

San Diego County Water Authority

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BUSINESS PLAN



San Diego County
Water Authority

In partnership with member agencies and stakeholders, provide a safe and reliable water supply by diversifying the region's water supply sources and building, maintaining and operating critical water facilities

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BUSINESS PLAN

August 2004



**San Diego County
Water Authority**

4677 Overland Avenue
San Diego, CA 92123
858-522-6600
www.sdcwa.org

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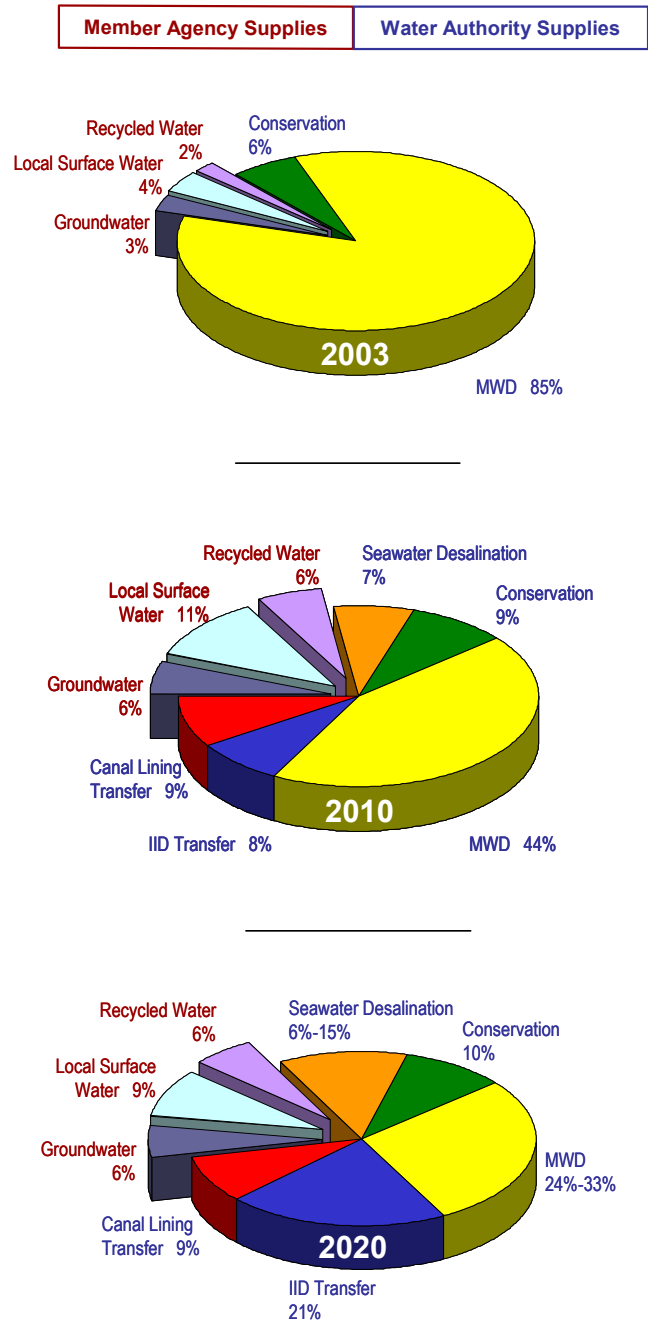
Executive Summary

The San Diego County Water Authority has historically relied on a single supplier to meet the majority of the county’s water demand. In 1946, the Water Authority was annexed into the Metropolitan Water District (MWD) of Southern California to access imported water from the Colorado River. Since then, the 23 member agencies served by the Water Authority have depended upon MWD for up to 90 percent of the water used in San Diego County. The impacts of a severe six-year drought from 1987 to 1992 provided compelling proof that if the Water Authority was to meet its mission of providing a safe and reliable supply of water to its member agencies, it needed to diversify its water supplies portfolio.

To meet growing demands, the Water Authority and its member agencies are implementing long-term strategies to reduce the region’s reliance on imported water, diversify the supplies portfolio, and maintain and operate a vast array of critical water facilities and conveyance systems. This long-term commitment by the Board of Directors (Board) to diversify the region’s water supplies and optimize facilities will ensure greater reliability by providing diversified water supplies less vulnerable to droughts, and greater operational flexibility to store and move water throughout the region.

Based on the Board policies developed to meet the Water Authority’s mission, the following vision statement serves as a compass to guide in the identification of key programs, their relationships to each other, and the selection of strategies and goals to provide reliable water supplies to the region.

Water Supplies Portfolio Programs



Vision

In partnership with member agencies and stakeholders, provide a safe and reliable water supply by diversifying the region's water supply sources and building, maintaining, and operating critical water facilities.

The long-term goal is to meet the Board's adopted water supplies portfolio diversification goals as represented in the 2020 pie chart. This Business Plan (Plan) provides the roadmap by which Water Authority staff will focus efforts to achieve

the goals. These pie charts reflect Board decisions adopted in the 2000 Urban Water Management Plan, the Quantification Settlement Agreement, and the Regional Water Facilities Master Plan.

Plan Strategies

Reliability will be obtained by employing two broad strategies: the diversification of water supplies and the construction, operation, and maintenance of critical water facilities. The Plan identifies and focuses on seven water supplies portfolio programs and four facilities programs. Supporting these two broad strategies are nine programs in the core business focus area.

The seven water supplies portfolio focus area programs are: MWD water supply, Colorado River water transfers, seawater desalination, water conservation, recycled water, local surface water, and groundwater. The goal of the diversification strategy is to reach the Board's adopted level of supply diversity.

The four water facilities focus area programs are: the Capital Improvement Program (CIP), operations and maintenance of facilities, facilities security, and treated water demand management. The goal of the facilities strategy is to build, operate, and maintain water facilities critical to reliably meeting the growing regional demands.

The core business focus area is essential to the execution of the two broad vision strategies. The first four programs deal with

relationships and partnerships. They recognize the need to create relationships and partnerships with member agencies, communities, government, and the media. The goal is to align all regional stakeholders in support of water supplies and facilities strategies.

The next two programs address financial capacity. The Long Range Financing Plan and credit ratings and investor relations programs seek to obtain the lowest possible debt cost for capital projects and implement Board policies for Water Authority debt management.

Technology and workforce management programs provide the organizational capacity to carry out these efforts. The goals of these programs are to provide competent staff to manage and execute programs, and information systems that provide timely and efficient information to manage programs.

Finally, environmental management is essential to the success of the supply and facilities programs. This program's goal is to provide timely compliance with environmental regulations to permit "on-schedule" construction and major repairs to water facilities.

Program Summary Organization

Each of the program discussions identifies the purpose of the program, its relationship to other key focus area programs, key issues

requiring management strategies to solve them, and program goals to measure success.

Key Events and Dependencies

Of the more than 100 goals contained in 20 Business Plan programs, 14 are designated as key events. They typically are the last in a series of goals that need to be accomplished along a critical path. They are critical in that their accomplishment triggers access to new or substantially increased water supplies or provides regional capabilities that did not exist. By designating these as key events, management attention is continually being focused on critical outcomes.

The successful completion of the Plan goals and key events depends upon a number of factors. Three categories of dependencies stand out, and if not successfully managed, will put Plan programs at risk.

The most significant dependency is the Water Authority's ability to manage environmental issues. Water transfers from Imperial Valley, seawater desalination, water treatment facilities, increased regional storage, and the build-out of required infrastructure are all dependent upon the management of this important issue. This is a linchpin issue, requiring solid planning, timely execution, and executive oversight.

The Plan calls for member agency local supplies and conservation to more than double in the next five years accounting for a third of all regional water supplies. Growth is dependent upon two things. First, to achieve the desired growth in recycled, local surface, and groundwater and nearly double the amount of water being conserved, additional funding will be required. Traditionally, the majority of this funding has come from state and federal sources. The present budget deficit environment will make this more challenging.

The final dependency will be the ability of the Water Authority and its member agencies to craft an appropriate business partnering framework to accomplish the local water supply goals. This will require collaborative effort and an agreement on the roles and obligations of each party.

Key events and their dependencies are summarized at the end of the chapters on water supplies portfolio and facilities.

Use of the Plan

Based on the decisions and guidance provided by the Board, the Plan is a rolling five-year "look-ahead" for the Water Authority to identify its priorities and focus. Staff will periodically update the Plan. The Plan identifies the priorities and focus for the Water Authority. The Plan identifies the basis for the

organization's budgets and programs. The first two years of the planning period will contain detailed milestones for each of the programs. These milestones will serve as an execution plan, allow performance tracking, and timely modifications to the Plan.

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Chapter 1. Introduction

The **mission** of the San Diego County Water Authority is to provide a safe and reliable supply of water to its member agencies.

Over the last several years, the Water Authority Board has adopted significant new policies and programs in the areas of supply reliability, system infrastructure, finance, and community outreach to help accomplish this mission.

The Water Authority's Business Plan brings the Board's decisions on policies, projects, and programs into one document with a common vision. The Plan identifies the key issues, strategies, goals, and milestones necessary to carry out the programs.

This document is a five-year plan, focusing the agency on the near-term actions needed to implement long-term programs. The Plan is also a dynamic document with periodic updates to assess whether milestones have been met, modify actions as necessary, update existing programs, and add new programs as approved.

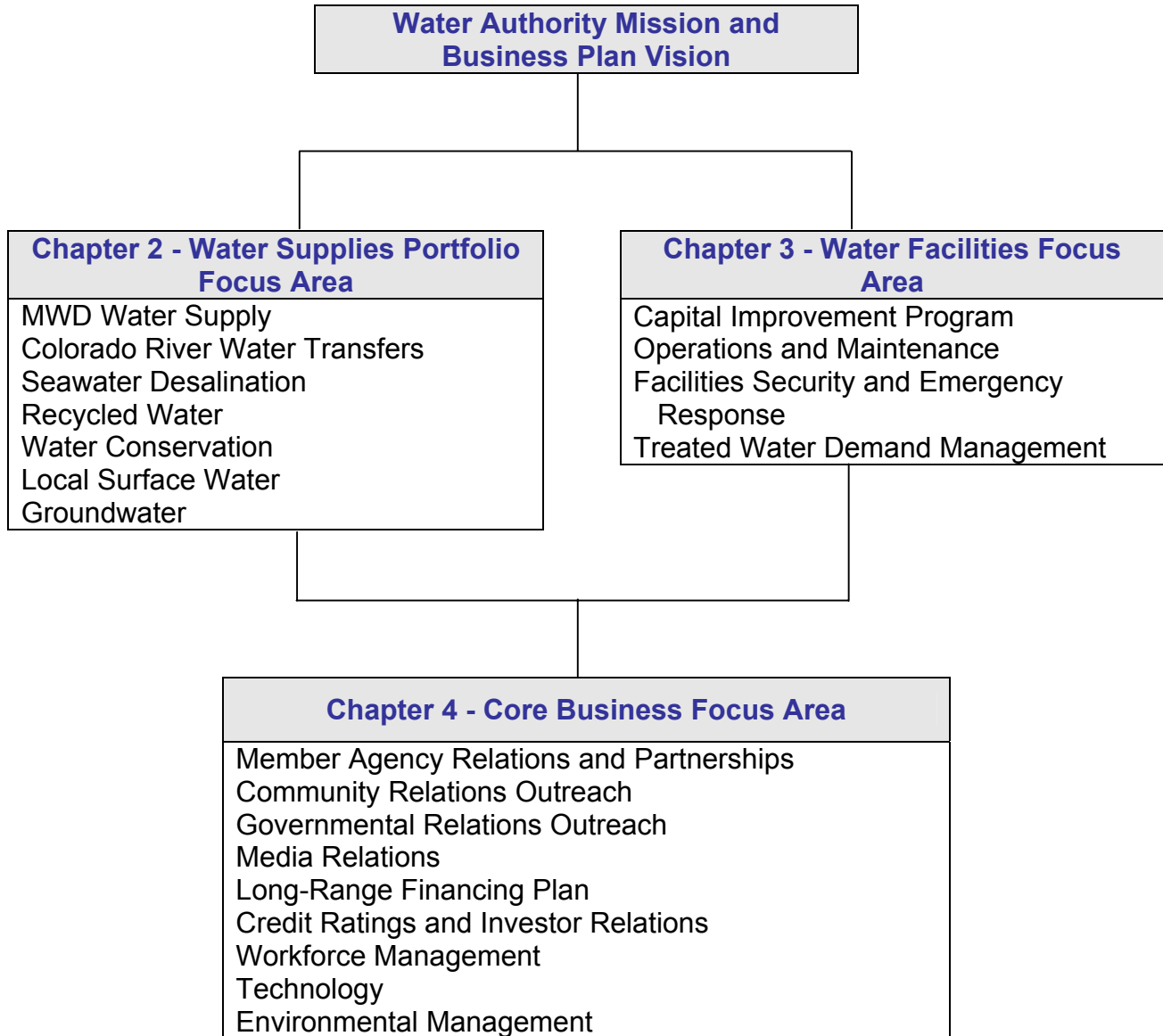
The clear direction of the Board is to increase the reliability of the water supply to meet the region's growing demands and to ensure reliable delivery of those supplies. The strategies to accomplish this are to increase the diversity of water supply and build, maintain, and operate the region's

water facilities to meet changing demand patterns. This direction has resulted in the following vision statement:

"In partnership with member agencies and stakeholders, provide a safe and reliable water supply by diversifying the region's water supply sources and building, maintaining, and operating critical water facilities."

Diversifying the region's water supplies portfolio increases reliability by reducing the Water Authority's heavy reliance on a single source of water. The system infrastructure necessary to deliver a reliable supply includes not only conveyance, but also storage and treatment facilities. The operations and maintenance of the infrastructure, once it is constructed, is also a critical component in meeting the mission.

The Water Authority mission and Plan vision are illustrated in the following figure. They are organized into three separate focus areas: water supplies portfolio, water facilities, and core business programs. A short narrative is included on each of the programs in the Plan, along with the key issues that must be addressed over the next five years. The Plan identifies strategies to manage the key issues along with specific goals and milestones.



Chapter 2. Water Supplies Portfolio Focus Area

FOCUS AREA SUMMARY

The Water Supplies Portfolio focus area has seven component programs: MWD water supply, Colorado River water transfers, seawater desalination, recycled water, water conservation, local surface water, and groundwater. The focus area goal is to increase the diversity of the water supplies portfolio to enhance reliability.

Emerging Programs: The majority of new supplies will come from the conservation and transfer of Colorado River water from Imperial Valley and the development of a seawater desalination facility within the county. These two programs will supply 24 percent of the region's water by 2010.

The San Diego County Water Authority-Imperial Irrigation District water transfer will provide an additional 200,000 acre-feet of Colorado River water annually to the San Diego region. The water transfer is a historic agricultural-to-urban-water transfer and was the linchpin of the Quantification Settlement Agreement (QSA) executed on October 16, 2003.

In addition, the program will include the construction of projects to conserve water by lining the All-American and Coachella canals with concrete. In exchange for lining the canals, the Water Authority will receive 77,700 acre-feet of water per year for the next 110 years.

Advances in seawater desalination technology and design have made its cost more competitive with other new water supplies available to the region. These developments have prompted the Water Authority to engage in a serious examination of several options that could make seawater desalination a significant new water supply in San Diego County. The Water Authority's Regional Water Facilities Master Plan identified seawater desalination as the preferred alternative with a target of generating 56,000 acre-feet of water annually by 2010. The Board has adopted seawater desalination as the next critical component of its diversified supplies portfolio.

Management and Expansion of Existing Programs: More than 30 percent of the region's future water demand is projected to be met through existing surface water supplies and from growth in groundwater, water recycling, and conservation. The Water Authority's member agencies are planning to develop these local supplies. The Water Authority must continue to collaboratively work with its member agencies and stakeholders to identify "win-win" strategies to realize this ambitious goal.

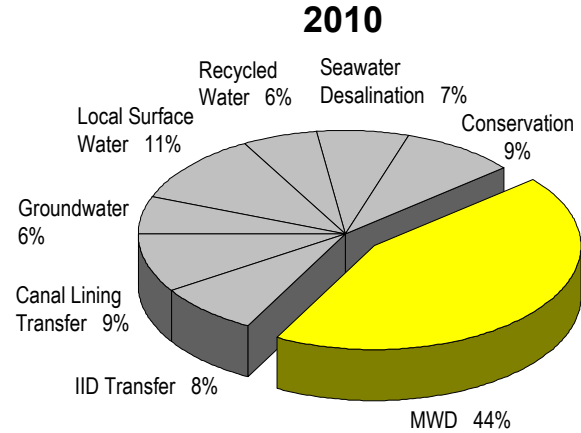
MWD WATER

Water from MWD was first imported to the San Diego region in 1947 to supplement existing local surface and groundwater supplies. Today, MWD supplies approximately 85 percent of the region's water and will remain a significant source of supply in the future. MWD's supply was relatively stable until a six-year drought began in 1987. As early as 1952, Water Authority officials raised concerns about the region's dependence on MWD and its right to purchase enough water to meet the region's needs. Today, the Water Authority has a preferential right to 15.5 percent of MWD's supply, but in normal years purchases 25 to 28 percent of MWD's water.

By 1991, and in the fifth year of a drought throughout the West, the Water Authority's member agencies were relying on MWD for more than 96 percent of their total water supply. However, critically dry conditions on the State Water Project, one of MWD's two sources of supply, caused water shortages throughout the entire MWD service area. MWD reduced the water it provided to the San Diego region by 31 percent. The impact was particularly hard on San Diego County due to its high dependence on imported MWD supplies.

Following the 1991 reductions in MWD deliveries to the Water Authority, the Water Authority Board began a process to decrease the high degree of reliance on a

Water Supplies Portfolio Programs



single water supply source. Today MWD remains the region's primary water supply source, providing 85 percent of the region's water needs.

The Water Authority has embarked upon a course to change its supplies portfolio, most significantly with the successful execution and implementation of the QSA and water conservation and transfer agreement with the Imperial Irrigation District. When these programs are fully implemented, the San Diego region will have significantly reduced its dependence on MWD. Even with this diversified supply, the Water Authority must continue to vigorously protect its significant investment in MWD's water supplies and infrastructure and to control costs.

Key Issues	Management Strategy	Goal #
Reliability of imported water supplies	<ul style="list-style-type: none"> Analyze MWD water resource planning efforts and available supplies, and develop and implement strategies to enhance the Water Authority's supply. 	1,8
	<ul style="list-style-type: none"> Analyze MWD CIP planning, timing, and execution; and advocate appropriate changes to ensure supply reliability and rate affordability. 	1,4,9
	<ul style="list-style-type: none"> Analyze MWD supplemental supplies and advocate appropriate changes in the context of the Water Authority's plans. 	1,8
	<ul style="list-style-type: none"> Evaluate opportunities for Water Authority supplemental supply and storage wheeled through MWD and implement those that bring affordability and reliability to the region. 	1,8
Affordability of MWD supplies	<ul style="list-style-type: none"> Advocate changes to MWD's Long Range Financing Plan consistent with the recommendations of the Water Authority's consultant and Finance Department recommendations. 	1,3,7
	<ul style="list-style-type: none"> Analyze MWD's CIP and annual budgets in the context of the Water Authority's recommendations for MWD's Long Range Financing Plan and water facilities master plan. 	1,3,4,9
	<ul style="list-style-type: none"> Work with Water Authority and MWD member agencies to secure MWD incentives for conservation and local supply development. 	2,6
	<ul style="list-style-type: none"> Seek emergency storage water supply rate from MWD. 	2,9
	<ul style="list-style-type: none"> Seek extension of reservoir storage program and implementation of a long-term storage replenishment rate. 	2,9
Water quality of MWD supplies	<ul style="list-style-type: none"> Monitor Skinner Filtration Plant ozone conversion and communicate progress to Water Authority member agencies. 	11
	<ul style="list-style-type: none"> Coordinate with MWD on water quality issues such as perchlorate to improve imported water quality. 	11
Reliability, affordability, and quality of Bay-Delta supplies	<ul style="list-style-type: none"> Advocate Board-adopted positions, working with our legislative advocates, MWD, and through other stakeholder organizations. 	10
	<ul style="list-style-type: none"> Influence federal and state legislation and policies that affect the California Bay-Delta Authority. 	10
	<ul style="list-style-type: none"> Advocate use of realistic assumptions of water conservation savings, recycled use, and seawater desalination production in California Bay-Delta Authority and California Department of Water Resources water resources planning. 	5
	<ul style="list-style-type: none"> Advocate California Bay-Delta Authority and state funding for San Diego area projects that offset demand for imported water. 	10
Communication of Water Authority and MWD positions	<ul style="list-style-type: none"> Develop alliances with MWD member agencies on common issues and concerns. 	1,2,3,4,6
	<ul style="list-style-type: none"> Assist delegates to inform MWD Board of Water Authority positions and views. 	1,2,3,4,6
	<ul style="list-style-type: none"> Communicate the impact of MWD issues and decisions to the Water Authority Board, member agencies, units of governments, and the public. 	1,2,3,4,6

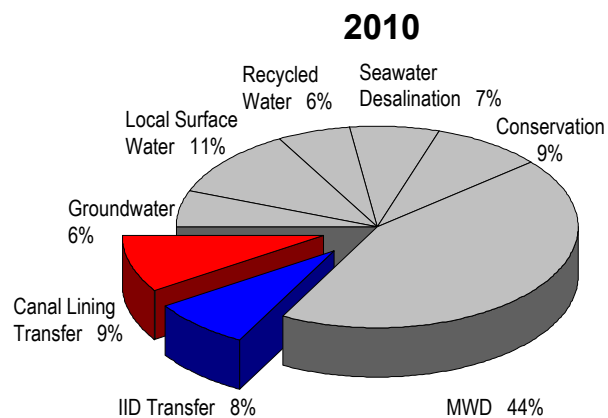
#	Goals	Time Frame
1	Obtain revisions to MWD Long Range Financing Plan consistent with Water Authority positions.	2004
2	Obtain MWD replenishment or emergency supply rate for Olivenhain Reservoir Emergency Storage fill.	2004
3	Obtain MWD decision on Diamond Valley Lake recreation that limits expansion of MWD's mission and controls costs consistent with Water Authority Board position.	2004
4	Obtain favorable decisions on phased implementation of Pipeline 6 to legal San Diego delivery point.	2004, 2006
5	Analyze updated California Department of Water Resources Bulletin 160 to ensure it includes accurate assumptions on water conservation, water recycling, and seawater desalination.	2005
6	Obtain MWD incentive for seawater desalination.	2006
7	Conduct comprehensive review of MWD Cost of Service.	2006
8	Make recommendation to Board regarding need to develop storage and additional water transfer options for the Water Authority.	2006
9	Review and make recommendations on MWD Budget and CIP.	Annually
10	Adopt Bay-Delta work plan.	Annually
11	Receive optimal blend of Colorado River and State Water Project water that meets 500 MG total dissolve solids standard and other water quality standards.	Ongoing

COLORADO RIVER WATER TRANSFERS

The QSA, executed on October 16, 2003, outlines how California will reduce its overuse of Colorado River water over a 15-year period. The linchpin of the agreement is the largest-ever agricultural-to-urban-water transfer. Under it, the Water Authority will receive 30 percent of its water supply by 2020. The Colorado River Water Transfers program manages the water transfer agreement with the Imperial Irrigation District, concrete lining of the All-American and Coachella canals, and implements the Water Authority's agreements under the QSA.

Water saved through conservation measures in Imperial Valley will be transferred to the Water Authority. Implementation of the water transfer began in 2003 with a transfer of 10,000 acre-feet of water. The quantities will increase according to an agreed-upon delivery schedule, ultimately providing 200,000 acre-feet of

Water Supplies Portfolio Programs



water in 2021. This amount will continue to be transferred between 2021 and as late as 2077. The goal is to achieve the transfer schedule described in the Agreement.

The Water Authority will receive 21,500 acre-feet of water annually from the concrete

lining of the Coachella Canal. The lining of the All-American Canal will provide 56,200 acre-feet of water per year when completed in late 2008.

The Water Authority has indirect control over the two canal lining projects. Imperial Irrigation District and the Coachella Valley Water District will manage the design, permitting, contracting, and construction of the two projects. These projects, like any other capital project, can fall behind schedule or exceed budget, which can increase costs to the Water Authority and its ratepayers.

Environmental challenges can cause delays of program components. Each of the canal lining projects is subject to completing necessary environmental documentation and permits before project construction can begin. In the case of the All-American Canal, state funding for project design and construction will not be available until environmental commitments are completed.

Successfully managing the implementation of practicable and fiscally sound environmental mitigation measures will assist the Water Authority in completing projects on schedule and without unnecessary additional costs resulting from delay.

The water transfer and the canal lining projects are of concern to a variety of stakeholders both within and outside of the region of San Diego and Imperial counties. The water transfer, in particular, has involved a large number of people who are concerned about possible “third-party” economic damages and environmental impacts that may result from the transfer. A public outreach and communications program will help address these issues and respond to the concerns of affected parties. The outreach and communications program will use staff and consultant resources to engage in a variety of activities designed to assure a broad understanding of the projects and to receive feedback.

Key Issues	Management Strategy	Goal #
Environmental compliance for canal lining projects	<ul style="list-style-type: none"> Supplement staff resources with environmental consultants to ensure timely issuance of necessary permits. 	1,4
	<ul style="list-style-type: none"> Advocate practicable and fiscally sound mitigation measures. 	1,4
Cost and schedule control for canal lining projects	<ul style="list-style-type: none"> Represent Water Authority's interests through coordinating committees that facilitate design and construction of projects. 	2,3,5,6
	<ul style="list-style-type: none"> Value engineer lining projects with Imperial Irrigation District and Coachella Valley Water District. 	2,3,5,6
	<ul style="list-style-type: none"> Track costs and schedule, and audit implementation. 	2,3,5,6
Outreach and communication for Imperial and Coachella valleys	<ul style="list-style-type: none"> Develop outreach plan for staff and consultants to effectively communicate water transfer and canal lining issues. 	14
	<ul style="list-style-type: none"> Emphasize Water Authority conservation and water use efficiency programs. 	14
State funding of canal lining projects	<ul style="list-style-type: none"> Work with California Department of Water Resources, Imperial Irrigation District, and Coachella Valley Water District to ensure appropriate and timely reimbursement of up to \$200 million of eligible project costs. 	1,4,15
	<ul style="list-style-type: none"> Seek early use of \$20 million in Proposition 50 funds. 	1,4
	<ul style="list-style-type: none"> Develop strategy for \$35 million available for groundwater/conjunctive use program. 	1,4
Water transfer third party economic impacts	<ul style="list-style-type: none"> Work through Local Entity and outreach program to ensure appropriate level of mitigation for third party impacts. 	7-13
Environmental mitigation of water transfers	<ul style="list-style-type: none"> Administer Joint Powers Authority to reimburse mitigation costs. 	7-13
	<ul style="list-style-type: none"> Use best efforts to develop Natural Communities Conservation Plan/Habitat Conservation Plan for Water Authority/IID transfer. 	7-13,16

#	Goals	Time Frame
Coachella Canal Lining Project.		
1	Complete environmental compliance necessary to begin construction.	2004
2	Begin construction.	2004
3	Complete construction and receive 21,500 acre-feet per year.	2007
All-American Canal Lining Project.		
4	Complete environmental compliance necessary to begin construction.	2005
5	Begin construction.	2005
6	Complete construction and receive 56,200 acre-feet per year.	2008
Water Authority/IID water transfer.		
7	Transfer 20,000 acre-feet.	2004
8	Transfer 30,000 acre-feet.	2005
9	Transfer 40,000 acre-feet.	2006
10	Transfer 50,000 acre-feet.	2007
11	Transfer 50,000 acre-feet.	2008
12	Transfer 60,000 acre-feet.	2009
13	Transfer 70,000 acre-feet.	2010
14	Establish outreach program in Imperial Valley.	2004
15	Establish and administer JPA.	2004
16	Complete Habitat Conservation plan for Water Authority/IID water transfer.	2006
	Colorado River transfers account for 17 percent (147,700 acre-feet).	2010

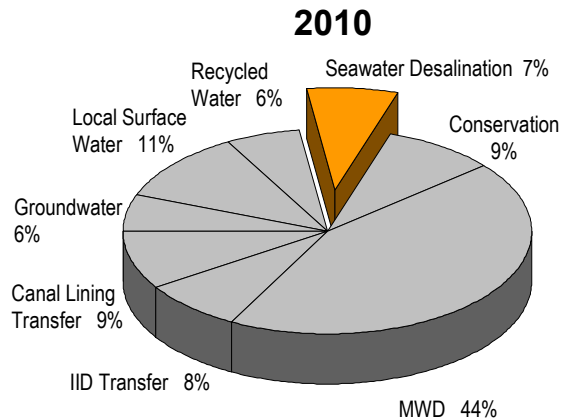
SEAWATER DESALINATION

Seawater desalination is one of the Water Authority's newest water supply diversification efforts. The concept is to convert seawater from the Pacific Ocean into a high quality and drought-proof local drinking water supply.

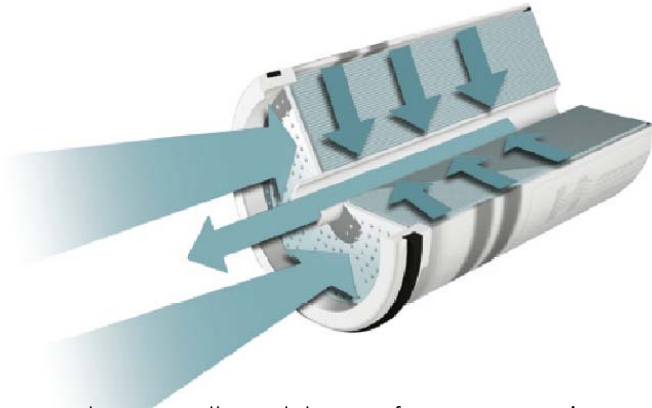
In the seawater desalination process, fresh water is separated from the salty seawater using reverse osmosis. In the reverse osmosis process, seawater is forced through a tightly wrapped membrane under very high pressure. The membrane allows the smaller water molecules to pass through. Salt and other remaining impurities are then returned to the ocean.

Locating reverse osmosis desalination facilities near existing coastal power generation plants allows the two facilities to provide mutual benefits. The desalination

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facility shares the seawater intake and discharge facilities used for power plant cooling. In return, the power plant obtains a firm "base-load" energy customer.



As seawater passes through layers of reverse osmosis membranes, water molecules are separated from salts, and impurities to produce high quality water.

The Seawater Desalination program goal is to promote the development of one or more desalination facilities capable of supplying 7 percent of the region’s water demand in 2010 and up to 15 percent by 2020. An environmental impact report (EIR) is under development for a proposed regional 50 million-gallon-a-day facility at the Encina Power Station site and associated conveyance facilities. Feasibility studies are also under way for the San Onofre Nuclear Generating Station and for a potential project in the South County.

Key Issues	Management Strategy	Goal #
Board decision on Encina site	• Conduct planning and certify environmental impact report.	1,3,5
	• Work with Carlsbad on developing a public agency partnership for project information.	1,3,5
Coastal Development Permit	• Develop Coastal Commission awareness of the importance of seawater desalination for regional water supply reliability.	2,4,5,6
	• Conduct technical studies that facilitate permitting process.	4,5,6
	• Community outreach to stakeholders.	5
Construction impacts on community	• Engage community leaders and residents in cooperative discussions.	5,6
	• Produce EIR for regional seawater desalination at the Encina Power Station.	5,6,8
Long lead time to implement seawater desalination	• Conduct detailed feasibility studies at San Onofre Nuclear Generating Station and in South County.	2,4
External funding	• Lobby for federal appropriations through leadership in U.S. Desalination Coalition.	7
	• Obtain federal appropriation.	7
	• Obtain external and state of California funding.	7

#	Goals	Time Frame
1	Provide key milestones and parameters to the Board for determining the feasibility of seawater desalination.	December 2004
2	Complete feasibility study of potential joint seawater desalination development opportunities for the San Diego/Tijuana region.	December 2004
3	Jointly develop with Carlsbad an interagency implementation agreement for the Encina project.	2005
4	Complete feasibility study for a seawater desalination project at the San Onofre Nuclear Generating Station.	2005
5	Certify EIR for a regional seawater desalination facility at Encina.	December 2005
6	Ensure completion of first phase (50 mgd) of Encina desalination facility and that is fully operational.	June 2010
7	Secure federal appropriations and new authorizations for Water Authority seawater desalination program.	Ongoing
8	Secure Coast Development Permit for seawater desalination project(s) and other regional regulatory permits.	Ongoing
	Seawater desalination provides 7 percent (56,000 acre-feet) of regional water supplies.	2010

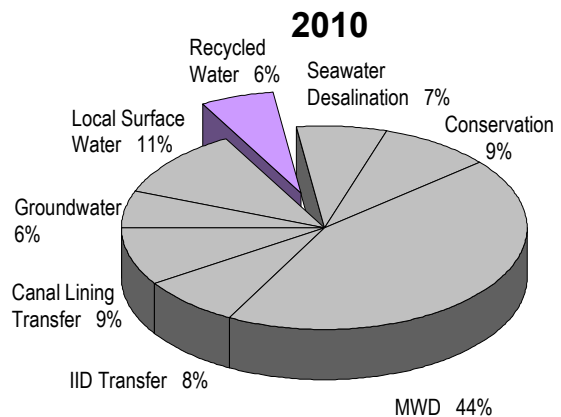
RECYCLED WATER

The Recycled Water program is the first of the local water supply programs that are developed and managed by the member agencies. It seeks to treat and distribute



Purple fixtures are installed throughout the county where recycled water is used for irrigation.

Water Supplies Portfolio Programs



municipal wastewater for use in irrigation and other non-potable uses. Every gallon of recycled water used reduces the need to import or develop other water supplies. At present, member agencies use about 13,000 acre-feet of recycled water for non-potable needs. Recycled water supply plans call for over 45,000 acre-feet by 2010, all of which would be developed by the Water Authority's member agencies.

The Recycled Water program goal is to promote the development and use of recycled water capable of supplying 6 percent of the region’s water demand by 2010.

The Water Authority currently provides up to \$100 per acre-foot incentive from the Reclaimed Water Development Fund to

support this program, totaling \$700,000 annually to program participants. The Water Authority also assists member agencies in obtaining regional, state, and federal funding. The Water Authority works to influence legislation and regulations to ensure that recycled water is maximized in the San Diego region.

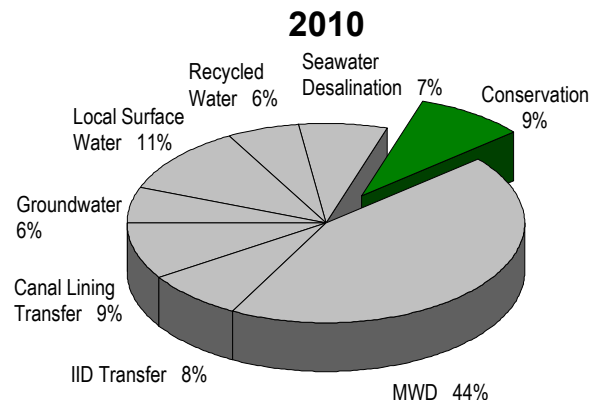
Key Issues	Management Strategy	Goal #
Recycled water target attainability	<ul style="list-style-type: none"> Develop actions in partnership with member agencies to meet recycling targets. 	3,4,7
	<ul style="list-style-type: none"> Explore partnership arrangements between member agencies and Water Authority that identifies the roles and obligations of parties. 	3,4,7
Availability of funding	<ul style="list-style-type: none"> Reexamine Water Authority funding mechanisms to maximize recycling programs. 	1,2,9
	<ul style="list-style-type: none"> Advocate for state and federal funding. 	2,9
	<ul style="list-style-type: none"> Work with member agencies to ensure projects qualify for funding. 	2,4,9,10
Regulatory constraints	<ul style="list-style-type: none"> Advocate at the state and federal level for minimizing recycling regulatory constraints. 	8
	<ul style="list-style-type: none"> Work with the San Diego County Health Department to ensure balanced implementation of recycling rules and regulations. 	8
Retail customer acceptance	<ul style="list-style-type: none"> Encourage and support member agencies to develop programs to encourage retail customer acceptance of non-potable and potable reuse. 	5
	<ul style="list-style-type: none"> Ensure that total dissolved solids levels do not preclude customers from utilizing recycled water. 	6,11

#	Goals	Time Frame
1	Recommend changes to the Water Authority's Financial Assistance Program and Recycled Water Development Fund Program to encourage more recycled water development.	October 2004
2	Award Regional Recycled Water Study grant funding to member agencies.	2004
3	Convene a member agency working group on local resources development to: <ul style="list-style-type: none"> • Refine recycled water targets for 2005 Urban Water Management plans. • Identify implementation constraints and potential solutions. • Identify specific actions to meet recycled water targets. • Develop framework for potential new and/or revised recycled water partnership arrangement between the Water Authority and member agencies. 	2005
4	Present local resources working group recommendations to the Board.	2005
5	Complete the study portions of the Regional Recycled Water Study – Phase II.	2005
6	Develop programs to reduce salinity discharge from water softeners.	2005
7	Member agencies and Water Authority enter into formal partnership arrangements to meet recycled water goals.	2006
8	Obtain acceptable and practicable regulatory standards that allow member agencies to maximize recycled water development.	2006
9	Identify and help member agencies obtain \$10 million in federal and state grant funding for member agencies.	Annually
10	Secure funding for qualified member agency projects through MWD's Local Resources Program.	Ongoing
11	Support federal legislation that provides funding assistance for Colorado River salinity control programs.	Ongoing
	Recycled water accounts for 6 percent (45,000 acre-feet) of regional water supplies.	2010

WATER CONSERVATION

The Water Conservation program seeks to reduce the region's need for more expensive water supplies by maximizing efficient use of existing water supplies. In cooperation with the member agencies, the Water Conservation program seeks a 9% long-term reduction in water use by 2010. This sustained reduction in water use will be met by a continued commitment to the Best Management Practices established in 1991 by the California Urban Water Conservation Council and Agricultural Efficient Water Management Practices. In concert with these ongoing measures, the Treated Water Demand Management program will employ

Water Supplies Portfolio Programs



short-term extraordinary measures to manage seasonal treated water peaking.

The chief program components of the Water Authority's conservation program have traditionally been the Ultra-Low-Flush Toilet Voucher Incentive Program, the High-Efficiency Clothes Washer Program, the Commercial Industrial and Institutional



Commercial high efficiency clothes washers.

Voucher Incentive Program. These programs provide financial incentives in the form of vouchers to buy water-efficient appliances.

The Water Authority manages one of the most comprehensive and aggressive water conservation programs in California, investing more than \$1 million each year. The Water Authority operates the programs on behalf of many of its member agencies. Economies of scale provide savings on administrative costs. Conservation program funding for these programs is augmented by: Water Authority member agencies, the United States Bureau of Reclamation, California Department of Water Resources, SDG&E, and MWD.

Past water conservation successes have focused on indoor water savings. Future water conservation efforts are shifting to a greater emphasis on landscape irrigation savings. The Water Authority will continue to look for additional measures and methodologies that will result in even greater water savings.

Key Issues	Management Strategy	Goal #
Best management practices conservation targets	<ul style="list-style-type: none"> Refine programs in partnership with member agencies to meet conservation targets. 	1,2
Conservation funding	<ul style="list-style-type: none"> Advocate for federal and state program funding. 	3
	<ul style="list-style-type: none"> Pursue funding at MWD. 	3
	<ul style="list-style-type: none"> Reexamine funding mechanisms to maximize new conservation initiatives. 	3
Landscape water use	<ul style="list-style-type: none"> Develop improved efficiency irrigation devices purchase incentives. 	4
	<ul style="list-style-type: none"> Promote expanded use of artificial turf. 	4
	<ul style="list-style-type: none"> Create program for weather-based controllers. 	4
	<ul style="list-style-type: none"> Link landscape audits to hardware programs. 	4
	<ul style="list-style-type: none"> Support landscape design demonstration gardens. 	4
	<ul style="list-style-type: none"> Implement Web-based water budgets for commercial and multi-family customers. 	4

#	Goals	Time Frame
1	Convene a member agency working group on local resources development to: <ul style="list-style-type: none"> • Refine conservation targets for 2005 Urban Water Management Plans. • Identify implementation constraints and additional conservation programs. • Identify actions to meet conservation targets. 	December 2004
2	Present local resource working group recommendations to the Board.	2005
3	Complete conservation program funding plan.	2005
4	Lower average-year water use by 5 percent.	2009
	Conservation savings account for 9 percent (74,400 acre-feet).	2010

LOCAL SURFACE WATER

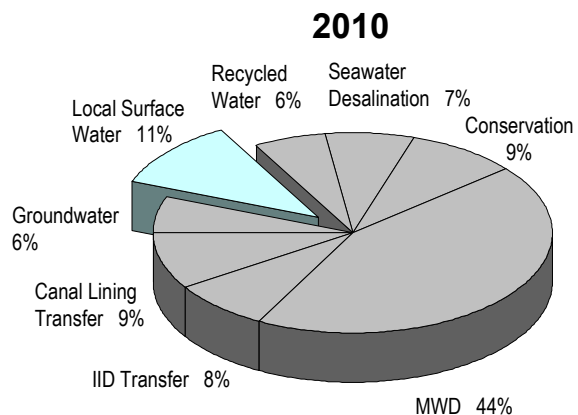
Surface water was the primary source of the region’s water supply until deliveries of imported water began in late 1947 and is still an essential supply for the San Diego region. Surface water is defined as the rainfall runoff water captured in local reservoirs that is available for use. These local supply reservoirs are owned and operated by the member agencies. The Water Authority expects that surface water will provide 11 percent of the total regional demand, in a normal year, by 2010.

Within the county, there are 17 major reservoirs, including the recently completed Olivenhain Reservoir, with a combined storage capacity of approximately 580,000 acre-feet. Surface water yields, linked to fluctuations in hydrological cycles, are highly variable. Since 1980, annual surface water yields have ranged from 31,000 to 174,000 acre-feet. The normal yield of 85,600 acre-feet is based on a historic 24-year average.

Maintaining adequate surface water quality is critical to supply reliability. Increased urbanization changes the constituents in the runoff water flowing into reservoirs and directly affects watershed quality.

There are nine reservoirs that can store imported water, all of which is delivered through the Water Authority’s pipelines. The Water Authority entered into a five-year

Water Supplies Portfolio Programs



Surface Storage Operating Agreement with MWD to efficiently manage local storage, save costs, and alleviate peak treated water capacity constraints. Under the agreement, MWD delivers 50,000 to 70,000 acre-feet of imported water into local reservoirs during the off-peak season (October-May). During the peak season, member agencies receive an incentive as stored water is withdrawn from the reservoirs according to an annual operating plan. The operating plan was developed cooperatively by MWD, the Water Authority, and participating member agencies.

The Water Authority, in partnership with its member agencies, works to ensure that the quality of runoff into the reservoirs does not degrade the supply and jeopardize yield.

Additionally, the Water Authority and member agencies need to implement seasonal and carryover storage programs

and projects to assist the region in meeting demands during summer months when demand is greatest.

Key Issues	Management Strategy	Goal #
Local surface supply yield	<ul style="list-style-type: none"> Develop actions in partnership with member agencies to maximize local surface supply yields from reservoirs. 	1,2
Water quality in local reservoirs	<ul style="list-style-type: none"> Work with member agencies, local government, and watershed groups to ensure that water quality in local reservoirs is considered in watershed protection programs and local land use planning. 	5
Local reservoir storage utilization	<ul style="list-style-type: none"> Work with MWD and Water Authority storage member agencies to continue and expand the Surface Storage Operating Agreement program. 	3
	<ul style="list-style-type: none"> Develop additional regional carry-over storage. 	4
	<ul style="list-style-type: none"> Develop long-term carry-over storage agreements with MWD. 	3

#	Goals	Time Frame
1	Convene a member agency working group on local resources development to: <ul style="list-style-type: none"> Refine surface water targets for 2005 Urban Water Management plans. Identify strategies for maximizing yield from local surface water reservoirs. Develop an action plan to protect surface water quality. 	2005
2	Present local resource working group recommendations to the Board.	2006
3	Surface Storage Operating Agreement program: <ul style="list-style-type: none"> Renew Surface Storage Operating Agreement with increased program volume. Maximize member agency participation. 	2008
4	Construct 100,000 acre-feet of additional carryover storage within the region.	2011
5	In partnership with member agencies, participate in development and implementation of watershed management plans and land use policies to ensure drinking water quality protection.	Ongoing
	Local surface water accounts for 11 percent (85,600 acre-feet) of regional water supplies in a normal local water runoff year.	2010

GROUNDWATER

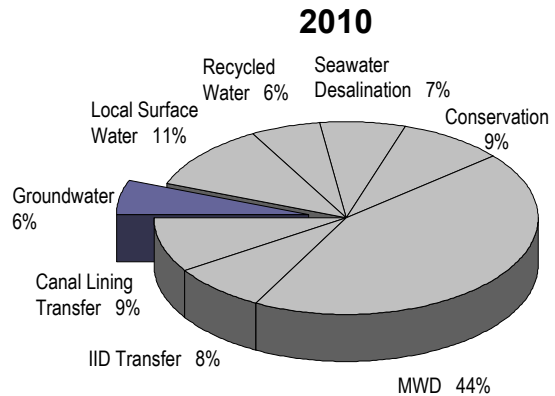
The Groundwater program was created in the early 1990s as one of the Water Authority's first water supply diversification efforts. The program provides financial and technical assistance to member agencies in the development and use of the region's aquifers to supply 6 percent of normal year water demand by 2010.

The Water Authority also assists in the development of basin-specific groundwater development plans. For example, the Water Authority, in coordination with the City of Oceanside, has funded and managed groundwater field investigations in the Lower San Luis Rey River Valley to evaluate the feasibility of conjunctive-use projects.



Demineralization of brackish groundwater in Oceanside.

Water Supplies Portfolio Programs



Conjunctive use projects recharge the groundwater basin with surface, imported or recycled water.

As part of the groundwater program, the Water Authority also provides funding through its Financial Assistance Program. The program helps member agencies initiate groundwater feasibility studies and develop groundwater management plans that evaluate and identify the potential for conjunctive-use and brackish groundwater recovery projects.

The Groundwater program assists member agencies to identify potential projects and obtain state and federal financial support. Staff also monitors state and local legislation, regulations, and policies for potential impacts on the availability or quality of local groundwater resources.

Key Issues	Management Strategy	Goal #
Groundwater targets	<ul style="list-style-type: none"> Develop actions in partnership with member agencies to assist in meeting groundwater targets and water quality standards. 	1,2,3
	<ul style="list-style-type: none"> Explore partnership arrangements between member agencies and Water Authority that identify the roles and obligations of each party. 	2,5
Availability of funding	<ul style="list-style-type: none"> Develop Water Authority funding incentives to support planning and implementation of groundwater projects. 	2,4
	<ul style="list-style-type: none"> Develop, monitor, and influence state and federal legislation and program implementation to increase funding. 	6
	<ul style="list-style-type: none"> Work with member agencies to ensure projects qualify for funding. 	6,7
Groundwater conjunctive-use	<ul style="list-style-type: none"> Collaborate with member agencies on groundwater conjunctive-use strategies. 	1,2,3

#	Goals	Time Frame
1	Complete feasibility study on potential Mission Basin groundwater storage and recovery project.	October 2004
2	Convene a member agency working group on local resources development to: <ul style="list-style-type: none"> Refine groundwater targets for 2005 Urban Water Management Plans. Identify implementation constraints and potential solutions. Identify specific actions to meet groundwater targets. Develop framework for potential partnerships between the Water Authority and member agencies to develop groundwater supplies within the region. 	2005
3	Present local resource working group recommendations to the Board.	2005
4	Board adopts policy principals for providing funding incentive to support implementation of groundwater projects that provide regional benefit.	2005
5	Based on working group recommendations, the member agencies and Water Authority enter into partnership arrangements that identify each party's role and obligations.	2006
6	Identify and help obtain grant funding for member agencies.	Annually
7	Secure funding for member agency groundwater projects from MWD's Local Resources Program.	Ongoing
	Ground water provides 6 percent (51,500 acre-feet) of regional water supplies.	2010

KEY EVENTS AND DEPENDENCIES

Seven water supplies portfolio key events will determine portfolio success. The receipt of the environmental permits to reline the All-American and Coachella canals will allow commencement of the work resulting in the delivery of nearly 78,000 acre-feet per year by 2008.

The Water Authority will need to create a framework with member agencies to double the amount of local water supplies available for regional use.

The completion of four capital projects will permit diversification of another 16 percent of the region's water supply from seawater desalination and canal lining transfers. Completion of the San Vicente dam raise will provide an additional 100,000 acre-feet of local carry-over storage.

The following table summarizes these water diversification key events and their dependencies through 2010.

	Key Event	Dependent Upon
2005	Obtain Colorado River Canal Relineing environmental permits.	Completion of EIR processes.
	Certify the EIR for the Encina seawater desalination project.	Resolution of site use, environmental issues, and permitting.
	Board adoption of the Urban Water Management Plan.	Development of partnering framework with member agencies.
2007	Complete relining of Coachella Canal.	Resolution of environmental issues, socio-economic impacts, and project cost control.
	Complete relining of All American Canal.	Resolution of environmental issues, socio-economic impacts, and project cost control.
2008	Complete relining of All American Canal.	Resolution of environmental issues, socio-economic impacts, and project cost control.
2010	50 mgd desalination plant fully operational.	Resolution of site selection and environmental issues.
2011	Complete San Vicente Dam raise beyond ESP.	Completion of water transportation CIP projects.

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Chapter 3. Water Facilities Focus Area

FOCUS AREA SUMMARY

The Water Facilities Focus Area contains four programs: the Capital Improvement Program, Operations and Maintenance of Facilities, Facilities Security and Emergency Response, and Treated Water Demand Management. This focus area seeks to cost-effectively build, operate, maintain, and secure water infrastructure to meet regional water demands.

The most significant issues in this focus area are:

- Controlling capital and operating costs of facilities.
- Balancing facility growth with water rate impacts.
- Managing facility operations, maintenance, and security to consistently deliver a reliable supply of water.

- Managing the ability to meet treated water demands.

The broad strategies to deal with these key issues are:

- Use proactive, exception management tools and strategies to control costs.
- Collaborate with member agencies on infrastructure growth and financing to help determine construction timing of capital projects.
- Develop and use departmental business plans to help manage facilities reliability.
- Reduce demand for treated water by working with regional stakeholders to increase local water supplies and storage capacity.

CAPITAL IMPROVEMENT PROGRAM

The purpose of the CIP is to build capital projects necessary to create a water system infrastructure to transport, treat, and store water needed to serve the member agencies. This program is critical to provide the facilities necessary to handle future demands and the growth of regional water supplies.

The CIP budget identifies capital needs over a 25-year period. It is updated on a biannual basis, reducing the chance of investment in infrastructure before the time of need. The Board-approved CIP totals approximately \$3.1 billion. Major elements of the CIP are the Emergency Storage Program (\$834

million), Seawater Desalination (\$668 million), Carryover Storage (\$242 million), and Water Treatment (\$155 million).

Annual execution of the CIP has been in the range of \$100 million in recent years. Significant increases in execution levels are anticipated in the future as emergency storage, seawater desalination, and other critical projects are designed and constructed. Successful CIP performance is dependent on the effective use of project management systems and tools including project controls, scheduling, and resource management.

Key Issues	Management Strategy	Goal #
Scheduling and sequencing of projects to meet reliability goals	<ul style="list-style-type: none"> Establish Water Authority-wide understanding and agreement of the need and timing for all CIP projects from planning phase through post-construction phase. 	1
Long lead time required to gain approvals to initiate project construction	<ul style="list-style-type: none"> Early creation of project implementation plan and consistency in management in all phases of capital projects. 	4,8
Resources to execute planned work, operate, and maintain new facilities	<ul style="list-style-type: none"> Evaluate CIP delivery methods and implement the most efficient model. 	2
	<ul style="list-style-type: none"> Perform project life-cycle cost analysis and implement most efficient alternative. 	7
Level of competition in project bidding	<ul style="list-style-type: none"> Become a preferred public agency to contract with in the San Diego region. 	4
Confidence by the Board that projects are effectively planned and constructed	<ul style="list-style-type: none"> Control capital costs using project planning and controls software, rate modeling tools, and value engineering. 	3,4,5,6
	<ul style="list-style-type: none"> Develop a project evaluation system using performance measurement metrics and exception management to set consistent performance expectations for project teams. 	3,5

#	Goals	Time Frame
1	Obtain Water Authority interdepartmental agreement on CIP project prioritization through 2006.	October 2004
2	Review existing CIP delivery model to identify most effective structure for program execution.	December 2004
3	Implement web-based project control software (Primavision) and make decision on implementation of project costing software (Primavera).	June 2005
4	Implement marketing plan and streamline bid processes to increase the number of bidders on Water Authority projects.	July 2005
5	Implement the Projects module of PeopleSoft Version 8.8.	June 2006
6	Complete the Emergency Storage Program projects and carryover storage project in the CIP.	2011
7	Perform life-cycle cost analysis to determine right-of-way and environmental management and operations and maintenance requirements for labor and material resources for new facilities.	Annually
8	Expend 95 percent of the annual CIP appropriation.	Annually

OPERATIONS AND MAINTENANCE

The Operations and Maintenance program ensures: the Water Authority has a reliable water system infrastructure; water quality meets standards; and, member agency water demands are consistently met. The Water Authority operates and maintains a regional water delivery system that delivered more than 615,000 acre-feet of water in fiscal year 2003. This system consists of more than 280 miles of five large-diameter pipelines in two aqueducts, more than 1,600 appurtenant structures and more than 100 flow control facilities, occupying 1,400 acres of right-of-way. Other major facilities include hydroelectric facilities, pump stations, flow regulatory and diversion structures, a dam, and a 24,000 acre-foot reservoir.

The Operations and Maintenance program issues include ensuring the continued operational reliability and flexibility of the aqueduct system, maintaining operational and business continuity, and meeting customer needs.

Active participation by operations and maintenance staff in new facility development, while working with member agencies to maximize the use of existing facilities, ensures the Water Authority maintains a flexible and reliable system. Clear and concise documentation of

operations and maintenance policies, procedures and standards, contributes toward staff development and retention, provides consistency of operation, and is critical to business continuity.

The use of proven and cost-effective technologies are necessary to increase operational efficiency, maximize resources, and keep pace with the changing business and regulatory environment. Actively seeking customer input and providing accurate and timely communication will increase confidence in the Water Authority's ability to deliver a reliable water supply, resulting in greater customer support and satisfaction.

The strategies to manage these key issues include continued operations and maintenance staff participation in the planning and design of future facilities to ensure that new facilities enhance system flexibility. The completion of scheduled maintenance and subsequent full documentation is necessary to ensure continued system reliability. The development of comprehensive facility operating plans and staff skills training and development are key factors in the areas of business continuity and staff development and retention.

Key Issues	Management Strategy	Goal #
Aqueduct System Reliability and Flexibility	<ul style="list-style-type: none"> Participate in all aspects of future Water Authority project planning, design, construction, and post-construction. 	2
	<ul style="list-style-type: none"> Solicit early member agency input on future projects. 	6
	<ul style="list-style-type: none"> Ensure inspection and maintenance of equipment and facilities are conducted at established industry intervals. 	7
	<ul style="list-style-type: none"> Refine right-of-way monitoring and encroachment removal program to meet Board policy. 	1
	<ul style="list-style-type: none"> Ensure appropriate facility and equipment upgrade and replacement. 	4
Operations and Business Continuity	<ul style="list-style-type: none"> Use computerized maintenance management software to increase operational and maintenance efficiency, documentation, and accountability. 	5
	<ul style="list-style-type: none"> Develop and maintain comprehensive operating plans for all major facilities. 	4
	<ul style="list-style-type: none"> Ensure accurate and complete drawings and schematics for all facilities. 	4
	<ul style="list-style-type: none"> Complete documentation of all operating and maintenance policies and procedures. 	4
Internal and External Customer Satisfaction	<ul style="list-style-type: none"> Conduct regular meetings with Water Authority member agencies to discuss operating and maintenance issues. 	6
	<ul style="list-style-type: none"> Provide accurate and timely operating information to internal and external customers. 	3, 6
	<ul style="list-style-type: none"> Promote Operations and Maintenance issues at all levels of organization. 	2,3,4

#	Goals	Time Frame
1	Obtain Board direction for resolving most serious right-of-way encroachments.	October 2004
2	Reorganize Operations and Maintenance CIP design and support functions to increase efficiency.	December 2004
3	Develop Web site for member agencies to access operational data and water resource information.	2005
4	Complete Operations and Maintenance strategic and business plans.	2005
5	Complete Operations and Maintenance Computerized Maintenance Management Software package implementation.	2006
6	Conduct routine meetings with external customers (operating heads, general managers, etc.) to obtain input on operations and future construction issues.	Monthly
7	Conduct pipeline shutdowns in support of CIP/Aqueduct Protection Program/Maintenance Programs.	Annually

FACILITIES SECURITY AND EMERGENCY RESPONSE

The Security and Emergency Response program ensures the security of Water Authority staff, customers, and the aqueduct system. The security of Water Authority staff, and of the aqueduct system, is critical to providing a safe and reliable water supply to member agencies. The ability of Water Authority staff to quickly respond to an emergency is essential to minimizing potential injury, property damage and restoring service to impacted member agencies.

The program key issues include: improvement of existing aqueduct and facility security; business continuity; emergency response planning; and, communication with key stakeholders.

The Water Authority has completed the EPA-mandated vulnerability assessments and is installing additional security improvements at critical facilities, including installation of security cameras, additional lighting, fencing, locks, and other security devices. Staff will incorporate lessons learned from the vulnerability assessments in the design of new capital projects.

As new facilities are constructed, the aqueduct system is evolving into a more complex and demanding system to operate. The combination of increased security concerns and system complexity has highlighted the need for an increased emphasis on business continuity and emergency response planning.

Establishing and maintaining positive relationships with key security and emergency response stakeholders, such as member agencies, law enforcement, and local political leaders is critical to program success.

The Water Authority will employ several strategies to deal with these key issues, including: integrating existing emergency response and security plans; undertaking additional physical and cyber security improvements; expanding operations center security and customer service support; constructing a new Operations Control Center; monitoring real-time water quality; and, developing communication and outreach programs.

Key Issues	Management Strategy	Goal #
Aqueduct and Facilities Security	<ul style="list-style-type: none"> Define physical, cyber, information, and personnel security roles and responsibilities. 	1
	<ul style="list-style-type: none"> Provide necessary facilities, staffing and funding to support security and emergency response requirements. 	2,3,4
	<ul style="list-style-type: none"> Conduct routine test of security system and employee/law enforcement response procedures. 	6
Business Continuity and Emergency Response Planning	<ul style="list-style-type: none"> Integrate Security and Emergency Response Plans to form Integrated Contingency Plan. 	1,5
	<ul style="list-style-type: none"> Coordinate emergency response drills with member agency and emergency response organizations. 	6,7,8
	<ul style="list-style-type: none"> Conduct annual emergency response drills and after-action debriefings. 	6,7
Communication with key stakeholders	<ul style="list-style-type: none"> Educate staff regarding security and emergency response roles and responsibilities, policies, and procedures. 	1,6
	<ul style="list-style-type: none"> Communicate security guidelines to staff, consultants, contractors, and member agencies. 	1,7
	<ul style="list-style-type: none"> Coordinate security and emergency response drill activities with applicable local and regional emergency response, water agencies, and law enforcement personnel. 	6,8
	<ul style="list-style-type: none"> Establish monitoring of water-related security issues at local and national level. 	7,6,8

#	Goals	Time Frame
1	Develop Water Authority General Security Policy.	2005
2	Implement 24-hour security monitoring.	2005
3	Implement additional online water quality monitoring.	2006
4	Complete construction of Operations Center upgrade and Emergency Operations Center.	2006
5	Integrate security, water quality emergency response, threat response, and other emergency response procedures into Integrated Contingency Plan.	2007
6	Conduct security and emergency response drills and staff training.	Annually
7	Conduct meetings with member agency operating heads to discuss security and emergency response issues.	Bi-monthly
8	Participate as regional water representative at County Emergency Operations Center.	Ongoing

TREATED WATER DEMAND MANAGEMENT

The Treated Water Demand Management program ensures the region has an adequate supply of treated water while additional treatment facilities are under construction. The Treated Water Enhancement Study, completed in the summer of 2003, forecasted a regional shortfall of 100 million gallons per day if additional capacity was not created by 2010. To meet this need, the Water Authority plans to construct a 50 Mgd regional water treatment plant by 2008 and 50 mgd regional seawater desalination by 2010.

Treated water shortfalls may occur during peak demand periods until the additional water treatment facility can be constructed. Until that time, the region will need to manage treated water shortages during the peak season and when maintenance or emergency situations limit the amount of treated water available for distribution.

The Treated Water Demand Management program is designed to accomplish four objectives. First, ensure existing treated water supplies and facilities are optimized through regional coordination; second, it will create savings from overall demand management measures; third, it will free up additional treated water by emphasizing short-term, extraordinary conservation during peak treated water demand periods; and fourth, it will shift urban irrigation practices to off-peak. These strategies are highly dependent on close cooperation and

partnering with member agencies, local media, and the retail water customers to be successful.

If demands exceed 95 percent of MWD's Skinner Water Treatment Plant capacity, the Water Authority will institute the Treated Water Shortage Allocation Plan. The plan consists of three phases. The first phase calls for notification to all member agencies that Skinner is operating at over 95 percent of its rated design capacity. If treated water demands continue to rise and exceed Skinner's capacity, phase two calls for voluntary reallocation of flows through the Skinner Area Operations Group and Water Authority member agencies. If treated water demands continue to exceed Skinner's capacity, the third phase calls for mandatory treated water delivery cutbacks to all Water Authority member agencies.

The Water Authority will work with member agencies on the expansion and use of local treatment facilities to provide a regional benefit during peak demand periods. These would include projects that could use existing facilities and be placed online in a short period of time.

Staff will be drawn from four departments to manage the Treated Water Demand Management program. Staff, for this effort consists of representatives primarily from the Operations and Maintenance, Public Affairs, Water Resources, and Engineering departments.

Key Issues	Management Strategy	Goal #
Regional treated water capacity	• Work with member agencies, MWD, media, and the public to expand peak demand water conservation programs.	5,6
	• Partner with member agencies to optimize treated water storage and delivery.	4,6
Expansion of existing water treatment plants and facilities	• Support the timely completion of member agency treatment plant expansions.	4,5,6
	• Construct regional water treatment facility.	3,6
Communication of treated water demand issue	• Clearly define and communicate treated and untreated customer peak demand issues.	5,6
	• Communicate with member agencies, MWD, and Skinner Operating Area agencies to collaboratively allocate treated water as required.	1,2,6
	• Coordinate treatment plant shutdowns to minimize regional treated water impacts.	4

#	Goals	Time Frame
1	Develop and communicate regional treated water allocation procedures for use during treated water shortage.	October 2004
2	Develop Skinner Operating Area Treated Water Shortage Allocation Plan with Western Municipal Water District, Rancho California Water District, and Eastern Municipal Water District.	December 2004
3	Complete construction of regional water treatment plant.	June 2008
4	Develop annual regional treatment plant shutdown and expansion schedules with contingency plans for expansion delays.	Annually
5	Conduct a peak demand evaluation after each summer period to refine program strategy and goals.	Annually
6	Conduct routine meetings with external customers (Operating Heads, General Managers, etc.) to communicate treated water demand issues.	Monthly

KEY EVENTS AND DEPENDENCIES

The June 2004 adoption of Regional Facilities Water Master Plan increased the size of the CIP to more than \$3 billion. Annual execution of the CIP has been in the range of \$100 million and significant increases are projected as emergency storage, seawater desalination, water treatment, and other critical projects are built.

Peak treated water will be a priority issue through the summer of 2007. The Water

Authority Treatment Plant is scheduled to be in operation by June 2008 expanding treated water production with the region.

Completing the upgrade of the Escondido Operating and Emergency Operating Center will provide an enhanced level of service for EWP projects and emergencies. The new maintenance management system will provide opportunities for increased maintenance productivity and asset life-cycle cost management.

The following table provides a timeline of the water facilities key events and principal

dependencies through 2010.

	Key Event	Dependent Upon
2005	Adoption of the two-year CIP budget with increasing levels of expenditure.	Executive staff alignment on project priorities and organizational structure.
	Award the contract to build the water treatment plant.	Successful procurement strategy.
2006	Complete implementation of new maintenance management system.	Database loading and user training.
	Complete construction of Operations and Emergency Operations Center upgrade.	Working successfully with local community.
2008	Complete Water Authority water treatment plant.	Resolution of environmental and community acceptance issues and board acceptance of procurement service agreement methodology.
2009	Complete Mission Trails CIP projects.	Resolution of environmental issues and successful community outreach.
2010	Encina Desalination Conveyance Facilities operational.	Resolution of site selection and environmental issues.
2011	Complete San Vicente Dam raise beyond ESP.	Completion of water transportation and pumping CIP projects.

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Chapter 4. Core Business Focus Area

FOCUS AREA SUMMARY

Development and implementation of the Core Business Focus Area programs in this chapter are critical to achieving the vision. Without these programs, the Water Authority could not accomplish the goals identified in the water supplies portfolio and facilities programs of the plan.

The Core Business programs can be grouped into four areas: building and maintaining external relations; ensuring financial capacity; maintaining qualified staff and technology; and, managing the environmental processes that allow timely completion of Water Authority projects.

For example, the Community Relations and Outreach program provides outreach and

relationship building with the public that is critical to achieving the CIP goals. The programs focusing on long-term financial planning ensure that funding will be available to purchase supplies under the Colorado River Water Transfers program and to pay for the construction of infrastructure. Critical to obtaining the Operation and Maintenance goals are the Workforce Management and Technology programs; these two programs ensure that the Water Authority is able to retain skilled employees and provide them with appropriate technology to accomplish the program goals. The final program, the Environmental Management program, provides timely environmental regulatory compliance that is critical to facility construction and repair.

MEMBER AGENCY RELATIONS AND PARTNERSHIPS

Future success in diversifying the region's supply sources and providing the necessary facilities depends on creating new models of cooperation and coordination between the Water Authority and its member agencies. The Member Agency Rate Impact Review Committee's recently completed work provides an example of a successful cooperative approach to how the member agencies and the Water Authority can work together more efficiently. Approximately 30 percent of the region's 2020 demands are targeted to be met by member agencies' local supply programs. Meeting these

demands requires stronger and better defined partnerships between member agencies and the Water Authority. These will be particularly important in the development of conservation, groundwater, recycled water, and local surface water supplies.

Member agency peer group activities, including regularly scheduled monthly meetings, special workshops, technical working groups, and e-mail distribution lists will continue to be important activities in the Member Agency Relations program.

Key Issues	Management Strategy	Goal #
Local water supply development risk	<ul style="list-style-type: none"> Timely reports on actual performance and identification of obstacles for success. 	1,4
	<ul style="list-style-type: none"> Develop partnerships that identify roles and obligations to ensure attainment of local water supply goals. 	4
Drought impacts	<ul style="list-style-type: none"> Development and adoption of a shortage allocation plan. 	2
Enhanced member agency input to Water Authority policies and programs	<ul style="list-style-type: none"> Build upon the success of the Member Agency Rate Impact Review Committee, provide timely information on sensitive issues, actively engage member agencies, and seek feedback on Water Authority performance. 	2,3,4,5

#	Goals	Time Frame
1	Update Urban Water Management Plan.	2005
2	Approve a shortage allocation plan.	2005
3	Develop framework for stronger and better defined partnership arrangements.	2005
4	Enter into enhanced partnership arrangements for local water supply development.	2006
5	Member agency survey of Water Authority programs and services.	Annually

COMMUNITY RELATIONS OUTREACH

The Community Relations Outreach program seeks to build community understanding of, and support for of the Water Authority's vision by building relationships with key business, community, industry leaders, and civic groups.

Staff builds relationships by employing proven outreach tools: speakers bureau presentations; executive water briefings; school and community education programs; education exhibits; community and educational partnerships; tours; fact sheets; and, newsletter distribution. The Water Authority also increases awareness by participating in special events hosted by community businesses and organizations. These tools and activities provide a forum for business and community leaders to show support for the Water Authority's vision and for the Water Authority to receive their valuable input.

An important aspect of Community Relations is CIP outreach. These activities are designed to provide project-specific information to the public impacted by Water Authority construction activities.

CIP outreach serves to resolve community concerns before, during, and after construction. Keeping the community updated on these activities contributes to the Water Authority's ability to complete projects and make major repairs in a timely manner.

Tools commonly used to conduct CIP outreach include: stakeholder interviews; public meetings; briefings for local officials; updates to community groups; newsletters; fact sheets; notices; toll-free project information telephone lines; and, project/facility tours.

Key CIP outreach activities through 2010 will focus on the Water Authority's efforts to complete most ESP projects, construct

seawater desalination and the water treatment facilities, and raise San Vicente Dam.

Key Issues	Management Strategy	Goal #
Community and business leaders' understanding of Water Authority's reliability vision	<ul style="list-style-type: none"> Strengthen and broaden relations with key business and community groups to provide clear communications and understanding of the actions necessary to obtain the reliability vision. 	1,2
	<ul style="list-style-type: none"> Employ community relations practices to increase understanding. 	1,2
Construction impacts to stakeholders from construction of CIP projects and major facility repairs	<ul style="list-style-type: none"> Determine community concerns about construction and repair projects to allow the project team to make community-sensitive decisions. 	3
	<ul style="list-style-type: none"> Educate the community about the importance of new water facilities to meet regional water demands. 	3
	<ul style="list-style-type: none"> Prepare and implement a public outreach plan at the start of each CIP project and major facility repair. 	3
Educational community understanding of water resource issues	<ul style="list-style-type: none"> Provide programs to educate students on the region's key water issues. 	4
	<ul style="list-style-type: none"> Provide opportunities for students, teachers, and the public to enhance knowledge of key water issues through community events, displays, and exhibits. 	4
	<ul style="list-style-type: none"> Partner with various community organizations and educational institutions to promote greater public understanding of regional water issues. 	4

#	Goals	Time Frame
1	Develop and implement community relations plan.	Annually
2	Create understanding and advocacy among community and business leaders to support the Water Authority's vision.	Ongoing
3	Ensure CIP outreach plans are developed and implemented as scheduled to keep CIP projects on time and within budget.	Ongoing
4	Increased student, teacher and public knowledge of regional water issues such as water conservation and water quality, leading to water-wise behaviors.	Ongoing

GOVERNMENT RELATIONS OUTREACH

The Government Relations Outreach program seeks to gain governmental support for the Water Authority's reliability vision. The primary strategies of this program are to work with legislators to create political environments that are supportive of the reliability programs, create positive relationships with key regulatory agencies,

and develop regional coalitions with other agencies around issues of common interest.

Key issues in this program include building support for development of seawater desalination, the timely construction of new facilities, and the ongoing external funding of

supply programs from regional, state, and federal sources.

Principal management strategies include raising awareness levels for reliability-based

programs and projects in the region, creation of and strengthening relationships with regulatory agencies, development of regional coalitions and the pursuit of external public funding.

Key Issues	Management Strategy	Goal #
Public officials' awareness of the importance of seawater desalination as a regional water supply	• Conduct legislative roundtables, briefings and project tours; produce and distribute electronic and project-specific newsletters.	2
	• Maintain leadership role in U.S. Desalination Coalition.	2
	• Build a relationship with Coastal Commission around Water Authority's seawater desalination program.	2
Local public officials' understanding of CIP projects in their districts	• Conduct timely and effective communications with public officials.	3
	• Provide briefings and tours on CIP projects.	3
Government funding for regional supply and infrastructure projects	• Identify available external funding sources for water supply and facilities programs.	1,4
	• Identify or initiate legislative appropriations and budget earmarks for water supply and facility development.	4,5
Legislation that could impact the Water Authority's vision	• Identify impacts of potential legislation on Water Authority programs and utilize lobbyists to influence potential legislation.	5
	• Develop strategies to influence legislation and secure Board approval of those strategies.	1,2
	• Participate in briefings in Sacramento and Washington, D.C., on key supply projects.	2,5
Regulatory agencies' approval for key projects	• Establish, maintain, and strengthen relationships with regulatory agencies' decision-makers.	1
	• Form partnerships with other agencies to advance common agendas.	1

#	Goals	Time Frame
1	Develop and implement government relations plan.	Annually
2	Create a public official appreciation and support of the importance of seawater desalination in the Water Authority's water reliability and diversification efforts.	Ongoing
3	Create a public official appreciation and support of Water Authority CIP projects in their district.	Ongoing
4	Create receptivity to new funding opportunities to support regional programs.	Ongoing
5	Support legislation that furthers the Water Authority's objectives.	Ongoing

MEDIA RELATIONS

The Water Authority's Media Relations program is designed to help effectively communicate the Water Authority's reliability message to the public. The Water Authority takes an active approach to media relations that increases the likelihood of accurate coverage and helps build editorial support for the Water Authority's vision.

The Media Relations program employs strategies such as: one-on-one and group briefings with reporters; editorial board meetings; opinion pieces; news releases; appearances on television news programs; staff interviews with print and broadcast media; and, marketing of news stories on the Water Authority's vision.

Key Issues	Management Strategy	Goal #
Relationships with news media representatives	<ul style="list-style-type: none"> Enhance and strengthen relationships with reporters through regular contact and timely response to inquiries. 	1,2
	<ul style="list-style-type: none"> As new reporters/editors/media general managers are assigned, offer overview briefings on Water Authority plans, programs, and projects. 	1,2
Media coverage of CIP projects and water supply programs	<ul style="list-style-type: none"> Identify CIP reliability projects that lend themselves to media coverage and seek news media coverage. 	1,2
	<ul style="list-style-type: none"> Produce clear and concise news releases and media kits. 	1,2
	<ul style="list-style-type: none"> Request editorial board meetings when appropriate. 	1,2
	<ul style="list-style-type: none"> Submit op-ed pieces. 	1,2
	<ul style="list-style-type: none"> Offer interviews, one-on-one and group briefings and tours of project sites to media representatives. 	1,2

#	Goals	Time Frame
1	Develop and implement media relations plan.	Annually
2	Increase number and accuracy of news reports of Water Authority programs and projects critical for reliability.	Ongoing

LONG-RANGE FINANCING PLAN

The Long-Range Financing Plan is a policy document that details how the Water Authority funds its CIP and operations over an extended period of time.

The plan is comprehensive, with sections devoted to the Water Authority's revenues, expenditures, funds, capital financing, financial planning, and investments. It is supported by a Financial Rate Modeling Program which helps develop the most cost-effective financing strategy to fund capital

projects and operating costs. The Plan utilizes a diversity of fixed and variable revenues and, through careful adherence to financial policies, ensures revenue stability. As a part of the Long-Range Financing Plan update process, the Water Authority will undertake a revenue study to examine non-commodity charges that the Water Authority uses to fund its capital improvement program. The revenue study will specifically examine non-commodity charges on new growth to determine whether growth is

paying its fair share of facility costs. It will also conduct an analysis of benefits to

ratepayers on the proposed Water Authority treatment plant.

Key Issues	Management Strategy	Goal #
Cost of capital	<ul style="list-style-type: none"> Achieve the best combination of short- and long-term debt including variable and fixed, as well as manage the debt capacity of the Authority. 	1
	<ul style="list-style-type: none"> Issue debt and obtain credit enhancements in the amount and type appropriately timed to meet the cash flow needs of the Water Authority. 	2
Affordability and equitability of water rates and charges	<ul style="list-style-type: none"> Obtain adequate balance of fixed and variable revenues and diversity of revenue sources. 	3
	<ul style="list-style-type: none"> Conduct rate-impact analysis in support of the CIP. 	4
	<ul style="list-style-type: none"> Strike appropriate balance between revenue needs and rate payer impacts. 	4
Understanding the use and levels of reserves by the member agencies	<ul style="list-style-type: none"> Educate member agencies on the use and level of reserves. 	5

#	Goals	Time Frame
1	Update the Long Range Financing Plan to coincide with the multi-year operating and capital improvement program budgets.	FY 2005, FY 2007, and FY 2009
2	Issue short- and long term debt for funding of capital projects.	FY 2005 and FY 2008
3	Complete revenue study.	February 2005
4	Set two-year water rates and charges.	FY 2005, FY 2007 and FY 2009
5	Conduct educational workshops with member agencies.	Ongoing

CREDIT RATINGS AND INVESTOR RELATIONS

The Credit Ratings and Investor Relations program manages the cost of debt by ensuring the continued marketability of Water Authority debt to investors and by demonstrating the Water Authority's effective management of financial risk.

The Credit Ratings and Investor Relations management strategy is to use industry reporting requirements and new technology

to provide enhanced access and disclosure of financial information to investors.

The program goals are to upgrade the Water Authority's credit ratings with the two major credit rating agencies and diversify the investor base through focused outreach to investors. This will lead to lower debt issuance costs and produce lower water rates for Water Authority member agencies.

Key Issues	Management Strategy	Goal #
Communication of financial strength and continuing commitment to financial management excellence	<ul style="list-style-type: none"> Utilize industry reporting requirements and technology to provide enhanced access and disclosure of financial information to investors. 	3,4
Relationship with rating agencies and bond investors	<ul style="list-style-type: none"> Enhance outreach program through direct contact with rating agencies and bond investors. 	1
	<ul style="list-style-type: none"> Track and analyze investors of Water Authority debt. 	5
Water Authority credit rating	<ul style="list-style-type: none"> Minimize financial risk using Long-Range Financing Plan. 	2

#	Goals	Time Frame
1	Rating agency/bond insurer presentation.	2005
2	Obtain a credit rating upgrade from Fitch and Moody's.	2008
3	Issue quarterly newsletter to investors.	Ongoing
4	Continue to publish and update financial information on Water Authority Web site.	Ongoing
5	Expand and diversify investor base through focused tracking of investors and Water Authority debt.	Ongoing

TECHNOLOGY

The purpose of the technology program is to manage information systems so that they provide accurate and timely information needed for daily business operations and informed decision-making. The Water Authority's current technology base includes software applications such as Peoplesoft, Maximo, GIS, SCADA, Primavera, Microsoft Office, and other specialized applications. An important element of the technology program is to ensure that future investments

in information technology are cost-effective and appropriate to support the execution of the programs identified in the Plan.

Management strategies include identifying and resolving redundancies, implementing data development standards, deploying appropriate tools to ensure timely access to information and implementing a structured process for reviewing and approving future investments in information technology.

Key Issues	Management Strategy	Goal #
Accurate, timely and accessible information for business operations and decision-making	<ul style="list-style-type: none"> Integrate databases to reduce data redundancy and increase information-sharing. Provide methods to make data accessible to staff. 	3,5
	<ul style="list-style-type: none"> Develop standards, conventions, and policies for data development, maintenance, security, and stewardship. 	2,3,8
	<ul style="list-style-type: none"> Maintain and replace critical technology in accordance with industry standards. 	1,4,6,7
Selection of appropriate technology to support Water Authority's strategic objectives	<ul style="list-style-type: none"> Ensure future investments in technology are appropriately prioritized and aligned with the Business Plan programs. 	1

#	Goals	Time Frame
1	Complete Information Technology Strategic Plan and implement IT governance structures and IT project portfolio management practices for reviewing, approving, and managing investments in information technology.	October 2004
2	Complete Computer-Automated Drafting Standard document.	October 2004
3	Complete GIS CIP Project.	2005
4	Complete implementation of SCADA upgrade to Wonderware product.	2005
5	Develop Web site for member agencies to access operational data and water resource information.	2005
6	Complete PeopleSoft Financial version 8.8 and Human Resources version 8.9 upgrades.	2006
7	Complete Operations and Maintenance Computerized Maintenance Management System implementation (Maximo).	2006
8	Update 70 percent of Operations and Maintenance records drawings.	2010

WORKFORCE MANAGEMENT

The purpose of the Workforce Management program is to recruit, develop, and retain a highly qualified, diverse workforce to build, manage, and operate the Water Authority's increasingly complex programs.

A well-defined workforce management program is an important tool to address the resource needs of the Water Authority. Maintaining the necessary balance and mix of staff will be a significant challenge as growth of the CIP, staff retirements, and a competitive labor market impact the organization.

Workforce planning is a systematic and ongoing process for identifying the human capital required to meet the Water Authority's goals and developing strategies to meet these requirements. Five issues are key in workforce management. Recruiting qualified staff begins the process that is followed by four other issues associated with creating a high quality work environment, developing and retaining staff, and succession planning.

Principal strategies to address these issues include: the development of innovative recruitment programs; enhancement of

organizational communication processes; use of employee job enlargement and enrichment programs; promotion of a

collaborative organizational culture; and succession planning to maintain continuity in key positions.

Key Issues	Management Strategy	Goal #
Succession Planning	<ul style="list-style-type: none"> Develop and implement a Workforce Management plan, which includes a workforce succession plan to ensure leadership continuity in key positions and to retain critical skills and information. 	2,7
	<ul style="list-style-type: none"> Ensure appropriate staffing levels within identified critical skill areas. 	2
Staff Development and Training	<ul style="list-style-type: none"> Develop and implement a Workforce Management plan that includes a workforce development and training plan to train employees to perform tasks associated with the more complex and sophisticated work environment. 	2,7
	<ul style="list-style-type: none"> Promote and encourage cross-functional work assignments and mentoring opportunities. 	2,3
Staff Retention	<ul style="list-style-type: none"> Refine and communicate agency-wide career opportunities through career development, career ladders, promotions, and transfer opportunities. 	1,2
	<ul style="list-style-type: none"> Develop communication process to ensure timely information is provided to staff on Authority-wide issues. 	1
Staff Recruitment	<ul style="list-style-type: none"> Develop apprenticeship and internship programs to enhance applicant pool for specific job classifications. 	1,2
	<ul style="list-style-type: none"> Re-examine recruitment policies, procedures, and outreach tools to optimize effectiveness. 	1,2
	<ul style="list-style-type: none"> Conduct examinations that sufficiently assess key competencies, and focus on capabilities as well as growth potential. 	2,3
Maintaining a Safe and High Quality Work Environment	<ul style="list-style-type: none"> Maintain and enhance current Employee Recognition, Team of Excellence, Award of Achievement and Safety Performance programs. 	1,2,5,6
	<ul style="list-style-type: none"> Support a collaborative partnership with all bargaining groups. 	3
	<ul style="list-style-type: none"> Maintain and enhance Performance Management programs. 	2

#	Goals	Time Frame
1	Develop annual communication plan that specifies how information is provided to Water Authority staff to facilitate learning and development.	December 2004
2	Develop Workforce Management plan with specific elements for workforce succession, retention, recruitment, development, and training.	2005
3	Conduct union/management coordination meetings.	Monthly
4	Coordinate and participate in the activities of the Employee Recognition Committee and other employee workplace issues committees.	Monthly
5	Maintain Workers Compensation Experience Modifier at 0.67, or better.	Annually
6	Maintain OSHA Incident Injury Rate at 2.5, or better.	Annually
7	Complete Equal Employment Opportunity Report and related action plans.	Bi-Annually

ENVIRONMENTAL MANAGEMENT

The Environmental Management program ensures compliance with environmental regulations to allow timely construction and ongoing operation of Water Authority capital projects. The goal is to develop reasonable and cost-effective environmental protection and mitigation programs to support the Water Authority’s mission.

The supply and infrastructure projects identified to meet future demands cannot be constructed and operated without first satisfying all necessary local, state and federal environmental regulations. The Water Authority’s Environmental Management program encompasses regulatory compliance, mitigation planning and monitoring, mitigation land management, technical studies, permitting support, and legislative review.

A number of key issues directly affect program execution. A major challenge is the continuing state and federal budget deficits that create pressures on regulatory agencies to operate with reduced staffing levels. This reduction can lead to delays in obtaining necessary approvals to build and operate facilities. To deal with this issue, the Water Authority is continuing to nurture its well established, relationships with the regulatory

agencies so that the permit process will be as smooth and efficient as possible.

Another key issue is the need to conduct public outreach to educate and gain an understanding of community issues associated with potential Water Authority activities. Misconceptions and lack of sensitivity to local environmental concerns can seriously delay or disrupt needed capital projects through political action or litigation. To address this issue, the Water Authority will integrate environmental management, engineering, and public affairs staff into capital project management teams in the formative stage of their development to reach out to communities, special interest groups, and individuals to educate and seek “win-win” solutions.

Finally, the number of capital projects slated for construction over the next decade to achieve the targeted level of water supply reliability is significant. The forecasting, scheduling, coordination, and execution of environmental management will need to be refined as the number of active capital project increases. The Water Authority has engaged an environmental program manager to provide project management and “on-call” extensions of staff to handle peak workloads.

Key Issues	Management Strategy	Goal #
Budget constrained staffing of environmental regulatory agencies	<ul style="list-style-type: none"> Continue to build trust-based relationships with environmental regulatory agencies. 	2,3,4,5
	<ul style="list-style-type: none"> Provide supplemental funding for staff at key regulatory agencies through written service agreements. 	2,3,4,5
Community sensitivity to environmental issues	<ul style="list-style-type: none"> Early inclusion of environmental planning, engineering, and public affairs staff in capital project management teams. 	1,2,3,4,5
	<ul style="list-style-type: none"> Develop programs to identify and resolve potential environmental issues with communities and special interest groups. 	2,3,4,5,7
Integrated environmental planning and execution management	<ul style="list-style-type: none"> Continuously refine project and environmental management processes. 	1,2,3,4,5,7
	<ul style="list-style-type: none"> Use of environmental consultants to assist with process reviews and augment Water Authority staff during peak workload periods. 	2,3,4,5,7
Uncertainty in future mitigation requirements	<ul style="list-style-type: none"> Mitigate in advance to the greatest extent possible. 	6
	<ul style="list-style-type: none"> Pursue mitigation banking independently and/or with member agencies/public agencies/utilities. 	2

#	Goals	Time Frame
1	Complete EIR for regional water treatment plant.	2005
2	Complete sub-regional Natural Communities Conservation Plan/Habitat Conservation plan to provide long-term mitigation for construction and operation of facilities.	2006
3	Complete EIR for construction of carry-over storage.	2006
4	Complete EIR and other environmental compliance requirements for Board decision on regional seawater desalination facility at Encina Power Station.	2007
5	Meet project schedule for implementation of Canal Lining Projects.	2008
6	Seek legislation that balances environmental protection with cost-effective provision of a safe and reliable water supply.	Ongoing
7	Support the environmental compliance requirements for all CIP projects to ensure schedules are met.	Ongoing

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Glossary

Base-load: (a) The minimum amount of water delivered or required over a given period of time at a steady rate; (b) An amount of energy demanded on a continuous basis.

Bay-Delta Urban Coalition: A coalition of the Water Authority and 10 other major urban water agencies that represents urban California's interests on Bay-Delta issues, primarily in Washington, D.C.

Best Management Practices (California Urban Water Conservation Council, 1991): "A Best Management Practice ("BMP") means a policy, program, practice, rule, regulation or ordinance or the use of devices, equipment or facilities which meets either of the following criteria: (a) An established and generally accepted practice among water suppliers that results in more efficient use or conservation of water; (b) A practice for which sufficient data are available from existing water conservation projects to indicate that significant conservation or conservation related benefits can be achieved; that the practice is technically and economically reasonable and not environmentally or socially unacceptable; and that the practice is not otherwise unreasonable for most water suppliers to carry out.

Brackish groundwater: Groundwater containing salt requiring treatment to be suitable for potable uses.

California Bay-Delta Authority: The state agency responsible for carrying out the CALFED Bay-Delta Program's long-term plan to restore the Bay-Delta's ecological health and improve water management for beneficial uses.

California Environmental Quality Act: State environmental legislation that is intended to ensure that the environmental consequences of a proposed public agency action are considered by decision makers before project approval. It requires public agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible.

California Urban Water Agencies: Comprises the Water Authority and nine other major urban water agencies. Studies technical water management issues of interest to its members and promotes the need for a reliable, high quality water supply for urban California.

Fitch: One of three major financial rating agencies that provide credit ratings on organizations that issue debt and equity securities.

GIS: An arrangement of computer hardware, software, and geographic data that people interact with to integrate, analyze, and visualize the data; identify relationships, patterns, and trends; and find solutions to problems. The system is designed to capture, store, update, manipulate, analyze, and display the geographic information.

Joint Powers Authority: Separate corporate entity established to govern and manage the terms of the San Diego-Imperial Irrigation District water transfer and related canal lining projects.

Local Entity: Organization established in the Imperial Valley to administer payments by the Water Authority for socio-economic impacts resulting from San Diego-Imperial Irrigation District water transfer.

Maximo: A Computerized Maintenance Management System that provides asset, work, and materials management and purchasing capabilities to help organizations maximize productivity.

Moody: One of three major financial rating agencies that provide credit ratings on organizations that issue debt and equity securities.

Non-commodity charges: Source of revenue to the Water Authority from a variety of charges, including interest earnings that are not based upon the sale of water.

PeopleSoft: The commercial financial accounting system used by the Water Authority.

Perchlorate: A contaminate from ammonium perchlorate manufacturing facilities in Nevada that is found in water from the Colorado River.

Preferential Rights: A water agency's right to receive an allocation of water during times of shortage as set forth in the Metropolitan Water District Act.

Primavera: The name of a corporate project management software used to schedule, resource, and control complex projects.

Primavision: The Web-based revision of Primavera that delivers only the appropriate information to the user, depending upon their role in the project.

Proposition 50: Proposition 50 authorizes the state to allocate \$3.44 billion for projects and programs related to freshwater and coastal resources. Up to \$2.4 billion is earmarked for programs of interest to the Water Authority, in such areas as safe drinking water, the Colorado River, desalination, conservation, recycling and groundwater.

SCADA: Supervisory Control and Data Acquisition systems are computerized systems used in industrial process control applications such as water distribution systems and electrical distribution systems.

U.S. Desalination Coalition: A coalition of agencies that is seeking federal assistance to encourage the development of seawater and brackish water desalination facilities.

Value engineering: A process to review and challenge project design elements and their underlying assumptions and methodologies in order to increase the value of the design.

WaterISAC: Water Information Sharing and Analysis Center is an information service developed to provide America's drinking water and wastewater systems with a secure Web-based environment for early warning of potential threats and a source of knowledge about water system security.

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San Diego County Water Authority

HEADQUARTERS

4677 Overland Avenue
San Diego, CA 92123-1233
[tel] 858.522.6600 [fax] 858.522.6568

HEILBRON OPERATIONS CENTER

610 West 5th Avenue
Escondido, CA 92025-4041
[tel] 760.480.1991 [fax] 760.480.9867

www.sdcwa.org
