




transformation

SAN DIEGO COUNTY WATER AUTHORITY



200 annual report



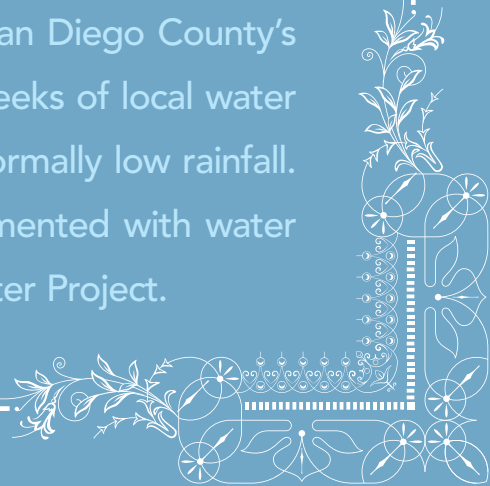
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a story of TRANSFORMATION

For more than half a century, the San Diego County Water Authority has provided water to meet San Diego County's needs through times of drought and economic expansion. The Water Authority was formed in 1944 and became a member agency of the Metropolitan Water District of Southern California in 1946 to gain access to Colorado River water. Local water supplies were not enough to meet the demands of the burgeoning World War II-military complex in this semi-arid region. The water from the Colorado River began to flow into San Diego County a year later. When imported water began flowing for the first time into the San Vicente Reservoir on Nov. 24, 1947, San Diego County's reservoirs were down to an estimated three weeks of local water supply because of increased demand and abnormally low rainfall. In 1978, Colorado River supplies were supplemented with water from Northern California through the State Water Project.





01

02

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04

During the past 10 years, the Water Authority has undergone a dramatic transformation. The Water Authority's story began more than a half-century ago, when it began delivering imported water from hundreds of miles away to a booming World War II-era San Diego County. Since 1947, the agency has fulfilled its mission of delivering imported water. In the early 1990s, the Water Authority determined that continuing to provide this region with safe, reliable water demanded that it diversify its water supplies. Since then, the agency's focus on diversification has grown, with programs in place to improve supply reliability and plans for the future that will further diversify the Water Authority's water supply portfolio.

In fiscal 2003, the Water Authority made great progress toward ensuring continued water reliability for the region. The Water Authority and the Imperial Irrigation District agreed to new terms of an agreement to transfer water from Imperial Valley to San Diego County. The four water agencies involved in the Colorado River Quantification Settlement Agreement signed a revised agreement to be executed upon the completion of certain conditions. The Water Authority's transfer agreement with IID and its efforts to secure the QSA will contribute toward the continued diversification of its water supply portfolio, help California reduce its overuse of Colorado River water and bring new and reliable water supplies to San Diego County.

In fiscal 2003, the Water Authority continued work to maximize its local water supplies. The agency's innovative programs and farsighted policies in conservation, water recycling and groundwater development reduced the Water Authority's dependence on imported water and set an example for the entire state.

The agency's ongoing efforts to enhance its water delivery system through its Capital Improvement Program progressed in fiscal 2003, with upgrades to pipelines and related facilities,



Bernie Rhinerson

01

Bernie Rhinerson
Chairman

James H. Bond

02

James H. Bond
Vice Chairman

George I. Loveland

03

George I. Loveland
Secretary

Maureen A. Stapleton

04

Maureen A. Stapleton
General Manager

and work on the Emergency Storage Project. The ESP is an interconnected system of reservoirs and pipelines that will operate together to provide more than 90,000 acre-feet of emergency water to the region. In fiscal 2003, significant headway was made on the ESP with the Olivenhain Dam and Reservoir nearing completion.

From fulfilling its original charge of building and maintaining a regional water delivery system to its efforts today to secure diversified water supplies, the Water Authority has always committed itself to meeting the water needs of San Diego County. Guiding the agency through the years to come is its Regional Water Facilities Master Plan, which identifies future water demands and the facilities required to meet those demands through the year 2030 and beyond. After years of development, the Water Authority completed the draft master plan in fiscal 2003.

Seawater desalination emerged in the master plan as the preferred alternative with the highest apparent degree of reliability. Seawater desalination is a drought-proof supply. It increases the amount of treated water available to the region and it produces very safe, high-quality drinking water. During the fiscal year, the Water Authority made significant strides toward its goal of building a regional seawater desalination facility in Carlsbad.

The Water Authority will continue to explore new water supply options, such as seawater desalination, to reduce its reliance on imported supplies and to achieve broad diversification in the region's water supplies. As you read this annual report, you will discover an important chapter in the Water Authority's story of transformation – a transformation through which the Water Authority will provide the water and infrastructure needed to sustain this region's quality of life and nurture its economy for generations to come.

transformation **TIMELINE**

1944

WATER AUTHORITY FORMED

On June 9, San Diego voters approve formation of San Diego County Water Authority as a public agency under County Water Authority Act of 1943 to develop, import and distribute water. Nine original member agencies are Chula Vista, Coronado, Oceanside, San Diego, Fallbrook Public Utility District, Lakeside Irrigation District, National City, Ramona Irrigation District and La Mesa, Lemon Grove and Spring Valley Irrigation District.

PRESIDENT ROOSEVELT ORDERS PIPELINE

As an emergency war powers measure to support war effort in San Diego, on Nov. 29, President Franklin D. Roosevelt orders U.S. Navy to construct a pipeline connecting the Colorado River Aqueduct in Riverside County to San Vicente Reservoir in Lakeside.

1946

WATER AUTHORITY JOINS THE METROPOLITAN WATER DISTRICT

On Dec. 17, Water Authority formally annexes into Metropolitan Water District of Southern California to enable it to receive water deliveries when the pipeline from the Colorado River Aqueduct is complete. As a condition of annexation, MWD requires city of San Diego to assign to MWD its rights to 112,000 acre-feet of Colorado River water.

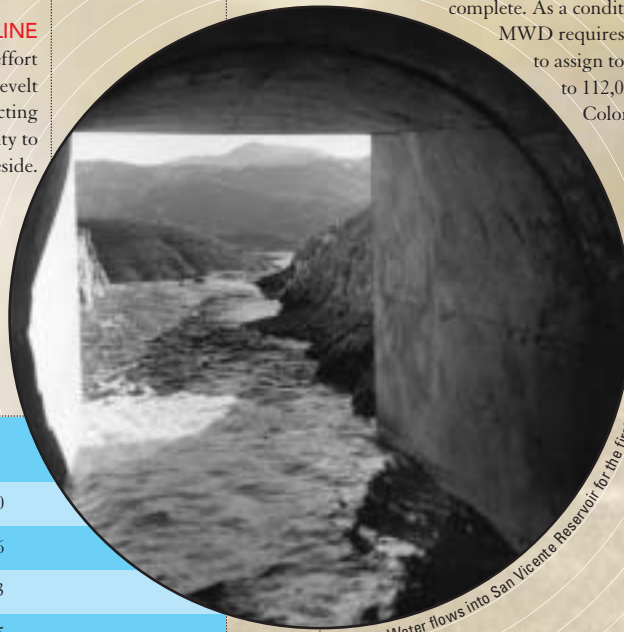


IMAGE: Water flows into San Vicente Reservoir for the first time.

1946 - 1948	
Total Population	432,000
Total Acreage	94,706
Total Water Deliveries (acre-feet)	41,093
Miles of Pipeline	67.5

1947

PIPELINE 1

On Nov. 24, the first Colorado River water flows from Colorado River Aqueduct's San Jacinto turnout in Riverside County for 71 miles into San Vicente Reservoir via the 48-inch-diameter San Vicente Aqueduct (later named Pipeline 1 in the First San Diego Aqueduct). The pipeline was built to convey approximately 65,000 acre-feet per year.

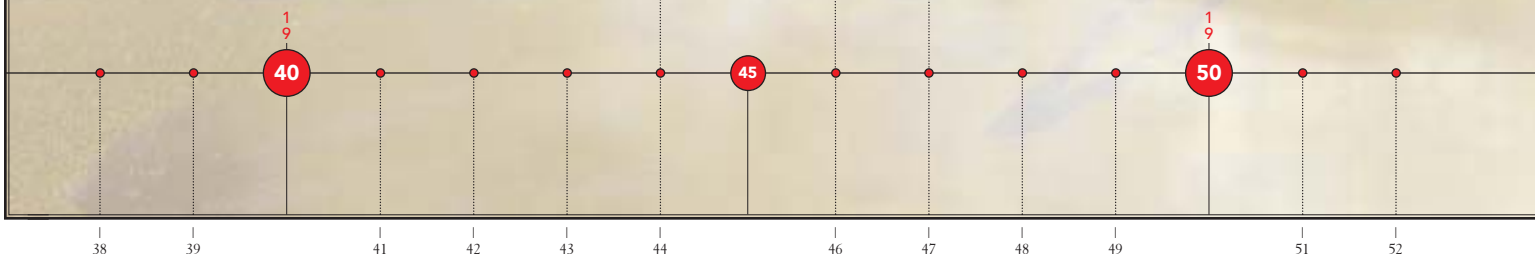
1950-51

WATER AUTHORITY SERVICE AREA

Water Authority serves 81 percent of county's residents, delivering 58,612 acre-feet to over 434,000 people.

DROUGHT

Drought causes concerns about water shortages in San Diego County. Water Authority pursues plans for second major pipeline.



1954

PIPELINE 2

Pipeline 2, a 48-inch-diameter pipeline built adjacent to Pipeline 1, begins delivering imported water. The new pipeline, built by U.S. Navy and U.S. Bureau of Reclamation, has capacity to deliver 65,000 acre-feet a year. Water Authority now has 18 member agencies and four times the service area it had when it was formed.



IMAGE: Installation of 48-inch-diameter pipeline

1960

WATER AUTHORITY SERVICE AREA

Water Authority provides 156,858 acre-feet (including deliveries and water purchased from member agencies' storage accounts) to more than 956,000 people serving 95 percent of county's residents.

1960

Total Population	956,400
Total Acreage	543,606
Total Water Deliveries (acre-feet)	156,858
Miles of Pipeline	161.0

1961

PIPELINE 3

Pipeline 3, a 72-inch-diameter pipeline capable of delivering nearly three times the water as Pipeline 1, is built in Second Aqueduct ending at Otay Reservoir. Built to convey up to 190,000 acre-feet a year, Pipeline 3 increases Water Authority's total delivery capacity by about 150 percent over First Aqueduct's (pipelines 1 and 2) capacity.



IMAGE: Pipeline 3: first pipe in the Second Aqueduct

1950

Total Population	434,777
Total Acreage	119,213
Total Water Deliveries (acre-feet)	58,612
Miles of Pipeline	67.5

1964

ARIZONA V. CALIFORNIA

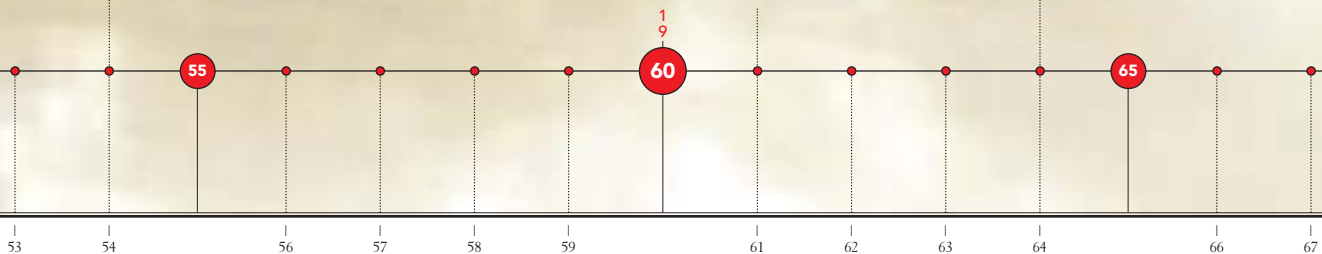
In *Arizona v. California*, U.S. Supreme Court rules California is limited to 4.4 million acre-feet of Colorado River water annually in absence of surplus or unused apportionments of Arizona and Nevada, and limits California to half of any surplus in Lower Colorado River Basin (California, Arizona and Nevada).



IMAGE: Workers place concrete for structure at inlet portal of San Vicente Tunnel.



IMAGE: San Diego skyline



1970

WATER AUTHORITY SERVICE AREA

Population of Water Authority's service area exceeds 1,250,000 (service area increases 39 percent in acreage and 30 percent in population since 1960). Water Authority delivers 245,678 acre-feet of water.

1976

PIPELINE 4

Pipeline 4, capable of carrying nearly as much water as first three pipes combined, is completed in Second Aqueduct. The 96-inch-diameter pipeline terminates at city of San Diego's Alvarado Treatment Plant, increasing Water Authority's pipeline capacity by 86 percent.



IMAGE: Pipeline 4: near Del Dios highway

1978

STATE WATER PROJECT

First water from Northern California is delivered to San Diego region via State Water Project's California Aqueduct and MWD facilities.



IMAGE: Pipeline 4: 96-inch-diameter welded steel pipe



1976-77

DROUGHT

San Diego County (and California) suffers severe drought.

1980

WATER AUTHORITY SERVICE AREA

Water Authority serves 99 percent of county residents (population of 1.8 million), delivering 309,756 acre-feet of water.



IMAGE: Drought-tolerant flower: alyogyne huegelii

1970	
Total Population	1,255,000
Total Acreage	753,200
Total Water Deliveries (acre-feet)	245,678
Miles of Pipeline	166.0



IMAGE: During the 1976-77 drought, water deliveries to Southern California are drastically reduced.



IMAGE: State Water Project, Fresno, California

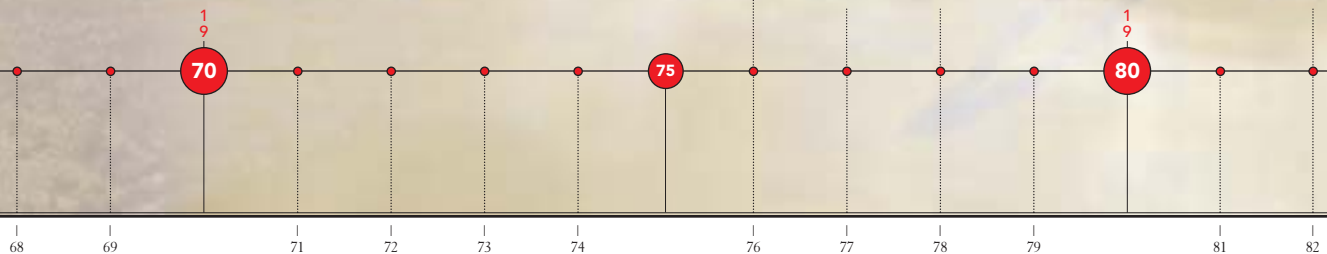




IMAGE: Pipeline 5

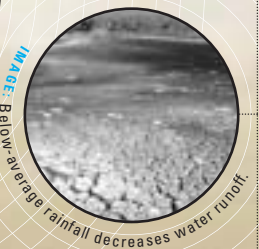


IMAGE: Below average rainfall decreases water runoff.

1987

EPA TO HALT PAMO PERMIT

U.S. Fish and Wildlife Service and Environmental Protection Agency oppose Draft Record of Decision on Pamo Project, issued by U.S. Army Corps of Engineers. Record of Decision recommends issuance of permit for construction providing certain conditions are met. EPA formally notifies Corps of Engineers of its intent to halt Pamo permit by invoking veto powers under Clean Water Act.

SIX-YEAR DROUGHT BEGINS

Major six-year drought begins in California. San Diego County is 84-percent dependent upon a single supplier of imported water.

1988

WATER RECLAMATION PLAN

Water Authority completes Water Reclamation Master Plan for San Diego region.

PAMO PROJECT SUSPENDED

In August, Water Authority requests U.S. Army Corps of Engineers suspend Water Authority's request for permit for Pamo Dam Project.

RAMONA PIPELINE

Water Authority begins construction of Ramona Pipeline, a 57-inch-diameter pipeline serving Olivenhain Municipal Water District, city of San Diego and Ramona Municipal Water District.

1989

OPTIMAL STORAGE STUDY

Water Authority authorizes preparation of an Optimal Storage Study to analyze water storage needs and develop recommended alternatives for meeting those needs. Study later evolves into Emergency Storage Project.

CAPITAL IMPROVEMENT PROGRAM

Water Authority adopts "The Water Distribution Plan, A Capital Improvement Program Through the Year 2010," which encompasses 10 major water infrastructure projects totaling \$530 million.

1990

WATER AUTHORITY SERVICE AREA

Water Authority serves 98 percent of county's residents (population of 2.49 million) delivering 674,993 acre-feet of water.

AQUEDUCT PROTECTION PROGRAM

Water Authority implements Aqueduct Protection Program, an industry-leading pipeline maintenance and repair program for large-diameter pipelines.

IMAGE: Operations and maintenance staff inspect a pipe.
PHOTOGRAPHER: Tim Botsko

1982

PIPELINE 5

Pipeline 5, a 96-inch-diameter pipeline, is added to Second Aqueduct ending at Twin Oaks Valley Diversion Structure in San Marcos, increasing delivery capacity by 54 percent.

1983

PAMO DAM STUDY

Water Authority and MWD authorize Feasibility Study for Pamo Dam and Reservoir.

1984

PRELIMINARY DESIGN FOR PAMO PROJECT

Water Authority certifies Final Environmental Impact Report and completes preliminary design for Pamo Dam Project, a proposed 264-foot-high roller-compacted concrete dam to impound 130,000 acre-feet of water, and approximately 19 miles of 54-inch pipeline connecting Pamo Reservoir with First and Second aqueducts.

VOTERS APPROVE PAMO DAM PROJECT

In November, voters approve \$82 million bond issue for Pamo Dam Project. Water Authority applies to U.S. Army Corps of Engineers for Clean Water Act Section 404 permit, required for construction of project.

1985

CENTRAL ARIZONA PROJECT

Arizona completes Central Arizona Project, which provides Colorado River water to Phoenix, Tucson and other Arizona water users, allowing Arizona to use its entire river allotment.

MID 1980s

DIVERSIFICATION

Water Authority begins to look beyond MWD as its sole supplier of imported water. Sources of potential supply include an Imperial Irrigation District water transfer.

1980

Total Population 1,806,035

Total Acreage 898,733

Total Water Deliveries (acre-feet) 309,756

Miles of Pipeline 210.0

1991

DROUGHT HAS SEVERE IMPACTS

In the fifth year of a six-year drought, MWD deliveries to Water Authority are reduced by 31 percent. Water Authority purchases additional water from California Drought Water Bank and implements a major water conservation program. San Diego County's economy suffers the loss of millions of dollars in economic activity and thousands of jobs are imperiled. Economic development in region suffers major blow.

1992

EMERGENCY STORAGE PROJECT PLANNING

Water Authority initiates planning and environmental studies for Emergency Storage Project, a system of reservoirs, pipelines and pump stations designed to serve water throughout San Diego County in the event a major catastrophe, such as an earthquake, interrupts imported water supplies.



IMAGE: Foundation excavation at Olivenhain Dam, a major component of ESP

1993

WATER RESOURCES PLAN

Water Authority adopts Water Resources Plan, which outlines how the Water Authority and member agencies can develop additional local water supplies through water transfers, water reclamation, conservation, groundwater development and seawater desalination.

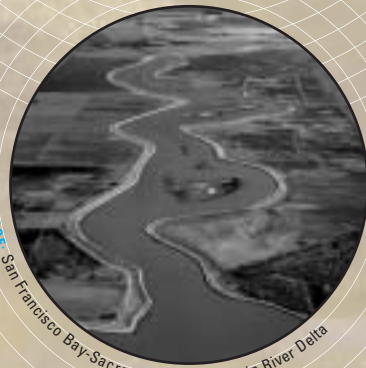


IMAGE: San Francisco Bay-Sacramento/San Joaquin River Delta

1995

WATER AUTHORITY – IID MOU

On Sept. 19, Water Authority and Imperial Irrigation District enter into a Memorandum of Understanding to pursue a major agriculture-to-urban water transfer.

URBAN WATER MANAGEMENT PLAN

Water Authority approves 1995 Urban Water Management Plan to forecast future water demand and supply needs; to explore alternative sources of supply including water transfers, water reclamation, groundwater development and seawater desalination; and to detail efforts for water conservation and drought contingency plans. Water management plan is to be used by land-use agencies to determine water supply availability.

1994

CALFED BAY-DELTA PROGRAM

More than 20 state and federal agencies form CalFed Bay-Delta Program, which seeks to restore the deteriorated Bay-Delta as a reliable source for high-quality drinking water and a healthy habitat for fish and wildlife.

WATER AUTHORITY TURNS 50

Water Authority celebrates 50th anniversary.

HABITAT MANAGEMENT AREA

Water Authority acquires 261 acres of coastal sage scrub habitat for California gnatcatcher and creates Crestridge Habitat Management Area. This mitigation land mitigates for coastal sage scrub removed by implementation of Capital Improvement Program and reserves approximately 50 acres for future mitigation.



IMAGE: Groundwater basin desalination facility in Oceanside
PHOTOGRAPHER: Tim Botsko

1990

Total Population	2,435,903
Total Acreage	908,945
Total Water Deliveries* (acre-feet)	674,993
Miles of Pipeline	222.0

*Prior to 1990, total water deliveries may include water sales to other non-member agencies.

95



IMAGE: Copper Basin Reservoir, along the Colorado River Aqueduct system

1997

MASTER PLAN DEVELOPMENT

Water Authority begins developing a master plan to serve as roadmap for securing diversified water supply sources and building associated capital improvement projects needed through 2030.

CALIFORNIA 4.4 PLAN

On Aug. 11, in a meeting of seven Colorado River basin states, California's Department of Water Resources director releases first draft of "California 4.4 Plan," and makes Water Authority-Imperial Irrigation District transfer a "linchpin" of the plan. Another "linchpin" is the need for an agreement between Water Authority and MWD to move transfer water into San Diego County.

NEW WATER RESOURCES PLAN

Water Authority releases new Water Resources Plan to explore and identify other water supply options. The plan contains board recommendations to continue pursuing Water Authority-IID water transfer.

50TH ANNIVERSARY OF FIRST WATER DELIVERY TO SAN DIEGO COUNTY

On Dec. 3, Water Authority celebrates 50th anniversary of first imported water deliveries into San Diego County. In a ceremony at San Vicente Reservoir, United States transfers title to pipelines 1 and 2 to Water Authority.



IMAGE: San Vicente Dam and Reservoir

1998

EMERGENCY STORAGE PROJECT APPROVED

Water Authority board approves Emergency Storage Project, an \$827 million addition to the agency's Capital Improvement Program.

LARGEST AGRICULTURAL-TO-URBAN WATER TRANSFER

On April 29, Water Authority and Imperial Irrigation District sign an agreement for largest agricultural-to-urban water transfer in U.S. history.

INFRASTRUCTURE ACCESS CHARGE

Water Authority begins water rate study and implements Infrastructure Access Charge and Special Agricultural Water Rate to facilitate payment for Emergency Storage Project.

MWD EXCHANGE AGREEMENT MOU

On Aug. 12, negotiations produce Water Authority-MWD Exchange Agreement Memorandum of Understanding, which requires state legislature to appropriate \$235 million for concrete lining All-American and Coachella canals. This \$235 million appropriation occurred with the passage of SB 1765 in September.

EXCHANGE AGREEMENT SIGNED

On Nov. 10, Water Authority and MWD sign Exchange Agreement to move Imperial Irrigation District transfer water into San Diego County.



IMAGE: The Water Resources Plan explores water reclamation as an additional local water supply source.



IMAGE: All-American Canal

1999

PROJECT LABOR AGREEMENT

Water Authority implements Project Labor Agreement for construction of Olivenhain Dam. The labor accord is first of its kind in San Diego County.

COLORADO RIVER WATER USE PLAN

Principles for California's Colorado River Water Use Plan are developed as a strategy to implement California's commitment to live within its 4.4-million acre-foot-per-year entitlement. Plan includes full implementation of Water Authority-IID water transfer.

BINATIONAL FEASIBILITY STUDY

Water Authority and Mexico agree to study feasibility of a binational pipeline. International Boundary and Water Commission signs Minute 301, a binational agreement between the two countries outlining terms and conditions by which study will be conducted.

KEY TERMS OF QSA APPROVED

On Oct. 15, Southern California's Colorado River water agencies approve key terms of Quantification Settlement Agreement, an agreement to implement water conservation, transfer and supply programs designed to reduce California's over-dependence upon the Colorado River. Key terms of QSA include a requirement for special surplus criteria for an interim period.



IMAGE: International Boundary and Water Commission



IMAGE: U.S. Secretary of the Interior Bruce Babbitt

2001

REDUCING DEPENDENCE ON COLORADO RIVER

On Jan. 16, Secretary of the Interior Bruce Babbitt signs Record of Decision for Colorado River Interim Surplus Guidelines to provide California a 15-year transition period to reduce its Colorado River water use.

SEAWATER DESALINATION ACTION PLAN

Water Authority board authorizes Seawater Desalination Action Plan.

NEW WATER AUTHORITY HEADQUARTERS

Water Authority moves headquarters from Hillcrest to Kearny Mesa.

2000

WATER AUTHORITY SERVICE AREA

Population of Water Authority's service area exceeds 2.8 million and water deliveries total 589,766 acre-feet of water.

WATER AUTHORITY GETS ENERGY POWERS

State of California amends County Water Authority Act, expanding Water Authority's ability to build, own and operate electrical and natural gas facilities.

GROUNDBREAKING FOR OLIVENHAIN DAM

Water Authority holds groundbreaking ceremony for Olivenhain Dam, Water Authority's first dam and major component of Emergency Storage Project.

URBAN WATER MANAGEMENT PLAN

Water Authority approves "2000 Urban Water Management Plan Update," which outlines a diverse mix of resources to provide future reliability, including development of recycled water, groundwater, conservation, water transfers, imported water and seawater desalination.

2000

Total Population	2,814,481
Total Acreage	918,128
Total Water Deliveries (acre-feet)	589,766
Miles of Pipeline	274.0

IMAGE: Water Authority Headquarters, Kearny Mesa
PHOTOGRAPHER: Tim Botsko

2000

2002

FIRST RCC FOR OLIVENHAIN DAM

Contractor places first layer of roller-compacted concrete for main portion of Olivenhain Dam.

"AA" BOND RATING

Standard & Poors rating agency upgrades Water Authority's bond rating from "AA-" to "AA," saving the agency \$220,000 annually.

WATER CONSERVATION AWARD

U.S. Department of Interior, Bureau of Reclamation, presents Water Authority award of excellence for residential high-efficiency clothes washer voucher program, recognizing it as top water conservation program in Lower Colorado region.

SEAWATER DESALINATION PLANT IN CARLSBAD

Water Authority board directs staff to conduct project development discussions with private developer for seawater desalination plant at Encina Power Station in Carlsbad.

RATE STRUCTURE REVISED

Water Authority revises its rate structure from former uniform or "postage-stamp" rate to unbundled rate structure.

QSA ENVIRONMENTAL REPORTS

In June, Water Authority and other QSA agencies certify QSA Program Environmental Impact Reports. As lead agency, Imperial Irrigation District certifies IID water transfer Environmental Impact Report.

SALTON SEA MITIGATION

In January, environmental regulatory agencies notify Water Authority and IID they will not approve water transfer unless parties reassess Salton Sea mitigation to ensure no "material impact to the projected salinity level of Salton Sea" for 15 years.

ESP MITIGATION PROPERTY ACQUIRED

Water Authority acquires last seven acres of ESP mitigation property from San Miguel Conservation Bank near Sweetwater Reservoir – total mitigation acreage acquired equals approximately 649 acres.

REGIONAL COLORADO RIVER FEASIBILITY STUDY

Water Authority works with International Boundary and Water Commission and Mexican water agencies to complete Regional Colorado River Conveyance Feasibility Study.

WATER RECYCLING FACILITIES

Member agencies' recycling facilities (15) produce 13,693 acre-feet of non-potable recycled water for reuse in the county.

SEAWATER DESALINATION PROJECT

Water Authority partners with cities of Carlsbad and Oceanside to evaluate proposal for seawater desalination project in Carlsbad.



IMAGE: Trial placements of roller-compacted concrete



securing a new reliable WATER SUPPLY

Over the past decade, the Water Authority has worked to diversify its water supplies to reduce its overdependence on the Metropolitan Water District of Southern California, its sole supplier of imported water. In fiscal 2003, the Water Authority continued to pursue one of the boldest ventures in its history: a vast new supply of imported water through a transfer agreement with the Imperial Irrigation District.

The Water Authority and the Imperial Irrigation District agreed in April 1998 to transfer up to 200,000 acre-feet of water per year from IID to the Water Authority for up to 75 years. Under the agreement, the Water Authority will fund agricultural water conservation programs in the Imperial Valley. The conserved water will then be delivered to the Water Authority through the Colorado River Aqueduct and existing pipelines. The project's Environmental Impact Report/Environmental Impact Statement was approved in fiscal 2003 and the two agencies reached agreement Dec. 31, 2002, on amendments to the 1998 accord. The new agreement reflects changes made to the terms and conditions required by the Quantification Settlement Agreement, a broader agreement among California's Colorado River water users.

The Water Authority, Imperial Irrigation District, Metropolitan Water District, Coachella Valley Water District and California Department of Water Resources developed the Quantification Settlement Agreement. The QSA was needed because California has historically drawn more than its 4.4-million-acre-foot basic annual apportionment of Colorado River water. The U.S. Department of the Interior, through its 2001 Interim Surplus Guidelines, agreed to continue California's surplus water deliveries only if the QSA was executed by Dec. 31, 2002. The surplus supplies would provide a transition period for California to gradually reduce its take from the river while it implements long-term water transfer and supply agreements (including the Water Authority-IID transfer). These programs would shift more than 30 million acre-feet of water from agricultural use to urban use over the life of the agreement.

The Dec. 31, 2002 QSA deadline was missed after the four water agencies failed to reach agreement. As a consequence, the Secretary of the Interior reduced California to its 4.4-million-acre-foot Colorado River basic annual apportionment for calendar year 2003. On March 12, 2003, all four agencies' QSA negotiators signed a revised QSA and pledged to recommend approval of the agreement to their boards of directors. Certain conditions for executing the QSA were identified. One of the most significant of these was obtaining \$200 million from Proposition 50 or other state funding for environmental mitigation and enhancement programs. Another important condition was enacting legislation to amend California's fully protected species statutes. The legislation would help resolve environmental issues related to the Salton Sea, which is sustained by agricultural runoff.

In May 2003, the Water Authority board of directors voted to support Senate Bill 317 by State Sen. Sheila Kuehl (D-Santa Monica). This legislation facilitated implementation of the QSA, including authorization of the limited take of fully protected species impacted by the QSA in return for substantial environmental protections and enhancements. The board also supported Senate Bill 117 by State Sen. Michael Machado (D-Linden), which would appropriate \$200 million from Proposition 50 funds to implement QSA-related programs. The Water Authority, Coachella, MWD and IID agreed to provide \$43.3 million for the environmental programs.

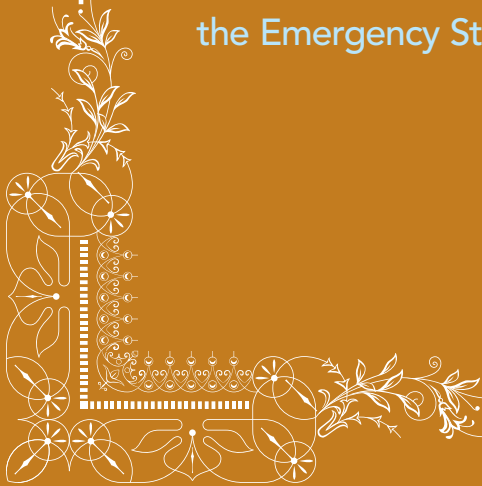
In June 2003, Sen. Machado proposed a modified QSA agreement that reduced the amount of funds contributed to the QSA from Proposition 50 and called for a three-and-a-half-year period to study Salton Sea restoration alternatives. In response, the Water Authority, Coachella and IID drafted a proposal that incorporated the study period and called for the agencies' contribution of an additional \$30 million toward environmental mitigation programs associated with the QSA, for a total by the agencies of \$73.3 million. At the end of the fiscal year, efforts to reach final agreement on a revised QSA were continuing.



building a **STABLE FOUNDATION**

The Water Authority's aqueduct system has expanded from the original pipeline that carried 65,000 acre-feet of water in 1947 to five large-diameter pipelines, which conveyed more than 615,000 acre-feet of water in fiscal 2003.

In 1989, the Water Authority initiated its Capital Improvement Program to improve the agency's distribution system and increase operational flexibility. The \$1.3 billion CIP ensures the Water Authority can supply water throughout the county when imported supplies are disrupted. In fiscal 2003, the Water Authority spent \$130 million on several pipeline projects and the Emergency Storage Project.





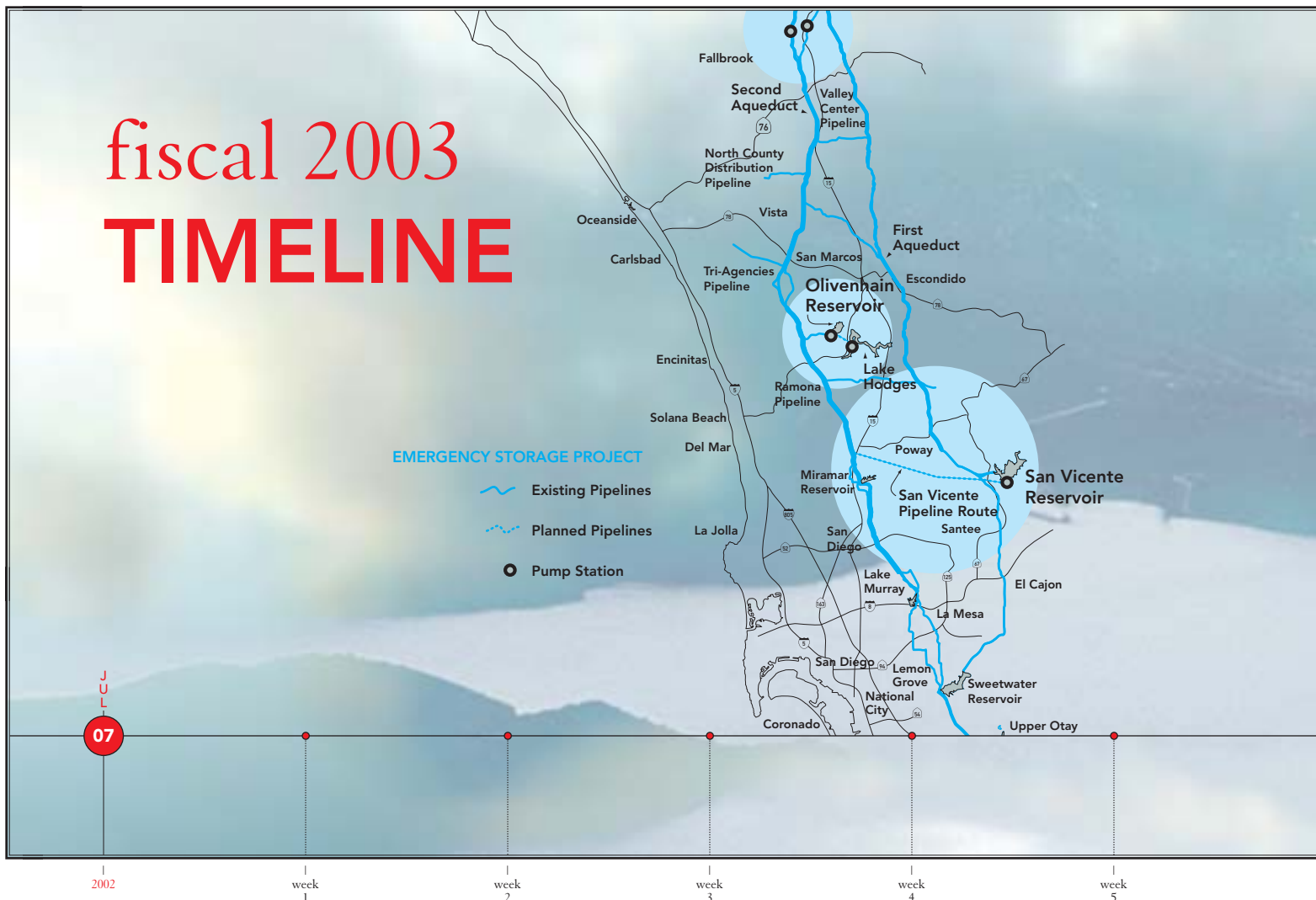
EMERGENCY STORAGE PROJECT PROGRESSES The Emergency Storage Project is a system of reservoirs, pipelines, pump stations and other facilities that will work together to store and move water around the county in case of a prolonged interruption of the region's imported water supply. The project includes the construction of the Olivenhain Dam and Reservoir, raising the San Vicente Dam, and the construction of interconnected pipelines and pumping stations that will allow water to move north or south to all member agencies in an emergency. The Olivenhain Dam and Reservoir will connect to Lake Hodges, together providing 38,000 acre-feet of emergency water storage. Combined with the raising of the San Vicente Dam, storage available for emergency water supplies will increase by 90,100 acre-feet by 2010. This emergency supply will support the region for up to six months during a disruption in imported supplies.

In fiscal 2003, the Water Authority made significant progress on the storage project with the near-completion of the 318-foot-tall Olivenhain Dam, the first major dam to be built in San Diego County in more than 50 years. The Water Authority installed mechanical and electrical systems and conducted critical tests and training related to the dam and the Olivenhain Reservoir. Crews also completed construction of the Olivenhain Pipelines and Interconnect that now link the Water Authority's Second Aqueduct to the reservoir and the adjacent Olivenhain

Water Treatment Plant. Through an agreement with the Olivenhain Municipal Water District, executed in fiscal 2003, the Water Authority will receive all excess capacity available in the treatment plant to help meet the growing need for water treatment in the region. Under the agreement, Olivenhain will expand the plant from 25 million to 34 million gallons a day and the Water Authority will receive water deliveries from the plant. The Water Authority expects to receive between 8,700 and 17,800 acre-feet of treated water over the 10 years of the agreement.

In fiscal 2003, the Water Authority also continued construction of the first component of the Lake Hodges-to-Olivenhain Pipeline. The Lake Hodges Headworks is a tunnel control facility in the Olivenhain Reservoir.

Also this fiscal year, staff completed the planning phase of all the Lake Hodges Projects, including the Lake Hodges-to-Olivenhain Pipeline, Lake Hodges Pump Station/Inlet-Outlet and Olivenhain-Hodges Pumped Storage projects. The Lake Hodges Projects will enable the Water Authority to move water between Lake Hodges and the Olivenhain Reservoir to maximize the reservoirs' storage capacity. The 760-foot drop in elevation from the Olivenhain Reservoir to Lake Hodges will also make it possible to generate hydroelectric power as the water flows downhill and passes through turbines. The Water Authority expects to complete the Lake Hodges Projects in spring 2008.



Design of the San Vicente Pipeline reached the 50-percent completion stage and an environmental report was initiated in fiscal 2003. The 11-mile-long tunnel and pipeline linking the Second Aqueduct with the San Vicente Reservoir is a vital component of the Emergency Storage Project. The pipeline will increase the amount of water available in San Diego County during emergencies by 60 percent, or approximately 52,100 acre-feet of water. The San Vicente Pipeline will convey the main supply of emergency storage water to the city of San Diego and communities in south San Diego County. Once completed, the tunnel and pipeline will enhance and increase overall operational flexibility of the Water Authority's water conveyance system.

MITIGATION PRESERVES THE ENVIRONMENT As part of its efforts to mitigate the environmental impacts of its capital project construction, the Water Authority purchased 820 acres at the San Miguel Reserve in fiscal 2003. Future Water Authority projects could affect sensitive habitats, such as coastal sage scrub and chaparral. Both are found at the San Miguel Reserve. By purchasing this property and setting it aside as mitigation for future projects, the Water Authority will realize a substantial savings over purchasing mitigation land in smaller increments for individual capital projects.

The Water Authority is also pursuing converting 8.7 acres of land adjacent to Lux Canyon Creek in Encinitas into a wet-

land as part of its mitigation for the Emergency Storage Project. The agency began the environmental process for the Lux Canyon project in fiscal 2003.

NEW CAPITAL IMPROVEMENTS ARE COMPLETED In fiscal 2003, the Water Authority completed construction of a flow control facility, which meters water to member agencies; a pressure control facility, which maintains pressure upstream and releases water downstream in a controlled manner; and a pipeline turnout, which provides an exit point in the aqueduct to serve water to a member agency. These completed projects are: the Vallecitos 10 Flow Control Facility, the Del Dios Valve Vault/Temporary Pressure Control Facility and Phase 1 of the Tri-Agencies Pipeline Turnout Replacement.

The Vallecitos 10 Flow Control Facility project, completed in October 2002, is an upgrade of an existing flow control facility with increased capacity for delivering more treated water to Vallecitos Water District.

The Del Dios Valve Vault/Temporary Pressure Control Facility, completed in August 2002, pressurizes approximately 11 miles of Pipeline 5 in order to deliver water to the Olivenhain Reservoir. The temporary facility will operate until the Rancho Peñasquitos Pressure Control/Hydroelectric Facility is built.

Phase 1 of the Tri-Agencies Turnout, completed in June 2003, replaces existing pipes to serve treated water to

AUG2002

RESTRUCTURED WATER TRANSFER AGREEMENT

Water Authority proposes restructured water transfer agreement to respond to Imperial Irrigation District concerns about 1998 agreement and to address Salton Sea concerns by regulatory agencies.



IMAGES: Salton Sea PHOTOGRAPHER: Tim Botsko



AUG
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Vista Irrigation District, Carlsbad Municipal Water District and the city of Oceanside.

In fiscal 2003, the Water Authority began construction of the Moreno-Lakeside Pipeline and Helix 6, 7 and 8 Flow Control Facility. The Water Authority is installing the 4.7-mile-long Moreno-Lakeside Pipeline to connect an existing pipeline to the Helix Water District's R.M. Levy Water Treatment Plant. The welded-steel pipeline will range in diameter from 54 to 60 inches. When the pipeline is completed, up to 80 million gallons of treated water per day will flow to the Helix, Otay and Padre Dam Municipal water districts. The project's flow control facility will meter the flow of water to these member agencies.

The Water Authority awarded construction management contracts in fiscal 2003 for the relocation of the Vallecitos 9 Flow Control Facility and sections of pipelines 3 and 4. It also awarded construction contracts for the Olivenhain 6 and 7 flow control facilities, Rancho Peñasquitos Pressure Control/Hydroelectric Facility and Phase 2 of the Tri-Agencies Turnout Replacement. Construction will begin in fiscal 2004 for these projects.

The Vallecitos 9 Flow Control Facility and two sections of pipelines 3 and 4 are located within Bradley Park in San Marcos. Because Bradley Park is built on the site of a former landfill, new environmental and hazardous material regulations could compromise the Water Authority's ability to repair the

flow control facility and these sections of the pipelines. Therefore, the agency is relocating the flow control facility and pipeline sections outside the landfill.

The Olivenhain 6 and 7 flow control facilities will combine two older flow control facilities into one below-ground structure that has greater capacity.

Pressure control valves within the Rancho Peñasquitos Pressure Control/Hydroelectric Facility will control water pressure and flow in the Water Authority's Pipeline 5, and hydroelectric turbines will produce electricity. In addition to awarding a construction management contract, the Water Authority completed 60-percent design and certified the environmental impact report for the Rancho Peñasquitos project in fiscal 2003.

Phase 2 of the Tri-Agencies Pipeline Turnout project will replace an existing connection to Pipeline 3 and provide a new turnout and connection to Pipeline 4.

AQUEDUCT PROTECTION PROGRAM SAFEGUARDS

PIPELINES Another important component of the Capital Improvement Program is the Aqueduct Protection Program. Through this proactive inspection program, Water Authority personnel detect deterioration in the pipelines so the pipelines can be repaired or replaced. The Water Authority shuts down and drains sections of its pipelines so engineers and inspectors can perform internal inspections. Any deterioration discovered

2003

Total Population	2,843,697
Total Acreage	920,472
Total Water Deliveries (acre-feet)	615,892
Miles of Pipeline	281.0

SEPT 2002



IMAGE: Drip irrigation saves water and reduces urban runoff.

PROPOSITION 50

Water Authority board endorses Proposition 50, a \$3.4 billion state bond initiative that provides funds to improve water quality; purchase, restore and protect coastal wetlands; and provide funds for conservation, reclamation and seawater desalination programs.

Proposition 50 also provides funds to reclaim Salton Sea.

SENATE BILL 482

California Legislature passes Senate Bill 482, necessary for implementation of QSA and Water Authority-IID transfer. Legislation becomes void if QSA is not executed by Dec. 31, 2002.



IMAGE: Recycled water use on golf course PHOTOGRAPHER: Tim Botsko

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is repaired or the affected sections of pipe are replaced before they can fail. In fiscal 2003, the Water Authority conducted six major pipeline shutdowns and inspected more than 54 miles of pipe. Since the program started in 1990, no section of inspected pipe has failed.

RIGHT OF WAY ISSUES ADDRESSED Maintaining access and protecting the security of its nearly 300 miles of pipeline is critical to the Water Authority's operations. In fiscal 2003, the agency adopted new administrative code provisions governing use of Water Authority right of way and sponsored Assembly Bill 650, by Assemblymember George Plescia (R-San Diego), which would improve the Water Authority's ability to recover its costs of removing illegal encroachments on its right of way.

SURFACE STORAGE OPERATING AGREEMENT OFFSETS PEAK DEMANDS The Water Authority delivers the water it imports to its 23 member agencies throughout San Diego County. The member agencies either deliver that water directly to homes and businesses in their areas, or store it in their local reservoirs for later use. The demand for water from member agencies' customers increases each summer as temperatures rise. The member agencies request more treated water from the Water Authority, which in turn requests more treated water from the Metropolitan Water District. MWD's other member

agencies also increase their requests for water when temperatures rise, impacting MWD's ability to meet everyone's needs at once.

In fiscal 2003, the Water Authority developed and negotiated an agreement with MWD that helps reduce demands on MWD during peak days. Under a new reservoir storage and operating agreement, MWD offers discounted water to member agencies during cooler months when more capacity is available. The water is stored in reservoirs for use during warmer months when demands are more likely to put strains on the treated water system. The new program helps offset peak demands on MWD during the summer by requiring participating agencies to store and use discounted water according to an operating plan. Agencies pay for the water only when it is used and MWD assumes the cost of water lost to evaporation. MWD can also call upon the agencies to use a portion of their stored water rather than placing new water orders in peak demand times.

OCT 2002

WATER TREATMENT OPTIONS

Water Authority board approves treated water policies to explore water treatment options as part of ongoing effort to diversify and improve reliability.

OLIVENHAIN DAM

Water Authority finishes placing roller-compacted concrete for Olivenhain Dam, now topped out at 318 feet tall.



IMAGE: Emergency Storage Project: Olivenhain Dam
PHOTOGRAPHER: Tim Botsko

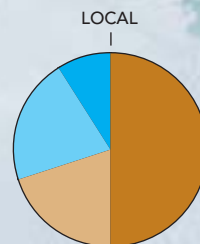
OCT 15

QSA TERM SHEET

On Oct. 15, Water Authority board approves QSA term sheet with revised water transfer agreement conditions to address Salton Sea issues.

**FISCAL 2003 WATER SUPPLY BY SOURCE**

Colorado River	431,125 acre-feet	70%
State Water Project	184,767 acre-feet	30%
Total Imported MWD Water	615,892 acre-feet	100%



Surface Water	31,448 acre-feet	50%
Wells	12,571 acre-feet	20%
Reclamation	13,181 acre-feet	21%
Brackish Groundwater Desalination	5,573 acre-feet	9%
Total Local Water	62,773 acre-feet	100%

OCT 10

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evolving OUR BUSINESS

During its first 40 years, the Water Authority operated primarily as a pipeline agency – building and maintaining a system of pipelines and other facilities needed to move imported water to its member agencies. But the decade that followed would change everything. It was the late-1980s when California began experiencing the most severe drought in its history. The six-year drought proved that the reliability of the Water Authority’s imported water could not be taken for granted – a crisis that was a defining moment for the agency. San Diego County was already reeling from 31-percent cutbacks in its imported supply when Metropolitan Water District of Southern California ordered water supplies cut by 51 percent. Only the “Miracle March” rains saved the region from the larger 51-percent cutback. It was clear the Water Authority could no longer depend solely upon one supplier for imported water.





If the Water Authority was to continue to provide this region with a reliable water supply, it had to diversify its water supply portfolio. Over the next decade, the Water Authority transformed itself from a pipeline agency to a leader in the water industry, with cutting-edge approaches to local water resource and supply development and a leading role in agricultural-to-urban water transfers.

BAY-DELTA AUTHORITY WORKS ON RESTORATION In fiscal 2003, almost 30 percent of the Water Authority's imported water came from the San Francisco Bay-Sacramento/San Joaquin River Delta via the State Water Project. For many years, Water Authority representatives have worked with the California Bay-Delta Authority, formerly known as the CalFed Bay-Delta Program, to resolve complicated Bay-Delta issues. The Bay-Delta Authority comprises more than 20 state and federal agencies seeking to restore the Bay-Delta as a reliable source for high-quality drinking water and a healthy habitat for fish and wildlife.

In fiscal 2003, Water Authority staff members participated in the Bay-Delta Authority's efforts and helped achieve the adoption of the program's long-term governance structure. The Water Authority also worked with other stakeholders to restore the Bay-Delta Authority's federal funding authorization so state and local interests do not have to shoulder all of the program's cost.

LOCAL WATER RESOURCES EXPANDED The Water Authority continued to focus on making the most of local water supplies in fiscal 2003 through the agency's conservation, recycled water and groundwater programs. These innovative efforts help reduce the region's dependence on imported water and diversify its water supply portfolio.

Conservation Program Goes Outdoors Between fiscal years 1990 and 2003, the population in the Water Authority's service area grew nearly 16 percent. Yet water use in fiscal 2003, a year with near-normal rainfall, was virtually the same as in 1990. These water savings can be attributed to water conservation programs managed by the Water Authority and its member agencies, coupled with San Diegans' strong commitment to water conservation. In fiscal 2003, the Water Authority's conservation programs conserved nearly 42,000 acre-feet of water.

The Water Authority focused much of its conservation efforts on outdoor water use in fiscal 2003. Landscape uses 50 percent of municipal and industrial water a year, making it the largest single water conservation opportunity. Planting low-water-use plants and efficient landscape water management can reduce regional demand for water by up to 15 percent. Outdoor conservation programs have helped businesses and residents reduce their water use in many ways. The latest among these is the Commercial Landscape Incentive Program, which provides

NOV2002

SEAWATER DESALINATION TERM SHEET APPROVED

Water Authority board approves term sheet with private developer for negotiating agreements to develop Water Authority's Seawater Desalination Project in Carlsbad.

IMAGE: Seawater desalination will diversify San Diego County's water supply portfolio.



IMAGE: Multi-load commercial coin-operated washing machines

PROPOSITION 13

California Department of Water Resources approves Water Authority's proposal for multi-load commercial coin-operated washing machines, providing \$350,000 in Proposition 13 funds.

HIGH-EFFICIENCY CLOTHES WASHER PROGRAM

High-efficiency clothes washer program generates both water and energy savings and provides financial incentive to encourage customers to choose HEW instead of standard top-loading model.

NOV2002

MORENO-LAKESIDE PIPELINE

Water Authority begins construction of Moreno-Lakeside Pipeline, which will allow 80 million gallons per day of water to flow to Helix, Otay and Padre Dam Municipal water districts.

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incentives for small commercial properties to upgrade irrigation hardware. The state Department of Water Resources awarded the Water Authority \$1.1 million in Proposition 13 funds for the program in fiscal 2003.

Indoors, residents and businesses have made good use of Water Authority programs that provide incentives to install water-saving devices such as ultralow-flush toilets. As part of the Water Authority's broad array of conservation programs, it provides incentives to residents and businesses to install high-efficiency clothes washers, and to hospitals to install X-ray systems that conserve water.

In fiscal 2003, the Water Authority expended \$300,000 in funds from the Bay-Delta Authority – the agency charged with restoring the Bay-Delta in Northern California – for the Water Authority's High-efficiency Clothes Washer Program. Through this program, consumers are given financial incentives to buy washers that use 40 percent less water and 55 percent less energy. In addition, the California Department of Water Resources provided \$350,000 in Proposition 13 (Water Bond 2000) funds to the Water Authority to provide incentives to purchasers of multi-load, commercial, coin-operated washing machines.

The Water Authority incorporated Proposition 13 funds into the Commercial, Industrial and Institutional Voucher Incentive Program in fiscal 2003. This program provides incentives for hospitals to install systems that recirculate the water

used by X-ray film processors. The Water Authority was awarded \$250,000 for these devices. A total of 250 devices will be installed during fiscal 2004 and fiscal 2005. This program is expected to conserve 800 acre-feet of water each year.

Beyond its local programs, the Water Authority worked at the state level to promote the wise use of water. In 2002, the agency sponsored Assembly Bill 1561, by Assemblymember David Kelley (R-Idyllwild), requiring stricter water efficiency standards on all residential clothes washers by 2007. In early 2002, the California Energy Commission adopted regulations that set a state water efficiency standard for coin-operated clothes washers, leading the way for AB 1561 to apply similar standards to residential clothes washers. In fiscal 2003, the governor signed AB 1561 into law. The new high-efficiency clothes washers are expected to save over a billion gallons of water a year once the California standard becomes effective on Jan. 1, 2007.

The Water Authority also sponsored Assembly Bill 514, by Assemblymember Christine Kehoe (D-San Diego), and Senate Bill 312, by Sen. Michael Machado (D-Linden). AB 514 mandates that urban water agencies receiving water from the Central Valley Project install water meters so their customers are billed for their actual water use instead of on a flat rate. Flat rates penalize those who conserve water and reward those who waste it. SB 312 also calls for separately metering landscaped areas, and mandates stronger ordinances for water-efficient landscapes.

DEC 2002

CONSERVATION EFFORTS EXPANDED

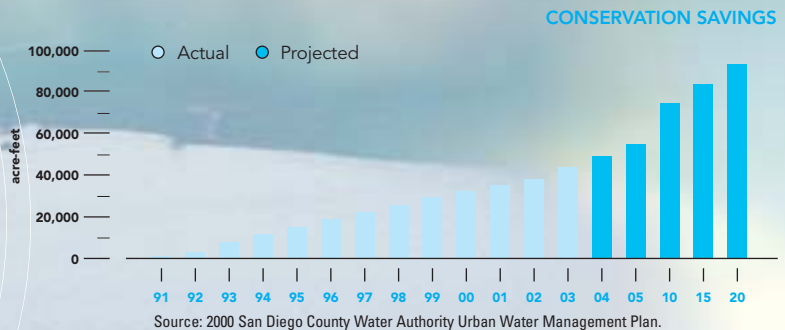
Water Authority board expands conservation efforts, resulting in projected additional water savings of 47,091 acre-feet over next five to 10 years.

IID BOARD REJECTS QSA

On Dec. 9, IID's board rejects QSA.

MASTER PLAN

Water Authority releases Draft Regional Water Facilities Master Plan.



DEC 31

QSA FALTERS

On Dec. 31, Water Authority and IID approve amendments to historic water transfer agreement and other QSA documents, but QSA falters as other agencies do not agree. SB 482 becomes void due to failure to execute QSA.

DEC 12

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Recycled Water Supplements Local Supplies Recycling water involves treating wastewater to a high level so that it can be reused for purposes other than drinking. Every day, recycled water is safely used to irrigate landscaping, golf courses and crops and for manufacturing processes.

In fiscal 2003, the Water Authority continued promoting regional water recycling efforts by working with its member agencies to secure funding for local recycling projects. This work paid off when the Bureau of Reclamation appropriated \$2 million for the North San Diego County Area Water Recycling Project. The project is a cooperative effort between the Carlsbad Municipal, Leucadia County and Olivenhain Municipal water districts and the San Elijo Joint Powers Authority. It consists of planning, designing and constructing permanent facilities to recycle approximately 15,350 acre-feet of water annually in the North San Diego County area. The San Diego Area Water Reclamation Program is a regional effort between the cities of Escondido, Poway and San Diego, the Otay Water District, the Padre Dam Municipal Water District, the Sweetwater Authority and the Tia Juana Valley County Water District. The program received \$6.5 million from the Bureau of Reclamation for increasing recycled water production and use. Total system capacity upon program completion will be approximately 57,116 acre-feet of water per year.

The region received more recycling funds when the State Water Resources Control Board awarded \$400,000 for Phase 2 of the San Diego County Regional Recycled Water Study. The study will explore regional obstacles to greater water recycling, find ways to overcome those obstacles and provide water recycling project funds to qualified Water Authority member agencies.

Groundwater Basins Studied San Diego County does not have a large supply of groundwater, and the groundwater basins it does have contain water that is “brackish,” or salty. Today, new technology makes it possible to cost-effectively convert this brackish water into a supply suitable for drinking.

Storing fresh, surface water in aquifers (an aquifer naturally stores and transmits water to wells and springs underground) may also prove feasible. The Water Authority is studying that idea through the Lower San Luis Rey River Valley Groundwater Storage and Recovery Feasibility Study and Pilot Program. The Water Authority is also exploring the viability of storing substantial amounts of surface water in northern San Diego County’s Mission and Bonsall groundwater basins when supplies are abundant. This stored water would be used later when supplies are scarce. In fiscal 2003, the state Department of Water Resources agreed to reimburse the Water Authority for this \$1.25 million study.

JAN 2003

COLORADO SUPPLIES REDUCED

U.S. Secretary of the Interior Gale Norton reduces California’s 2003 Colorado River water supplies to 4.4 million acre-feet, reducing Southern California’s supplies by about 800,000 acre-feet of water.



IMAGE: Colorado River

GOVERNOR STEPS IN

California Governor Gray Davis orders MWD, Imperial Irrigation District, Coachella Valley Water District and Water Authority to renew QSA negotiations.

IID SUES UNITED STATES

IID sues United States for reinstatement of its 2003 water order. MWD and Coachella Valley Water District intervene with United States.

JAN

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COMMUNITY OUTREACH REMAINS A COMMITMENT

Keeping the community informed and involved is fundamental to the success of the Water Authority's policies, programs and projects.

In fiscal 2003, the Water Authority worked diligently to keep business leaders, public officials, community and civic groups and the general public informed about its efforts to diversify its water supply portfolio and address water demands facing the region. It did so by:

- Making presentations on various topics through its speakers bureau;
- Holding meetings with local, state and federal legislators;
- Providing community outreach on construction projects;
- Holding legislative roundtable events;
- Conducting tours of the Olivenhain Dam, the Colorado River Aqueduct and the State Water Project;
- Participating in special events;
- Keeping the media informed; and
- Producing a variety of internal and external publications.

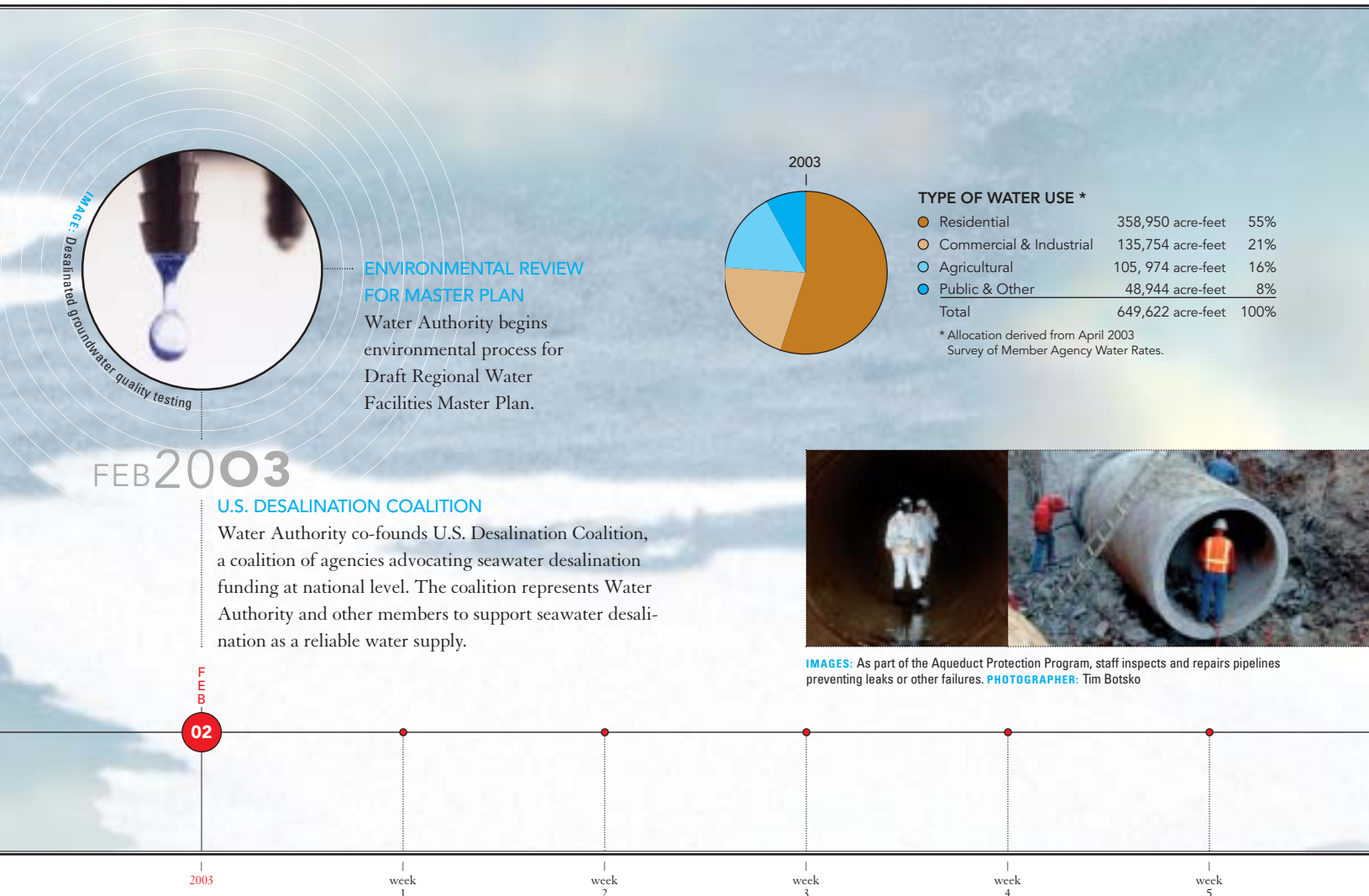
Additionally, educating school children about water plays an important role in shaping public understanding about this vital resource. Each year, the Water Authority's school education

program reaches more than 100,000 kindergarten-through-12th-grade students countywide. In fiscal 2003, these programs included the Dr. Wilderness "Splashtastic" show, the Traveling Library program, the Water-Science-in-a-Box program, the Splash Science Mobile Lab and other curriculum materials.

The Water Authority participates yearly in the San Diego County Fair. This year, staff designed a 30-foot-long exhibit in the flower and garden show area to promote conservation and educate the public about using drip irrigation. The Water Authority and its member agencies staffed the booth and shared low-water-use gardening, conservation and irrigation tips with fairgoers, estimated at about a million people.

For the sixth consecutive year, the Water Authority sponsored the Xeriscape Gardening Awards at the San Diego County Fair. The agency presented monetary awards and plaques to those exhibits that best displayed principals of xeriscape gardening. The Water Authority presented first and second place awards to commercial, non-commercial, youth and succulent garden entries.

The Water Authority also displayed an interactive water exhibit at the Reuben H. Fleet Science Center and presented awards for water-category winners in the county's Science Fair.





moving toward a **NEW HORIZON**

The Water Authority has undergone a period of revolutionary change. And that change will continue. Meeting San Diego County's water needs for generations to come means the Water Authority must continue to take bold steps into the future. In fiscal 2003, the Water Authority made great strides toward the future with the release of its Regional Water Facilities Master Plan, pursuit of a coastal seawater desalination plant, exploration of regional approaches to enhancing the treated water supply, binational study of a Colorado River conveyance facility and completion of a regional energy plan.





PLANNING FOR 2030 AND BEYOND Effective planning is key to any effort to meet future water needs. In fiscal 2003, the Water Authority released the Draft Regional Water Facilities Master Plan. The master plan is the Water Authority's roadmap for the major capital improvements needed to meet its mission of providing a safe and reliable water supply through the year 2030 and beyond. It recommends potential additional facilities and improvements to existing facilities to cost-effectively serve water demands in the future. The Water Authority board is scheduled to consider certifying the master plan's environmental document in late 2003.

Three regional alternatives for water supply and delivery were studied in the master plan. The board of directors selected seawater desalination as the plan's preferred alternative. The seawater desalination alternative will be evaluated against the other alternatives during the ongoing environmental review process.

Seawater Desalination Actively Pursued Seawater desalination is expected to become an important part of San Diego County's water supply portfolio by increasing the amount of water available to the region locally. Seawater desalination has become an attractive option in recent years because it has become more affordable through advances in technology. Also, by placing a seawater desalination facility on the site of an

existing power generation facility, costs can be decreased further through the use of available infrastructure and the availability of on-site electricity.

In fiscal 2003, the Water Authority hired a consultant to begin work on an environmental impact report for the proposed seawater desalination facility at the Encina Power Station in Carlsbad. The plant would produce 56,000 acre-feet of water annually, enough to serve 112,000 families.

The Water Authority also finalized arrangements for a feasibility study, in conjunction with Southern California Edison and the Municipal Water District of Orange County, to evaluate opportunities for seawater desalination at the San Onofre Nuclear Generating Station on the Camp Pendleton Marine Corps Base. The Water Authority is also pursuing a binational desalination feasibility study with Mexico that will evaluate sites for seawater desalination opportunities in southern San Diego County and Tijuana.

In fiscal 2003, the Water Authority worked to encourage seawater desalination statewide through sponsorship of Assembly Bill 314 by Assemblymember Christine Kehoe (D-San Diego), and Senate Bill 318 by Sen. Dede Alpert (D-San Diego). AB 314 provides seawater desalination projects the same opportunity to receive state funds as other water supply projects. SB 318 would ensure that future urban water management plans prepared by water agencies examine seawater desalination opportunities.

MAR 2003

PROPOSITION 13 FUNDS

California Department of Water Resources approves Proposition 13 funding of \$250,000 for Commercial/Industrial/Institutional Voucher Program and \$1.1 million for Commercial Landscape Incentive Program.

SURFACE STORAGE OPERATING AGREEMENT

Water Authority board approves Surface Storage Operating Agreement with MWD to help offset peak demands on MWD during the summer by requiring participating agencies to store and use discount water.

SAN MIGUEL CONSERVATION BANK

Water Authority purchases entire remaining San Miguel Conservation Bank for future construction projects – Water Authority now owns 820 acres of mitigation credits.

MAR 12

REVISED QSA AGREEMENT

On March 12, the four QSA agencies reach revised agreement. Agreement contains seven "conditions precedent" to satisfy before implementation, including use of Proposition 50 funds. Agreement begins to falter over objections to use of Proposition 50 funds; negotiations resume under leadership of governor.

MAR-JUN 2003

QSA NEGOTIATIONS CONTINUE

Lack of agreement on use of Proposition 50 funds for environmental programs sidetracks QSA. Department of the Interior and six other basin states object to agencies having the ability to terminate agreement. Negotiations continue under leadership of Governor Gray Davis' team, led by Richard Katz.

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The Water Authority is a leading force in raising national visibility of seawater desalination as a viable and critical option in meeting the future water demands of the nation. In February 2003, the board approved the Water Authority's membership in the U.S. Desalination Coalition, a nonprofit organization co-founded by the Water Authority to advocate seawater desalination funding at the national level. The coalition represents the Water Authority and its other members to support pursuit of seawater desalination as a reliable water supply.

The Water Authority increased its own advocacy efforts to secure federal funding for the agency's seawater desalination program. The Water Authority was successful in working with Representative Randy "Duke" Cunningham (R-California) and Representative Duncan Hunter (R-California) to obtain the first specific federal appropriation in a House bill for the Water Authority's seawater desalination program. In fiscal 2003, the House of Representatives passed the Veterans Administration/Housing and Urban Development Appropriations Bill, which will secure \$750,000 in 2004.

Water Treatment Options Explored The master plan identifies increasing water treatment capacity as the most critical near-term need to maintain regional reliability. An additional 50 million to 100 million gallons per day of treatment capacity would meet the peak demand for treated water. In October

2002, the board approved treated water policies that: 1) allow the Water Authority to evaluate the need for a new regional water treatment plant; 2) state that treated water service will be funded through a separate treated water charge, regardless of the source; and 3) direct the Water Authority to establish a pricing incentive program. The board also approved the concept of soliciting proposals for 25 million to 100 million gallons per day of Water Authority-owned water treatment capacity should a determination be made that a treatment plant is needed.

In response to the board's approved policy to evaluate the need for a new regional water treatment plant, the Water Authority produced a Treated Water Enhancement Study to quantify treated water needs in various regions of the Water Authority's service area. Based on the results of the study, in June 2003, the board approved the selection of the Twin Oaks Valley Diversion Structure as a potential site for a regional water treatment plant with a capacity up to 100 million gallons of water per day. In addition, the nearby Robert A. Weese Treatment Plant – owned by the city of Oceanside – will be studied for a short-term, 5-million-gallons-per-day expansion.

After further analysis and discussion with its member agencies, the Water Authority launched its "Beat the Peak" program, instead of a pricing incentive plan. The program was created in response to Water Authority findings that most people irrigate primarily on Monday through Thursday schedules. It calls on

KEY WATER FACTS FISCAL 2003: WATER DELIVERIES, SALES AND CONSERVATION (ACRE-FEET)

Total Water Delivered via Water Authority System	615,892
Water Placed in Water Authority Storage Account	953
Total Sales to Member Agencies	614,939
Total Savings from Conservation in Service Area*	41,820

*Includes savings from Water Systems Audit and Repair Program



IMAGES: Lake Hodges tunnel connection point



APR 2003

LAKE HODGES PUMPED STORAGE PROJECT

Water Authority finishes planning phase of Lake Hodges Pumped Storage Project, Water Authority's largest hydroelectric project.

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residential and commercial landscape irrigators to spread outdoor water use throughout the week to help avoid peak demands on the treated water system.

Binational Studies Continue San Diego County and its neighboring cities in Mexico share something besides a border. Both regions depend on the Colorado River as their primary water supply. Over the past several years, the Water Authority worked cooperatively with the International Boundary and Water Commission and water agencies in Mexico to develop the Regional Colorado River Conveyance Feasibility Study. The study, completed in 2002, examined the feasibility of building a new aqueduct from Imperial County to San Diego County to serve both the San Diego and the Tijuana-Tecate-Rosarito regions.

In fiscal 2003, the Water Authority finalized scopes of work with the Mexican water agencies for supplemental studies to the feasibility study. These studies will provide additional information necessary to determine the feasibility of a binational conveyance project. Potential financing options, and institutional and legal issues for a potential project, will be evaluated.

A separate study is planned to evaluate seawater desalination sites that could allow the two countries to participate jointly in the development of a seawater desalination project.

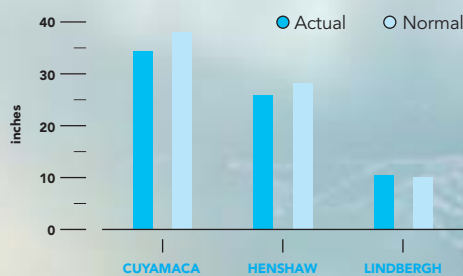
Producing Energy Water is powerful – literally. The energy created by rushing water can be captured. The Water Authority worked in fiscal 2003 on projects that will accomplish the agency's primary goal of supplying water, with the added benefit of producing energy that can be made available to meet the needs of San Diego County.

The Water Authority completed the planning phase of the 40-megawatt Olivenhain-Hodges Pumped Storage Project in fiscal 2003. The project will work as part of the Lake Hodges Projects to pump water from Lake Hodges to the Olivenhain Reservoir when electricity costs are low, then reverse the flow and use turbines to capture the energy of the water flowing downhill back into Lake Hodges during peak demands for electricity. This accomplishes the fundamental goal of enabling water flow between the two reservoirs, while taking advantage of an opportunity to generate hydroelectric energy.

Progress was also made on another energy-producing water facility. The design phase of the 4.5-megawatt Rancho Peñasquitos Hydroelectric Facility was 60 percent complete in fiscal 2003. The facility will use a turbine to harness the energy of water passing through a pipeline in the Rancho Peñasquitos area.

The Water Authority recognizes that energy, like water, is a regional issue. Accordingly, the agency led efforts to develop a San Diego Regional Energy Infrastructure Study. The Water

RAINFALL: OCTOBER 2002 - SEPTEMBER 2003



RECYCLED WATER SYSTEM STUDY

State Water Resources Control Board approves \$1 million preliminary grant commitment for Water Authority's San Diego County Regional Recycled Water System Study.



IMAGE: Proposed seawater desalination site at Encina Power Station in Carlsbad

SEAWATER DESALINATION PROJECT

Water Authority board authorizes preparation of environmental impact report for Water Authority's Seawater Desalination Project in Carlsbad.

MAY 2003

QSA LEGISLATION

Water Authority supports new state legislation required for implementation of QSA and Water Authority-IID water transfer.



IMAGE: Funding made available through the water transfer will pay for conservation measures in Imperial Valley.

MAY
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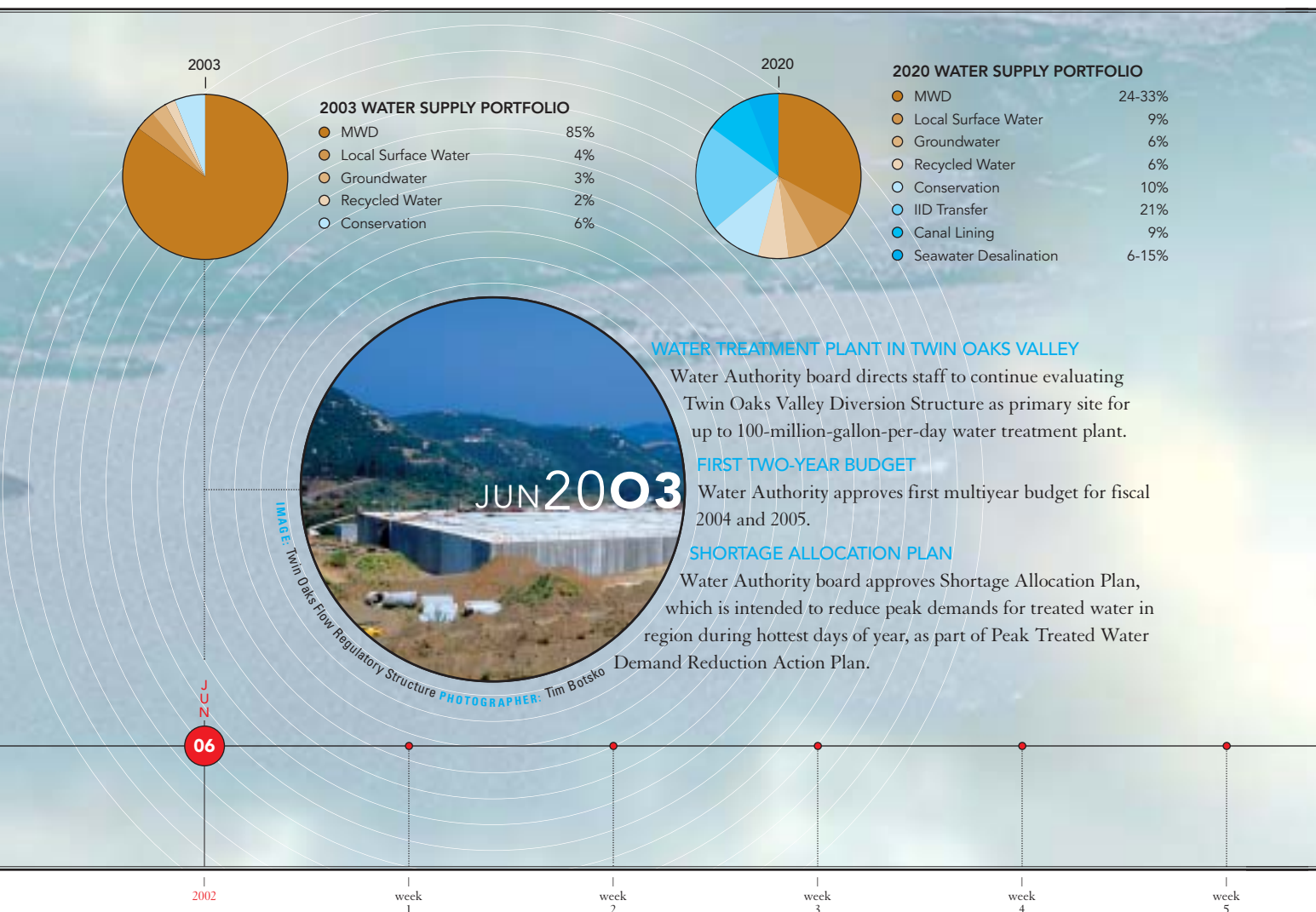
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Authority worked with several local organizations to craft this regional energy strategy aimed at improving energy reliability and reducing price volatility. Other participants in the energy study include the city of San Diego, county of San Diego, Unified Port of San Diego, San Diego Regional Energy Office, Utilities Consumer Action Network, San Diego Association of Governments and San Diego Gas & Electric.

Completed in fiscal 2003, the study produced a strategy that identified specific conservation and energy efficiency goals and recognized the potential need for development of additional power generation capacity within the region. The study also encouraged increased coordination of regional interests at legislative and regulatory hearings. These efforts will be directed by a San Diego Association of Governments-sponsored agency. In the coming years, the Water Authority will continue to work with the new agency to implement the strategy.

Master Plan, the Capital Improvement Program, the Emergency Storage Project, conservation, recycling, seawater desalination, groundwater development and more. In the years to come, the Water Authority will implement its plans for the future, continuing the transformation through which it will support San Diego County's robust economy, population and quality of life for all residents.

CONTINUING THE TRANSFORMATION A lot has changed in San Diego County since Nov. 24, 1947, when the Water Authority first began delivering imported water. Fiscal 2003 was another year of change in a decade that has seen the Water Authority transform itself to improve water supply reliability and establish the agency as a water industry leader. The Water Authority made significant progress this fiscal year in the Water Authority-IID water transfer, the Regional Water Facilities



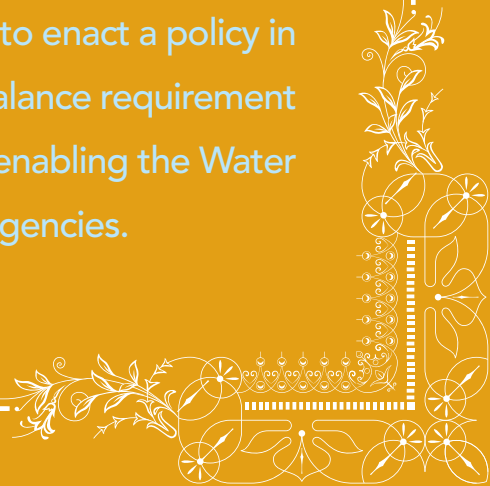


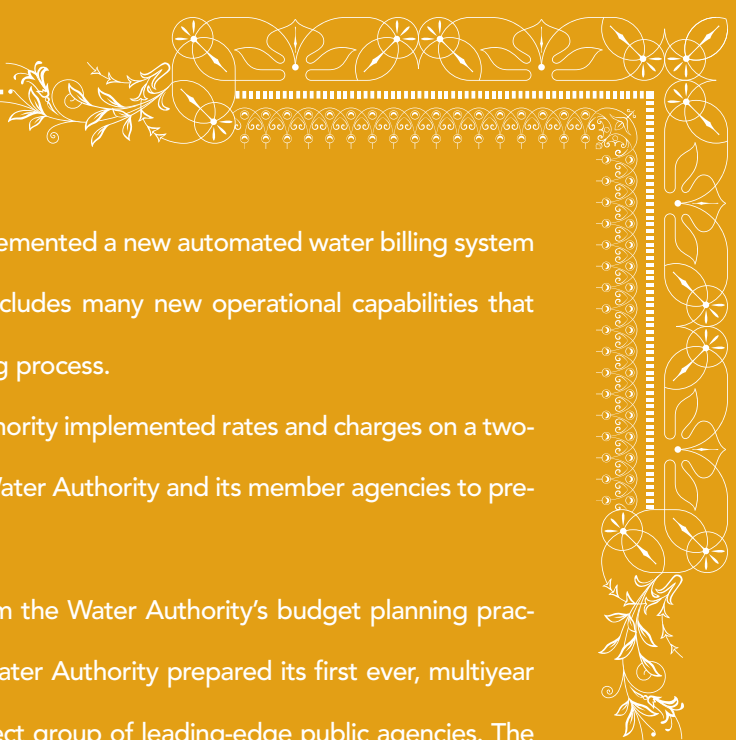


recognizing FINANCIAL LEADERSHIP

Visionary thinking and strong commitment to those it serves has transformed the Water Authority into a leader in the water industry. That same commitment and vision guides the Water Authority's financial strategy.

In fiscal 2003, the Water Authority implemented a new rate structure that revised cost distribution to its member agencies, incorporated changes in the Metropolitan Water District's rate structure and addressed the needs of both urban and agricultural customers. The Water Authority also substantially increased the amount of fixed revenues it collects, greatly improving the predictability of cash flow. This allowed the agency to enact a policy in fiscal 2003 that decreased the operating fund balance requirement from a 60-day minimum to a 45-day maximum, enabling the Water Authority to refund \$14 million to its member agencies.






The Water Authority also developed and implemented a new automated water billing system for the revised rate structure. The system includes many new operational capabilities that increase the speed and efficiency of the billing process.

This year, for the first time, the Water Authority implemented rates and charges on a two-year basis, improving the ability of both the Water Authority and its member agencies to prepare accurate multiyear budget projections.

Fiscal 2003 marks a major departure from the Water Authority's budget planning practices over the past 58 years. This year, the Water Authority prepared its first ever, multiyear budget, a budget process practiced by a select group of leading-edge public agencies. The board approved the two-year budget in June 2003.

This commitment to excellence in financial management was recognized in fiscal 2003 by several credit rating agencies and financial organizations. The Water Authority's "AA" rating by Standard and Poors, and "Aa3" and "AA-" ratings by Moody's and Fitch respectively, were affirmed, accompanied by a "stable outlook" position by Moody's. The agency earned the Distinguished Budget Presentation Award from the Government Finance Officers' Association and the Excellence in Operational Budgeting Award from the California Society of Municipal Finance Officers. It also received a Certificate of Achievement for Excellence in Financial Reporting from the GFOA and the Excellence in Financial Reporting Award from the CSMFO for its comprehensive annual financial report. In addition, the Association of Municipal Treasurers recognized the agency for its Excellence in Investment Policy. The Water Authority was one of 75 special districts nationwide to implement Governmental Standards Board Statement Number 34, two years prior to the deadline and was recognized by the GFOA for this significant accomplishment.



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Statements of Net Assets { Fiscal Years Ended June 30, 2003 and 2002 }

ASSETS	2003	2002
CURRENT ASSETS		
Cash and Cash Equivalents	\$ 63,144,000	\$ 77,398,000
Investments	24,961,000	—
Accounts and Taxes Receivable	48,803,000	67,197,000
Inventories	1,374,000	1,099,000
TOTAL CURRENT ASSETS	138,282,000	145,694,000
RESTRICTED AND DESIGNATED CASH, CASH EQUIVALENTS AND INVESTMENTS		
Cash and Cash Equivalents	19,669,000	186,441,000
Investments	385,431,000	343,541,000
Property, Plant and Equipment, Net	1,195,104,000	1,066,109,000
Other Assets	5,938,000	6,515,000
TOTAL NONCURRENT ASSETS	1,606,142,000	1,602,606,000
TOTAL ASSETS	1,744,424,000	1,748,300,000
LIABILITIES	2003	2002
CURRENT LIABILITIES		
Accounts Payable and Accrued Liabilities	67,120,000	95,432,000
Current Portion of Long-Term Debt	144,610,000	152,937,000
TOTAL CURRENT LIABILITIES	211,730,000	248,369,000
Noncurrent Liabilities	711,615,000	742,428,000
TOTAL LIABILITIES	923,345,000	990,797,000
NET ASSETS		
Invested in Capital Assets, Net of Related Debt	522,041,000	501,159,000
Restricted for Construction Projects	182,221,000	150,733,000
Restricted for Rates Stabilization	64,437,000	61,619,000
Unrestricted	52,380,000	43,992,000
TOTAL NET ASSETS	\$ 821,079,000	\$ 757,503,000

Income Statements { Statements of Revenues, Expenses and Changes in Net Assets for Fiscal Years Ended June 30, 2003 and 2002 }

	2003	2002
Water Sales	\$ 283,044,000	\$ 294,526,000
OPERATING EXPENSES		
Cost of Sales	224,347,000	242,255,000
Depreciation and Amortization	17,645,000	17,773,000
Operations and Maintenance	9,057,000	7,679,000
Planning	3,812,000	2,212,000
General and Administrative	11,933,000	13,119,000
TOTAL OPERATING EXPENSES	266,794,000	283,038,000
OPERATING INCOME	16,250,000	11,488,000
OTHER REVENUES		
Property Taxes and In-Lieu Charges	8,079,000	7,575,000
Interest Expense	(25,603,000)	(17,795,000)
Investment Income	19,955,000	16,880,000
Infrastructure Access Charge	10,091,000	9,968,000
Other Income	994,000	1,104,000
Other Expenses	(318,000)	(312,000)
Operating Reserve Distribution	(14,000,000)	—
TOTAL NONOPERATING REVENUES (EXPENSES)	(802,000)	17,420,000
NET INCOME BEFORE OTHER REVENUES, EXPENSES, GAINS, LOSSES AND TRANSFERS	15,448,000	28,908,000
Capital Contributions	48,128,000	49,986,000
INCREASE (DECREASE) IN NET ASSETS	63,576,000	78,894,000
Net Assets at Beginning of Year	757,503,000	678,609,000
NET ASSETS AT END OF YEAR	\$ 821,079,000	\$ 757,503,000

Portfolio Master Summary { Fiscal Years Ended June 30, 2003 and 2002 }

INVESTMENTS	2003	2002
As of June 30, 2003 and 2002, restricted reserve fund cash balances were as follows:		
Construction	\$ 122,088,000	\$ 269,835,000
Rate Stabilization	64,437,000	61,619,000
Pay-As-You-Go	163,468,000	143,422,000
Debt Service Reserve	55,106,000	55,106,000
Equipment Replacement Fund	7,090,000	5,574,000
TOTAL	\$ 412,189,000	\$ 535,556,000
As of June 30, 2003 and 2002, unrestricted cash balances were as follows:		
Operating	\$ 81,015,000	\$ 71,823,000

Sources and Expenditures of Cash { As of June 30, 2003 and 2002 }

SOURCES OF CASH TO FUND EXPENDITURES*	2003	2002
Water Sales**	\$ 283,044,000	\$ 294,526,000
Taxes	8,079,000	7,575,000
Interest Income***	17,959,000	16,593,000
Standby Charge	10,743,000	10,696,000
Capacity Charge	26,305,000	24,951,000
Infrastructure Access Charge	10,091,000	9,968,000
Other Revenue	994,000	1,104,000
Capital Reimbursement	11,079,000	14,338,000
Rate Stabilization Transfer	1,400,000	(5,276,000)
Net Pay-As-You-Go Deposit	(18,531,000)	(11,597,000)
Sale of Assets	—	3,109,000
Net Construction Draw	126,032,000	93,269,000
TOTAL	\$ 477,195,000	\$ 459,256,000
EXPENDITURES	2003	2002
Water Purchases	\$ 224,347,000	\$ 242,255,000
Operating Budget	25,326,000	23,388,000
Capital Budget	129,049,000	123,929,000
Debt Service****	80,407,000	52,968,000
Operating Reserve Distribution*****	14,000,000	—
TOTAL	\$ 473,129,000	\$ 442,540,000

* Method change in fiscal 2002 shows revenues net of draws from, or deposits into funds.

** Favorable Water Sales Revenues in fiscal 2001 enabled the Water Authority to refund \$7.159 million to its member agencies in fiscal 2002. Fiscal 2002 Water Sales are shown net of this \$7.159 million refund.

*** Interest income shown net of unrealized gain/loss on investments.

**** Debt Service is net of amortization of discounts and premiums and deferred refunding.

***** Refund to member agencies due to change in the Operating Fund Reserve Policy replacing its 60-day minimum ending balance with a 45-day maximum ending balance.

continuing disclosure of FINANCIAL INFORMATION

The purpose of this document is to provide information about the San Diego County Water Authority for the fiscal year ended June 30, 2003. The document provides continuing disclosure for the Water Authority's six fixed-rate debt issues currently outstanding.

The economic and demographic data contained in this document has been collected from sources believed to be accurate. The Water Authority, however, makes no assurances about the accuracy or reliability of this information. The Water Authority does not intend that the enclosed information be relied on as specific offering information in connection with any issuance of bonds.

Investors may receive further documentation about the Water Authority by requesting its most recent official statement from the Municipal Securities Rulemaking Board or a Nationally Recognized Municipal Securities Information Repository.

Requests may also be directed to:

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Daniel S. Hentschke
General Counsel

Overview of the San Diego County Water Authority

GENERAL The Water Authority was organized by nine member agencies in 1944 for the primary purpose of supplying water to San Diego County for distribution to the Water Authority's member agencies. The Water Authority currently has 23 member agencies. A member of the San Diego County Board of Supervisors also serves as a representative to the Water Authority board of directors. As a wholesaling entity, the Water Authority has no retail customers, serving only its member agencies.

The Water Authority has broad powers related to acquiring, developing, storing, transporting, selling and delivering water both

inside and outside its boundaries. The Water Authority is authorized to fix and collect rates or other charges for the delivery of water or the use of facilities for service. The Water Authority may borrow money, incur indebtedness and issue bonds and other evidences of indebtedness.

The Water Authority currently receives a minor amount of revenue from hydroelectric power sales. Legislation enacted in September 2000 expands the Water Authority's power generation authority to include the purchase, sale and transmission of energy.

Member Agency Voting Entitlements { As of Jan. 1, 2003 }

	Total Financial Contribution ¹	Votes ²	Percentage
Carlsbad Municipal Water District	\$ 192,402,579	38.481	3.28%
City of Del Mar	18,272,945	3.655	0.31
City of Escondido	186,494,815	37.299	3.18
Fallbrook Public Utility District	152,063,349	30.413	2.60
Helix Water District	453,631,463	90.726	7.74
City of National City ³	50,702,086	10.140	0.87
City of Oceanside	280,096,903	56.019	4.78
Olivenhain Municipal Water District	128,642,886	25.729	2.20
Otay Water District	244,631,157	48.926	4.18
Padre Dam Municipal Water District	200,092,136	40.018	3.42
Camp Pendleton Marine Corps Base	11,257,350	2.251	0.19
City of Poway	120,137,331	24.027	2.05
Rainbow Municipal Water District	253,745,486	50.749	4.33
Ramona Municipal Water District	92,086,343	18.417	1.57
Rincon del Diablo Municipal Water District	92,245,382	18.449	1.57
City of San Diego	2,446,131,092	489.226	41.75
San Dieguito Water District	67,250,089	13.450	1.15
Santa Fe Irrigation District	85,848,866	17.170	1.47
South Bay Irrigation District ³	158,538,100	31.708	2.71
Vallecitos Water District	111,460,607	22.292	1.90
Valley Center Municipal Water District	331,825,629	66.365	5.66
Vista Irrigation District	161,409,639	32.282	2.76
Yuima Municipal Water District	19,571,489	3.914	0.33
TOTAL	\$5,858,537,722	1,171.706	100.00%

¹ Total financial contribution equals base revenues plus fiscal 2002 revenues. ² Rounded values. ³ Comprised Sweetwater Authority.

The 23 voting member agencies currently served by the Water Authority consist of six cities, 16 special districts and one federal agency. Under the County Water Authority Act, California Statutes 1943, Chapter 545, a member agency's vote is based on its "total financial contribution" to the Water Authority since the Water Authority was organized in 1944. Total financial contribution includes all

amounts paid in taxes, assessments, fees and charges to or on behalf of the Water Authority or the Metropolitan Water District of Southern California excluding charges for water treatment. The act authorizes each board member to cast one vote for each \$5 million, or major fractional part thereof, of the total financial contribution paid by the member agency.

Summary of Debt Outstanding

The table below summarizes the Water Authority's outstanding fixed-rate debt, including final maturities, original par amounts, amounts outstanding and applicable debt service reserve fund requirements. This information is presented as of June 30, 2003.

Fixed-Rate Debt Outstanding { Fiscal Year Ended June 30, 2003 }

ISSUE NAME	Final Maturity	Original Par Amount	Amount Outstanding	Debt Service Reserve Funds
1966 Waterworks General Obligation Bonds	2003	\$ 30,000,000	\$ 1,645,000	\$ — ¹
Water Revenue Certificates of Participation, Series 1991	2021	300,000,000	56,700,000	21,329,000
Water Revenue Refunding Certificates of Participation, Series 1993A	2009	135,650,000	71,940,000	13,565,000 ²
Water Revenue Refunding Certificates of Participation, Series 1997A	2020	162,315,000	160,485,000	15,196,610 ²
Water Revenue Certificates of Participation, Series 1998A	2028	180,000,000	180,000,000	15,392,000
Water Revenue Certificates of Participation, Series 2002A	2032	300,000,000	283,095,000	18,375,500
TOTAL		\$1,107,965,000	\$ 753,865,000	

¹ No debt service reserve fund balance required.

² Balance satisfied with surety bond.

Trustee for all issues is Fonda Hall, U.S. Bank Trust National Association, (213) 615-6023.

Source: San Diego County Water Authority, Comprehensive Annual Financial Report, June 30, 2003.

COMMERCIAL PAPER PROGRAM The Water Authority has a commercial paper program through which it can borrow up to \$250 million for periods of up to 270 days. Currently, the amount that can be borrowed is limited to \$110 million, the amount of the revolving credit and term loan agreement that supports a portion of the program. The revolving credit and term loan agreement, unless otherwise extended, will terminate on Nov. 7, 2005. During the term of the agreement, the Water Authority is obligated to pay a usage fee of 0.16 percent on the commitment. Currently, no advances have been made under the revolving credit and term loan agreement. The Water Authority maintains remarketing arrangements with two dealers at a total cost of 0.05 percent on the outstanding commercial paper. The commercial paper notes are secured and payable solely from net water revenues and are subordinate to the water revenue certificates of participation. As of June 30, 2003, \$110 million of commercial paper was outstanding.

FUTURE DEBT ISSUANCE Future debt issuance is largely governed by the Water Authority's current Capital Improvement Program. The CIP, discussed elsewhere in this annual report, has a projected cost of \$1.3 billion through the fiscal year ended June 30, 2015. The use of debt is prescribed by the Water Authority's Long-Range Financing Plan, which considers overall projected revenues and expenditures, reserve fund balances and debt service coverage factors through 2060.

The current projection of funding sources is approximately 70 percent long-term debt proceeds, 17 percent short-term debt proceeds and 13 percent cash (pay-as-you-go funds). In fiscal 2005, the Water Authority plans to issue approximately \$120 million in new commercial paper. In fiscal 2006, the Water Authority plans to issue approximately \$180 million in new long-term debt. The Water Authority annually assesses its capital financing needs through the budget process.

Summary of Water Rates { Fiscal 2003 }

Metropolitan Water District										San Diego County Water Authority		
From	To	Full Service ¹		IAWP ²		Seasonal Shift Storage ³		Commodity Rate ⁴				
		UTR	TR	UTR	TR	UTR	TR					
7/1/93	6/30/94	\$318	\$385			\$250	\$248	\$208	\$253	\$70		
7/1/94	6/30/95	335	412			222	275	222	275	70		
7/1/95	12/31/96	344	426			231	289	229	286	80		
1/1/97	12/31/97	349	431			236	294	233	290	80		
1/1/98	12/31/98	349	431			236	294	244	301	80		
1/1/99	12/31/99	349	431			236	294	255	312	85		
1/1/00	12/31/00	349	431			236	294	266	323	90		
1/1/01	12/31/01	349	431			236	294	277	334	90		
1/1/02	12/31/02	349	431			236	294	288	345	95		
								Surface Storage Operating Agreement ⁶				
		Full Service Tier 1 ⁵		Full Service Tier 2 ⁵		IAWP						
From	To	UTR	TR	UTR	TR	UTR	TR	UTR	TR	Transportation Rate	Customer Service	Storage
1/1/03	12/31/03	\$326	\$408	\$407	\$489	\$236	\$294	\$256	\$338	\$55	\$13,753,401	\$13,375,295

¹ MWD renamed "Non-Interruptible" to "Full Service" in 1997.

² MWD implemented the Interim Agricultural Water Program (IAWP) effective May 1, 1994.

³ Seasonal Shift Storage rates apply Oct. 1 through April 30. This schedule represents contractual seasonal storage rate. Noncontractual participants pay a higher rate.

⁴ Represents M&I rate, CWA Special Agricultural Water Rate (SAWR) implemented Jan. 1, 1999 (set at \$80/acre-foot).

⁵ Effective Jan. 1, 2003, MWD separated its full service rates into Tier 1 and Tier 2 components.

⁶ Effective Jan. 1, 2003, MWD instituted a new Surface Storage Operating Agreement offering a discount of \$70/acre-foot for "scheduled" water placed into reservoirs by member agencies. An increased discount rate of \$105/acre-foot is offered for "call" water, which is withdrawn from reservoirs per MWD's usage needs.

⁷ Effective Jan. 1, 2003, the Water Authority replaced its postage stamp commodity rate with a new rate structure in which fixed Customer Service and Storage Charges are billed directly to its member agencies, and a new transportation charge is billed for each acre-foot of water which flows through the Water Authority's system. Agricultural customers do not pay the Storage Charge, to reflect their interruptible status in the case of an emergency.

UTR = Untreated Water

TR = Treated Water

Water rates are established by the board of directors and are not subject to regulation by the California Public Utilities Commission or by any other local, state or federal agency. Under the General Resolution, the Water Authority is required to fix rates that are reasonably fair and nondiscriminatory. The Water Authority fixes its water rate at the price charged by the Metropolitan Water District of Southern California, plus an additional component as established

by the board, resulting in an automatic pass-through of MWD's charge to the Water Authority's member agencies. The additional component is used to pay, among other things, debt service, administration and maintenance expenses and Capital Improvement Program costs. A new rate structure, effective Jan. 1, 2003, substantially increases the percentage of water revenues received as fixed charges, increasing Water Authority revenue stability.

Water Source and Use { Fiscal 2003 }

	Source of Water			Type of Water Authority Supply Water Use		Gross Area (Acres)	Estimated Populations ⁴
	Local Supply ¹ Acre-feet	Water Authority Supply (Imported Use) ² Acre-feet	Total Acre-feet	Agricultural Use ³ Acre-feet	M & I Use Acre-feet		
City of Carlsbad	1,171	20,278	21,449	928	19,350	20,640	76,730
City of Del Mar	64	1,285	1,349	0	1,285	1,159	4,389
Escondido	2,951	28,637	31,588	5,282	23,355	21,569	128,000
Fallbrook P.U.D.	522	15,841	16,362	7,000	8,841	27,988	32,000
Helix W.D.	1,622	38,248	39,870	0	38,248	31,350	234,900
National City	2,449	4,908	7,357	0	4,908	5,838	54,420
City of Oceanside	2,898	30,202	33,101	2,478	27,724	28,161	157,869
Olivenhain M.W.D.	281	21,425	21,706	1,294	20,131	30,942	52,000
Otay W.D.	1,013	34,536	35,548	121	34,415	63,155	123,420
Padre Dam M.W.D.	518	20,154	20,672	905	19,249	54,370	134,600
Camp Pendleton	13,043	836	13,879	0	836	134,625	50,000
City of Poway	73	13,615	13,688	331	13,285	25,088	48,044
Rainbow M.W.D.	0	28,881	28,881	19,279	9,601	47,260	18,000
Ramona M.W.D.	1,515	11,001	12,516	3,647	7,354	46,524	36,000
Rincon Del Diablo M.W.D.	0	7,982	7,982	856	7,126	10,596	27,000
City of San Diego ⁵	22,914	192,641	215,555	214	192,427	210,726	1,277,168
San Dieguito W.D.	2,187	5,541	7,729	0	5,541	5,653	36,500
Santa Fe I.D.	4,356	10,071	14,426	137	9,934	10,359	20,758
South Bay I.D.	2,028	15,363	17,391	0	15,363	20,411	120,200
Vallecitos W.D.	0	17,312	17,312	2,478	14,834	28,986	70,000
Valley Center M.W.D.	350	43,675	44,025	33,738	9,937	61,022	21,949
Vista I.D.	1,726	21,192	22,918	819	20,373	21,258	117,880
Yuima M.W.D. ⁶	1,092	3,225	4,318	3,176	49	12,792	1,870
TOTALS⁷	62,773	586,849	649,622	82,683	504,166	920,472	2,843,697

¹ Includes surface, recycled and groundwater supplies; does not reflect conserved water.

² Water use in a given year may differ from Water Authority water sales due to storage.

³ Includes only amounts certified through the Interim Agricultural Water Program.

⁴ Per Water Authority member agency records.

⁵ Excludes city of San Diego local surface water use outside of Water Authority service area.

⁶ Excludes local supplies developed beyond Yuima's master meters.

⁷ Numbers may not total due to rounding.

Gross Water Sales Receipts by Member Agency¹ { Thousands of Dollars }

	1999	2000 ²	2001	2002	2003
Carlsbad Municipal Water District	\$ 8,784	\$ 10,048	\$ 8,775	\$ 10,378	\$ 10,675
City of Del Mar	674	701	663	599	639
City of Escondido	7,833	11,382	11,414	12,433	12,285
Fallbrook Public Utility District	6,456	7,547	6,975	7,761	7,042
Helix Water District	12,266	17,515	17,069	17,674	17,941
City of Oceanside	13,971	14,616	14,000	14,662	14,047
Olivenhain Municipal Water District	8,374	9,851	8,424	10,961	10,252
Otay Water District	12,988	15,029	13,440	18,081	18,041
Padre Dam Municipal Water District	9,893	11,003	9,079	10,841	10,655
Camp Pendleton Marine Corps Base	56	52	34	51	52
City of Poway	5,890	6,792	6,476	6,657	6,511
Rainbow Municipal Water District	11,432	12,719	12,658	13,613	12,175
Ramona Municipal Water District	3,503	4,579	4,557	5,408	5,078
Rincon del Diablo Municipal Water District	4,059	4,511	3,486	4,509	4,110
City of San Diego	77,089	91,982	100,650	106,560	98,547
San Dieguito Water District	1,684	2,183	2,839	2,183	2,575
Santa Fe Irrigation District	2,886	3,510	2,704	3,847	4,641
Sweetwater Authority ³	-257	1,846	5,479	7,775	8,925
Vallecitos Water District	7,224	8,234	7,257	8,837	9,017
Valley Center Municipal Water District	17,169	20,438	20,749	20,833	18,272
Vista Irrigation District	3,555	7,989	7,683	9,322	10,228
Yuima Municipal Water District	249	1,080	1,161	1,354	1,112
TOTAL⁴	\$215,778	\$263,607	\$265,572	\$294,297	\$282,820

¹ Gross receipts represent amounts invoiced to member agencies, but do not include year-end accruals or other adjustments. Numbers may not total due to rounding.

² Favorable water sales for the fiscal years 1999 and 2001 enabled the Water Authority to refund \$6.268 and \$7.159 million respectively to its member agencies. Fiscal years 2000 and 2002 water sales are shown net of this refund.

³ Represents sales to the city of National City and South Bay Irrigation District for which Sweetwater Authority acts as a purchasing agent.

⁴ In addition to the total water sales revenue shown, in some years the Water Authority has also received a minor amount of revenues from adjacent water districts that provide water to customers within the Water Authority's service area under operating agreements. These revenues are not included in this chart.

Historical Operating Results { Thousands of Dollars }

	1999	2000	2001	2002	2003
OPERATING REVENUE					
Water Sales ¹	\$217,796	\$262,081	\$266,467	\$294,526	\$283,044
Standby Charges	10,523	10,829	10,708	10,696	10,743
Capacity Charges	21,259	21,500	25,836	24,951	26,305
Infrastructure Access Charges ²	4,789	9,626	9,788	9,968	10,091
Total Operating Revenue	254,367	304,036	312,799	340,141	330,183
Plus Withdrawals From or Minus Deposits to the Rate Stabilization Fund ³	0	0	n/a	(5,276)	1,400
Non-Operating Revenue ⁴	15,534	13,054	18,097	15,739	14,193
Total Revenue	269,901	317,130	330,896	350,604	345,776
OPERATING EXPENSES⁵					
MWD Water Purchases	179,332	217,000	214,480	242,255	224,347
Other Maintenance and Operations Costs ⁶	17,126	18,704	21,795	23,009	24,803
Other Expenses ⁷	—	—	—	—	14,000
Total Operating Expenses	196,457	235,705	236,275	265,264	263,150
Application of Net Tax Receipts ⁸	4,410	4,956	5,438	5,900	6,411
Net Operating Expenses	192,047	230,749	230,837	259,364	256,739
Net Water Revenue Available for Debt Service	77,854	86,381	100,059	91,240	89,037
REVENUE SUPPORTED DEBT SERVICE⁹					
1991 Certificates	17,430	16,822	16,372	16,706	3,578
1993 Certificates	11,737	11,778	14,439	14,436	14,423
1997 Certificates	8,107	8,772	8,081	8,548	8,286
1998 Certificates	5,481	8,809	8,809	8,809	8,809
2002 Certificates	—	—	—	1,001	30,681
Total Debt Service	42,755	46,181	47,701	49,500	65,777
SUBORDINATE OBLIGATION PAYMENTS¹⁰					
Commercial Paper ¹¹	1,970	2,314	2,734	1,755	1,600
Balance Available After Debt Service and Subordinate Obligation Payments	\$ 33,129	\$ 37,886	\$ 49,624	\$ 39,986	\$ 21,660
Revenue Supported Debt Service Coverage Ratio	1.82 x	1.87 x	2.10 x	1.84 x	1.35 x
Debt Service and Subordinate Obligation Coverage Ratio	1.74 x	1.78 x	1.98 x	1.88 x	1.32 x

¹ Water sales represent accrued sales to member agencies, as well as revenues from treatment of raw water and certain miscellaneous income items.

² Infrastructure Access Charge was implemented January 1999 and is levied on retail water meters within the service area.

³ Favorable revenues in fiscal year 2001 enabled a deposit to the RSF of \$6.762 million. The computation method was changed in fiscal year 2002 to reduce revenues by RSF deposits.

⁴ Non-operating revenues consist of interest earnings on Water Authority funds and from fiscal year 2001 forwards includes other revenues (hydroelectric sales, penalties, etc.).

For fiscal year 2000 and forward, non-operating revenues exclude interest earned on debt proceeds.

⁵ Excludes depreciation and amortization charges.

⁶ Includes operations, maintenance, planning, and general and administrative costs; excludes capital equipment purchases.

⁷ Represents operating reserve distribution.

⁸ Fiscal Year Ended June 30,	1999	2000	2001	2002	2003
Total Tax Receipts	\$6,125	\$6,665	\$7,120	\$7,575	\$8,079
General Obligation Bond Debt Service	1,715	1,709	1,682	1,675	1,668
Net Tax Receipts	\$4,410	\$4,956	\$5,438	\$5,900	\$6,411

⁹ Includes only debt service on Water Authority indebtedness payable from net water revenues and excludes debt service paid from tax revenues. Senior lien debt service does not include trust fees.

¹⁰ The Water Authority has no outstanding subordinate obligation long-term debt at this time.

¹¹ Fiscal 2000 and forward, commercial paper costs include interest and related program fees.

INVESTMENT POLICY The Water Authority's investment policy is defined and approved annually. The purpose of this policy is to identify various policies and procedures that enhance opportunities for a prudent and systematic investment policy and to organize and formalize investment-related activities. The Water Authority's board of directors has delegated investment responsibility to the Water Authority's treasurer, who is primarily responsible for implementing the investment policy. The board of directors and treasurer adhere to the guidance provided by the "prudent investor rule." The treasurer presents an investment report to the board monthly.

The objectives of the investment policy are as follows:

- A. Safety: Each investment transaction shall seek to ensure that capital losses are avoided. Diversification of the portfolio will be used in order to reduce exposure to principal loss.
- B. Liquidity: An adequate percentage of the portfolio will be maintained in liquid short-term securities that can be converted to cash to meet disbursement requirements. Investment in securities with active secondary markets will be utilized. These securities will have a low sensitivity to market risk.
- C. Yield: Yield should become a consideration only after the basic requirements of safety and liquidity have been met.
- D. Public Trust: All participants in the investment process shall act as custodians of the public trust. The overall program shall be designed and managed with a degree of professionalism that is worthy of the public trust.

The investment portfolio will be diversified to avoid incurring unreasonable and avoidable risks regarding specific security types or individual financial institutions. Portfolio diversification is employed as a way to control risk. The Water Authority strives to maintain an efficient portfolio by providing for the lowest level of risk for a given level of return. This acceptable level of return has been quantified as a return that is consistent with the Merrill Lynch 1-3 Year Index.

The Water Authority is governed by the California Government Code, Sections 53600 et seq. Within the context of these limitations, investments are authorized for the Water Authority's operating and reserve funds as indicated in the Portfolio Master Summary table.

It is the Water Authority's goal to maintain a minimum of 50 percent of the Water Authority's portfolio in U.S. Treasury securities; however, based on market conditions a combination of 50 percent agency securities and Treasury bills or notes will satisfy this requirement. At no time will less than 15 percent of the portfolio be in Treasury bills or notes.

The Water Authority does not invest in derivative instruments. Securities such as yield curve notes, interest only, principal only, range notes and inverse floaters are prohibited. Callable bonds, step-up bonds and floating rate securities are permitted investments. No security will be purchased that could result in a zero interest accrual if held to maturity. Investments such as common stocks, futures and the writing of options are prohibited from use in the Water Authority's portfolio. The use of short positions is also prohibited.

Portfolio Master Summary { Fiscal Year Ended 30, 2003 }

INVESTMENT TYPE	Permitted by Board Policy	Maximum Maturity	Maximum Financial Institution Concentration	Actual Percentage	Actual Amount
Local Agency Investment Fund (LAIF)	\$40 Million	N/A	N/A	12.87%	\$ 40,000,000
Bankers Acceptances	20%	180 days	5%	0.00%	—
Treasury Securities	15%	-Minimum 5 years	N/A	19.90%	61,865,885
Federal Agency Securities	70%	5 years	No limit	55.63%	172,966,369
Repurchase Agreements	20%	1 year	No limit	0.00%	—
Reverse Repurchase Agreements	20%	92 days	No limit	0.00%	—
Certificates of Deposit (CD's)	15%	1 year	No limit	0.00%	—
Negotiable CD's	15%	1 year	No limit	0.00%	—
Commercial Paper	25%	270 days	5%	7.13%	22,170,094
Medium Term Notes/Corporates	30%	3 years (AA-) 5 years (AAA)	5%	3.16%	9,837,616
Money Market Funds	15%	N/A	No limit	1.31%	4,074,363
SUBTOTAL FOR PORTFOLIO PERCENTAGES				100.00%	\$310,914,327
Accrued Interest (unavailable for investing)					137,336
Checking/Petty Cash/Available Funds (unavailable for investing)					856,442
Subtotal					\$311,908,105
BOND PROCEEDS EXCLUDED FROM PORTFOLIO PERCENTAGES:					
Money Market Funds and Cash					3,870,199
Local Agency Investment Fund (LAIF)					15,159,019
FSA - Acquisition Fund (GIC)					103,007,329
Subtotal for Bond Proceeds (available for CIP expenditures)					\$122,036,547
DEBT SERVICE RESERVE (DSR) FUNDS EXCLUDED FROM PORTFOLIO PERCENTAGES:					
Societe Generale - Reserve (GIC)					21,458,156
Trinity Plus - Reserve (GIC)					15,391,555
FSA - Reserve (GIC)					18,385,750
Subtotal for Debt Service Reserve Funds (unavailable for CIP expenditures)					\$ 55,235,461
TOTAL CASH AND INVESTMENTS					\$489,180,113

LITIGATION The Water Authority has engaged in litigation against the Metropolitan Water District of Southern California and the city of Los Angeles challenging a section of the Metropolitan Water District Act that established so-called "preferential rights" to MWD water supplies among MWD's 27 member agencies.

The validity of the transportation rate portion of the Water Authority's rate structure is currently being challenged in a lawsuit filed against the Water Authority in San Diego Superior Court by Rincon del Diablo Municipal Water District, Vallecitos Water District, Valley Center Municipal Water District, Vista Irrigation

District and Yuima Municipal Water District. Since the lawsuit pertains to the rate structure rather than the amount of revenues collected, there will not be a material impact on the Water Authority's revenues should the challenge be successful. The Water Authority prevailed at trial and the plaintiff agencies have filed a notice of appeal of the judgment in favor of the Water Authority. The board of directors has authorized full defense of the suit. For further information, contact Water Authority General Counsel Daniel S. Hentschke.

Economy of San Diego County

GENERAL San Diego County extends 70 miles along the Pacific Ocean from the U.S.-Mexico border to Orange County, and inland 75 miles to Imperial County. Riverside and Orange counties form the northern boundaries. The county covers 4,255 square miles, approximately the size of the state of Connecticut.

The Water Authority's service area lies within the foothill and costal areas of the westerly third of San Diego County, encompassing 920,472 acres.

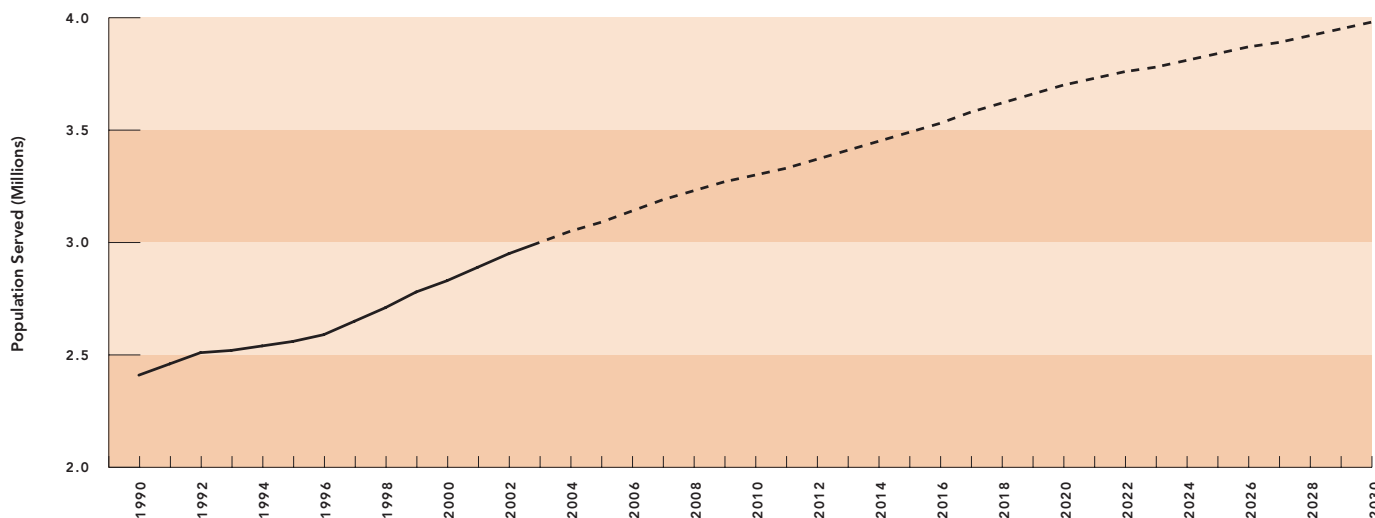
The Water Authority works through its 23 member agencies to provide a safe, reliable water supply to support San Diego County's \$126 billion economy.

As San Diego County has grown, the population served by the Water Authority has increased considerably since the agency's

inception in 1944. Of the total population of San Diego County, 97 percent lives within the Water Authority's service area. The Water Authority's first annual report in 1946 indicates a service area of 431,000 residents. By the year 2003, the population served had increased to over 2.8 million residents. The chart below shows the historic and projected population in the service area from 1990 through 2030.

The Water Authority serves Carlsbad, Fallbrook, Helix, Olivenhain, Otay, Padre Dam, Rainbow, Ramona, Rinco del Diablo, San Dieguito, Santa Fe, South Bay, Vallecitos, Valley Center, Vista and Yuima water districts; Camp Pendleton Marine Corps Base; and the cities of Del Mar, Escondido, National City, Oceanside, Poway and San Diego. Coronado and Imperial Beach are not within the Water Authority's service area.

Historic and Projected Population in Water Authority Service Area 1990 – 2030



San Diego County Annual Building Permit Activity Single and Multifamily Dwellings

	1999	2000	2001	2002*	2003
Single Family	10,100	8,100	9,300	6,791	9,100
Multifamily	6,200	7,600	6,300	4,734	7,200
TOTAL	16,300	15,700	15,600	11,525	16,300

Source: San Diego Regional Chamber of Commerce Economic Research Bureau.

*Numbers indicate time period of April 2001 through March 2002.

Economy of San Diego County

County, State and National Labor Force, Employment, Unemployment and Unemployment Rate Trends

YEAR	Area	Civilian Labor Force	Employment	Unemployment	Percent Unemployment
1999	San Diego County	1,361,600	1,319,600	42,000	3.1
	California	16,653,400	15,868,200	785,200	4.7
	United States	139,386,000	128,986,000	5,836,000	4.2
2000	San Diego County	1,404,100	1,362,100	42,000	3.0
	California	17,256,000	16,456,000	800,000	4.6
	United States	141,319,000	128,986,000	5,227,000	3.7
2001	San Diego County	1,435,900	1,388,300	47,600	3.3
	California	17,408,700	16,507,600	901,100	5.2
	United States	141,774,000	135,379,000	6,395,000	4.5
2002	San Diego County	1,475,400	1,413,700	61,600	4.2
	California	17,451,000	16,426,000	1,145,000	6.5
	United States	142,605,000	134,149,000	8,456,000	5.9
2003	San Diego County	1,494,700	1,426,800	67,800	4.5
	California	17,669,500	16,463,300	1,206,200	6.8
	United States	146,545,000	137,573,000	8,973,000	6.1

Sources: California Employment Development Department and U.S. Department of Labor, Bureau of Labor Statistics

San Diego County Employment by Industry*

INDUSTRY	1999	2000	2001	2002	2003
Farm Production & Services	11,200	11,900	13,800	11,400	11,000
Mining	300	400	400	300	300
Construction	67,000	70,400	74,400	76,900	80,900
Manufacturing	128,100	129,700	130,100	128,100	108,300
Transportation & Public Utilities	51,300	50,900	51,700	50,600	64,200
Wholesale Trade	50,300	52,300	53,300	50,500	41,600
Retail Trade	206,100	215,500	219,200	227,700	139,400
Finance, Insurance & Real Estate	68,700	69,800	71,200	72,500	74,600
Leisure and Hospitality (formerly Hotels & Other Lodging Places)*	26,100	26,800	28,400	27,800	137,200
Professional and Business Services (formerly Business Services)*	95,200	102,700	106,700	98,600	202,200
Amusement, Including Movies	24,800	24,400	28,000	26,100	31,300
Health Care and Social Assistance (formerly Health Services)*	73,400	75,300	77,100	80,100	102,500
Engineering & Management Services	51,700	56,000	60,900	66,000	n/a**
Other Services	110,500	115,400	119,900	125,100	49,300
Federal Government	42,500	42,600	41,000	39,800	40,200
State & Local Government	156,800	164,200	163,400	169,400	171,900
Total	1,164,000	1,208,300	1,239,500	1,250,900	1,254,900

* In February 2003, the Employment Development Department began releasing official estimates of employment by industry using the new North American Industry Classification System (NAICS), rather than the Standard Industry Classification System (SIC). As a result, some industry titles and numbers may have undergone a significant change.

** Engineering and Management Services is now classified under Professional and Business Services.

Note: Total Employment by Industry is not directly comparable to the labor force data in the previous table due to different survey techniques.

Source: State of California Employment Development Department.

The Metropolitan Water District of Southern California

General Mineral and Physical Analysis of MWD's Water Supplies { *Fiscal 2003 Averages* }

	Source Waters										Filtration Plant Effluents				
	Symbols	Units	Lake Havasu near Whitsett Intake	San Jacinto Tunnel West Portal	Lake Mathews	Castaic Lake at Lensen Inflow	Silverwood Lake at Devil Canyon	Lake Perris	Diamond Valley Lake	Lake Skinner at Outlet Conduit	Weymouth Plant	Diemer Plant	Jensen Plant	Skinner Plant	Mills Plant
Silica	SiO ₂	mg/L	8.8	8.8	9.3	15.3	13.5	4.2	7.8	9.1	11.8	11.1	14.5	9.3	13.4
Calcium	Ca	mg/L	70	70	69	25	21	26	63	56	45	46	25	55	21
Magnesium	Mg	mg/L	28	27.5	28	15	13.5	15.5	25.5	24	20.5	21	15	23.5	13.5
Sodium	Na	mg/L	87	87	88	59	58	66	79	77	76	77	63	78	62
Potassium	K	mg/L	4.2	4.5	4.5	3.1	3.1	4.0	4.4	4.0	3.6	3.7	3.1	3.9	3.1
Carbonate	CO ₃	mg/L	1	0	0	0	0	0	0	0	0	0	0	0	0
Bicarbonate	HCO ₃	mg/L	161	163	161	107	100	124	138	142	124	122	108	141	87
Sulfate	SO ₄	mg/L	236	234	233	49	37	48	210	177	134	142	51	174	39
Chloride	Cl	mg/L	78	77	79	80	81	89	77	78	88	88	86	84	93
Nitrate	NO ₃	mg/L	0.9	1.1	0.8	2.9	3.2	0.4	0.8	0.9	2.2	2.0	2.9	1.0	3.0
Fluoride	F	mg/L	0.29	0.28	0.28	0.12	0.10	0.12	0.26	0.23	0.18	0.19	0.11	0.21	0.09
Boron	B	mg/L	0.11	0.11	0.11	0.20	0.16	0.20	0.13	0.13	0.13	0.14	0.20	0.13	0.17
Total Dissolved Solids	TDS	mg/L	594	592	593	303	281	316	537	497	444	452	315	499	293
Total Hardness as CaCO ₃		mg/L	290	288	288	124	108	129	262	239	197	201	124	234	108
Total Alkalinity as CaCO ₃		mg/L	134	134	133	88	82	103	114	116	102	100	88	115	72
Free Carbon Dioxide	CO ₂	mg/L	1.2	1.3	1.4	2.4	1.3	1.7	2.2	1.2	1.6	1.9	0.9	2.0	0.7
H ⁺ Concentration	pH		8.36	8.33	8.30	7.90	8.13	8.17	8.09	8.29	8.10	8.03	8.29	8.05	8.34
Specific Conductance		µmho/cm	955	959	957	550	520	597	884	830	764	781	575	837	545
Color		CU	4	4	4	7	11	8	4	6	2	2	2	2	2
Filter Effluent Turbidity		NTU	—	—	—	—	—	—	—	—	0.06	0.05	0.05	0.06	0.06
Turbidity		NTU	1.3	1.9	1.8	0.78	1.8	0.81	0.51	0.82	0.06	0.05	0.05	0.06	0.06
Temperature		°C	20	19	18	16	17	18	16	18	19	20	16	21	18
Asbestos		MFL	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Bromide*	Br	mg/L	0.07	0.07	0.07	0.24	0.25	0.27	0.11	0.12	0.15	0.15	0.24	0.12	0.24
Cyanide	CN	mg/L	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Foaming Agents (MBAS)		mg/L	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Total Organic Carbon	TOC	mg/L	3.00	4.19	3.34	2.81	3.70	4.56	3.13	2.96	2.31	2.24	2.34	2.42	2.18
Total Trihalomethanes	TTHMs	µg/L	—	—	—	—	—	—	—	—	53	51	57	49	62
Threshold Odor Number	TON		12	17	17	4	12	8	6	12	2	2	2	1.4	2
Langelier Index@Source Temp.			—	—	—	—	—	—	—	—	0.20	0.14	0.10	0.33	0.04
Percent State Project Water	%SPW	%	0	0	0	100	100	100	—	30	51	46	100	30	100

* Treatment plant bromides are plant influent values.

** Treatment plant results are flow weighted averages.

nd = none detected

MEMBER AGENCIES AND REPRESENTATIVES ON THE WATER AUTHORITY BOARD OF DIRECTORS

AS OF JUNE 30, 2003

1 CARLSBAD MUNICIPAL WATER DISTRICT
5950 El Camino Real
Carlsbad, CA 92008
T: 760-438-2722 F: 760-431-1601
www.ci.carlsbad.ca.us
DIRECTOR: Claude A. "Bud" Lewis

2 CITY OF DEL MAR
WATER UTILITIES DEPARTMENT
1050 Camino del Mar
Del Mar, CA 92014
T: 858-755-9313 F: 858-755-2794
www.delmar.ca.us
DIRECTOR: Charles Newton

3 CITY OF ESCONDIDO
WATER UTILITIES DEPARTMENT
201 N Broadway
Escondido, CA 92025
T: 760-839-4657 F: 760-432-9512
www.ci.escondido.ca.us
DIRECTOR: Marilyn J. Dailey

4 FALLBROOK PUBLIC UTILITY DISTRICT
990 E Mission Road
Fallbrook, CA 92028-2290
T: 760-728-1125 F: 760-728-6029
www.fpubd.com
DIRECTOR: Keith Lewinger

5 HELIX WATER DISTRICT
7811 University Avenue
La Mesa, CA 91941-4927
T: 619-466-0585 F: 619-466-1823
www.hwd.com
DIRECTORS: Harold W. Ball,
H. Warren Buckner

6 CITY OF NATIONAL CITY
(MEMBER OF SWEETWATER AUTHORITY)
1243 National City Boulevard
National City, CA 91950
T: 619-336-4200 F: 619-336-4376
www.sweetwater.org
DIRECTOR: Robert Valderrama

7 CITY OF OCEANSIDE
300 N Coast Highway
Oceanside, CA 92054-2886
T: 760-435-5800 F: 760-435-5814
www.ci.oceanside.ca.us
DIRECTOR: James F. Turner

8 OLIVENHAIN MUNICIPAL WATER DISTRICT
1966 Olivenhain Road
Encinitas, CA 92024
T: 760-753-6466 F: 760-753-1578
www.olivenhain.com
DIRECTOR: Susan J. Varty

9 OTAY WATER DISTRICT
2554 Sweetwater Springs Blvd
Spring Valley, CA 91978-7299
T: 619-670-2222 F: 619-660-0829
www.otaywater.gov
DIRECTORS: Mark Watton,
Paul Lewis

10 PADRE DAM MUNICIPAL WATER DISTRICT
10887 Woodside Avenue
Santee, CA 92071
T: 619-448-3111 F: 619-449-9469
www.padredam.org
DIRECTOR: Jesse Dixon

11 CAMP PENDLETON MARINE CORPS BASE
Water Resources, AC/S Facilities
Marine Base
Camp Pendleton, CA 92055-5013
T: 760-725-1061 F: 760-725-1058
www.cpp.usmc.mil
DIRECTOR: Edmund L. Rogers

12 CITY OF POWAY
CUSTOMER SERVICE DEPARTMENT
13325 Civic Center Drive
Poway, CA 92064
T: 858-748-6600 F: 858-748-1455
www.ci.poway.ca.us
DIRECTOR: James L. Bowersox

13 RAINBOW MUNICIPAL WATER DISTRICT
3707 Old Highway 395
Fallbrook, CA 92088-2500
T: 760-728-1178 F: 760-728-0902
www.rainbowmwd.com
DIRECTOR: Paul W. Christensen

14 RAMONA MUNICIPAL WATER DISTRICT
105 Earlham Street
Romona, CA 92065-1599
T: 760-789-1330 F: 760-788-2202
www.rmwd.org
DIRECTOR: Doug Wilsman

15 RINCON DEL DIABLO
MUNICIPAL WATER DISTRICT
1920 N Iris Lane
Escondido, CA 92026
T: 760-745-5522 F: 760-745-4235
www.rinconwater.org
DIRECTOR: Gregory M. Quist

16 CITY OF SAN DIEGO
WATER UTILITIES DEPARTMENT
600 B Street Ste. 1300 (MS913)
San Diego, CA 92101-4588
T: 619-533-7555 F: 619-533-7593
www.ci.san-diego.ca.us/water/
DIRECTORS: Benjamin A. Haddad,
Nora Jaeschke, John Johnson,
George I. Loveland, Joseph
Parker, Bernie Rhinerson,
Javier Saunders, Fern Steiner,
Fred Thompson, Yen C. Tu

17 SAN DIEGUITO WATER DISTRICT
505 S Vulcan Avenue
Encinitas, CA 92024-3633
T: 760-633-2763 F: 760-633-2818
www.ci.encinitas.ca.us
DIRECTOR: James H. Bond

18 SANTA FE IRRIGATION DISTRICT
5920 Linea del Cielo
P.O. Box 409
Rancho Santa Fe, CA 92067
T: 858-756-2424 F: 858-756-0450
DIRECTOR: Robert M. "Bud" Irvin

19 SOUTH BAY IRRIGATION DISTRICT
(MEMBER OF SWEETWATER AUTHORITY)
505 Garrett Avenue
Chula Vista, CA 91910
T: 619-427-0868 F: 619-425-7469
www.sweetwater.org
DIRECTOR: Bud Pocklington

20 VALLECITOS WATER DISTRICT
201 Vallecitos de Oro
San Marcos, CA 92069-1453
T: 760-744-0460 F: 760-744-2738
www.vwd.org
DIRECTOR: Dale Mason

21 VALLEY CENTER
MUNICIPAL WATER DISTRICT
29300 Valley Center Road
Valley Center, CA 92082
T: 760-749-1600 F: 760-749-6478
www.vcmwd.org
DIRECTOR: Gary A. Broomell

22 VISTA IRRIGATION DISTRICT
1391 Engineer Street
Vista, CA 92083
T: 760-597-3128 F: 760-597-3036
www.vid-h2o.org
DIRECTOR: Howard Williams

23 YUIMA MUNICIPAL WATER DISTRICT
34928 Valley Center Road
Pauma Valley, CA 92061-0177
T: 760-742-3704 F: 760-742-2069
DIRECTOR: W.D. "Bill" Knutson

COUNTY OF SAN DIEGO
1600 Pacific Highway, Rm. 335
San Diego, CA 92101
T: 619-531-5522 F: 619-696-7253
www.co.san-diego.ca.us
DIANNE JACOB, MEMBER OF THE
SAN DIEGO COUNTY BOARD OF
SUPERVISORS, ALSO SERVES AS A
REPRESENTATIVE TO THE WATER
AUTHORITY BOARD OF DIRECTORS.

