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*City of Anaheim  
Public Utilities Department  
Year Ended June 30, 1985  
Annual Report*

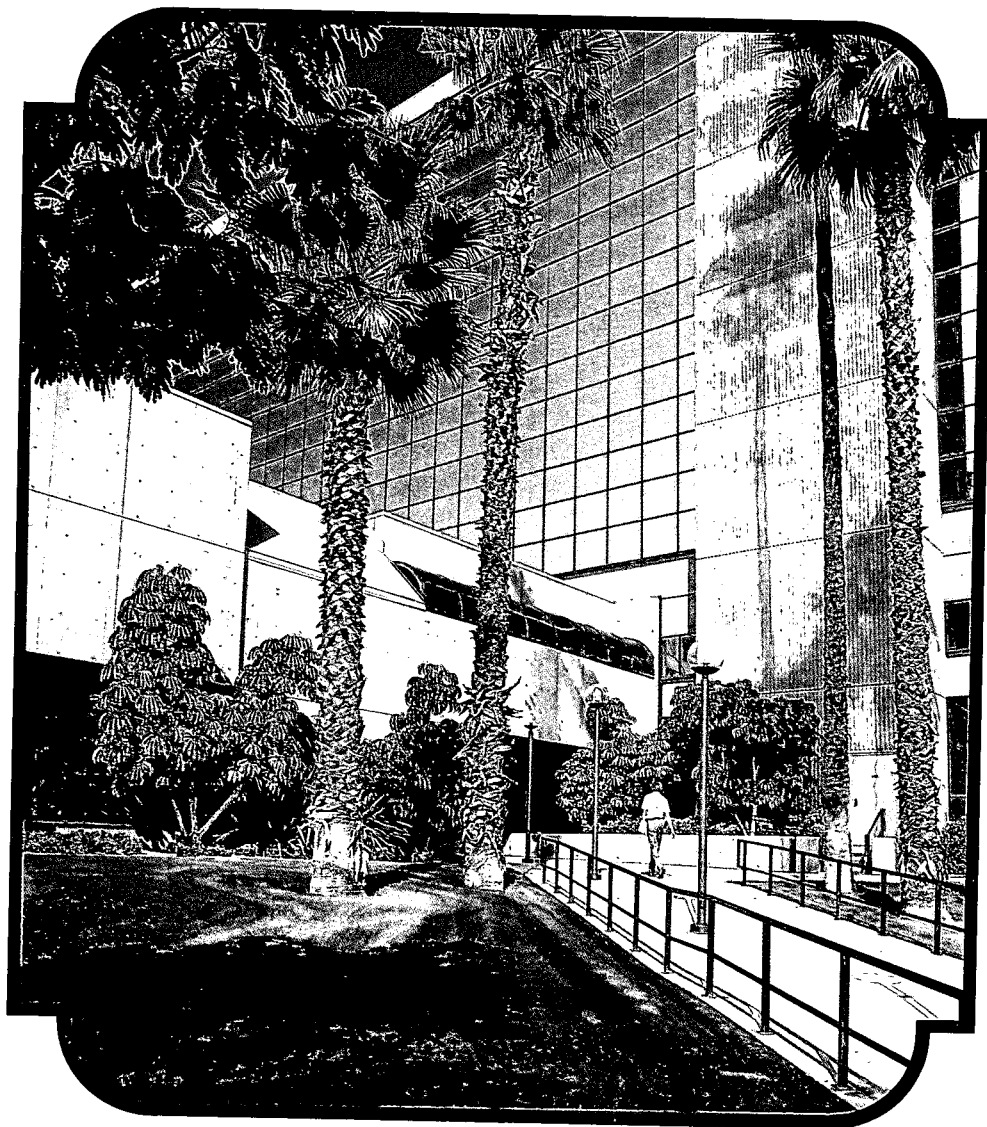
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# 1985 and 1984 Fiscal Year Highlights



OPERATIONS	WATER		ELECTRIC	
	Year Ended June 30		Year Ended June 30	
	1985	1984	1985	1984
Sales	21,221 million gallons	19,981 million gallons	1,990 million kilowatt-hours	1,871 million kilowatt-hours
System peak requirements	94.0 million gallons	87.9 million gallons	483,360 kilowatts	421,920 kilowatts
Average number of customers	51,896	50,993	92,347	90,154
<b>FINANCIAL</b>				
Revenues from sale of water and electric power	\$16,928,000	\$13,759,000	\$166,782,000 <sup>(1)</sup>	\$142,971,000 <sup>(1)</sup>
Net income	\$ 3,964,000	\$ 3,239,000	\$ 6,759,000	\$ 7,777,000
Transferred to City of Anaheim General Fund	\$ 550,000	\$ 476,000	\$ 5,706,000	\$ 5,039,000

<sup>(1)</sup>Amounts represent revenues derived solely from billings and do not reflect any provision for changes in the Power Cost Adjustment balancing account which were \$8,312,000 and (\$4,420,000) for the years ended June 30, 1985 and 1984, respectively. See Note 1 to Electric Utility Financial Statements.

On the Cover. From state of the art inertial guidance for the defense of our nation to the high flying fantasy of fireworks bursting above Sleeping Beauty's Castle, the Anaheim Public Utilities Department is proud of its partnership role in meeting the water and power needs of the community.

# Officials for the City of Anaheim

## CITY STAFF

William O. Talley  
*City Manager*  
George P. Ferrone  
*Finance Director*  
Jack L. White  
*City Attorney*  
Leonora N. Sohl  
*City Clerk*  
Mary E. Turner  
*City Treasurer*

## PUBLIC UTILITIES MANAGEMENT

Gordon W. Hoyt  
*General Manager*  
Edward G. Alario  
*Assistant General Manager  
Operations*  
Darrell L. Ament  
*Assistant General Manager  
Management Services*  
Dale L. Pohlman  
*Assistant General Manager  
Power Resources*

Ray A. Auerbach  
*Water Engineering Manager*  
Michael A. Bell  
*Financial Services Manager*  
George C. Campbell  
*Electrical Engineering Manager*  
Edward E. Dumon  
*Operations Systems Manager*  
Diana M. Leach  
*Administrative Services Manager*  
Don R. Metzger  
*Customer Service Manager*

Public Utilities Board  
(Middle and back row)

City Council  
(Front row)

Richard J. McMillan

Carl J. Kiefer

S. Dale Stanton

James H. Townsend  
Vice Chairman

Richard L. Haynie

Kenneth M.  
Keesee  
Chairman

Joseph R. White

Irv Pickler  
Councilman

Miriam Kaywood  
Councilwoman

Ben W. Bay  
Councilman

Don R. Roth  
Mayor

E. Llewellyn  
Overholt, Jr.  
Mayor Pro Tem



# Report from the General Manager

The roots of the Anaheim Public Utilities Department are deeply imbedded in this community. The forerunner of today's modern water system was created in 1879. We brought the first electric power to the community in 1895.

During the past 106 years, the Department has been much more than a utility. We have been partners in Anaheim's transformation from rural vineyards and orchards to one of America's fastest growing metropolitan areas. We have helped fuel Anaheim's remarkable growth by reliably meeting the ever increasing water and power needs of the community at the lowest possible costs. We are proud of our role.

We eagerly look forward to fueling the growth of our community for decades to come. Indeed, we are taking steps today to assure that the resources and facilities are in place to meet our community's water and power needs 10, 20 and 30 years into the future.

In 1984-85, we continued to increase the productivity of our workforce and the efficiency of our operations through the application of microcomputers, training and sophisticated management systems and techniques. As a result, we are delivering increased service to a larger number of homes and businesses than ever before . . . and we're doing it with a smaller workforce.

In 1985-86, we will serve our customers with five fewer employees than in the fiscal year just completed and 25 fewer employees than in 1982-83, an 8 percent reduction in our workforce. And a recent survey for the Edison Electric Institute indicated that we are using 30 percent fewer managers and supervisors than other utilities our size.

We strive to manage the Department with the same conscientious attitude applied to the best run businesses in Anaheim — attention to detail, long range planning, an insistence on excellence, and a commitment to serve. This attitude resulted in significant accomplishments in every major operating area during the past fiscal year, as discussed on the following pages of this report. Items of particular significance include:

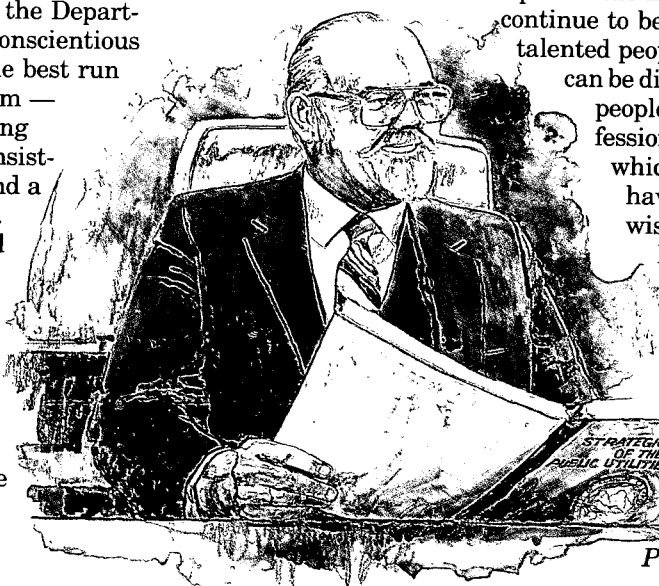
## Water Utility

- Water production was up 4.5 percent in 1984-85 to a record 22.6 billion gallons.
- Two new high production water wells, drilled deeper than any existing city wells, were placed in service.
- The Department put in place financing for its aggressive water capital replacement program. Funding was provided by proceeds from the sale of \$6.7 million in revenue bonds, issuance of \$2.9 million in Water Revenue Anticipation Notes and a portion of our revenue from the sale of water.

## Electric Utility

- Anaheim was awarded a preliminary allocation of power from Hoover Dam which is expected to save about \$6 million a year in power supply costs by the end of the decade.
- Construction of the coal-fueled Intermountain Power Project in central Utah, including the 490 mile Southern Transmission System from the plant to Southern California, continued on schedule and under budget.
- We received an additional \$8.0 million in refunds from Southern California Edison Company resulting from our continuing challenge to their unreasonably high wholesale rates. Subsequently, we received another \$2.2 million refund in August 1985.
- Electric system total energy requirements topped 2.1 billion kilowatt-hours for the first time, and a record demand of 483,360 kilowatts was set during a record heat wave.

As President of the American Public Power Association for 1985-86, I have established a close working relationship with the nation's leading power systems. I continue to be impressed by the high caliber, talented people who work here. Our results can be directly attributed to the dedicated people of this Department and the professional, businesslike manner in which they approach their jobs. They have my sincerest gratitude. I also wish to thank the City Manager, Mayor and members of the City Council and members of the Public Utilities Board, whose leadership, support and encouragement have been the cornerstone of our success.



Gordon W. Hoyt  
Public Utilities General Manager



*Disneyland's 30th Anniversary is expected to result in record attendance of over 12 million visitors in 1985. Behind the fantasy, the Anaheim Public Utilities Department is working to supply the water and power needs of the Magic Kingdom and Anaheim's tourism industry.*

# The 1984-85 Water Year

Anaheim's municipal water utility began operations in 1879 with a single well, a pumping plant, and a 20,000 gallon redwood storage tank. Wells were the sole source of water for the city until the 1940's when surplus water was brought in from the Colorado River by the Metropolitan Water District of Southern California (MWD), of which Anaheim is a founding member.

The municipal utility has matched step for step Anaheim's explosive growth which began in the 1950's. Using ever advanced methods of producing, storing, treating and delivering water, the water utility has played an integral role in making Anaheim a modern, thriving, economically sound and important city.

In order to meet customer needs and maintain prudent storage levels, water production in 1984-85 was a record 22.6 billion gallons, up one billion

gallons from the prior fiscal year. Wells provided 11.7 billion gallons or 52 percent of total production. Remaining supplies were purchased from MWD.

The production and operating flexibility of today's water system is a tremendous credit to Anaheim's planners, engineers and policy makers. While wells are the primary source of water for the city and are capable of producing 65 to 70 percent of consumers needs, the Department also has the ability to take advantage of relatively lower cost surplus water which is made available by MWD from time to time. The Department saved approximately \$179,000 in water supply costs in 1984-85 as a result of increasing water purchases under MWD's surplus water program.

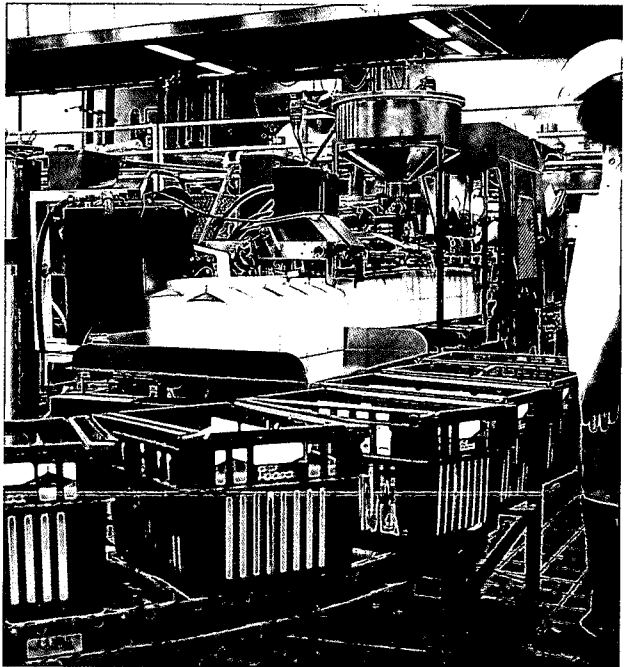
**Water Sales.** The system's 51,896 customers used 21.2 billion gallons of water in 1984-85, up 1.2 billion gallons or 6.2 percent from the prior fiscal year. The increased sales and resulting increase in production were primarily the result of relatively low rainfall during the fiscal year. While the 12.1 inches measured in 1984-85 was up slightly from the prior fiscal year, 90 percent of that rainfall occurred from November through February.

**New Production.** Two new wells, each capable of producing twice as much water as any existing system well, were placed in service in 1984-85. Wells 40 and 41, located in the southwestern area of



The Delco Remy Division of General Motors Corporation Anaheim facility has been turning out world class quality auto and truck batteries since 1954.

Anaheim youngsters enjoy a carefree splash in the pool . . . a perfect respite from the heat of a hot Southern California day.

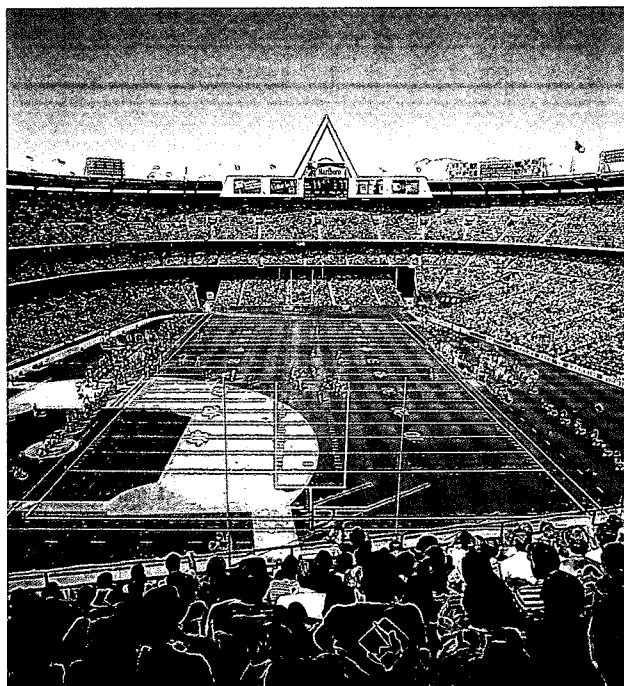
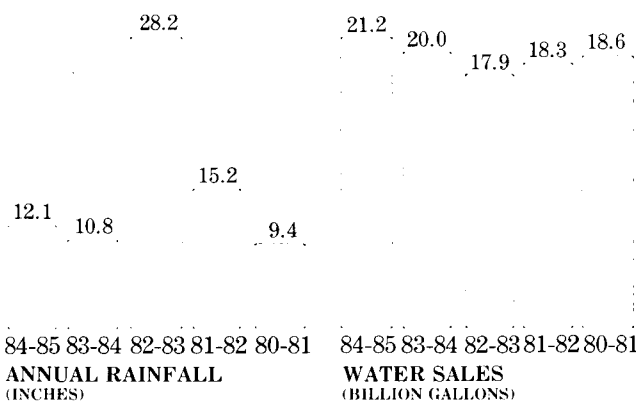


At the Anaheim headquarters of Carl Karcher Enterprises, freshly cooked sauces and dressings are carefully dispensed into containers for distribution to Carl's Jr. restaurants in California, Arizona, Nevada and Texas.

# The 1984-85 Water Year

the city, are pumping at 3,700 and 3,900 gallons per minute, respectively. However, each is capable of producing about 5,000 gallons per minute with modifications which could be made at a future date. In addition to producing more water, these new wells tap groundwater at about 1,300 feet, twice the depth of older existing wells. The result is water of such high quality that no treatment is required. There are 32 wells now serving the needs of Anaheim water consumers.

**System Improvements.** The Anaheim City Council's on-going commitment to a comprehensive replacement program continues to play a major role in meeting customers' water needs. In 1984-85 the Department arranged for the necessary financing



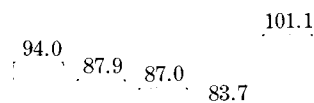
Anaheim Stadium has been rated the number one major league baseball stadium in the Nation. It is home to the California Angels of the American League as well as the Los Angeles Rams of the NFL.

to pay for the rehabilitation of existing wells and replacement of facilities which have outlived their useful lives or are no longer capable of meeting the needs of customers.

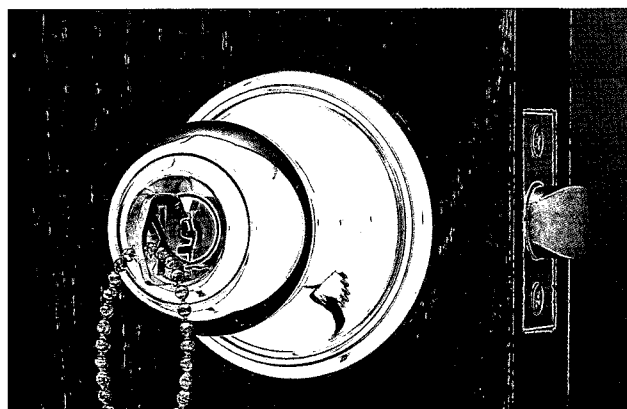
Main replacements continued in the downtown area of Anaheim to improve water flow and pressures. The new mains provide significantly better fire fighting flows and they virtually eliminate so called "red water" complaints normally associated with the bare, unlined cast iron water mains. It is estimated that only 27 miles of unlined cast iron mains were still in service at June 30, 1985.

Construction also was completed on extension of a 36-inch water transmission line in Weir Canyon Road from Santa Ana Canyon Road to the south boundary of the Bauer Ranch development. The 375 acre Bauer Ranch is the newest major residential/commercial development under construction in the city. Plans call for construction of approximately 950 dwelling units, an 85 acre regional shopping center and 65 acres of general commercial development.

Other capital improvement projects included



84-85 83-84 82-83 81-82 80-81  
PEAK DAY DEMAND  
(MILLION GALLONS)



Kwikset, a division of Emhart Corporation, is the manufacturer of America's largest selling residential locksets. The Anaheim facility, which opened in 1948, now employs 1,300 people.



construction of a new roof for the 3 million gallon La Palma East Reservoir and installation of radio transmitter/receiver control systems at several well sites.

Design and engineering were completed in preparation for installation of a floating cover at Olive Hills Reservoir. Covering the 60 million gallon storage facility, the system's largest treated water reservoir, will provide improved water quality and operating flexibility.

Design and engineering also were completed for rehabilitation of the August F. Lenain Filtration Plant, located adjacent to the 920 million gallon Walnut Canyon Reservoir. The plant has logged a remarkable 17 year record of almost continuous service since it was placed in operation in 1968. This major overhaul and rehabilitation should begin by late fall of 1985 and will require the plant to be out of service through the spring of 1986.

**Rates.** To assure revenues sufficient to pay debt service, costs of operations and to help fund capital improvements, new higher rates based on cost of service were implemented July 1, 1984. Rates were decreased very slightly October 23, 1984 due to increased pumping efficiency from system wells. The rate changes combined to produce a 15.8 percent increase in revenue per 100 cubic feet of water sold.

**Water Quality.** Water delivered to Anaheim consumers in 1984-85 continued to exceed all Federal and State standards for drinking water. To make sure it stays that way, the Department's own

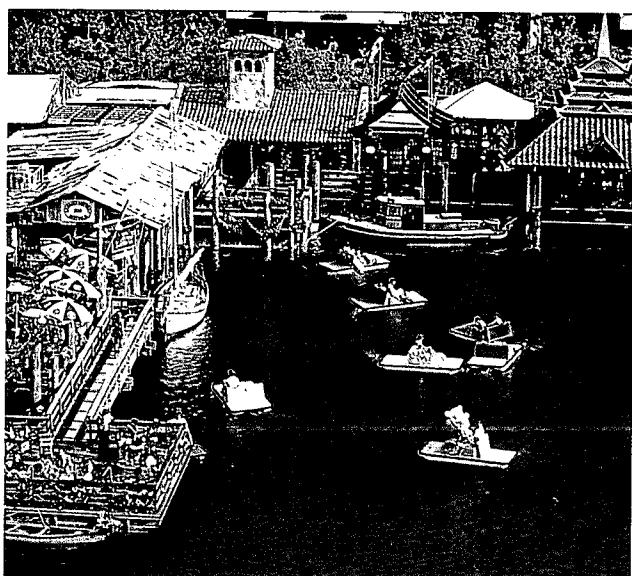
water quality section completed more than 3,500 physical, biological and chemical tests of the water supplied to Anaheim consumers. In addition, MWD, the Orange County Water District and Orange County Health Department maintain rigorous sampling and testing programs of both imported and groundwater sources. Tests include routine checking for industrial, agricultural and organic compounds.

In 1984-85, MWD began using chloramines instead of chlorine to disinfect water delivered to the city. The change was made in order to ensure that levels of trihalomethanes were reduced to the lowest possible levels. The Department will be converting its chlorinating equipment at various reservoir and well locations.

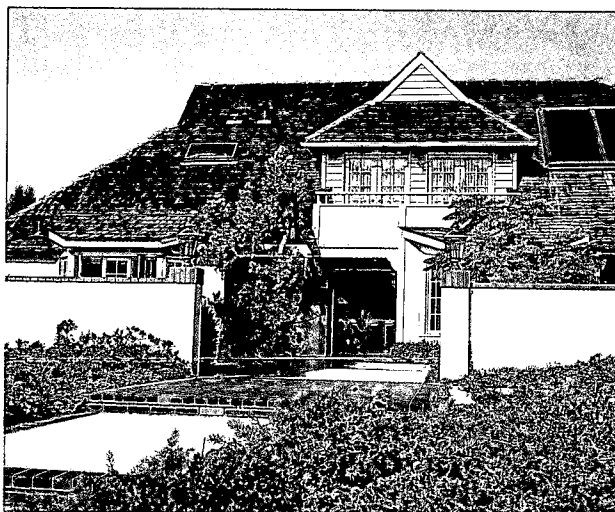
**Toward the Future.** During the next 5 years, the Department plans to make investments totaling \$38.6 million in water facilities. Of that figure, \$11.4 million is targeted toward replacement of water production and distribution systems and \$27.2 million will go toward new facilities.

In 1985-86, the Department plans to devote approximately \$4 million to install a floating cover at Olive Hills Reservoir and to rehabilitate the Lenain Filtration Plant. Capital projects will be financed in part by revenue bond and short-term revenue anticipation note proceeds and by fees charged to developers.

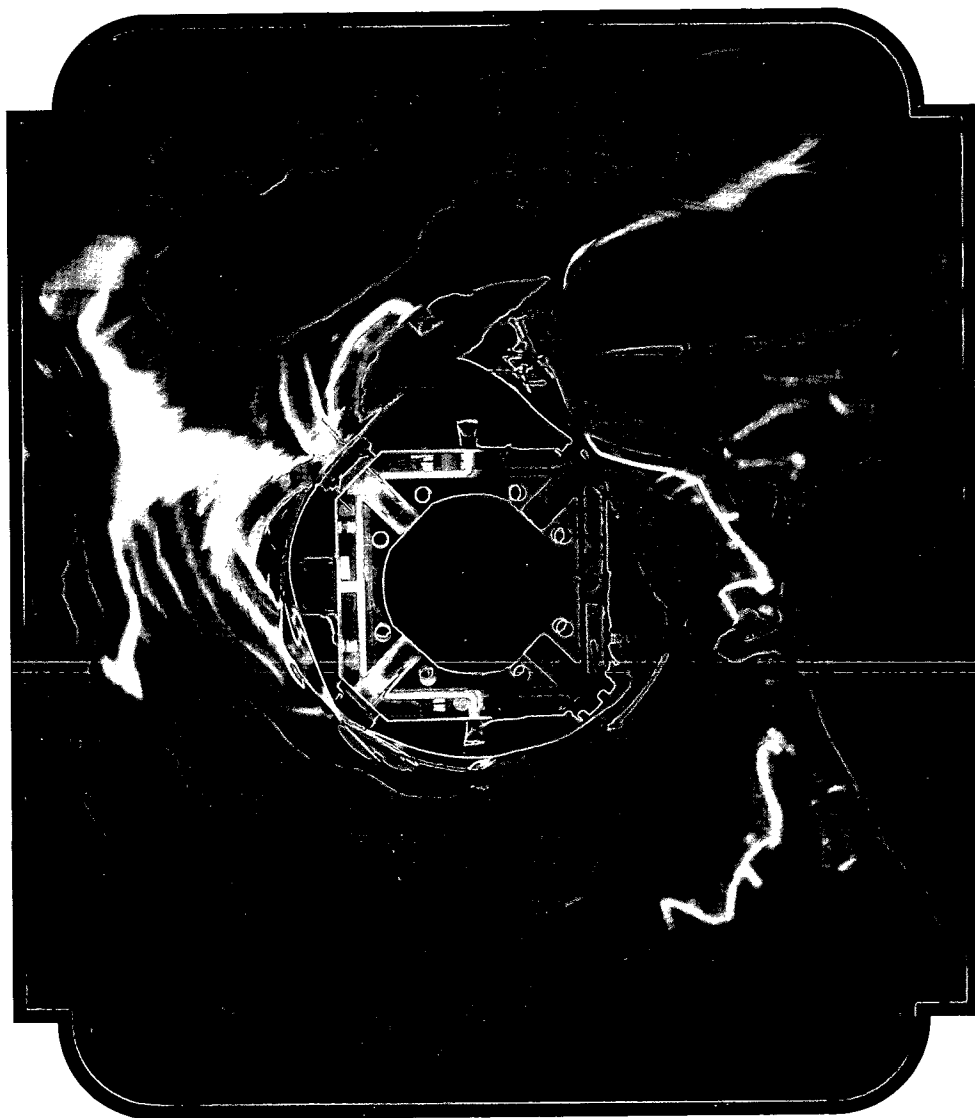
It is the Department's goal to see that the 106 year tradition of reliably delivering high quality water to Anaheim homes and businesses continues. And just as important, that those deliveries are made in the most cost efficient manner practical.



*Seaports of the Pacific is the multi-million-dollar focal point of Wrather Corporation's 4-star Disneyland Hotel. The "official hotel of the Magic Kingdom," features over 1,200 guest rooms in three towers, 16 restaurants and lounges, 160,000 square feet of meeting space and this inland marina.*



*Anaheim's water system is designed to meet consumers' water needs, both indoors and out . . . even during record heatwaves and accompanying heavy water demands.*



*Developed by Rockwell International Corporation's Electronics Operations in Anaheim, this Ring Laser Gyro is the next-generation inertial navigator. The Department supports many firms working at the leading edge of defense and other technologies with reliable water and electric service.*



# The 1984-85 Electric Year

Total electric system energy requirements reached 2.1 billion kilowatt-hours (kWh) in fiscal 1984-85 and peak demand climbed to 483,360 kilowatts (kW). Both were all-time system records.

It should come as no surprise that Anaheim's electric system met the record customer energy and peak demand requirements with relative ease. Department engineers, designers and economists continually work to evaluate system performance, plans and forecasts for community development and forecasts of economic conditions to assure that adequate production and distribution facilities are in place to reliably and economically serve Anaheim electric consumers.

Anaheim's 92,347 customers used 1.99 billion kWh in fiscal 1984-85, up 6.3 percent from the 1.87 billion kWh used in the prior year. Among the major customer classes, the increase was largest among residential consumers, up 6.8 percent.

Hotter weather, including average daily low temperatures which were higher than the 48 year average, accounted for the majority of the increased electric use by consumers.

**Power Supply.** Anaheim's 3.16 percent share of San Onofre Nuclear Generating Station, Units 2 and 3 (SONGS), produced 286.8 million kWh, which represented 13.6 percent of the system requirement. Non-firm energy purchases from 11 western utilities were 304.0 million kWh. These purchases represented 14.4 percent of the total system requirement. The 1.5 billion kWh

purchased from Southern California Edison Co. (Edison) represented 72.0 percent of the system requirement.

In August 1984, SONGS Unit 2 completed its first full year of serving Anaheim customers. Unit 2 operated at a 67 percent capacity factor its first year, surpassing the 61 percent national average for similar reactors during their first year of operation. Unit 2 also underwent its first refueling during the fiscal year. Unit 3 is to undergo its first refueling in the Fall of 1985. SONGS is operated by Edison.

With an eye toward the future, the Department is aggressively pursuing projects which will allow the utility to continue to perform at levels which meet customers' expectations. In 1984-85, the Western Area Power Administration awarded Anaheim a preliminary allocation of power from Hoover Dam, the city's first share of a federal hydroelectric project. Anaheim's investment in the Hoover Dam is expected to total approximately \$10 million.

When fully operational, Hoover is projected to save ratepayers \$6 million a year in power costs.

Construction of the 1,522,000 kW coal-fueled Intermountain Power Project (IPP), including the



Learning by computer is becoming increasingly important in the education of our community's children. El Rancho Junior High School is one of the Department's 92,347 customers.



The System 25 computer-aided design hardware/software package is representative of the sophisticated computer systems developed and manufactured by CalComp, Anaheim.

A major cardiac care center in Orange County, Anaheim Memorial Hospital depends on reliable power 24-hours a day.

# The 1984-85 Electric Year

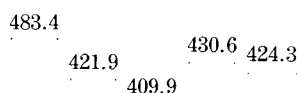
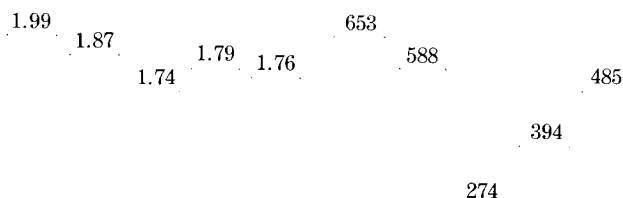
490 mile Southern Transmission System, continues to proceed on time and under budget. Anaheim should begin receiving IPP power by July 1986 with commercial operation of Unit 1. Unit 2 is scheduled for operation by July 1987. Anaheim has rights to 13.2 percent or 201,285 kW of IPP power.

Anaheim took an historic step on January 8, 1985 by signing a memorandum of understanding relating to studies for construction of a new transmission line which would link Anaheim to potential resources to the Pacific Northwest. While there is a great deal of work to be done before the 500 kV AC line, known as the California-Oregon Transmission Project, is determined to be economically feasible, it nevertheless holds great

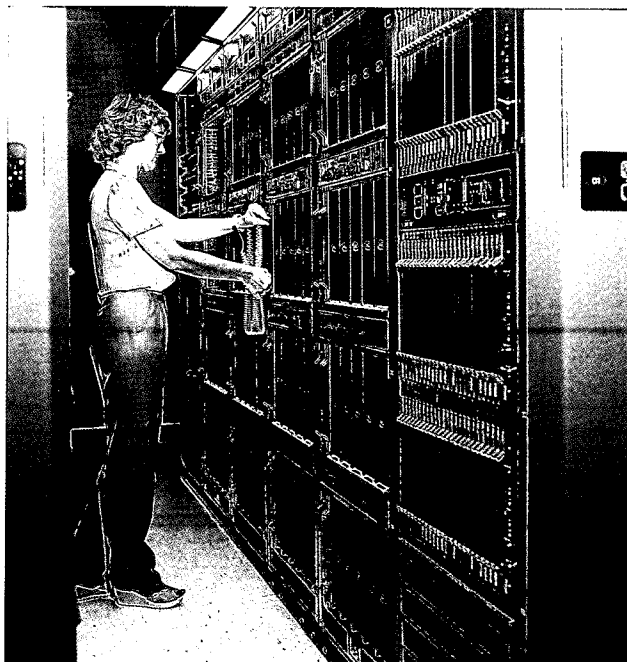
promise. It is significant that the project represents a cooperative effort between every major electric utility in California, both publicly and privately owned, and the federal government.

The Department continued its participation in a study with other western utilities relating to construction of the Mead-Phoenix DC Intertie Project. The transmission line would link Anaheim to potential resources in Arizona, New Mexico and west Texas.

The Department's goal is to bring in power from a



84-85 83-84 82-83 81-82 80-81 84-85 83-84 82-83 81-82 80-81  
ELECTRIC SALES (BILLION KILOWATT-HOURS) TEMPERATURE (DEGREE DAYS ABOVE 72°)



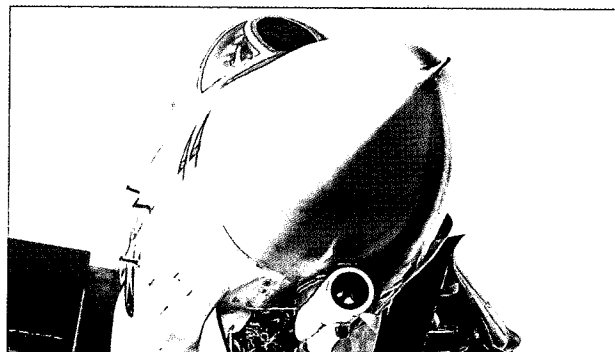
One of the Department's major customers is Pacific Bell. Here, a technician inspects a circuit panel on a computerized digital call-routing system serving 19,000 Anaheim households and businesses.

84-85 83-84 82-83 81-82 80-81  
ELECTRIC PEAK DEMAND  
(THOUSAND KILOWATTS)

variety of resources. More power supply resources means more competition among suppliers and the end result is more competitive energy pricing.

**System Construction.** The 1984-85 fiscal year was eventful for the Department with the completion of many major projects and the further development of plans for future projects.

Among the most noteworthy of accomplishments was installation of Supervisory Control and Data Acquisition equipment at all 11 electrical distribution substations. This sophisticated monitoring and remote control system significantly enhances the Department's ability to provide



This Navy F-14 Tomcat is equipped with an infrared/electro optical sensor system enabling pilots to identify aircraft up to 10 times the range of the human eye. It was developed and produced at Northrop Corporation's Electro-Mechanical Division in Anaheim.

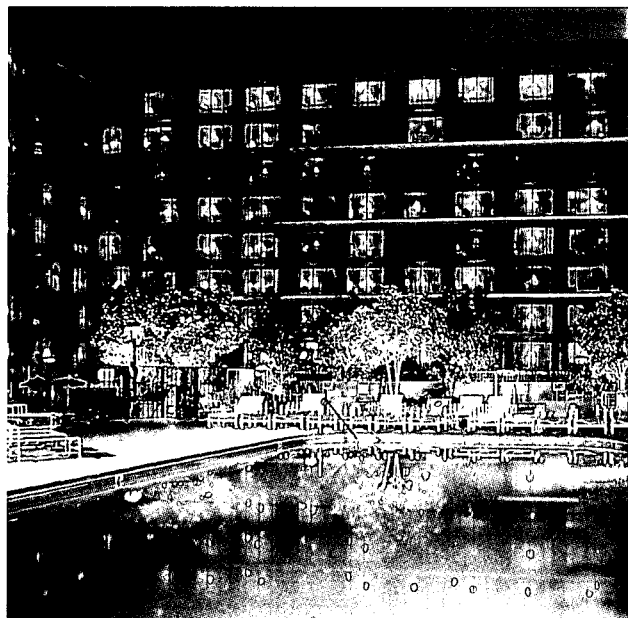


reliable service to Anaheim consumers.

Equipment was ordered in preparation for the expansion of Sharp Distribution Substation to its design capacity with the addition of a second 40,000 Kilovolt Ampere, 69 to 12 kV transformer and related equipment. As partners in progress with consumers, this expansion will maintain the system's ability to meet increased electrical demand caused by strong growth in the north-central industrial area.

Initial site preparation work was begun for Southwest Substation which will serve customers in the Disneyland/Anaheim Convention Center area. Construction was started on a 69 kV transmission line which will carry power to the station from Lewis Receiving Substation. The new station is scheduled for operation late in fiscal 1986-87. Also, construction was completed on a second 69 kV transmission line to Fairmont Substation, located in the rapidly developing Santa Ana Canyon. This line was placed in service in January, 1985.

Distribution line extensions and services were designed for 1,056 residential units and 336 new commercial and industrial units during the fiscal year. Approximately 10 circuit miles of distribution line were installed in 1984-85, with approximately 8 miles being installed underground. The majority of this construction was to meet future residential and commercial demand in the Santa Ana Canyon.



*Southern California's largest hotel, the Anaheim Hilton and Towers, is adjacent to the Anaheim Convention Center, the largest meeting and convention facility on the West Coast. The Hilton offers 1,600 guest rooms, 8 restaurants and lounges, two pools, 4 spas and complete health club facilities.*

**Rates.** Action was taken on August 8 and September 12, 1984 to assure sufficient revenue to meet the budgeted 1984-85 revenue requirement. Revenue per kWh increased 0.75 cents or 9.8 percent overall as a result of the rate changes.

**Cost Reductions.** Purchases of economy energy from sources other than Edison resulted in savings of about \$9.4 million in 1984-85. Load management programs reduced costs by another \$1.2 million.

Hand-held computers were put into use for a more accurate, timely, and cost effective method of reading meters and computing usage. An estimated \$50,000 annually will be saved through use of this state-of-the-art system.

**Looking Ahead.** The Department's forecast of the community's power needs for the next 20 years was the only utility-prepared forecast to be adopted by the California Energy Commission in its 1985 Draft Electricity Report. Electricity sales in Anaheim are expected to grow at an average rate of 2.4 percent over the next two decades and the peak system demand is expected to grow at an average rate of 2.6 percent.

Over the next five years, the Department plans to invest approximately \$68.6 million in new electric facilities. Approximately \$32.5 million will be related to power supply and will come from revenue bond or revenue anticipation note proceeds. The remaining \$36.1 million will be financed from power sales.

As Anaheim plays a leadership role in Orange County's march into the 1990's and beyond, the Anaheim Public Utilities Department is committed to meeting the city's energy needs at the lowest practical cost.



*The Department is extremely proud of its role in support of defense contractors like Interstate Electronics Corporation, headquartered in Anaheim. Contracts like IEC's \$433 million Navy Trident II instrumentation contract have helped make the firm one of the Department's major customers and the city's largest employers.*

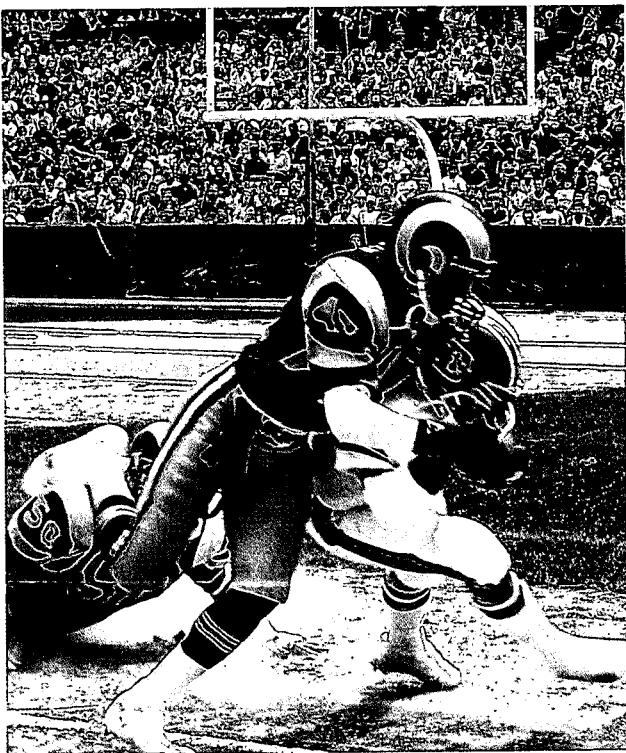


*The City of Anaheim was in the international spotlight during 1984 Olympic Wrestling competition at the Anaheim Convention Center. The Department was proud to participate by supplying the water and electricity necessary to support this major event.*



# A Commitment to Serve

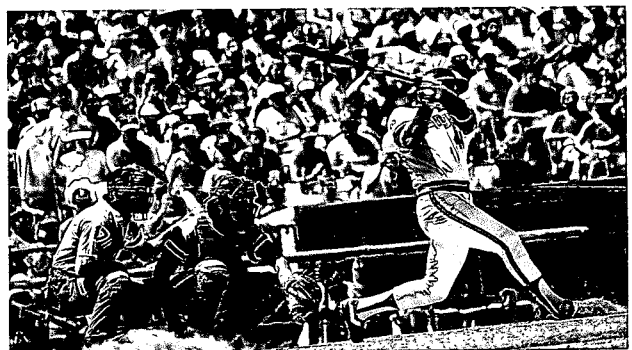
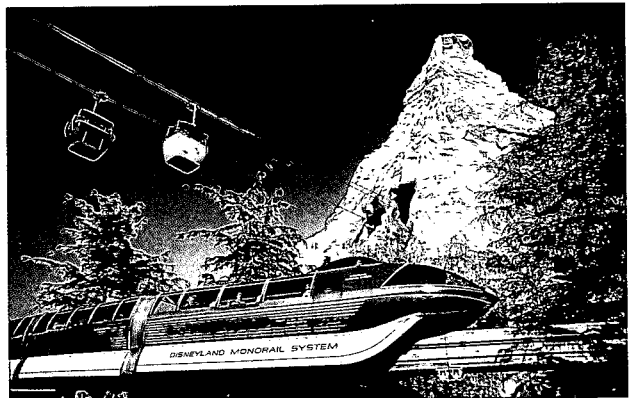
What do thousands of visitors to the Anaheim Convention Center, site of the 1984 Summer Olympic Wrestling competition, have in common with Rams and Angels fans, "children of all ages" riding Disneyland's Monorail or Matterhorn, a conventioneer in one of Anaheim's fine hotels, local residents, merchants or corporate executives? The common denominator is their reliance upon water and power to follow their individual pursuits. And the responsibility to provide that water and power in the City of Anaheim rests squarely with the employees of the Anaheim Public Utilities Department.



Mike Lyons, Sandy Rodriguez, Ron Bengochea, Betty Johnson, Ken Tilley, Ted Casler and Frank Wolfe are representative of the many outstanding people of the Department who are dedicated to serving the community.

*The Los Angeles Rams, NFL action at its best.*

During the past 106 years, Department employees have been meeting the challenge to provide reliable water or power service to the community — its residents as well as its visitors. Ours is a people-serving-people business and the fact that residents and visitors alike take water and electricity so much for granted in their everyday lives, whether at work or at play, is strong evidence that employees are fulfilling their commitment to serve the community by providing reliable water and power now and in the future.

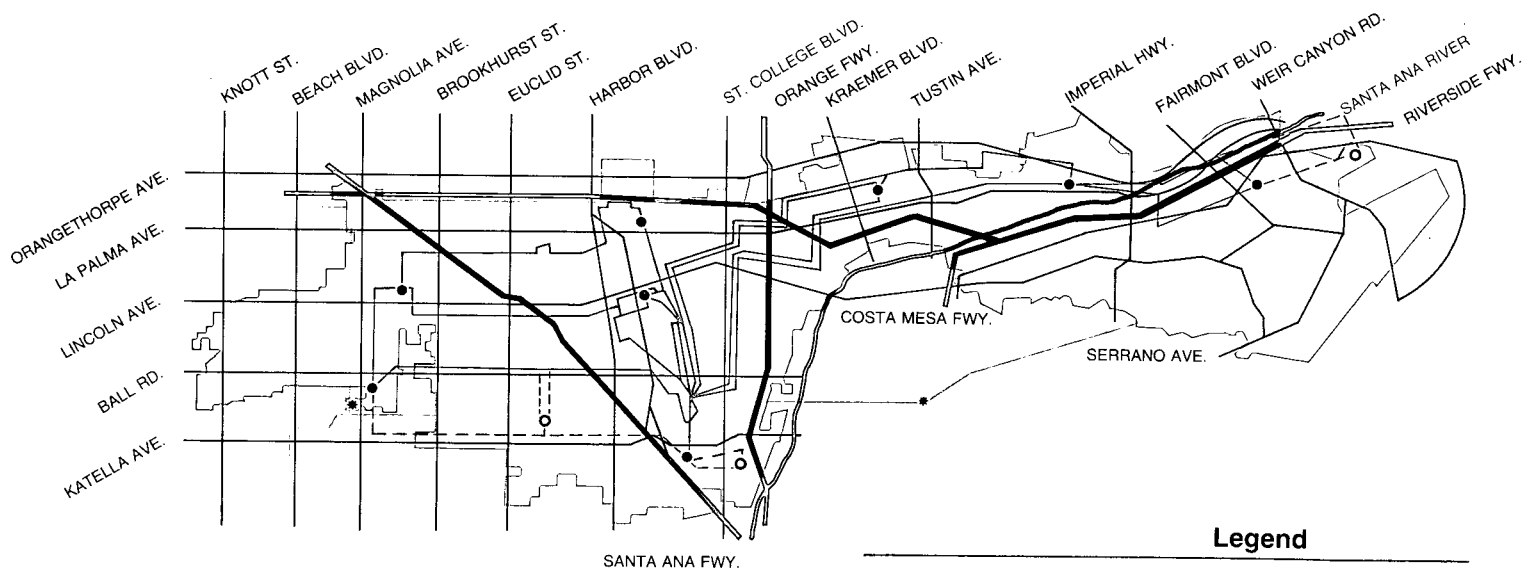
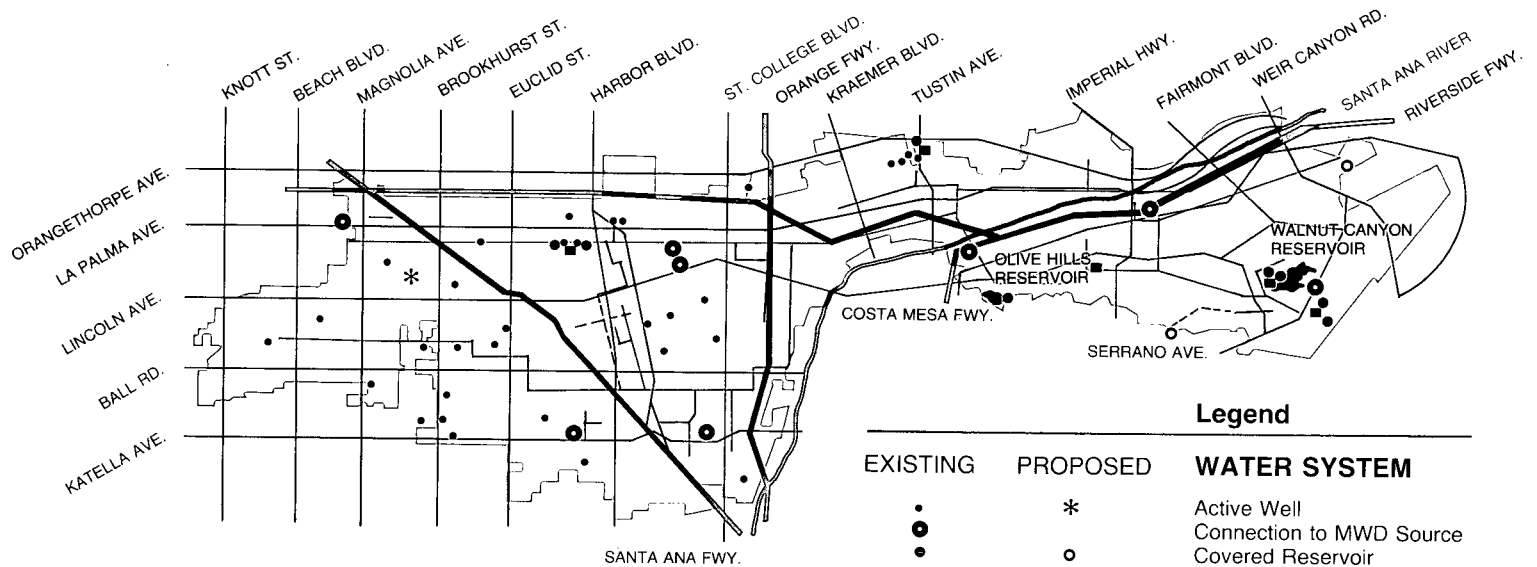


Carl N. Karcher, chairman and chief executive officer of Carl Karcher Enterprises, operator of Carl's Jr. restaurants, which is headquartered in Anaheim.

*Disneyland. (Disneyland Photos © 1985 Disneyland)*

*More than 2.5 million fans watched the California Angels battle for the American League pennant in 1985.*

# Water and Electric Distribution System Maps



# Water and Electric System Sources of Supply

## CALIFORNIA

California-Oregon  
Transmission Project  
(Under Study)

Rock Creek/Cresta  
Hydroelectric  
(Proposed)

Lake Tahoe

California Aqueduct

Haas/Kings River  
Hydroelectric  
(Proposed)

• FRESNO

Adelanto  
Converter Station  
(Under Construction)

ANAHEIM

San Onofre  
Nuclear Generating  
Station

Colorado River  
Aqueduct

Lake Havasu

## NEVADA

White Pine  
Power Project  
(Proposed)

LAS VEGAS

Lake Mead

Hoover Dam  
Power Plant  
(Proposed)

Intermountain  
Power Project  
(Under Construction)

Intermountain Power Project  
Southern Transmission System  
(Under Construction)

## UTAH

## ARIZONA

Mead-Phoenix  
DC Intertie  
Transmission Line  
(Under Study)

• PHOENIX

### LEGEND

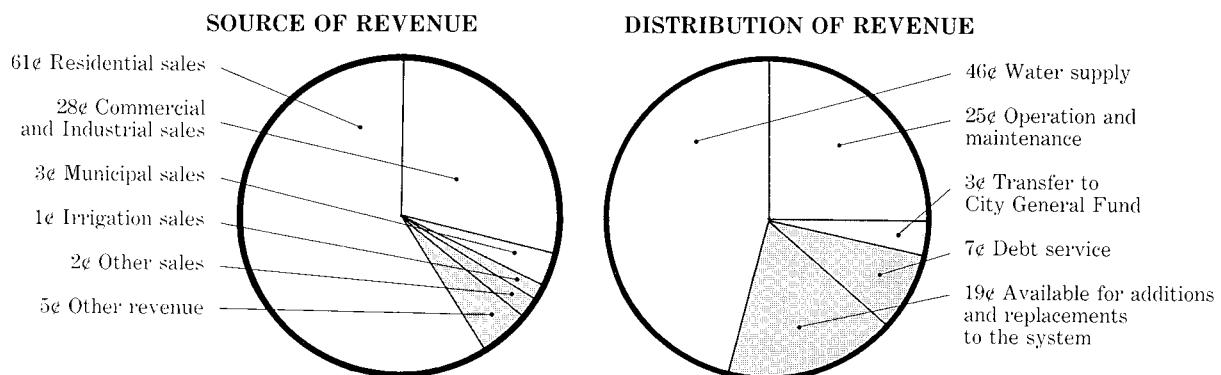
- Water Aquaducts.
- Transmission Lines in which Anaheim has an Interest.
- Transmission by other Utilities for Anaheim.



# 1984 - 1985

## Source and Distribution of Revenue

### THE 84-85 WATER DOLLAR



### THE 84-85 ELECTRIC DOLLAR

