

## Salt River Project 1977 Annual Report



75 years of progress

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# Background

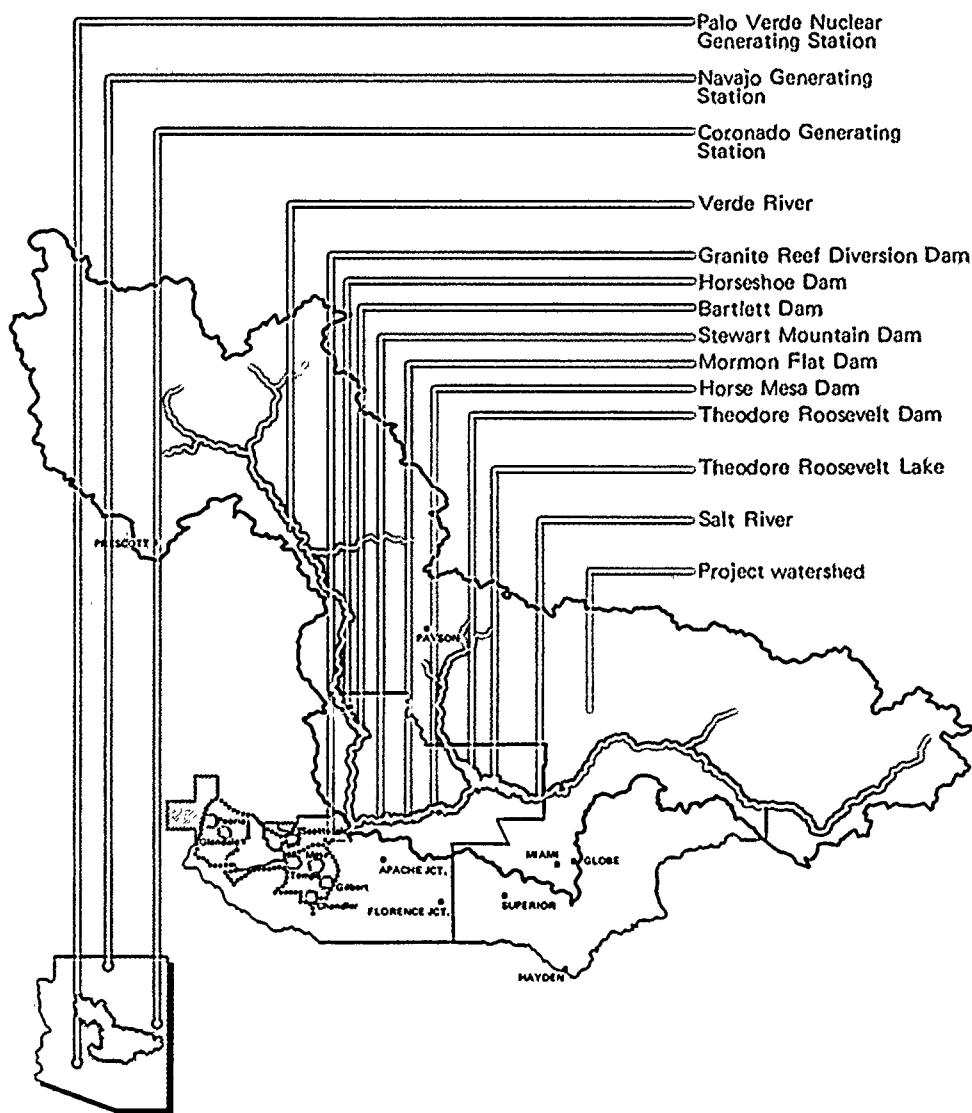
For 75 years, the Salt River Project has played a leading role in the growth of the Valley of the Sun, by providing the utility services of water and power to area residents.

SRP was one of the first projects authorized under the National Reclamation Act of 1902. It consists of two organizations--the Salt River Project Agricultural Improvement and Power District (the District), and the Salt River Valley Water Users' Association (the Association).

The District is a political subdivision organized under the laws of the State of Arizona and operates as a federal reclamation project under contracts with the United States of America. The District provides electric service to residential, commercial, industrial and agricultural power users in a 2,900-square-mile service territory in parts of Maricopa, Gila and Pinal counties.

The Association is a private Arizona corporation. It participates in the management of the 13,000-square-mile watersheds of the Salt and Verde rivers, in cooperation with the U.S. Forest Service. The Association administers water rights of the Project's 250,000-acre area. It also operates and maintains the irrigation transmission and distribution system which carries SRP water to municipal, agricultural and industrial users.

Following the long-standing reclamation principle, SRP uses electric revenues to help support its water and irrigation operations. This support helps keep water delivery charges at reasonable levels. At the same time, the Project maintains competitive rates for the electric service it provides.



- Electrical Service Area Served Exclusively by Salt River Project
- Salt River Project Provides Full Power Requirements of Arizona Public Service for Resale. Project Makes Direct Sales to Customers for All Mining Loads
- Salt River Project Provides Full Power Requirements of Arizona Public Service for Resale
- Electrical Service Areas Not Served by Salt River Project
- Salt River Project Irrigated Area

## Contents

	Page
Highlights.....	1
Letter from management.....	2
Water.....	4
Power.....	8
Financial section .....	13
Statistical review .....	22
Officers, board & council .....	24

# 1977 highlights

## Sources:

	Dollars	Percent
Residential.....	\$134,535,916	43.2%
Commercial and industrial.....	108,827,999	35.0
Sales for resale.....	43,977,961	14.1
Agricultural pumping, street and highway lighting, and public authorities.....	15,934,527	5.1
Water and irrigation revenues.....	5,466,506	1.8
Other.....	2,344,324	.8
Total.....	\$311,087,233	100.0%

## Uses:

Fuel used for generation.....	\$ 67,486,314	21.7%
Purchased power.....	17,766,614	5.7
Other operating expenses.....	45,427,955	14.6
Taxes and tax equivalents.....	34,256,598	11.0
Depreciation and amortization.....	30,818,245	9.9
Maintenance.....	24,628,415	7.9
Net interest on indebtedness.....	37,451,163	12.1
Miscellaneous deductions.....	43,359	-
Reinvested.....	53,208,570	17.1
Total.....	\$311,087,233	100.0%

## Operations

	1977	1976
Assessed water accounts.....	168,736	166,048
Water runoff (acre-feet)*.....	367,122	817,419
Water in storage, Dec. 31 (acre-feet).....	325,087	711,353
Sources of water for deliveries (acre-feet).....	1,209,197	1,190,720
Number of power customers.....	268,891	257,941
Average annual use per residential customer (kwh).....	13,108	12,597
Average annual kwh cost per residential customer (cents).....	4.25	3.51
Energy generated, purchased, interchanged and wheeled (kwh).....	10,294,543,000	9,260,530,000
Peak load for Project customers (kw).....	1,731,000	1,732,000

## Revenues

	1977	1976
Electric.....	\$305,620,727	\$220,961,215
Water and irrigation.....	5,466,506	4,307,032
Total operating revenues.....	311,087,233	225,268,247
Taxes and tax equivalents.....	34,256,598	30,869,311
Total operating expenses.....	220,384,141	182,703,113
Net revenues.....	53,208,570	11,287,259
Plant investment, year-end gross.....	1,473,519,826	1,229,617,294
Long-term debt.....	1,428,270,291	1,186,565,170

\* Based on U.S.G.S. provisional records and subject to adjustment.

# Letter from management

It was hotter and drier than usual last year in semi-arid Arizona. The heat and the drought played parts in both the water and power operations of the Salt River Project, as SRP began its 75th year of operation. The lack of moisture served to sharpen awareness of the Project's significance to the continued growth and development of the Valley of the Sun.

SRP runoff records reveal that 1977 was the second driest year since 1903. Despite this dire statistic, the Project's water-storage system protected its service area from the severe water rationing experienced in some parts of the West. The foresight of the pioneers who began SRP 75 years ago assured the Valley of an adequate water supply in a short-supply year.

Along with the drought came higher average temperatures. However, the maximum daily temperatures were somewhat lower than normal which tended to reduce the peak kilowatt (kw) demand on SRP's system. In addition, the copper mines were on strike during the normal peaking period, and many customers made a special effort to conserve energy during the peak periods. These three factors resulted in a peak demand of 1,731,000 kw—1,000 kw lower than the previous year and considerably lower than anticipated.

SRP actively helped customers conserve energy during 1977. The utility was the first in Arizona, and one of the first in the nation, to offer free home energy inspections to customers. Called Power Saver Service, the program is designed to help consumers cut energy costs by showing them how to make their homes more energy-efficient.

Continuing its efforts to cut operating costs and improve its efficiency to customers, the Project implemented a

new billing system which provides much more information about power usage. SRP also offered a program which allows customers to level their monthly power bills and pay the same amount each month.

Another cost-saving action by SRP was the sale of a portion of its forecast excess generating capacity to the Los Angeles Department of Water and Power (LADWP). The sale will provide coal-generated power to LADWP from the Coronado Generating Station and reduce the Project's total revenue requirements by seven to eight percent over the next 10 years. It will also eliminate that portion of any future rate increases otherwise required for debt-service coverage on the financing of that part of the plant sold to LADWP. In 1982, when the Palo Verde Nuclear Generating Station begins producing electricity, LADWP will trade its share of Coronado back to SRP in exchange for 5.7 percent of Palo Verde.

Taking advantage of favorable money-market conditions, SRP held a special bond sale during 1977 to refund three issues of bonds bearing high interest rates. Savings in the first six years are projected at about \$1.5 million annually, and will total approximately \$23.2 million in debt-service payments during the next 37 and a half years.

Construction and improvements of other electrical facilities were financed by money from other bond sales held during the year. Major projects currently under way include the Coronado and Craig coal-fired generating stations and the Palo Verde Nuclear Generating Station. The use of economical fuel by these projects will help stabilize the cost of producing energy for SRP's customers in the future.

During the past year, the Project's net revenues reached an all-time high of \$53.2 million. The net revenues will be used to help meet construction costs and repayment of debt principle.

In short, 1977 was a successful year for SRP to launch its 75th Anniversary celebration. It was a year when the Project was keenly aware of its roots, while keeping an eye on the future. It is because of the vision of the people who founded the Project that the Valley continues to blossom despite its desert location.

But, as farsighted as those pioneers were, it's highly unlikely they even dreamed that within 75 years the value of crops raised each year on Project lands would exceed 10 times the amount of the original loan it took to build Roosevelt Dam. Or, that per-acre yields of wheat, cotton and alfalfa would exceed twice the national average. Or, that a town with a population of 5,544 in 1900 would grow into a city of 682,000 by 1977, with more than 1.3 million residents sharing the land area within SRP boundaries. In 20 years, some 2.2 million people are expected to be living in the Valley area.

In 1911, when Roosevelt Dam was completed, SRP's total assets were a little more than \$10 million, or the amount of the loan needed to build the dam and its related facilities. At the end of 1977, the Project's gross plant value exceeded \$1.4 billion. Projections indicate that SRP's plant value will more than double within five years, to approximately \$3.6 billion.

As in the past, with the basic principles upon which SRP was founded, the Project will continue serving the people in the Valley with water and power through the last quarter of the 20th century—and well beyond.



In 1911, when President Theodore Roosevelt dedicated the dam named for him, Salt River Project's assets were slightly more than \$10 million. Last year, keeping up with the demands of customers required an investment of more than \$312 million. Leading the Project in meeting the challenges of water and power needs were President Karl Abel (rear), Vice President John Lassen (left) and General Manager Jack Pfister.

# 75 years of leadership in water development

For three-quarters of a century, SRP has played a leading role in the genesis and growth of the Salt River Valley. The Project's 75th year was no exception. Once again, the Project achieved its basic purpose of storing and developing water, and delivering it to the Valley, despite the desert climate.

## SRP meets the challenge of a hot, dry year

Arizona and other parts of the Western United States continued to experience the parching effects of the drought which began in 1975. In fact, 1977 was the second driest year since 1903, according to SRP runoff records. Only 367,035 acre-feet (af) of water flowed into Project reservoirs on the Salt and Verde rivers. A normal flow (based on 30-year averages) would have been 925,492 af. (One acre-foot equals 325,850 gallons.)

The dry year left the largest of the Project's six reservoirs—Roosevelt Lake—at its lowest level since 1958. At the end of the year Roosevelt held only 125,264 af of its 1,381,580-af capacity.

Together, the Salt and Verde water-storage systems contained only 24.7 percent of capacity at the end of the year. In an average year, they would have contained 45.3 percent of capacity.

Despite the drought, Valley residents were able to continue using water at normal volume. This was due largely to SRP's water-storage system which saved water from wet years in the early 1970's for use in dry ones. In addition, the percentage of water from wells increased somewhat.

## Board enacts precautionary measures

Uncertainty about when the continuing drought would end prompted

the Project's board of governors to take several precautionary measures to protect water supplies for 1978 and future years.

In October, the board reduced the 1978 allotment of stored and developed water from three to two-acre-feet-per-acre and enacted a moratorium on new, special pump-right contracts.

The board also placed water-use restrictions on residential irrigators, by reducing the number and duration of irrigation deliveries for about 26,000 subdivision accounts.

The provisions were lifted in early 1978 when runoff and reservoir storage improved significantly.

To help meet rising costs, the board increased the annual water assessment from \$9 to \$10 per acre.

Paying the assessment entitles a Project water user to two-acre-feet of water per acre. When runoff conditions improved in early 1978, a third acre-foot-per-acre of reservoir water was made available for a delivery fee of \$5 per acre-foot.

## SRP drains Bartlett Lake for dam inspection

In February, the Project began draining Bartlett Lake to inspect a valve and other operating equipment at the bottom of Bartlett Dam. The inspection was performed by SRP staff members and the U.S. Bureau of Reclamation.

Monitoring equipment was installed to estimate the amount of seepage from the dam. Crews also conducted a silt survey to check the amount of silt build-up at the bottom of the reservoir. The survey showed there was essentially no loss in storage capacity since the last survey in 1965. Other work done on Bartlett included replacing

the gauge and related equipment used to monitor the reservoir's water level and applying a protective coating to the pipes, valves and other metal equipment used to release water through the dam.

The work cost approximately \$291,000. Refilling of Bartlett began Sept. 30, 1977.

## Project opposes 160-acre limitation

During 1977, SRP took a strong stand against the 160-acre limitation for lands which can receive water from a federal reclamation project.

The Project's position is that due to the terms of the legislation which authorized the construction of the Salt River Project, the proposed regulations are not applicable. Also, the Project believes that the interpretation of the 1902 Reclamation Act by a California court is impractical in light of modern farming costs. SRP has asked the Secretary of the Interior and the Arizona Congressional delegation to support legislation which recognizes the economic realities of agricultural production in today's world.

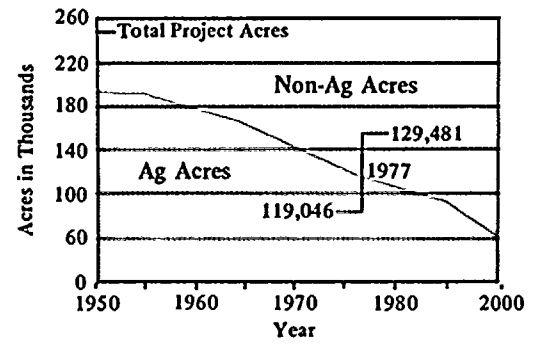
## Composition of land using water changes; demand remains constant

Since 1903, the way land has been used within the Project service area has changed dramatically. Then, nearly all the land was used for agricultural purposes. Within SRP boundaries, the average rate of urbanization from 1965 to 1975 was 4,000 acres per year. A total of 2,764 acres was converted from agricultural to urban use during 1977. At year-end there were 119,046 acres in the Project area being used for agricultural purposes and 129,481 acres being used for other purposes.

Despite the declining amount of farmed land within SRP boundaries,



**Land Use In Salt River Project**



Uncontrolled, destructive flows of the Salt River were once common. Today, SRP's reservoirs on the Salt and Verde rivers store most of the water from rain and snow which falls on the Project's 13,000-square-mile watershed. The water is released as it is needed to meet the demands of Valley water users. The Project's facilities also provide a variety of welcome recreational side benefits. Canal banks can be used by joggers, bicyclists and horseback riders. Boaters, swimmers, skiers and fishermen can pursue their sports on the six SRP lakes.

water deliveries have remained relatively constant for more than 30 years. A fully-urbanized Project area is expected to require approximately the same amount of water that is used today. That's because the density of urbanization is directly related to per-acre water consumption.

Water deliveries in 1977 totaled 910,506 af, 2.6 percent more than in 1976. This total was divided among four categories: nonagricultural uses; decreed lands; agricultural uses; and contract deliveries.

SRP water used for nonagricultural purposes, including municipal and industrial uses, parks, playgrounds and residential irrigation, increased to 316,325 af in 1977, from 295,123 af in 1976.

Deliveries to cities increased 10.0 percent. During 1977 these deliveries totaled 205,921 af compared with 187,044 af the previous year. Other nonagricultural uses required 110,404 af, up from 108,079 af in 1976.

Water used by decreed lands, which include Indian reservations, totaled 66,158 af, compared with 58,464 af last year.

Agricultural water orders declined in 1977 to 441,103 af compared with 451,377 af in 1976.

Contract deliveries for 1977 totaled 86,920 af compared with 82,467 af in 1976. These deliveries include city uses on nonmember lands; this quantity is replaced by the cities from other sources such as city pumps.

Of the total deliveries during 1977, 65 percent came from lakes compared with 69 percent in 1976. Wells produced the remaining percentage in both years. The increased use of wellwater was necessary because the drought reduced the quantity of water available in the reservoirs. During

the past 30 years an average of 65 percent of water delivered by the Project has come from the lakes.

#### Project defends shareholders' water rights

A paramount objective of SRP is to maintain the integrity of the water rights of the lands within its boundaries. Under federal reclamation law and state water law, these water rights are permanently attached to the land itself—not to the owner of the land. Such rights cannot be transferred from the land regardless of whether the land is used for agricultural or urban purposes. Thus, administration of these rights is a land-related concept which benefits the existing user—whether agricultural or municipal—and does not favor one type of use over the other.

Surface water rights in Arizona are based upon the doctrine of prior appropriation. Basically, this doctrine means that the first person to take water from a surface water source and put the water to beneficial use has a right forever to continue to use that amount before another person can take water from the source. The doctrine of prior appropriation was firmly established in the early territorial days and was the legal basis for a court decision which adjudicated the relative water rights of certain lands within the SRP area. That decision, known as the Kent Decree, was issued in 1910 by Judge Edward Kent.

SRP has a statutory obligation to protect the water rights of both its urban and agricultural shareholders. Continuing encroachments on these rights include upstream diversions and impoundments. If allowed to go unchecked, unlawful upstream diversion of water would drastically reduce the

supply of surface water for the Valley.

In recent years, illegal upstream uses of water have been increasing rapidly. In 1957, approximately 3,000 af per year was being illegally diverted; that quantity had risen to 36,000 af per year by 1977. Estimates indicate that unchecked, this amount will increase to 120,000 af by the year 2000.

To protect the rights of its shareholders from the growing number of illegal upstream uses, the Project has petitioned the State Land Department to determine and adjudicate all water rights on the Salt and Verde river watersheds.

To support its petitions, SRP has compiled the most complete record of historic water use available in Arizona and is ready to support its shareholders' claims to water from the Salt and Verde systems through judicial or administrative action. Work in this area will continue to help protect water supplies which belong to Valley lands, and assure that the taps won't run dry in Valley cities.

#### Water helps the Valley bloom

Water—the primary reason for SRP's existence—is as important now as it was 75 years ago. It will continue to be just as significant in the years to come. Water helped bring life to the Valley, and the Project helped bring the water.





## Domestic Water Use (in acre-feet)

	1977	1976	% of Change
Phoenix	149,430.92	135,807.97	10.0
Tempe	22,588.46	20,856.31	8.3
Glendale	11,342.65	9,446.18	20.1
Mesa	16,471.44	15,519.81	6.1
Scottsdale	2,273.45	2,491.91	(9.6)
Chandler	1,249.35	1,064.27	17.4
Peoria	1,102.48	983.73	12.1
Gilbert	1,462.61	874.12	67.3
Total	203,921.36	187,044.30	10.1



For many years, SRP processed its customer accounts slowly and tediously, by hand. Today, the Project relies on a sophisticated computer accounting system. The system also allows the Project to give consumers more complete information about their water and power use.

# Producing power for people for more than seven decades

SRP's involvement in power production was a product of its concern for water development and storage. During construction of Roosevelt Dam, between 1905 and 1911, hydroelectric generators were installed for two purposes. First, the power could be used to operate pumps and bring additional agricultural lands into production. Second, the power could be sold to help pay for water operations. The first power delivery to Phoenix residents from Roosevelt Dam's generators took place in 1909.

Today, the Project produces power for more than 268,000 customers. SRP still uses hydroelectric power; but today other energy sources including coal, oil and natural gas, produce the majority of electricity used by the Project's customers.

The cost of producing and supplying electricity is rising, and SRP recognizes the increase puts a burden on customers. During 1977, SRP continued to help customers combat rising prices with a new program aimed at teaching consumers how to effect energy conservation in their homes.

## Free home inspections aid conservation efforts

SRP was the first Arizona utility, and one of the first in the country, to offer home energy inspections to customers. This free service is offered through the Project's Power Saver Service program which began in April, 1977. The purpose of the inspection is to pinpoint areas of energy-waste in homes and offer suggestions about how to correct them.

Power Saver Service advisers measure the attic insulation in customers' homes and evaluate its effectiveness. They also check window exposures, look for air-leaks around doors and

windows, and determine if there is any heat-loss from the water heater. Advisers provide customers with their individual power-use histories, and teach them how to read their electric meters and establish an energy budget.

In addition to the professional inspection and advice about cutting costs, the service offers customers a chance to buy additional insulation and offers low-interest loans from SRP to finance the purchase. Customers also may buy insulating jackets for water heaters and weather-stripping kits for doors from the Project.

More than 10,000 customers took advantage of the free service in 1977. SRP estimates it will perform another 13,000 inspections during 1978. Insulation sales through the program totaled 1,227 in 1977. More than 2,200 weather-stripping kits and nearly 850 water heater insulating jackets were sold.

The service has the potential to do more than help reduce customers' electric usage. It also can help save dollars in the future. Reduced peak power use can result from actions taken in response to Power Saver Service recommendations. Such a reduction helps the Project cut the need for additional generating units. Lowering the need for new units can decrease construction costs, and thus help hold down the size of rate increases needed in the future.

## New bills tell customers about their energy use

In the fall of 1977, the Project's power bills took on a different look with the implementation of a new, computerized-billing system. The system is designed to improve service to customers by providing more information about power usage; it also increases the efficiency of billing procedures.

The new format provides information about amounts due, average daily power use for the current month, the previous month, and the same month of the previous year. These figures can help customers plan an energy budget by showing them how their power use has changed.

Under the revamped billing system, SRP also offers a program called the Budget Payment Plan that can give customers tighter control over their family budgets. The plan is a method of leveling customers' payments so they pay the same amount each month, winter or summer. And, they know in advance just how much that payment will be.

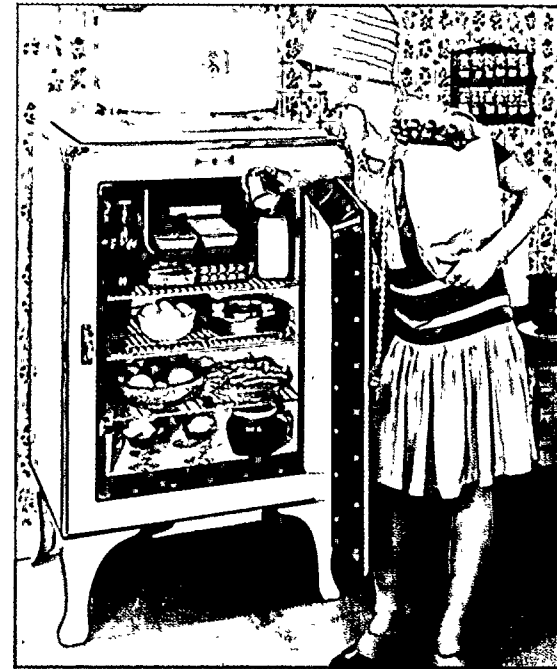
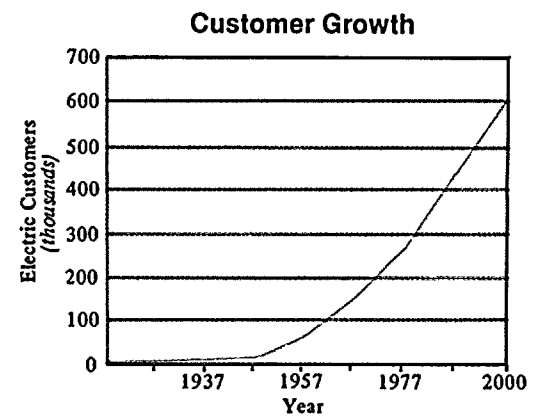
One way the new billing system saves money is by eliminating mailing of separate discontinuance notices. The discontinuance notice is printed on the bill. This process will save about \$50,000 annually in printing, handling and postage costs.

The system is designed to permit direct entry of information into the computer, which will eliminate excess paperwork and result in faster, more efficient service to customers. Altogether, the new billing procedure is expected to save SRP about one-half million dollars in its first five years of operation.

## Excess capacity sales aimed at cutting costs

Early in 1977, SRP began negotiating to sell portions of its forecast excess generating capacity. The sale was sought as a result of a load-growth study that predicted the Project would have more generating capacity than necessary in the mid-1980's, because customer growth has not been as rapid as originally anticipated.

The sale, to the Los Angeles Department of Water and Power (LADWP), was



Throughout its 75-year history, the Project has helped improve the quality of life its customers enjoy. Today SRP feels it also has an obligation and responsibility to help consumers get the most from their energy dollars. One way of doing that is through Power Saver Service, which includes a free home inspection program and suggestions about making homes more energy-efficient, thereby saving on electric bills.

finalized at the end of the year. Under terms of the agreement, LADWP now is a 30-percent owner of the first two 350,000-kilowatt units of the coal-fired Coronado Generating Station being built near St. Johns.

When the first 1,270,000-kilowatt unit of the Palo Verde Nuclear Generating Station begins commercial operation in 1982, LADWP will transfer its ownership in Coronado back to SRP. In exchange, LADWP will receive 5.7 percent interest in the three-unit Palo Verde station. That will come from the Project's 29.1 percent interest in the station. SRP has the right to recapture LADWP's share in the Palo Verde station to meet customer load requirements in the late 1990's.

SRP has received \$51 million cash and will receive another cash payment of \$47 million in August, 1978 from LADWP for its share of costs already expended for Coronado's construction. LADWP will also pay its proportionate share of the remaining construction costs.

The sale will reduce the amount of future SRP bond sales by about \$230 million between 1978 and 1982. That reduction will decrease the portion of rate increases otherwise required for debt service coverage on the financing of that part of the plant sold to LADWP.

#### Number of customers goes up; peak dips slightly

By the end of 1977, SRP was serving 268,891 electricity customers, compared with 257,941 at the end of 1976.

Despite the increase in the number of people being served, the Project's annual peak dipped from 1,732,000 kilowatts in 1976 to 1,731,000 kilowatts in 1977. Three factors contributing to the lower-than-expected peak were the copper mine strike in Arizona, which reduced the power demands

by the mines, lower-than-normal maximum daily temperatures during the summer, and the growing conservation efforts by customers.

Average annual use by residential customers increased from 12,597 kwh in 1976 to 13,108 kwh in 1977. The average cost per kwh for those customers climbed from 3.51 cents in 1976 to 4.25 cents in 1977.

An electricity rate-increase went into effect in February, 1977, to offset increases in noncontrollable costs such as fuel, taxes and financing. (The last rate increase was in October, 1975. Another rate increase is not expected to be necessary until late 1978.)

However, the increased charges were partially offset during the summer when a negative fuel cost adjustment factor was in effect. As a result, the cost of electricity declined \$3.68 per 1,000 kwh during July, August and September. (The fuel cost adjustment factor reflects the changes in fuel prices as they fluctuate above or below the base charges contained in SRP electric rates.) During 1977, the Project produced a higher percentage of the electricity needed by customers with lower-cost fuels, such as coal, and less had to be produced with higher-priced oil. This fuel-mix helped keep electricity costs down for consumers.

#### Developing fuel supplies for energy independence

Throughout 1977, the Project continued its efforts to plan and develop adequate and reliable fuel sources for its existing and future generating stations.

Now and in the near future, the bulk of SRP's generating facilities will be fueled by coal. The existing units at the Navajo, Hayden No. 2, Four Corners Nos. 4 and 5, and Mohave stations are coal-fired. They have a com-

bined capability of 5,691,000 kw. SRP's share is 1,014,250 kw. The units at the four stations produced 67.3 percent of SRP's energy in 1977. In addition, coal-fired units with a combined capacity of 1,460,000 kw are under construction at the Coronado and Craig stations. SRP owns a percentage of these stations which are scheduled for completion in 1979 and 1980 respectively. When completed, 85 percent of SRP's energy will come from coal, an abundant and economical energy source. Using coal instead of more expensive fuel helps keep consumers' electricity costs as low as possible.

During 1977, SRP made moves to ensure adequate future fuel resources by entering into several coal contracts for Coronado Generating Station. The contracts were with Pittsburg & Midway Coal Mining Company, Consolidation Coal Company and Coastal States Energy Company. The contracts covered periods of five to 25 years.

In addition, SRP joined with the four other participants in Palo Verde Nuclear Generating Station to acquire one-half interest in potential uranium properties in Wyoming. It is hoped the acquired rights will provide supplementary fuel for the nuclear generating station.

During the year, the Project also actively sought and acquired several long-term coal leases in New Mexico. SRP is presently conducting exploration on the sites. The objective is to delineate a proven coal reserve, which will further aid SRP's quest for energy independence and will help keep electricity costs down for consumers.

#### SRP's construction looks to the future

Construction of additional generating facilities is part of the Project's commitment to future needs. During

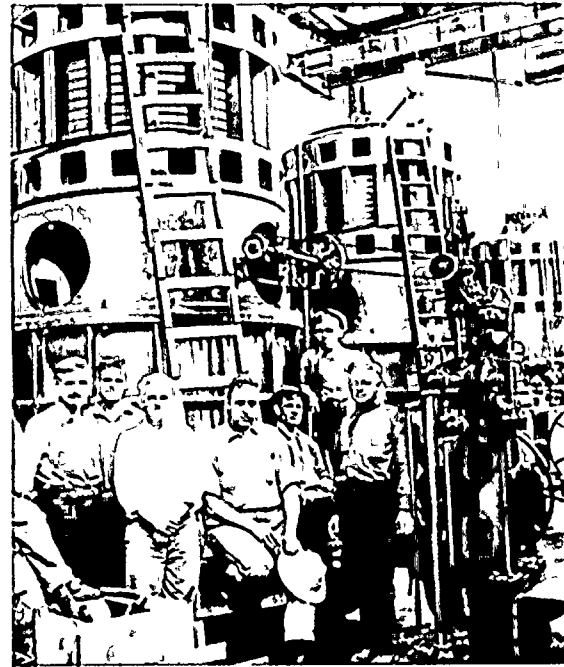


## Project Fuel Sources

Actual 1972, 1976 and 1977  
Estimated 1978 and 1982

Year	Percent					Misc. Purch.
	Hydro <sup>1</sup>	Oil	Gas	Coal	Nuc	
1972	17%	4%	37%	32%	—	10%
1976	15%	12%	7%	60%	—	6%
1977	10%	13%	6%	67%	—	3%
1978	10%	18%	2%	69%	—	1%
1982	9%	7%	—	74%	10%	—

<sup>1</sup> Includes hydro purchases.



Hydroelectric generators at Roosevelt Dam were among the first to produce power for Project customers. However, the energy needs of Valley residents outgrew the hydroelectric generation available. So, SRP turned to other energy sources. Last year, coal-fired generation supplied 67 percent of the power produced by the Project. Hydroelectric generation furnished just 11 percent of the power used by customers.

1977, SRP spent \$312.5 million on various construction projects.

Major construction under way last year included the Coronado Generating Station, near St. Johns, the Palo Verde Nuclear Generating Station, near Buckeye, and the Craig Generating Station, near Craig, Colorado. Also under construction were transmission lines, to bring power from Coronado and Palo Verde to Valley customers.

The Project presently owns 70 percent of the Coronado Station's first two generating units; Los Angeles Department of Water and Power (LADWP) owns the remaining 30 percent. Each of those units has a capacity of 350,000 kw. They are scheduled for operation in 1979 and 1980. The estimated cost of those units is \$634.0 million, excluding interest charges during construction.

A third 350,000-kw unit may be constructed at Coronado. SRP's percentage of ownership in that unit has not been determined.

SRP owns 29 percent of the Craig project, which includes two 380,000-kw coal-fired units that are expected to be operational in 1979. The total cost of Craig is \$598.0 million excluding interest charges during construction.

At present, the Project also owns 29.1 percent of the Palo Verde station. (5.7 percent will be transferred to LADWP in 1982, in exchange for its 30-percent share of the Coronado station.) Palo Verde will ultimately consist of three 1,270,000-kw pressurized-water nuclear-reactor units. The first unit will begin commercial operation in 1982. The station's total cost—excluding interest charges during construction—is estimated to be \$2.8 billion.

#### Consulting firm looks at SRP

Last year, the Project's board retained the consulting firm of Cresap,

McCormick and Paget, Inc., to conduct a management audit of SRP. After the first phase was completed, the firm reported that "on balance, SRP is an effectively and efficiently-managed utility."

Areas which received high ratings included:

- management's strong ethic of holding costs in line;
- the senior management team's competency and activist posture;
- financial management in general;
- methods of raising capital; and
- sophisticated planning.

Areas where improvements can be made included:

- key management processes such as delegation of authority, and management information;
- water group approaches to construction and facilities upgrading; and
- power group management of engineering resources and the planning and execution of maintenance.

To fully complete its work, the consulting firm will study three major areas in greater depth. These are general management organization; major power construction project and engineering management; and water group management.

#### Project signs new two-year labor contract

SRP's two-year labor contract with the International Brotherhood of Electrical Workers Local 266 expired on Dec. 31, 1977.

After nearly three months of negotiations, talks broke down on Jan. 11, 1978 and the union began a 23-day strike against SRP. Agreement on the new two-year pact was reached on Feb. 2, 1978 and striking employees returned to work.

The \$4.3 million agreement pro-

vides for: changes in work practices to improve efficiency of operations; an additional holiday to become effective in 1979; more rapid accrual of vacation time; increased medical and dental insurance coverage; and wage increases ranging from 6.5 percent to 9.0 percent.

The contracts may be opened prior to Jan. 1, 1979 for negotiation of 1979 wage increases and shift differential pay.

At the end of 1977, SRP had a total of 3,652 employees; 2,315 were covered by the new contract. The remainder were salaried.

# Financial commentary

## Special bond sale held to refund high-interest bonds

In August, 1977, the Project held the largest bond sale in its history. SRP sold \$155,915,000 in municipal revenue bonds at an effective interest rate of 5.90 percent. Proceeds from the sale will be used to refund three earlier issues of bonds with interest rates of 6.50 to 8.13 percent. The refunding sale is expected to save approximately \$23.2 million in debt service payments during the next 37 and a half years. By reducing revenue requirements, the refund will reduce future electric rate increases that would otherwise be required.

The Project also sold \$125 million in revenue bonds in March, and \$115 million in November. Proceeds from those sales were used to help finance construction and improvements of electric facilities. Major projects include the coal-fired Coronado and Craig generating stations and the nuclear-powered Palo Verde Generating Station.

Revenues available for debt service coverage for 1977 were about 1.77 times actual requirements. This level of coverage helped produce the very favorable effective interest rates negotiated for bond sales. The Project's bond ratings were "Aa" by Moody's Investor Service Inc., and "A+" by Standard & Poor's Corporation.

## Operating revenues climb

Revenues from operations improved in 1977 after several lackluster years brought about by the general business recession. In 1977, operating revenues totaled \$311.1 million, compared with \$225.3 million in 1976.

Hot, dry weather prevailed in the west during 1977. The resulting drought greatly reduced stream-flows and the amount of hydroelectric

energy normally generated in California and the Pacific Northwest. This reduction created a demand for energy from other sources. In response, the Project supplied large amounts of energy—primarily from coal-fired generating units—to utilities hard-hit by the water shortage. As a result, wholesale sales to other utilities, including surplus sales, were up 135 percent, to \$44.0 million in 1977, compared with \$18.7 million in 1976.

Increases were also recorded in electric sales revenues from retail customers. Residential sales increased 30.7 percent since 1976, from \$102.9 million to \$134.5 million. Commercial and industrial sales rose 27.4 percent, from \$85.4 million to \$108.8 million. Agricultural pumping sales increased by 38.6 percent, from \$4.4 million to \$6.1 million.

The increase in electric revenues was primarily the result of a 13.9 percent rate increase that took effect in February, 1977, coupled with the growth in electric energy sales. Weather conditions and new-customer hook-ups also had an impact on the increase.

Water revenues also increased in 1977 because of higher water assessments (from \$7.50 per acre in 1976 to \$9 per acre in 1977) and increased deliveries.

## Operating expenses increase

Operating expenses for the Project totaled \$220.4 million in 1977, compared with \$182.7 million in 1976. Fuel and purchased-power expenses amounted to \$85.3 million compared with \$66.4 million the previous year. Most of the additional expense was a result of extra fuel needed to generate energy to meet the increased retail sales and the higher-than-normal sales to other utilities.

The plant-related expenses of

maintenance and depreciation totaled \$55.4 million, compared with \$46.7 million in 1976. Uncontrollable expenses of taxes and tax equivalents amounted to \$34.3 million, compared with \$30.9 million the previous year. Other operating expenses, including labor, material, supplies and services totaled \$45.4 million, compared with \$38.8 million last year.

## Financing costs up

Financing costs, less allowance for funds used during construction, were \$37.5 million in 1977, compared with \$31.1 million in 1976.

## Net revenues set record

The Project realized net revenues of \$53.2 million in 1977, compared with \$11.3 million last year. Because SRP is a not-for-profit institution, net revenues are used to finance increases in working-capital requirements and to help pay for construction and improvement of facilities.

SRP's plant-in-service value, less credits for accumulated depreciation plus construction work in progress, totaled \$1.25 billion in 1977, compared with \$1.04 billion in 1976.

Project management is committed to maintaining a strong financial position as a key factor in assuring favorable low-interest costs on borrowed capital funds and helping to minimize the impact of future rate increases.

# Combined statement of net revenues

Salt River Project Agricultural Improvement and Power District  
and its agent, Salt River Valley Water Users' Association

For the years ended December 31, 1977 and 1976

	1977	1976
<b>Operating Revenues:</b>		
Electric.....	\$303,620,727	\$220,961,215
Water and irrigation.....	5,466,506	4,307,032
Total operating revenues.....	<u>\$311,087,233</u>	<u>\$225,268,247</u>
<b>Operating Expenses:</b>		
Power purchased.....	\$ 17,766,614	\$ 18,103,516
Fuel used in electric generation .....	67,486,314	48,285,472
Other operation expenses .....	43,427,953	38,786,480
Maintenance .....	24,623,415	19,562,273
Depreciation and amortization (Note 1).....	30,813,245	27,096,061
Taxes and tax equivalents (Note 5).....	34,256,598	30,869,311
Total operating expenses .....	<u>\$220,384,141</u>	<u>\$182,703,113</u>
Net operating revenues .....	<u>\$ 90,703,092</u>	<u>\$ 42,565,134</u>
<b>Financing Costs:</b>		
Interest on bonds at coupon rates.....	\$ 76,804,743	\$ 60,074,044
Amortization of bond discount .....	818,787	657,176
Amortization of bond issue expense .....	184,259	167,854
Amortization of loss on defeased debt (Note 9) .....	247,049	—
Interest on other obligations.....	1,627,024	294,059
Interest earned on investments and deposits.....	(17,601,737)	(12,775,619)
Net financing costs .....	<u>\$ 62,080,125</u>	<u>\$ 48,417,514</u>
Less—Allowance for funds used for construction (Note 1) .....	<u>(24,623,962)</u>	<u>(17,357,802)</u>
Financing costs less allowance for funds used for construction .....	<u>\$ 37,451,163</u>	<u>\$ 31,059,712</u>
Other Deductions, net.....	<u>\$ 43,359</u>	<u>\$ 218,163</u>
Net Revenues for the Year .....	<u>\$ 53,208,570</u>	<u>\$ 11,287,259</u>

The accompanying notes to combined financial statements are an integral part of this statement.



# Combined statement of sources of funds for additions to utility plant

Salt River Project Agricultural Improvement and Power District  
and its agent, Salt River Valley Water Users' Association

For the years ended December 31, 1977 and 1976

	1977	1976
<b>Gross Additions to Utility Plant, excluding allowance for funds used during construction .....</b>	<b><u>\$229,922,827</u></b>	<b><u>\$234,011,818</u></b>
<b>Funds Generated From Operations:</b>		
Net revenues for the year.....	\$ 53,203,570	\$ 11,287,259
Add—Depreciation and other charges not requiring current funds .....	33,922,150	29,919,879
Deduct—Allowance for funds used during construction not providing current funds.....	<u>(24,628,962)</u>	<u>(17,357,802)</u>
Total funds generated from operations before retirement of debt .....	\$ 62,501,758	\$ 23,849,336
Less—Repayment of long-term debt .....	<u>15,303,763</u>	<u>10,527,234</u>
Net funds generated from operations.....	<b><u>\$ 47,197,990</u></b>	<b><u>\$ 13,322,102</u></b>
<b>Funds Obtained From Financing:</b>		
Proceeds of bond issues, less defeased bonds in 1977 (Note 9) .....	\$253,791,034	\$398,749,762
Advances from U.S. Government for rehabilitation of irrigation plant.....	598,752	1,126,874
Other advances and contributions in aid of construction .....	8,043,063	3,062,146
Short-term borrowings, net of repayments .....	<u>(1,000,000)</u>	<u>(40,000,000)</u>
Total funds obtained from financing .....	<b><u>\$261,432,904</u></b>	<b><u>\$362,938,782</u></b>
<b>Other—</b>		
(Increase) in segregated funds set aside for debt service .....	(17,732,131)	(16,023,299)
Decrease (increase) in segregated funds set aside for construction .....	46,801,431	(96,825,635)
(Increase) in temporary investments held primarily for construction .....	<u>(40,364,853)</u>	<u>(50,652,353)</u>
Net funds obtained from financing .....	<b><u>\$250,137,351</u></b>	<b><u>\$199,437,495</u></b>
<b>Changes in Other Items Affecting Funds:</b>		
(Increase) in receivable on sale of plant .....	\$ (47,430,043)	\$ —
(Increase) in unamortized loss on defeased debt .....	(19,416,340)	—
Increase in accounts payable.....	15,610,711	6,888,304
(Increase) decrease in accounts receivable.....	(10,994,430)	936,461
(Increase) decrease in fuel stocks and materials and supplies.....	(9,714,836)	7,416,227
(Increase) in deposits for payment of accrued interest on bonds.....	(5,374,274)	(11,122,078)
Increase in accrued interest payable.....	5,372,213	10,991,331
Decrease in cash.....	59,053	6,544,295
Change in other assets and liabilities, net.....	<u>4,525,477</u>	<u>(402,319)</u>
Net change in other items.....	<b><u>\$ (67,412,514)</u></b>	<b><u>\$ 21,252,221</u></b>
<b>Funds Used for Additions to Utility Plant.....</b>	<b><u>\$229,922,827</u></b>	<b><u>\$234,011,818</u></b>

The accompanying notes to combined financial statements are an integral part of this statement.

# Combined balance sheet

Salt River Project Agricultural Improvement and Power District  
and its agent, Salt River Valley Water Users' Association

For the years ended December 31, 1977 and 1976

## Assets

	1977	1976
<b>Utility Plant, at original cost (Notes 1, 2 and 3):</b>		
Plant in service—		
Electric .....	\$ 842,364,849	\$ 812,169,386
Irrigation .....	64,459,472	62,549,894
General .....	40,826,678	39,483,750
Total plant in service .....	\$ 947,650,999	\$ 914,203,030
Less—Accumulated depreciation on plant in service .....	222,905,186	192,839,319
	\$ 724,745,813	\$ 721,363,711
Construction work in progress .....	525,868,827	315,414,264
	<u>\$1,250,614,640</u>	<u>\$1,036,777,975</u>
<b>Segregated Funds, consisting of cash, U.S. Government obligations and bankers' acceptances set aside in accordance with resolutions of bond issues:</b>		
Debt service funds, excluding \$38,856,000 in 1977 and \$33,481,000 in 1976 for payment of accrued interest (Note 9) .....	\$ 103,070,093	\$ 86,902,964
Construction funds .....	50,346,380	97,582,811
	<u>\$ 153,416,473</u>	<u>\$ 184,485,775</u>
<b>Current Assets:</b>		
Cash .....	\$ 340,639	\$ 399,692
Temporary investments, at cost, held primarily for construction .....	146,454,908	106,090,055
Deposit in debt service fund for payment of accrued interest on bonds .....	38,855,641	33,481,367
Accounts receivable from insurance carriers (Note 11) .....	1,012,393	1,887,870
Receivable on sale of plant (Note 10) .....	47,480,043	—
Trade and other accounts receivable, less reserves of \$1,319,000 in 1977 and \$967,000 in 1976 for doubtful accounts .....	30,195,317	18,325,360
Fuel stocks, at average cost .....	23,006,012	11,133,659
Materials and supplies, at average cost .....	13,139,369	15,296,886
Prepayments, interest receivable and other .....	7,216,654	7,788,908
	<u>\$ 307,700,976</u>	<u>\$ 194,403,797</u>
<b>Other Assets:</b>		
Nonutility plant, less accumulated depreciation of \$688,000 in 1977 and \$500,000 in 1976 .....	\$ 1,703,797	\$ 2,389,661
Unamortized loss on defeased debt (Note 9) .....	19,169,291	—
Bond expense being amortized (Note 1) .....	3,331,547	2,725,782
Miscellaneous deferred charges (Note 11) .....	11,975,078	5,934,333
	<u>\$ 36,179,713</u>	<u>\$ 11,049,776</u>
	<u>\$1,749,911,804</u>	<u>\$1,426,717,323</u>

The accompanying notes to combined financial

## Liabilities and Capitalization

	1977	1976
<b>Long-Term Debt (Note 9)</b>		
General obligation bonds.....	\$ 266,722,018	\$ 278,915,016
Electric system revenue bonds.....	1,147,765,208	893,317,068
Obligations to U.S. Government.....	12,337,937	12,570,867
Other obligations.....	1,445,133	1,762,219
	<u>\$1,428,270,291</u>	<u>\$1,186,565,170</u>
<b>Accumulated Net Revenues, invested principally in utility plant:</b>		
Balance beginning of year.....	\$ 157,682,088	\$ 146,394,829
Net revenues for the year.....	53,203,570	11,287,259
Balance end of year .....	<u>\$ 210,890,658</u>	<u>\$ 157,682,088</u>
Total capitalization, consisting of long-term debt and accumulated net revenues .....	<u>\$1,639,160,949</u>	<u>\$1,344,247,258</u>
<b>Current Liabilities, excluding \$15,688,000 in 1977 and \$15,260,000 in 1976 representing current portion of long-term debt which is to be paid from segregated funds:</b>		
Notes payable to banks (Note 8) .....	\$ —	\$ 1,000,000
Accounts payable .....	41,072,214	25,461,503
Accrued taxes and tax equivalents (Note 5).....	14,532,244	12,822,109
Accrued interest .....	38,355,641	33,483,423
Customers' deposits.....	4,133,721	3,340,486
Other current and accrued liabilities.....	4,154,526	2,710,770
	<u>\$ 102,748,346</u>	<u>\$ 78,818,291</u>
<b>Deferred Credits and Reserves:</b>		
Irrigation assessments levied for subsequent year.....	\$ 2,355,670	\$ 2,690,660
Advances for construction .....	410,029	397,342
Other.....	4,736,810	563,772
	<u>\$ 8,002,509</u>	<u>\$ 3,651,774</u>
<b>Commitments and Contingencies (Notes 3, 4, 5, 6 and 11)</b>		
	<u>\$1,749,911,804</u>	<u>\$1,426,717,323</u>

# Notes to combined financial statements

## (1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

### (a) Principles Underlying Combined Statements

The combined financial statements include the accounts of the Salt River Project Agricultural Improvement and Power District ("District") and the accounts of its agent, the Salt River Valley Water Users' Association, together referred to as the Salt River Project, and a wholly owned subsidiary, Salt River Generating Company. All significant inter-company transactions have been eliminated.

### (b) Utility Plant, Depreciation and Maintenance

The accounting records of Salt River Project are maintained substantially in accordance with the Uniform System of Accounts prescribed for electric utilities by the Federal Power Commission. Utility plant is stated at the historical cost of construction. Construction costs include labor, materials, services purchased under contract, and allocations of indirect charges for engineering, supervision, transportation, and administrative expenses.

An allowance for funds used to finance construction work in progress is capitalized as a part of the electric and general plant. This allowance is deducted from net financing costs in the combined statement of net revenues and added to utility plant. Capitalization rates of 6½% and 7¼% were used in 1977 and 1976, respectively.

Depreciation expense is computed on the straight-line basis over estimated useful lives of the various classes of plant. Rates in effect during the years 1977 and 1976 resulted in provisions approximating 3.59% for 1977 and 3.71% for 1976 on the average cost of depreciable electric plant, and 1.94% for 1977 and 1.90% for 1976 for depreciable irrigation plant. When property representing a retirement unit is replaced, removed, or abandoned, the cost of such property is credited to the appropriate utility plant account, and such cost together with removal costs less salvage is charged to accumulated depreciation.

The Project charges to maintenance expense the cost of labor, materials, and other expenses incurred in the repair, restoration of condition and replacement of minor items of property.

### (c) Bond Expense

Bond discount, premium, and bond issue expense are being amortized over the terms of the related bond issues.

### (d) Employees' Retirement Plan

The Project has a retirement plan covering substantially all employees. The plan is funded entirely from employers' contributions and the earnings of the invested assets. The estimated unfunded past service liability, as determined by the plan's actuary using the "entry age normal cost" valuation method, with frozen initial liability, was \$7,731,628 as of July 1, 1977, and is being funded over a period ending in 2001. The employers' contributions to this plan totaled \$5,350,555 in 1977 and \$4,552,082 in 1976.

At July 1, 1977, the plan's assets exceeded the actuarially computed value of the vested benefits at the same date.

### (e) Revenues

Meters for residential, commercial and small industrial customers are read cyclically and sales recorded only when billed. This system of billing results in earned but unbilled revenues which amounted to \$9,450,000 at December 31, 1977, and \$8,769,000 at December 31, 1976. For large industrial customers, meters are read near month-end and billings recorded on the accrual basis. Electric revenue billings are adjusted periodically for changes in costs of fuel and purchased power. Revenues from water and irrigation operations are recorded when earned.

## (2) POSSESSION AND USE OF UTILITY PLANT:

The United States of America retains a paramount right or claim in the Salt River Project which arises from the original construction and operation of the Project's facilities as a Federal Reclamation Project. The Project's right to the possession and use of, and to all revenues produced by, these facilities is evidenced by contractual arrangements with the United States.

## (3) CONSTRUCTION PROGRAM:

Balances shown for construction work in progress represent expenditures for new facilities required to serve anticipated customer needs, and consist of:

	December 31	
	1977	1976
Electric generating facilities.....	\$450,324,298	\$276,195,260
Transmission and distribution.....	68,164,647	32,176,139
Irrigation plant.....	3,832,230	2,807,137
Other construction.....	3,547,652	4,235,728
Total.....	\$525,868,827	\$315,414,264

Construction expenditures planned for 1978 approximate \$427 million.

At December 31, 1977, substantial commitments had been entered into for delivery of materials and services on construction projects. In addition, various firm commitments exist under coal and fuel oil supply contracts.

## (4) ENVIRONMENTAL LITIGATION:

Various pending lawsuits involving environmental matters could affect interests owned by Salt River Project in present generating facilities and in proposed generating facilities and transmission lines. In general, these lawsuits seek to impose higher air quality standards for generating plants. If ultimately decided adversely to the interest of Salt River Project, the outcome of the lawsuits could result in increased construction costs, increased future operating costs, and a possible loss in the operational reliability of certain generating plants. All of these effects would increase the costs to be passed on to customers through increased electric rates.

## (5) PROPERTY VALUATION LITIGATION:

Salt River Project makes voluntary contributions to taxing bodies in lieu of payment of property taxes. The Department of Revenue of the State of Arizona has filed lawsuits requesting increases in the values used to compute the voluntary contributions for the years 1970

through 1974. No lawsuits or claims have been filed for subsequent years.

The general effect of the claims made under the lawsuits would be to increase the contributions for the years in dispute by a total of approximately \$3,650,000. In 1973, in connection with a portion of the lawsuits, the Superior Court of Arizona granted a summary judgment in favor of Salt River Project. This summary judgment was later reversed in part in appellate decisions within Arizona, and this reversal was appealed to the United States Supreme Court which denied jurisdiction. The claims must now be litigated in Superior Court with the decision of that court possibly subject to the appellate process.

Under Arizona law, the amount of each voluntary contribution made by Salt River Project is subject to review and approval, or disapproval, by the Secretary of the Interior of the United States of America. In the opinion of legal counsel, any additional contributions required as a result of the above litigation would be subject to the approval or disapproval of the Secretary prior to payment.

If any liability were to result from this litigation, management expects that the amount of such liability would be recovered when paid through increased rates collected from electric customers.

#### **(6) OTHER LITIGATION:**

Principally as a result of certain water flooding in 1970 and 1972, various lawsuits and claims have been filed against Salt River Project alleging that the Project has a responsibility in regard to flood control and a liability in regard to flood damage. The ultimate liability, if any, is not determinable, but management expects that a significant portion of any liabilities which might result from flood damage claims will be covered by insurance.

#### **(7) IRRIGATION AND WATER OPERATIONS:**

The expenses, including depreciation, for irrigation and water operations exceeded the assessments, delivery fees, and other revenues therefrom by approximately \$9,462,000 in 1977 and \$7,341,000 in 1976. These amounts do not include expenditures for additions and improvements to irrigation plant and for repayment of long-term debt.

#### **(8) LINE OF CREDIT:**

The District has a line-of-credit agreement with 13 banks, which provides for a maximum commitment of \$60,000,000 with interest on borrowings at a rate equal to 60% of the banks' prime rate as established from time to time by the lead bank. No compensating balances nor commitment fees are required under the line of credit. The current agreement terminates on October 16, 1978. The line-of-credit borrowings are borrowed in the name of and payable from the General Fund and rank junior to payments required for the Prior Lien Bonds and the Revenue Bonds. At December 31, 1977, there were no outstanding borrowings. On January 3, 1978, the District borrowed the full \$60,000,000 at an initial interest rate of 4.65%, repayable in full on or before October 16, 1978.

#### **(9) LONG-TERM DEBT:**

Bonds outstanding are general obligation bonds and electric system revenue bonds. In all years to date, net electric revenues have been more than sufficient to meet all debt service requirements.

General obligation bonds are a lien upon the real property included in the District and are additionally secured by a pledge of revenues from the operation of the electric system. If the net electric revenues, as defined in the bond resolutions, are not sufficient to meet the principal and interest payments, the bonds and interest are payable from a levy of taxes on the real property.

Electric system revenue bonds are secured by a pledge of, and a lien on, the revenues of the electric system after deducting "operating expenses," as defined in the bond resolutions, subject to prior liens of general obligation bonds and amounts due the United States. In all years to date electric revenues, after deducting "operating expenses" as defined in the bond resolutions, have been more than sufficient to meet all debt service requirements.

On August 18, 1977, \$155,915,000 of Electric System Refunding Revenue Bonds, 1977 Series B, were sold at an effective interest rate of 5.90%. The proceeds of these bonds were used to defease the following Electric System Revenue Bonds:

Issue	Amount
1974 Series C.....	\$ 40,000,000
1975 Series A.....	60,000,000
1975 Series C.....	35,000,000
	\$135,000,000

The defeasance resulted in a loss of \$19,416,340. The Board of Directors approved the deferral of this loss and its amortization over the period which the 1977 Series B bonds are outstanding.

The annual maturities of bonds and other long-term debt outstanding as of December 31, 1977 due in each of the years 1978 thru 1982 are \$15,670,000; \$16,421,000; \$19,269,000; \$20,198,000 and \$20,909,000, respectively.

Interest and amortization of discount on the various issues outstanding during the year resulted in an effective rate of 6.15% for 1977. This rate approximates 6.23% over the remaining terms of the bonds.

At December 31, 1977, Electric System Revenue Bonds totaling \$235,000,000 principal amount were authorized, but unissued. Electric System Refunding Revenue Bonds totaling \$90,000,000 principal amount were also authorized, but unissued.

The debt service portion of segregated funds includes \$18,666,000 at December 31, 1977, and \$16,896,000 at December 31, 1976, restricted for operating reserve requirements under bond resolutions.

Long-term debt outstanding at December 31, 1977 and December 31, 1976, was as follows:

	Interest Rate	Issued In Year	Outstanding		Future Maturities
			<u>12/31/77</u>	<u>12/31/76</u>	
<b>General Obligation Bonds:</b>					
Issue No. 4 .....	2 5/8	1950	\$ —	\$ 700,000	
Issue No. 5 .....	2 1/2	1951	2,000,000	2,500,000	1978-80
Issue No. 6 .....	2 3/4 to 3 5/8	1953	7,500,000	8,000,000	1978-82
Issue No. 7 .....	3.2 to 3.4	1956	6,995,000	7,045,000	1978-87
Issue No. 8 .....	3.6 to 3 5/8	1959	3,660,000	3,830,000	1978-87
Issue No. 9 .....	1 to 4 1/4	1960	21,745,000	22,805,000	1978-92
Issue No. 10 .....	1 to 3.6	1962-65	14,875,000	15,730,000	1978-94
Issue No. 11 .....	3.4 to 3 1/2	1965	10,400,000	10,900,000	1978-87
Issue No. 12 .....	3 to 5	1968-69	35,350,000	37,000,000	1978-99
Issue No. 13 .....	4 to 5	1969	7,550,000	7,900,000	1978-99
Issue No. 14 .....	3 1/2 to 6	1970-72	159,700,000	165,900,000	1978-2003
			<u>\$ 269,775,000</u>	<u>\$ 282,310,000</u>	
			<u>(3,052,982)</u>	<u>(3,394,984)</u>	
Unamortized bond discount.....					
Total general obligation bonds outstanding.....			<u>\$ 266,722,018</u>	<u>\$ 278,915,016</u>	
<b>Electric System Revenue Bonds:</b>					
1973 Series A .....	5 to 6 1/2	1973	\$ 73,380,000	\$ 74,210,000	1978-2010
1973 Series B .....	5 to 6 1/2	1973	74,210,000	75,000,000	1978-2011
1974 Series A .....	5.7 to 7.2	1974	90,000,000	90,000,000	1983-2012
1974 Series B .....	6.1 to 7.6	1974	50,000,000	50,000,000	1983-2012
1974 Series C .....	6 1/2 to 7 3/4	1974	—	40,000,000	
1975 Series A .....	7.1 to 8 1/8	1975	—	60,000,000	
1975 Series B .....	7.0 to 7.6	1975	75,000,000	75,000,000	1983-2015
1975 Series C .....	7.2 to 8 1/8	1975	—	35,000,000	
1976 Series A .....	5.0 to 7.2	1976	100,000,000	100,000,000	1985-2016
1976 Series B .....	4.7 to 6 5/8	1976	140,000,000	140,000,000	1984-2016
1976 Series C .....	6.0 to 6 3/4	1976	40,000,000	40,000,000	1982-2016
1976 Series D .....	4.0 to 6.4	1976	125,000,000	125,000,000	1980-2016
1977 Series A .....	3 3/4 to 6 1/8	1977	125,000,000	—	1980-2017
1977 Series B .....	4 3/4 to 5.9	1977	155,915,000	—	1989-2015
Refunding					
1977 Series C .....	3.8 to 5.8	1977	115,000,000	—	1980-2017
			<u>\$1,163,505,000</u>	<u>\$ 904,210,000</u>	
			<u>(15,732,927)</u>	<u>(10,892,932)</u>	
Unamortized bond discount.....					
Total electric system revenue bonds outstanding.....			<u>\$1,147,762,073</u>	<u>\$ 893,317,068</u>	
Total bonds outstanding.....			<u>\$1,414,487,221</u>	<u>\$1,172,232,084</u>	
<b>Obligations to U.S. Gov't for</b>					
irrigation plant .....	None	1935-77	12,337,937	12,570,867	1978-2002
Equipment contracts .....	6 7/8 and 7 1/2	1974-75	1,422,312	1,728,048	1978-82
Other obligations.....	None	1950	22,821	34,171	1978-79
Total long-term debt .....			<u>\$1,428,570,221</u>	<u>\$1,186,565,170</u>	

#### **(10) CORONADO PROJECT PARTICIPATION AGREEMENT:**

The District and the Department of Water and Power of the City of Los Angeles (LADWP) entered into the Coronado Project Participation Agreement on November 23, 1977, which provides for ownership, construction, operation and maintenance of two coal-fired units each having a generating capacity of 350,000 kw, a railroad to deliver fuel and a 500-kv transmission system.

The District is Project Manager and owns 70% of the two generating units and the railroad and 80% of the transmission system. LADWP owns 30% of the first two units and the railroad and 20% of the transmission system.

The LADWP agreed to pay its share of all costs incurred by the District from inception through December 31, 1977, which amounted to \$98,087,756. The District received payment of \$50,607,713 on December 30, 1977. The unpaid balance of \$47,480,043 plus 7¼% interest is due on or before August 1, 1978. Collection of the unpaid balance is subject to a review of the related costs by LADWP. In management's opinion, the resulting adjustment, if any, to the unpaid balance, would not be significant.

The District and LADWP have also entered into a Memorandum of Agreement Providing for Purchase, whereby LADWP shall transfer its

interest in the Coronado Project to the District and in return the District shall transfer to LADWP a 5.7% interest in Units 1, 2 and 3 and associated facilities of the Palo Verde Nuclear Generating Station.

#### **(11) OTHER MATTERS:**

During 1976, Salt River Project terminated its participation in the Montezuma Pumped-Storage Generation Project because of projections of reduced capacity requirements. The Board of Directors approved the deferral of approximately \$1,800,000 of Montezuma Project costs and the amortization of this charge over a period of five years, with the intention that the costs be considered for inclusion in amounts to be recovered from consumers over the same five-year period, commencing with the next general rate change.

A receivable from insurance carriers arises from an accident at the Kyrene Station. Damage from the accident has been fully repaired and billed to the carriers. Management believes that the amount billed will be collected.

Salt River Project is actively engaged in research and development programs related to new energy sources and improved technologies for power generation. During 1977, operating expenses included approximately \$1,100,000 of amortization related to research and development projects.

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## **Auditors' report**

To the Board of Directors,  
*Salt River Project Agricultural Improvement and Power District, &*  
Board of Governors,  
*"Salt River Valley Water Users' Association:*

We have examined the combined balance sheet of SALT RIVER PROJECT AGRICULTURAL IMPROVEMENT AND POWER DISTRICT (a political subdivision of the State of Arizona) and its agent, SALT RIVER VALLEY WATER USERS' ASSOCIATION, together referred to as the SALT RIVER PROJECT, as of December 31, 1977, and December 31, 1976, and the related combined statements of net revenues and sources of funds for additions to utility plant for the years 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 as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the financial position of the Salt River Project as of December 31, 1977, and December 31, 1976, and the results of its operations and sources of funds for additions to utility plant for the years then ended, in conformity with generally accepted accounting principles consistently applied during the periods.

Phoenix, Arizona,  
February 24, 1978.

Arthur Andersen & Co.

# Statistical review

## PROJECT GENERAL

	1977	1976	1972	1967
Operating revenues.....	\$301,037,233	\$225,268,247	\$104,698,620	\$50,686,491
Electric .....	305,620,727	220,961,215	102,627,839	48,791,130
Water and irrigation .....	5,416,506	4,307,032	2,070,781	1,895,361
Operating expenses .....	220,334,141	182,703,113	84,251,026	45,398,680
Net financing costs				
Less capitalized interest .....	37,451,163	31,059,712	7,527,068	2,458,112
Other deductions (revenues), net .....	43,359	218,163	159,782	287,449
Net revenues .....	53,203,570	11,287,259	12,760,744	2,542,250
Construction expenditures.....	312,533,000	223,448,000	89,788,071	19,889,979
Electric and irrigation plant, gross.....	1,473,519,326	1,229,617,294	519,919,307	252,375,989
Contributions of power revenues to support water operations.....	9,432,000	7,341,000	10,600,000	7,700,000
Taxes & tax equivalents .....	34,256,598	30,869,311	11,207,572	4,559,225
Employees at year-end .....	3,652	3,325	2,654	2,050

## WATER

	1977	1976	1972	1967
Total storage and pumping capacity (acre-feet) .....	2,310,645	2,841,818	2,856,538	2,871,243
Storage capacity (six reservoirs).....	2,072,050	2,072,050	2,072,050	2,072,050
Installed pumping capacity .....	733,595	769,768	784,488	799,193
Water in storage January 1 (acre-feet) *				
Project storage only .....	701,353	771,440	723,247	1,345,146
Runoff (acre-feet).....	367,122*	817,419	1,279,103	595,946
Water in storage December 31 (acre-feet)				
Project storage only .....	323,037	711,353	1,051,824	1,176,353
Sources of water, for deliveries (acre-feet) .....	1,209,197	1,190,720	1,190,477	1,205,255
Gravity supply .....	809,373*	848,734	782,629	804,536
Groundwater supply (pumping by SRP) .....	391,627	335,988	403,106	396,863
Groundwater supply (pumping by others) .....	8,197	5,998	4,718	3,856
Uses of water (acre-feet) .....	1,209,197	1,190,720	1,190,477	1,205,255
Agricultural.....	441,103	451,377	455,567	541,167
Urban.....	316,323	295,123	236,361	179,227
City domestic.....	203,921	187,044	142,559	96,250
Subdivision irrigation .....	57,952	56,753	50,248	45,839
Other nonagricultural irrigation (schools, parks, churches, etc.).....	52,452	51,326	43,555	37,138
Decreed deliveries .....	66,153	58,464	55,548	55,159
Contract deliveries .....	86,920	82,467	79,630	53,695
Seepage and evapotranspiration .....	293,691	303,289	363,371	376,007
Canals, total (miles) .....	131	131	131	138
Lined .....	61	59	53	47
Laterals, total (miles).....	873	878	877	872
Lined or piped .....	726	715	622	472
Drainage and waste ditches (miles).....	250	251	272	285
Lined or piped .....	55	52	47	38
Assessed area.....	233,220	238,266	238,264	238,252
Number of assessed accounts .....	163,736	166,048	152,120	134,325
Number of times water delivered to users .....	493,043	500,607	517,784	488,342

\* Based on U.S.G.S. provisional records and subject to adjustment.



# POWER

## Sources: (kwh)

	1977	1976	1972	1967
Net steam generation .....	7,499,002,000*	5,637,595,000*	4,219,158,000*	1,395,066,000
Net diesel generation.....	-0-	-0-	-0-	-0-
Net combustion turbine generation.....	59,167,000	93,811,000	125,819,000	-0-
Net combined cycle generation .....	477,803,000	459,155,000	-0-	-0-
Net run of river hydro generation .....	319,851,000**	243,951,000**	97,870,280**	256,718,000
Pumped-storage generation .....	22,694,000	89,536,000	95,733,000	-0-
Total net generation.....	8,378,522,000*	6,524,048,000*	4,538,580,280*	1,651,784,000
Purchased.....	1,730,201,343	2,561,076,900	1,559,501,675	1,403,660,530
Interchange received .....	173,417,000	162,016,000	560,248,063	472,217,002
Wheeling received.....	7,402,652	13,389,100	41,976,362	30,255,328
Total energy sources .....	10,294,543,000	9,260,530,000	6,700,306,380*	3,557,916,860

## Disposition: (kwh)

Residential.....	3,169,000,667	2,931,444,260	2,260,767,468	1,107,042,744
Commercial and industrial .....	3,723,299,603	3,594,531,963	2,631,193,186	1,285,331,692
Irrigation pumping.....	233,926,606	282,916,839	257,292,624	239,225,723
Street and highway lighting.....	33,193,033	36,456,046	31,959,968	23,822,920
Public authorities.....	321,266,390	288,417,414	209,570,851	178,264,606
Interdepartmental .....	214,643,125	186,729,026	216,442,682	202,702,690
Sales for resale .....	1,359,303,329	818,405,306	428,622,958	169,799,750
Total sales.....	9,614,643,253	8,138,900,854	6,035,849,737	3,206,190,125
Interchange delivered .....	135,930,000	384,440,000	132,683,800	70,206,680
Wheeling delivered .....	6,854,855	12,643,696	38,954,064	27,713,880
Energy losses.....	453,313,392	598,785,450	471,167,779	253,806,175
Energy for pumped-storage operations.....	33,746,000	125,760,000	21,651,000	-0-
Total disposition of energy .....	10,294,543,000	9,260,530,000	6,700,306,380	3,557,916,860
Peak overall power system (kw).....	2,149,000	2,089,000	1,523,000	739,000
Date and time (MST) .....	June 29, 5 p.m.	July 7, 6 p.m.	Aug. 1, 5 p.m.	July 10, 5 p.m.
Peak, Project customers (kw).....	1,731,000	1,732,000	1,360,000	679,000
Date and time (MST) .....	Sept. 7, 6 p.m.	July 7, 6 p.m.	July 31, 6 p.m.	Aug. 29, 6 p.m.

## Generating capability (kw)\*\*\*

Steam.....	1,543,250*	1,548,250*	844,400*	532,200
Diesel.....	-0-	-0-	-0-	7,900
Combustion turbine.....	378,000	378,000	112,000	-0-
Combined cycle .....	233,000	288,000	-0-	-0-
Hydroelectric, conventional .....	94,000	94,000	54,400	77,100
Hydroelectric, pumped-storage .....	140,000	140,000	143,500	-0-
Total operating capability .....	2,443,250*	2,448,250*	1,154,300*	617,200
Contract purchase at time of peak .....	461,313	325,563	520,592	432,312
Total resources.....	2,910,063*	2,773,813*	1,674,892*	1,049,512

## Electric customers, year end

Residential .....	243,877	238,989	191,357	128,966
Commercial and industrial .....	13,526	17,591	14,076	11,264
Other .....	1,433	1,361	1,012	881
Total.....	263,891	257,941	206,445	141,111
Average annual kwh use — residential .....	13,103	12,597	12,442	8,770
Average annual kwh price — residential (cents).....	4.25	3.51	2.14	1.96

\* Includes SRP participation in jointly owned projects.

\*\* Includes run of river generation by pumped-storage units.

\*\*\* Figures reported indicate unit capabilities during the summer peak.

# Officers, board & council

## Elected Officers

Karl F. Abel  
*President*  
John R. Lassen  
*Vice President*

## Principal Officers and Other Executives

Jack Pfister  
*General Manager*  
Robert F. Amos  
*Deputy General Manager*  
John D. Jacobs (1)  
*Director, Information Systems*  
Roger B. Ludeman  
*Director, Operations Services*  
E. W. Yorke  
*Director, Personnel*  
John R. McNamara  
*Associate General Manager, Power*  
Trent O. Meacham  
*Assistant General Manager, Power  
Construction and Maintenance*  
John O. Rich  
*Assistant General Manager,  
Power Operations*  
Reid W. Teeple  
*Associate General Manager, Water*  
Don L. Weesner  
*Assistant General Manager, Water*  
Leroy Michael Jr. (2)  
*Assistant General Manager,  
Planning and Resources*  
R. W. Mason (3)  
*Director, Project Planning*  
Carroll M. Perkins (4)  
*Assistant General Manager,  
Financial Services*  
Kenneth J. Knauer  
*Treasurer*  
Vaughan A. Pierce  
*Assistant General Manager,  
Marketing and Commercial Services*  
Stanley E. Hancock  
*Director, Communications  
& Public Affairs*

D. Michael Rappoport (5)  
*Director, Governmental Affairs*  
Richard H. Silverman (6)  
*Director, Law and Land*  
Paul D. Rice  
*Secretary*

*Named to position: (1) April 20, 1978; (2) Jan. 1, 1978; (3) Jan. 9, 1978; (4) Jan. 1, 1978; (5) July 18, 1977; (6) Jan. 3, 1978.*

## Consultants

Legal Advisers  
*Jennings, Strouss & Salmon*  
Auditors  
*Arthur Andersen & Co.*  
Consulting Engineers  
*Ford, Bacon & Davis Incorporated*  
Bond Counsel  
*Mudge Rose Guthrie & Alexander*  
Financial Consultant  
*Smith Barney, Harris Upham & Co.  
Incorporated*

## Board Members

The 10 members of the Board of Governors of the Salt River Valley Water Users' Association are elected biennially from among the shareholders of the Association.

The Board of Directors of the Salt River Project Agricultural Improvement and Power District consists of 12 members and will be expanded to 14 in 1980. One District board member is elected from each of the 10 SRP voting areas. In addition, the District's board includes two members to be elected at large. These board members were appointed to the District's board in 1976 as prescribed by state law. Their positions will be up for election to four-year terms in 1978. The new state law also provided that two additional at large representatives will be added in 1980, bringing the total number of District board members to 14.

The boards establish the policies for the management and conduct of the business affairs of the Project.

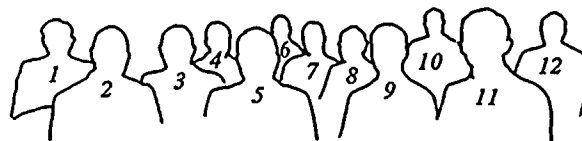
## Council Members

Three council members are elected for two-year terms from among the shareholders in each of the 10 district areas of the Salt River Valley Water Users' Association and from among the members in each of the 10 division areas of the Salt River Project Agricultural Improvement and Power District. The state law passed in 1976 provides that beginning in 1978 District council members will be elected to four-year terms with half the council seats up for election every two years.

The councils enact and amend bylaws relating to the management and conduct of the business affairs of the Project.

*SRP council members, pictured next page, top to bottom:*

*District 1—Rudolph Johnson, Emil M. Rovey, Howard W. Lydic; District 2—Conrad Gingg, Marcel J. Boulais, C.C. Pendergast Jr.; District 3—M.B. Brooks Jr., Elvin E. Fleming, Thayer Collier; District 4—Ivy Wilson Jr., Levi H. Reed, Wiley R. Baker; District 5—Edmund Navarro, Roy W. Cheatham, Carl E. Weiler; District 6—James L. Diller; not pictured: James R. Marshall, Dean W. Lewis; District 7—William H. Goettl, A. Warren Austin, George B. Willmoth; District 8—Thomas M. Owens Jr., Joe Bob Neely; not pictured: Dwayne E. Dobson; District 9—Robert W. Birchett, W. Curtis Dana, Olen Sharp; District 10—Otto B. Neely, L. Max Pace, Orland R. Hatch*



*SRP Board members (above);  
district number follows Board member's name:*

- 1—Alex M. Conovaloff, No. 2*
- 2—John M. Williams Jr., No. 5*
- 3—W. Larkin Fitch, No. 9*
- 4—Bill Rousseau, No. 3*
- 5—Leo C. Smith, No. 4*
- 6—John S. Hoopes, No. 8*
- 7—Tom Finley, No. 10*
- 8—John L. Burton Jr., at large*
- 9—Thomas P. Hurley, No. 6*
- 10—William P. Schrader, No. 7*
- 11—William W. Arnett, at large*
- 12—Germain H. Ball, No. 1*

# Salt River Project

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