



Our Region's Trusted Water Leader
San Diego County Water Authority

2019-2023 Business Plan

**Pioneering.
Visionary.
Agile.
Driven.**

*That's who we are.
That's what we do.*



2019 - 2023 Business Plan

October 2018

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Message from the General Manager

The San Diego County Water Authority was created by a legislative act in 1944 and tasked with the mission of providing a safe and reliable water supply to our member agencies serving the San Diego region. From inception, the Water Authority has faced and overcome significant economic, environmental, and regulatory challenges and a major key to our success has been the organization's ability to anticipate and adapt to these challenges. As a result, the Water Authority has achieved numerous important accomplishments, including the completion of the Claude "Bud" Lewis Carlsbad Desalination Plant, the 2015 Urban Water Management Plan, the San Vicente Dam Raise, and the updated Long-Range Financing Plan.

The Water Authority's Business Plan – presented originally to the Board of Directors in 2004 – is a key planning document that provides the roadmap for Water Authority staff to communicate, coordinate, and focus efforts towards meeting organizational goals. Throughout the years, the Business Plan has evolved, reflecting the addition of new challenges and changes to Water Authority policy and programs.

We have updated the 2017-2021 Business Plan to look forward for the next five years. The 2019-2023 Business Plan contains updates from the previous plan to include new objectives and tactics. The Business Plan highlights three key focus areas: Water Supply, Water Facilities, and Business Services. The plan contains updated programs and management strategies that reflect the organization's continued emphasis on water system management, system reliability, regulatory compliance, and financial stability. Objectives have also been updated to reflect the organization's emphasis on cybersecurity, energy

management, innovation, and workforce development. Near-term and long-term objectives and tactics, which are clearly linked to management strategies and key performance indicators to track continuous improvement, have been identified for each Business Plan program. As a leader on water issues statewide, the Water Authority continues to be a forward-looking agency, striving to anticipate future challenges, seek out opportunities, and respond quickly to our changing environment.



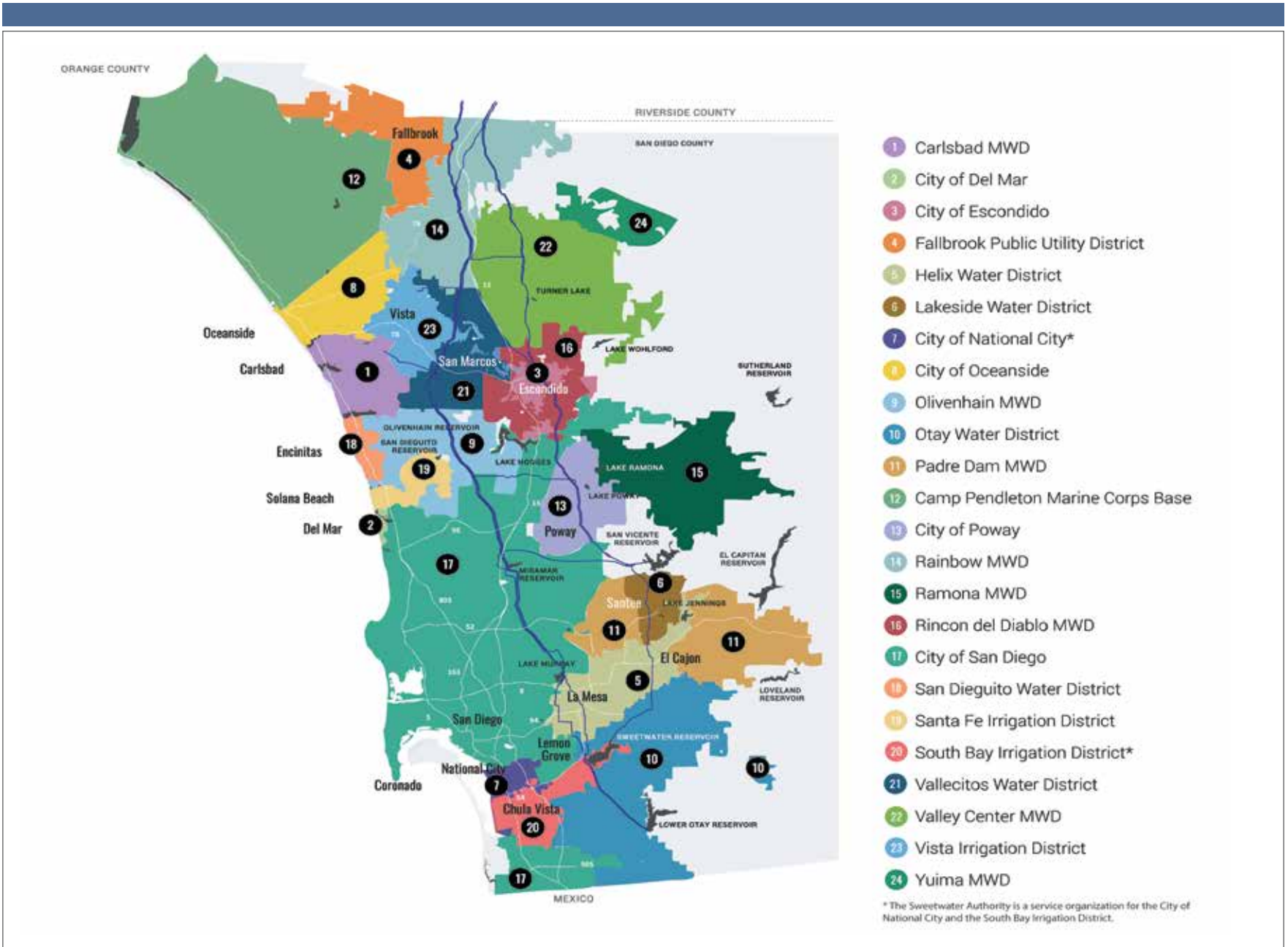
Maureen A. Stapleton
General Manager

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FIGURE 1.1 The San Diego County Water Authority Member Agencies & Service Area



Introduction

Business Plan Overview

The San Diego County Water Authority Business Plan describes the key focus areas, programs and program focus areas, management strategies, and objectives and tactics along with key performance indicators necessary to carry out the policies and strategic direction set forth by the Water Authority Board of Directors. Based on a five-year horizon, the plan is updated biennially in accordance with guiding principles and policies, related planning documents, and an analysis of current business trends.

The Water Authority's member agencies are represented through a 36-member Board of Directors. The Water Authority was formed by the California State Legislature under the County Water Authority Act, which established the Board of Directors as the agency's governing body. The County Water Authority Act authorizes the Water Authority to acquire water and water rights; construct, operate, and maintain facilities; tax; and incur bonded indebtedness.

The Board has adopted principles and policies that guide the Water Authority in its business practices. Among these are: the Debt Management and Disclosure Policy and Fiscal Sustainability Policy that ensure savings from refunded debt are maximized and financial stability for the agency, the Energy Management Policy that provides guidance on the development of energy related projects and programs, the Legislative Policy Guidelines that

provide a framework for evaluation of potential impacts to the Water Authority from state and federal legislation, and Bay-Delta and WaterFix Policy Principles that guide staff in evaluating the Bay-Delta initiatives. A complete list of the Water Authority's guiding principles and policies is provided in Appendix 1.



As the governing body of the Water Authority, the Board of Directors meet to ensure a safe and reliable water supply for the San Diego region..

Business Plan Key Focus Areas & Programs

Business Plan programs are divided into three key focus areas: Water Supply, Water Facilities, and Business Services. Each key focus area is divided into programs that contain the management strategies, objectives and tactics, and key performance indicators necessary to achieve the Water Authority’s mission.

Water Supply

The Water Supply key focus area consists of three programs that support the Board of Directors’ adopted level of water supply diversification.

Water Facilities

The Water Facilities key focus area consists of three programs that are designed to implement the Board of Directors’ cost-effective asset management strategy.

Business Services

The Business Services key focus area consists of four programs that are essential, in that they include the majority of the Water Authority’s business operations required to execute the activities of the previous two key focus areas.

FIGURE 1.2 Business Plan – Key Focus Areas and Programs

WATER SUPPLY	WATER FACILITIES	BUSINESS SERVICES
Imported Water	Infrastructure/ Capital Improvement Program	Business Support
Local Water	Sustainability	Communication and Messaging
Resource Planning	Water System Management	Financial Management
		Workforce Management

FIGURE 1.3 Planning Documents by Business Plan Focus Areas/Programs

KEY FOCUS AREA	WATER SUPPLY			WATER FACILITIES			BUSINESS SERVICES			
	IMPORTED WATER	LOCAL WATER	RESOURCE PLANNING	INFRASTRUCTURE / CIP	SUSTAINABILITY	WATER SYSTEM MANAGEMENT	BUSINESS SUPPORT	COMMUNICATION AND MESSAGING	FINANCIAL MANAGEMENT	WORKFORCE MANAGEMENT
AQUEDUCT OPERATING PLAN		■		■		■	■	■		■
ASSET MANAGEMENT PLAN				■		■	■	■	■	■
CLIMATE ACTION PLAN					■		■	■		
COMPREHENSIVE ANNUAL FINANCIAL REPORT	■	■	■	■	■	■	■	■	■	■
GENERAL MANAGER'S MULTI-YEAR BUDGET	■	■	■	■	■	■	■	■	■	■
INTEGRATED REGIONAL WATER MANAGEMENT PLAN		■	■		■		■	■		
LONG-RANGE FINANCING PLAN	■	■	■	■	■	■	■	■	■	
QUANTIFICATION SETTLEMENT AGREEMENT	■	■	■				■	■	■	
REGIONAL WATER FACILITIES OPTIMIZATION & MASTER PLAN		■		■	■	■	■	■	■	■
URBAN WATER MANAGEMENT PLAN	■	■	■	■				■	■	
WATER SHORTAGE CONTINGENCY PLAN	■	■	■	■				■	■	■

- Primary planning document
- Secondary planning document

Related Planning Documents

The Business Plan serves as an overarching planning tool to assist the Water Authority in accomplishing its mission of providing a safe, reliable water supply to the region. To the left is a table of the supporting planning documents highlighting their impacts on the key focus areas of Water Supply, Water Facilities, and Business Services and their respective programs. A description of each plan is provided in Appendix 2.

Current Business Trends

The water utility industry is similar to other factions of the American economy. The industry is subject to, and must be agile in adapting to changing economic conditions, societal perceptions, governmental regulations, environmental issues and sustainability, and technological security. The Water Authority faces an increasingly challenging future, and as a result must continue to develop pioneering strategies and execute a visionary approach to the management of water. Trends that are critical to the Water Authority's business operations are organized into the following categories: economic/business, societal/political, technological, and environmental.

Economic/Business Trends

Fiscal Sustainability

The Water Authority has a long history of prudent financial management and financial planning. Identifying fiscal challenges well in advance, the Water Authority has successfully maintained its fiscal health through the financial crisis and subsequent recession of 2008, and the multi-year drought. One example of a proven success for crafting innovative solutions is the Supply Reliability Charge, which further diversifies the fixed/variable revenue mix and ensures equitable recovery of supply reliability investments. Looking forward, the Water Authority will be focused on addressing the challenges facing water supply availability, providing affordable and reliable water to the region, providing smooth and predictable rates and charges, and funding the asset management program.



Low unemployment levels in the County reflect an economy on the rise.

Economic Conditions

San Diego County's economic condition has improved significantly as unemployment levels are at their lowest level in 18 years and home construction and home prices continue to rise. The economic development will drive water demands up in the future for both residential and commercial users, and increase the property tax related revenues the Water Authority receives. Growth related revenue from capacity charges, a highly volatile revenue stream, is also expected to increase.

Workforce Planning

The world of work is changing, and Workforce Management continues to be one of the greatest challenges facing the public sector today. Surrounded by a rapidly evolving world, volatile economies, environmental impacts, rapid changes in technology, and the changing needs of the workforce require the public sector to think differently about how to shape our organizations. The focus on five key areas: 1) Leadership, 2) Culture, 3) Talent, 4) Communication, and 5) Technology will help to shift our organization to a higher level of performance and to strategically position the Water Authority as a driver of change and innovation.

Societal/Political Trends

Intergovernmental Relations

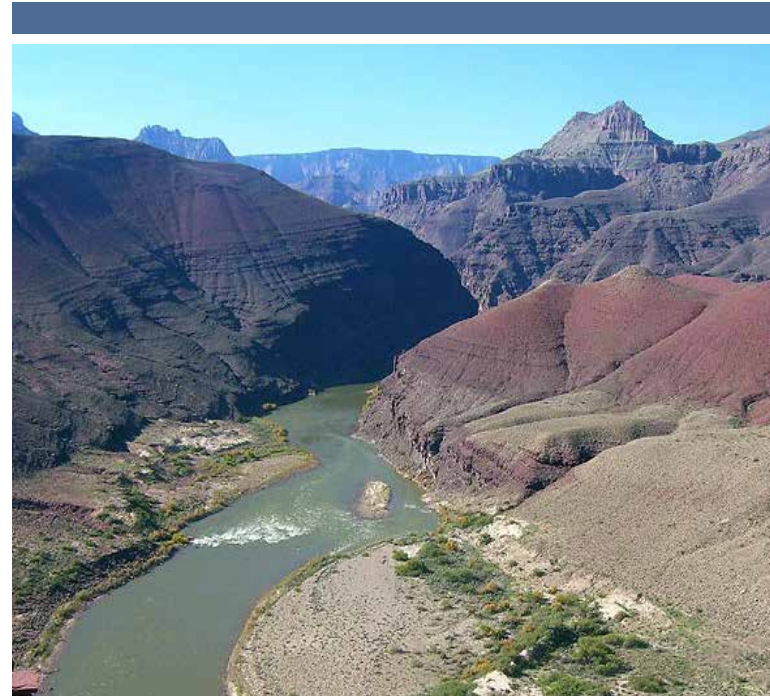
The nexus between regional growth and water is an ongoing and important discussion. While the San Diego region's growth rate has slowed, the population is still increasing. Between 2000 and 2015, the region's population increased approximately 15 percent. This equates to roughly 414,000 more people in the region. The Water Authority continues to work closely with local and regional land-use agencies and continues to focus on state and federal level coordination. A significant portion of our water supply is integrated with large and complex water systems, such as the Colorado River and Bay-Delta. Taking an active role in the intergovernmental arena and advocating for our region will continue to be necessary to ensure supply reliability.

Integrated Public Policies

The Water Authority's involvement with regional agencies is key for the integration of public policies affecting energy, housing, transportation, and water quality and supply. Advocating for the clarification of policies is in the public's best interest to ensure public agencies work in a consistent direction for the benefit of the region.

Transparent and Open Disclosure

The Water Authority strives to make decisions that positively contribute to the well-being of citizens today and in the future. Organizations with transparent and open disclosure of performance information strengthen the water industry and communities. The Water Authority will continue to be transparent and demonstrate a willingness to be forthright with information. This willingness stresses accountability, supports continuous improvement, builds stakeholder trust, reinforces credibility, and educates and serves the public.



The Colorado River provides the San Diego region with a portion of its imported water supply.

Public and Private Partnerships

The Water Authority has successfully engaged in partnerships with its member agencies, the private sector, community organizations, and ratepayers. These partnerships have resulted in the construction of the Twin Oaks Valley Water Treatment Plant, Helix Water Treatment Plant, San Vicente Dam Raise, Claude “Bud” Lewis Carlsbad Desalination Plant, and the creation of innovative water use efficiency programs. When cost-effective and feasible, the Water Authority and its member agencies will identify and evaluate opportunities for collaboration with each other and private enterprises to provide services and water supplies.

Renewal and Replacement of Aging Infrastructure

Each year the American Water Works Association (AWWA) releases a State of the Water Industry Report based on responses to an annual survey of industry professionals. The survey provides an industry-wide self-assessment and gathers information to support the water community’s major challenges. The 2018 report identified renewal and replacement of aging water infrastructure as the number one issue for the fourth year in a row. The Water Authority has remained vigilant with managing our infrastructure starting with pipeline rehabilitation in the 1980’s and establishing a formal management program in 1992. Overall, we continue to invest in our critical water conveyance infrastructure through the Asset Management Program. The overall goal of the program is to manage infrastructure assets by analyzing a broad spectrum of risks and optimizing the timing of infrastructure rehabilitation spending. Over the past decades, the program has completed more than 45-miles of pipeline rehabilitation, the scanning and evaluation of more than 120-miles of a pipelines, and visually inspected all 310-miles of pipelines in the system.



Crews repair equipment at one of the Water Authority’s flow control facilities.

Technological Trends

Technology

The Water Authority has been very successful at fostering innovation and the use of new technologies to help meet the changing needs of the water industry. Moving forward, the Water Authority will continue to leverage new technologies to support the areas of communication, planning and design, daily operations, and business services. The water industry, like many others, has seen an increase in cybersecurity threats, and the Water Authority continues collaborate with other organizations to promote coordinated security responses and adopt mitigation methods to protect and secure its technical infrastructure. The Water Authority is also optimizing its maintenance activities by using new technology and in-house developed

inspection technologies. The innovation program, a relatively advanced idea for a public agency, will help the Water Authority continue to be a technology pioneer that pursues cost efficient solutions to help safeguard critical water assets and increase the value to customers.

Potable Reuse Water

Reuse water is part of a natural cycle. The Earth's water supply is a closed loop system, with all the water on our planet being used over and over again. Water can be reused safely, efficiently, and in a sustainable manner. For these reasons, it is a viable part of the Water Authority's supply portfolio. To achieve the Water Authority's mission to secure a safe and reliable water supply for the region, it is important to beneficially reuse our water supply in the region.



The Water Authority and its member agency staff are actively pursuing potable reuse initiatives. Photo of the Advanced Purification Demonstration Facility courtesy of Padre Dam MWD.

Environmental Trends

Climate Change

The climate is becoming increasingly warmer and drier, and ocean levels are on the rise. Snowfall in the Sierras, a major source of water for California, is occurring later and melting earlier, therefore, reducing the supply of water. In addition, the State of California now mandates that government agencies address climate change impacts and reduce their carbon footprint.

Energy Demand

The Water Authority recognizes that energy is a significant cost in treating and delivering water to its member agencies. The Water Authority is pursuing opportunities to reduce these costs and energy demands through a variety of energy initiatives that include agency-wide planning, regulatory and legislative engagement, operations of existing energy facilities, and diversification of its energy supply portfolio. These initiatives will ensure the Water Authority's success in helping to stabilize water rates, reduce greenhouse gas emissions, and address economic and electrical system reliability risks.

Environmental Sustainability

A commitment to support cost-effective sustainability programs that will benefit the environment and promote thoughtful stewardship of natural resources is essential to decreasing the impact to ratepayers, reducing the environmental impacts of Water Authority operations, conserving energy and water, and helping the Water Authority better anticipate and adapt to the impacts of climate change. The Water Authority is engaged in a variety of sustainability initiatives, such as the development of renewable energy sources, the reduction in fleet emissions, and a decrease in waste production. These initiatives help to ensure the Water Authority is reducing its impact on the environment and making a positive contribution to a more sustainable future for the region.

Natural Disasters

The Water Authority recognizes its responsibility to be prepared and to respond quickly, safely, and effectively to emergency situations that arise within our jurisdiction. Building partnerships with other utilities and businesses for mutual aid, establishing clear public communication procedures, and having resources in place to effectively meet the needs at hand are evidence of our commitment to the well-being of the communities we serve.

Limited Local Water Supplies

Traditional sources of water supplies, such as local surface water and groundwater, are limited and becoming less reliable. While historically these supplies represent the least-costly source of water, climate change may negatively impact these already scarce water resources. As a result, they will continue to comprise a smaller percentage of our water supply portfolio and make the development of additional supply sources and increased water use efficiency essential.



The regional surface water yield is supported by 24 surface reservoirs. The Olivenhain Reservoir, completed in 2003, is the region's newest reservoir.

Business Plan Performance Assessment

Water Authority Management will conduct periodic performance assessments of the Business Plan objectives and tactics, and key performance indicators. These assessments will be presented to the Board of Directors and the public annually. The performance report, as well as an electronic version of the Business Plan document, are available online at www.sdcwa.org/mission-vision-values-strategies.

Agency Dashboard of Key Performance Indicators

The online Water Authority Agency Dashboard displays agency-wide key performance indicators in the focus areas of water supply reliability, water distribution and facilities, and financial responsibility. Many of the key performance indicators are linked to Business Plan objectives and tactics, making it another useful tool for monitoring Water Authority activities towards achieving its mission of providing a safe, reliable water supply to the region. Detailed descriptions of the Water Authority Dashboard focus areas and key performance indicators are provided in Appendix 3.

The Water Authority Dashboard is available online at www.sdcwa.org/dashboard and is continuously updated to ensure the most current status is available on each of the key performance indicators.

FIGURE 1.4 Agency Dashboard of Key Performance Indicators (www.sdcwa.org/dashboard)

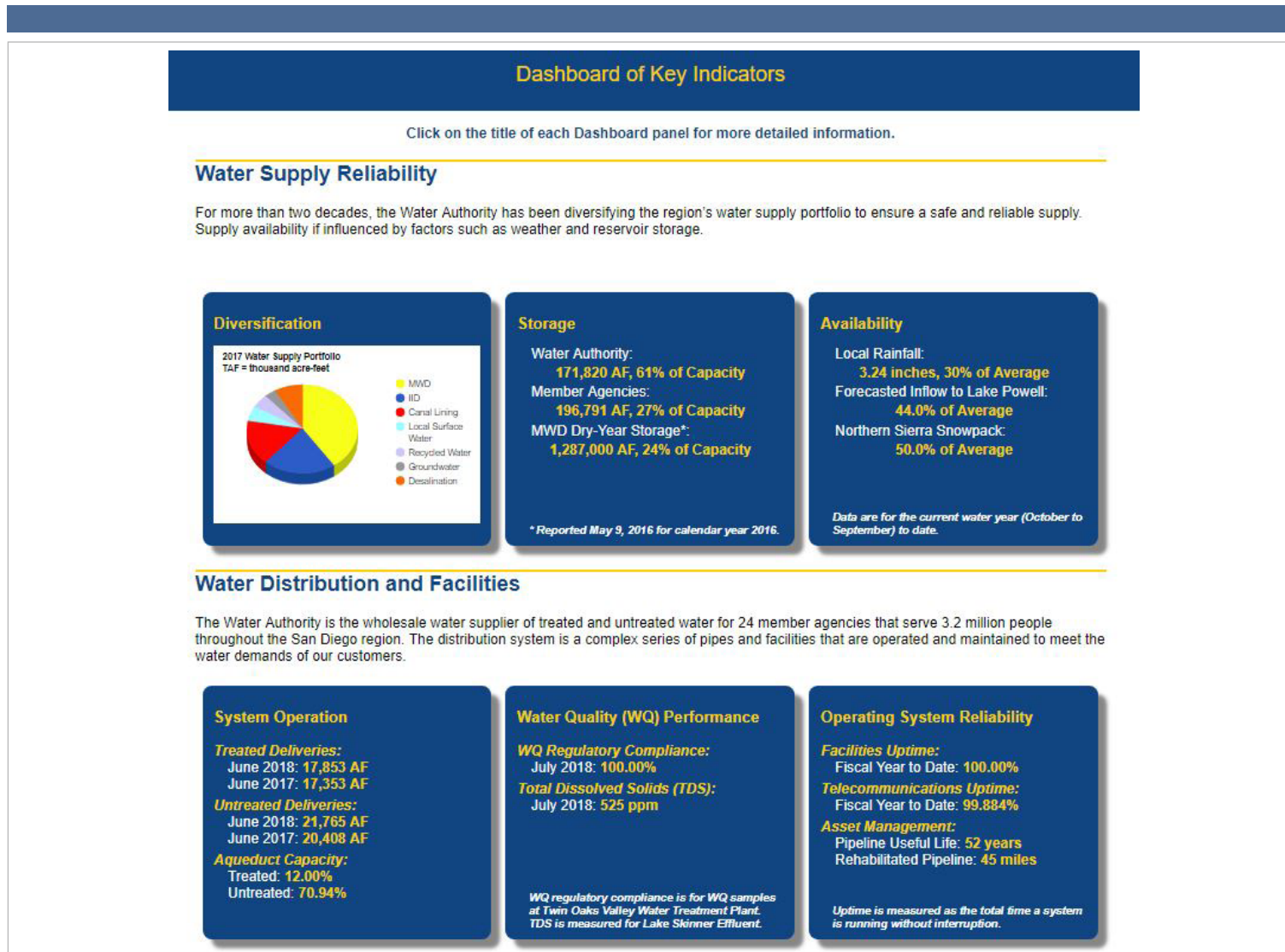

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FIGURE 2.1 Water Supply – Programs and Focus Areas

IMPORTED WATER	LOCAL WATER	RESOURCE PLANNING
Bay-Delta	Member Agency Supply	Water Management Planning
Colorado River	Potable Reuse	Water Shortage and Drought Response Management
Metropolitan Water District	Seawater Desalination	Water Use Efficiency

Water Supply

Water Supply Overview

The Water Supply focus area consists of three programs: **Imported Water**, **Local Water**, and **Resource Planning**.

Imported Water addresses the long-term viability, sustainability, and fiscal issues surrounding the Water Authority's imported water supplies. Local Water supports the on-going execution of the Water Authority's and member agencies' water supply diversification strategy. Resource Planning guides the Water Authority as it strives to carry on its visionary planning and implementation of pioneering water resource management and water efficiency programs and strategies.

Ensuring a diverse water supply portfolio supported by the long-term sustainability of local and imported water supplies depends on close coordination and collaboration with our member agencies and the public. Engaging stakeholders and influencing regulatory and legislative policy will help the Water Authority and the region plan for the future, obtain necessary funding, develop the necessary infrastructure, and attain our water reliability objectives.

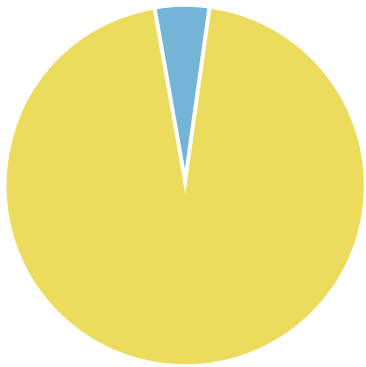
Key issues of the Water Supply focus area include:

- ▶ Ensuring appropriate cost allocation and long-term viability of imported water supplies
- ▶ Supporting regulatory efforts for potable reuse as the “next increment” of water supply for the region
- ▶ Advancing long-term water use efficiency practices in the region



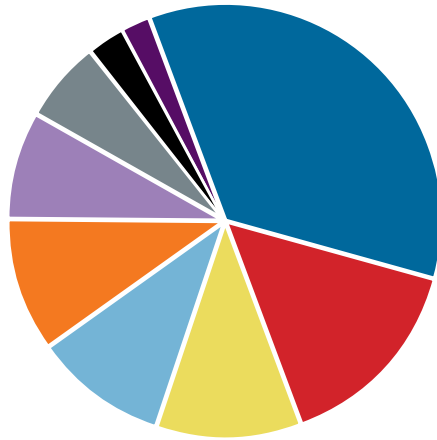
The Claude “Bud” Lewis Carlsbad Desalination Plant provides a highly reliable local water supply to the region.

Figure 2.2
1991 Water Supply Portfolio



95%	Metropolitan Water District
5%	Local Surface Water

Figure 2.3
2020 Water Supply Portfolio*



35%	Imperial Irrigation District Transfer
15%	Canal Lining Transfer
11%	Metropolitan Water District
10%	Local Surface Water
10%	Seawater Desalination
8%	Recycled Water
6%	Groundwater
3%	San Luis Rey Water Transfer
2%	Potable Reuse

Figure 2.4
2035 Water Supply Portfolio*



32%	Imperial Irrigation District Transfer
17%	Potable Reuse
13%	Canal Lining Transfer
11%	Seawater Desalination
9%	Recycled Water
8%	Local Surface Water
6%	Groundwater
2%	San Luis Rey Water Transfer
2%	Metropolitan Water District

**Based on interim demand forecast reset and includes verifiable and additional planned local supply projects from the 2015 Urban Water Management Plan.*

Imported Water Overview

The Water Authority receives imported water as a member agency of the Metropolitan Water District of Southern California (MWD) and from our Quantification Settlement Agreement (QSA) water transfer with the Imperial Irrigation District (IID) and canal lining projects. These imported supplies from the Sacramento Bay-Delta and Colorado River are vital to providing a diversified and sustainable water supply to the San Diego region.

The Water Authority's government relations team pioneers our advocacy efforts through active engagement of various governmental decision-making levels on Bay-Delta issues to ensure the Water Authority is an integral part of the Bay-Delta solution and that San



As a result of the Quantification Settlement Agreement, the lining of the All-American Canal contributes to San Diego's imported water supply.

Diego ratepayers' interests are protected. The team also works closely with the Governor's office, state legislators, federal officials, state agencies, water agencies, and interested stakeholders to develop agile and visionary solutions that ensure California WaterFix is properly allocated as a supply cost.

The Colorado River Program advocates the Water Authority's position on developing state and federal issues associated with the seven Colorado River Basin States agreements and QSA, including environmental issues at the Salton Sea. The program continues to ensure the completion of QSA milestones for the timely creation and delivery of scheduled volumes of IID water transfer and canal lining supplies. Going forward, a vital component of the program will be to safeguard these supplies during negotiations related to continued drought in the Colorado River Basin and to look for new and flexible ways to store these supplies. Additionally, our satellite public outreach office in the Imperial Valley drives our advocacy efforts on QSA and Salton Sea issues and quickly responds to stakeholder concerns.

The Metropolitan Water District Program promotes creative and sustainable ideas at MWD to ensure its long-term viability as Southern California's imported water provider. Paramount to MWD's longevity and relevancy is the need for it to comply with the law and to be nimble and adaptive in reaction to changing conditions. The Metropolitan Water District Program team works closely with the Water Authority's Board Officers and Delegates to MWD to advocate for the Water Authority's policies and objectives with MWD, its member agencies, the state, and other interested stakeholders. Ensuring MWD's rate-setting practices are lawful is vital to the Water Authority's ratepayers. The

initiation, in 2010, of the Water Authority's rate litigation against MWD was a bold step towards that objective. As a result of one phase of the litigation, the Water Authority affirmed MWD member agencies' right to challenge MWD without threat of retaliation. In addition, the Water Authority regained eligibility to access MWD's Local Resources Program funding; was awarded a refund of illegally charged Water Stewardship Rate payments on the Water Authority's QSA supplies; and secured a higher preferential right to MWD water that is approximately equivalent to an additional 100,000 acre-feet annually. The Water Authority aims to sustain these successful outcomes in the pending cases and obtain the region's proportional share of Local Resources Program funding.

Imported Water Focus Areas

The focus areas of the Imported Water Program are **Bay-Delta**, **Colorado River**, and **Metropolitan Water District**. Within each focus area are strategies to accomplish the major objectives and tactics over the next five fiscal years.

Bay-Delta

The Water Authority is actively engaged in Bay-Delta activities as this is one of the important sources of San Diego's imported water supply. Environmental conditions in the Bay-Delta are not sustainable, and the resultant water supply reliability uncertainties associated with Bay-Delta conditions impact the predictability of State Water Project water supply available to the San Diego region. The state is implementing the California WaterFix project to mitigate the impact of future environmental regulations on water supply. On August 9, 2018, the Water Authority Board of Directors adopted policy principles that convey the Water Authority's support for the California WaterFix project on the condition that MWD properly allocates the project's costs as

conservation or supply charges. The Water Authority will implement management strategies that ensure costs for fixing the Bay-Delta are equitably and fairly apportioned among MWD's member agencies, and commensurate with the water supply quantity and water quality benefits received. Main objectives and tactics driving these management strategies include bolstered outreach and advocacy of the Water Authority's support of the project conditioned on proper cost allocation, and ensuring that WaterFix's cost recovery does not disproportionately impact San Diego County ratepayers.

Colorado River

The Water Authority's independent Colorado River supplies from our conserved water transfer with IID and canal lining projects are critical to our region's water



Environmental conditions in the Bay-Delta impact the availability of State Water Project water supply deliveries to the San Diego region.



Successful implementation of the Quantification Settlement Agreement milestones is one of the key strategies of the Colorado River program.

supply. The key management strategies and objectives of the Colorado River focus area include successfully implementing QSA milestones and environmental mitigation requirements, developing innovative options for flexibility in QSA deliveries as annual transfer volumes ramp up through 2021, and protecting our Colorado River supplies. In 2017, the Water Authority Board of Directors approved the extension of the Exchange Agreement with MWD to match the 45-year term of the IID Water Transfer Agreement. This action has generated renewed interest in considering alternative conveyance of the transfer water should the transfer be extended beyond the 45-year mark. Additionally, mitigation water delivered to the Salton Sea since 2003 ended in 2017, shifting the focus of mitigation efforts to cost-effective on-the-ground air quality projects at

the sea to ensure environmental impacts of the QSA are fully addressed. The Water Authority will continue to ensure all required environmental mitigation is implemented at the Salton Sea through the QSA Joint Powers Authority. Finally, in 2017 the Water Authority successfully coordinated with other agencies on drafting a Stipulated Order adopted by the State Water Resources Control Board. The Stipulated Order further establishes the state's obligation to meet a series of milestones in implementing its phased approach to restoration, through its Salton Sea Management Program (SSMP). The Water Authority will actively monitor the State's progress and work collaboratively with other stakeholders to advance implementation of the SSMP.

The Water Authority will continue to work with QSA partners, other stakeholders, and the government relations team to safeguard Water Authority Colorado River supplies through drought contingency planning negotiations, and work towards a storage solution in Lake Mead. These actions drive many of the objectives and tactics developed for this focus area.

Metropolitan Water District

The Metropolitan Water District Program is responsible for developing and implementing strategies to achieve the Water Authority's long-term reliability and fiscal sustainability goals at MWD, in accordance with the Water Authority Board of Directors' strategic objectives. The Water Authority drives advancement of policies at MWD that: embrace transparent governance, legal rate setting, fiscal responsibility, and reliable supplies; create equity and fairness among MWD member agencies; and facilitate water transfers and effective resources management. The MWD management strategies aim to promote the Water Authority's positions on issues affecting MWD supply reliability, quality, cost and its long-term fiscal sustainability. Major tactics focus on gaining support and advocating for the Water Authority's position on key MWD policy concerns.

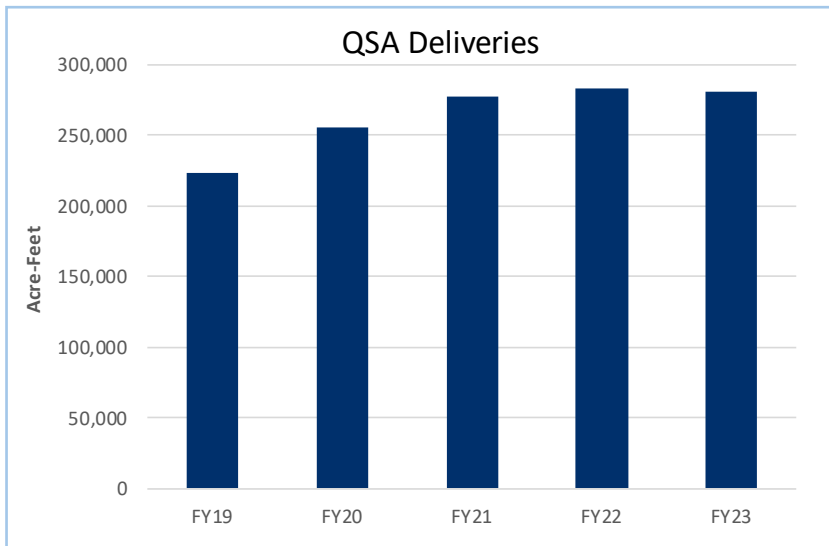
BAY-DELTA	COLORADO RIVER	METROPOLITAN WATER DISTRICT
<p>A. Advocate Board policies regarding Bay-Delta issues, funding initiatives, and the California WaterFix to federal, state, local, and other stakeholders.</p>	<p>C. Develop flexibility in Quantification Settlement Agreement implementation.</p>	<p>H. Support MWD Delegates in identifying, maintaining, and advancing Water Authority strategic goals at MWD.</p>
<p>B. Protect ratepayers from paying an inequitable share of California WaterFix costs by ensuring project costs are properly assigned in MWD’s rate and charges and are consistent with DWR’s historic practice of assigning similar projects as “conservation”, or supply charges.</p>	<p>D. Safeguard Water Authority investments from outside influences.</p>	<p>I. Influence policy decisions at MWD to ensure its long-term sustainability as a supplemental imported water supplier.</p>
	<p>E. Ensure completion of Quantification Settlement Agreement environmental mitigation milestones and Salton Sea activities.</p>	<p>J. Ensure the Water Authority receives its fair share of investments at MWD.</p>
	<p>F. Leverage opportunities to increase involvement in Colorado River Basin-wide programs, including storage opportunities in Lake Mead.</p>	<p>K. Advocate for equity and transparency in MWD’s decision making processes.</p>
	<p>G. Advance Water Authority Quantification Settlement Agreement policy through continuing dialogue with governing bodies, elected officials, and the public.</p>	<p>L. Resolve through litigation or settlement all outstanding issues in rate litigation with MWD.</p>

Water Supply IMPORTED WATER | Objectives and Tactics

No.	Description	Target date
1.	Achieve final decision in 2010/2012 MWD rate litigation through final court action or settlement and secure award of damages. (H, I, J, K, L)	Dec-2019
2.	Develop new and flexible water storage solutions, including an Intentionally Created Surplus account in Lake Mead for Water Authority Colorado River supplies, in coordination with local, state and federal stakeholders. (C, D, F, G)	Dec-2019
3.	Develop and implement strategies for Water Authority participation in Basin States policy discussions on the Drought Contingency Plan, binational issues, and renegotiation of the 2007 Interim Guidelines. (C, D, F, G)	Dec-2019
4.	Support the Water Authority's MWD Delegates engagement in the review of MWD's Ethics Office to promote transparency and equity at MWD. (H, K)	Dec-2019
5.	Communicate the Board's conditional support of California WaterFix and updated Bay-Delta Policy Principles and WaterFix to secure the support of the San Diego legislative delegation, business community, civic leaders, opinion leaders, and media for the proper allocation of project costs on MWD's rates and charges. (A, B)	Jun-2020
6.	Continue to explore the viability of alternative conveyance of QSA supplies. (C, D, F)	Jun-2023
7.	Work with QSA JPA parties to ensure all required environmental mitigation is implemented at the Salton Sea. (C, E, G)	Jun-2023
8.	Engage with the state Salton Sea Management Program, Governor's Office, elected officials, and opinion leaders to ensure the state meets its obligations for restoration at the Salton Sea. (D, E, G)	Jun-2023
9.	Lead stakeholder briefings, annual tours, and additional outreach with Imperial Valley stakeholders to enhance relationships and exchange perspectives on efficiency-based water conservation, Salton Sea issues, and water diversification in the San Diego region. (D, E, F, G)	Dec-2023
10.	Actively engage in MWD's efforts to update and refine key programs and policies to support Water Authority's strategic goals, including but not limited to supply and facility reliability, demand management subsidies, and MWD fiscal sustainability. (H, I, K)	Dec-2023
11.	Communicate the status of MWD's fiscal condition with key stakeholders to ensure MWD's long-term financial sustainability and viability, and ultimately obtain support from stakeholders for MWD to adopt a long-term finance plan. (H, I, K)	Dec-2023

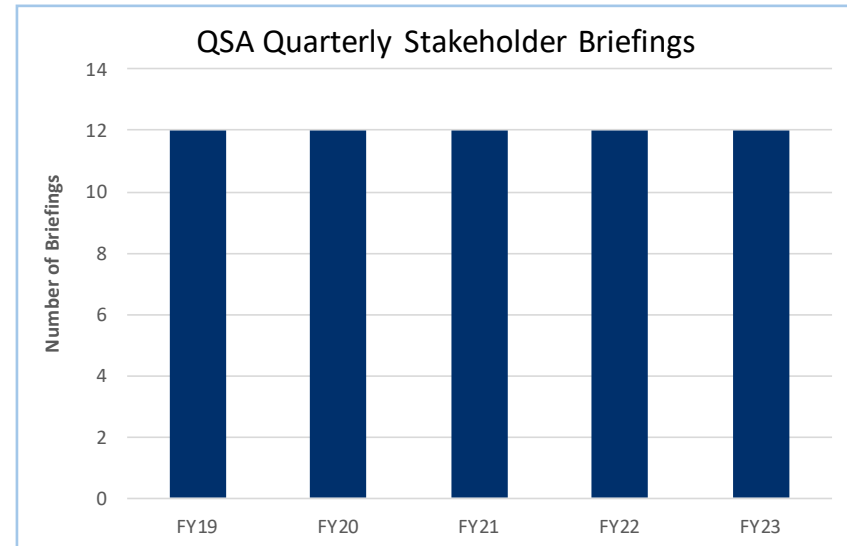
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Ensure full amount of scheduled Quantification Settlement Agreement water is delivered to the San Diego region each fiscal year.



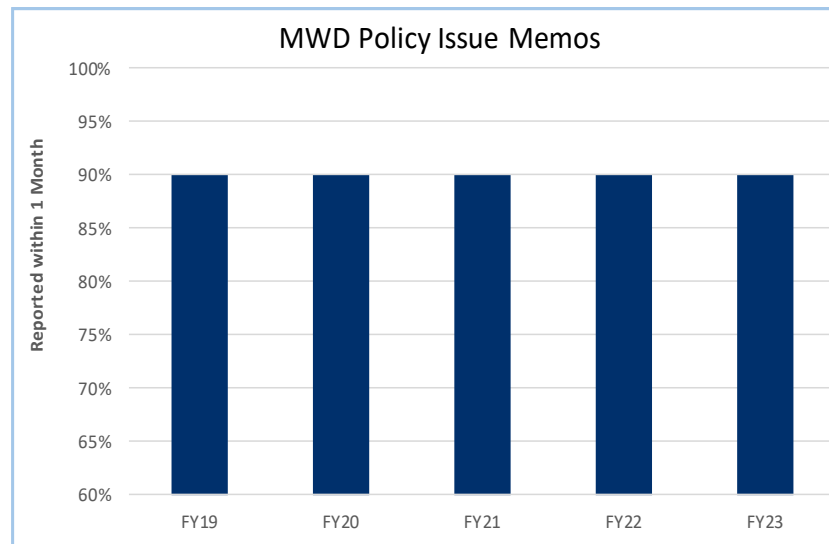
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Perform three (3) stakeholder meetings per quarter (12 annually) on emerging QSA issues to enhance legislative and community support for protection of Water Authority's Colorado River supplies each fiscal year.



3

Present to the Water Authority Board of Directors, 90 percent of key MWD policy issues, major resource and financial plans within one month of MWD Board review through 2023 to increase awareness and understanding of key MWD policy issues.



Local Water Overview

Local water resources developed and managed by the Water Authority and its member agencies are critical to the success of the region's water supply diversification program. Local projects reduce the need for imported water and often provide agencies with a reliable, drought resilient supply. Local resources include recycled water, groundwater, surface water, potable reuse, and seawater desalination. The San Diego Region has a long history of capturing local stormwater in backcountry and urban reservoirs for use as a surface water supply. Potable reuse and seawater desalination are new water supplies that have been realized or initiated, and reflect ongoing pioneering efforts to diversify the region's water supply portfolio.

As part of this program, the Water Authority is driven to work closely with its member agencies to foster and support development and optimization of local water supplies. This is accomplished by identifying, promoting, and obtaining outside funding opportunities to assist agencies in offsetting project costs; serving as a visionary leader and facilitator on various regulatory issues that affect the region; and providing technical assistance.

Commercial operation of the Claude "Bud" Lewis Carlsbad Desalination Plant in December 2015 represents a significant local water supply accomplishment. It is the result of a twelve-year collaborative effort by the region to secure up to 56,000 acre-feet of local, drought-proof supply. Since the start of operations, it has produced over 36 billion gallons of high-quality drinking water and won numerous awards including Global Water Intelligence's Desalination Plant of the Year, San Diego County Tax Payers Association's Grand Golden Watchdog award, and the Association of California Water Agencies Clair A. Hill Water Agency Award. In addition to the progress

made in seawater desalination, the Water Authority has successfully supported member agencies on grant funding opportunities in the areas of potable reuse research and local supply development, the development of new regulations and regional planning efforts for potable reuse, recycled water and brackish water programs, and managed local project incentive programs.

Local Water Focus Areas

The focus areas within the Local Water Program support the development and management of **Member Agency Supply**, **Potable Reuse**, and **Seawater Desalination**. Each focus area identifies key management strategies to drive the execution of priority objectives and tactics over the next five fiscal years.

Member Agency Supply

Member agencies take the lead in developing and managing local supplies such as recycled water, groundwater, and surface water. The Water Authority coordinates regional efforts with member agencies to promote a common vision across the region when engaging in statewide and regional forums. Strategies in this focus area include improving and maintaining regulatory flexibility and source water quality for the San Diego region's water supply and supporting member agency efforts to obtain outside funding. Supporting objectives and tactics include coordinating recommendations for the proposed Statewide Mercury Reservoir Program, advocating for reasonable monitoring requirements and standards for constituents of emerging concern in potable and recycled water, and developing

strategies for permitting treatment plant residual discharges; all in support of the various existing and proposed local supply facilities and projects.

Potable Reuse

The Water Authority's member agencies are moving forward with research and planning for cutting edge and innovative projects that will set the standard for potable reuse in California. The Water Authority coordinates with member agencies on potable reuse to create a regional voice for reasonable and flexible regulations for approval of a new drinking water supply that will support the region in a time of climate change and unprecedented drought. For example, the Potable Reuse Coordinating Committee, comprised of Water Authority and member agency staff, provides a forum for regional collaboration on key potable reuse initiatives. Management strategies for this focus area over the next five fiscal years include regulatory and legislative support and educating the public on the benefits of potable reuse and associated water quality improvements.

Seawater Desalination

The Water Authority has taken a leadership role in the state by developing local seawater desalination through a public-private partnership for the largest desalination facility in the nation. Management strategies linked to seawater desalination over the next five years include the ongoing oversight of the Claude "Bud" Lewis Carlsbad Desalination Plant to ensure compliance with the Water Purchase Agreement and the Ocean Plan Amendment, which was adopted by the State Water Resources Control Board in May 2015 and addresses seawater desalination plant intake and discharge facilities.



Desalinated water from the Lewis Carlsbad Desalination Plant provides a reliable, drought-proof water supply to San Diego County through a public-private partnership.

MEMBER AGENCY SUPPLY

- A. Improve regulatory flexibility and streamlining for local supplies.
- B. Protect and improve source water quality for water supply in the San Diego region.
- C. Support funding from outside the region for local water supply projects.

POTABLE REUSE

- D. Engage in regulatory and legislative processes to ensure regulatory pathways are available for approval of local potable reuse projects.
- E. Assess and recognize the benefits of water quality improvements associated with new local supplies.
- F. Encourage public support, implement public outreach, and offer technical assistance to support reuse and recycled water projects.

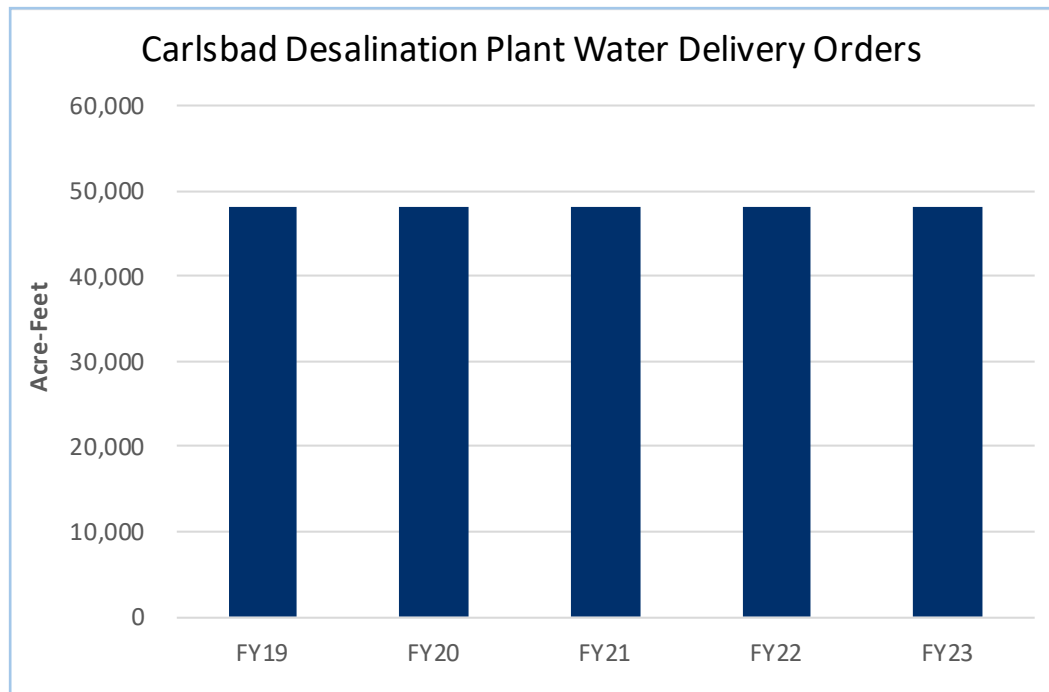
SEAWATER DESALINATION

- G. Ensure compliance with Lewis Carlsbad Desalination Plant Water Purchase Agreement.
- H. Ensure continued operation of Lewis Carlsbad Desalination Plant for stand-alone operation and compliance with Ocean Plan Amendment.

No.	Description	Target date
1.	Lead a member agency workgroup to develop a strategy for permitting treatment plant residual discharges. (A, B)	Mar-2019
2.	Support Poseidon in obtaining National Pollutant Discharge Elimination System permit from the San Diego Regional Water Quality Control Board required to initiate the phased implementation of the Lewis Carlsbad Desalination Plant Intake Modifications Project. (G, H)	Jun-2019
3.	Support Poseidon with development and implementation of the intake screen demonstration project to optimize the proposed intake technology. (G, H)	Dec-2021
4.	In collaboration with member agencies, support the San Diego Regional Water Quality Control Board to develop a Basin Plan amendment or guidance that supports potable reuse and reservoir operations based on sound science. (A, B, C)	Dec-2021
5.	Advocate for state and federal funding opportunities applicable for the Lewis Carlsbad Desalination Plant Intake Modifications Project and apply as such programs are made available. (C, H)	Dec-2021
6.	Complete Contract Administration Memoranda and any necessary Water Purchase Agreement contract amendments for each phase of the new intake and discharge facilities at the Lewis Carlsbad Desalination Plant. (G, H)	Mar-2022
7.	Coordinate with member agencies and Water Research Foundation to evaluate the benefits of the Lewis Carlsbad Desalination Plant supply and new local supplies. (E)	Jun-2022
8.	Complete all submittal reviews within the Water Purchase Agreement required timeframe during oversight of the design, construction, and commissioning of the Lewis Carlsbad Desalination Plant's interim and permanent intake and discharge facilities in compliance with the Ocean Plan Amendment. (G, H)	Jun-2023
9.	Coordinate with member agencies to submit applications to MWD for LRP and other funding opportunities and advocate for criteria which is supportive of member agency projects. (C)	Jun-2023
10.	Facilitate a member agency workgroup to engage with the State Water Resources Control Board to provide coordinated regional comments on the proposed statewide Mercury Reservoir Plan. (D)	Jun-2023
11.	Coordinate with the member agencies to provide comments to the State Water Resources Control Board on development of monitoring requirements and standards for constituents of emerging concern in potable and recycled water. (A, B)	Jun-2023

1

Exceed the Claude “Bud” Lewis Carlsbad Desalination Plant Water Purchase Agreement Minimum Demand Commitment of 48,000 acre-feet annually.



Resource Planning Overview

Resource planning is essential to ensuring a reliable water supply for the San Diego region and effectively managing potential supply shortages. Long-term supply planning at the Water Authority is accomplished with two major visionary plans – the San Diego Urban Water Management Plan (UWMP) and the San Diego Integrated Regional Water Management (IRWM) Plan. In collaboration with its 24 member agencies, the Water Authority completed the 2015 UWMP update, which was adopted by the Board in June 2016 and accepted by the State Department of Water Resources (DWR) in September of the same year. As part of the San Diego Regional Water Management Group (RWMG), the Water Authority Board adopted the 2013 IRWM Plan in September 2013. Both plans were prepared such that they comply with state requirements and maintain the region's eligibility for state funding. Going forward, implementation of the new laws created by the passage of SB 606 and AB 1668 will impact water suppliers throughout the state. For the Water Authority, the new laws require reporting on activities related to strengthening local drought resilience. As the implementation process begins, the Water Authority will continue to advocate on behalf of the San Diego region to ensure the region's interests are represented.

From 2008 to 2018, the Water Authority worked with its RWMG partners, City of San Diego and County of San Diego, to secure \$96 million in IRWM funding from three Department of Water Resources' grant programs to support 67 high-priority water projects that help achieve the goals of the San Diego IRWM Plan. The Water Authority continues to fulfill an ongoing obligation to both its RWMG partners and DWR to administer the IRWM grant funding obtained by the San Diego IRWM

Program. This is achieved through the IRWM Grant Administration Program, which administers the awarded grant funds for individual IRWM projects.

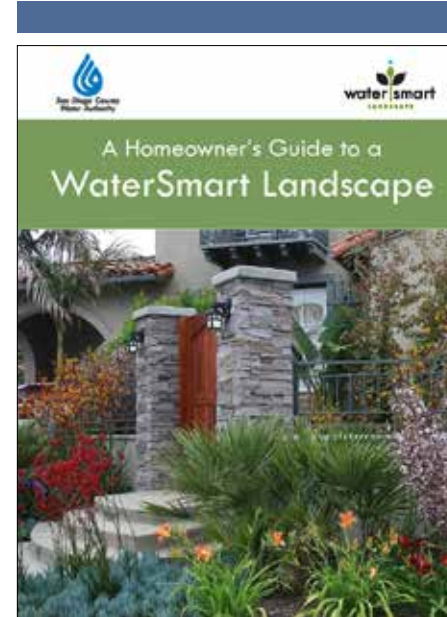
The Resource Planning Program also encompasses water shortage and drought response management. The Water Authority's primary planning document that addresses water supply shortages is the Water Shortage Contingency Plan (WSCP). The WSCP includes a series of orderly, progressive steps for the Water Authority and its member agencies to take during shortages to minimize impacts to the region's economy and quality of life. The WSCP was approved by the Board in August 2017.



Another important aspect of resource planning is water use efficiency, which supports the Water Authority’s long-term strategy to improve the reliability of the region’s water supplies by promoting and facilitating the efficient use of water. Examples of our award-winning water efficiency initiatives include the publication “A Homeowner’s Guide to a WaterSmart Landscape” and the WaterSmart Landscape Makeover Series for homeowners. Other innovative programs include the Qualified Water Efficient Landscaper (QWEL) program, which provides basic training in water use-efficiency for landscape professionals and the Sustainable Landscapes Program, which pioneered issuing incentives for landscape transformation projects that achieve water efficiency and other environmental benefits. The Water Authority’s water use efficiency activities support a number of ongoing efforts identified as core needs by member agencies to help them meet their long-term water management goals in a manner that aligns with the Water Authority’s Water Use Efficiency Policy Principles. These activities are primarily focused on market transformation towards products and services that achieve outdoor water savings.

Resource Planning Focus Areas

The focus areas of the Resource Planning Program are **Water Management Planning**, **Water Shortage and Drought Response Management**, and **Water Use Efficiency**. Each focus area includes management strategies designed to accomplish significant objectives over the next five fiscal years.



Water Management Planning

The Water Management Planning focus area includes management strategies for maintaining an IRWM plan and a regional UWMP. The IRWM plan addresses resource management, water quality, and habitat in a region that includes the portion of San Diego County that is tributary to coastal waters. The plan builds on local and regional management plans within the San Diego region with input from an array of key stakeholders. It also provides the basis for acquiring grant funding from the state. The UWMP identifies a diverse mix of water resources projected for development over the next 25 years to ensure long-term water supply reliability for the region. It is prepared in accordance with the state

Urban Water Management Planning Act and includes conservation measures, programs, and policies. Together, these plans ensure a reliable regional water supply, and comply with evolving state requirements to maintain the region's eligibility to receive state funding and pursue other funding for projects that achieve San Diego IRWM Program goals. Strategies over the next five fiscal years include objectives and tactics to update the IRWM Plan to comply with state requirements, update the regional UWMP to identify supplies necessary to meet future demands, and secure the region's allocated share of IRWM grant funding from DWR's Proposition 1 grant program.

Water Shortage and Drought Response Management

The Water Authority relies on its Water Shortage Contingency Plan to effectively manage and respond to water supply shortages during droughts to avoid or minimize impacts to the region. The plan identifies regional shortage response actions to be taken at specific shortage levels by the Water Authority and, where appropriate, its member agencies. A critically important element of the plan is the municipal and industrial supply allocation methodology, which provides the Water Authority a method by which to allocate supplies to its member agencies, if the region were to be cutback. The plan also includes a basic methodology to prepare an annual municipal and industrial water reliability assessment to ensure that the Board, member agencies, the public, and state and local agencies are informed as to the region's water supply conditions and the likelihood of water shortages. In order to comply with evolving state laws, objectives include an update of the WSCP, a revision of the 2008 Model Drought Response Conservation Ordinance, and preparation of an annual water supply and demand assessment for submittal to DWR.

Water Use Efficiency

The Water Shortage Contingency Plan responds to specific conditions by reducing water use in the short term via policies and ordinances that enforce temporary water use restrictions. The plan and other related measures adopted by the Board of Directors may trigger the accelerated implementation of conservation programs administered by the Water Authority. For instance, in 2015 the Board deployed \$1 million in new extraordinary water conservation programs. These near-term measures were commissioned in addition to the region's ongoing long-term water-saving activities, which are driven by the Board's Water Use Efficiency Program Policy Principles. Water use efficiency programs are a core element of the Water Authority's strategy to make the region's water supply more reliable in the long term. The Water Use Efficiency focus area utilizes several management strategies, including continuing to pioneer the advancement of sustainable landscapes, increasing program administrative efficiencies, and enhancing customer service and support to member agencies and program participants. Other strategies involve providing leadership at the state and local level to advocate for long term water use efficiency policies that benefit the San Diego region, and obtaining external funding for Water Use Efficiency Program efforts. Objectives and tactics in this area include implementing and closing out four distinct Proposition 84 grant awards (Rounds 1, 2, 3, and 4); leveraging regional programs available through the Metropolitan Water District; and enhancing a long-standing Water-Energy Nexus partnership with SDG&E.

WATER MANAGEMENT PLANNING

- A. Implement an Integrated Regional Water Management Plan that reflects stakeholder consensus and complies with evolving state requirements.
- B. Pursue funding for implementation of projects that achieve San Diego Integrated Regional Water Management Program goals.
- C. Develop a regional Urban Water Management Plan that complies with evolving state requirements and ensures a reliable water supply for the San Diego region.
- D. Update water management plans to maintain eligibility for state funding.

WATER SHORTAGE AND DROUGHT RESPONSE MANAGEMENT

- E. Ensure planning documents are consistent and relevant to properly manage and respond to supply shortages.
- F. Ensure that proposed drought response actions are appropriate, progressive, and may be reasonably implemented by the Water Authority and its member agencies.
- G. Ensure the public, along with state agencies, are kept informed of regional supply conditions and likelihood of shortages through preparation of annual water supply and demand assessments.

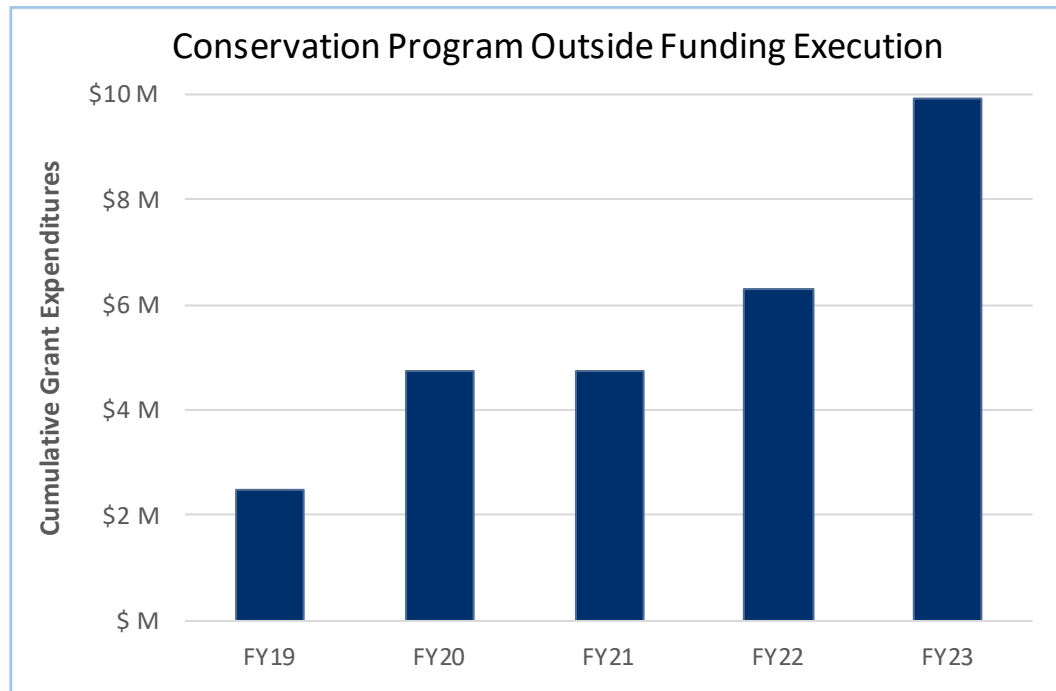
WATER USE EFFICIENCY

- H. Implement best-practices to manage and deliver water-use efficiency programs and services in a timely, convenient, and courteous manner.
- I. Plan, develop, implement, or administer water efficiency programs and tools that meet the needs of member agencies and water users.
- J. Support policies and actions that advance long-term water-use efficiency best practices, behaviors, and market transformations.
- K. Leverage ratepayer investments by securing grants or other external funding sources and advocating for equitable benefits from MWD water-use efficiency programs.
- L. Advocate for long term water use efficiency policies that benefit the San Diego region.

No.	Description	Target date
1.	Prepare an annual water supply and demand assessment, in coordination with the member agencies, that complies with state requirements. (G)	Jun-2019
2.	Develop a centralized database covering five water-use efficiency programs to improve data management and performance reporting. (H, L)	Jul-2019
3.	Obtain Board approval for the updated Integrated Regional Water Management Plan (Phases 1 and 2) to comply with state requirements and enhance plan content. (A, D)	Jul-2019
4.	Secure \$2.5 million in external funding such as grant awards, utility funding, and in-kind contributions to support water-use efficiency programs. (H, I, J, K)	Jun-2021
5.	Secure the San Diego Region's allocated share of approximately \$38 million in Integrated Regional Water Management grant funding, from the Department of Water Resource's Proposition 1 program. (A, B, D)	Jun-2021
6.	Obtain Board approval for an updated Water Shortage Contingency Plan that complies with evolving state requirements. (E, F)	Jul-2021
7.	Obtain Board approval for a revised 2008 Model Drought Response Conservation Ordinance to achieve consistency with the Water Shortage Contingency Plan and evolving state requirements. (E, F)	Jul-2021
8.	Update the Urban Water Management Plan to identify supplies necessary to meet future demands and comply with the planned revision of the Urban Water Management Plan Act. (C, D)	Jul-2021

1

Implement regional conservation programs demonstrated by expending 95 percent of grants and external funding portfolio in accordance with the terms of each award.



2

Increase efficiency of awarding Proposition 1 IRWM grant funding by executing 90 percent of project sponsor contracts within 120 days of an agreement between the Water Authority and State Department of Water Resources.

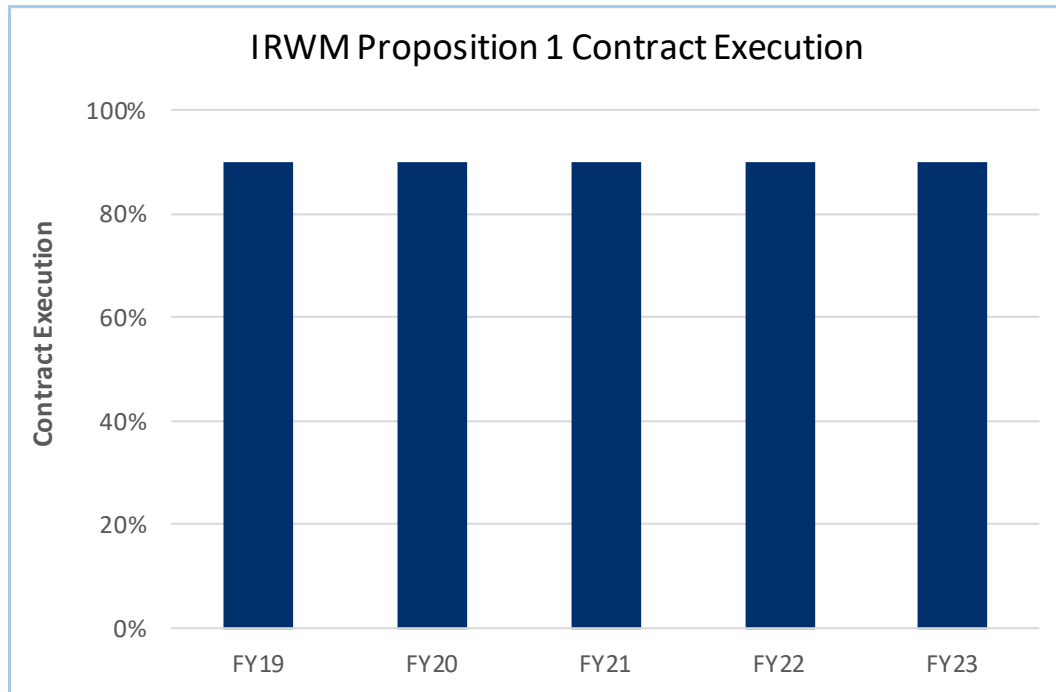


FIGURE 3.1 Water Facilities – Programs and Focus Areas

**INFRASTRUCTURE/
CAPITAL IMPROVEMENT
PROGRAM**

Asset Management

Infrastructure Planning

New Facilities

SUSTAINABILITY

Climate Change

Environmental Management

**WATER SYSTEM
MANAGEMENT**

Energy Initiatives

Facilities Security
and Emergency Response

Operations and Maintenance



Water Facilities

Water Facilities Overview

The Water Facilities focus area consists of three programs: **Infrastructure/Capital Improvement Program**, **Sustainability**, and **Water System Management**.

Infrastructure/Capital Improvement Program addresses the execution of the Water Authority's large and complex capital projects.

Implementing cost-effective and productive sustainability strategies that reduce environmental impacts, promote thoughtful stewardship of nature resources and enhance facility and supply resiliency are the focus of the Sustainability Program.

Water Systems Management ensures the Water Authority's infrastructure is reliable, complies with water quality standards, and meets member agency demands through optimized operations and cost-effective maintenance.

The Water Facilities focus area ensures the Water Authority's complex network of water transportation, treatment, and storage facilities are efficiently and sustainably operated and maintained, resulting in a safe, reliable water supply to support the region's economy and a good quality of life for its residents.

Key issues within the Water Facilities focus area include the following.

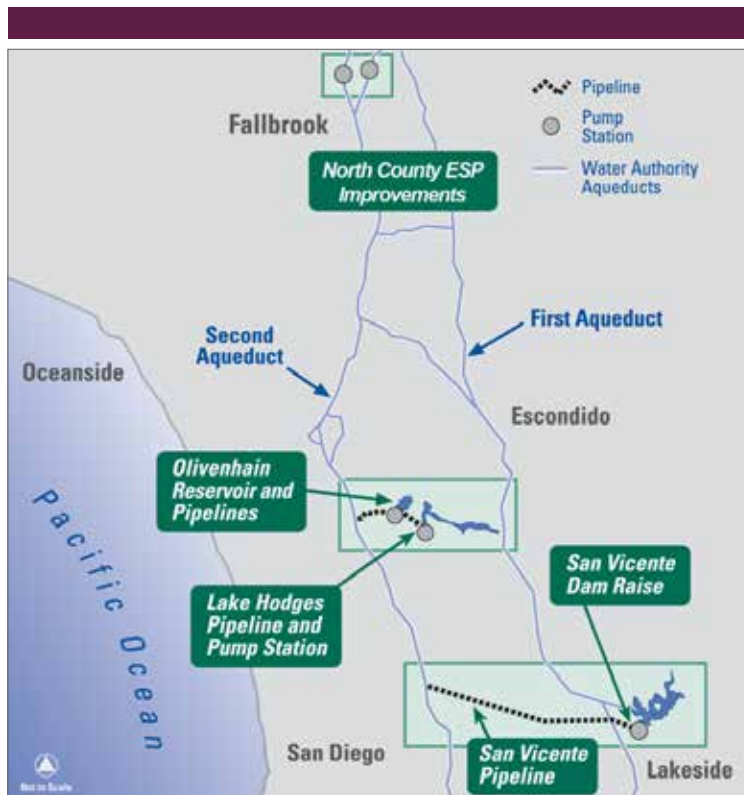
- ▶ Controlling facility capital and operating costs
- ▶ Balancing facility growth with water demands
- ▶ Managing facility operations, maintenance, and security to consistently and efficiently deliver a reliable water supply and meet member agency water demands
- ▶ Implementing cost-effective sustainability strategies that reduce environmental impacts, and promote thoughtful stewardship of natural resources within the Water Authority's aqueduct system



Work crews install a section of 54-inch steel pipe connecting the Lewis Carlsbad Desalination Plant to the Water Authority's aqueduct system.

Infrastructure/CIP Overview

The Water Authority has built a reputation of being both pioneering and visionary in its execution of large and complex capital projects. Over the past decade, the focus of the Capital Improvement Program (CIP) was to build new infrastructure to implement the award-winning Emergency and Carryover Storage Project and fulfill the Water Authority's mission to provide a safe and reliable water supply to the region.



Key facilities of the Emergency and Carryover Storage Projects.

The \$1.5 billion Emergency and Carryover Storage Project is a system of reservoirs, interconnected pipelines, and pumping stations designed to make water available to the San Diego Region if imported water deliveries are interrupted by an emergency event or periods of extended drought. Some of the key facilities of the Emergency and Carryover Storage Projects include the Olivenhain Dam, Reservoir, Pipeline, and Pump Station; Lake Hodges Pipeline and Pump Station; and the San Vicente Pipeline, Pump Station, and Dam Raise. With the completion of the San Vicente Dam Raise in 2014, the major components of the Emergency and Carryover Storage Project were completed.

The current 30-year CIP budget of \$2.5 billion, with an appropriation of \$137.6 million for Fiscal Years 2018 and 2019, reflects the shift from major construction projects to asset management and the optimization of the existing aqueduct system.

Infrastructure/CIP Focus Areas

The focus areas for the Infrastructure/Capital Improvement Program are **Asset Management**, **Infrastructure Planning**, and **New Facilities**. Within each focus area are strategies that will drive the Water Authority to accomplish the major objectives and tactics set for the next five fiscal years.

Asset Management

In 2009, the Water Authority adopted an Asset Management Program for its infrastructure assets worth \$3 billion. Effective management of these assets yields savings from improved system reliability, effective rehabilitation, and lower increases to water rates over time. Several industry groups identify the Water Authority's

Asset Management efforts as both visionary and pioneering, and recognize it as a leader in the field. Beyond established practices such as pipeline inspections, risk analysis, program monitoring, and long-term forecasting, the program continues to pioneer new technology to optimize maintenance, condition assessments, and prioritization of assets for rehabilitation or replacement.

Asset Management is comprised of two components: first, the Infrastructure Rehabilitation Project that consists of pipeline and facility assessments, repairs, and replacements; and second, the Relining and Pipe Replacement Program that includes rehabilitation efforts specifically related to pre-stressed concrete cylinder pipe. To date, 45 miles, or over 55 percent of the Water Authority's 82 miles of pre-stressed concrete cylinder pipe have been rehabilitated under this program.

Infrastructure Planning

The Water Authority completed the 2013 Regional Water Facilities Optimization and Master Plan Update that focuses on optimizing the Water Authority's existing system while being agile enough to adapt to a range of future operating and member agency water demand scenarios. These projects include local supply development that has both direct and indirect impacts to the operation of the Water Authority's system. Future infrastructure planning will be focused on the projects specifically identified in the Master Plan Update in addition to other projects subsequently identified that ensure a safe and reliable water supply is maintained for the region.

New Facilities

The focus for new facilities has shifted from major construction projects to asset management and the optimization of the existing aqueduct system. This new



In 2017, the Water Authority's Asset Management program was honored with a Technology Innovation award for its Pipeline Risk Visualization initiatives from the Special Districts West.

focus involves the implementation of small projects. As a result, the Water Authority must adapt by developing business policies, practices, and procedures that are conducive to the award and management of smaller contracts. Management strategies that employ pioneering technology, such as 3-D scanning, drones, and automated scheduling and controls can promote the most efficient and cost-effective delivery of projects. The Water Authority will continue to employ existing and new innovative best management practices such as performance metrics, quality control and quality assurance, value engineering, and comprehensive Gate reviews for all CIP projects, while continuing coordination efforts with both internal and external stakeholders and member agencies.

ASSET MANAGEMENT

- A. Ensure prioritization, optimal maintenance, and rehabilitation of assets.
- B. Pioneer and utilize new and innovative technology to reduce risk and increase productivity and efficiency.

INFRASTRUCTURE PLANNING

- C. Coordinate and align project scope and schedules within the Master Plan Update and the Asset Management Program to achieve the optimal balance between regional water reliability and cost.
- D. Optimize use of existing treatment, storage, and conveyance facilities to meet projected member agency water demands.

NEW FACILITIES

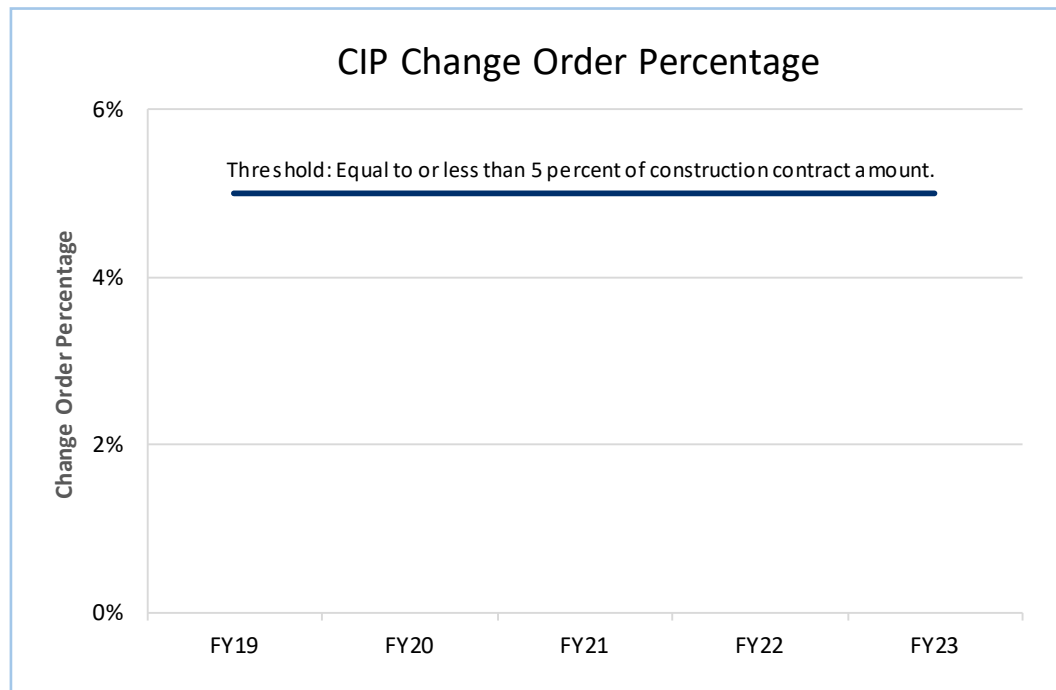
- E. Employ pioneering technology, innovation, and best management practices for all Capital Improvement Program projects.
- F. Develop innovative business policies, practices, and procedures that are aligned with smaller contracts.
- G. Collaborate with member agencies and other external stakeholders on the Capital Improvement Program.
- H. Coordinate with internal functional groups and stakeholders to promote the most efficient and cost-effective delivery of projects.

Water Facilities INFRASTRUCTURE/CIP | Objectives and Tactics

No.	Description	Target date
1.	Complete the Kearny Mesa Headquarters Roof Rehabilitation project to provide an additional 20 to 30 years of waterproofing system service life. (A, E, F, H)	Apr-2019
2.	Evaluate and utilize tools and innovative technology which can be used for robotic pipeline inspections to reduce water discharge, labor costs, and risk of pipeline failures. (A, B)	Jun-2020
3.	Complete the Vallecitos Water District 11/Vista Irrigation District 12 Flow Control Facility project to improve operations and reliability for the delivery of treated water to the Vallecitos Water District and the Vista Irrigation District. (A, C, E, F, G, H)	Jun-2020
4.	Complete a pilot study for implementing the use of drone technology for assisting with Capital Improvement Program projects and management of the aqueduct right of way. (B, E, F)	Dec-2020
5.	Complete the San Diego 28 Flow Control Facility Rehabilitation project to improve operations and delivery reliability of untreated water to the city of San Diego's Alvarado Water Treatment Plant. (A, C, E, F, G, H)	Dec-2020
6.	Complete the Fallbrook Public Utility District 7/Rainbow Municipal Water District 14 Flow Control Facility project to improve operations and reliability for the delivery of treated water to the Fallbrook Public Utility District and the Rainbow Municipal Water District. (A, C, E, F, G, H)	Dec-2020
7.	Determine the number of Member Agencies who are interested in a Member Agency Asset Management Support Network. The network would offer a method for information sharing and guidance on asset management, condition assessment evaluation, procurement, and implementation. If interest is sufficient, draft a plan to develop the network and formalize the procedures. (A, B)	Dec-2020
8.	Complete the Carlsbad 5 Flow Control Facility project to allow desalination water delivery directly from the Lewis Carlsbad Desalination Plant to the Carlsbad Municipal Water District. (E, F, G, H)	Mar-2021
9.	Complete the Hauck Mesa Storage Reservoir and Pipeline Surge Protection project to provide operational flexibility on the First Aqueduct and long-term surge protection for the Valley Center Pipeline. (C, D, E, F, G, H)	Jun-2021
10.	Complete the Northern First Aqueduct Structures and Lining Rehabilitation project to improve operations and the reliability of First Aqueduct treated water deliveries. (A, C, E, F, G, H)	Jun-2021
11.	Complete the design for the Southern First Aqueduct Structures Rehabilitation project to improve operations and the reliability of First Aqueduct untreated water deliveries. (A, C, E, F, G, H)	Jun-2021
12.	Complete the Mission Trails Flow Regulatory Storage II and Flow Control Facility project to mitigate existing operational risks and meet future untreated water demands for the central and south county service areas. (C, D, E, G, H)	Jun-2021
13.	Complete a detailed study for the repair time estimates of the Water Authority's aqueduct and pipeline system based changes in seismic hazard evaluation and pipeline response to earthquakes. (A, C)	Dec -2021
14.	Complete the Emergency and Carryover Storage Project – North County Pump Station project to provide treated water deliveries to portions of the North County service area during an emergency event. (C, D, E, G, H)	Dec-2021
15.	Using the latest proven and innovative pipeline assessment technologies, perform 25-miles of comprehensive condition assessment of the treated water portion of the First Aqueduct. (A, B)	Jun-2022
16.	Complete a Master Plan Update that incorporates revised demand projects from the 2020 Urban Water Management Plan and evaluates system optimization strategies to address lower flows and water quality. (C, D, G)	Jun-2023
17.	Complete an additional 6 miles of priority pipeline relining, extending the service life of the identified segments of the aqueduct system. (A, E, G, H)	Dec-2023

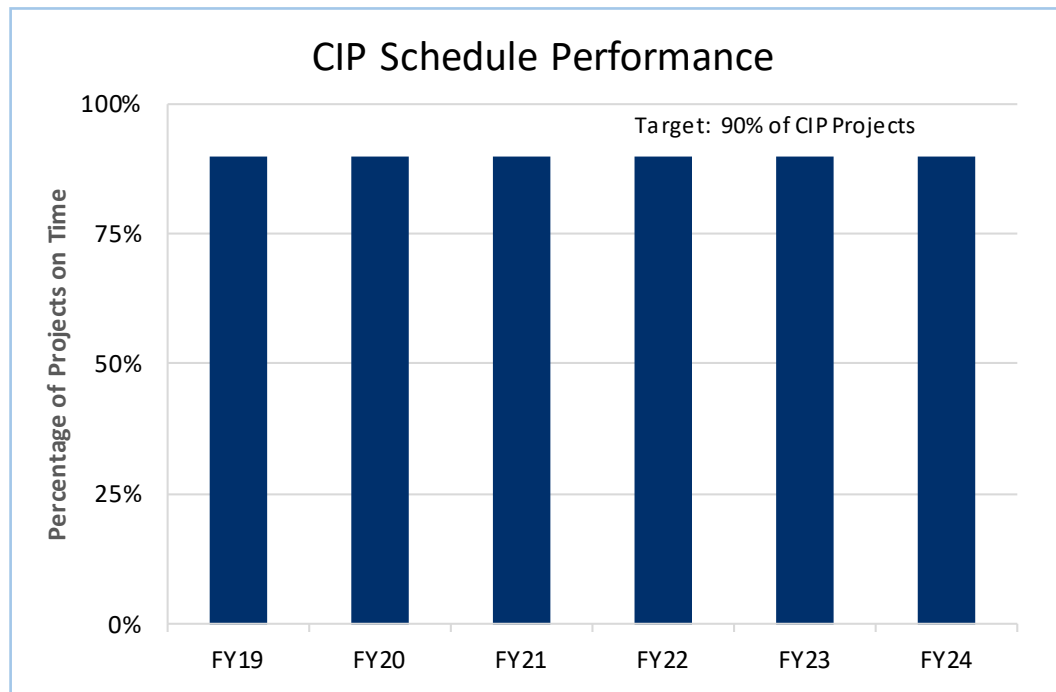
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Maintain an overall Construction Change Order Percentage equal to or less than 5 percent of the construction contract amount.



2

Maintain 90 percent of all Capital improvement Program projects within four months of their baseline schedule.



Sustainability Overview

The Water Authority is committed to being a model agency for sustainability. This is demonstrated through our continued support of cost-effective sustainability strategies that reduce environmental impacts, promote thoughtful stewardship of natural resources, and enhance facility and supply resiliency. These strategies save ratepayers money, reduce and manage the environmental footprint of Water Authority facilities and operations, conserve energy and water, and help the Water Authority better anticipate and adapt to the impacts of climate change.

The Water Authority's Environmental Management Program is designed to reduce short- and long-term environmental impacts and streamline the permitting process. The Water Authority's Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP), which became effective in 2012, provides a 55-year permit for future projects and includes goals, guidelines, and specifications that comprise the Water Authority's conservation strategy for biological resources. The NCCP/HCP also provides a description of the Water Authority's mitigation lands and preserve area management guidelines. In line with our innovative and visionary approach to environmental stewardship, in 2015 the Water Authority obtained a programmatic 50-year Clean Water Act Section 404 permit known as the Programmatic Master Plan Permit (PMPP).

The Water Authority recognizes the challenges that climate change poses to the San Diego region and is dedicated to proactively addressing these issues. Our regional climate change initiatives include both mitigation and adaptation strategies. The Water Authority voluntarily developed and adopted the agency's first Climate Action Plan (CAP). The CAP was initially adopted in March 2014 and revised

in December 2015, and serves as an interdisciplinary guide intended to promote, facilitate, and coordinate implementation of climate change mitigation strategies. The plan focuses on greenhouse-gas emission reduction measures to ensure our water supplies, infrastructure, and services will accommodate projected impacts of climate change. It contains a methodology to compute baseline greenhouse-gas emissions, an approach to track and report on emissions reduction progress, and establishes targets for voluntary compliance with Assembly Bill 32-California Global Warming Solutions Act of 2006. The Water Authority has already made great strides in reducing emissions, with 2017 levels falling well below our 2020 emissions goal.

Additionally, the Water Authority has pursued partnerships with researchers and other climate change practitioners to advance actionable climate science focused on adaptation strategies. Through partnering with agencies like the Scripps Institution of Oceanography, the Water Authority has collaborated on work products including California's Fourth Climate Change Assessment - San Diego Region Report. As a pioneering leader in the climate change arena, the Water Authority is also a founding member of the Water Utility Climate Alliance (WUCA). Formed in 2007, WUCA is comprised of 12 of the nation's largest water providers that supply drinking water to more than 50 million people throughout the United States. WUCA provides leadership in assessing and adapting to the potential effects of climate change. Projects funded through WUCA, such as the Best Practices in Climate Adaptation project intended to define climate adaptation for a water utility context and identify, document, and synthesize lessons and practices associated with adapting to climate change.

The Water Authority continues to make a positive contribution to a more sustainable future for the region by implementing cost-effective adaptation and mitigation strategies that support efficient resource management, decrease greenhouse-gas emissions, and promote actionable climate change research.

Sustainability Focus Areas

The focus areas of the Sustainability Program are **Climate Change** and **Environmental Management**. Within each focus area are specific management strategies that establish the Water Authority's sustainability vision of maintaining a leadership role in advancing climate science research and collaborating on approaches to mainstream adaptation strategies into business practices.

Climate Change

The climate of the San Diego region is increasingly warmer and drier, with recent prolonged record-breaking temperatures – as demonstrated by 54 out of 57 months (between November 2014 and July 2018) having hotter than normal temperatures at Lindbergh Field. Heat wave frequency, intensity, and duration are anticipated to increase. Precipitation patterns are also anticipated to experience changes with more frequent and severe droughts punctuated by more intense individual precipitation events. The Water Authority's agile strategies and associated tactics for the Climate Change focus area include implementing cost-effective measures to reduce greenhouse-gas emissions, updating the Climate Action Plan, and collaborating on leading-edge climate science research to evaluate potential impacts of climate change on the quantity and quality of local water supplies and its effect on water demands.

Environmental Management

The Environmental Management focus area is central to the sustainability of long-term facility planning and operations. It is driven by regulatory compliance with the California Environmental Quality and National Environmental Policy Acts, State and Federal endangered species acts, clean water act, and other natural resources regulations. Other environmental management activities include mitigation planning and implementation, land management, permitting support for Capital Improvement Program projects, and legislative review.

Key management strategies and objectives of the Environmental Management Program include advanced planning, projecting mitigation needs, and proactively obtaining mitigation lands and/or credits at a mitigation bank. These strategies will give the Water Authority the ability to move projects forward as mitigation acreage (credits) are debited from already established mitigation properties. This includes utilizing proactive methods to ensure sustainable mitigation in advance of capital and operational project needs; developing a plan to manage mitigation land credit inventory; evaluating the potential to market excess mitigation land credits; reassessing NCCP/HCP covered species list to consider additions or reductions to the list, proactively participating in regulatory agency's five-year review of PMPP, and creating an environmental awareness training program.

CLIMATE CHANGE

- A. Implement cost-effective measures that reduce greenhouse-gas emissions in compliance with emission targets contained in the Climate Action Plan.
- B. Advance climate science research and mainstream adaptation strategies into business practices.
- C. Ensure resiliency of infrastructure and supplies in response to climate change impacts.

ENVIRONMENTAL MANAGEMENT

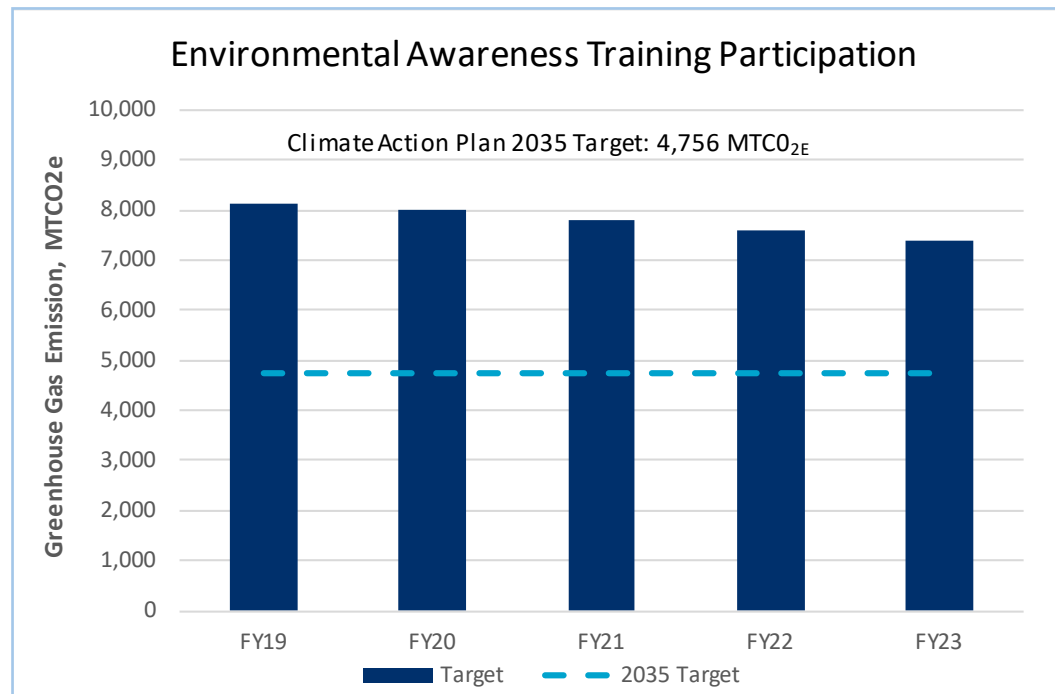
- D. Incorporate advanced planning to ensure Water Authority compliance with environmental regulations.
- E. Strengthen inter-departmental coordination of environmental compliance.
- F. Ensure sustainable mitigation is obtained in advance of project needs.

No.	Description	Target date
1.	Meet 2020 Climate Action Plan emission targets by using adaptive management strategies developed for further reduction of carbon emissions. (A, B, C)	Dec-2019
2.	Develop an environmental awareness training video on the California Environmental Quality Act and current environmental permitting requirements to be used for new hires and as a refresher course tailored for Engineering and Operations & Maintenance staff. (E)	Dec-2019
3.	Obtain Board approval for the updated Climate Action Plan to ensure conformity of greenhouse-gas inventory calculation with the Climate Registry's current General Reporting Protocol. (B, C)	Jun-2020
4.	Obtain partnerships on leading-edge climate science projects on adaptation, sustainability, and resiliency strategies, and evaluate opportunities to incorporate research findings into facility and supply planning processes. (B, C)	Jun-2021
5.	Evaluate NCCP/HCP covered species list to determine if desirable to seek a major amendment to the NCCP/HCP, its' implementing agreement, and State and Federal incidental take permits to revise the Covered Species list. (D, F)	Jun-2021
6.	Develop a minimum of three acres of wetland mitigation at the San Luis Rey Kendall site to mitigate impacts of near-term Capital Improvement Program projects. (D, F)	Jun-2022

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Ensure compliance with 2020 and 2035 greenhouse gas emission targets identified in the Water Authority's Climate Action Plan.



Water System Management Overview

The Water Authority operates and maintains a complex water system including large diameter pipelines, flow control facilities, flow regulatory structures, pump stations, a large dam, and hydroelectric facilities. The Water System Management Program ensures this complex infrastructure is reliable, complies with water quality standards, and meets member agency demands through optimized operations and cost-effective maintenance.

The program is engaged in several ongoing initiatives, including developing and maintaining a skilled workforce, monitoring hydroelectric performance, resolving right of way encroachments, enhancing physical security and the operations communication network, and improving the work management system.

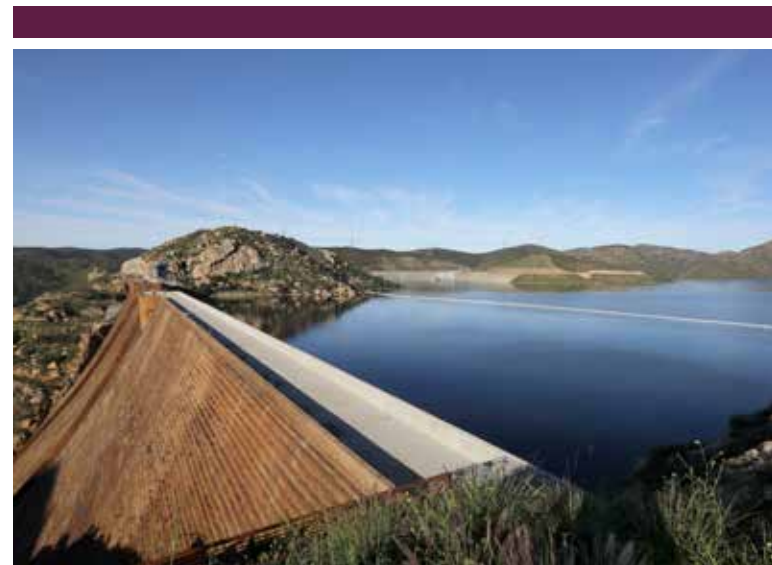
Past accomplishments of this focus area include securing a business arrangement for the Rancho Penasquitos Hydroelectric Facility to maximize the value of energy generated at the facility and successfully implementing a cost-effective option for in-house operation and maintenance of the Lake Hodges Hydroelectric Pumped Storage facility. Also, physical security assessments were conducted resulting in the development of improvement plans for critical facilities for continued water system protection against potential threats and battery systems were installed at both the Kearny Mesa Headquarters and the Twin Oaks Valley Water Treatment Plant to reduce energy demand charges.

Water System Management Focus Areas

The focus areas of the Water System Management Program are **Energy Initiatives, Facilities Security and Emergency Response, and Operations and Maintenance**. Within each focus area are management strategies that will drive staff to accomplish major objectives and tactics over the next five fiscal years.

Energy Initiatives

The Water Authority's energy initiatives support efforts to maximize existing power generation facilities, advance new energy initiatives, foster strategic partnerships, and participate in the setting of legislation and regulations. Over the past several decades, the Water Authority has successfully pursued diversification of its water supply portfolio to reduce potential supply shortages. Similarly, this focus area strives to diversify the Water Authority's



A proposed energy storage facility at the San Vicente Reservoir Site is one energy initiative under consideration by the Water Authority Board of Directors.

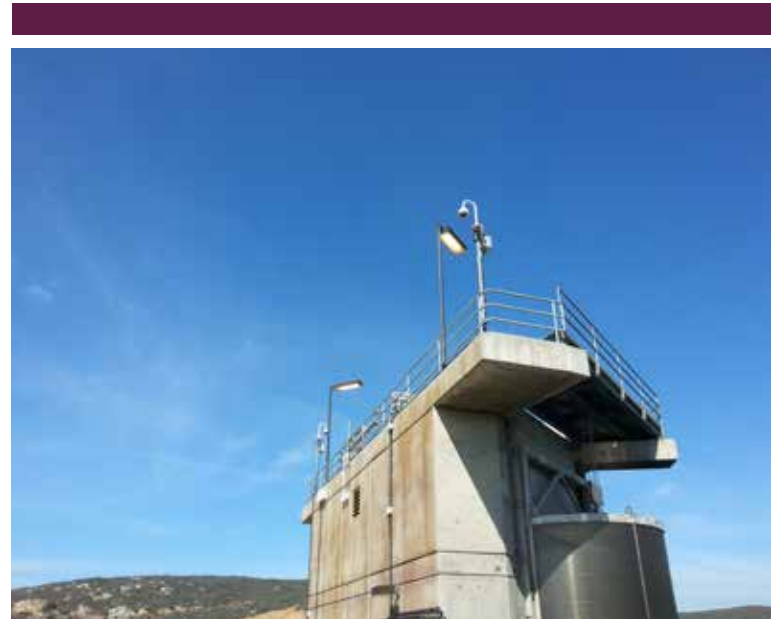
energy supply portfolio to address economic and electrical system reliability risks. The Water Authority's Energy Management policy, adopted by the Board in 2013, provides direction for the implementation and administration of energy efficiency projects and programs.

Facilities Security and Emergency Response

The Water Authority operates critical infrastructure to ensure a safe and reliable water supply for the region. Security and emergency response efforts support the need for physical and cybersecurity, business continuity, and emergency preparedness. This focus area emphasizes the protection of critical facilities and the operations control system against risks and vulnerabilities from all potential threats, such as terrorism and cyber-threats. The Water Authority plays a critical dual role during emergencies, as a provider of water to the region and as a first responder. The ability to respond quickly during a security or emergency incident is crucial to ensure water supply availability to our member agencies and to minimize potential injury, loss of life and property damage.

Operations and Maintenance

The Operations and Maintenance area focuses on efficiently maintaining system reliability and continuing to develop staff that are driven to excellence in their fields of expertise. The Water Authority's complex water system requires staff to continuously develop their knowledge, skills and abilities. In addition, efficient operations and enhanced proactive maintenance sustains a reliable water system and increases the Water Authority's ability to efficiently support and supply its member agencies.



Water Authority facilities are monitored to ensure the safety of the water supply.

ENERGY INITIATIVES

- A. Leverage power market opportunities that maximize the value of existing energy facilities.
- B. Pursue new energy initiatives that reduce energy costs.
- C. Develop updates to the 2013 Board adopted Energy Management Policy.
- D. Coordinate with local, regional, state and federal agencies to best position Water Authority energy purchases.
- E. Influence energy rule-making by engaging in legislative and regulatory processes.

FACILITIES SECURITY AND EMERGENCY RESPONSE

- F. Provide necessary facilities, staffing, and funding to support security and emergency response requirements.
- G. Comply with applicable state and federal regulations regarding security.
- H. Engage in water related security and emergency response issues at the local and national levels.

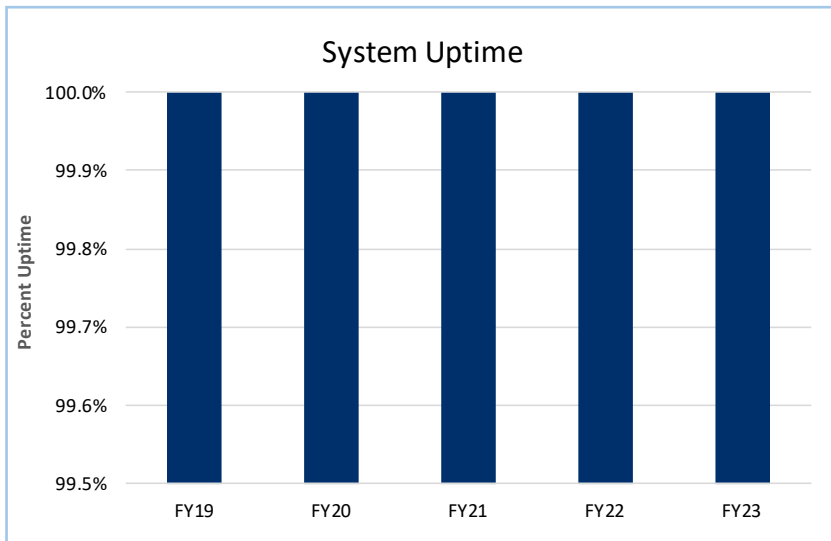
OPERATIONS AND MAINTENANCE

- I. Maintain water system reliability and efficient operations through staff development and facility improvements.
- J. Enhance proactive maintenance practices.

No.	Description	Target date
1.	Secure a bill crediting arrangement at the Lewis Carlsbad Desalination Plant for energy generated from the Rancho Peñasquitos Hydroelectric Facility to the desalination plant to offset the plant’s energy costs. (A, B, E)	Jun-2019
2.	Complete update and obtain Board approval of updates to the 2013 Energy Management Policy. (C)	Jun-2019
3.	Develop a major maintenance and replacement plan for the Lake Hodges Hydroelectric Pumped Storage Facility. (I, J)	Dec-2019
4.	Negotiate a draft project development agreement with a developer for Board consideration for the proposed San Vicente Energy Storage Facility project. (A,B)	Dec-2019
5.	Complete an Escondido Facility Space Needs Assessment Study and utilize the Study results to develop a master plan for an efficient and secure operating facility. (I)	Dec-2019
6.	Construct and place into operation the Mission Trails Chlorination facility to mitigate nitrification on the 2nd Aqueduct. (I)	Mar-2020
7.	Implement identified physical security assessment recommendations for critical facilities. (F, G, H)	Jun-2020
8.	Complete replacement of the instrumentation communication network at San Vicente Pump Station to increase operational reliability of these facilities. (I)	Jun-2020
9.	Develop a communication system master plan for the Water Authority’s Aqueduct Control System. (I)	Jun-2020
10.	Evaluate alternatives for centralizing energy generation and usage data. (B)	Dec-2020
11.	Identify innovative opportunities for energy procurement to reduce energy costs and identify schedules for economically viable alternatives. (D, E)	Dec-2020
12.	Participate in Federal and State regulatory proceedings to move bulk energy storage forward in California. (E)	Jun-2023

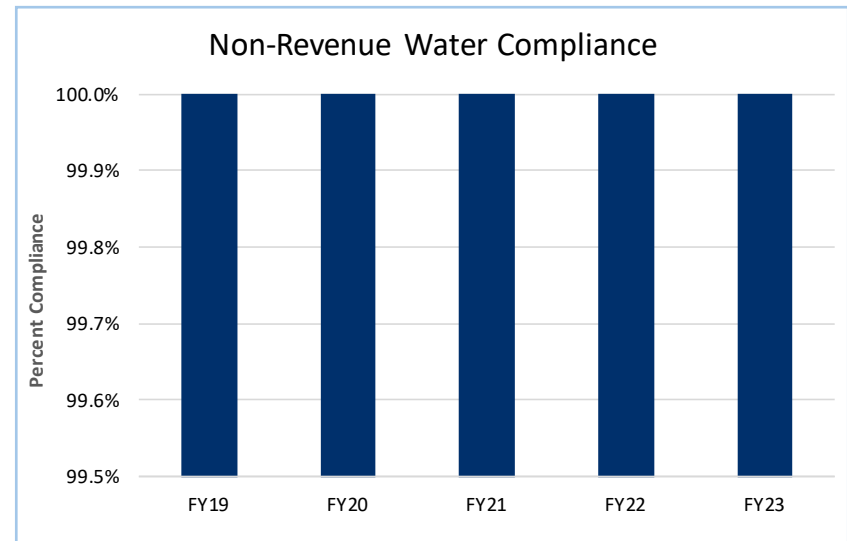
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Eliminate unplanned service interruptions to member agencies by maintaining 100 percent system uptime each fiscal year.



2

Minimize non-revenue water by managing system water loss within established standards 100 percent each fiscal year.



3

Meet all federal and state drinking water regulations by maintaining 100 percent compliance each fiscal year.

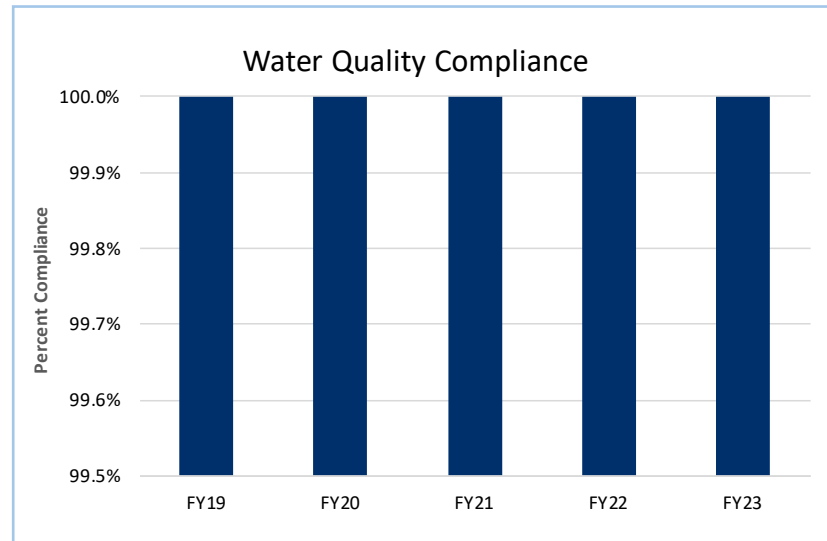




FIGURE 4.1 Business Services – Programs and Focus Areas

BUSINESS SUPPORT	COMMUNICATION AND MESSAGING	FINANCIAL MANAGEMENT	WORKFORCE MANAGEMENT
Cybersecurity	Governmental Relations Outreach	Accounting	Leadership
IT Services and Operations	Public Outreach	Debt and Investment Management	Culture
Facilities	Regulatory Policy Support	Financial Planning	Talent Management
Administrative Support			Communication
			Technology

Business Services

Business Services Overview

The Business Services focus area consists of four programs: **Business Support, Communication and Messaging, Financial Management,** and **Workforce Management.**

The Business Support Program encompasses the areas of cybersecurity, technology, records management, and facilities, and supports efficient and productive agency operations.

Communication and Messaging supports and maintains strong relations with regulators, elected officials, and other stakeholders through effective communication.

Financial Management focuses on near- and long-term financial planning, management and reporting.

Workforce Management bridges the workforce of today with the workforce of the future.

Collectively, the programs within the Business Services focus area serve as the foundation for all aspects of the Water Authority's business operations and is an essential component of the Business Plan.

Key issues within the Business Services focus area include the following.

- ▶ Adopting pioneering technology and protecting against cybersecurity threats
- ▶ Continuing effective communications with external stakeholders
- ▶ Implementing long-term financial plans to provide rate and charges guidance
- ▶ Attracting, retaining, and developing a high-performing workforce



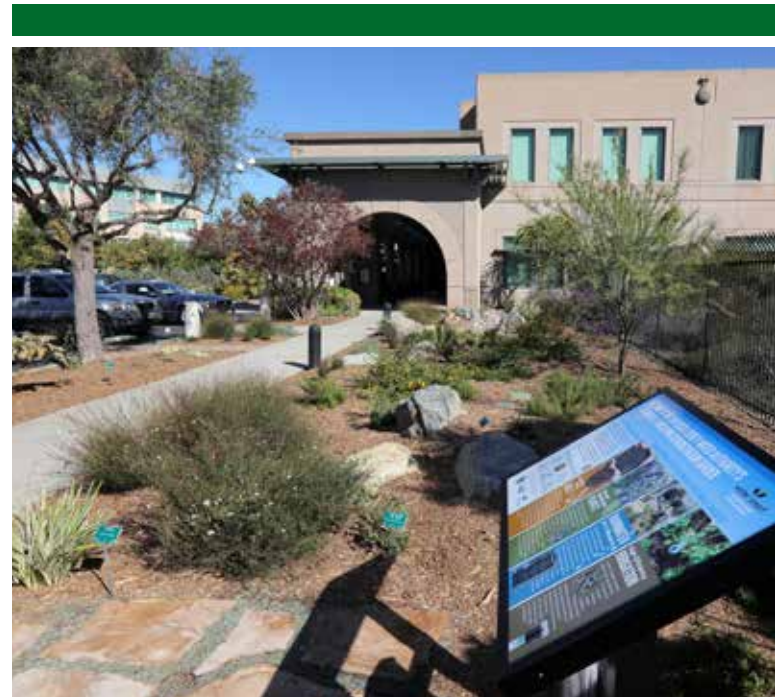
The Business Services focus area serves as the foundation for all aspects of the Water Authority's business operations.

Business Support Overview

The Water Authority's day-to-day operations, long-term planning, engineering, design, communication, and public engagement all depend on high-quality business support services. The Business Support Program helps the organization meet its ongoing and rapidly changing needs by providing excellent information technology systems, tools and services, implementing cybersecurity best practices and performing a range of critical administrative functions to support daily business operations, such as records management, facility management, risk management, and purchasing and contract support.

Recent accomplishments for the Business Support Program include transitioning email, Microsoft Office and other key systems to cloud-based platforms, completing the first in-house major upgrade to PeopleSoft enterprise software, and developing new web-based applications and dashboards to facilitate program reporting and transparency. Others include implementing a number of critical cyber and information security measures in accordance with the Center for Internet Security's CIS-20 framework, completing several facilities projects designed to reduce water and energy use at the Kearny Mesa headquarters (including installation of electric vehicle chargers, switching to LED light fixtures and a Sustainable Landscape demonstration garden), updating the organization's Record Retention Schedule, and finding cost-effective insurance coverage to mitigate risk from new facilities or initiatives such as drone use.

The Business Support Program must remain driven to act nimbly and provide solutions to new and evolving circumstances. Critical technologies such as website, phone communications and enterprise software will need to be upgraded, while staff continue to bolster cybersecurity defenses and stay on top of ongoing needs such as helpdesk requests, developing new web/GIS apps for customer departments, and managing network hardware and software. Meanwhile, staff will implement cost-effective measures to make the Water Authority's headquarters facility more efficient, resilient and secure, and they will continue to pursue administrative initiatives, such as expanding the use of electronic document signatures, designed to improve staff efficiency and productivity.



The Sustainable Landscape demonstration garden at the Water Authority's headquarters is one facilities project designed to reduce water use.

Business Support Focus Areas

The focus areas of the Business Support Program are **Cybersecurity, IT Services and Operations, Facilities,** and **Administrative Support.** The focus areas support the vision of the program to protect, enable and improve the ability of the organization and its employees to perform their duties effectively and efficiently.

Cybersecurity

Comprehensive network security remains a high priority for the agency and is critical to providing stable business operations. Best practice technical and administrative controls were enhanced as part of an overarching program to ensure the organization is well protected against cyber threats. The multi-layered security model is consistently updated to reflect current trends and respond to emerging threats. In Fiscal Year 2019, the Water Authority repurposed several staff positions to ensure effective coordination and implementation of information security measures for the business and Aqueduct Control System. Over the next five fiscal years, staff will continue to follow the implementation and maintenance of internationally recognized best practices for securing our systems and data.

IT Services and Operations

The Water Authority continually updates its technology infrastructure and tools to support enhanced business operations, such as providing specialized software and robust databases that deliver essential financial reporting and budgeting tools. It also maintains a specific suite of software applications to help meet agency-wide business needs and manages critical network infrastructure, allowing Water Authority employees to operate effectively and to deliver high-quality service to its member agencies and stakeholders. This focus area will continue to support customer departments with improved databases, dashboards, websites and other applications, by making



A Water Authority Information Systems developer programming a specialized database for use by the Operations and Maintenance department.

timely upgrades and enhancements to financial management, human resource and asset management enterprise software, and by ensuring equipment and technical tools are available to employees when and where needed. The Water Authority's IT Policy Committee provides oversight of new investments in IT services and applications to ensure accountability and to align with business needs.



Solar panels installed on the roof of the Kearny Mesa headquarters have improved energy efficiency. Initiatives are planned to continue to improve energy efficiency by 7 percent over the next five fiscal years.

Facilities

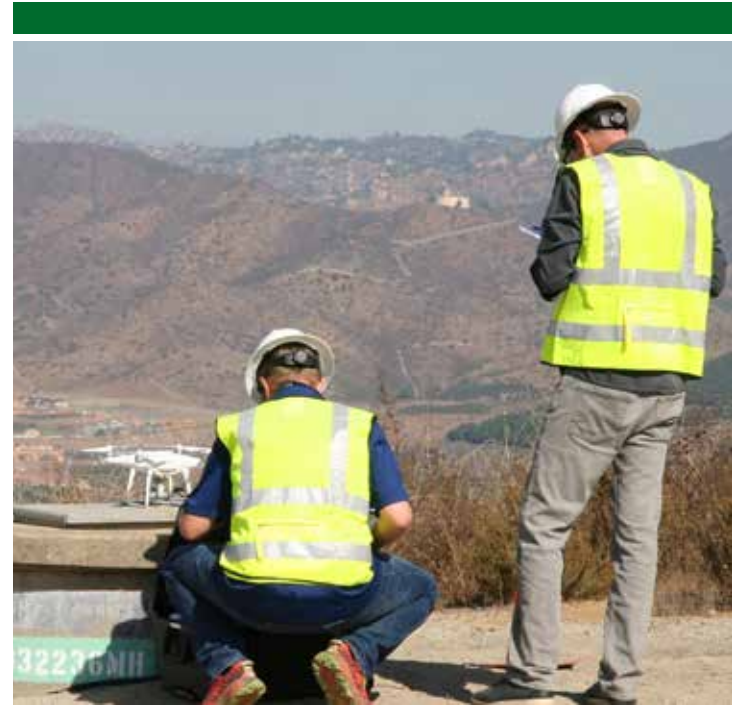
The Facilities focus area covers the operation and maintenance of the Kearny Mesa headquarters building and associated facilities. It works to enhance the efficiency of these facilities and ensure employees, Board members and visitors have a safe, secure and comfortable environment for their official business. In recent years, the Water Authority has implemented many physical improvements, such as solar panels, waterless urinals, dual-flush toilets, bathroom hand dryers, a hydration station, LED lighting, hallway lighting controls, and sustainable landscaping to immediately reduce energy and water use and save on their long-term costs. The Water Authority will continue to improve energy efficiency over the next five fiscal years through more efficient lighting, window tinting, roof improvements, and other projects. Many public agencies and institutions are re-evaluating and strengthening their building security measures to protect employees and visitors at their facilities from a variety of threats. The Water Authority recently conducted a security review and as a result of that review will be making physical and technological improvements, updating policies and conducting workforce training.

Administrative Support

The Administrative Support focus area provides a variety of services crucial for carrying out the agency's business affairs, from records management to risk management to purchasing and other processes that support employee productivity and agency objectives.

The Water Authority maintains a comprehensive records management program that effectively manages agency records from creation to ultimate disposition so the Water Authority can reliably access documents when necessary to meet its legal, operational or other obligations as a public agency. Over the next five fiscal years, staff aims to pilot enhancements to its records management software platform to further automate records classification and disposition to make successful records management easier and more efficient.

Historically, the Water Authority has employed innovative and cost-effective solutions to manage risk and reduce exposure to liability. An example is implementing an owner-controlled insurance program during the height of the Capital Improvement Program. More recently, new lines of insurance have needed to be secured to cover areas such as drone use and cybersecurity. Given constantly changing laws and regulations, new facilities and technologies, as well as the need to control costs where possible, staff will need to remain agile and ready to adapt the Water Authority's insurance portfolio over the next five fiscal years.



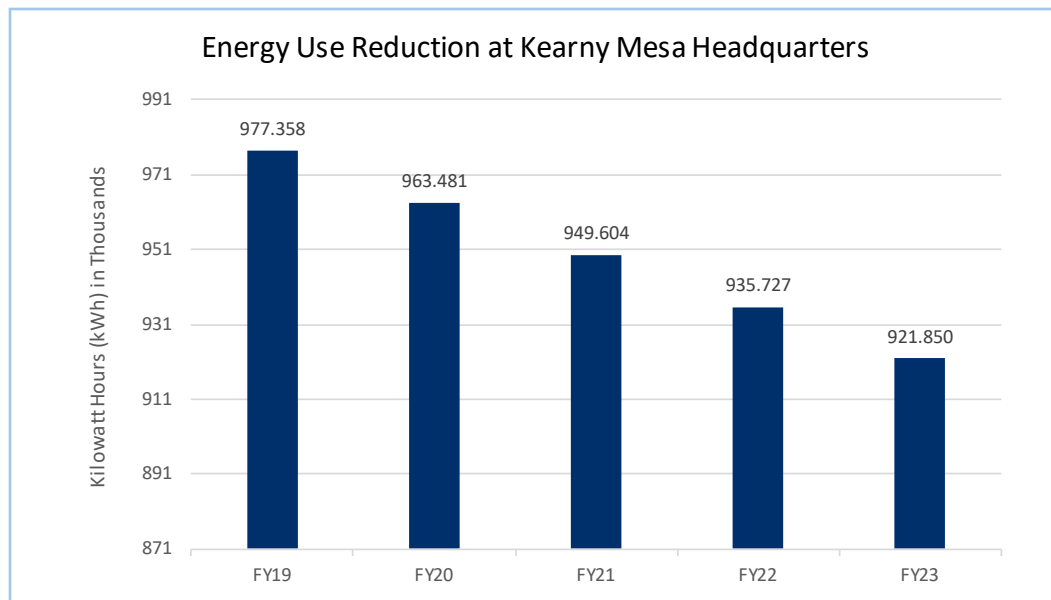
With the advancement of technology within the agency, new lines of insurance are needed, such as for drone use.

CYBERSECURITY		IT SERVICES AND OPERATIONS		FACILITIES		ADMINISTRATIVE SUPPORT	
A.	Provide back-up and recovery capability to protect data and critical information systems for business continuity.	D.	Maintain and upgrade critical software and business applications and hardware to meet business needs.	G.	Implement measures that maintain or enhance a safe, secure and productive working environment.	I.	Obtain cost-effective business insurance policies that appropriately manage risk and support evolving business needs.
B.	Implement cybersecurity measures to provide a safe and secure computing environment.	E.	Continually improve business processes by increasing automation, flexibility, ease of use, and mobility.	H.	Improve the efficiency of water and energy use at the Kearny Mesa Headquarters to reduce long-term costs and conserve resources.	J.	Maintain and upgrade records management practices and electronic document management systems.
C.	Educate employees to be technically skilled, well informed, alert, and vigilant.	F.	Upgrade, enhance, and support critical software applications to leverage new functionality, maintain compliance and compatibility, improve productivity and promote timely and informed decision making.			K.	Support and improve tools and processes that enhance business efficiency and productivity.

No.	Description	Target date
1.	Pilot implementation of enhancements to records management application that increase functionality, such as auto-classification of new records upon creation. (D, E, J, K)	Jun-2019
2.	Complete development of the Maximo computer maintenance management system for use in the field by Operations and Maintenance staff. (D, E, F)	Sep-2020
3.	Implement all physical and policy improvements to enhance the security of the Kearny Mesa Headquarters that were identified in the 2018 Security Review. (G)	Dec-2020
4.	Migrate three primary shared drives to cloud-based platforms to maximize resilience against loss of service while reducing on-premise physical server hardware needs. (A, B)	Dec-2021
5.	Upgrade existing phone technology to complete the “unified communication” system (combined messaging, presence, phone, video conferencing, voicemail, and email) to expand organization-wide communication capabilities. (D, E, F)	Dec-2021
6.	Reduce energy use of the Kearny Mesa Headquarters from Fiscal Year 2018 baseline by 7 percent by the end of Fiscal Year 2023. (H, K)	Sep-2023
7.	Implement at least 50 additional information security measures based on Center for Internet Security’s CIS-20 security framework. (A, B, C)	Sep-2023
8.	Adapt business insurance policies to cost-effectively meet the evolving needs of the Water Authority. (I)	Sep-2023
9.	Migrate electronic document management system to the cloud to improve systems resilience. (A, B, D, E, J, K)	Sep-2023

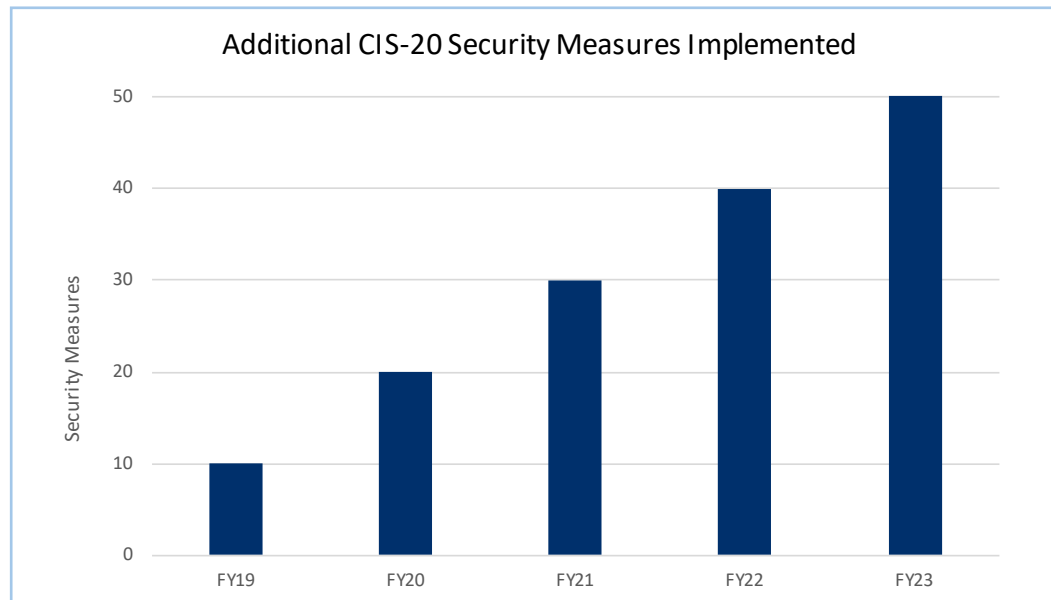
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Reduce energy use of the Kearny Mesa Headquarters from the Fiscal Year 2018 baseline of 991,235 Kilowatt hours (kWh) by 7 percent by the end of the Fiscal Year 2023.



2

Implement at least 50 additional information security measures based on Center for Internet Security’s CIS-20 security framework by the end of Fiscal Year 2023.



Communication and Messaging Overview

The Communication and Messaging Program supports the organization's vision in multiple ways. Effective communication with regulators, elected officials, media, community leaders, and the general public is imperative for meeting critical Water Authority goals. Regulatory or legislative requirements can have a significant impact on the Water Authority's and its member agencies' ability to maintain flexibility and cost sustainability of their systems. Meanwhile, public trust and support are also necessary to ensure the successful implementation of endeavors ranging from short-term maintenance projects to long-term supply reliability strategies. Engaging in these areas has become increasingly challenging in recent years as statewide drought and other complex water issues have dominated headlines and heightened public and regulatory interest in how water is secured, used, and funded.

Recent accomplishments in the Communication and Messaging Program include the State Water Resources Control Board's adoption of drought response requirements that take into consideration local supply development; engagement with the member agencies, WaterReuse California, and the State Water Resources Control Board to obtain flexible statewide standards for permitting reservoir potable reuse projects; and collaborating with WaterReuse to support passage of Assembly Bill 574 that lays out a strategy to advance direct potable reuse in California and develop statewide standards by 2023.

Government relations outreach efforts have resulted in the successful passage of Water Authority-sponsored bills that significantly advance the San Diego region's strong water conservation ethic into statewide policy and practice, and improved opportunities for small non-profit and disadvantaged community organizations to meaningfully

participate in Integrated Regional Water Management activities and projects. Additionally, the Water Authority has played an instrumental role in legislative efforts to secure robust funding for implementation of the Salton Sea Management Program.

Public outreach efforts have helped the San Diego region maintain a strong water conservation ethic. Water Authority branded communications, including the WaterSmart campaign, help to remind the public of the on-going need to practice efficient and sustainable water use. Outreach efforts have also helped maintain high levels of public support for the Water Authority's supply diversification strategy, water-use efficiency, and the value of public water services. Outreach has also bolstered engagement of community leaders on important water issues through initiatives such as the Citizens Water Academy and the new Brought to You by Water outreach and education program.

Communication and Messaging Focus Areas

The focus areas of the Communications and Messaging Program are **Government Relations Outreach**, **Public Outreach**, and **Regulatory Policy Support**. The focus areas support the vision of the program to maintain the Water Authority's leadership position in these areas into the future. Staff will remain driven to build and maintain strong relations with regulators, elected officials, and other stakeholders.

Government Relations Outreach

The Government Relations Outreach focus area increases the Water Authority's political influence with Washington, D.C., Sacramento, and local entities to secure favorable legislation, funding, or other outcomes that will help ensure continued safe and reliable water supplies for the region. Objectives include being driven to support legislative outcomes that protect the interests of the San Diego region's water agencies and their rate payers.

Public Outreach

The Public Outreach focus area builds community understanding and support for the Water Authority's strategies, programs, and projects through building and maintaining relationships with key audiences such as business, community, labor, education, environmental, industry leaders and organizations, the media, school-age children, and the general public. Outreach activities include media relations, online and social media communications, developing publications and other printed materials, hosting tours and events, offering school education programs, community presentations, and more. The focus area also oversees efforts to help small businesses participate in Water Authority procurements. Objectives include increasing our social media followers and engagement, along with redesigning sdcwa.org and "microsites" on an updated, integrated operating system.

Regulatory Policy Support

The Regulatory Policy Support focus area enables the Water Authority to engage and collaborate with state and national organizations, groups, and other agencies to maximize its impact on various regulatory policies related to water supply and quality, energy, and the environment. The Water Authority actively partners

with various entities, such as WateReuse, Association of California Water Agencies, American Water Works Association, Water Utility Climate Alliance, Western Urban Water Coalition, Cal Desal, Southern California Salinity Coalition and California Urban Water Agencies, to gain support on regulatory policy issues. In addition, it fosters relationships with state and federal agencies, such as the regional and state Water Boards, Division of Drinking Water, California Public Utilities Commission, California Department of Water Resources, and the U.S. Environmental Protection Agency. Other objectives include working with supporters to develop a visionary, long-term strategy to support potable reuse in California.



Advocating for the interests of San Diego County's ratepayers at the state and national level is a key objective of the Government Relations Outreach program.

GOVERNMENT RELATIONS OUTREACH

- A. Strengthen relationships with the San Diego local, state, and federal legislative delegations, other key legislators, legislative staff, and the state and federal administrations.
- B. Engage and influence relevant legislation, regulatory matters, and funding requests in the Legislature, Congress, and state and federal administrations.
- C. Sponsor and promote legislation that positively impacts the region and conveys San Diego’s role as a statewide water community leader.

PUBLIC OUTREACH

- D. Enhance public understanding and support for Water Authority and member agency strategies, policies, and programs.
- E. Implement innovative and effective public outreach programs and tools that deliver Water Authority messages to key stakeholders.
- F. Promote greater public awareness of local water issues and wise water use by building relationships and partnerships with compatible organizations and institutions.

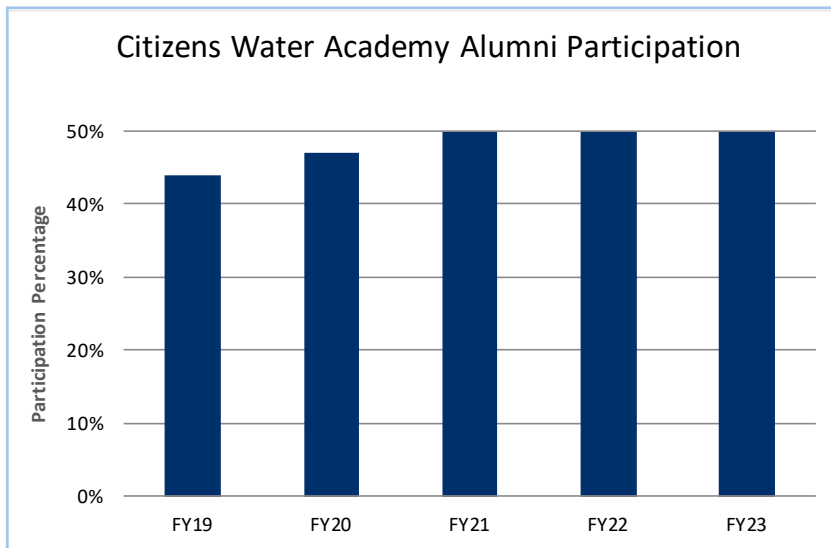
REGULATORY POLICY SUPPORT

- G. Maximize flexibility and sustainability in water supply development and management, water-use efficiency, and water quality protection.
- H. Foster collaborative relationships with regulatory agencies.
- I. Engage in policy and regulatory development under local, state and federal water, energy, and environmental laws.
- J. Inform and obtain feedback from Water Authority departments and member agencies on regulatory and permitting issues.

No.	Description	Target date
1.	Conduct communications and outreach activities that result in at least 70 percent of stakeholders viewing municipal water service as a “good” or “excellent” value through the public opinion poll. (D, E, F)	Jun-2019
2.	Execute a minimum of three significant programs or events to commemorate the Water Authority’s 75th Anniversary. (A, D, E, F)	Jun-2019
3.	Execute effective advocacy strategies to defeat all legislation that the Water Authority Board opposes each year. (B)	Dec-2019
4.	Redesign sdcwa.org and microsites on an integrated, up-to-date operating system. (E, F)	Jun-2020
5.	Grow total social media audience and engagement by 15 percent. (F)	Sep-2020
6.	Achieve passage of one or more Water Authority sponsored bills annually. (A, B)	Dec-2020
7.	Provide at least one briefing annually to each member of the San Diego state legislative delegation to enhance support for advancing and protecting the Water Authority’s legislative interests. (A, B)	Jun-2021
8.	Increase awareness and understanding of the Water Authority’s interests by providing at least one briefing annually to each member of the San Diego congressional delegation in Washington, D.C. and the San Diego district office. (A, B)	Jun-2021
9.	Strengthen relationships with state and federal legislators by conducting at least two legislative roundtable events at the Water Authority headquarters during each calendar year. (A, B)	Jun-2021
10.	Engage in outreach efforts that result in at least 50 percent of Citizens Water Academy alumni engaging in at least one alumni activity through Fiscal Year 2021. (E, F)	Jun-2021
11.	Convene the Potable Reuse Coordinating Committee to advocate for direct potable reuse criteria that supports potable reuse in the San Diego region. (H, I, J)	Jun-2023
12.	Participate with water supply stakeholders to support water supply development and operations in EPA’s rulemaking for Waters of the United States. (H, J)	Jun-2023

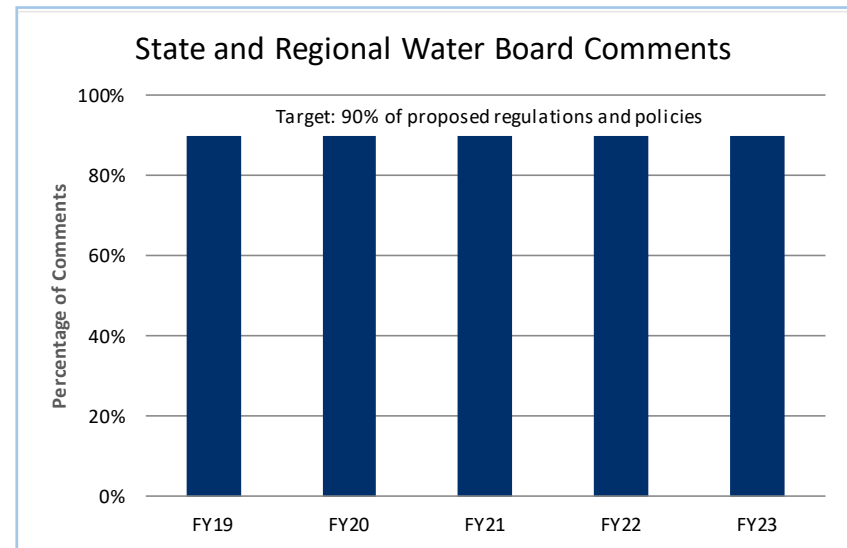
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Engage in outreach efforts that result in at least 50 percent of Citizens Water Academy alumni participating in a least one alumni activity through June 2021.



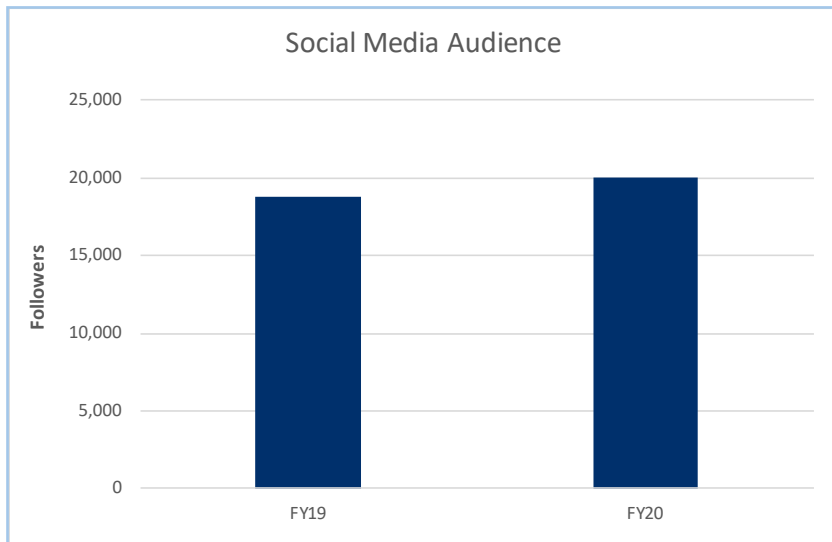
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Provide comments on a least 90 percent of the proposed State or Regional Water Board regulations and policies that directly impact the Water Authority or its member agencies.



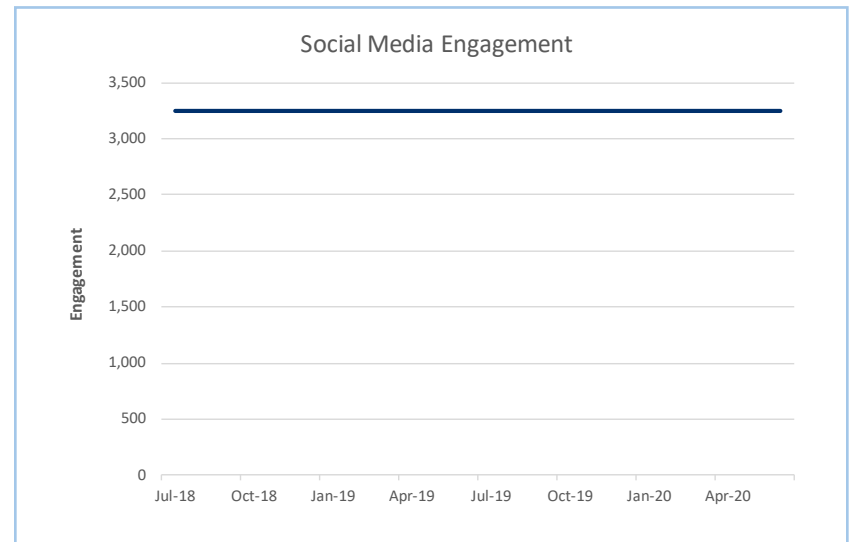
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Grow total social media audience (followers) from 17,500 to 20,000 across core platforms (Twitter, Facebook, Instagram and LinkedIn) by the end of Fiscal Year 2020.



4

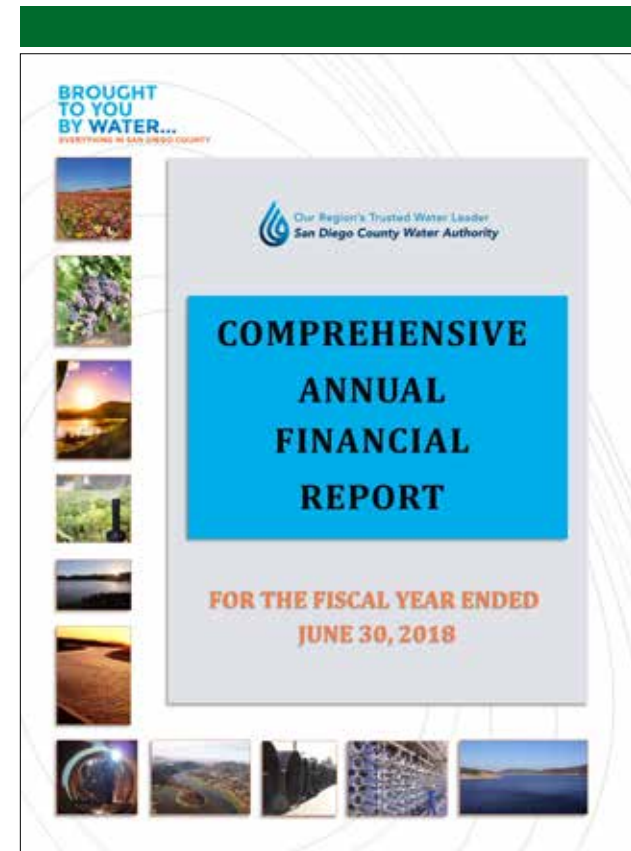
Increase monthly social media engagement (shares, likes, comments, clicks) from 2,750 per month to 3,250 per month by the end of Fiscal Year 2020.



Financial Management Overview

The Water Authority maintains a comprehensive financial management plan that focuses on both near-term and long-term planning to provide smooth and predictable rates and charges. A key ongoing component of near-term planning and reporting is the Water Authority's Multi-Year Budget. The last Multi-Year Budget, adopted in June 2017, successfully executed the financial policies and objectives as determined by the Board of Directors. The Multi-Year Budget document conforms to the highest standards and has received awards for Distinguished Budget Presentation from the Government Finance Officers Association (GFOA) every year since 1995. The Multi-Year Budget will be presented for adoption every other June during the five year planning period of the 2019-2023 Business Plan. An additional and equally key component of our near-term planning and reporting is the preparation of the Comprehensive Annual Financial Report (CAFR). The CAFR is produced to report the results of the financial operations each fiscal year. The report for the prior fiscal year, ending on June 30, is presented to the Audit Committee and Board of Directors during the last meeting of each calendar year. The CAFR preparation has received the prestigious GFOA Certificate of Achievement award for the past fourteen years.

Central to long-term planning is the development of the Long-Range Financing Plan, which was most recently updated and adopted by the Board of Directors in January 2016. The Long-Range Financing Plan is a 10-year guiding document that incorporates the Water Authority's financial policies and goals. It includes an optimized funding and Capital Improvement Program strategy, water sales and rate projections, and sensitivity analyses of selected variables.



Comprehensive Annual Financial Report 2018

Financial Management Focus Areas

The key focus areas of the Financial Management Program are **Accounting**, **Debt and Investment Management**, and **Financial Planning**. Within each focus area, management strategies are identified to determine the vision for accomplishment of significant objectives and tactics over the next five fiscal years.

Accounting

The Accounting focus area centers on delivering accurate, meaningful, and timely information to all of its customers. This group has the important responsibility of recording the financial activities of the Water Authority using various accounting platforms and summarizing the financial activities into levels of information important to our internal and external users. Management strategies for Accounting includes providing financial data and other key information, monitoring revenue and expense trends, and assessing industry best practices to apply to Water Authority financial operations.

Debt and Investment Management

Effective debt and investment management help to minimize costs. By optimizing the debt portfolio, the Water Authority's cost of funds can be reduced. Effective management of the investment portfolio maximizes the revenues generated from the Water Authority's cash balances and offsets other costs. Management strategies under Debt and Investment Management include maintaining solid credit fundamentals and optimizing the capital financing mix.

Financial Planning

The Water Authority's prudent financial planning and sound financial policies are aligned to achieve long-term fiscal sustainability. Financial planning involves accurately projecting both near- and long-term operating and capital costs so rates and charges can be set to achieve the financial policy goals (i.e. the Board of Directors' Senior Lien Coverage Ratio target of 1.5 times). Financial planning strategies include ensuring financial policies are aligned with the long-term fiscal sustainability of the Water Authority.

ACCOUNTING

- A. Provide relevant, accessible, and usable financial data and other key information.
- B. Analyze revenue and expense trends proactively to anticipate early budget variances and formulate actions to ensure fiscal sustainability.
- C. Assess and recommend as appropriate industry best practices and new accounting standards for applicability to Water Authority financial operations for enhanced financial reporting.

DEBT AND INVESTMENT MANAGEMENT

- D. Ensure Water Authority credit ratings through sound financial management.
- E. Ensure strong financial industry presence for the Water Authority.
- F. Strategically optimize the resources of the debt and investment portfolio to execute future bond and investment transactions successfully.
- G. Optimize the capital financing mix to achieve the lowest cost of funds and minimize interest rate risk.

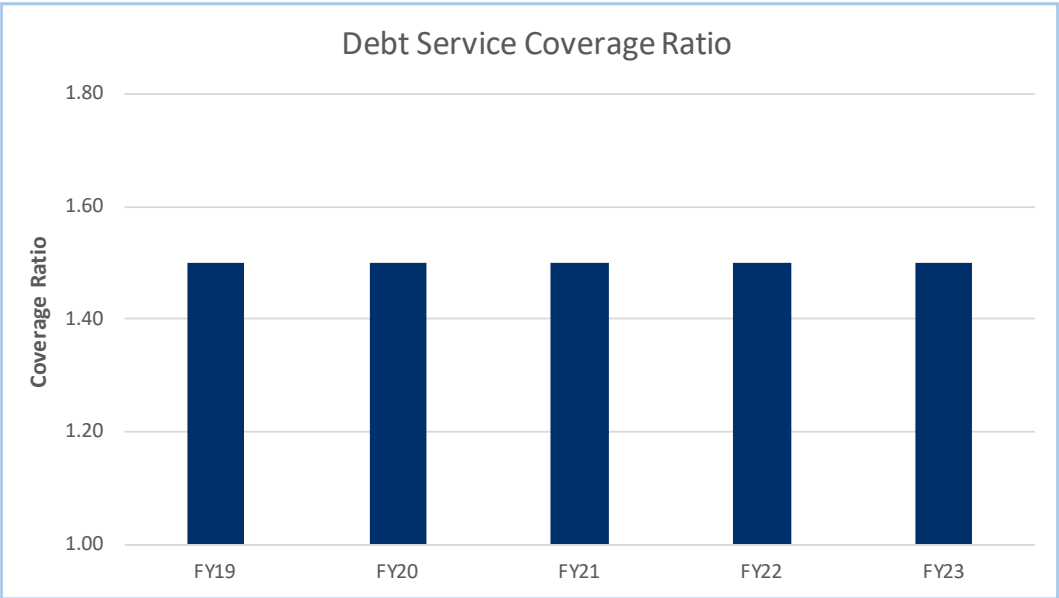
FINANCIAL PLANNING

- H. Develop detailed cost projections for Capital Improvement Program projects and operations to develop long-term rate projections.
- I. Analyze and recommend an updated rates and charges model resulting in the goals of cost efficiency, predictable rates, and intergenerational equity.
- J. Provide high level of service to member agencies while ensuring equitable rates and charges.
- K. Ensure financial policies are aligned with the long-term fiscal sustainability of the Water Authority.

No.	Description	Target date
1.	Upgrade the Financial Rate Model Program for rate and charge reliability. (A, B, I)	Mar-2019
2.	Develop and obtain approval for a long-term pension funding strategy for future pension savings. (C, G, K)	Jun-2019
3.	Complete the full implementation of both short-term and long-term investment strategies to realize future investment earnings. (E, F, K)	Jun-2019
4.	Complete pipeline refunding transactions resulting in debt policy driven savings. (D, F, K)	Jun-2019
5.	Restructure the Chart of Accounts for better measurement of the organization’s performance and increase effectiveness of reporting. (A, C)	Jul-2019
6.	Develop the Water Billing and Information Management System project (subsequently renamed the Data Archival and Invoicing System - DAIS) to replace the existing PRIMA and WBIS systems. (A, C)	Mar-2020
7.	Update budgeting processes to ensure efficiency and continued best practices in accordance with Government Finance Officers Association standards. (A, C, H)	Jun-2020
8.	Advocate Water Authority position through participation in two industry conferences per year via speaking engagements and achieve membership in industry committees and boards, such as California Society of Municipal Finance Officers, Government Finance Officers Association, Bond Buyer, and the California Municipal Treasurer’s Association. (E, K)	Jun 2023

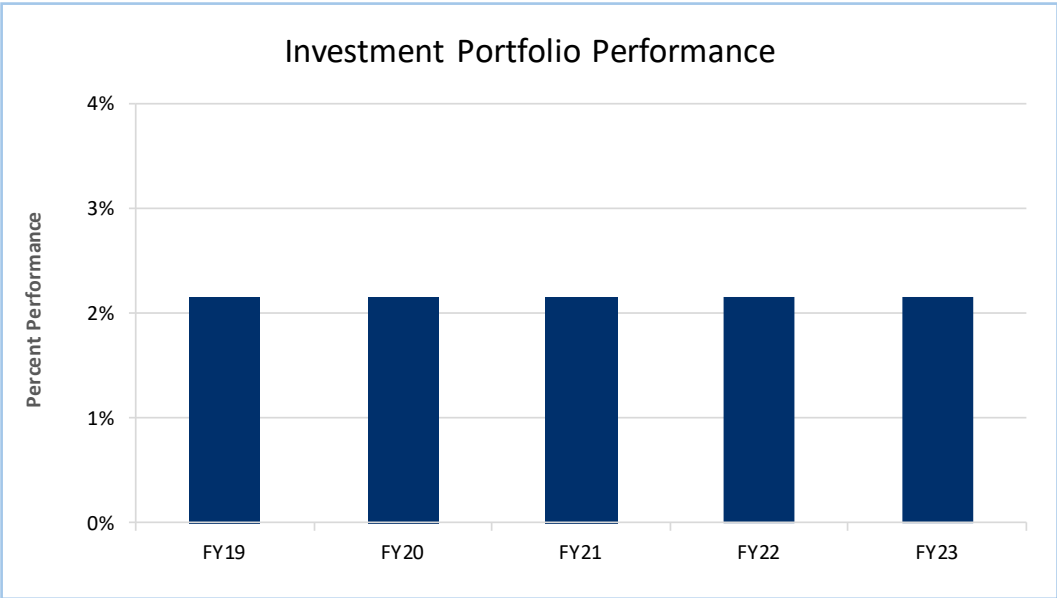
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Maintain debt service coverage ratio of 1.5 times on senior lien debt in accordance with the Water Authority’s Board policy target. (Source: Water Authority Board and Long-Range Financing Plan.)



2

Monitor the Water Authority’s short-term investment portfolio performance using the Bank of America Merrill Lynch 0-3 Year US Treasury & Agency Index as a performance benchmark.



Workforce Management Overview

Workforce Management continues to be one of the greatest challenges facing the public sector today. Surrounded by a rapidly evolving world, volatile economies, environmental impacts, rapid changes in technology, and the changing needs of the workforce require the public sector to think differently about how to shape our organizations. Workforce Management focuses on key areas to shift the organization to a higher level of performance and to strategically position the organization as a driver of change and innovation.

Workforce Management Focus Areas

The focus areas of the Workforce Management Program include **Leadership, Culture, Talent, Communication,** and **Technology**. Within each focus area are strategies to accomplish the objectives and tactics planned for the next five fiscal years.

Leadership

The Water Authority emphasizes organization-wide knowledge of its mission, vision, values, and priorities of its leadership to manage the ‘workforce of tomorrow’. The Workforce Management Program is responsible for the development of targeted leadership and skill-based training programs to ensure the workforce fulfills the competency and leadership skills necessary for the success of the agency. Leadership training, combined with succession planning, enables the Water Authority to create a long-term, flexible system focused on the development of visionary leaders that will cultivate an innovative spirit across the entire workforce.

Culture

Organizational culture captures the ‘personality’ of an organization and how it functions and expresses itself. Culture is the key factor in determining how effectively the Water Authority’s goals and objectives will be achieved. Objectives of a positive organizational culture focus on developing policies, programs, and practices that support the physical, social, and mental well-being of the workforce, allowing each individual to bring their best selves to their roles in the organization. A healthy organizational culture can also facilitate improved professional development, career agility, and knowledge transfer to ensure the Water Authority’s succession planning needs are met through acknowledging the value of creativity, continuous process improvement, and an agile organizational structure. As we address the Water Authority culture, it is also paramount to ensure inclusive leadership methods are employed, such as openness and consideration of innovative solutions and diverse points of view.

Talent Management

Ensuring there is a high performing workforce in place to execute and meet desired results is paramount to workforce management. Assuring the Water Authority has the right people, in the right place, at the right time, with the right set of skills, will allow the organization to continue to move forward. Creating an integrated systems approach to talent management improves the agency’s ability to fulfill evolving needs of the agency and its workforce.

The nature of the workforce is increasingly changing. Traditionalists are all but gone from full time employment and baby boomers are quickly exiting the workforce. Millennials are the fastest growing demographic in applicant pools. Because of the rapid and multiple changes taking place across the spectrum of society in general,

organizations will have to evolve to be able to fulfill missions, successfully achieve goals and objectives and retain this valuable workforce demographic.

To address this new workforce, the Water Authority will adopt and promote innovative practices for attracting, selecting and promoting employees who possess the desired personality characteristics (e.g. agility and curiosity) for the future state of the needed workforce. The Water Authority will not discount technical competencies for job success, but will begin to shift to more strongly encourage hiring managers to hire for desired attributes and train for technical skills when possible.



Regional Water/Wastewater program interns visit Helix Water District for an informative tour.

To address the hiring gaps of entry level water/wastewater positions among member agencies, the Water Authority has facilitated the Regional Water/Wastewater program for over ten years and will revamp the program over the next two years to better include the stakeholders, including the local community colleges and member agency contacts.

Communication

Communication touches every area of our business operation and every employee. Communication is rapidly changing in messaging, frequency and the manner in which the message is transmitted in order to be effective. The proliferation of communication channels, along with the changing dynamic of the workforce, requires the Water Authority to be innovative in developing communication strategies that reach all employees in all locations. Workforce management plays a key role in how effective communication channels operate and connect the workforce with one another internally across departments as well as externally with the public. Included in the objectives is the development of a Water Authority introductory video to provide a framework for prospective applicants unaware of the water industry.

Technology

Technology plays a critical and foundational role in providing workforce management, not only for the automated processes but also for the analytics that can be derived from such tools. Evaluating and developing tools for employee performance will ensure more effective feedback at more regular intervals to address any issues or highlight any successes. Additional technology tools will streamline human resources practices that will improve accuracy, speed, transparency and relevance to the overall workforce management strategies.

LEADERSHIP

A. Strengthen leadership capabilities and capacity to encourage performance excellence and productivity.

CULTURE

B. Foster a positive culture by developing policies, programs and practices that support the employees' physical, social, and mental well-being; and facilitating learning through professional development, career agility, and knowledge transfer.

COMMUNICATION

C. Maintain open and effective communication that addresses the changing dynamic of the workforce.

TALENT

D. Creating an integrated systems approach to Talent Management better enables the organization to meet the evolving needs of the agency and the workforce of the future.

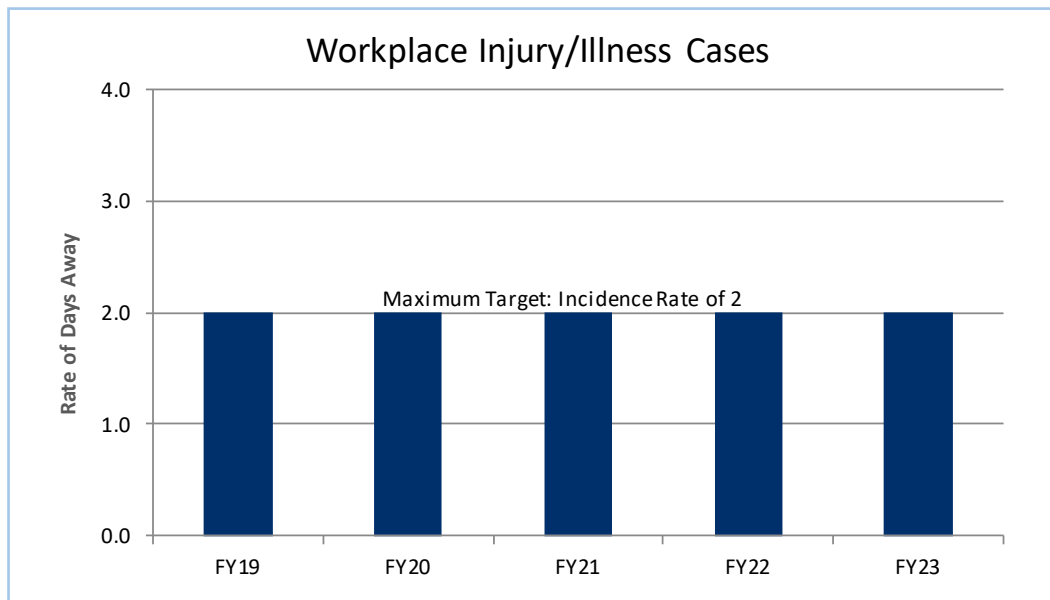
TECHNOLOGY

E. Evaluate and facilitate tools that will streamline processes and provide more relevant and effective information.

No.	Description	Target date
1.	Develop communication plan and implement additional communication channels to address changing demographics of the workforce. (C)	Jun-2019
2.	Evaluate and implement a competency-based hiring model. (D, E)	Mar-2019
3.	Evaluate a new performance review tool to address consistent, relevant feedback for leadership staff. (E)	Jun-2019
4.	Develop and produce job preview videos, showcasing our industry and what a hard to recruit for job looks like. (C)	Jun-2019
5.	Develop a workforce management strategic plan that addresses diversity and inclusion. (B)	Jun-2020
6.	Reassess the San Diego Regional Water/Wastewater Internship Program to address needs of the stakeholders and increase number of qualified applicants. (D)	Mar-2021
7.	Develop a Water Authority Alumni Network and hold annual meetings with the Alumni group. (D)	Jun-2021
8.	Develop targeted quarterly leadership and ongoing skills-based training programs for employees to address any competency gaps in the workforce. (A)	Jun-2023
9.	Develop organization-wide mentoring program designed to empower early and mid-career professionals, increase diversity, attract high performing employees, and foster a culture of continuous learning and knowledge transfer. (A, B, D)	Jun-2023
10.	Achieve and maintain an employee turnover rate of six percent or less, factoring out retirements, for employees meeting or exceeding overall performance standards each fiscal year. (D)	Jun-2023
11.	Develop and implement Wellness Initiatives to improve health and wellness of employees; develop employee satisfaction survey regarding wellness; and achieve 20 percent increase in satisfaction from baseline results. (B)	Jun-2023
12.	Enroll 150 Water Authority employees over a two-year fiscal period in the supervisory training provided by the Liebert Cassidy Whitmore Employee Relations Consortium. (B)	Jun-2023

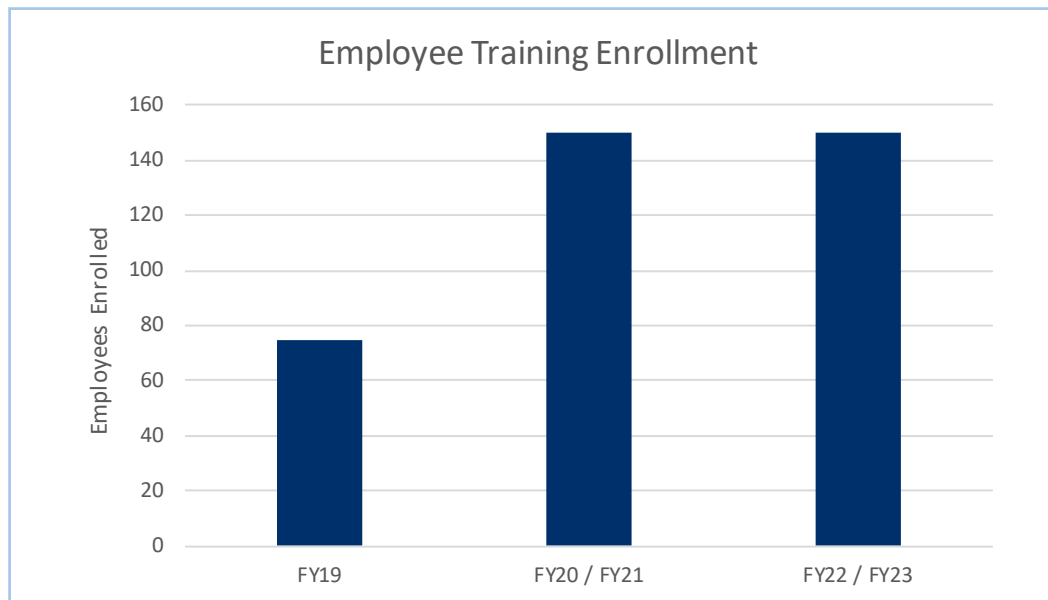
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Reduce the number of workplace injury/illness incidents by achieving 100 percent hazard identification and remediation each calendar year.



2

Enroll 150 Water Authority employees over a two-year fiscal period in the supervisory training provided by Liebert Cassidy Whitmore Employee Relations Consortium.



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Appendix 1

Guiding Policies and Principles

The Water Authority's member agencies are represented through a 36-member Board of Directors. The Water Authority was formed by an Act of the California state legislature establishing the Board of Directors as the agency's governing body. Below are highlights of the Board's adopted principles and policies that guide the Water Authority in its business practices.

County Water Authority Act – Sets forth the organization, incorporation, and government of the Water Authority, including authorizing the agency to acquire and own water rights, to construct and maintain facilities, and to tax and incur bonded indebtedness.

Debt Management and Disclosure Policy – Ensures the Water Authority's debt portfolio is optimized to minimize cost of funds and ensure savings from refunded debt are maximized.

Delta Policy Principles – Guides staff in evaluating Bay-Delta initiatives and the Water Authority's advocacy to ensure a successful implementation of a Delta solution.

Energy Management Policy – Provides guidance to the Board when it is considering energy related issues, and provides guidance to staff in the development of projects and programs. Areas of focus include inter-agency cooperation; the design, construction, maintenance, and operation of facilities; and public education.

Fiscal Sustainability Guiding Principles – Provides guidance to the Board when it is considering changes or additions to the Water Authority's rates and charges structure or financial policies with the objective of ensuring long-term fiscal sustainability.

Legislative Policy Guidelines – Leads staff and the legislative advocates on issues of critical importance to the Water Authority and its service area. Provides a framework for evaluation of potential impacts to the Water Authority from state and federal legislation.

Water Shortage and Drought Response Plan Allocation Methodology – Establishes policies and procedures for administering the Municipal and Industrial (M&I) water supply allocation methodology to member agencies during times of water shortage or drought.

Water Supply Diversification Strategy – Guides Water Authority staff to enhance regional water supply reliability through a diversified water supply portfolio.

Water Use Efficiency Policy Principles – Provides Water Authority staff with long-term strategic direction for planning and implementing regional water use efficiency initiatives and programs.

Appendix 2

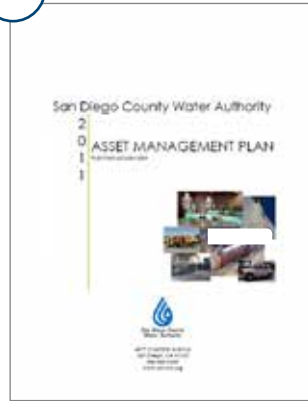
Related Planning Documents

- 1. Aqueduct Operating Plan** – Reflects on-going efforts to optimize the delivery, treatment, and storage of water in the San Diego region through coordination between the Water Authority, its member agencies, and the Metropolitan Water District of Southern California. Prepared by the Operations and Maintenance Department.
- 2. Asset Management Plan** – Documents the actions necessary to derive the most value from each Water Authority asset through its life cycle. Prepared by the Operations and Maintenance Department.
- 3. Climate Action Plan** – An inter-disciplinary effort that promotes, facilitates, and coordinates implementation of climate change strategies and related activities within the Water Authority. Prepared by the Water Resources Department.
- 4. Comprehensive Annual Financial Report** – Details the results of operations each fiscal year and includes the Continuing Disclosure, which is a required communication to investors. Prepared by the Finance Department.
- 5. General Manager’s Adopted Multi-Year Budget** – Based on the Board of Directors’ financial and operational policies, and provides the resources necessary to achieve the Water Authority’s Business Plan management strategies, objectives, and tactics. Prepared by the Finance Department.
- 6. Integrated Regional Water Management Plan** – Addresses resource management, water quality, and habitat in a region that includes the portion of San Diego County that is tributary to coastal waters. Prepared under the direction of the Regional Water Management Group.
- 7. Long-Range Financing Plan** – Calculates the cost of service and projects the Water Authority’s financial position. It provides a solid financial foundation on which to build and operate the Water Authority’s infrastructure. Prepared by the Finance Department.
- 8. Quantification Settlement Agreement** – Provides California the means to implement water transfers and supply programs to the state’s 4.4 million acre-foot basic annual apportionment of Colorado River Water. Prepared by various parties.
- 9. Regional Water Facilities Optimization and Master Plan** – Provides a comprehensive evaluation of the infrastructure required for meeting the Water Authority’s mission to provide a safe and reliable water supply to its member agencies. Prepared by the Water Resources Department.
- 10. Urban Water Management Plan** – Identifies a diverse mix of water resources projected for development over the next 25 years to ensure long-term water supply reliability for the region. Prepared by the Water Resources Department.
- 11. Water Shortage Contingency Plan** – Provides the Water Authority and its member agencies with a series of potential actions to take when faced with a shortage of imported water supplies from Metropolitan Water District of California due to drought conditions. Prepared by the Water Resources Department.

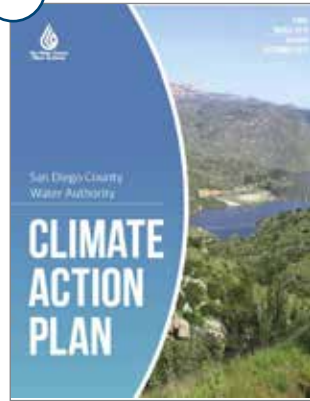
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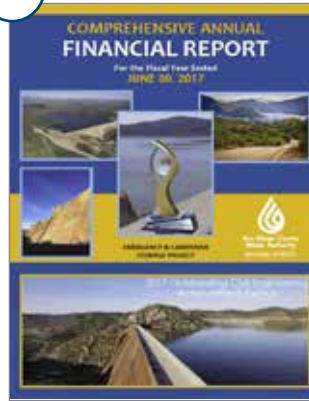
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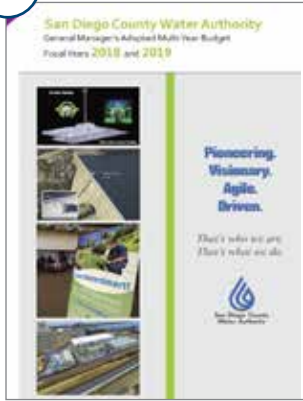
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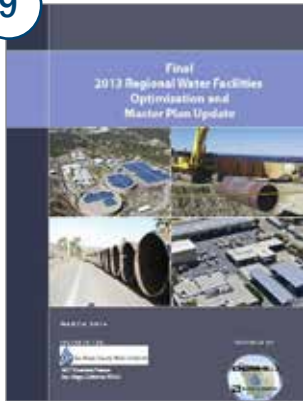
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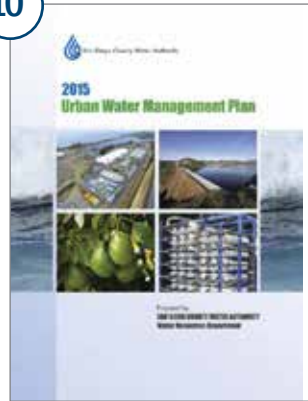
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Appendix 3

Agency Dashboard of Key Performance Indicators

The Water Authority Agency Dashboard displays 12 key performance indicators, divided into 4 agency-wide focus categories: **Water Supply Reliability**, **Water Distribution and Facilities**, **Environmental Stewardship**, and **Financial Responsibility**.

Water Supply Reliability

Key Performance Indicators

▶ **Diversification**

Water supply diversification pie charts are used to track the Water Authority's progress towards our supply portfolio goals.

▶ **Storage**

Reservoir storage is an important indicator of current supply reliability. The Storage indicator tracks member agency, Water Authority, and Metropolitan Water District water storage volumes and reservoir levels with comparisons to previous time periods.

▶ **Availability**

Hydrologic conditions and storage levels for the State Water Project and Colorado River provide implications for water availability for the Water Authority and throughout California. The Availability indicator tracks precipitation, snowpack, major reservoir levels, and other indicators for the State Water Project and Colorado River systems.

Water Distribution and Facilities

Key Performance Indicators

▶ **System Operation Water Deliveries**

The System Operation indicator tracks untreated and treated water deliveries and aqueduct flows. Monthly and annual water deliveries reveal trends in water demand.

▶ **Water Quality Performance**

Maintaining water quality standards is a vital component of the Water Authority distribution system. The Water Quality Performance indicator tracks compliance with water quality regulations and guidelines.

▶ **Operating System Reliability**

The Water Authority's operating system consists of the communications network, aqueduct and facilities, and hundreds of miles of pipeline. The Operating System Reliability indicator tracks the communications and facilities systems uptime and outages compared to goals. Pipeline asset management is expressed through length of pipeline rehabilitated (relined, replaced, or repaired) and the impact of system improvements on the long-term reliability of the pipeline network.

Environmental Stewardship

Key Performance Indicators

▶ **Habitat Conservation**

The Water Authority's Habitat Conservation Plan and Natural Communities Conservation Plan describe the types of habitat, target species, and conservation areas within San Diego County preserved to offset environmental impacts from water supply and delivery projects. The Habitat Conservation indicator tracks preserved habitat associated with environmental programs related to the Quantification Settlement Agreement.

▶ **Energy Budget**

Transporting and delivering water throughout the Water Authority service area can be an energy-intensive process. The Water Authority has developed alternative energy sources through solar and hydroelectric projects to help offset energy use. The Energy Budget indicator monitors energy production and use, and associated financial information.

▶ **Per Capita Water Use**

Per capita water use relates directly to progress towards reaching the California Senate Bill X7-7 requirement to reduce urban water use 20 percent statewide by 2020. The Per Capita Water Use indicator tracks progress toward achieving the 2020 mandate.

Financial Responsibility

Key Performance Indicators

▶ **Revenue**

The Water Authority's two-year budget contains the expected revenue sources and amounts necessary to achieve the Water Authority's programs and initiatives. The Revenue indicator tracks actual revenues compared to budgeted amounts for the Water Authority on a quarterly basis.

▶ **Expenditures**

Expenditure projections and source categories are shown in the Water Authority's two-year budget. The Expenditures indicator tracks the Water Authority's actual expenditures compared to budgeted amounts on a quarterly basis.

▶ **Credit Rating**

The Water Authority's credit rating is an indicator of our ability to repay debt and the likelihood of default. The Credit Rating indicator includes annual updates to financial metrics, bond ratings, and debt service coverage ratios, which track the Water Authority's financial responsibility.

Appendix 4 Glossary

A

Acre-foot – The measurement by which large amounts of water are measured. One acre-foot is about 326,000 gallons, or enough water to cover one acre to a depth of one foot. An acre-foot can supply the needs of 2.5 single-family households of four for one year.

Adaptive Management – A management approach whereby strategies are adapted to changing circumstances.

Agricultural Water – Water used mostly for irrigating groves and crops.

Aqueduct – An artificial man-made pipeline constructed to convey water from one location to another.

Asset Management – The combination of management, financial, economic, engineering, and other practices applied to physical assets with the objective of providing the required level of service in the most cost-effective manner. It includes the management of the entire lifecycle including design, construction, commissioning, operating, maintaining, repairing, modifying, replacing, and decommissioning/disposal of infrastructure assets.

B

Basin Plan – Water Quality Control Plan for the San Diego Region - A planning document prepared and managed by the California Regional Water Quality Control Board, San Diego Region that recognizes and reflects the regional differences in existing water quality, beneficial uses of ground and surface waters, and local water conditions.

Battery Systems – One or more batteries that store energy during off-peak periods where energy costs are lower, and discharge energy for use during peak demand periods when energy costs are higher.

Bay-Delta – The Bay-Delta is formed by the confluence of California's two largest rivers: the Sacramento and San Joaquin. Joined by the Mokelumne and Cosumnes rivers, they comprise the Bay-Delta's watershed, which drains nearly 50 percent of the state's water runoff. Pumping stations move a portion of Bay-Delta water throughout the state, while the remainder flows to farms and communities within the Bay-Delta itself and then out to sea through a series of bays.

Best Management Practices – Practices, methods, or techniques agreed upon by industry professionals found to be the most effective and practical means in achieving an objective while making the optimum use of resources.

Brackish Groundwater – Somewhat salty water, often found in groundwater aquifers. The water has a mineral content between freshwater and seawater.

C

California WaterFix – WaterFix is a science-driven upgrade to the aging water system. It will provide clean, reliable water while protecting the environment. WaterFix covers five main areas: water security; environmental protection; reduced risk from earthquakes and climate change; system upgrades and new technology; and increased efficiency.

Capital Improvement Program (CIP) – A major building program initiated in 1989 to plan and implement projects required to meet the region’s current and future water demands. Projects in the CIP include: constructing new facilities to improve operational flexibility and capacity to deliver water, particularly during times of peak usage; rehabilitating existing facilities; and replacing or relining aging pipelines.

Carryover Storage – A volume of storage dedicated to water storage during a wet year for future use in a dry year.

Claude “Bud” Lewis Carlsbad Desalination Plant (CDP) – This seawater desalination plant meets approximately 10 percent of the region’s water demand by producing an average of 50 million gallons per day of locally controlled water for the region as part of a Water Purchase Agreement (WPA) between Poseidon, the owner/operator of the plant, and the Water Authority.

Colorado Lower Basin States – The three states that are fed from the lower basin of the Colorado River: California, Arizona, and Nevada.

Conservation – The preservation of a physical quantity of water, or the deferral of use of that same amount of water.

Conveyance – The movement of bulk commodities such as water.

D

DDW – The Division of Drinking Water of the State Water Resources Control Board.

Direct Potable Reuse Water – Water that is distributed directly into a potable water supply distribution system downstream of a water treatment plant or in the source water supply immediately upstream of the water treatment plant.

Distribution Tariff – The rate charged by an electrical utility to customers wishing to use the infrastructure owned by the electrical utility to deliver wholesale power to itself or others.

Drought – A prolonged period of below-average precipitation.

Dry-year – A year in which rainfall is less than the long-term average.

E

Emergency Storage – Additional water that is stored during a water year, for emergency use, should an emergency occur.

Emergency Storage Project (ESP) – A set of Water Authority Capital Improvement Program projects. The ESP is a system of reservoirs, interconnected pipelines, and pumping stations designed to make water available to all communities in the San Diego region in the event of a disaster that interrupts imported water deliveries.

Energy Facilities – As it pertains to the Water Authority, any systems or facilities that generate or store energy.

Environmental Impact – The direct and indirect physical changes to the environment that are caused by a project. Impacts can be classified in four general categories: 1) beneficial impact; 2) less than significant impact; 3) less than significant impact with incorporation of mitigation measures; or 4) significant and unavoidable impact.

F

Facilities – As it pertains to the Water Authority, any pipelines, pump stations, flow control facilities, reservoirs, or dams that enable the transport of water throughout San Diego County.

First Aqueduct – The eastern-most of two San Diego County Water Authority pipeline aqueducts which conveys water from Metropolitan Water District’s system throughout San Diego County. The First Aqueduct contains Pipeline 1 and 2.

G

Gate – A hold point in a project schedule where the project team certifies to a select committee of senior managers that predetermined work deliverables have been completed for specific project milestones.

Groundwater – Water that is found below the Earth’s surface within aquifers and extracted for potable use, either for demineralization treatment or directly through residential wells.

H

Hydraulic Transient – A pressure surge that is created when sudden changes in flow rate occurs in pumping and pipeline systems. The pressures created may be high enough to damage or even cause catastrophic failure of pipelines. Specialized hydraulic transient analysis provides the basis for designing surge control measures to protect important infrastructure.

Hydroelectric Facilities – A power plant that produces electricity from the power of rushing water turning turbine-generators.

I

Imported Water Supply – A water supply that lies outside the region of San Diego County and requires transport into San Diego County.

Indirect Potable Reuse (IRR) – Water that is blended with other environmental systems such as a river, reservoir, or groundwater basin, before the water is reused.

Irrigation – A water supply used for agriculture by artificial means, such as pumping water onto crops, in an area where rainfall is insufficient.

L

Local Water Supply – A water supply that is not imported from outside of San Diego County. Local resources for the San Diego region are recycled water, groundwater, local surface water, and conservation.

M

Member Agency – An agency that is a direct purchaser of water from the Water Authority. The Water Authority has 24 member agencies. The Water Authority’s member agencies are comprised of 6 cities, 5 water districts, 3 irrigation districts, 8 municipal water districts, 1 public utility, and 1 federal agency (military base).

MGD – Million gallons per day

Mitigation – A way in which an agency may offset negative environmental impacts from a project, or make the impacts less serious.

Mitigation Monitoring Plan – A written document, adopted when the lead agency approves a project, to ensure that mitigation measures, or other project revisions identified in the certified final environmental impact report, to reduce or avoid impacts are implemented. Inspectors/monitors may be placed on-site during construction to record proper implementation of mitigation measures. The plan remains active until all mitigation measures have been satisfactorily completed.

Municipal and Industrial (M&I) Water – Water for residential and commercial uses, accounting for approximately 80 to 85 percent of Water Authority demand. Does not include agricultural water, which makes up the remaining 15 to 20 percent.

N

Non-potable Water – Water not treated to a level for drinking water purposes.

O

Ocean Plan Amendment – The May 6, 2015 amendment to the State Water Resources Control Board’s Water Quality Control Plan for Ocean Waters of California regarding construction and operation of seawater desalination facilities.

P

Potable Reuse Water – Recycled water that has been purified to meet or exceed federal and state drinking water standards and is safe for human consumption.

Potable Water – Water suitable for drinking.

Pre-stressed Concrete Cylinder Pipe – A type of pipe that consists of a concrete core, a thin steel cylinder, high tensile pre-stressing wires, and a mortar coating. The pre-stressing wires are prone to early failure, which can cause a pipe segment to break. There are 82 miles of this type of pipe within the Water Authority’s aqueduct system.

Preferential Rights – An antiquated formula used by Metropolitan Water District of Southern California to calculate the amount of water to which each of its member agencies is legally entitled.

Pump Storage – A hydroelectric technology that stores and generates energy by moving water between two reservoirs at different elevations.

Q

Quantification Settlement Agreement (QSA) – An agreement between the San Diego County Water Authority, Coachella Valley Water District, Imperial Irrigation District, and the Metropolitan Water District of Southern California signed in 2003. The QSA provides California a transition period to implement water transfers and supply programs that will reduce California’s over-dependence on the Colorado River, and reduces the state’s draw to its 4.4 million acre-foot annual apportionment.

R

Recycled Water – Municipal wastewater that is treated and disinfected to a level suitable for non-drinking purposes. The beneficial reuse of recycled water reduces the need to import or develop other water supplies.

Reservoir – A pond or lake where water is collected and stored until it is needed.

Runoff – Water that travels over the surface of the earth, moving downward due to the law of gravity. Runoff is one way in which water that falls as precipitation returns to the ocean.

S

Seawater Desalination – A reverse osmosis membrane technology employed to separate fresh water from seawater.

Second Aqueduct – The western-most of two San Diego County Water Authority pipelines which convey water from Metropolitan Water District’s system throughout San Diego County. The Second Aqueduct contains Pipelines 3, 4, and 5.

State Water Project – A water supply and delivery system of reservoirs, aqueducts, power plants, and pumping plants which extends over two-thirds of California.

Surface Water – All water, fresh and salty, on the earth’s surface.

Surge Protection - A facility designed and constructed for the purpose of controlling hydraulic transient pressures created by a sudden change in flow rate within a pipeline.

T

Treated/Filtered Water – Water that meets the Department of Health Services standards for potable drinking water use.

U

Untreated/Raw Water – Water that has not yet been treated to meet the Department of Health Services standards for potable drinking water use.

Urban Water Use – Same as Municipal and Industrial (M&I) Water. Water for residential and commercial uses, accounting for approximately 80 to 85 percent of Water Authority demand. Does not include agricultural water, which makes up the remaining 15 to 20 percent.

V

Value Engineering – A systematic and structured approach used to analyze and improve design and construction of projects. It helps to achieve an optimum balance between function, performance, quality, safety, and costs. The proper balance results in the maximum value for the project and the reliable performance of functions to meet customer needs at the lowest overall cost.

W

Wastewater – Water containing waste material.

Water Demand – The amount of water, at present, that is required to meet the needs of a specified group.

Water Facilities – As it pertains to the Water Authority, any pipelines, pump stations, flow control facilities, reservoirs, or dams that enable the transport of water throughout San Diego County.

Water Purchase Agreement (WPA) – Agreement that governs the purchase of between 48,000 and 56,000 acre-feet of desalinated seawater per year from the Claude “Bud” Lewis Carlsbad Desalination Plant (CDP).

Water Recycling – The treatment and disinfection of municipal wastewater to provide a water supply suitable for non-potable reuse.

Water Supply Diversification – A strategy to meet regional water demands with a diverse range of water supplies and tactics including imported water, local supply development, and water use efficiency.

Waters of the United States – A document that defines the waters that fall within the jurisdiction of the Environmental Protection Agency and the Army Corp of Engineers.

Watershed – A region or area of land bounded peripherally by a water parting and draining ultimately to a specific watercourse or body of water.



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