OPERATION H₂O Annual Report 2009
On the cover: Workers weld pipe joints inside the San Vicente Pipeline
A CLEAR AND DECISIVE RESPONSE TO HISTORIC CHALLENGES

As the 2009 fiscal year began, the San Diego County Water Authority faced the most significant challenges to the reliability of the region’s water supply in nearly two decades. Serious supply problems throughout much of California were already growing from ongoing drought conditions and low water storage levels. Now, a 30 percent reduction in water deliveries from Northern California – brought about by regulatory restrictions designed to protect threatened and endangered fish species in the Bay-Delta, the hub of the state water system – created the potential for conditions to worsen. The possibility for mandatory water cutbacks for homes and businesses grew more likely with each passing month.
The Water Authority’s clear vision and focused response had turned a daunting threat to the region’s 3 million residents and $171 billion economy into an orderly and manageable transition.

The Water Authority met these challenges head-on with singular focus and commitment. To enhance and manage available supplies, the Water Authority followed its visionary Drought Management Plan. It reached a short-term water transfer agreement to bring additional water to the region, and it worked with its 24 member retail agencies to facilitate the implementation of effective local drought response ordinances.

It also reached out to the public with the largest communications campaign in the agency’s history, raising awareness of the growing water supply problems and the need for significantly increased conservation.
Concurrently, the Water Authority reached an important milestone in its long-term strategy to enhance the reliability of the region’s water supply through diversifying its supply sources.

Crews finished major construction on the All-American Canal Lining Project early, allowing nearly 14,400 acre-feet of water to become available to San Diego County ahead of schedule. (An acre-foot is enough water to supply two average households of four for a year.)

By April 2009, limited water supplies forced the Metropolitan Water District of Southern California, the Water Authority’s largest water supplier, to order a 13 percent supply cutback in the Water Authority’s supplies for fiscal year 2010.

The Water Authority’s Drought Management Plan and ongoing investments in diversification, however, paid off. Additional water supplies secured through these strategies allowed the Water Authority to reduce the water supply cut to its local member agencies to a more manageable level — 8 percent for fiscal year 2010. The Water Authority Board also declared a Level 2 “Drought Alert” condition, enabling member agencies to activate water use restrictions and other tools needed to reach that savings target.

Looking ahead, significant steps to improve the region’s water supply reliability are under way. Late in the fiscal year the Water Authority issued the notice to proceed with construction of the San Vicente Dam Raise project. It will be the largest dam raise in the United States and will more than double the capacity of the San Vicente Reservoir.

Also, a sea change is under way in how people use and view water. A Water Authority public opinion poll indicated that more than 90 percent of residents believe using water wisely is a civic duty on par with recycling. Conservation efforts were elevated into its own program area to ensure it had the resources and structure to tap into this growing ethic and position the agency to achieve aggressive long-term conservation goals.

As the fiscal year ended, the specter of a water shortage in San Diego County became real. But the Water Authority’s clear vision and focused response had turned a daunting threat to the region’s 3 million residents and $171 billion economy into an orderly and manageable transition.

Going forward, the Water Authority will remain dedicated to resolving challenges and implementing solutions required to provide San Diego County with a safe and reliable water supply for decades to come.
THE DROUGHT MANAGEMENT PLAN CALLS FOR ORDERLY, PROGRESSIVE, AND FLEXIBLE ACTIONS TO MANAGE WATER SUPPLIES IN RESPONSE TO SHORTAGE.
Supply Challenges: A Year In Review

Oct. 30, 2008
State Department of Water Resources announces second lowest State Water Project initial allocation in its history, predicts water deliveries will be limited in 2009.

Dec. 15
U.S. Fish and Wildlife Service issues biological opinion on Delta smelt, recommending limits on State Water Project pumping and other restrictions remain in place.

Feb. 27, 2009
Governor declares a State of Emergency and orders assistance for communities and people affected by drought.

Mar. 4
California Fish and Game Commission votes to recommend listing longfin smelt as threatened species and upgrade Delta smelt protection status from “threatened” to “endangered.”

The State Water Project's Harvey O. Banks pumping plant pushes water into the 444-mile California Aqueduct for delivery to Southern California.
With supply challenges mounting throughout fiscal year 2009, the Water Authority took escalating steps to promote conservation and manage water supplies. Ultimately, the Water Authority Board made several difficult, but prudent decisions to prepare for the transition into mandatory urban water cutbacks in fiscal year 2010.

**MANAGEMENT**

**Apr. 14** MWD orders reduced deliveries to its member agencies beginning July 1, 2009 and hikes rates by 21 percent. The supply cut to the Water Authority equates to 13 percent.

**Apr. 23** Water Authority Board of Directors approves 8 percent cut in deliveries to its member agencies. Board also votes to move to **Level 2 Drought Alert** as called for under its Drought Management Plan.

**Apr. 30** Department of Water Resources raises final State Water Project allocation to 40 percent.

**May 28** Water Authority Board authorizes acquiring up to 20,000 acre-feet of water under a one-year transfer agreement with the Placer County Water Agency in Northern California to bolster supplies in fiscal year 2010.

**June 25** The Water Authority Board of Directors approves a $1.65 billion, two-year budget to fund water purchases, debt service, capital improvements and Water Authority operations from July 1, 2009 through June 30, 2011. The Board also adopts new rates and charges for water purchased by the Water Authority’s 24 member retail agencies, increasing rates by $139 per acre foot or 18.1 percent. (An acre-foot is 325,900 gallons, enough to meet the needs of two average households of four people for a year.)

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"The Water Authority’s effective leadership in supply diversification and drought management helped protect our region’s residents and businesses from severe impacts."

— Doug Hutcheson, CEO and President, Leap Wireless International, Inc.

Hutcheson and Julie Meier Wright, CEO and President of the San Diego Regional Economic Development Corporation, discuss the importance of water reliability on the regional economy and efforts by the Water Authority to ensure a smooth transition to mandatory watering restrictions.

To watch the video, go to www.sdcwa.org/annualreport2009

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In 2006—a wet year in California that produced abundant State Water Project supplies—the Water Authority, along with its member agencies, had the foresight to develop its Drought Management Plan. The plan is a policy toolbox of orderly, progressive, and flexible actions to manage water supplies in response to shortage. Implementing the plan turned out to be crucial to water supply reliability during fiscal year 2009.

Maintaining water supplies became increasingly challenging with regulatory restrictions on water deliveries from Northern California (imposed to protect threatened and endangered fish species in the Bay-Delta), a third year of drought, and falling water storage levels around the state.

Throughout the year, the Water Authority aggressively and effectively promoted the need for increased voluntary conservation in light of the growing supply challenges.

The Water Authority also continued to augment its available supplies with short-term “dry-year” water transfers, reaching a one-year water purchase agreement with the Placer County Water Agency in Northern California that will make 20,000 acre-feet of additional water available to the San Diego region.

The Water Authority helped its member agencies prepare for the increasing likelihood of water supply shortages by collaborating with them as they updated their local drought response ordinances. By February 2009, all 24 member agencies had adopted updated ordinances that were consistent with the Water Authority’s model drought ordinance, which was developed in 2008 to prepare the region for a potential shortage. This was a crucial step in minimizing public confusion about what water use restrictions or other conservation requirements would be imposed if supply cutbacks were ordered.

“This is a crisis, just as severe as an earthquake or raging wildfire, and we must treat it with the same urgency by upgrading California’s water infrastructure to ensure a clean and reliable water supply.”

—Gov. Arnold Schwarzenegger declaring a drought emergency, Sacramento Bee, February 28, 2009
The ability to pump water from the Bay-Delta to Southern California is limited nine months of every year. Currently, the only time there are no restrictions on the pumps is July through September.
San Diego County’s Water Sources

Cuts in State Water Project supplies have made San Diego County more reliant on Colorado River water supplies.

* Based on MWD Water Quality/Supply Reports

AN ORDERLY TRANSITION

By April 2009, supply challenges prompted the Metropolitan Water District of Southern California, the Water Authority’s largest supplier, to order water shortage allocations for its member agencies in fiscal year 2010. The San Diego region received about 62 percent of its water supply from MWD in fiscal year 2009, and MWD’s allocation for fiscal year 2010 amounted to a 13 percent supply cut to the Water Authority.

In response, the Water Authority Board took the difficult but necessary step of allocating reduced water deliveries to its member agencies for fiscal year 2010 — the first time in nearly two decades such action was required.

The Water Authority’s investments in supply diversification, however, offset a significant part of MWD’s cutback. The Water Authority has 165,000 acre-feet of additional water available in fiscal year 2010 through several long-term agreements — a water conservation and transfer agreement with the Imperial Irrigation District and supplies secured from lining parts of the Coachella and All-American canals (see page 33).

In addition to the Water Authority’s supplies, member agency local storage and groundwater projects also contributed to a reduced cutback. These supplies, along with the Water Authority Board’s decision to use dry-year transfer supplies in
LEGISLATIVE HIGHLIGHTS


The Water Authority concentrated on legislation and regulations that would facilitate greater water supply reliability and conservation at the regional level and on building consensus toward a comprehensive, statewide solution to the complex environmental and water supply problems in the Bay-Delta.

The Water Authority successfully sponsored Assembly Bill 1465 (Jerry Hill, D-South San Francisco), a bill that authorized urban water agencies to use best management practices for water conservation adopted by the California Urban Water Conservation Council.

Board members and staff also worked with legislators, stakeholders and coalitions around California – including water agencies, environmental groups, and business associations – to develop a package of bills that would provide both near-term improvements and long-term solutions to the water supply, infrastructure and environmental problems in the Bay-Delta.

As the fiscal year ended, a historic package of bills designed to improve Bay-Delta governance, set targets for statewide water conservation, and finance vital projects via a water bond was taking shape.

fiscal year 2010, reduced the shortage allocation for the Water Authority’s member agencies to 8 percent, facilitating a smoother transition into shortage conditions.

The Water Authority Board also declared a Level 2 “Drought Alert” condition in accordance with its model drought response ordinance. This action enabled the Water Authority’s member agencies to activate mandatory water use restrictions, conservation-based water rates, and other tools to help their customers achieve the region’s 8 percent savings target.
95% of residents said they were aware that the region faces a potentially significant water shortage.
Lake Oroville is the largest reservoir in the State Water Project. These powerful images were used to convey the seriousness of the water supply outlook in fiscal year 2009.
Using everything from mass-market advertising to grassroots tactics, the Water Authority immediately raised public awareness of growing water supply and water rate challenges and aggressively promoted increased conservation. This all-encompassing outreach created much-needed momentum as retail water agencies prepared to make mandatory cutbacks.

**Urban Water Use Reductions**

**By Fiscal Year 2009**

- **2007**: 185 GALLONS/PERSON/DAY
- **2008**: 178 GALLONS/PERSON/DAY (4% DECREASE)
- **2009**: 164 GALLONS/PERSON/DAY (11.4% DECREASE)

Region’s urban water use

- **2007**: 185 GALLONS/PERSON/DAY
Throughout the year, the Water Authority executed one of the most high-profile and comprehensive community outreach efforts in its history. Working with its member agencies and many community partners, the Water Authority used varied and innovative tactics to ensure the public not only knew about escalating water supply challenges that could lead to urban water shortages, but understood how to take action to quickly spur greater voluntary water savings.

The region responded impressively. Traffic to www.20gallonchallenge.com, the Water Authority’s conservation website, rose from an average of nearly 5,800 unique visits a month the previous year to more than 13,600 a month during fiscal year 2009.

More importantly, urban water use declined, dropping from 178 gallons per person per day in fiscal year 2008 to 164 gallons per person per day during fiscal year 2009. The pace of water savings also accelerated going into the summer months of 2009, with water use from January through June 2009 down 9 percent compared to the same time period in 2008. This gave the region a running start at achieving the 8 percent mandatory savings target for fiscal year 2010.
EVERY MEANS NECESSARY

The Water Authority’s extensive advertising campaign to promote conservation, themed “Save It or Lose It,” launched in May 2008 and ran through spring 2009. Highly visible television, radio, online, and outdoor ads featured strong messages conveying impending water supply cuts and simple steps residents could take to save more water.

The advertising messages evolved as the year progressed to reflect the growing likelihood of water shortages and to focus on outdoor conservation measures with the greatest savings potential. After the declaration of the Level 2 Drought Alert condition, radio “traffic tags” were quickly deployed to alert residents and businesses to mandatory water use restrictions that would soon take effect.

The Water Authority used much more than traditional mass-market advertising to convey its message. Staff hosted information booths at dozens of community events, strengthened conservation messaging in its K-12 and adult education programs, and used creative tactics to generate media and public interest. These measures included distributing more than 1.75 million conservation-themed yellow door hangers to help people alert their neighbors to leaks or other water-wasting problems on their property. The Water Authority also partnered with the Girl Scouts, San Diego-Imperial Council, to include water conservation tip fliers with annual cookie deliveries.

We must conserve more water to protect our region’s economy and way of life.

Fall 2008 Water Authority Television Ad
PUBLIC: WATER RELIABILITY IS CRITICAL

The Water Authority also measured community perceptions about water issues and conservation. A public opinion survey completed in March found some striking results. It confirmed that San Diego County residents understood water supply challenges were serious, that water conservation was growing as a social ethic, and that people were supportive of stronger actions by local water agencies to limit water consumption and diversify water supplies.

Survey highlights include:
- Ninety-five percent of residents said they were aware that San Diego County faced a potentially significant water shortage.
- By a ratio of nearly 2-to-1, respondents supported action by water agencies to impose mandatory water cutbacks in household water use.
- Water conservation was seen as an important civic duty by 92 percent of residents.
- Consistent with polls from recent years, pursuing seawater desalination was considered the single most important thing that can be done to ensure a safe and reliable water supply. Conservation, though, doubled in importance since 2006.
- Support for using recycled water as part of the region’s drinking water supply rose to 63 percent. That was more than double the level of support in 2005.

Principal Colorado River Programs Specialist Dan Denham addressed participants during a facility tour of the All-American Canal Lining Project. A record number of presentations were made in the spring to increase awareness of potential supply shortages.

Water Resources Director Ken Weinberg responded to questions from the media about the impact of an April 23 Water Authority Board decision to immediately move to a Level 2 “Drought Alert” condition and cut water deliveries to its member retail water agencies by 8 percent effective July 1.
SPEAKING FRANKLY

Water Authority board members and staff personally communicated with key groups around the region at an unprecedented rate during the fiscal year. Through its speaker’s bureau program, a record 175 presentations were made to civic groups, government officials, and businesses across the county to address the tenuous condition of the state’s water supply, the forces driving up of the cost of purchasing and importing water, and the urgent need for conservation and diversification.

This face-to-face communication was an important tool for: alerting key leaders and influencers to the potential impacts of growing supply problems due to Bay-Delta regulatory restrictions and drought conditions; educating the region about the Water Authority’s current success and future plans for addressing these challenges through supply diversification; and discussing the rates and capital investments necessary for providing a reliable water supply now and in the future.

The overarching message was clear — water will be a critical issue for years to come, and regionwide commitment and support on state and local efforts is needed to help secure a safe, reliable water supply for San Diego County.

“With water use restrictions in San Diego County likely this year, it is important that we find every opportunity to remind residents, businesses, and public agencies to do all they can to save water now.”

— Claude A. “Bud” Lewis, Board Chair, commenting on the distribution of 400,000 water conservation messages with annual Girl Scout cookie deliveries, news conference, March 13, 2009
The Water Authority is developing new tools to lay the groundwork for widespread and enduring behavior changes to transform water use.
Committed to CO
The Water Authority sharpened its focus on programs designed to increase long-term residential, commercial, and public sector water use efficiency. It partnered with member agencies and businesses on new and innovative water-saving programs while developing engaging methods for giving water users important information about how to make lasting, sustainable changes.
Demand for conservation incentives surged as water supply conditions worsened. In response, the Water Authority approved $2.5 million in funding to expand the Smart Landscape Program and high efficiency washer rebate program, two highly popular conservation incentive programs experiencing rapid growth in participation levels.

Aggressive conservation targets set in the Water Authority’s Strategic Plan, and growing calls in Sacramento to increase statewide water conservation 20 percent by 2020, signaled a need to change strategies and structure for securing long-term, larger-scale water savings.

To better position itself for meeting this critical and challenging task, the Water Authority reorganized water conservation efforts into a single,
stand-alone program area. This restructuring will ensure staff has the focus and coordination required to address immediate drought management needs; as well as the vision to evaluate and deploy new types of programs that will effectively shift attitudes and practices to permanently reduce residential and commercial water use.

**SHIFTING FROM DEVICES TO PERFORMANCE**

The Water Authority is exploring new avenues to make large and lasting gains in regional water efficiency. One of the most promising is shifting from traditional single device-driven rebate incentives to include “pay for performance” programs for large businesses and organizations. Instead of motivating large water users toward improved conservation through upfront financial incentives for installing specific pieces of equipment, “pay for performance” programs encourage them to adopt new technologies or other systematic improvements and provide a financial incentive after proven water savings are achieved.

This year, the Water Authority, backed by funding from SDG&E, launched the Managed Landscape Irrigation Program. The pilot project is testing the effectiveness of a Solana Beach-based start-up company’s proprietary software and hardware at 14 sites across the county, ranging from multifamily apartment complexes to large

“Say goodbye to grass and hello to water-thrifty landscaping.”

— *The San Diego Union-Tribune,* Editorial, *February 14, 2009*
THE REVIEW WAS PART OF A PILOT PROJECT CO-SPONSORED BY THE WATER AUTHORITY AND SDG&E TO HELP LARGE BUSINESSES IDENTIFY ADDITIONAL WATER AND ENERGY SAVINGS OPPORTUNITIES IN THEIR FACILITIES AND MANUFACTURING PROCESSES. BASED ON CHANGES IT MADE IN ACCORDANCE WITH THE RECOMMENDATIONS, LIFE TECHNOLOGIES NOW SAVES:

- **60,000 gallons per week** from installing a retrofit kit to feed cooling water into its autoclaves only when needed, rather than on a continuous basis.

- **Approximately 58,000 gallons per week** after installing an EnviroTower for the company’s existing cooling towers. The company will conserve an equal amount of potable water after it implements plans to use recycled water in its cooling towers.

In addition, LifeTechnologies is installing devices to make its irrigation systems more efficient, and is using recycled water for landscape at the Carlsbad facility. These measures are generating an estimated 150,000 gallons a week in potable water savings, amounting to approximately 24 acre-feet of water savings each year.
How A Water Budget Works

A water budget helps to reduce overwatering by estimating the amount of water a landscape requires based on area, climate and seasonal changes. Understanding how much water a particular landscape actually needs eliminates guesswork and uncertainty and results in more efficient water use. In a typical home, anywhere from 40 percent to upward of 60 percent of a home’s total use is outdoors. Regionally, more than half of all our water use in San Diego County is outdoors.

TARGETING BEHAVIOR

Institutions such as the University of San Diego. The wireless technology aims to reduce water consumption on large landscapes by remotely controlling the schedules of each watering station – down to the individual valve – based upon weather conditions. The goal is to cut consumption at each site by at least 20 percent. Preliminary data indicates all sites are hitting that mark and some have cut use by 40 percent or more.

The Water Authority is also developing new tools to lay the groundwork for widespread and enduring behavior changes. These changes will transform residential and commercial water use – especially outdoors, where the greatest component of urban water use occurs.

One new tool is a “water budget” website application. The Water Authority provided this software to its member retail agencies to help them
In June 2009, the Water Authority hosted its third Water Conservation Summit at Cuyamaca College. With water shortage allocations set to begin in July, the daylong event had a different focus from previous summits. Instead of discussing long-term strategic conservation approaches, the 2009 summit concentrated on sharing “how to” information among specific stakeholders that could be used right away to reduce water consumption.

More than 400 people attended the sold-out event, from landscape industry representatives to facility managers of large institutions, to local and regional public officials. Subjects covered included: implementation of mandatory water restrictions; conservation case studies and best management practices in various industries; and business opportunities and trends. Attendees also toured the adjacent Water Conservation Garden.

In addition, the Water Authority continued to develop new marketing approaches to increase the desirability and consumer demand for beautiful, water-efficient landscapes. The conservation team created and distributed a comprehensive draft guide for residential homeowners’ associations to help improve their irrigation efficiency or switch to water-saving landscapes that complemented community aesthetics. The draft guide was popular, and the Water Authority will refine and develop similar guides in coming years for single-family homeowners, public agencies, and other water users.

**CONVENING THE COMMUNITY**

“If we are going to make our conservation goals happen in the next 10 years, we are going to have to do it outdoors – moving beyond appliances and fixtures to changing behavior.”

Michael P. Neal, President & Chief Executive Officer, and Carroll Whaler, CPM, Vice President/Residential Property Management, from H.G. Fenton Company, receive an award at the Water Conservation Summit for their Aquatera apartment community.

“We adjusted all the time clocks on each station by one minute, saving about 2 million gallons of water immediately.”
—Roger Manion, Assistant Vice President for Facilities Management, University of San Diego

The Water Authority also unveiled a logo for its water conservation brand, part of its marketing effort to communicate that water-efficient landscapes can be lush and are “a better way to beautiful” in semi-arid San Diego County. The Water Authority also recognized two companies for fostering the advancement of beautiful, low-water landscapes. H.G. Fenton Company was recognized for the landscape and other measures built into its Aquatera apartment community in Mission Valley. Water2Save, a Solana Beach-based firm, was honored for its wireless technology that remotely monitors and controls water use on large landscapes.

Nearly 52,000 people viewed the garden’s exhibits or attended their events during fiscal year 2009. More than 9,000 people – a 325% increase - participated in the garden’s organized tours program, which shows off the beauty and variety of low water use landscapes.

To watch the video, go to www.sdcwa.org/annualreport2009

Manion discusses the University of San Diego’s successes saving water through participation in the Water Authority’s Managed Landscape Irrigation Program.
The Water Authority reached important milestones in its long-term strategy to enhance the reliability of the region’s water supply.
FORGING A RESILIENT
The Water Authority made important progress enhancing the reliability of the region’s water supply through its strategies to diversify water supplies and improve infrastructure. Highlights included reaching a major construction milestone on the All-American Canal Lining Project, commencing construction on the San Vicente Dam Raise Project, and supporting the development of additional local supplies.
A MUCH-NEEDED BOOST

Completing major construction on the All-American Canal Lining Project could not have come at a better time.

Representatives from the project partners – the San Diego County Water Authority, Imperial Irrigation District, California Department of Water Resources, and Bureau of Reclamation – celebrated the achievement with a ceremony on April 30. The project replaced approximately 23 miles of earthen canal with concrete-lined canal, conserving water previously lost to seepage. A critical component of the Water Authority’s diversification strategy and California’s plan for managing its Colorado River water supplies following the 2003 Quantification Settlement Agreement, the AACLP was a year ahead of schedule.

PLANNING PAYS OFF

COLORADO RIVER WATER TRANSFER AGREEMENTS ARE A CORNERSTONE OF THE WATER AUTHORITY’S STRATEGY TO IMPROVE SUPPLY RELIABILITY THROUGH A MORE DIVERSIFIED WATER PORTFOLIO.
For San Diego County, the early completion meant the project will deliver nearly 14,400 acre-feet more water to the region in fiscal year 2010 than originally scheduled. The Water Authority will use the additional supply to help mitigate the water shortage allocation ordered by MWD in April, helping to reduce the potential supply cut to local water agencies from 13 percent to 8 percent.

Full realization of the project's water savings will begin in calendar year 2010. From that point, the Water Authority will receive 56,200 acre-feet of water per year from the AACLP. The Water Authority receives another 21,500 acre-feet of water annually from the Coachella Canal Lining Project, completed in 2006.

PROTECTING AND UPGRADING ASSETS

Water agencies throughout the world consider the Water Authority’s Aqueduct Protection Program to be the model for effective large-diameter pipeline monitoring and maintenance.

More than 300 miles of large-diameter pipelines – about the distance from the city of San Diego to Phoenix – along with more than 100 water delivery facilities are required for the Water Authority to import and distribute water daily throughout the region, and around the clock. That means constant attention to maintaining and improving the system is necessary.

In fiscal year 2009, the Water Authority made significant progress on the Mission Trails Pipeline Project, installing 1,000 feet of the inlet tunnel and concrete-lined portions of the Coachella Canal and All-American Canal. The lined portions conserve water lost to seepage in the older, earthen canals.

The Coachella Canal Lining Project is complete, and final field work on the All-American Canal Lining Project will be finished by March 2010. Under a 110-year agreement, the two projects will provide San Diego County with approximately 78,000 acre-feet of water annually.

Given California’s growing supply challenges, the Water Authority’s far-sighted planning to serve these additional supplies is paying off now — and will be increasingly important in coming years.
1,800 feet of the outlet tunnel beneath portions of Mission Trails Regional Park in the city of San Diego. This part of the untreated water system is being upgraded to carry more water to treatment plants that serve the central and south areas of the county. The project will help ensure delivery reliability in the region for decades to come.

The Water Authority visually inspected more than 47 miles of pipeline in the county during planned annual pipeline shutdowns. Crews also installed more than 33 miles of acoustic fiber optic cable that listens around the clock to catch sounds indicating possible weakening of the pipelines – more than tripling the innovative early warning system’s coverage area. These efforts help prevent catastrophic breaks that could result in the loss of billions of gallons of water, property damage, and spending millions of dollars in repair costs.

In late spring 2009, the Water Authority issued its Notice to Proceed with construction on the San Vicente Dam Raise project. The $568 million project is a vital component of the Water Authority’s long-term plan to improve regional water reliability and will provide the biggest increase in regional water storage in San Diego County history. When completed in 2012, it will more than double the reservoir’s current capacity, expanding the region’s emergency water supplies by 52,000 acre feet and providing 100,000 acre feet of additional storage for use during times of limited supply.

The project – the tallest dam raise in the United States and the tallest dam raise using roller-compacted concrete in the world – will raise the height of the city of San Diego’s 220-foot-tall dam by 117 feet.

It’s a vital job with a single purpose: make sure the tap never runs dry.

REACHING NEW HEIGHTS
Part of the Emergency Storage Project, the San Vicente Pipeline is 11 miles long and 8.5 feet in diameter. When completed, the $342 million tunneled pipeline will enhance ability to move water to and from the expanded San Vicente Reservoir.

The emergency storage component of the San Vicente Dam Raise is part of the final phase of the Water Authority’s $1.5 billion Emergency Storage Project, which has been under way for more than a decade. The ESP is a system of reservoirs, pipelines, and other facilities that work together to store and move water around the county during a prolonged drought or natural disaster, such as an earthquake, which could cut the region off from its imported water supply. When complete, the ESP will provide 90,100 acre-feet of water stored locally for emergency use.

**San Vicente Dam RAISE**

169%

Reservoir’s capacity increase
Local supply development is a cornerstone of the Water Authority’s long-term diversification strategy. Working with member agencies, significant progress was made on capital projects to expand brackish groundwater production and recycled water. In Oceanside, construction completed in 2008 enabled the Mission Basin Desalter Facility to more than triple its water deliveries this year to 7 million gallons per day.

Funding secured by the Water Authority also facilitated the expansion of recycled water use by several of its member agencies during fiscal year 2009. The Carlsbad Municipal Water District and Olivenhain Municipal Water District were able to connect additional customers to their recycled water programs through purchases from the recently completed upgrade of the Meadowlark Water Reclamation Plant, which is owned and operated by Vallecitos Water District. The upgrades more than doubled the plant’s output capacity, raising it from 2.25 million gallons daily to 5 million gallons daily of reclaimed water.
Seawater Desalination Process

Ocean Water

STEP 1
Pre-Treatment

STEP 2
Reverse Osmosis

STEP 3
Conditioning+disinfection

You

Filters remove suspended solids and other particles that would interfere with the desalting process.

Reverse osmosis membranes separate dissolved minerals (including salts) and other impurities from the water.

Mineral and/or chemicals are added to ensure produced water meets health, aesthetic and anti-corrosion standards.

Leftover high-salinity water discharged as brine.

SEAWATER DESALINATION

The Water Authority’s supply diversification strategy calls for about 10 percent of the region’s water supply to come from desalinated seawater by 2020. During fiscal year 2009, the Water Authority worked on three local desalination efforts.

1 The Water Authority supported the regional, privately developed desalination project under way in Carlsbad by defining how desalinated water from the plant would be delivered to member agencies. The Carlsbad plant, which will produce 56,000 acre-feet of potable water annually, is scheduled to be operational in late 2012.

2 The Water Authority entered the final phase of a feasibility study for building a desalinated water plant capable of producing between 56,000 acre-feet and 168,000 acre-feet annually at the Marine Corps Base Camp Pendleton. The potential plant would be constructed in the next decade.

3 Finally, the Water Authority approved funding for the first phase of a joint feasibility study for building a seawater desalination plant in Baja California, Mexico. The project’s other partners are the Metropolitan Water District of Southern California, the Southern Nevada Water Authority, and the Central Arizona Water Conservation District. If built, the Baja California plant would enable transfers of Colorado River water between the Republic of Mexico and users in the United States.
In fiscal year 2009, the Water Authority was a national leader on the issue of climate change and water planning through its work as part of the Water Utility Climate Alliance. The group, comprised of 10 of the nation’s largest urban water providers, was formed to provide leadership and collaboration on climate change issues affecting water agencies.

During fiscal year 2009, WUCA sponsored the preparation of two important scientific reports. As a result of the first white paper, senior U.S. scientists, including members of the National Oceanic and Atmospheric Administration, the Department of the Interior, Bureau of Reclamation, and numerous other federal agencies, met with the Water Authority and other members of WUCA and committed to work together to incorporate the needs of water utilities in future climate modeling.

The Water Authority is also supporting proposed federal climate change legislation to ensure funding is included for better water planning tools and water infrastructure upgrades necessary to respond to the effects of climate change.
Amid the turmoil of the biggest economic downturn since the Great Depression, the Water Authority maintained its solid financial position through a conservative long-range financial plan and a balanced investment policy.

During fiscal year 2009, the Water Authority did not need to enter the turbulent financial market for new borrowing since a major bond issuance of $558 million was completed in the previous fiscal year. The Water Authority’s investment policy, with its emphasis on safety, liquidity, and yield, allowed the organization to remain financially stable during a time when many private and public companies experienced significant losses.

The Water Authority also maintained its strong credit ratings: Standard and Poor’s continued with its “AA+” rating, Moody’s gave the Water Authority an “AA3” rating, and Fitch gave an “AA” rating.

As it weathered the economic storm and looked to the future, the Water Authority’s Board of Directors adopted a prudent two-year budget and 2010 water rates that will enable the Water Authority to continue strategic priorities that help achieve the goal of long-term water reliability.
## THE SAN DIEGO COUNTY WATER AUTHORITY STRATEGIC PLAN

The San Diego County Water Authority Strategic Plan sets into writing a vision of what the water authority will be 25 years from now. It identifies the key result areas of critical concern the Water Authority’s Board of Directors must address if it is to be successful, and provides management and staff with clear policy direction. For more information on the Strategic Plan, and reports on progress toward meeting its goals, visit [www.sdcwa.org/strategicplan/](http://www.sdcwa.org/strategicplan/)

### OVER $3 BILLION in total assets

### SELECTED FINANCIAL HIGHLIGHTS

### Statements Of Net Assets

**June 30, 2009 and 2008**

<table>
<thead>
<tr>
<th>ASSETS:</th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current assets:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and investments</td>
<td>$104,094,605</td>
<td>$92,286,369</td>
</tr>
<tr>
<td>Restricted cash and investments</td>
<td>381,242,365</td>
<td>437,652,820</td>
</tr>
<tr>
<td>Water receivables</td>
<td>68,436,955</td>
<td>64,730,760</td>
</tr>
<tr>
<td>Interest receivable</td>
<td>3,562,437</td>
<td>4,011,609</td>
</tr>
<tr>
<td>Taxes receivable</td>
<td>798,762</td>
<td>746,698</td>
</tr>
<tr>
<td>Other receivables</td>
<td>4,845,555</td>
<td>9,163,823</td>
</tr>
<tr>
<td>Inventories</td>
<td>27,102,945</td>
<td>13,671,902</td>
</tr>
<tr>
<td>Prepaid water</td>
<td>5,713,500</td>
<td>4,615,500</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>595,737,124</td>
<td>626,879,481</td>
</tr>
<tr>
<td><strong>Noncurrent assets:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and investments</td>
<td>2,694,225</td>
<td>18,455,132</td>
</tr>
<tr>
<td>Restricted cash and investments</td>
<td>35,926,935</td>
<td>213,484,032</td>
</tr>
<tr>
<td>Advances to other agencies</td>
<td>19,446,844</td>
<td>37,593,713</td>
</tr>
<tr>
<td>Retention receivable</td>
<td>4,007,308</td>
<td>1,331,944</td>
</tr>
<tr>
<td>Long-term loan receivables</td>
<td>20,000,000</td>
<td>20,000,000</td>
</tr>
<tr>
<td>Unamortized bond issuance costs</td>
<td>12,263,098</td>
<td>12,981,707</td>
</tr>
<tr>
<td>Capital assets:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land</td>
<td>13,128,344</td>
<td>13,283,900</td>
</tr>
<tr>
<td>Construction in progress</td>
<td>1,222,253,504</td>
<td>971,709,935</td>
</tr>
<tr>
<td>Work in progress</td>
<td>749,017</td>
<td>612,973</td>
</tr>
<tr>
<td>Plant and equipment, net</td>
<td>1,166,190,126</td>
<td>1,150,387,266</td>
</tr>
<tr>
<td>Intangible assets, net</td>
<td>122,196,758</td>
<td>99,535,754</td>
</tr>
<tr>
<td><strong>Total noncurrent assets</strong></td>
<td>2,618,856,159</td>
<td>2,539,376,356</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>3,214,593,283</td>
<td>3,166,255,837</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIABILITIES:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current liabilities:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts payable and other liabilities</td>
<td>78,392,621</td>
<td>87,719,978</td>
</tr>
<tr>
<td>Interest payable</td>
<td>12,077,179</td>
<td>11,195,798</td>
</tr>
<tr>
<td>Construction deposits</td>
<td>2,364,089</td>
<td>527,985</td>
</tr>
<tr>
<td>Short-term liabilities</td>
<td>460,000,000</td>
<td>460,000,000</td>
</tr>
<tr>
<td>Current portion of long-term liabilities</td>
<td>10,691,961</td>
<td>23,299,522</td>
</tr>
<tr>
<td><strong>Total current liabilities</strong></td>
<td>563,525,820</td>
<td>582,741,989</td>
</tr>
<tr>
<td><strong>Noncurrent liabilities:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term liabilities</td>
<td>1,524,401,978</td>
<td>1,532,317,028</td>
</tr>
<tr>
<td><strong>Total noncurrent liabilities</strong></td>
<td>1,524,401,978</td>
<td>1,532,317,028</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td>2,087,927,828</td>
<td>2,115,058,917</td>
</tr>
<tr>
<td><strong>Net assets:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invested in capital assets, net of related debt</td>
<td>612,078,083</td>
<td>303,112,596</td>
</tr>
<tr>
<td>Restricted for construction projects</td>
<td>347,541,565</td>
<td>593,625,237</td>
</tr>
<tr>
<td>Restricted for debt service</td>
<td>68,708,574</td>
<td>69,195,142</td>
</tr>
<tr>
<td>Unrestricted</td>
<td>98,337,233</td>
<td>85,262,945</td>
</tr>
<tr>
<td><strong>Total net assets</strong></td>
<td>$1,126,665,455</td>
<td>$1,051,196,920</td>
</tr>
</tbody>
</table>
Statements Of Revenues, Expenses, And Changes In Net Assets
For The Fiscal Years Ended June 30, 2009 And 2008

Operating revenues:

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water sales</td>
<td>$359,951,622</td>
<td>$343,455,834</td>
</tr>
<tr>
<td>Total operating revenues</td>
<td>$359,951,622</td>
<td>$343,455,834</td>
</tr>
</tbody>
</table>

Operating expenses:

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of sales</td>
<td>265,280,906</td>
<td>262,538,493</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>29,000,364</td>
<td>28,281,962</td>
</tr>
<tr>
<td>Operations and maintenance</td>
<td>22,792,425</td>
<td>14,475,780</td>
</tr>
<tr>
<td>Planning</td>
<td>10,004,516</td>
<td>8,882,047</td>
</tr>
<tr>
<td>General and administrative</td>
<td>15,309,407</td>
<td>13,561,452</td>
</tr>
<tr>
<td>Total operating expenses</td>
<td>$342,387,718</td>
<td>$327,739,734</td>
</tr>
<tr>
<td>Operating income</td>
<td>$17,563,904</td>
<td>$15,716,100</td>
</tr>
</tbody>
</table>

Nonoperating revenues (expenses):

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property taxes and in-lieu charges</td>
<td>10,467,484</td>
<td>10,303,336</td>
</tr>
<tr>
<td>Infrastructure access charges</td>
<td>19,389,790</td>
<td>17,457,819</td>
</tr>
<tr>
<td>Investment income</td>
<td>18,507,476</td>
<td>22,163,884</td>
</tr>
<tr>
<td>Other income</td>
<td>10,004,942</td>
<td>9,841,798</td>
</tr>
<tr>
<td>Interest expense</td>
<td>(41,866,522)</td>
<td>(52,388,352)</td>
</tr>
<tr>
<td>Other expenses</td>
<td>(7,202,845 )</td>
<td>(6,963,781 )</td>
</tr>
<tr>
<td>Total nonoperating revenues (expenses)</td>
<td>$8,300,325</td>
<td>$434,504</td>
</tr>
<tr>
<td>Income before capital contributions</td>
<td>$25,864,229</td>
<td>$16,150,604</td>
</tr>
</tbody>
</table>

Capital contributions:

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity charges</td>
<td>13,285,608</td>
<td>23,883,745</td>
</tr>
<tr>
<td>Water standby availability charges</td>
<td>11,311,384</td>
<td>11,256,386</td>
</tr>
<tr>
<td>Contributions in aid of capital assets</td>
<td>25,027,314</td>
<td>3,986,450</td>
</tr>
<tr>
<td>Total capital contributions</td>
<td>$49,604,306</td>
<td>$39,126,581</td>
</tr>
<tr>
<td>Changes in net assets</td>
<td>$75,468,535</td>
<td>$55,277,185</td>
</tr>
<tr>
<td>Net assets at beginning of year, as restated</td>
<td>$1,051,196,920</td>
<td>$995,919,735</td>
</tr>
<tr>
<td>Net assets at end of year</td>
<td>$1,126,665,455</td>
<td>$1,051,196,920</td>
</tr>
</tbody>
</table>

Fiscal Year 2009
Continuing Disclosure

Cash and Investments
As of June 30, 2009 and 2008

As of June 30, 2009 and 2008, restricted reserve fund cash and investment balances were as follows:

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>$268,375,536</td>
<td>$485,321,009</td>
</tr>
<tr>
<td>Debt Service Reserve</td>
<td>88,708,574</td>
<td>69,195,142</td>
</tr>
<tr>
<td>Pay-As-You-Go</td>
<td>80,085,190</td>
<td>96,620,701</td>
</tr>
<tr>
<td>Total</td>
<td>$417,169,300</td>
<td>$651,136,852</td>
</tr>
</tbody>
</table>

As of June 30, 2009 and 2008, unrestricted cash and investment balances were as follows:

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating</td>
<td>$52,737,812</td>
<td>$56,695,923</td>
</tr>
<tr>
<td>Designated for Rate Stabilization</td>
<td>43,340,691</td>
<td>45,877,055</td>
</tr>
<tr>
<td>Designated for Equipment Replacement</td>
<td>10,710,327</td>
<td>8,168,523</td>
</tr>
<tr>
<td>Total</td>
<td>$106,788,830</td>
<td>$110,741,501</td>
</tr>
</tbody>
</table>

Achieved the Water Authority’s Board enhanced financial management policy of maintaining a target senior lien debt service coverage

RATIO OF 1.5 TIMES

Average return for the Water Authority’s cash and investment portfolio for fiscal year 2009 was 2.54%
AWARDS

• American Society of Civil Engineers, San Diego Section: Project of the Year — Twin Oaks Valley Water Treatment Plant
• American Society of Civil Engineers, San Diego Section: Award of Excellence — San Vicente Dam Raise Aggregate Quarry
• American Society of Civil Engineers, San Diego Section: Awards of Merit — Pipeline 4 Repair at San Diego River/Design Build Contract for Pipelines 3.4 and 4A
• American Public Works Association: Project of the Year — Twin Oaks Valley Water Treatment Plant
• American Public Works Association: Project of the Year — San Vicente Dam Raise Aggregate Quarry
• American Public Works Association: Project of the Year — Jackson Drive Emergency Crossover Connection
• American Public Works Association: Honor Award — Pipeline 4 Repair Project at San Diego River
• San Diego Gas & Electric: Savings by Design Award of Excellence — San Vicente Pump Station
• California Geographic Information Association: Outstanding Internet Mapping Application — Water Budget Target Application
• The Public Relations Society of America: Silver Bernays Award of Excellence for Community Relations — Community Outreach for the San Vicente Dam Raise

MEMBER AGENCY MAP AND BOARD OF DIRECTORS
As of June 30, 2009

1 CARLSBAD MUNICIPAL WATER DISTRICT
5950 El Camino Real
Carlsbad CA 92008
Ph: 760-438-2722
Fax: 760-431-1601
www.carlsbadca.gov
Director: Claude “Bud” Lewis

2 CITY OF DEL MAR
1050 Camino del Mar
Del Mar CA 92014
Ph: 858-755-3294
Fax: 858-755-2794
www.delm.com
Director: Hershell Price

3 CITY OF ESCONDIDO
201 North Broadway
Escondido CA 92025
Ph: 760-839-4682
Fax: 760-839-6205
www.escondido.ca.us
Director: Marilyn Dailey

4 FALLBROOK PUBLIC UTILITY DISTRICT
900 East Mission Road
Fallbrook CA 92028
Ph: 760-728-1125
Fax: 760-731-6082
www.fpud.com
Director: Keith Lawinger

5 HELIX WATER DISTRICT
7811 University Avenue
La Mesa CA 91942
Ph: 619-468-0589
Fax: 619-466-1823
www.hwd.com
Directors: John Linden, Richard Smith

6 LAKESIDE WATER DISTRICT
10375 Vine Street
Lakeside CA 92040
Ph: 619-443-3809
Fax: 619-443-3690
www.lakesidewaterdistrict.com
Director: Frank Hilliker

7 CITY OF NATIONAL CITY
(Managed by Sweetwater Authority)
1243 National City Boulevard
National City CA 91950
Ph: 619-336-4200
Fax: 619-336-4376
www.ci.national-city.ca.us
www.sweetwater.org
Director: Ron Morrison

8 CITY OF OCEANSIDE
380 North Coast Highway
Oceanside CA 92054
Ph: 760-435-5800
Fax: 760-435-5814
www.ci.oceanside.ca.us
Director: Barry Martin

9 OLIVENHAIN MUNICIPAL WATER DISTRICT
9300 Fanita Parkway
Santee CA 92071
Ph: 619-448-3111
Fax: 619-449-9469
www.padredam.org
Director: Dan McMillan

10 OTAY WATER DISTRICT
2554 Sweetwater Springs Boulevard
Spring Valley CA 91978
Ph: 619-670-2222
Fax: 619-670-1468
www.otaywater.gov
Directors: Gary Croucher, Mark Watton

11 PADRE DAM MUNICIPAL WATER DISTRICT
9300 Fanita Parkway
Santee CA 92071
Ph: 619-448-3111
Fax: 619-449-9469
www.padredam.org
Director: Dan McMillan

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