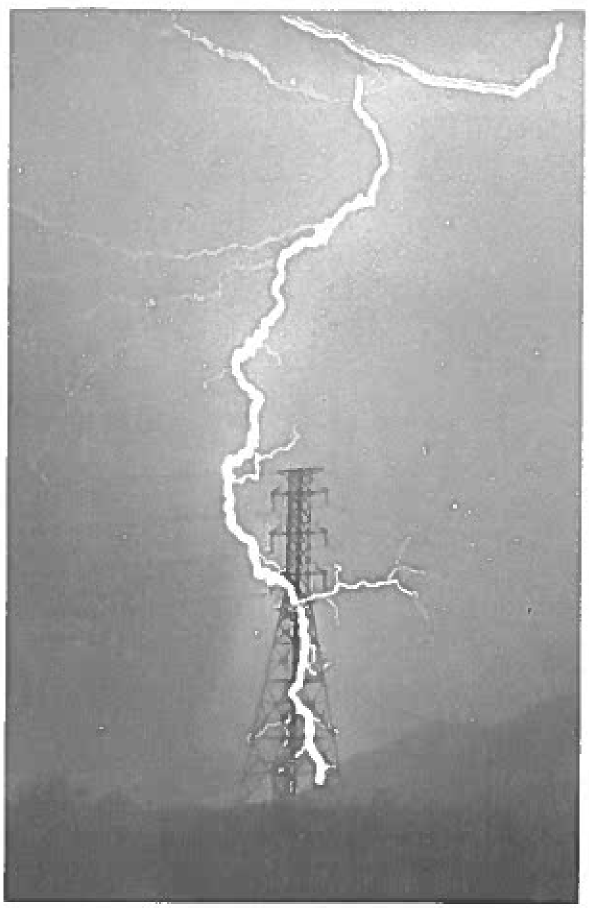



One of three gas turbines to provide additional energy for Coachella Valley is seen being installed at the District's power plant site at Highway 111 and 9th Street, Coachella. The total generation of the new plant will be 60,000 kilowatts which will protect service and cover power requirements for the Coachella Valley. The turbines will meet pollution standards set by the Air Pollution Control Board and will have silencing equipment so that residents within a block of these units will not be disturbed. It is anticipated that the first phase (two units) will be completed by July 1.

# POWER

## POWER SALES

| | | Per Cent 1973 | Per Cent 1972 |
|---|---|---|---|
| *Ultimate Consumers* | | | |
| Domestic | $ 7,413,205 | 45.0 | 44.7 |
| Commercial and Industrial | 7,898,268 | 48.0 | 48.4 |
| Agricultural | 634,675 | 3.9 | 3.9 |
| Street Lighting | 185,291 | 1.1 | 1.0 |
| Public Authorities | 211,683 | 1.3 | 1.3 |
| Inter-Departmental | 113,478 | 0.7 | 0.7 |
| Total Ultimate Consumers | $16,456,600 | 100.0 | 100.0 |
| Other Utilities | $ 1,803 | 0.0 | 0.0 |
| Total Revenue | $16,458,403 | 100.0 | 100.0 |



*A lightning bolt strikes a power transmission tower four miles east of El Centro during a severe thunderstorm in August, causing extensive system damage and power outages throughout Imperial Valley.*

## MAJOR DISTRIBUTION PLANT EXPENDITURES

| | |
|---|---|
| Transformers | $ 422,549 |
| Poles and Fixtures | 334,100 |
| Conductors and Devices | 227,593 |
| Meters | 101,771 |
| Services | 66,437 |
| Station Equipment | 162,142 |
| Underground | 145,055 |
| Street Lights | 108,546 |
| TOTAL | $1,568,193 |

## AVERAGE NUMBER OF CUSTOMERS

| | |
|---|---|
| Residential | 34,794 |
| Commercial and Industrial | 7,276 |
| Agricultural | 759 |
| Other | 727 |
| TOTAL | 43,556 |

## POWER REVENUE

| | 1973 | 1972 |
|---|---|---|
| Imperial Valley | $10,438,145 | $ 9,853,809 |
| Coachella Division | 5,717,391 | 5,316,903 |
| Colorado River | 301,064 | 275,151 |
| Total Retail Sales | $16,456,600 | $15,445,863 |
| Other Utilities | $ 1,803 | $ 133 |
| TOTAL | $16,458,403 | $15,445,996 |

## ANNUAL RESIDENTIAL KILOWATT-HOUR USAGE

| | |
|---|---|
| Average | 12,812 |

Gain of 457 over 1972.

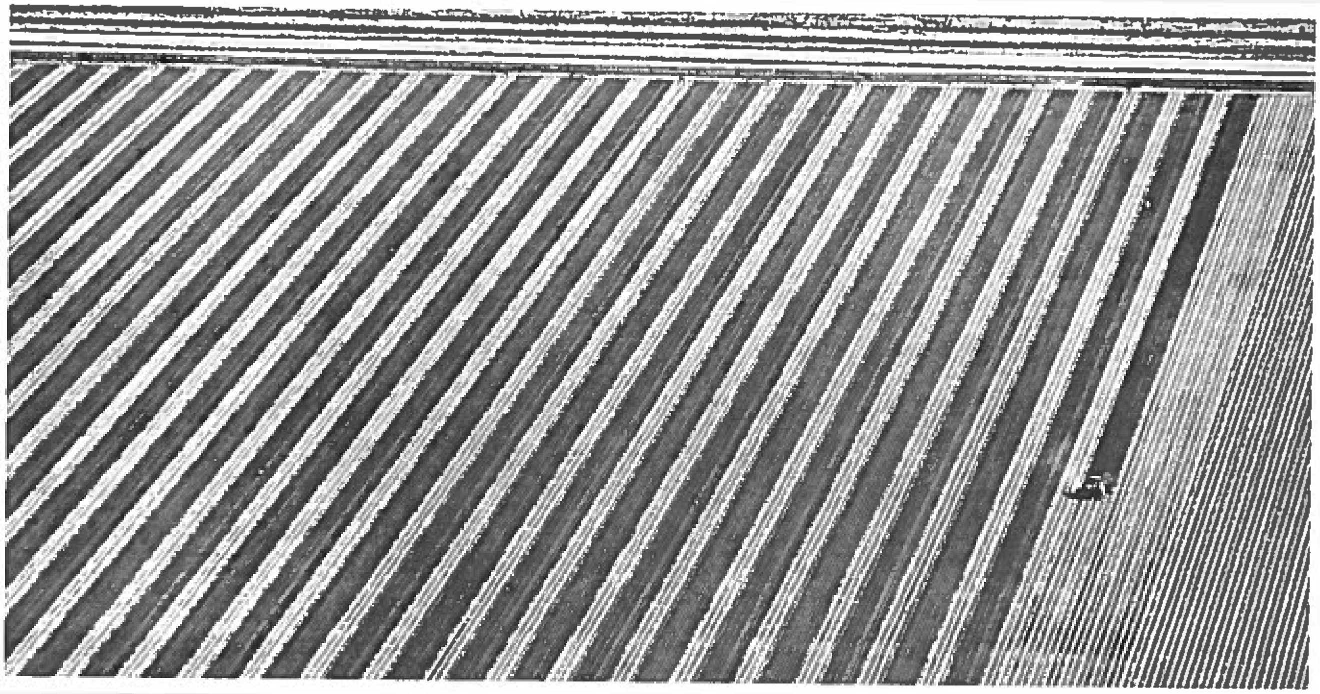
## SOURCES OF POWER REQUIREMENTS

| | |
|---|---|
| Hydroelectric | 21% |
| Thermal | 52% |
| U.S. Bureau of Reclamation | 20% |
| Axis Plant, Yuma | 7% |

## CAPITAL EXPENDITURES ON CURRENT ADDITIONS AND IMPROVEMENTS

| | |
|---|---|
| Production Plant | $ 12,441 |
| Distribution Plant | 1,577,658 |
| Transmission Plant | 170,640 |
| Engineering and Supervision | 225,453 |
| General Plant | 78,685 |
| Fuel Oil Storage Tank | 39,613 |
| Gas Turbines - Preliminary | 4,838,091 |
| TOTAL | $6,942,581 |

# AGRI-BUSINESS



Imperial County agriculture experienced the most productive year in its history during 1973 with a record gross income of $488,862,000. Not only did prices reach record levels, but production, because of favorable weather conditions, was higher than normal. The year also saw the beginning of escalating costs, as the price of fuel, fertilizer and other necessary materials doubled — and, in many cases, tripled. The cattle industry was again the largest single gross producer, although cattle prices were variable during 1973.

## RECAPITULATION

| | *1973* | *1972* |
|---|---|---|
| FIELD CROPS | $168,444,000 | $104,689,000* |
| VEGETABLE CROPS | 119,102,000 | 93,174,000 |
| LIVESTOCK & DAIRY | 190,644,000 | 119,741,000 |
| FRUIT & NUT CROPS | 2,754,000 | 2,063,000* |
| SEED & NURSERY CROPS | 6,440,000 | 2,999,000 |
| APIARY | 1,478,000 | 696,000 |
| TOTAL | $488,862,000 | $323,362,000* |

***Revised**

## MILLION-DOLLAR CROPS

| | *1973* | *1972* |
|---|---|---|
| LETTUCE | $73,200,000 | $60,136,000 |
| HAY, ALFALFA | 53,424,000 | 26,758,000 |
| SUGAR BEETS | 31,936,000 | 28,647,000 |
| COTTON LINT | 30,160,000 | 19,102,000 |
| WHEAT | 26,000,000 | 7,740,000 |
| CANTALOUPES | 12,504,000 | 10,786,000 |
| SORGHUM | 8,280,000 | 6,900,000 |
| CARROTS | 7,092,000 | 3,945,000 |
| ONIONS | 7,044,000 | 3,384,000 |
| ASPARAGUS | 5,832,000 | 3,164,000 |

| | *1973* | *1972* |
|---|---|---|
| COTTON SEED | $ 4,622,000 | $ 1,581,000 |
| TOMATOES | 4,388,000 | 4,925,000 |
| ALFALFA, DEHYDRATED | 3,800,000 | 2,184,000 |
| PASTURE, RYEGRASS | 3,770,000 | 3,375,000 |
| WATERMELONS | 2,935,000 | 1,316,000 |
| BARLEY | 2,520,000 | 5,040,000 |
| ALFALFA SEED | 2,388,000 | 359,000 |
| PASTURE, ALFALFA | 1,926,000 | 1,995,000 |
| PASTURE, SUGAR BEET TOPS | 1,152,000 | 854,000 |

# Management

J. Fred Hesse
Power Department Mgr.

J. Melvin Sheldon
Water Department Mgr.

Robert D. Reynolds
Operations Services Mgr.

Richard W. Wheeler
Finance & Accounting Mgr.

L. R. McGlocklin
Personnel Mgr.

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