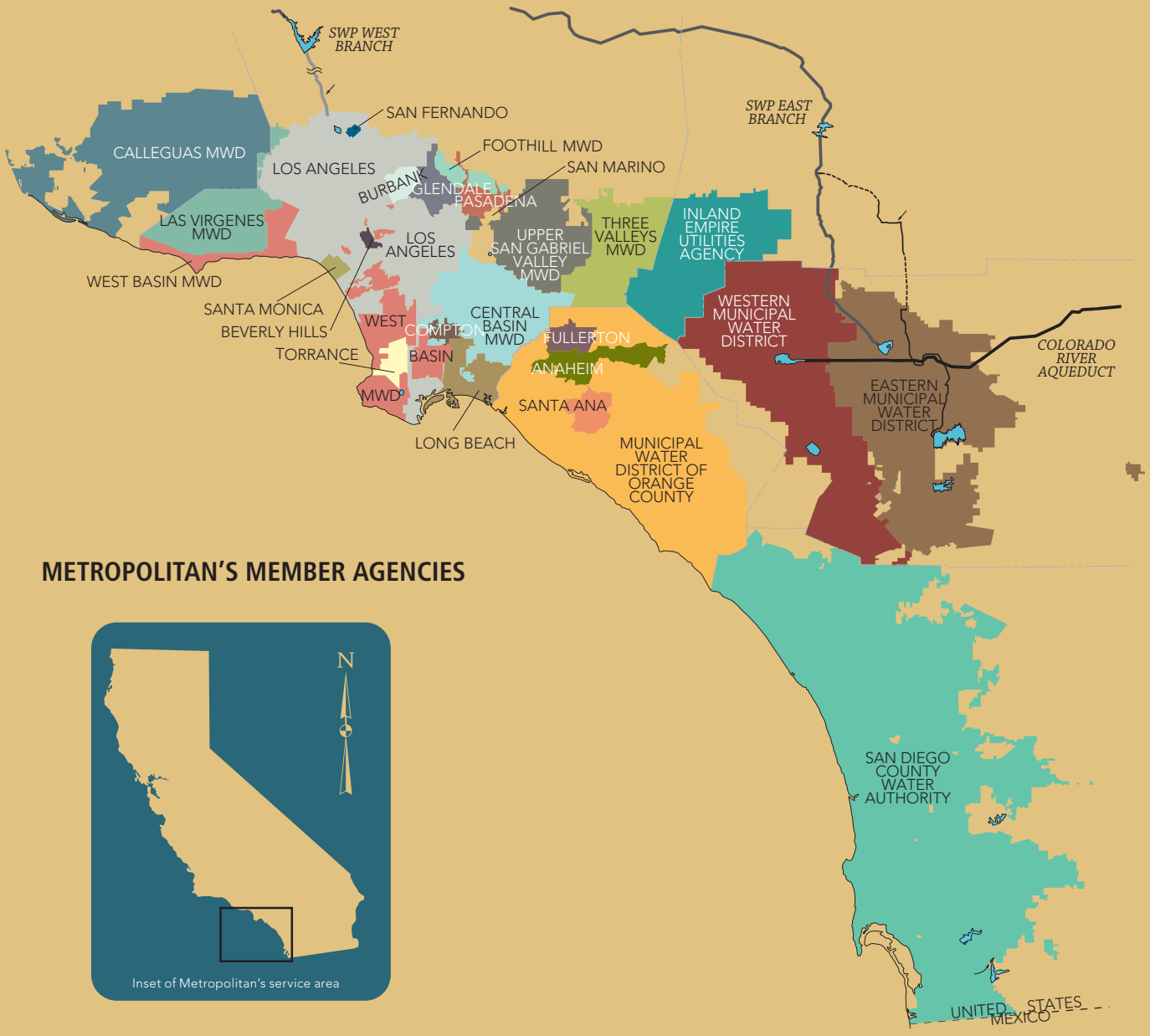
ANNUAL PROGRESS REPORT TO THE CALIFORNIA STATE LEGISLATURE

ACHIEVEMENTS IN CONSERVATION, RECYCLING AND GROUNDWATER RECHARGE

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

February 2011



METROPOLITAN'S MEMBER AGENCIES

The Metropolitan Water District of Southern California was established in 1928 under an act of the state Legislature to import water supplies for the Southland. Metropolitan is a public agency and a regional water wholesaler.

It is governed by a 37-member board of directors representing 26 member public agencies that purchase some or all of their water from Metropolitan and serve 19 million people across six Southern California counties.

The mission of Metropolitan is to provide its 5,200-square-mile service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Metropolitan draws supplies through the Colorado River Aqueduct, which it owns and operates. Water supplies also come from Northern California via the State Water Project and from local programs and transfer arrangements. An increasing percentage of Southern California's water supply comes from conservation, water recycling and recovered groundwater, which are further described in this report.

TABLE OF CONTENTS

For more information about this report contact Kathy Cole, Metropolitan's Executive Legislative Representative at (916) 650-2642 or kcole@mwdh2o.com.

WATER-USE EFFICIENCY

Metropolitan helps the region to reduce water consumption through conservation programs and the use of recycled water.

INTRODUCTION

In 2009, the state of California faced the third consecutive year of drought. The Sierra Nevada recorded its driest spring on record. There was a corresponding drop in snow and runoff. Continued court-ordered pumping restrictions to protect endangered fish resulted in a significant reduction of water imported from Northern California through the Sacramento-San Joaquin Delta. Regional storage reserves were being pulled down for the third consecutive year. Fiscal year 2009/10 was the first time in 18 years that Metropolitan's Board of Directors took action to reduce supplies allocated to Metropolitan's member public agencies. By the end of 2009, mandatory conservation was in place across much of the Southland. In April 2010, Metropolitan's board approved a second year of mandatory allocations, marking the first time in Metropolitan's history that it imposed consecutive years of supply reductions.

By the close of 2010, the water supply picture was much different. It's much better now, although improved conditions may fluctuate as the season progresses. After three challenging years, Metropolitan's two key imported water sources are showing improvement. The Metropolitan-owned Colorado River Aqueduct will be running at near-full capacity in 2011. In December 2010, the state Department of Water Resources boosted its 2011 allocation for the State Water Project from 5 percent to 50 percent contracted amounts. Different factors have come into alignment which have allowed Metropolitan to begin to replenish depleted reserves. These factors include an increase in imported supplies, successfully negotiated water transfers, and significant consumer response to the call for conservation.

Weathering several years of dry conditions is made possible by good planning and positive consumer response to water conservation initiatives. Investments like Diamond Valley Lake have provided Metropolitan with reserves to withstand the years of shortages. New additions to the distribution system have as well. One example is the recently completed Inland Feeder, which allows for the transport and storage of additional water

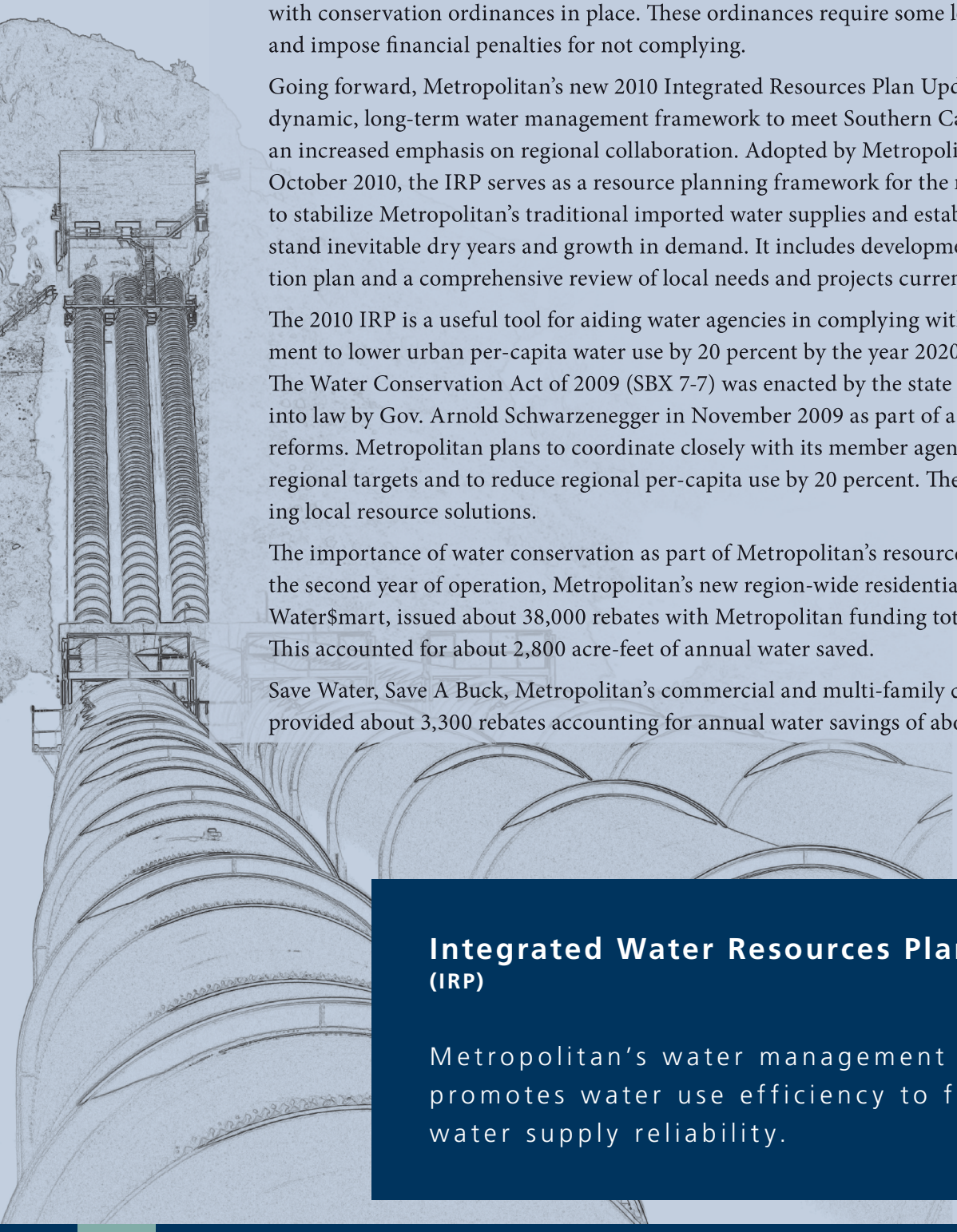
when it becomes available. Agreements are in place for water transfers and groundwater storage outside of Metropolitan's service area. These can be tapped when supplies fall short of demands. Infrastructure enhancements, coupled with water savings in the residential and business sectors, have allowed Southern California water managers to avoid even more severe restrictions. And many of the 19 million residents in Metropolitan's six-county service area reside in communities with conservation ordinances in place. These ordinances require some level of reduced water use and impose financial penalties for not complying.

Going forward, Metropolitan's new 2010 Integrated Resources Plan Update (IRP) establishes a dynamic, long-term water management framework to meet Southern California's challenges with an increased emphasis on regional collaboration. Adopted by Metropolitan's Board of Directors in October 2010, the IRP serves as a resource planning framework for the next 25 years. The IRP seeks to stabilize Metropolitan's traditional imported water supplies and establish water reserves to withstand inevitable dry years and growth in demand. It includes development of a long-term conservation plan and a comprehensive review of local needs and projects currently under consideration.

The 2010 IRP is a useful tool for aiding water agencies in complying with California's new requirement to lower urban per-capita water use by 20 percent by the year 2020 (referred to as "20x2020"). The Water Conservation Act of 2009 (SBX 7-7) was enacted by the state Legislature and signed into law by Gov. Arnold Schwarzenegger in November 2009 as part of a historic package of water reforms. Metropolitan plans to coordinate closely with its member agencies to achieve these regional targets and to reduce regional per-capita use by 20 percent. The IRP is useful in identifying local resource solutions.

The importance of water conservation as part of Metropolitan's resource mix is far-reaching. In the second year of operation, Metropolitan's new region-wide residential rebate program, SoCal Water$mart, issued about 38,000 rebates with Metropolitan funding totaling roughly $2 million. This accounted for about 2,800 acre-feet of annual water saved.

Save Water, Save A Buck, Metropolitan's commercial and multi-family conservation program, provided about 3,300 rebates accounting for annual water savings of about 10,200 acre-feet.



Integrated Water Resources Plan
(IRP)

Metropolitan's water management framework promotes water use efficiency to further ensure water supply reliability.

Metropolitan encourages research and development for unique methods of conserving water. The Innovative Conservation Program provides funding to both individuals and organizations to test new water-saving technologies. The Enhanced Conservation Program provides funds to Metropolitan's member agencies to encourage innovative ideas for expanding urban water conservation opportunities. Current projects being funded include research on irrigation devices, weather station equipment and cooling tower water re-use.

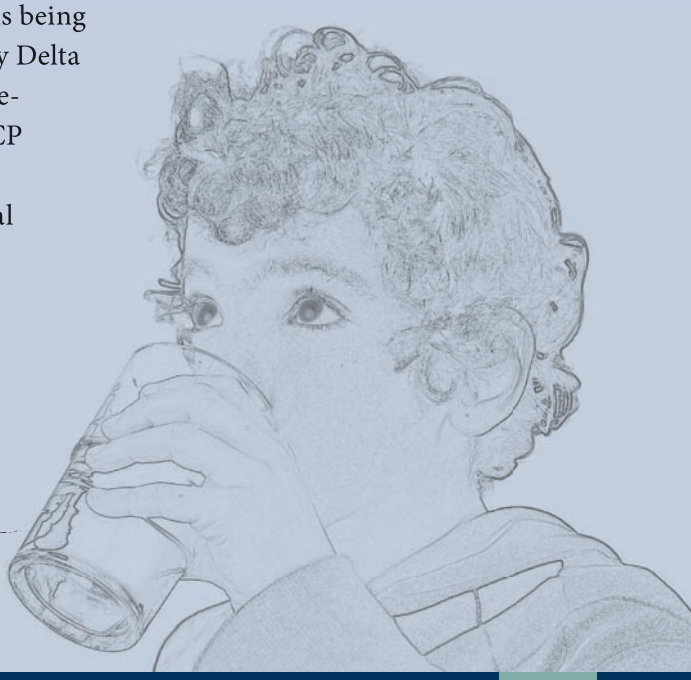
To complement Metropolitan's regional programs, member agencies and retailers implemented local water conservation programs within their respective service areas. They receive Metropolitan incentives for qualified retrofits and other water-saving projects such as toilet replacements, locally-run clothes washer rebate programs and residential water audits. Since 1990, Metropolitan has invested $293 million in conservation programs.

Metropolitan's water recycling and groundwater recovery programs provide additional water for regional supplies. In fiscal year 2009/10, about 177,000 acre-feet of recycled water was delivered for non-potable uses and about 50,000 acre-feet of groundwater was treated to improve its quality for municipal use.

All of the local resource programs receiving Metropolitan incentives are listed with their annual water savings in the Achievements Scorecard on page 7.

Metropolitan's goals include protecting both its source waters and the environment. Watershed management and environmental restoration remain a key focus. Efforts range from short-term response to long-term planning. Many of these activities are being implemented for the Sacramento-San Joaquin Delta – the hub of California's water system. About 30 percent of Southern California's water moves through the Delta, which is the West Coast's largest estuary.

The Delta's environmental decline has led to historic restrictions in water deliveries. The prospect of continued restrictions has prompted an effort to improve both the Delta environment and the reliability of its water delivery system for 25 million people statewide. A promising solution is being offered through a 50-year improvement plan known as the Bay Delta Conservation Plan (BDCP). This plan links ecosystem improvements with improvements in the conveyance system. The BDCP is being crafted with the oversight of state and federal wildlife agencies, as well as water districts, environmental groups, local Delta interests and other stakeholders.



A new educational campaign called "50 Percent Less" brought consumer focus to supply shortages caused by pumping restrictions in the Delta and the need to modernize the water delivery system. Metropolitan created new television spots and aired them along with radio advertisements.

While the water picture improved during the last year, a wet winter does not ease the region's long-term supply uncertainty. The challenges remain great. Metropolitan and its member agencies will continue to invest in conservation, water recycling, groundwater recovery and other local resource programs to provide a reliable source of water for Southern California, the regional economy and future generations.

Reader's Guide to the Achievements Scorecard

Conservation
Metropolitan helps the region to reduce water consumption through its Conservation Credits Program. Established in 1991, the program provides rebates for the installation or retrofit of water-efficient devices. An expanded program now includes process improvements for industry and efficiency measures for residential and commercial customers such as water audits.

Recycled Water
Used municipal water is recycled and treated to a quality level allowed for specific uses such as outdoor irrigation, groundwater recharge and seawater intrusion barriers. Metropolitan provides financial assistance to produce recycled water through its Local Resources Program, which began in 1982.

Groundwater Recovery
Degraded groundwater is recovered for potable use through treatment techniques that reduce high salt levels or other contaminant levels. Financial assistance for groundwater recovery has been provided since 1995 through Metropolitan's Local Resources Program.

Conjunctive Use Program
Metropolitan works in partnership with its member agencies and groundwater basin managers to store surplus imported water in local aquifers for future withdrawal.

Water Rate Discount For Groundwater Replenishment
When there are surplus water supplies, Metropolitan offers its member agencies water at a discounted rate to encourage groundwater storage. Because of drought conditions, Metropolitan has not offered discounted water since June 2007.

Achievements Scorecard	
Metropolitan-Assisted Programs	
Conservation[1]	
FY 2009/10 New Water Saved From Active Conservation Programs[2]	15,500 acre-feet
FY 2009/10 Water Saved From New & Existing Active Conservation Programs[2]	147,000 acre-feet
Cumulative Water Saved From Active Conservation Programs[3]	1,417,000 acre-feet
FY 2009/10 Metropolitan Active Conservation Investment[4]	$25 million
FY 2009/10 Member Agency Investment[5]	$20.5 million
Cumulative Active Conservation Investment (excl. funding by member agencies)	$293 million
Total FY 2009/10 Conservation Investment[6]	$29.2 million
Recycled Water[7]	
FY 2009/10 Production	177,000 acre-feet
FY 2009/10 Investment	$29.3 million
Cumulative Production	1,330,000 acre-feet
Cumulative Investment	$243.4 million
Groundwater Recovery[7]	
FY 2009/10 Production	50,000 acre-feet
FY 2009/10 Investment	$8.3 million
Cumulative Production	515,000 acre-feet
Cumulative Investment	$95 million
Conjunctive Use Program[8]	
Metropolitan Cumulative Investment	$54.7 million
Proposition 13 Grant Funds Administered by Metropolitan	$45.0 million
Water Stored Since Program Inception	225,000 acre-feet
Water Rate Discount For Groundwater Replenishment[9]	
Cumulative Investment through December 2010	$316 million
Cumulative Replenishment Water Delivery through December 2010	2.9 million acre-feet

Footnotes:

1. Active conservation is water saved directly as a result of conservation incentives through Metropolitan's Conservation Credits Programs and other water agencies. It includes device retrofits, process improvements, landscape efficiency improvements and other efficiency measures utilized in commercial, industrial and residential sectors. Additional water is conserved as a result of plumbing codes and other laws governing appliances and other products' efficiency standards.
2. This is water savings from devices installed in fiscal year 2009/10 and from devices installed in prior years. It includes water savings initially achieved through Metropolitan's active conservation programs and then maintained through plumbing codes. It also includes savings from member-agency funded programs administered through Metropolitan's region-wide residential and commercial programs.
3. This is cumulative water savings since 1991 from active conservation programs. It also includes water savings initially achieved through Metropolitan's active conservation programs and then maintained through plumbing codes.
4. Active conservation investment includes administrative fees for contracted program vendors.
5. In addition to Metropolitan's Conservation Credits Programs, member agencies and retailers also implemented local water conservation programs within their respective service areas. Member agency investment figures include rebate funding provided by member agencies in addition to rebates already provided by Metropolitan's Conservation Credits Programs.
6. Total conservation investment includes the Conservation Credits Programs plus education and advertising campaigns to promote conservation.
7. Metropolitan provides financial incentives to its member agencies to develop new water recycling projects and groundwater recovery projects (that make degraded groundwater potable) through its Local Resources Program; figures reflect deliveries for all Metropolitan-assisted projects and payments reported through June 2010.
8. Construction of the conjunctive use storage programs was completed in 2008. Proposition 13 refers to Chapter 9 of the Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Bond Act of 2000. Metropolitan has not stored water in the Conjunctive Use Program since 2007 due to drought conditions.
9. Metropolitan provides water at a discounted rate to its member agencies to encourage groundwater storage. In 2010, Metropolitan audited the data used to calculate the replenishment investment and discovered that the criteria used in the calculation were inconsistent. Adjustments were made to standardize the calculation, which resulted in lowered cumulative investment. Due to drought conditions, Metropolitan has not offered discounted water since June 2007.

CONSERVATION

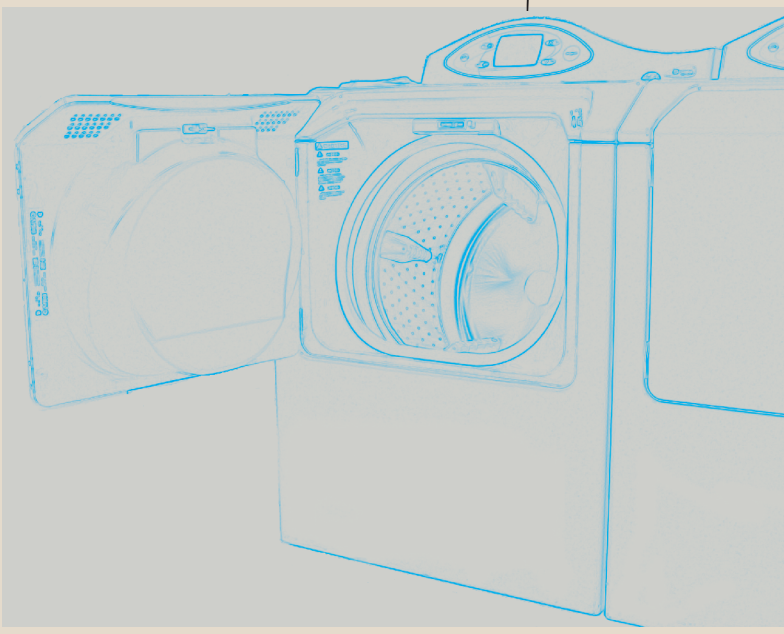
Conserved water is considered a source of supply for Southern California along with locally developed and imported water supplies.

CONSERVATION

Metropolitan and its member agencies have long been leaders in water conservation. Water-use efficiency is encouraged with financial incentives such as rebates and a tiered pricing structure, outreach and education programs, and support for new plumbing and compliance codes that facilitate water savings. In 2009, the California state Legislature mandated a 20 percent per-capita reduction in water use by the year 2020. Metropolitan is providing technical assistance to member agencies and retailers to help comply with the requirements and to identify programs and projects that work towards this goal. One useful tool will be Metropolitan's recently adopted (October 2010) Integrated Resources Plan Update. The long-term plan provides a road map for maintaining regional water supply reliability. It offers strategies to protect the region from future supply shortages, with an emphasis on water efficiency through conservation and local supply development.

Fiscal Year 2009/10 Program Highlights

- Metropolitan and its member agencies issued a second record year of rebates valued at more than $45.5 million.
- In April 2010, Metropolitan's Board of Directors imposed a second consecutive year of reduced allocations to member agencies for July 1, 2010 to June 30, 2011. This has helped to sustain consumer awareness and community commitment to continue efficient water use.
- With the governor's proclamation of a statewide drought and reduced allocation from Metropolitan, many cities contributed by adopting water conservation ordinances. More than half of the 19 million residents in Metropolitan's service area are now covered by water conservation ordinances or residing in cities that are in the process of adopting ordinances.



Rebates

Metropolitan's region-wide residential rebate program marked a second consecutive record-breaking year. This was partly due to customers motivated by reduced allocations to save water.

- With water supply shortages due to pumping restrictions in the Delta, an outreach campaign called "50 Percent Less" hit the airwaves to inform residents of the need to practice long-term conservation despite improved water conditions in fiscal year 2009/10.

Regional Conservation Programs

Metropolitan's conservation programs focus on two main areas: residential and commercial water usage.

Residential Conservation Programs

Metropolitan's Residential Conservation Programs consist of three targeted efforts: SoCal Water$mart; Save Water, Save A Buck (Save A Buck) for multifamily dwellings; and programs implemented by member agencies. In fiscal year 2009/10, the Residential Conservation Programs saved 5,000 acre-feet.

SoCal Water$mart

In July 2008, Metropolitan launched a region-wide residential program named SoCal Water$mart. During its first year of operation, rebate activity exceeded expectations as awareness about conservation increased and customers turned to financial incentives available to help offset the purchase of water-efficient devices. In its second year, SoCal Water$mart issued about 38,000 rebates with Metropolitan funding of about $2 million. Water savings were calculated at about 2,800 acre-feet annually.

Save Water, Save A Buck (Multi-Family)

Metropolitan's regional Save A Buck program extends rebates to multi-family dwellings. More than 1,000 rebates were issued during fiscal year 2009/10 for high-efficiency toilets and clothes washers, accounting for a water savings of about 900 acre-feet annually.

Member Agency Residential Programs

In addition to SoCal Water$mart, Metropolitan also provides funding to member and retail agencies for locally-administered water conservation programs. Member agencies receive Metropolitan incentives for qualified retrofits and water-saving activities. Qualifying projects have included toilet distribution and replacement programs, clothes washer rebate programs, and residential water audits. Programs implemented by member agencies saved 1,300 acre-feet annually starting in fiscal year 2009/10.

Examples of water-saving devices that contribute to conservation:

High-Efficiency Clothes Washers

High-efficiency clothes washers (HECW) are a growing segment of water-saving hardware in the marketplace, supported by Metropolitan's rebate program. Metropolitan's program eligibility requirement is currently set at water factor 4.0, which saves more than 10,000 gallons per year per washer. The water factor is the measure for the amount of water used to wash a standard load of laundry. HECW rebates in fiscal year 2009/10 saved 1,050 acre-feet per year. Metropolitan has historically supplemented its HECW rebate using state or federal grants.

High-Efficiency Toilets

Metropolitan has provided incentives for toilet replacement programs since 1988. Over time, technology has advanced and toilets have become more efficient. Funding recently was provided by Metropolitan for high-efficiency toilets that use 20 percent less water than the current ultra-low-flush toilets. Metropolitan uses the federal Environmental Protection Agency's WaterSense list of qualifying models for eligibility in its programs. High-efficiency toilet rebates in fiscal year 2009/10 saved 2,900 acre-feet per year.

Irrigation Evaluations and Residential Surveys

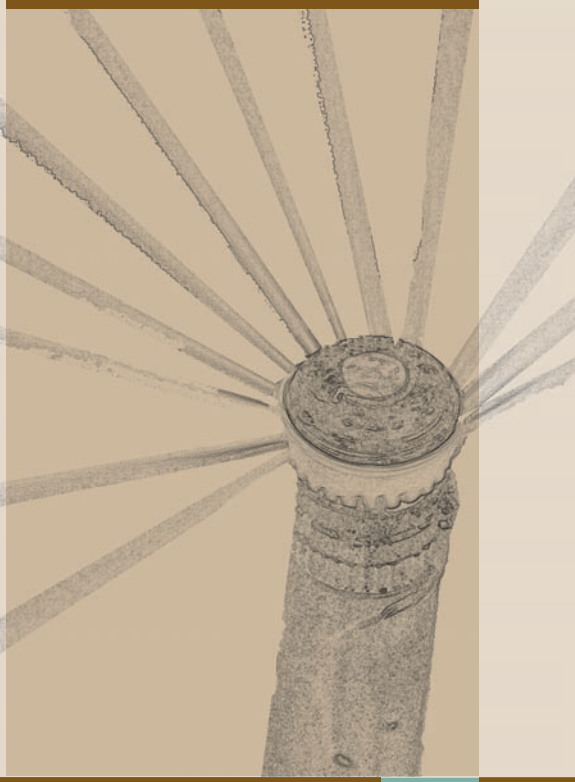
Metropolitan provides funding to member agencies that offer residential irrigation evaluations and indoor water surveys. Irrigation evaluations produce a recommended watering schedule along with suggestions for system efficiency improvements. Indoor residential surveys provide customers with information on how to identify leaks as well as suggestions for water-saving hardware for the home. Starting in fiscal year 2009/10, these programs saved 45 acre-feet annually.

Rotating Nozzles for Sprinklers

Pop-up spray heads with multi-stream, multi-trajectory rotating nozzles represent a new alternative for landscape irrigation. In field tests, the spray heads have been found to increase watering efficiency and provide water savings. The nozzles installed in fiscal year 2009/10 saved 625 acre-feet annually.

Multi-Stream Rotating Nozzles

The newer technology sprinkler heads provide the dual benefit of eliminating runoff with a more precise, uniform water spray and using about 20 percent less water than conventional sprinklers.



Weather-Based Irrigation Controllers

Weather-based irrigation controllers (WBIC) are a rapidly evolving conservation technology. Rather than relying on periodic manual adjustments, WBICs adjust irrigation schedules automatically based on a number of factors including rain, temperature, sunlight, and soil moisture. Metropolitan began funding residential WBIC incentives after conducting a pilot study to evaluate potential savings and ease of use. WBICs installed in fiscal year 2009/10 saved 400 acre-feet annually.

Commercial Conservation Programs

Metropolitan's commercial programs provide rebates to businesses and institutions for water-saving device retrofits throughout Southern California, resulting in an annual water savings of about 10,400 acre-feet. In fiscal year 2009/10, the commercial program was comprised of the Save A Buck program, Water Savings Performance Program and member agency commercial programs.

Save Water, Save A Buck

The majority of the commercial conservation activity comes from Metropolitan's regional Save A Buck program. During fiscal year 2009/10, Save A Buck provided about 2,300 rebates for more than 65,000 device retrofits resulting in annual water savings of 9,300 acre-feet.

Smart Controllers
(Weather-Based Irrigation Controllers)

Smart controllers are an example of hardware initially developed for larger water customers like schools and parks, and later adapted for individual consumer use as demands for more efficient irrigation systems grew.

Water Savings Performance Program

A component of the commercial program, the Water Savings Performance Program provides financial incentives for documented water savings linked to landscape irrigation and industrial process improvements. This program allows large water users to customize conservation projects with water-use efficiency improvements and receive incentives for five years of water savings. Starting in fiscal year 2009/10, this program saved 370 acre-feet annually.

Member Agency Commercial Programs

Member and retail agencies also implement water conservation programs for commercial sectors using Metropolitan incentives. Projects target specific local businesses, with many programs also receiving assistance from state or federal grant programs. Metropolitan incentives are used as the basis for meeting cost-share requirements. For fiscal year 2009/10, this program saved 750 acre-feet.

Metropolitan's Commercial Program provides rebates for water-saving fixtures and equipment to businesses and institutions. Following is a list of current and past devices that contributed to this year's conservation savings:

- Connectionless Food Steamer
- Cooling Tower Conductivity Meter
- Dry Vacuum Pump
- High-Efficiency Clothes Washers
- High-Efficiency Toilet
- High-Efficiency Urinal
- Large Rotors - High Efficiency Nozzle
- Multi-Stream Rotating Nozzles
- pH Cooling Tower Controller
- Pre-rinse Spray Head
- Steam Sterilizer
- Synthetic Turf
- Ultra-Low-Flush Toilet
- Ultra-Low-Flush Urinals
- Water Broom
- Weather-Based Irrigation Controller
- X-ray Processor
- Zero Water Urinal

Research and Development Programs

Metropolitan encourages research and development of new and creative ways to conserve water. The Innovative Conservation Program provides funding to individuals and organizations to test new technologies and devices. The Enhanced Conservation Program provides funding directly to Metropolitan's member agencies to encourage innovative approaches for promoting urban water conservation. Currently, Metropolitan has five projects under way researching improvements in irrigation devices, weather station equipment, and cooling tower water re-use.

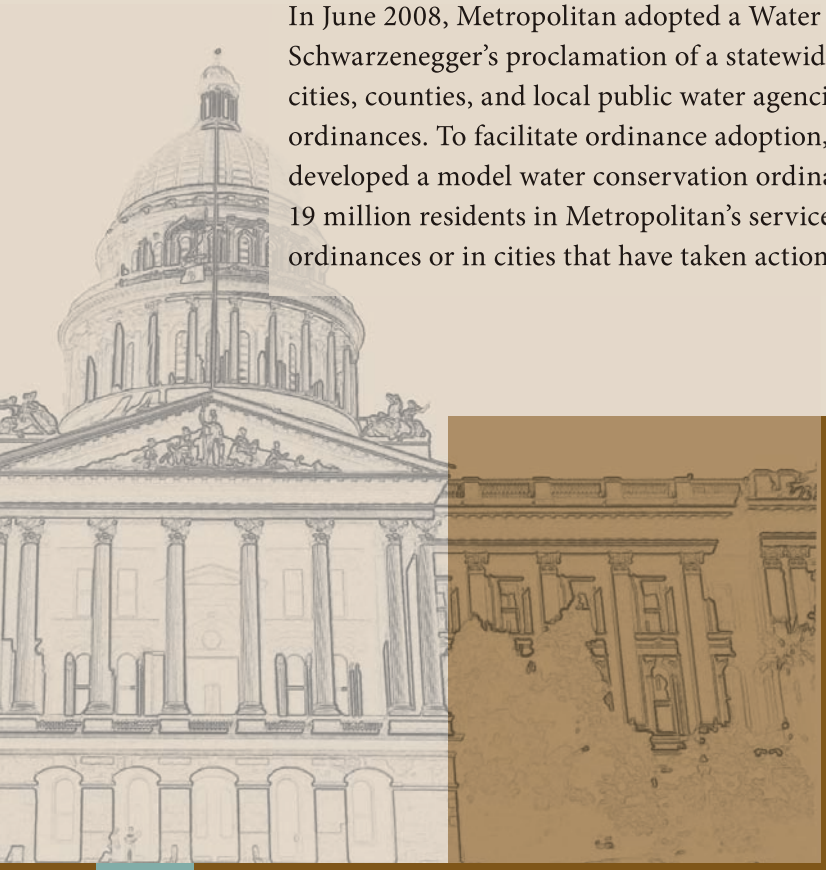
Senate Bill X7-7 Water Conservation Act of 2009 (20x2020)

Metropolitan cosponsored the Water Conservation Act of 2009 (SBX7-7) that requires the state to achieve a 20 percent reduction in urban per capita water use by 2020. Methodologies for calculating gross water use and other measurements for demonstrating compliance with the law were developed by the state Department of Water Resources (DWR) and adopted in October 2010.

To help its member agencies and retailers comply with the 20x2020 requirements, Metropolitan provides technical assistance at different venues. Regional workshops have been hosted by Metropolitan and presentations given at meetings and conferences for water agencies, municipalities, and businesses. In November 2010, Metropolitan sponsored a statewide summit on 20x2020, bringing together federal and state legislators, regulators, water industry experts, municipal planners, environmentalists, and other stakeholders to discuss the work being carried out across the state.

Water Conservation Ordinances

In June 2008, Metropolitan adopted a Water Supply Alert resolution following Gov. Arnold Schwarzenegger's proclamation of a statewide drought. Among other provisions, the Alert encouraged cities, counties, and local public water agencies to adopt and enforce local water conservation ordinances. To facilitate ordinance adoption, Metropolitan compiled a library of local ordinances, developed a model water conservation ordinance, and hosted several workshops. More than half of the 19 million residents in Metropolitan's service area reside in cities that have water conservation ordinances or in cities that have taken actions to adopt ordinances.



Senate Bill X7-7
(Water Conservation Act of 2009)

California has a new requirement to lower urban per-capita water use 20 percent by the year 2020.

Communications and Outreach

Metropolitan sponsored water conservation and Sacramento-San Joaquin Delta-related educational advertising campaigns throughout Southern California during seven months in fiscal year 2009/10. From August to October 2009, the "Move the Needle" campaign continued from the prior fiscal year, appearing on broadcast television, cable networks, radio stations and Web sites. Radio ads were in English, Spanish, Chinese (Mandarin and Cantonese), Korean and Vietnamese. Online and social media included Google search advertising, a YouTube channel devoted to water conservation and a Facebook fan page.

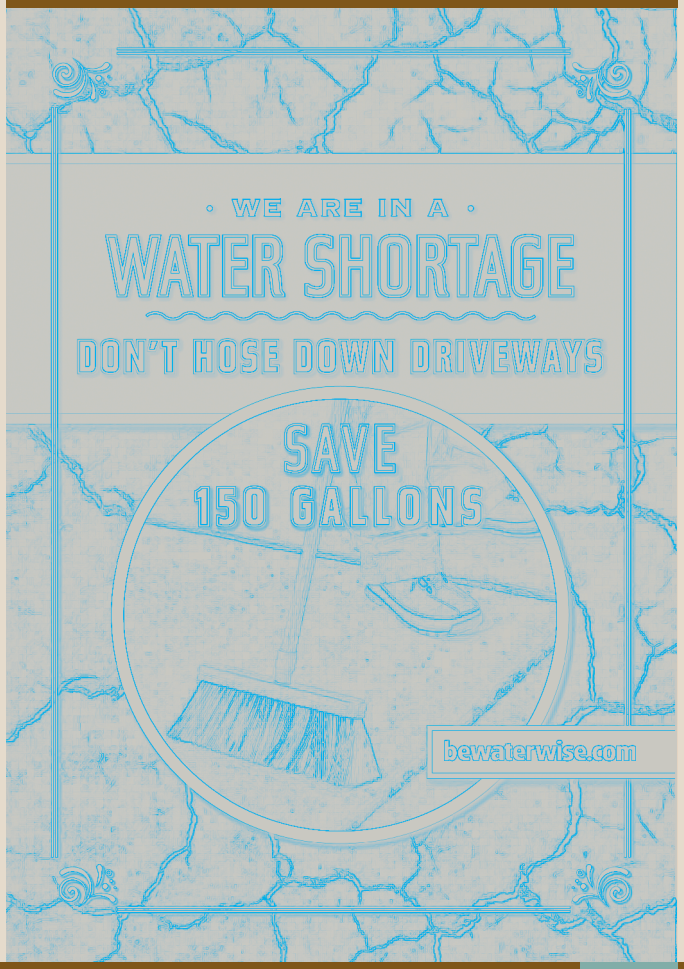
After a series of winter storms, Metropolitan ran radio traffic ads from February to March 2010 to inform listeners that despite the rain, California's water problems were not over.

A new educational campaign called "50 Percent Less" focused on water supply shortages caused by pumping restrictions in the Delta, the need to modernize the water delivery system and long-term conservation practices. Two new television ads were created and aired, and an existing television ad "Reservoir" was updated with new information. The ads began airing in May 2010, with television ads continuing through early June, radio ads through mid-June and online through June 30.

Key to outreach efforts is Metropolitan's bewaterwise.com® Web site, which attracted nearly 600,000 unique visitors in fiscal year 2009/10, a 21 percent increase from the previous year. A Spanish-language version of the site was launched in September 2009.

Outreach

Metropolitan uses different avenues for education and communication, frequently testing its messages both before and after an outreach campaign to gauge consumer awareness and understanding.



In crafting Metropolitan's outreach campaign, bilingual focus groups were conducted as well as online surveys to determine awareness and attitudes about the state's water supply issues and continued call for conservation. These findings were used to help develop and refine Metropolitan's outreach messages in the "50 Percent Less" campaign. Among the July 2009 findings, more than eight in ten Southern Californians were aware of the drought and seven in ten were aware of mandatory conservation.

Community Events

To continue to promote its water conservation programs, Metropolitan organized and staffed educational booths at numerous community events throughout its service territory. These included the Orange County Children's Water Festival; Los Angeles County Sanitation District's "Earth Day" Fair; Los Angeles Environmental Youth Conference; Los Angeles Parks Foundation Conservation Forum; California Landscape Contractors Association; Dow Live Earth Run for Water; Water Replenishment District Groundwater Festival; and the Colorado River Water Users Association annual conference.

Education Programs

During fiscal year 2009/10, Metropolitan and its member agencies reinforced the conservation message through the distribution of educational materials, organization of outreach activities and events for more than 40,000 K-12 students and more than 300 new program teachers throughout the service area. Key opportunities included: the eighth annual Solar Cup® boat race with 38 high school teams; the 16th year of Metropolitan's Diamond Valley Lake Education Program; and the 2010 "Water is Life" student art calendar. Additionally, Metropolitan launched the new Education Programs Web site, which drew more than 7,000 unique visitors over the course of the fiscal year.

"Water Is Life"

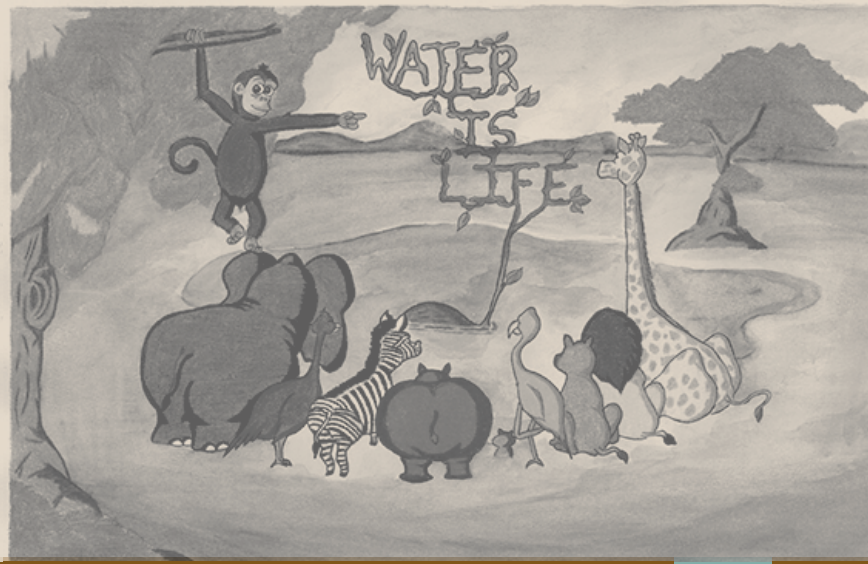
Metropolitan's student art program promotes water awareness in grades K - 12 through an annual calendar art competition.

California Friendly® Landscape Irrigation Efficiency Training

Metropolitan's California Friendly Landscape Training program provided classroom and online water-wise landscaping classes to nearly 1,100 professional landscapers and more than 3,000 residents in fiscal year 2009/10. The classroom and online training is provided in English and Spanish. Since the program's inception in 1994, more than 54,000 people have participated in the classes.

Community Partnering Program

The Community Partnering Program continues to support water-related and educational community projects, programs and events. CPP funding supports Metropolitan's overall mission and results in expanding partnerships and collaboration with nonprofit community organizations, public agencies, professional associations and educational institutions. These cosponsorships emphasize water conservation, watershed education, and other programs that support Metropolitan's California Friendly landscape conservation campaign and overall water conservation efforts.



RECYCLED WATER

Recycled water can be used for non-potable uses such as landscape irrigation, replenishing groundwater basins and providing an underground barrier against seawater intrusion.

LOCAL RESOURCES

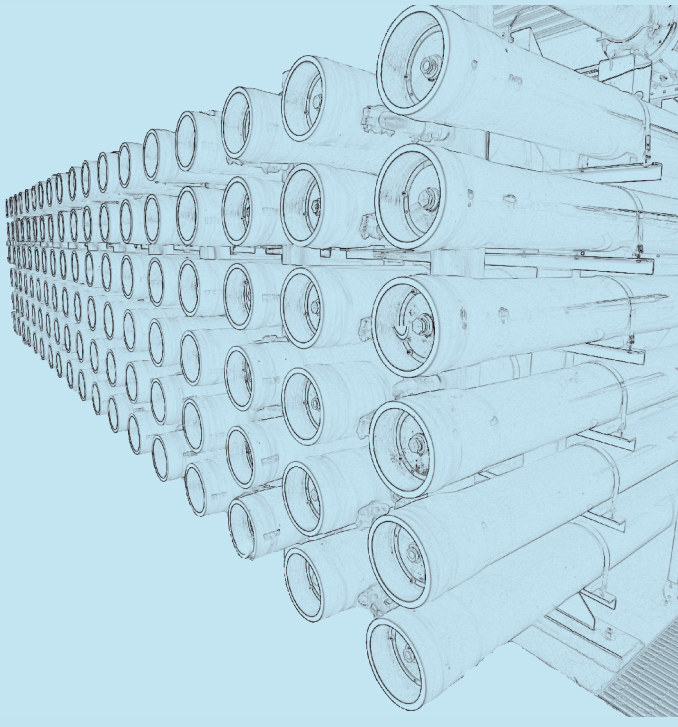
Water recycling and groundwater recovery, along with seawater desalination and groundwater storage, are important assets in the region's diverse local resource portfolio and help bring greater water supply reliability to Southern California. These resources help to offset imported water supply shortages tied to drought and other supply restrictions. Local water agencies have largely led the development of water recycling and groundwater recovery projects with newer projects incentivized by Metropolitan's Local Resources Program.

Water Recycling and Groundwater Recovery

Metropolitan's Local Resources Program is a performance-based incentive program designed to expand water recycling and the recovery of degraded groundwater. Metropolitan funding supported the production of about 177,000 acre-feet of recycled water for non-potable uses and about 50,000 acre-feet of recovered groundwater for municipal use in fiscal year 2009/10. Additional recycled water and groundwater recovery was produced without Metropolitan funding. Figures 1 and 2 represent total recycled water and groundwater recovery production in Metropolitan's service area, including local agency funded projects.

Fiscal Year 2009/10 LRP Highlights

- Metropolitan disbursed final payments to complete the Recycled Water Retrofit portion of the Public Sector Program. Metropolitan provided incentives totaling approximately $1.1 million over two fiscal years to retrofit potable irrigation systems to recycled water for more than 85 public sites such as parks, schools, golf courses, and street and freeway landscaping. These sites will collectively use about 3,300 acre-feet of recycled water per year.



Local Resources Program (LRP)

Metropolitan's LRP has invested nearly $340 million to date in water recycling and groundwater recovery.

- Western Municipal Water District's Arlington Basin Groundwater Desalter Project agreement expired after 20 years of participation in the Local Resources Program. The project will continue to operate and help achieve regional supply reliability. Financial incentives from Metropolitan served as the catalyst for this project which remains in operation beyond the original agreement time frame and produces potable water.
- Calleguas Municipal Water District's Tapo Canyon Groundwater Treatment Project began operation in June 2010 and will produce up to 1,445 acre-feet of recycled water for municipal uses.
- The city of Burbank's Recycled Water System Expansion Phase II started operation in October 2009 and will deliver up to 950 acre-feet of recycled water for landscape irrigation and industrial uses.
- Ramona Municipal Water District's San Vicente Water Recycling Project began operation in May 2010 and will produce up to 340 acre-feet per year of recycled water to irrigate the San Vicente Golf Course. Ramona Municipal Water District is a member agency of the San Diego County Water Authority.

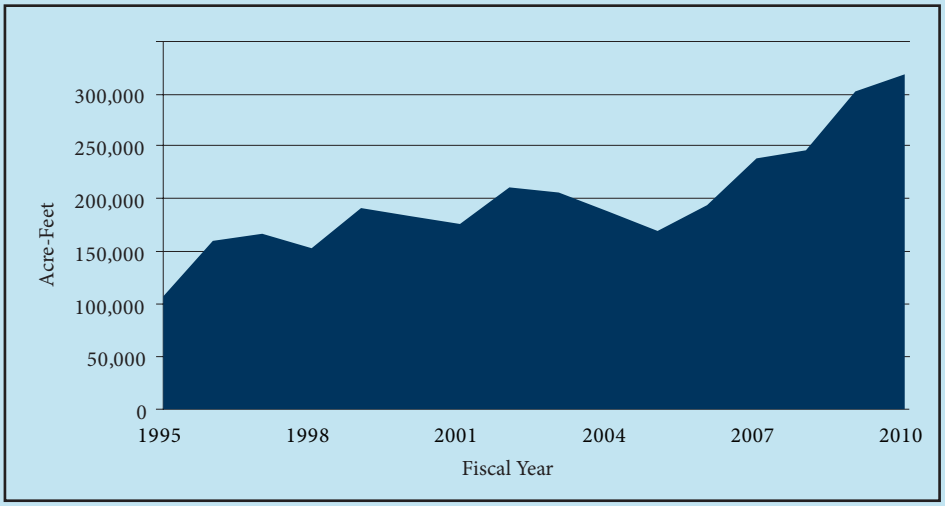


Figure 1. Recycled Water Production in Metropolitan's Service Area

- The Los Angeles Department of Water and Power's Taylor Yard Park Water Recycling Project began operation in August 2009 and will produce up to 150 acre-feet per year of recycled water for landscape irrigation and industrial uses. The Sepulveda Basin Water Recycling Project Phase 4 also began operation in August 2009 and will produce up to 546 acre-feet per year for landscape irrigation.
- Rowland Water District's City of Industry Regional Recycled Water Project began operation in June 2010 and will deliver up to 1,884 acre-feet per year of recycled water for irrigation and industrial uses. Rowland Water District is a member agency of Three Valleys Municipal Water District.
- The city of Manhattan Beach unveiled a new recycled water system for the Manhattan Beach Golf Course that will retrofit the on-site irrigation system to use recycled water. The project, which received funding through Metropolitan's Public Sector Program, will deliver approximately 50 acre-feet of recycled water. The city of Manhattan Beach is a retail customer of West Basin Municipal Water District.

Groundwater Recovery

Degraded groundwater gets a second life when processed through advanced treatment techniques that reduce high salt content and other contaminants.

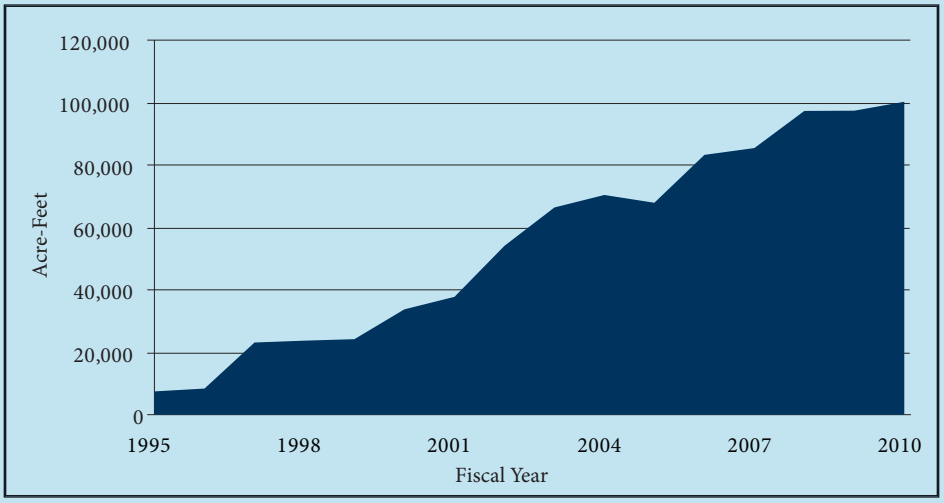
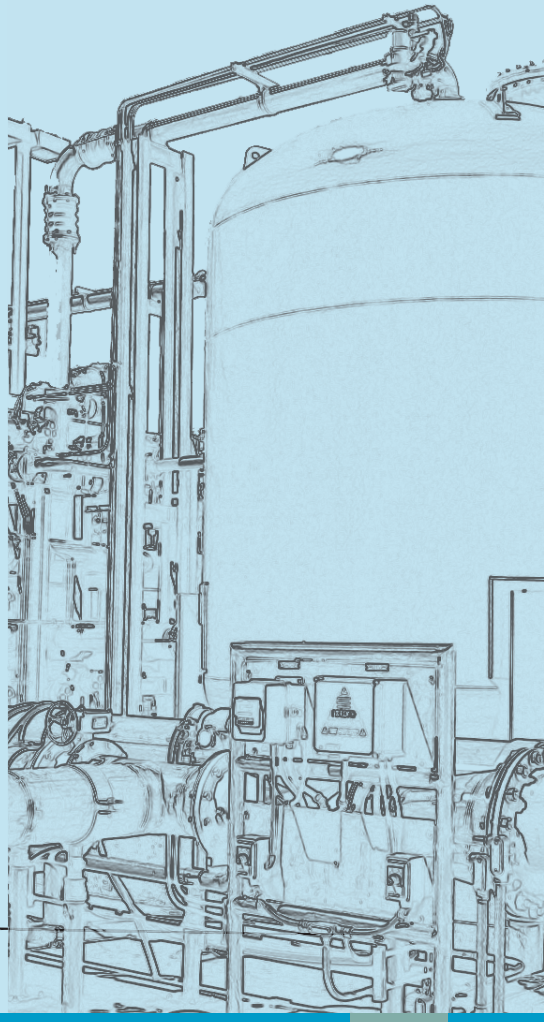


Figure 2. Groundwater Recovery Production in Metropolitan's Service Area



Groundwater Programs

Groundwater storage programs have proven their value in recent dry years when reserves were made available to Metropolitan to offset shortages due to drought and other supply restrictions.

Groundwater Management

Conjunctive Use

Metropolitan's dry-year conjunctive use program involves storing surplus imported supplies within the service area to maintain reliability during dry, drought and emergency conditions. Metropolitan has developed 10 storage programs in groundwater basins in its service area. These storage programs provide Metropolitan with about 422,000 acre-feet of storage capacity from which Metropolitan can withdraw about 115,000 acre-feet per year during shortage years. Metropolitan has placed 225,000 acre-feet in storage since the program's inception. The storage balance at the close of fiscal year 2009/10 was approximately 77,000 acre-feet.

Surplus water has historically been used to provide supplemental replenishment water for groundwater basins throughout Metropolitan's service area. Metropolitan held a series of groundwater workshops with its member agencies and groundwater basin managers to review replenishment needs. The results of the workshops were recommendations for continued reliability of groundwater production and enhancement of storage and conjunctive use. Recommendations included measures to focus on increased use of recycled water and greater capture of storm-water runoff for recharge of groundwater basins.

WATERSHED

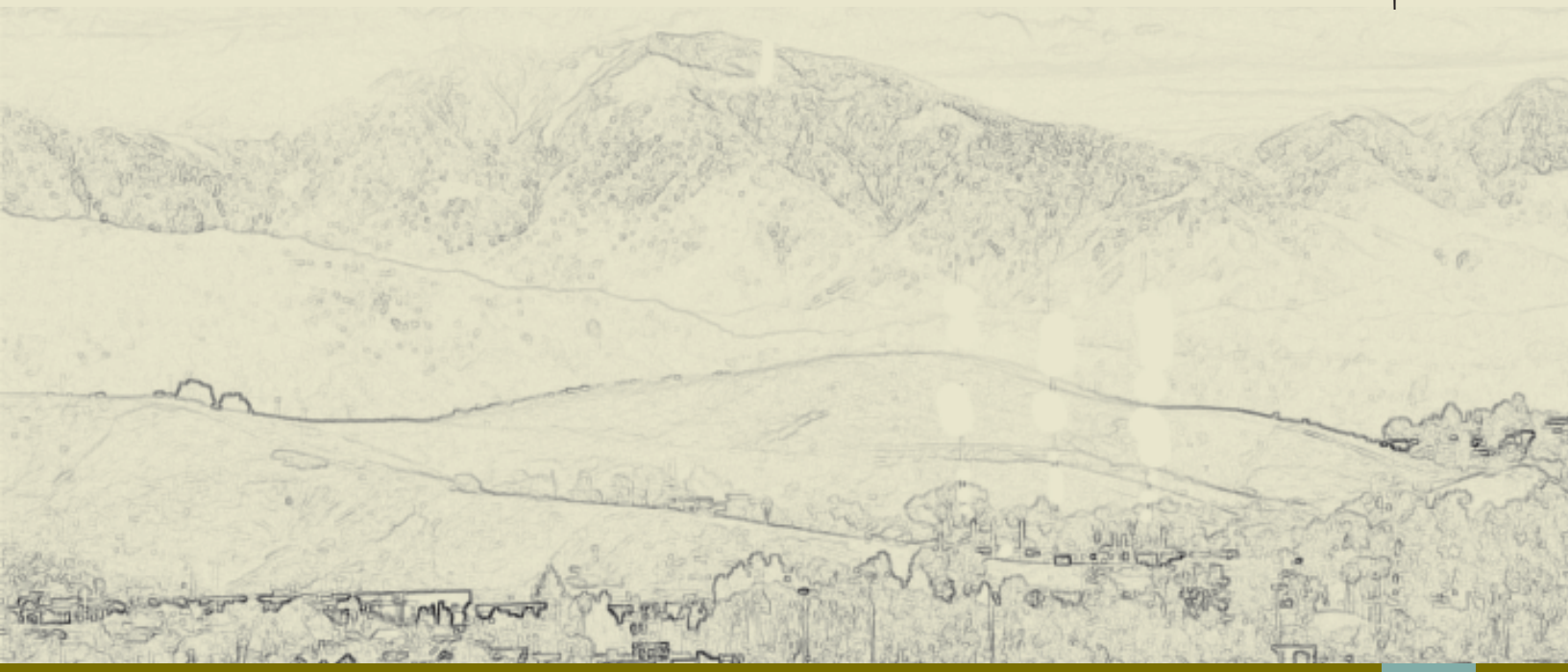
Metropolitan is primarily involved in watershed protection because of the impact on drinking water quality.

WATERSHED INITIATIVES

Metropolitan is active on planning boards and organizations formed to improve watershed management and restoration. Metropolitan works with stakeholders in the Sacramento-San Joaquin Delta watershed and participates in the Greater Los Angeles County Integrated Regional Water Management Plan and the Los Angeles and San Gabriel Rivers Watershed Council.

Integrated Regional Water Management Planning

Integrated Regional Water Management (IRWM) is a state initiative that encourages collaboration among multiple agencies, stakeholders, individuals, and groups within a region to manage all aspects of water resources. IRWM groups typically consist of public agencies with water or wastewater authorities, cities, counties, special districts and non-governmental organizations that address a broad range of issues including growing water demands, water supply reliability, water quality, stormwater management, open space and habitat, and financing of projects. Currently, there are eight IRWM groups covering Metropolitan's service areas and all the member agencies participate in one or more of the eight IRWM groups. Metropolitan is continuing its participation in the Greater Los Angeles County



Bay Delta Conservation Plan (BDCP)

The goal of the BDCP is to provide for both species/ habitat protection and improved water supply reliability for 25 million Californians.

region leadership committee as the surface water management area representative. It has also been monitoring, providing technical assistance, and participating in discussions of other IRWM groups on request.

In November 2006, California voters passed Proposition 84, the Safe Drinking Water, Water Quality, and Supply, Flood Control, River and Coastal Protection Bond Act, which provides $1 billion for Integrated Regional Water Management Planning and Implementation. California Department of Water Resources has initiated the first cycle of the grant program under Proposition 84. The IRWM groups are required to prepare or update their IRWM Plans in order to participate in Proposition 84 implementation grants. Metropolitan will be providing information and technical assistance to member agencies to update the plans.

Los Angeles and San Gabriel Rivers Watershed Council Water Augmentation Study

Metropolitan has been a participant in the Water Augmentation Study, a 10-year research study on stormwater runoff measurement. The report was completed in January 2010. The study investigates the benefits, costs and risks of capturing stormwater to augment water supply through infiltration. The study demonstrated that stormwater infiltration does not adversely impact groundwater quality when best management practices are implemented on site. The study included a demonstration phase with 15 residential properties retrofitted on Elmer Street in the Los Angeles neighborhood of Sun Valley. The project captures urban runoff and provides groundwater recharge, flood management and water quality benefits with the inclusion of rain gardens, California Friendly plants, underground runoff capture devices and a meandering pathway in lieu of a concrete sidewalk.

Sacramento-San Joaquin Delta Watershed

The Sacramento-San Joaquin Delta watershed is an important source of water supply delivered to Southern California through the State Water Project. Due to the large size of the

watershed, the diversity of land uses and the projected population growth, many watershed activities affect or have the potential to affect Delta water quality. Metropolitan continued to work with agencies and stakeholders throughout the Delta watershed to conduct studies and develop policies and programs that protect Delta water quality for drinking water uses and for aquatic wildlife.

Metropolitan participated in the Bay Delta Conservation Plan (BDCP) process, which is a collaborative effort to restore the Delta ecosystem and protect water supplies. The main goal of the BDCP is to provide for both endangered species and habitat protection and improved reliability of water supplies. Metropolitan participates on the BDCP Steering Committee with state and federal agencies, water agencies, and environmental and conservation organizations. One of the key BDCP Steering Committee accomplishments this year included the development of technical analysis and information for the BDCP, and proposed operations criteria.

Metropolitan continued to support DWR's Municipal Water Quality Investigations (MWQI) Program, which implements water quality monitoring and special studies in the Delta and its tributaries to develop a better understanding of the sources and effects of drinking water quality constituents of concern. This year, the MWQI Program continued important studies assessing the potential water quality impacts of urban runoff from a rapidly urbanizing city in the Delta watershed and initiated a water quality monitoring program in the upstream Sacramento River watershed.

Through its involvement in water coalitions such as the California Urban Water Agencies and State Water Contractors, Metropolitan also participated in stakeholder processes addressing drinking water quality protection and supported ongoing studies of toxic contaminants in the Delta and their possible role in the Delta fishery decline observed in recent years.

Metropolitan continued to work with several agencies and groups to develop a drinking water policy for surface waters in the Delta watershed. This program is a multi-year effort. On July 29, 2010, the Central Valley Regional Water Quality Control Board adopted a resolution outlining a schedule for completing the policy. The first milestone will be June 2011, when the watershed studies to support the drinking water policy elements are scheduled to be completed. The Regional Board is scheduled to consider for adoption the final drinking water policy by July 2013. Once adopted, the drinking water policy will provide an improved regulatory framework for implementing drinking water quality protection activities in the Delta watershed.

Metropolitan also continued to work with the state and federal water contractors to support studies addressing the impacts of nutrients and ammonia in the Delta. A key scientific study addressing the relationships between nutrients and the food web in the Delta was published in May 2010.

In addition to involvement in research efforts and studies, Metropolitan supported and financially assisted the Battle Creek Salmon and Steelhead Restoration Project, which began in fall 2010. The Bureau of Reclamation project is one of the largest cold water restoration efforts in North America. It is being supported with federal, state and private funding. The project will open almost 50 miles of winter-, spring- and late fall-run salmon and steelhead habitat in the Sacramento River watershed. Construction is anticipated to be completed by 2014.

ETHICS

The Ethics Office enhances the ethical culture of Metropolitan by encouraging ethics over mere compliance with rules and regulations.

ETHICS OFFICE

The Ethics Office works collaboratively with Metropolitan's Board of Directors, general manager, general counsel and general auditor to promote the agency's core values: integrity, stewardship, diversity, leadership, open communication and teamwork.

In addition, the Ethics Office enforces ethics-related laws and policies; educates directors, officers, and employees about what is expected of them in terms of ethical behavior and compliance; and works with the board of directors and other departments to enhance Metropolitan's ethical culture.

In fiscal year 2009/10, Metropolitan's Ethics Office accomplished the following:

- Responded to 87 matters brought to the attention of the office. Sixty-one percent were queries involving research and 39 percent were expressions of concern. Callers included employees (68%), members of the public (14%) and unknown classification (18%);
- Amended Administrative Code to reflect changes in Ethics Office complaint review procedures;
- Revised board of directors' ethics manual;
- Created sexual harassment prevention online training for directors;
- Presented a workshop on the Brown Act and provided the first of two AB 1234 training sessions to directors and officers;
- Provided ethics education at field locations outside of the Los Angeles headquarters for employees and managers;
- Created Web-based ethics training for the board of directors' Web site as well as the employee internal Web site;
- Created an online ethical decision tree for the board of directors and employees;
- Distributed monthly ethics posters;
- Sent Operating Policy H-03 Ethics Policy to all employees for annual review;
- Provided advice and support to board of directors at committee and general board meetings, and privately as requested; provided advice to officers and employees as requested;
- Provided ethics orientation to all new employees.

PUBLIC HEARING COMMENTS

In accordance with section 130.5 of the MWD Act, Metropolitan held a public hearing on December 13, 2010 to receive comment on the draft annual report on achievements in conservation, recycling and groundwater recharge for this fiscal year 2009/10. The following are compiled from comments received and submitted at the public hearing. Water use efficiency programs for conservation and recycled water were the focus of reviewer comments and will be considered as Metropolitan develops the framework for regional long-term conservation and recycled water programs in partnership with its member agencies and for consideration by Metropolitan's Board of Directors.

Joe Walters, business development manager, West Basin Municipal Water District

Since the inception of West Basin's recycled water program in 1995, we have produced and distributed over 367,000 acre-feet of recycled water to our service area. To do that, we have invested over $500 million in infrastructure to distribute to over 300 customers throughout our service area and adjacent areas that we serve in partnership. Of those 300 customers, they will take anywhere from the smallest amount for a median, up to thousands of acre-feet of recycled water per year.

Part of our distribution system extends to areas beyond our service area. We have been able to partner with the City of L.A. and the City of Torrance to serve in their areas as the only local recycled water plant nearby. None of this would have been possible without the LRP Program from Metropolitan Water District. Met has invested something like $92 million in our program since 1995, which is nearly 20 percent of the total program. Without that, we would not have been able to produce the volume of recycled water and certainly not been able to partner with local agencies to benefit the region. Thank you for enabling us to be so successful.

Edward R. Osann, senior policy analyst, Natural Resources Defense Council

I wanted to start out by indicating that we appreciate the action of this committee and the board as a whole in strengthening the role of conservation and efficiency in the most recent IRP Update. This committee is all too familiar with the resource challenges, the new lows on the Colorado, the limitations on exports from the Delta that are in all likelihood going to be lasting the decade. At the same time, we have the 20x2020 mandate from the state. This committee will be working over the next few months to really develop a robust program that has at least a decade-long time frame and can meet the challenges that the District faces.

The draft 2011 Progress Report shows that active conservation programs are highly cost-effective. If active conservation programs are bringing in water savings at about $1,600 per acre-foot, that's a one-time cost, and it annualizes to around $150 per acre-foot. So if water efficiency projects funded with support from Met can produce real water savings in the range of $150 per acre-foot, why don't we do more of that?

In the statement that I have distributed in the form of a PowerPoint we make several recommendations for modifying the current long-term conservation program. Taken together we think they have a Big Bang effect that really attracts attention and interest, and allows the District to scale up the level of efficiency investment in Southern California.

- MWD should back out of direct involvement in implementing incentive programs and shift more to an RFP-type procurement program,
- MWD should expand the number and types of entities that are eligible to offer savings into the regional program,
- Procurement of efficiency savings should be calculated two years in advance so you know ahead of both the budget year and the water year what kind of savings you'll have in the delivery year,
- There's a need for stronger measurement and verification of savings -- only pay for verified water savings, and finally,
- Pay up to the full short-run avoided cost, which is now closer to $500 an acre-foot than $195 an acre-foot which has been in place for a long time.

Mr. Osann provided printed hardcopies of a PowerPoint presentation to supplement his oral comments on December 13, 2010. For more information on this handout, please contact Mr. Osann directly.

Chris Brown, executive director, California Urban Water Conservation Council (written comments submitted)

I appreciate the opportunity to provide comments on behalf of the California Urban Water Conservation Council as Metropolitan Water District of Southern California considers its Annual Progress Report to the California State Legislature on Achievements in Conservation, Recycling and Groundwater Recharge. My comments are addressed to the water conservation portions of the document.

Metropolitan is one of the founding members of the Council, and it was the vision of Metropolitan to sponsor a partnership between nonprofit advocacy groups and water agencies in an ongoing dialogue and negotiation structure which continues to animate the Council. Metropolitan has played an active role in the Council since its inception, and we anticipate you continuing that role in the future.

The Draft Progress Report being considered here today is evidence of the District's leadership and vision and the importance with which you hold water conservation as part of your water supply portfolio. The role played by you in sponsoring the 20x2020 legislative efforts and bringing to fruition per capita water conservation goals for California was crucial to the success of that effort. As we move into implementation of the 20x2020 goals, the District's ongoing participation in statewide and regional

efforts to improve water conservation is critical. The District's Save Water Save a Buck, Water Savings Performance Program and support for your member agencies' water conservation efforts provide not only real water savings but stellar examples of effective programs which others can emulate.

In the next several years, the District's leadership will be needed even more if we are to achieve the 20x2020 targets set by Met, its member agencies and water agencies across the state. Reducing outdoor water use is the single largest opportunity to meet aggressive water conservation goals. Through your California Friendly Landscaping program, and programs focused on reducing irrigation water waste, Met will help again to lead this important effort. It is only if we set a new paradigm in landscape – that a landscape adapted to our climate and resources is the new California ideal – will the state and Metropolitan meet our water conservation goals. The Council stands ready to assist in this effort by maintaining the ongoing dialogue and improvements to Best Management Practices that is our hallmark. We look forward to Metropolitan's partnership and leadership in these efforts.

Conner Everts, executive director, Southern California Watershed Alliance

I actually have been tracking this bill by Tom Hayden since we worked on it in the late '80s. I appreciate that you took a supply source that's still speculative at this point, ocean water desalination, out of the report. What we're looking at here is local water resources, for some water agencies to look at stormwater and other potentials for recharge. We are at a crossroads here. I think I've said that before but we've seen pushback on our programs to do recycled water. We've seen a pushback on conservation. Conservation is what we really have right now before we have any new supply source. And while you mention the Bay-Delta watershed and the Sacramento River, that's not what we're talking about under this hearing. We're talking about potential for water and how we can improve that while we may be waiting for a future solution, whether it be better desal plants or maybe whatever we get out of the Delta. But in the interim we're forced to do what works locally and cost-effectively with conservation, what you call groundwater recharge, and a real watershed approach. I appreciate including the Bureau of Reclamation's Water Augmentation Study that we've worked on for 10 years. There's great opportunity here, but only if we take a regional approach. So when we look back to the beginning of the Conservation Credits Program, what worked so well was when individual agencies did the administration themselves. It's really been a challenge in the last year and a half when demand was too great for the programs, and it was a setback both for the small vendors and to a lot of agencies. We really have to resolve this problem. People across the state look to Met to be a leader on these issues. You've set goals that make you a leader, and I think this is an opportunity, and it should be followed up by a presentation, or at least a hearing to the Legislature. Thank you very much.

David Smith, managing director, WateReuse California (written comments submitted)

The Recycled Water Policy adopted by the State Water Resources Control Board in 2009 calls for California water agencies to "increase the use of recycled water over 2002 levels by at least one million acre-feet per year (afy) by 2020 and by at least two million afy by 2030." This is necessary because, as noted in the California Water Plan, demand is increasing due to in-stream needs and population growth, and supply is decreasing due to drought and possible climate change. Expansion of recycled water use to help meet this need is constrained by lack of funding and regulations that have not kept pace with water treatment technologies. Metropolitan continues to be an important force to relieve both of these constraints on water recycling.

Metropolitan's Local Resources Program provides significant funding for the development of water recycling and groundwater recovery supplies that replace an existing demand or prevent a new demand on Metropolitan's imported water supplies either through direct replacement of potable water, or increased regional groundwater production. Metropolitan's interim goal of 174,000 afy of yield when achieved will be a major factor helping to meet the regional goal of 779,000 afy by 2025. Continued funding of the Local Resources Program is critical to meeting these recycled water goals.

Senate Bill 918, approved by the State Legislature and signed by the Governor in September 2010, provides funding for the California Department of Health Services (DPH) to review existing regulations governing use of recycled water for potable supply. Metropolitan's support was instrumental in the passage of this milestone legislation, and is essential for implementation. DPH's review of regulations will consider the results of science-based research supported by Metropolitan. Metropolitan's support has the potential to substantially reduce recycled water delivery costs by reducing the need for water conveyance infrastructure and energy.

WateReuse California is pleased to recognize Metropolitan's leadership in water recycling.

Mary Ann Dickinson, president and CEO, Alliance for Water Efficiency

I'm the president and CEO of the Alliance for Water Efficiency which is a North American nonprofit devoted to the efficient and sustainable use of water. We are promoting water efficiency solutions around the country and piloting a number of the types of models that started here at Metropolitan and Southern California. And so, what this SB60 process is really showing in its compilation of reports is the evolution of that methodology and the changes that you have substantively made in the programs as you've been moving forward. Now, with the addition of the 20x2020 targets, Met's going to enter into a new realm. Met's an international leader in its resource management programs. That's not to say that it can't be improved. You've heard great suggestions for some of those improvements. One of the suggestions that I've wanted to particularly subscribe to is a reevaluation of your $195 incentive payment on water efficiency. Again, when I came to Met in 1992, the treated water rate was I think under $400 an acre-foot and the conservation incentive was $155. Now, you're going to be enacting a new rate next year that is almost double that but yet the conservation incentive rate's only $195. So I think in terms of your avoided cost, which is how incentives are best constructed, this might be the time to take a look at whether you can get the savings that will be required under the 20x2020 program with perhaps better incentives to the Southern California community.

Metropolitan was an important leader in water conservation during the '90s when it funded a number of very key evaluation studies of fixture savings. These weren't just engineering estimates. These were econometric studies of field-metered data to evaluate how these fixtures were saving water in customers' homes. Those kinds of studies are not being funded anymore, and not just by Metropolitan but by anyone. This is critical information because unless you know how these savings perform in the field you don't know how well you can count on them. I think in the mid-'90s, Met had a research budget of anywhere in between $400,000 and $500,000 a year, and I wonder if you are spending anywhere close to that now to verify the savings that you are actually getting.

The Alliance for Water Efficiency stands ready to help you in any way that we can. We know you rely very much on code savings, those passive water savings that form a large part of what you're relying on, and we are very active in the codes and standards arena. We hope to continue to partner with you on that particular aspect of the water savings portfolio. Thank you.

GLOSSARY

Acre-foot: The amount of water that would cover one acre of land, one foot deep. An acre-foot is 325,851 gallons. On average, an acre-foot supplies six to seven people in Southern California for one year.

Bewaterwise.com®: A Web site sponsored by Metropolitan that has extensive information about how to use water more efficiently.

California Friendly®: A program that encourages Southern California residents to make their homes California Friendly by using native and drought-tolerant plants, smart irrigation systems and water-wise appliances that meet certain efficiency standards.

Community Partnering Program: Metropolitan's Community Partnering Program provides funding for water-related, educational outreach on regional water resources issues, such as conservation, watershed or water quality, educational material for California Friendly garden projects.

Conjunctive Use: The storing of imported water in a local aquifer, in conjunction with groundwater, for later retrieval and use.

Groundwater Recovery: The extraction and treatment of groundwater making it usable for a variety of applications by removing chemicals and/or high levels of salts.

HECW (High-efficiency Clothes Washers): Washing machines that use less water than conventional washers and that are included in Metropolitan's incentive programs.

HET (High-efficiency Toilet): Newer generation toilets that on average use about 1.28 gallons per flush, saving about 8,000 gallons per year.

IRP (Integrated Water Resources Plan): Metropolitan's plan to ensure reliable water delivery to its member agencies despite population growth, dry spells and droughts. The IRP mix includes water storage, conservation, best management practices, recycling, desalination, and groundwater recovery, among others.

LRP (Local Resources Program): Metropolitan's funding mechanism for local recycling, groundwater recovery, and desalination projects.

Potable/Non-Potable: Drinkable and non-drinkable water according to California Department of Public Health standards, respectively.

Replenishment: When supply and system conditions are favorable, Metropolitan can deliver interruptible water supplies to its member agencies at reduced rates that are used to replenish local groundwater supplies through percolation and direct injection.

Smart Controllers (Weather-Based Irrigation Controllers): Smart controllers adjust automatically to current weather conditions, increasing efficiency of irrigation systems.

Watershed: Geographical portions of the earth's surface from which water drains or runs off to a single place like a river; also called a drainage area.

MWD ACT

Sections 130.5 and 130.7 of The Metropolitan Water District Act

Added by Statutes of 1999, Chapter 415 (SB 60 (Hayden))

130.5. (a) The Legislature finds and declares all of the following:

(1) The Metropolitan Water District of Southern California reports that conservation provides 7 percent of its "water resource mix" for 1998, and conservation is projected to provide 13 percent of its total water resources by 2020.

Conservation, water recycling, and groundwater recovery combined, provide 12 percent of the district's total water resources for 1998 and those water resources are projected to increase to 25 percent of the district's total water resources by 2020.

(2) It is the intent of the Legislature that The Metropolitan Water District of Southern California expand water conservation, water recycling, and groundwater recovery efforts.

(b) The Metropolitan Water District of Southern California shall place increased emphasis on sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures.

(c) The Metropolitan Water District of Southern California shall hold an annual public hearing, which may be held during a regularly scheduled meeting of the Board of Directors of The Metropolitan Water District of Southern California, during which the district shall review its urban water management plan, adopted pursuant to Part 2.6 (commencing with Section 10610) of Division 6 of the Water Code, for adequacy in achieving an increased emphasis on cost-effective conservation, recycling, and groundwater recharge in accordance with this section.

The Board of Directors of The Metropolitan Water District of Southern California may modify any ongoing program as necessary to meet that requirement, consistent with the district's urban water management plan.

(d) The district shall invite to the hearings knowledgeable persons from the fields of water conservation and sustainability, and shall consider factors of availability, water quality, regional self-sufficiency, benefits for species and environment, the totality of life-cycle costs, including avoided costs, and short- and long-term employment and economic benefits.

(e) On or before February 1, 2001, and on or before each February 1 thereafter, The Metropolitan Water District of Southern California shall prepare and submit to the Legislature a report on its progress in achieving the goals of increased emphasis on cost-effective conservation, recycling, and groundwater recharge in accordance with this section, and any recommendations for actions with regard to policy or budget matters to facilitate the achievement of those goals.

(f) Nothing in this section shall diminish the authority of The Metropolitan Water District of Southern California pursuant to Section 25 or any other provision of this act, or otherwise affect the purposes of The Metropolitan Water District of Southern California as described in existing law.

130.7. (a) The Metropolitan Water District of Southern California, in cooperation with the following entities, shall participate in considering programs of groundwater recharge and replenishment, watershed management, habitat restoration, and environmentally compatible community development utilizing the resource potential of the Los Angeles River, the San Gabriel River, or other southern California rivers, including storm water runoff from these rivers:

(1) Member public agencies whose boundaries include any part of the Los Angeles River, the San Gabriel River, or any other river in southern California.

(2) The Water Replenishment District of Southern California.

(3) Local public water purveyors and other appropriate groundwater entities.

(4) The County of Los Angeles.

(5) The United States Army Corps of Engineers.

(b) Nothing in this section affects the powers and purposes of the Water Replenishment District of Southern California or any other groundwater management entity, the County of Los Angeles, local public water purveyors, or the United States Army Corps of Engineers.

Photography Credits: Computer rendering of original photos from Metropolitan, California Department of Water Resources and licensed stock photography.

METROPOLITAN'S MEMBER AGENCIES

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928

Joined Metropolitan December 14, 1960

Joined Metropolitan November 12, 1954

Joined Metropolitan February 27, 1931

Joined Metropolitan October 16, 1950

Joined Metropolitan January 15, 1953

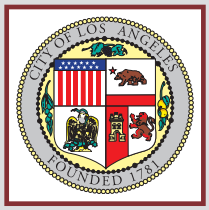
Joined Metropolitan February 27, 1931

Joined Metropolitan December 6, 1928

Joined Metropolitan November 26, 1951

Joined Metropolitan December 1, 1960

Joined Metropolitan February 27, 1931



Joined Metropolitan December 6, 1928

Joined Metropolitan November 26, 1951

Joined Metropolitan December 6, 1928

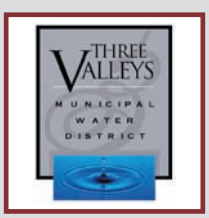
Joined Metropolitan December 17, 1946

Joined Metropolitan November 12, 1971

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928



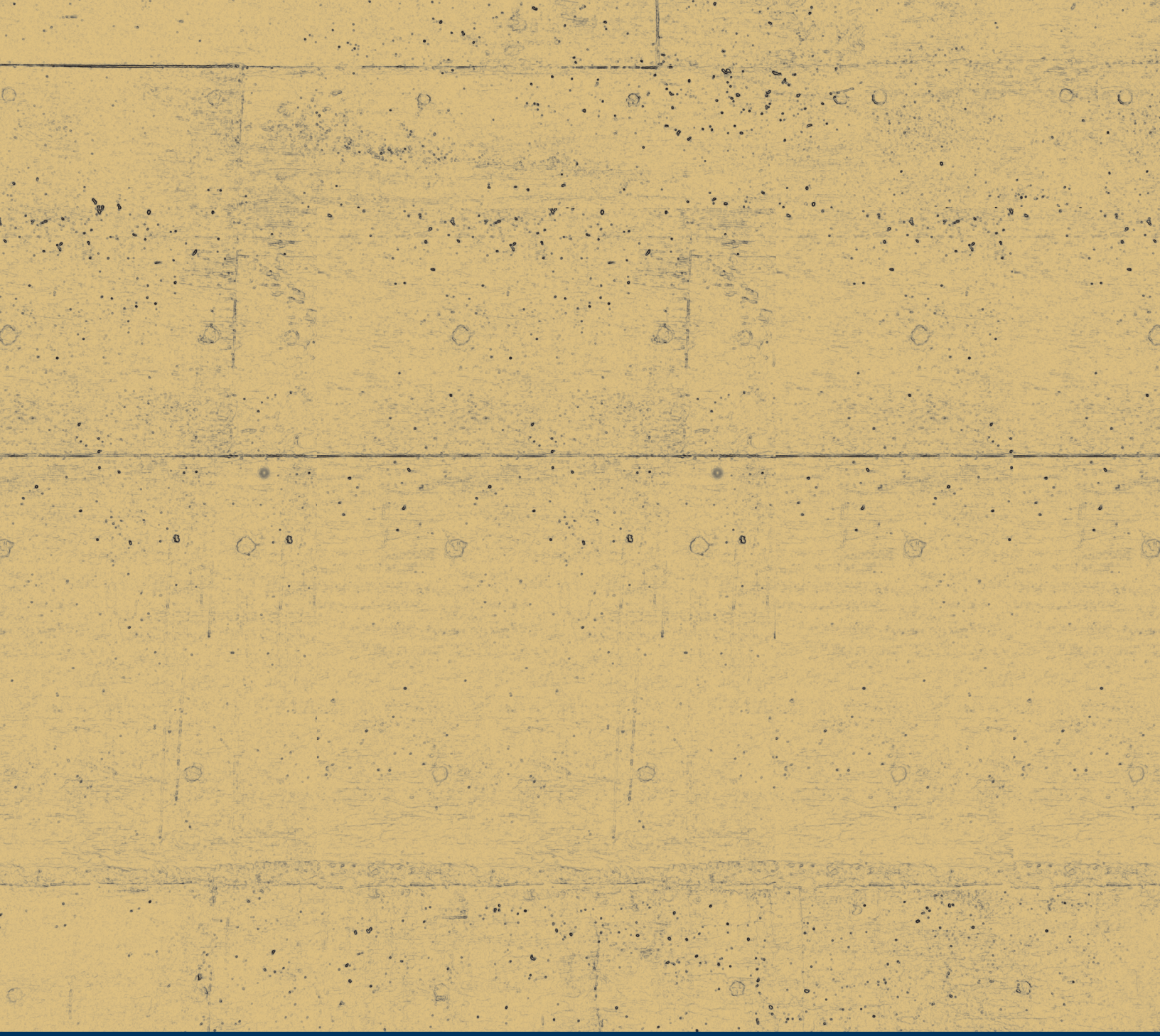
Joined Metropolitan November 15, 1950

Joined Metropolitan February 27, 1931

Joined Metropolitan March 27, 1963

Joined Metropolitan July 23, 1948

Joined Metropolitan November 12, 1954



The Metropolitan Water District of Southern California

mwdh2o.com

bewaterwise.com

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA




bewaterwise.com®

Annual Progress Report to the California State Legislature

Achievements in Conservation, Recycling and Groundwater Recharge

February 2012

Pictured on the cover:
Left to right: High-efficiency clothes washers are among the devices eligible for rebates under the SoCal Water$mart program; High school students participate in the annual Solar Cup Program which spans activities over seven months and teaches students about energy and water resources management; Metropolitan and its member agencies provide incentives to upgrade landscape with more efficient irrigation equipment like the multi-stream sprinkler head; Fallbrook Public Utility District Water Reclamation Project in San Diego County produces recycled water for irrigation of freeway greenbelts, golf courses, school grounds and nurseries; bewaterwise.com is an important tool for promoting conservation education and awareness, attracting nearly 400,000 visitors last fiscal year.

TABLE OF CONTENTS

The Metropolitan Water District of Southern California was established in 1928 under an act of the state Legislature to provide supplemental water supplies to its member agencies in Southern California. Metropolitan is a public agency and a regional water wholesaler.

It is governed by a 37-member board of directors representing 26 member public agencies that purchase some or all of their water from Metropolitan and serve 19 million people across six Southern California counties.

The mission of Metropolitan is to provide its 5,200-square-mile service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Metropolitan draws supplies through the Colorado River Aqueduct, which it owns and operates; from Northern California via the State Water Project; and from local programs and transfer arrangements. An increasing percentage of Southern California's water supply comes from conservation, water recycling and recovered groundwater, which are further described in this report.

For more information about this report contact Kathy Cole, Metropolitan's Executive Legislative Representative, at (916) 650-2642 or kcole@mwdh2o.com.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

METROPOLITAN'S MEMBER AGENCIES

LEGEND

- Department of Water Resources' California Aqueduct
- Metropolitan's Colorado River Aqueduct
- Water Treatment Plants

Overview

Water conservation continues to be a key factor in water resource management in Southern California. Water resource managers balance the need to provide supply reliability with environmental protection. Planning strategies today are adaptive, recognizing the challenges that uncertainties of weather, environmental restrictions and economics can present. These strategies also recognize opportunities, such as emerging technologies and social and business trends. They are designed to be weather-proof; meaning that in drought or wet periods, plans for managing resources can be successful and provide long-term supply reliability.

Over the past two decades, the Metropolitan Water District of Southern California has built a regional water system based on solid responsible planning. Many of those plans intersect at different milestones and share the underlying goal of reliability. How to get to the end point -- a reliable water supply for a region that supports a trillion dollar economy and 19 million residents – is based on a plan with many milestones. Some milestones are legislated – like the 2009 mandate in California for retail water providers to lower per-capita residential water use 20 percent by 2020 (known as 20 X 2020) and the state's Recycled Water Policy. Others reflect regional and local opportunities, like targets in Metropolitan's 2010 Integrated Water Resources Plan Update (IRP) that call for water-use efficiency to provide about one-third of the region's water supply by 2035.

For Metropolitan, water-use efficiency is anchored by the recently adopted (August 2011) Long-Term Conservation Plan (LTCP) and the Local Resources Program (LRP). The LTCP sets goals to help retailers achieve water conservation savings, and at the same time, support technology innovation and transform public perception about the value of water. This plan is market oriented – with both incentive and non-incentive drivers to ultimately change how water is used and perceived by Southern California consumers. Additionally, the LRP encourages the development and increased use of recycled water through incentives.

The LTCP was developed in collaboration with member agencies, retailers and other stakeholders and embraces both traditional and innovative approaches to conservation. The goals of the LTCP are to 1) achieve the conservation target in the 2010 IRP Update 2) pursue innovation that will advance water use efficiency and conservation and 3) transform the public's perception of the value of water within the region.

Working on parallel paths, the LTCP seeks to leverage the success of traditional conservation programs by collaborating with trade associations, public interest groups, environmental organizations, customers and others to change consumer values and generate preferences for water-efficient technologies.

Outdoor water use is a key focus as watering landscapes and gardens accounts for about half of household water use in Metropolitan's service area. Metropolitan will work with water agencies, landscape equipment manufacturers and other stakeholders to make proper irrigation control more effective and easier to understand. A similar effort will be made to reach out to the region's businesses, industries and agriculture to focus on process improvements that can save both money and water. The final focus will be on residential water use, where Metropolitan will work with water agencies and energy utilities to better promote the choices that consumers have for water-efficient products like faucets, shower heads and high-efficiency clothes washers. These programs are promoted through the conservation-focused Web site bewaterwise.com, which has seen an average 400,000 visitors annually since its launch in 2003.

This past year of increased water availability followed four years of dramatically reduced supplies. In April 2011, the official end to the drought was announced by Gov. Jerry Brown. Metropolitan's Board of Directors followed suit and restored imported water deliveries to the district's 26 member public agencies without risk of allocation penalties for the first time in two years.

Metropolitan's achievements in water-use efficiency programs have defined the future supply outlook according to plan. Incentive programs aimed at residential, commercial and industrial water users make a key contribution to the region's conservation achievements. The rebate program is credited with water savings of 156,000 acre-feet annually from a cumulative investment of $309 million. Funding provided by Metropolitan to member and retail water agencies for locally-administered conservation programs included rebates for turf removal projects, toilet distribution and replacement programs, high-efficiency clothes washer rebate programs and residential water audits.

Training classes have been developed under the California Friendly® umbrella and include landscape and turf courses for the general public, facility managers, landscape professionals and gardeners. Courses are available online in both English and Spanish.

Fiscal year 2010/11 saw the launch of new initiatives. Metropolitan and its member agencies initiated a program called, "Proper Irrigation Control" as part of the LTCP to provide resources to educate the public on landscape water-use efficiency. With a grant from the state Department of Water Resources, Metropolitan provided financial incentives to customers to replace their lawns with more water-efficient plants. A newly launched agricultural conservation program offered financial incentives to growers for irrigation system efficiency improvements.

Metropolitan encourages research and development of innovative ways to conserve water in the future. The Innovative Conservation Program provided funding to individuals and organizations to test new technologies and devices. In fiscal year 2010/11, four of the five ICP projects completed final reports documenting water-saving opportunities.

Supporting the development of local resources, Metropolitan's LRP offers financial incentives designed to expand water recycling and groundwater recovery. In fiscal year 2010/11, Metropolitan funding supported the production of 162,000 acre-feet of recycled water for non-potable uses and about 43,000 acre-feet of groundwater recovered for municipal use. A newly-established task force collaborated with member agencies to review the LRP and identify alternative financial mechanisms to support development of local resources with a cost-effective, sustainable approach.

Because of improved water conditions this past year, Metropolitan was able to begin refilling groundwater and surface storage reservoirs that had been tapped during drought years 2007 – 2010. Metropolitan also stored more than 20,000 acre-feet in the dry-year conjunctive use program within the service area to maintain reliability during dry, drought and emergency conditions.

Metropolitan is involved in several statewide issues that encompass watershed management and environmental restoration. Efforts range from short-term emergency response to long-term planning. Many of these activities come into play in the Sacramento-San Joaquin Delta – the Northern California hub for the state's water system. About 30 percent of Southern California's water moves through the Delta, the West Coast's largest natural estuary. A healthy Delta watershed supports supply reliability for the region.

The Delta's environmental decline has led to ongoing restrictions in water deliveries. It has prompted renewed commitment by stakeholders to find a solution that links conveyance system improvements with ecosystem restoration. This is the goal of the Bay Delta Conservation Plan (BDCP) being crafted by state and federal wildlife agencies, water districts, environmental groups, local Delta interests and other stakeholders. This year saw the release of a working draft BDCP that outlines a three-part approach to ecosystem restoration: a new water conveyance infrastructure, habitat restoration and measures to offset non-water project related stressors that negatively affect sensitive species. Metropolitan also participated on other watershed work groups and provided funding towards restoration projects that include the largest cold-water restoration effort in North America. The Battle Creek Salmon and Steelhead Restoration Project will open almost 50 miles of habitat in the Sacramento River watershed.

With a legacy of planning and a history of engineering acumen and excellence, Metropolitan has been able to adapt to changing conditions and maintain a reliable water supply for Southern California. Metropolitan continues to explore innovative programs and embrace new technology that increases water-use efficiency in the service area.

Reader's Guide to the Achievements Scorecard

Conservation
Metropolitan helps the region reduce water consumption through its Conservation Credits Program. Established in 1991, the program provides rebates for the installation or retrofit of water-efficient devices.

Recycled Water
Used municipal water is recycled and treated to a quality level allowed for specific uses such as landscape irrigation, groundwater recharge and seawater intrusion barriers. Metropolitan provides financial assistance to produce recycled water through its Local Resources Program, which began in 1982.

Groundwater Recovery
Degraded groundwater is recovered for potable use through treatment techniques that reduce high salt levels or other contaminant levels. Financial assistance for groundwater recovery has been provided since 1991 through Metropolitan's Local Resources Program.

Conjunctive Use Program
Metropolitan works in partnership with its member agencies and groundwater basin managers to store surplus imported water in local aquifers for future withdrawal.

Water Rate Discount For Groundwater Replenishment
When there are surplus water supplies, Metropolitan offers its member agencies water at a discounted rate to encourage groundwater storage.

Achievements Scorecard	
Metropolitan-Assisted Programs	
Conservation[1]	
FY 2010/11 New Water Saved From Active Conservation Programs[2]	13,000 acre-feet
FY 2010/11 Water Saved From New & Existing Active Conservation Programs[2]	156,000 acre-feet
Cumulative Water Saved From Active Conservation Programs[3]	1,569,000 acre-feet
FY 2010/11 Metropolitan Active Conservation Investment[4]	$16 million
FY 2010/11 Member Agency Investment[5]	$15 million
Cumulative Active Conservation Investment (excluding funding by member agencies)	$309 million
Total FY 2010/11 Conservation Investment[6]	$16.1 million
Recycled Water[7]	
FY 2010/11 Production	162,000 acre-feet
FY 2010/11 Investment	$26.3 million
Cumulative Production	1,492,000 acre-feet
Cumulative Investment	$269.7 million
Groundwater Recovery[7]	
FY 2010/11 Production	43,000 acre-feet
FY 2010/11 Investment	$7.7 million
Cumulative Production	550,000 acre-feet
Cumulative Investment	$102.7 million
Conjunctive Use Program[8]	
Metropolitan Cumulative Investment	$26.5 million
Proposition 13 Grant Funds Administered by Metropolitan	$45.0 million
Water Stored Since Program Inception through September 2011	235,000 acre-feet
Water Extracted Since Program Inception through September 2011[8]	206,000 acre-feet
Water Rate Discount For Groundwater Replenishment[9]	
Cumulative Investment through September 2011	$345 million
Cumulative Replenishment Water Delivery through September 2011	3.1 million acre-feet

Footnotes:

1. Conservation is water saved directly as a result of incentives from Metropolitan's Conservation Credits Programs and other water agencies. It includes device retrofits, process improvements, landscape efficiency improvements and other efficiency measures utilized in commercial, industrial and residential sectors. Additional water is conserved as a result of plumbing codes and other laws governing appliances and other products' efficiency standards.
2. This includes water savings initially achieved through Metropolitan's conservation programs and subsequently maintained through plumbing codes and includes savings from devices installed through fiscal year 2010/11. It also includes savings from member-agency funded programs administered through Metropolitan's region-wide residential and commercial programs.
3. This is cumulative water savings since 1991 and includes water savings initially achieved through Metropolitan's active conservation programs and subsequently maintained through plumbing codes.
4. Active conservation investment includes administrative fees for contracted program vendors.
5. In addition to Metropolitan's Conservation Credits Programs, member agencies and retailers also implemented local water conservation programs within their respective service areas. Member agency investment figures include rebate funding provided by member agencies beyond rebates already provided by Metropolitan's Conservation Credits Programs.
6. Total conservation investment includes the Conservation Credits Programs along with education and advertising campaigns to promote conservation.
7. Figures reflect actual and estimated deliveries for all Metropolitan-assisted projects and payments reported through June 2011; cumulative production and investment reflect accounting reconcilation as data become available.
8. Construction of the conjunctive use storage programs was completed in 2008. Proposition 13 refers to Chapter 9 of the Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Bond Act of 2000. Metropolitan and Calleguas Municipal Water District mutually terminated an agreement to store water in the Las Posas groundwater basin. The associated project cost of $28.2 million was refunded to Metropolitan, reducing the cumulative investment from $54.7 million to $26.5 million. Water extracted since program inception includes losses.
9. Figure is cumulative since 1990.

Conservation

Metropolitan and its member agencies have long been leaders in water conservation. Water-use efficiency is encouraged with financial incentives such as rebates and tiered pricing structure, outreach and education programs, and support for new plumbing and compliance codes that facilitate water savings. In fiscal year 2010/11, savings from Metropolitan's active conservation programs was 156,000 acre-feet. In addition, the region saved about 760,000 acre-feet.

Long Term Conservation Plan

In 2009, the California Legislature mandated retail water providers achieve a 20 percent per-capita reduction in water use by the year 2020. In 2011, Metropolitan's board adopted a Long-Term Conservation Plan (LTCP), developed in collaboration with its member agencies, retailers, and other stakeholders. The plan provides a framework of goals and strategies to reduce per capita water use through conservation and water use efficiency. The goals of the LTCP are: 1) achieve the conservation target in the 2010 IRP Update 2) pursue innovation that will advance water use efficiency and conservation and 3) transform the public's perception of the value of water within the region.

Implementation of the LTCP will occur through parallel programs that seek lasting changes in consumer values, behaviors, and preferences for water-efficient technologies, processes, services, and design approaches. The traditional program of incentives, education and broad outreach provides a foundation of water savings and information to help assess opportunities for strategically focused efforts. The strategic focus program depends on new alliances, collaboration, outreach and incentives to meet benchmarks that indicate earlier and/or broader adoption of a water-saving technology or service by consumers. Metropolitan will review progress of the LTCP periodically and adjust programs based on levels of success, cost and opportunity.

For its inaugural year, the strategic focus is proper irrigation control. Metropolitan held several work group meetings with its member and retail agencies that led to the development of an online toolbox. This brings resources to water agencies and other interested groups for educating the public on landscape water use efficiency. Metropolitan also met with irrigation manufacturers to encourage emphasis on proper irrigation control on their Web sites and in written materials. A number of Metropolitan's member and retail agencies have advertised in local newspapers encouraging residents to "Take Control of Your Controller."

Fiscal Year 2010/11 Program Highlights

- Metropolitan and its member agencies issued rebates valued at $16 million for about 190,000 devices.
- Metropolitan and its member agencies implemented a strategic focus program called "Proper Irrigation Control" to provide resources on landscape water use efficiency.
- Metropolitan, with a grant from the state Department of Water Resources, initiated a turf removal program that pays incentives to customers who replace their lawns with more water efficient plants.
- Metropolitan created an agricultural conservation program that provides financial incentives to growers for irrigation system efficiency improvements.

Conservation Programs

Metropolitan's conservation programs focus on two main areas: residential and commercial water use.

Residential Conservation Programs

Metropolitan's Residential Conservation Programs consist of two targeted efforts: SoCal Water$mart for residential customers and programs implemented by member agencies. In fiscal year 2010/11, the Residential Conservation Programs saved 3,800 acre-feet.

SoCal Water$mart

Launched in 2008, the region-wide residential program SoCal Water$mart provides rebates to offset purchases of water-efficient devices. In fiscal year 2010/11, SoCal Water$mart issued about 190,000 rebates with Metropolitan funding of about $6.3 million.

Member Agency Residential Programs

In addition to SoCal Water$mart, Metropolitan also provides funding to member agencies for locally-administered water conservation programs. Member agencies receive Metropolitan incentives for qualified retrofits and water-saving activities. Qualifying projects have included turf removal projects, toilet distribution and replacement programs, clothes washer direct-installation programs, and residential water audits.

Examples of water-saving devices that contribute to conservation:

High-Efficiency Clothes Washers

High-efficiency clothes washers (HECW) continue to be in demand in the marketplace, supported by Metropolitan's rebate program. Metropolitan's program eligibility requirement is currently set at water factor 4.0, which saves more than 10,000 gallons per year per washer. The water factor is the measure for the amount of water used to wash a standard load of laundry. HECW rebates in fiscal year 2010/11 saved 1,860 acre-feet per year. When available, Metropolitan has supplemented its HECW rebate using state or federal grants.

Rebates for high-efficiency clothes washers accounted for water savings of 1,860 acre-feet in fiscal year 2010/11.

Turf Removal

Aided by a Proposition 50 grant from the state Department of Water Resources, Metropolitan implemented a turf removal incentive program that provides customers rebates to remove their lawn and replace it with lower water-use plants. In its first full year of operation, more than 2.5 million square-feet of turf were replaced, saving approximately 75 acre-feet of water.

Low water use gardens, like the one pictured here at Metropolitan headquarters, are being installed in lieu of turf areas through the support of Metropolitan's Turf Removal Program.

High-Efficiency Toilets

Metropolitan uses the federal Environmental Protection Agency's WaterSense list of high-efficiency toilet (HET) models to qualify for rebates. HETs use 20 percent less water than the current low-flush toilets. High-efficiency toilet rebates in fiscal year 2010/11 saved 1,040 acre-feet per year.

Irrigation Evaluations and Residential Surveys

Metropolitan provides funding to member agencies that offer residential irrigation evaluations and indoor water surveys. Irrigation evaluations produce a recommended watering schedule along with suggestions for system efficiency improvements. Indoor residential surveys provide customers with information on how to identify leaks as well as suggestions for water-saving hardware for the home. In fiscal year 2010/11, these programs saved 140 acre-feet per year.

Rotating Nozzles for Sprinklers

Pop-up spray heads with multi-stream, multi-trajectory rotating nozzles increase watering efficiency. Metropolitan provides incentives to replace the nozzles. In fiscal year 2010/11 nozzles saved 560 acre-feet per year.

Weather-Based Irrigation Controllers

Weather-based irrigation controllers (WBIC) adjust irrigation schedules automatically based on a number of factors including rain, temperature, plant type, sunlight and soil type. Metropolitan provides incentives to replace traditional manual controllers with WBICs. WBICs installed in fiscal year 2010/11 saved 125 acre-feet.

Commercial Conservation Programs

Metropolitan's commercial programs provide rebates to businesses and institutions for water-saving device replacements throughout Southern California. This results in annual water savings of about 9,100 acre-feet. In fiscal year 2010/11, the commercial program was comprised of the Save Water Save A Buck Program, member agency commercial programs, Water Savings Performance Program and the Agricultural Conservation Program.

Save Water, Save A Buck

The majority of commercial conservation activity comes from Metropolitan's regional Save Water Save A Buck Program (Save A Buck). The Save A Buck program provides rebates for water-saving plumbing fixtures, landscaping equipment, food-service equipment, cleaning equipment, HVAC (heating, ventilating, air conditioning) and medical equipment. This program also targets multi-family dwellings for retrofits using high-efficiency washers and toilets, and rotating nozzles for pop-up spray heads. During fiscal year 2010/11, Save A Buck provided about 2,700 rebates for more than 66,000 device retrofits.

Member Agency Commercial Programs

Member and retail water agencies also implement water conservation programs for commercial sectors using Metropolitan incentives. Projects target specific local businesses, with many programs also receiving assistance from state or federal grant programs. Metropolitan incentives are used as the basis for meeting cost-share requirements.

Examples of water-saving devices used in the commercial sector:

Following is a list of current and past water-saving fixtures and equipment that contributed to this year's conservation savings with rebates provided to businesses and institutions under Metropolitan's Commercial Programs:

- Connectionless Food Steamer
- Cooling Tower Conductivity Meter
- Dry Vacuum Pump
- High-Efficiency Toilet
- High-Efficiency Urinal
- Large Rotors - High Efficiency Nozzle
- Multi-Stream Rotating Nozzles
- pH Cooling Tower Controller
- Synthetic Turf
- Turf Removal
- Ultra-Low-Flush Urinals
- Water Broom
- Weather-Based Irrigation Controller
- Zero Water Urinal

Water Savings Performance Program

A component of the commercial program, the Water Savings Performance Program, provided financial incentives for documented water savings linked to landscape irrigation and industrial process improvements. This program allowed customers to receive incentives for five years of water savings. Projects with existing contracts continue to produce savings.

Agricultural Conservation Program

The Agricultural Conservation Program was created to provide financial incentives to growers who perform physical improvements to their overall irrigation systems to increase efficiency. An initial site audit is required to determine the baseline efficiency of the irrigation system and the improvements needed to increase system efficiency. Once the grower makes the physical improvements, a second audit is conducted to determine the improved irrigation efficiency. Incentives are based on the calculated water savings. For fiscal year 2010/11, 10 projects were approved with completion expected in early 2011/12.

Research and Development

Metropolitan encourages research and development of new and creative ways to conserve water. The Innovative Conservation Program (ICP) provides funding to individuals and organizations to test new technologies and devices. Four of the five ICP projects selected in fiscal year 2009/10 were completed with final reports documenting the water savings opportunities of new devices and technologies in fiscal year 2010/11. In fiscal year 2011/12, eight new projects were selected for funding for a total of nine ICP projects in progress.

(Pictured left) Discharged wastewater from industrial cooling towers is tested on California Friendly plants for irrigation.
(Pictured right) Sprinklers with pressure reducers minimize runoff on greenbelt medians.

Communications and Outreach

Metropolitan sponsored conservation and Delta-related educational outreach efforts and programs throughout its service area during fiscal year 2010/11. Online and social media included Google search advertising focused on water conservation.

Metropolitan's bewaterwise.com Web site continued to be an important tool in educating the public, attracting nearly 400,000 unique visitors from July 1, 2010 through June 30, 2011. Metropolitan also added a Spanish-language version of the site.

Community Events

Metropolitan continues to maintain a strong presence in community water resource education and conservation awareness activities and events. Metropolitan co-sponsored numerous events throughout its six-county service area.

Education Programs

During fiscal year 2010/11, Metropolitan and its member agencies completed a revision of the school curriculum supplement titled, "Conservation Connection: Water and Energy in Southern California." This curriculum focuses on water and energy use in Southern California. It covers programs, projects and challenges in providing reliable supplies of drinking water and usable energy, including drought cycles, environmental considerations, population growth and costs.

Metropolitan and its member agencies reinforced the conservation message through the distribution of educational materials and the organization of outreach activities and events for more than 30,000 K-12 students and more than 200 new program teachers throughout the service area. Key opportunities included: the ninth annual Solar Cup® boat race with 40 high school teams; the 17th year of Metropolitan's Diamond Valley Lake Education Program; and the 2011 "Water is Life" student art calendar program. Additionally, Metropolitan's Education Programs Web site drew nearly 8,000 unique visitors over the course of the fiscal year.

California Friendly® Landscape Irrigation Efficiency Training

Metropolitan's California Friendly Landscape Training program provided classroom and online water-wise landscaping classes for more than 1,400 professional landscapers and residential homeowners in 2011. The classroom and online training was conducted in English and Spanish. Since the program's inception in 1994, more than 55,000 people have participated in the classes.

Community Partnering Program

The Community Partnering Program continues to support water-related and educational community projects, programs and events. CPP funding supports Metropolitan's overall mission and results in expanding the support of and collaboration with nonprofit community organizations, public agencies, professional associations and educational institutions. These co-sponsorships emphasize water conservation, watershed education, and other programs that support Metropolitan's overall water conservation efforts.

Local Resources

Water recycling and groundwater recovery and storage are important assets in the region's diverse local resource portfolio and help bring greater water supply reliability to Southern California. These resources help offset imported water supplies. Local water agencies have largely led the development of water recycling and groundwater recovery projects with many new projects incentivized by Metropolitan's Local Resources Program (LRP).

Water Recycling and Groundwater Recovery

Metropolitan's LRP is a performance-based incentive program designed to expand water recycling and the recovery of degraded groundwater. Metropolitan funding supported the production of about 162,000 acre-feet of recycled water for non-potable uses and about 43,000 acre-feet of recovered groundwater for municipal use in fiscal year 2010/11. Additional recycled and recovered water was produced without Metropolitan funding. Figures 1 and 2 (opposite page) represent total recycled water and groundwater recovery production in Metropolitan's service area, including local agency funded projects.

Fiscal Year 2010/11 LRP Highlights

- Metropolitan established the Local Resources Development Strategy Task Force in collaboration with member agencies to review the LRP and identify alternative mechanisms to support development of local resources consistent with the updated Integrated Water Resources Plan.
- Western Municipal Water District and Inland Empire Utilities Agency's Chino Desalter III Project began treating degraded groundwater and will produce up to 10,600 acre-feet/year of recycled water.
- Irvine Ranch Water District's Wells 21 and 22 Project began operation this year and will produce up to 6,400 acre-feet per year of recovered groundwater.
- Cucamonga Water District, a retail agency of the Inland Empire Utilities Agency, began operation of the North-east Recycled Water Project that will produce up to 33,000 acre-feet of recycled water for recharging the Chino Groundwater Basin.
- Elsinore Valley Municipal Water District, a retail agency of Western Municipal Water District, launched its Recycled Water Program and will produce up to 300 acre-feet of recycled water per year.
- Los Angeles Department of Water and Power's Van Nuys Area Recycling Project will produce up to 120 acre-feet of recycled water per year.

Whittier Narrows Golf Course uses recycled water for irrigation.

Figure 1
Recycled Water

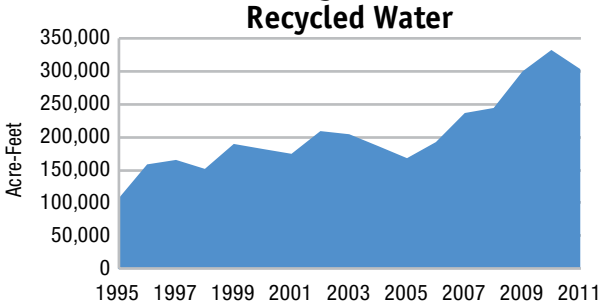
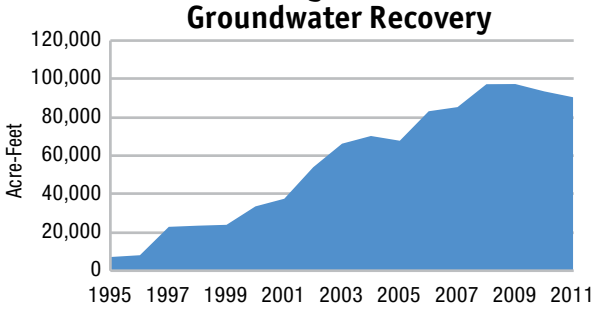


Figure 2
Groundwater Recovery



Groundwater Management

Conjunctive Use

Metropolitan's dry-year conjunctive use program stores surplus imported supplies within the service area to maintain reliability during dry, drought and emergency conditions. In fiscal year 2010/11, Metropolitan and Calleguas Municipal Water District mutually terminated an agreement to store water in the Las Posas groundwater basin. The associated project cost of $28.2 million was refunded to Metropolitan, reducing the cumulative investment from $54.7 million to $26.5 million. Currently, Metropolitan has nine storage projects that provide about 212,000 acre-feet of storage capacity. Metropolitan can withdraw about 70,000 acre-feet per year during shortage years. Since the program inception in 2008, Metropolitan stored 235,000 acre-feet. During the recent drought period, Metropolitan extracted 206,000 acre-feet to meet demands. With improved water supply conditions this past fiscal year, Metropolitan began to refill these accounts. As of July 1, 2011, 20,000 acre-feet have been stored.

Groundwater Recharge Initiatives

Metropolitan supported the Southern California Water Committee's task force to address issues relating to increased stormwater capture for water supply. The task force has coordinated information and perspectives among stormwater agencies, water supply providers, development interests and environmentalists. Metropolitan also provided support for development of salt and nutrient management plans in groundwater basins in its service area to increase potential for recharge of recycled water. Metropolitan participates in a joint study with the Sanitation Districts of Los Angeles County to evaluate the potential for large-scale indirect potable reuse of recycled water involving advanced treatment and groundwater storage prior to recapture and reuse.

Watershed Initiatives

Metropolitan is active on planning boards and organizations formed to improve watershed management and restoration. Metropolitan works with stakeholders in the Sacramento-San Joaquin Delta watershed and participates in the Greater Los Angeles County Integrated Regional Water Management Plan and the Council for Watershed Health.

Integrated Regional Water Management Planning

Integrated Regional Water Management (IRWM) is a state initiative that encourages collaboration among multiple agencies, stakeholders, individuals and groups within a region to manage all aspects of water resources. IRWM groups typically consist of public agencies with water or wastewater authorities, cities, counties, special districts and non-governmental organizations that address a broad range of issues including growing water demands, water supply reliability, water quality, stormwater management, open space and habitat, and financing of projects. Currently, there are eight IRWM groups covering Metropolitan's service area and all the member agencies participate in one or more IRWM groups. Metropolitan continues to participate in the Greater Los Angeles County Region Leadership Committee as the surface water management area representative.

In November 2006, California voters passed Proposition 84, the Safe Drinking Water, Water Quality, and Supply, Flood Control, River and Coastal Protection Bond Act, which provides $1 billion for Integrated Regional Water Management Planning and Implementation. The state Department of Water Resources has initiated the first cycle of the grant program under Proposition 84. The IRWM groups are required to prepare or update their IRWM Plans in order to participate in Proposition 84 implementation grants. Metropolitan will be providing information and technical assistance to member agencies to update the plans.

Council for Watershed Health (formerly the Los Angeles and San Gabriel Rivers Watershed Council) Water Augmentation Project

Metropolitan was an active participant in the Water Augmentation Project, a 10-year research study to investigate the benefits, costs and risks of capturing stormwater runoff since 2000. Metropolitan continues to participate in follow-up technical studies and projects identified in the Water Augmentation Study. Projects include extension of the Elmer Street neighborhood (San Fernando Valley) retrofit to include an alley downstream of the completed project; specific groundwater basin studies to quantify the groundwater yield and benefit to surface water quality of capturing runoff; and identifying additional pilot studies.

Sacramento-San Joaquin Delta Watershed

The Sacramento-San Joaquin Delta watershed is an important source of water supply delivered to Southern California through the State Water Project. A healthy Delta watershed ensures regional water supply reliability. Metropolitan continues to work with agencies and stakeholders throughout the Delta watershed to conduct studies and develop policies and programs to restore the ecosystem and protect Delta water quality for drinking water uses and for aquatic wildlife.

Metropolitan participates in the Bay Delta Conservation Plan (BDCP) process, which is a collaborative effort to restore the Delta ecosystem and improve conveyance. The main goals of the BDCP are to provide for both endangered species and habitat protection as well as improved reliability of water supplies. Metropolitan participates on the BDCP Steering Committee with state and federal agencies, water agencies, and environmental and conservation organizations. One of the key BDCP accomplishments in 2011 was the release of the working draft BDCP that outlines a three-part approach to ecosystem restoration: new water conveyance infrastructure, habitat restoration, and measures to offset non-water project related stressors that negatively affect sensitive species.

Metropolitan continued to support the state Department of Water Resources' Municipal Water Quality Investigations (MWQI) Program, which implements water quality monitoring and special studies in the Delta and its tributaries to develop a better understanding of the sources and effects of drinking water quality constituents of concern. This year, the MWQI Program continued important activities including the installation of additional water quality monitoring stations and development of data for watershed modeling studies.

Metropolitan continued to work with several agencies and stakeholder groups to develop a drinking water policy for surface waters in the Delta watershed. This program is a multi-year effort. In July 2010, the Central Valley Regional Water Quality Control Board adopted a resolution outlining a schedule for completing the policy. In spring 2011, technical studies to support the drinking water policy development, including evaluation of potential future water quality scenarios, were completed. By July 2013, the Regional Board is scheduled to consider the final drinking water policy for adoption. The policy will provide an improved regulatory framework for drinking water quality protection activities in the Delta watershed.

Metropolitan also continued to work with the state and federal water contractors to support studies and regulatory decisions addressing the impacts of nutrients and ammonia in the Delta and the impact of nutrients on the Delta food web.

In addition to involvement in research efforts and studies, Metropolitan supported and financially assisted the Battle Creek Salmon and Steelhead Restoration Project, which began in fall 2010. The U.S. Bureau of Reclamation project is one of the largest cold-water restoration efforts in North America. It is being supported with federal, state and private funding. The project will open almost 50 miles of winter-, spring- and late fall-run salmon and Steelhead habitat in the Sacramento River watershed. Construction is anticipated to be completed by 2015.

The Sacramento-San Joaquin Delta is the hub of the state's water system and the West Coast's largest estuary.

Ethics Office

The Ethics Office works collaboratively with Metropolitan's Board of Directors, general manager, general counsel and general auditor to promote the agency's core values: integrity, stewardship, diversity, leadership, open communication and teamwork.

In addition, the Ethics Office enforces ethics-related laws and policies; educates directors, officers, and employees about what is expected of them in terms of ethical behavior and compliance; and works with the Board of Directors and other departments to enhance Metropolitan's ethical culture.

In fiscal year 2010/11, Metropolitan's Ethics Office accomplished the following:

- Responded to 78 matters brought to the attention of the office. Fifty-nine percent were queries involving research and 41 percent were expressions of concern. Callers included employees (72%), members of the public (19%), directors (5%), and unknown classification (4%);
- Presented the second and final AB 1234 ethics training workshop of the year for Metropolitan directors and officers;
- Created a list of all members of the Board of Directors and the Executive Team who represent Metropolitan on external boards, collaborative initiatives, or civic groups;
- Reviewed policies with the Legal Department and the General Manager's office for possible revisions;
- Provided ethics education at field locations outside of the Los Angeles headquarters for employees and managers;
- Distributed monthly ethics posters to raise awareness;
- Sent Operating Policy H-03 Ethics Policy to all employees for annual review;
- Provided advice and support to directors at committee and general board meetings, and privately as requested; provided advice to officers and employees as requested; and
- Provided ethics orientation to all new employees.

Excerpts From Public Hearing Comments

In accordance with section 130.5 of the MWD Act, Metropolitan held a public hearing on December 12, 2011 to receive comment on the draft annual report on achievements in conservation, recycling and groundwater recharge for fiscal year 2010/11. The following summaries are from comments received and submitted at the public hearing. Water use efficiency programs for conservation and recycled water were the focus of reviewer comments and will be considered as Metropolitan develops the framework for regional long-term conservation and recycled water programs consistent with the 2010 Regional Urban Water Management Plan and for consideration by Metropolitan's Board of Directors.

Chris Brown, California Urban Water Conservation Council

Again, Metropolitan shows itself as a leader in water conservation in the state and in the nation with this plan. The 20x2020 legislation (SBX7-7) allowed agencies to choose different options for reducing water use. Agencies with historically progressive and successful water conservation could have chosen an option with a target less than 20 percent. In your planning efforts, you have chosen to go for a full 20 percent reduction in per capita water use within your service area. That is very important for the state and the region. Without Metropolitan's leadership in this area, it would be very difficult to reach the 20 x 2020 goal. I also like in this particular plan that you support research and innovation.

You have a renewed emphasis on landscape with your irrigation controller program. Landscape water conservation has been a real challenge. You have to have the right type of plants for the climate we live in, and you also have to maintain that equipment.

And with that, my final comment has to do with your emphasis on social marketing and the public perception of the value of water. Again I think you hit it right on the mark. Where there is true leadership and big success in water conservation, it's because the public understands the importance of water. They know where it comes from, what it cost to get it to them, and the need to have robust, safe drinking water systems. I want to encourage and thank you all for your leadership in the California Urban Water Conservation Council. I think for the state as a whole to succeed, people from the Central Valley to the coast, not just here in the Southland, have to do the things that are in this plan.

Edward Osann, Natural Resources Defense Council

We really appreciate the support of Metropolitan to continue budgeting for conservation program activities during challenging fiscal times. With the 20x2020 goal that has been set in state statute and by Metropolitan itself in the IRP Update, we really are in this for the long haul. The revised Long Term Conservation Plan that was approved by your Board in August reaffirmed the commitment to use Metropolitan's avoided costs as the benchmark or upper bound for conservation, for payment of conservation program savings. However, the current maximum payment of $195 per acre-foot has not been changed in many years. We recommend that the

Board consider changes to this approach. The programs should provide stability from year to year, while taking into account the general trends in Metropolitan's cost experience. We suggest using 3-year or 5-year rolling averages of the variable costs associated with Metropolitan's marginal purchases of water. This would include water purchases and transfers adjusted for water losses in transit, pumping costs associated with the marginal purchase of water, and the variable treatment costs associated with them. We encourage the board and staff to develop such a methodology in time for the annual consideration of conservation programs and program updates this coming April or May.

Shivaji Deshmukh, West Basin Municipal Water District

West Basin MWD has participated in Metropolitan's Local Resources Program since 1994 when the Edward C. Little Water Recycling Facility was constructed. Since then, we have produced over 390,000 acre-feet of recycled water to serve West Basin MWD's service area, as well as the cities of Torrance and Los Angeles. We currently have more than 380 sites connected to recycled water that receive recycled water supplies. All of the oil refiners within our service area also use this recycled water for their cooling tower and boiler processes needs. We are also finalizing an agreement with the Los Angeles Department of Water and Power to serve recycled water from our El Segundo facility to the Harbor area. None of these projects would be financially possible without the Metropolitan LRP incentive. Producing recycled water requires a significant capital and operational investment, and these costs continue to rise as chemical, power and replacement costs continue to increase.

With regard to conservation, West Basin MWD is very proud of its successful conservation program, and it does rely heavily on outside funding sources. For every $1 that West Basin invests in its public conservation program, the public receives $7 worth of programs which is made possible through outside funding sources, including Metropolitan's rebates and member agency allocation. Today, West Basin MWD has distributed over 20,000 devices and has conserved over 15,000 acre-feet per year from active and passive conservation programs.

Finally, in the area of groundwater recharge, West Basin MWD, in partnership with the L.A. County Flood Control District and the Water Replenishment District of Southern California, protects and replenishes the local groundwater aquifer using a blend of purified recycled water as well as imported water from Metropolitan. In our effort to reduce dependence on imported water supply, the amount of injection of high quality recycled water into the barrier has steadily increased from 50 percent to 75 percent.

West Basin MWD finds Metropolitan's efforts in water recycling and conservation extremely successful in helping its member agencies to achieve greater reliance on local water supplies. Further, the involvement in California's legislative and policy matters have brought about positive changes to public perception regarding water use efficiency and water recycling, and ultimately will have lasting statewide impacts.

Penny Falcon, Los Angeles Department of Water and Power

The Los Angeles Department of Water and Power supports Metropolitan's regional water conservation programs and congratulates Metropolitan on the water use efficiency accomplishments as outlined in your current SB60 report. Water conservation is an important part of the region's water supply portfolio, and your regional conservation program provides real water savings that would otherwise not be achieved. In these next years,

Metropolitan's conservation leadership will play a key role in achieving the necessary real water savings to support our region's water supply reliability goals as stated in your current Integrated Resources Plan. Your regional water conservation program is a vital tool for meeting these goals. LADWP supports maintaining existing funding levels of the current conservation program and will support expansion of these funding levels when economic conditions improve.

Dennis Cushman, San Diego County Water Authority

SB 60 of 1999 requires that MWD hold a public hearing annually to review its Urban Water Management Plan. Today's public hearing was not noticed to review MWD's Urban Water Management Plan, but my testimony on MWD's draft SB 60 report to the legislature is offered on the context of that.

First, the legislative intent of SB 60 was for MWD to report annually on Southern California's progress in developing local water resources and increasing conservation to reduce dependence upon imported water supplies and increasing conservation and reduce dependence on the Sacramento-San Joaquin Bay Delta. However, the draft report before you today does not provide a comprehensive review of Southern California's progress. Instead, it limits the report to only those local supplies and conservation programs that Metropolitan subsidizes through financial payments and subsidies. MWD leaves out any mention of Southern California's local supply development and conservation that does not depend upon or receive MWD's subsidies. Let's focus first on MWD's Urban Water Management Plan as compared to its 2005 and 2000 plans. MWD's firm water sales projections are far lower than its earlier plans: 18 percent lower in 2020 and 22 percent lower in 2030. There has been a seismic shift in Southern California that will have substantial implications for MWD's water supply planning. Despite concerns expressed by the Water Authority more than a year ago, this board last November adopted and approved MWD's Urban Water Management Plan many months before it and the plans of its 26 member agencies were due to the Department of Water Resources. As a result, the plans are disconnected in fundamental ways. The Water Authority commissioned a study to compare Metropolitan's Urban Water Management Plan with the cumulative total of its 26 member agencies. *(Mr. Cushman submitted a copy of that report for the public record.)*

The report shows significant differences between MWD's plan and those of its member agencies. Mr. Cushman identified five member agencies' plans for local supply development that MWD failed to capture in its 2010 Urban Water Management Plan, including projects by Long Beach, West Basin, Los Angeles and the Water Authority. One example noted was the Water Authority's negotiations to purchase 56,000 acre-feet of water from the Carlsbad Seawater Desalination Plant. When that plant goes online, MWD's water sales will decline by 56,000 acre-feet annually, according to the report.

The Water Authority respectfully requests and recommends that the board produce an update to its Urban Water Management Plan, produce a Long Range Finance Plan, and develop future budgets tied to Metropolitan's long range water sales forecast.

Mr. Cushman provided printed hard copies of a PowerPoint presentation and a written report to supplement his oral comments on December 12, 2011. Copies of these materials are on file at Metropolitan and available upon request.

Paul D. Jones II, Eastern Municipal Water District (written comments submitted)

Eastern Municipal Water District (EMWD) aggressively pursues conservation and recycled water use activities in the Western Riverside County. We appreciate the leadership and support of Metropolitan as we move towards greater water efficiency and continued development of local resources.

For many years, EMWD has benefitted from Metropolitan funding for water use efficiency programs, and in 2010/11 fiscal year, EMWD was able to conserve 4,612 acre-feet of water.

Metropolitan's achievements in conservation, recycling and groundwater recharge programs as described in the draft report are commendable. We look forward to collaborating with Metropolitan on implementing its long term conservation plan, and meeting its local resource development goals.

Mr. Jones provided a written statement for the December 12, 2011 hearing. Copies of the complete written statement are on file at Metropolitan and available upon request.

Celso Barcena III, Hines (a commercial real estate firm, submitted written comments)

The 10100 Santa Monica building reduced annual water consumption by 330,000 gallons with the "Save Water, Save a Buck" program. "Save Water, Save a Buck" allowed us to implement this critical water conservation measure with minimal capital investment and reduced the payback period to a few months. Programs like this support our commitment to environmental and sustainable practices. Please keep them coming.

Mr. Barcena provided a written statement for the December 12, 2011 hearing. Copies of the complete written statement are on file at Metropolitan and available upon request.

Glossary

Acre-foot: The amount of water that would cover one acre of land, one foot deep. An acre-foot is 325,851 gallons. On average, an acre-foot supplies five to seven people in Southern California for one year.

Bewaterwise.com: A Web site sponsored by Metropolitan that has extensive information about how to use water more efficiently.

California Friendly®: A program that encourages Southern California residents to make their homes California Friendly by using native and drought-tolerant plants, smart irrigation systems and water-wise appliances that meet certain efficiency standards.

Community Partnering Program: Metropolitan's Community Partnering Program provides funding for water-related, educational outreach on regional water resources issues, such as conservation, watershed or water quality, educational material for California Friendly garden projects.

Conjunctive Use: The storing of imported water in a local aquifer, in conjunction with groundwater, for later retrieval and use.

Groundwater Recovery: The extraction and treatment of groundwater making it usable for a variety of applications by removing chemicals and/or high levels of salts.

HECW (High-efficiency Clothes Washers): Washing machines that use less water than conventional washers and that are included in Metropolitan's incentive programs.

HET (High-efficiency Toilet): Newer generation toilets that on average use about 1.28 gallons per flush, saving about 8,000 gallons per year.

IRP (Integrated Water Resources Plan): Metropolitan's plan to ensure reliable water delivery to its member agencies despite population growth, dry spells and droughts. The IRP mix includes water storage, conservation, best management practices, recycling, desalination, and groundwater recovery, among others.

LRP (Local Resources Program): Metropolitan's funding mechanism for local recycling and groundwater recovery projects with member agencies.

Potable/Non-Potable: Drinkable and non-drinkable water according to California Department of Public Health standards, respectively.

Replenishment: When supply and system conditions are favorable, Metropolitan can deliver interruptible water supplies to its member agencies at reduced rates to be used to replenish local groundwater supplies.

Smart Controllers (Weather-Based Irrigation Controllers): Smart controllers adjust automatically to current weather conditions, increasing efficiency of irrigation systems.

Watershed: Geographical portions of the earth's surface from which water drains or runs off to a single place like a river; also called a drainage area.

MWD Act

Sections 130.5 and 130.7 of The Metropolitan Water District Act

Added by Statutes of 1999, Chapter 415 (SB 60 (Hayden))

130.5. (a) The Legislature finds and declares all of the following:

(1) The Metropolitan Water District of Southern California reports that conservation provides 7 percent of its "water resource mix" for 1998, and conservation is projected to provide 13 percent of its total water resources by 2020.

Conservation, water recycling, and groundwater recovery combined, provide 12 percent of the district's total water resources for 1998 and those water resources are projected to increase to 25 percent of the district's total water resources by 2020.

(2) It is the intent of the Legislature that The Metropolitan Water District of Southern California expand water conservation, water recycling, and groundwater recovery efforts.

(b) The Metropolitan Water District of Southern California shall place increased emphasis on sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures.

(c) The Metropolitan Water District of Southern California shall hold an annual public hearing, which may be held during a regularly scheduled meeting of the Board of Directors of The Metropolitan Water District of Southern California, during which the district shall review its urban water management plan, adopted pursuant to Part 2.6 (commencing with Section 10610) of Division 6 of the Water Code, for adequacy in achieving an increased emphasis on cost-effective conservation, recycling, and groundwater recharge in accordance with this section.

The Board of Directors of The Metropolitan Water District of Southern California may modify any ongoing program as necessary to meet that requirement, consistent with the district's urban water management plan.

(d) The district shall invite to the hearings knowledgeable persons from the fields of water conservation and sustainability, and shall consider factors of availability, water quality, regional self-sufficiency, benefits for species and environment, the totality of life-cycle costs, including avoided costs, and short- and long-term employment and economic benefits.

(e) On or before February 1, 2001, and on or before each February 1 thereafter, The Metropolitan Water District of Southern California shall prepare and submit to the Legislature a report on its progress in achieving the goals of increased emphasis on cost-effective conservation, recycling, and groundwater recharge in accordance with this section, and any recommendations for actions with regard to policy or budget matters to facilitate the achievement of those goals.

(f) Nothing in this section shall diminish the authority of The Metropolitan Water District of Southern California pursuant to Section 25 or any other provision of this act, or otherwise affect the purposes of The Metropolitan Water District of Southern California as described in existing law.

130.7. (a) The Metropolitan Water District of Southern California, in cooperation with the following entities, shall participate in considering programs of groundwater recharge and replenishment, watershed management, habitat restoration, and environmentally compatible community development utilizing the resource potential of the Los Angeles River, the San Gabriel River, or other southern California rivers, including storm water runoff from these rivers:

(1) Member public agencies whose boundaries include any part of the Los Angeles River, the San Gabriel River, or any other river in southern California.

(2) The Water Replenishment District of Southern California.

(3) Local public water purveyors and other appropriate groundwater entities.

(4) The County of Los Angeles.

(5) The United States Army Corps of Engineers.

(b) Nothing in this section affects the powers and purposes of the Water Replenishment District of Southern California or any other groundwater management entity, the County of Los Angeles, local public water purveyors, or the United States Army Corps of Engineers.

Metropolitan's Member Agencies

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928

Joined Metropolitan December 14, 1960

Joined Metropolitan November 12, 1954

Joined Metropolitan February 27, 1931

Joined Metropolitan October 16, 1950

Joined Metropolitan January 15, 1953

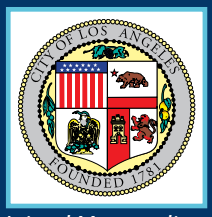
Joined Metropolitan February 27, 1931

Joined Metropolitan December 6, 1928

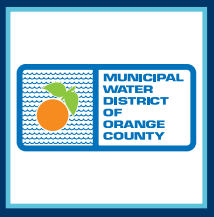
Joined Metropolitan November 26, 1951

Joined Metropolitan December 1, 1960

Joined Metropolitan February 27, 1931



Joined Metropolitan December 6, 1928



Joined Metropolitan November 26, 1951

Joined Metropolitan December 6, 1928

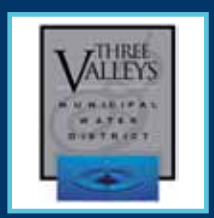
Joined Metropolitan December 17, 1946

Joined Metropolitan November 12, 1971

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928



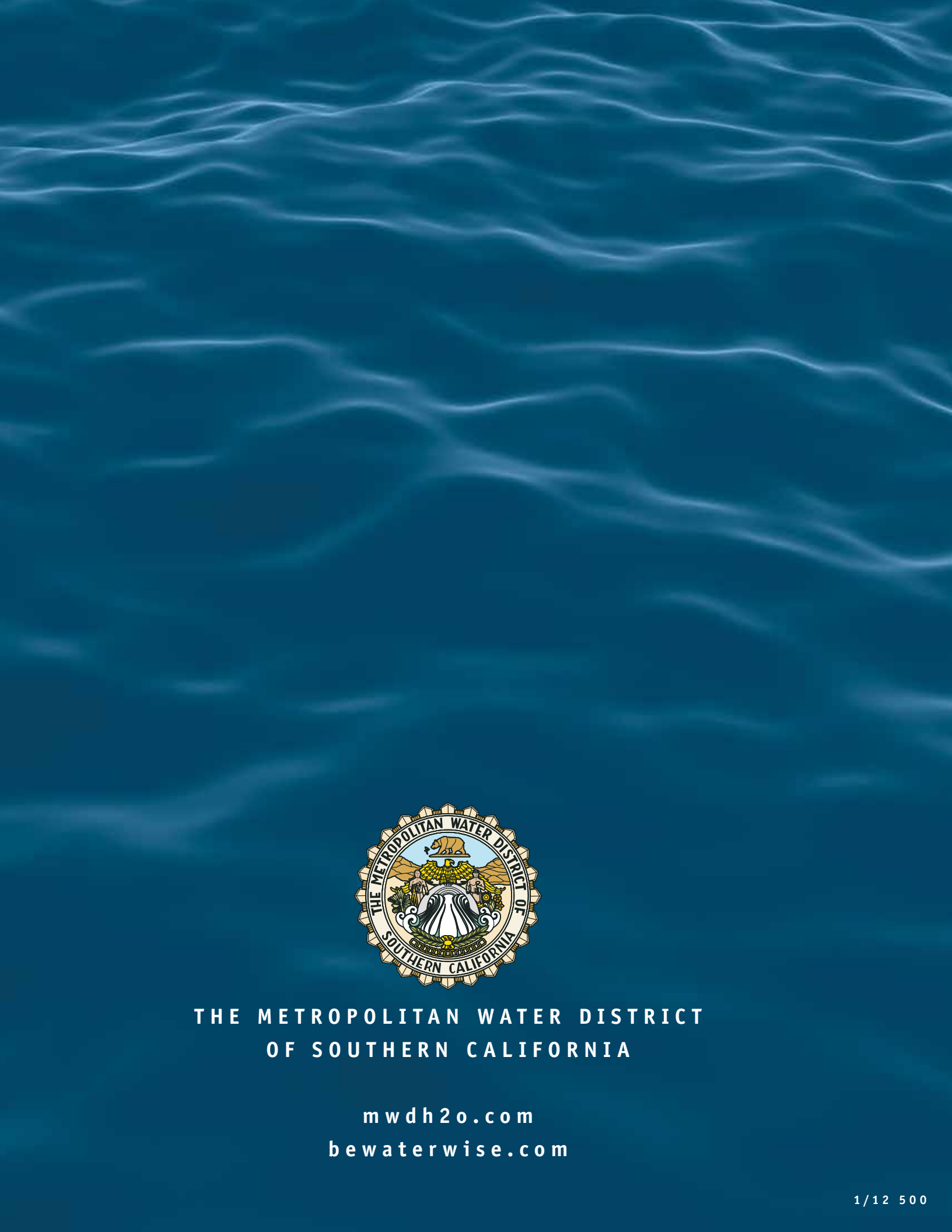
Joined Metropolitan November 15, 1950

Joined Metropolitan February 27, 1931

Joined Metropolitan March 27, 1963

Joined Metropolitan July 23, 1948

Joined Metropolitan November 12, 1954



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

mwdh2o.com
bewaterwise.com

1/12 500

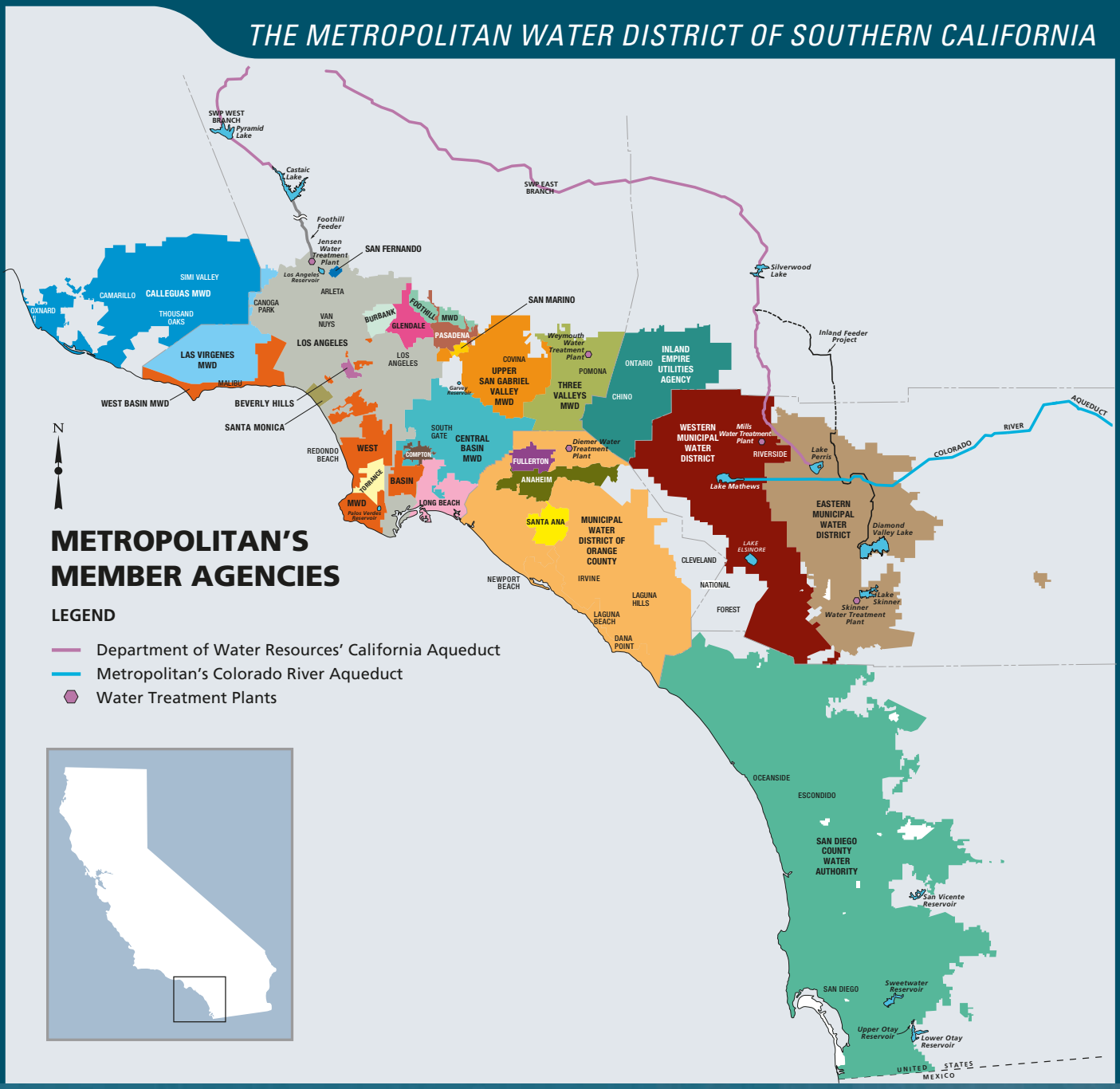
THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Annual Progress Report to the California State Legislature

Achievements in Conservation, Recycling and Groundwater Recharge

February 2013

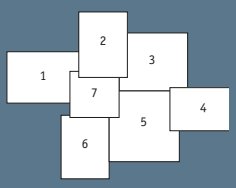
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA



METROPOLITAN'S MEMBER AGENCIES

LEGEND

- Department of Water Resources' California Aqueduct
- Metropolitan's Colorado River Aqueduct
- Water Treatment Plants



Pictured on the cover:
1) Diamond Valley Lake is the Southland's largest storage reservoir, designed to provide six months of emergency supply; 2) each year Metropolitan tests its water for almost 400 constituents and performs nearly 250,000 water quality tests; 3) Metropolitan owns and operates five water treatment plants among the largest 10 in the world; 4) Metropolitan and its member agencies provide incentives to upgrade landscape with more efficient irrigation equipment like the multi-stream sprinkler head; 5) Metropolitan water quality meets or exceeds standards required to safeguard public health; 6) high-efficiency clothes washers are among the devices eligible for rebates under the SoCal Water$mart program; 7) bewaterwise.com® is an important tool for promoting conservation education and awareness.

TABLE OF CONTENTS

The Metropolitan Water District of Southern California was established in 1928 under an act of the state Legislature to provide supplemental water supplies to its member agencies in Southern California. Metropolitan is a public agency and a regional water wholesaler. It is governed by a 37-member board of directors representing 26 member agencies that purchase some or all of their water from Metropolitan and serve 19 million people across six Southern California counties.

The mission of Metropolitan is to provide its 5,200-square-mile service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Metropolitan draws supplies from the Colorado River through the Colorado River Aqueduct, which it owns and operates; from Northern California via the State Water Project; and from local programs and transfer arrangements. An increasing percentage of Southern California's water supply comes from conservation, water recycling and recovered groundwater, which are further described in this report.

For more information about this report contact Kathy Cole, Metropolitan's
Executive Legislative Representative, at (916) 650-2642 or kcole@mwdh2o.com.

Picture Reliability

Nearly 19 million people living in Southern California depend on the Metropolitan Water District of Southern California to continue making investments in projects, programs and facilities that help ensure a high quality, reliable water supply. Metropolitan's collaborative regional approach to water planning, including strong support for local projects, has long benefited residents throughout its service area. Our continued collaboration on these important issues will help ensure a safe and reliable regional water system today and in the future. The text of this report details some of the achievements that support reliability, including conservation, recycling and groundwater management.

A "picture" of reliability is depicted in the photographs that line the lower portion of each page of this report. Photo identifications are listed on the back page of this report.

Overview

The Metropolitan Water District of Southern California was formed more than 80 years ago to bring reliable water supplies to Southern California. Since 1928, Metropolitan and its member agencies have funded, built and operated a water supply system that serves the Southland's $1 trillion economy. Southern California's growth and continued economic development depend in part on Metropolitan's strategic regional investments in infrastructure and prudent management of water resources.

Metropolitan's infrastructure is aging, with about 40 percent of the district's imported water system more than 60 years old. Metropolitan, however, is taking proactive steps to ensure continued reliability by investing in and targeting improvements, repairs and upgrades throughout its system. Over the next two years, Metropolitan has budgeted more than $550 million to replace and refurbish aging infrastructure and improve water quality.

By the end of the two year budget cycle ending June 30, 2014, Metropolitan will have spent $40 million to fund water conservation programs and $66 million to provide incentives for water recycling and groundwater recovery projects administered by local water agencies. Metropolitan, along with several other water districts across the state, is investing nearly $250 million to help develop the Bay Delta Conservation Plan. The BDCP will secure a long-term fix in the Sacramento-San Joaquin Delta to ensure reliable water supplies for about 25 million Californians while also making critical ecosystem improvements in the estuary.

These commitments are part of a larger blueprint for reliability, detailed in Metropolitan's key water supply planning and reporting documents – the Integrated Water Resources Plan (IRP) and the Regional Urban Water Management Plan (RUWMP). Updated in 2010, the IRP represents Metropolitan's long-term water plan to protect the region from future supply shortages. The IRP emphasizes water-use efficiency through conservation and local resource development. The plan includes guiding principles as well as resource targets and triggers for adaptive management options to achieve regional water supply reliability for the next 25 years.

IN ACCORDANCE WITH California Senate Bill 60 (SB60) enacted in 1999, Metropolitan prepares this report annually. SB60 states "it is the intent of the Legislature that The Metropolitan Water District of Southern California. . . place increased emphasis on sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures." To coincide with the preparation of the report, the MWD Act requires Metropolitan to "hold an annual public hearing during which the district shall review its urban water management plan for adequacy in achieving an increased emphasis on cost-effective conservation, recycling and groundwater recharge." While the Regional Urban Water Management Plan is prepared and updated every five years according to state requirements, Metropolitan holds its annual public hearing in December to share progress on meeting the plan objectives over the past fiscal year as detailed in this report, and to receive public comment.

The RUWMP describes and evaluates sources of supply, efficient uses, water recycling and demand management activities. Metropolitan and other urban water suppliers are required by the Urban Water Management Planning Act to submit Urban Water Management Plans to the state Department of Water Resources every five years to be eligible for state grants, loans and drought assistance. Wholesale agencies, such as Metropolitan, include in their Urban Water Management Plans an assessment of present and proposed future measures, programs and policies that would help achieve water-use reduction targets. The information included in Metropolitan's 2010 RUWMP is a comprehensive overview of planning projections of supply capability and demand developed through the IRP process and serves as an important reference point for the region's water conditions.

This SB60 report is submitted annually to the state Legislature to highlight Metropolitan's consistent emphasis on sustainable, environmentally sound and cost-effective water conservation, recycling, groundwater storage and replenishment measures. It provides an annual snapshot of program goals and achievements outlined in the more comprehensive IRP and RUWMP documents. There will be references in this report to acre-feet of water. An acre-foot of water is about 326,000 gallons and supplies five to seven people in Southern California for one year.

All of Metropolitan's planning and reporting documents contain a common goal – helping the region achieve water supply reliability. The combined achievements of conservation and recycling play a key role in driving down water use and keeping the state mandate on target for reducing per capita water use 20 percent by the year 2020.

The region's achievements in water-use efficiency extend to a water supply portfolio that also includes imported water resources and local resource development. To maintain reliability, Metropolitan recognizes the importance of a balanced approach to resource management. Imported supply distribution systems are protected through systematic infrastructure maintenance, retrofits and replacement programs. Local supplies are sought and developed in collaboration with member agencies and include incentives for water recycling, groundwater recovery and storage programs. Water-use efficiency programs promote conservation in residential and commercial sectors to offset growing demands and reduce environmental impacts.

Metropolitan continues to build on a 20-year investment in conservation that has provided more than $322 million in incentive programs to reduce residential and commercial water use. Metropolitan's region-wide residential conservation effort, operated under Metropolitan's SoCal Water$mart program, issued about 41,000 new rebates in fiscal year 2011/12. Metropolitan expects to save about 1,520 acre-feet of water annually through residential conservation. Metropolitan also provided $2.2 million to its member agencies for locally-administered programs such as turf removal and water-efficient toilet distributions, which resulted in projected annual water savings of about 1,400 acre-feet. Other residential rebates encouraged the use and retail market development of high-efficiency clothes washers, multi-stream rotating nozzles for sprinklers and weather-based irrigation controllers.

Commercial conservation introduced a new program called the Water Savings Incentive Program (WSIP). This regional pay-for-performance program targets large water users in the agricultural, industrial, commercial and landscape sectors. It offers significant incentives up to 50 percent of a qualifying project's cost for reduced water use or improved

efficiency. Contracts initiated under the former Water Savings Performance Program will be managed as a part of the new WSIP. Those projects are expected to save about 310 acre-feet of water annually.

Metropolitan's regional commercial rebate program, Save Water Save A Buck Program (Save A Buck), provides rebates for water-saving plumbing fixtures, landscape, food service, cleaning and medical equipment and HVAC (heating, ventilating, air conditioning). Save A Buck provided about 2,900 new rebates with projected savings of 1,950 acre-feet annually. Member and retail water agencies also implemented specialized water conservation programs for commercial sectors with incentive funding from Metropolitan and projected annual savings of an additional 3,070 acre-feet.

Metropolitan encourages research and development for innovative ways to conserve water. The Innovative Conservation Program, managed in cooperation with the federal Bureau of Reclamation, selected eight projects in 2011 that will collectively receive $250,000 in funding assistance.

In addition to its investments in conservation and water-use efficiency, Metropolitan supports the development of local resources through its Local Resources Program (LRP), offering financial incentives designed to expand water recycling and groundwater recovery. In fiscal year 2011/12, Metropolitan's funding assistance supported the production of about 171,000 acre-feet of recycled water for non-potable and indirect potable uses and about 40,000 acre-feet of recovered groundwater for municipal water use. These achievements are further enhanced by local water agencies that produced recycled water and recovered groundwater without Metropolitan funding.

With improved water supply conditions the last few years, Metropolitan has been able to refill its local groundwater conjunctive use storage accounts, with more than 66,000 acre-feet in storage as of July 1, 2012. The dry-year conjunctive use program stores surplus imported supplies within Metropolitan's service area to maintain reliability during dry, drought and emergency conditions. Metropolitan has nine groundwater storage accounts with a total capacity of about 212,000 acre-feet.

Metropolitan is involved in several statewide efforts for watershed management and environmental restoration. Many of these activities are focused on the Sacramento-San Joaquin Delta – the hub of the state's water system. Metropolitan has been actively involved in a collaboration of state, federal and local agencies as well as environmental organizations to craft the Bay Delta Conservation Plan. The BDCP is designed to provide for the restoration of Delta ecosystems as well as water supply reliability for the state. This fiscal year saw the release of initial BDCP environmental review documents. The public comment period closed in fall 2012 and project approval is expected by mid-2013.

Metropolitan's planning model is adaptive. Responding to changing conditions – such as population, weather, aging infrastructure and environmental sensitivities – requires Metropolitan to constantly reassess the water supply portfolio. Reliability is predicated on sound investment and adaptability – two qualities that have defined Metropolitan for more than 80 years.

Achievements Scorecard Metropolitan-Assisted Programs	
Conservation	
FY 2011/12 New Water Saved From Conservation Credits Program	8,300 acre-feet
FY 2011/12 Water Saved From New & Existing Conservation Credits Program[1]	156,000 acre-feet
Cumulative Water Saved From Conservation Credits Program[2]	1,720,000 acre-feet
FY 2011/12 Metropolitan Conservation Investment[3]	$12.9 million
FY 2011/12 Member Agency Investment[4]	$9.2 million
Cumulative Conservation Investment (excluding funding by member agencies)	$322 million
Total FY 2011/12 Conservation Investment[5]	$13.4 million
Recycled Water[6]	
FY 2011/12 Production	171,000 acre-feet
FY 2011/12 Investment	$27.5 million
Cumulative Production	1,679,000 acre-feet
Cumulative Investment	$302 million
Groundwater Recovery[6]	
FY 2011/12 Production	40,000 acre-feet
FY 2011/12 Investment	$5.9 million
Cumulative Production	594,000 acre-feet
Cumulative Investment	$111 million
Conjunctive Use Program[7]	
Metropolitan Cumulative Investment	$26.5 million
Proposition 13 Grant Funds Administered by Metropolitan	$45.0 million
Water Stored Since Program Inception through September 2012	271,000 acre-feet
Water Extracted Since Program Inception through September 2012[7]	206,000 acre-feet
Groundwater Replenishment[8]	
Cumulative Investment through September 2012	$347 million
Cumulative Replenishment Delivery through September 2012	3.2 million acre-feet

Footnotes:

Numbers in this report are based on best available information during the production of this report and subject to revision due to accounting reconciliation.

1. This includes water savings initially achieved through Metropolitan's Conservation Credits Program and subsequently maintained through plumbing codes and includes savings from devices installed through fiscal year 2011/12. It also includes savings from member agency-funded programs administered through Metropolitan's region-wide residential and commercial programs.
2. This is cumulative water savings since 1991 and includes water savings initially achieved through Metropolitan's Conservation Credits Program and subsequently maintained through plumbing codes.
3. Conservation investment includes administrative fees for contracted program vendors.

Footnotes continue next page

Reader's Guide to the Achievements Scorecard

Conservation

For the purpose of this report, conservation is water saved directly as a result of incentives from Metropolitan's Active Conservation Credits Program and other water agencies. The program, established in 1991, provides rebates for device retrofits, process improvements, landscape efficiency improvements and other efficiency measures utilized in commercial, industrial and residential sectors. The Achievements Scorecard does not reflect additional water conserved as a result of plumbing codes and other laws governing appliances and products' efficiency standards.

Recycled Water

Municipal water is recycled and treated to a quality level allowed for specific uses such as landscape irrigation, groundwater recharge and seawater intrusion barriers. Metropolitan provides financial assistance to produce recycled water through its Local Resources Program, which began in 1982.

Groundwater Recovery

Degraded groundwater is recovered for potable use through treatment techniques that reduce high salt or other contaminant levels. Financial assistance for groundwater recovery has been provided since 1991 through Metropolitan's Local Resources Program.

Conjunctive Use Program

Metropolitan works in partnership with its member agencies and groundwater basin managers to store surplus imported water in local aquifers for future withdrawal.

Groundwater Replenishment

When supply and system conditions are favorable, Metropolitan can deliver water supplies to its member agencies to replenish local groundwater supplies.

4. In addition to Metropolitan's Conservation Credits Program, member agencies and retailers also implemented local water conservation programs within their respective service areas. Member agency investment figures include rebate funding beyond rebates already provided by Metropolitan's Conservation Credits Program.
5. Total conservation investment includes the Conservation Credits Program along with education and advertising campaigns to promote conservation.
6. Figures reflect actual and estimated deliveries for all Metropolitan-assisted projects and payments reported through June 2012; cumulative production and investment reflect accounting reconciliation as data become available.
7. Construction of the conjunctive use storage programs was completed in 2008. Proposition 13 refers to Chapter 9 of the Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Bond Act of 2000. Water extracted since program inception includes losses.
8. Figure is cumulative since 1990. Metropolitan's replenishment rate was discontinued effective January 1, 2013. Thereafter, replenishment deliveries will be at full service rates. Figure includes long-term reservoir replenishment storage.

Conservation

Metropolitan and its member agencies have long been leaders in water conservation, having invested more than $322 million in the last 20 years. Conservation is a core element of Metropolitan's long-term water management strategy. This strategy places equal weight on local and imported resource development. Conservation is considered a local supply investment similar to water recycling and storage.

Long Term Conservation Plan

In 2011, Metropolitan's board adopted a Long Term Conservation Plan (LTCP), developed in collaboration with its member agencies, retailers and other stakeholders, to provide a framework for achieving water-use efficiency goals including the 20 X 2020 mandate. The goals of the LTCP are: 1) achieve the conservation target in the 2010 IRP Update 2) pursue innovation that will advance water-use efficiency and conservation and 3) transform the public's perception of the value of water within the region. The LTCP identifies five key strategies for achieving Metropolitan's conservation target:

- Use catalysts for market transformation
- Encourage action through outreach and education
- Develop regional technical capability
- Build strategic alliances
- Advance water efficiency standards

To encourage water-use efficiency, Metropolitan offers financial incentives such as rebates, provides outreach and education programs and supports new plumbing and compliance codes that facilitate water savings. In fiscal year 2011/12, savings from Metropolitan's Conservation Credits Program was 8,340 acre-feet. In addition to the Conservation Credits Program, the region saved approximately 772,000 acre-feet of water from code-based and price-based conservation. Code-based and price-based conservation consist of demand reductions attributable to conservation-oriented plumbing codes and usage reductions resulting from increases in the price of water.

Fiscal Year 2011/12 Program Highlights

- Issued rebates valued at $12.9 million
- Increased Metropolitan's turf removal rebates by nearly 40 percent with the help of state and federal funding grants
- Partnered with the federal Bureau of Reclamation and hosted a one-day research symposium on water-use efficiency

Conservation Programs

Metropolitan's Conservation Credits Program focuses on two main areas: residential and commercial water use.

Residential Conservation Programs

Metropolitan's residential conservation programs consist of two targeted efforts: SoCal Water$mart for residential customers and programs implemented by member agencies. Metropolitan projects to save about 2,950 acre-feet of water annually with rebates issued through the residential conservation programs in fiscal year 2011/12.

SoCal Water$mart

Launched in 2008, SoCal Water$mart provides rebates to residential customers to reduce the purchase cost of water-efficient products. Current program rebates include high-efficiency clothes washers, multi-stream rotary sprinkler nozzles and weather-based irrigation controllers. Recent refinements, such as online applications and automatic email notifications to customers, have streamlined operations resulting in faster processing times and increased customer satisfaction, while enhancing budget controls. Metropolitan projects to save about 1,520 acre-feet of water annually from 41,000 rebates issued through the region-wide residential program in fiscal year 2011/12.

Member Agency Residential Programs

Metropolitan also provides funding to member agencies for locally-administered water conservation programs. Member agencies receive Metropolitan incentives for qualified water-saving activities. Qualifying residential projects have included turf removal projects, toilet distribution and replacement programs, direct-installation clothes washer programs and residential water audits. Metropolitan projects the member agency residential programs to save about 1,430 acre-feet of water annually with Metropolitan funding of about $2.2 million in fiscal year 2011/12.

Popular Rebates

Turf removal

Aided by a Proposition 50 grant from the state Department of Water Resources and grant funding from the federal Bureau of Reclamation, Metropolitan implemented a turf removal program that provides residential and commercial customers financial incentives to remove their lawn and replace it with lower water-use plants or synthetic turf. Metropolitan projects to save about 520 acre-feet of water annually from 3.9 million square-feet of turf removed in fiscal year 2011/12.

SoCal Water$mart

High-efficiency clothes washers

High-efficiency clothes washers (HECW) continue to be the most popular residential product in Metropolitan's rebate program. The eligibility requirement for HECWs is currently set at water factor 4.0, which saves more than 10,000 gallons per washer per year over a conventional top loading clothes washer. The water factor is the measure of the amount of water used to wash a standard load of laundry. Metropolitan projects HECW rebates issued in fiscal year 2011/12 to save about 1,190 acre-feet of water annually. Metropolitan supplements its HECW rebate using state or federal grants as they are available.

High-efficiency toilets

High-efficiency toilets (HET) use approximately 20 percent less water per flush than the conventional ultra-low-flush toilets required by law. Metropolitan uses the federal Environmental Protection Agency's WaterSense list of HET models to qualify for rebates. Metropolitan projects savings of about 1,260 acre-feet of water annually from HET rebates issued for both residential and commercial customers in fiscal year 2011/12.

Irrigation evaluations and residential surveys

Metropolitan provides funding to member agencies that offer irrigation evaluations and indoor water surveys to their customers. Commercial and residential irrigation evaluations produce a recommended watering schedule along with suggestions for system efficiency improvements. Indoor residential surveys provide customers with information on how to identify leaks as well as suggestions for water-saving hardware for the home. Metropolitan projects savings of about 430 acre-feet of water annually from residential evaluations and surveys conducted in fiscal year 2011/12.

Multi-stream rotating nozzles for sprinklers

Pop-up spray heads with multi-stream, multi-trajectory rotating nozzles increase watering efficiency by improving distribution uniformity. Metropolitan provides incentives to residential and commercial customers to replace conventional fan spray nozzles with these more efficient models. FreeNozzles.com, an innovative online program that utilizes Metropolitan's rebates to provide vouchers for free multi-stream rotating nozzles, was established by Metropolitan's member agencies and has increased popularity of these water-efficient products. Metropolitan projects savings of 1,840 acre-feet of water annually from new rebates provided for nozzle replacements in fiscal year 2011/12.

Weather-based irrigation controllers

Weather-based irrigation controllers (WBICs) automatically adjust irrigation schedules based on a number of factors including rain, temperature, plant type, sunlight and soil type. Metropolitan provides incentives to residential and commercial customers to replace traditional irrigation controllers with WBICs. Metropolitan projects savings of 660 acre-feet of water annually from new rebates issued for WBICs in fiscal year 2011/12.

Commercial Conservation Programs

Metropolitan's commercial conservation programs provide rebates to businesses and institutions for water-saving device replacements throughout Southern California. The programs are comprised of Metropolitan's Save A Buck Program, Water Savings Incentive Program, the Agricultural Conservation Program and member agency commercial programs. Metropolitan projects savings of about 5,390 acre-feet of water annually from new rebates issued by commercial conservation programs in fiscal year 2011/12.

Save Water, Save A Buck Program

The majority of commercial conservation activity comes from Metropolitan's regional Save A Buck Program which provides rebates for water-saving plumbing fixtures, landscaping equipment, food service equipment, cleaning equipment, HVAC (heating, ventilating, air conditioning) and medical equipment. This program also targets multi-family dwellings for retrofits using high-efficiency washers and toilets, along with multi-stream rotating nozzles for pop-up spray heads. Metropolitan projects savings of about 1,950 acre-feet annually from nearly 2,900 new rebates issued by the Save A Buck program in fiscal year 2011/12.

Member Agency Commercial Programs

Member and retail water agencies also implement water conservation programs for commercial sectors using Metropolitan incentives. Projects target specific local businesses, with many also receiving assistance from state or federal grant programs. Qualifying commercial projects have included turf removal, high-efficiency toilet direct installation and multi-stream rotating nozzle distribution. Member and retail water agencies also implement specialized water conservation programs designed for commercial sectors. Metropolitan projects savings of about 3,070 acre-feet of water annually from use of Metropolitan incentives in fiscal year 2011/12.

Water Savings Incentive Program

In May 2012, Metropolitan's board approved the Water Savings Incentive Program. This regional pay-for-performance program is a collaborative effort among Metropolitan, its 26 member agencies and large water-using customers to improve water-use efficiency in the commercial, industrial, institutional, agricultural and large landscape sectors. Contracts initiated under the former Water Savings Performance Program will be managed as a part of the new WSIP. In fiscal year 2011/12, Metropolitan projects water savings of 310 acre-feet annually. Incentives are paid based on the amount of water saved as a result of the projects. Qualifying projects include:

- Changing an industrial process water system to capture, treat and reuse process wastewater
- Capturing condensation to supplement cooling tower water supply
- Installing new, water-efficient equipment in commercial kitchens and laundry facilities
- Replacing irrigated turf with a water-efficient California Friendly® landscapes
- Changing overhead spray sprinklers to a drip systems
- Installing valves and pumps to improve agricultural irrigation efficiency

Agricultural Conservation Program

The Agricultural Conservation Program was created to provide financial incentives to growers who perform improvements to irrigation systems that increase their water-use efficiency. Incentives are based on calculated water savings generated from the increased irrigation system efficiency, up to half of the cost of the newly installed equipment. Metropolitan projects an annual water savings of about 60 acre-feet from financial incentives provided under the Agricultural Conservation Program in fiscal year 2011/12.

Examples of commercial sector water-saving devices

The following is a list of current and past water-saving fixtures and equipment rebated through Metropolitan's commercial conservation programs:

- Multi-stream rotating nozzles
- pH cooling tower controllers
- Synthetic turf
- Turf removal
- Ultra-low-flush urinals
- Water brooms
- Weather-based irrigation controllers
- Zero water urinal
- Connectionless food steamer
- Cooling tower conductivity meter
- Dry vacuum pump
- High-efficiency toilet
- High-efficiency flushometer toilet
- High-efficiency urinal
- In-stem flow regulators
- Laminar flow restrictors
- Large rotors - high-efficiency nozzle

Research and Development

Innovative Conservation Program

Metropolitan encourages research and development of new and creative ways to conserve water. Metropolitan's Innovative Conservation Program (ICP) is a competitive grant program that evaluates water savings and reliability of new water-savings devices, technologies and strategies. Administered in cooperation with the federal Bureau of Reclamation, approximately $250,000 of funding is available biennially for research. Eight projects were selected in 2011, including a return on investment calculator, school irrigation audit tools, plant selector applications, graywater irrigation treatment systems, real-time water use evaluations and an economic study on demand elasticity and revenue stability.

Water-Use Efficiency Research Symposium

In May 2012, Metropolitan worked with the federal Bureau of Reclamation to host a one-day research symposium on water-use efficiency. The symposium featured presentations on research projects funded through the ICP and delivering new technologies to market for entrepreneurs and innovators. Participants networked and shared strategies for innovative water savings.

Communications and Outreach

Metropolitan sponsored conservation-related educational outreach efforts and programs throughout its service area during fiscal year 2011/12. Online and social media included Google search advertising focused on water conservation and water-use efficiency.

Metropolitan's bewaterwise.com® website continues to be an important tool in educating the public, attracting more than 400,000 unique visitors in fiscal year 2011/12. The site is also available in Spanish.

Community Events

Metropolitan continues to maintain a strong presence in community water resource education and conservation awareness activities and events. Metropolitan cosponsored numerous educational events throughout its six-county service area.

Education Programs

During fiscal year 2011/12, Metropolitan completed the pilot testing and member agency outreach efforts related to the curriculum supplement, Conservation Connection: Water and Energy in Southern California. This curriculum was provided to middle schools in fall 2012. Metropolitan also selected 15 proposals from local colleges during the third funding cycle of the Southern California World Water Forum College Grant Program following an extensive and formal review process. The grants will support the research, development and completion of prototype projects (locally or globally-focused) emphasizing the development of unique water conservation technologies, communication strategies and/or new water policy approaches to creating water-use efficiencies. Each selected college or university team project will receive a $10,000 grant. In addition to Metropolitan, funding sponsors include the federal Bureau of Reclamation and the County Sanitation Districts of Los Angeles County.

Metropolitan and its member agencies reinforce conservation messages through the distribution of educational materials and the organization of outreach activities and events for nearly 40,000 K-12 students and more than 200 new teachers throughout the service area. Other programs include: the 10th annual Solar Cup® boat race with 39 high school teams participating; the Diamond Valley Lake Education Program (now in its 18th year); and the 2012 "Water is Life" student art calendar program. Additionally, Metropolitan's Education Programs' website drew more than 11,000 unique visitors over the course of the fiscal year.

bewaterwise.com®

California Friendly® Landscape Online Training

During fiscal year, 2011/12 Metropolitan continued to provide online water-wise landscape training for professional landscapers and residential homeowners.

Community Partnering Program

The Community Partnering Program continued to support water-conservation and educational community projects, programs and events. CPP funding supports Metropolitan's overall mission and results in expanding the support of and collaboration with a variety of stakeholders, including: nonprofit and community organizations, public agencies, professional associations and educational institutions. These sponsorships emphasize water conservation, watershed education and other programs that support Metropolitan's overall water conservation efforts.

Participation in State and National Water Conservation Organizations

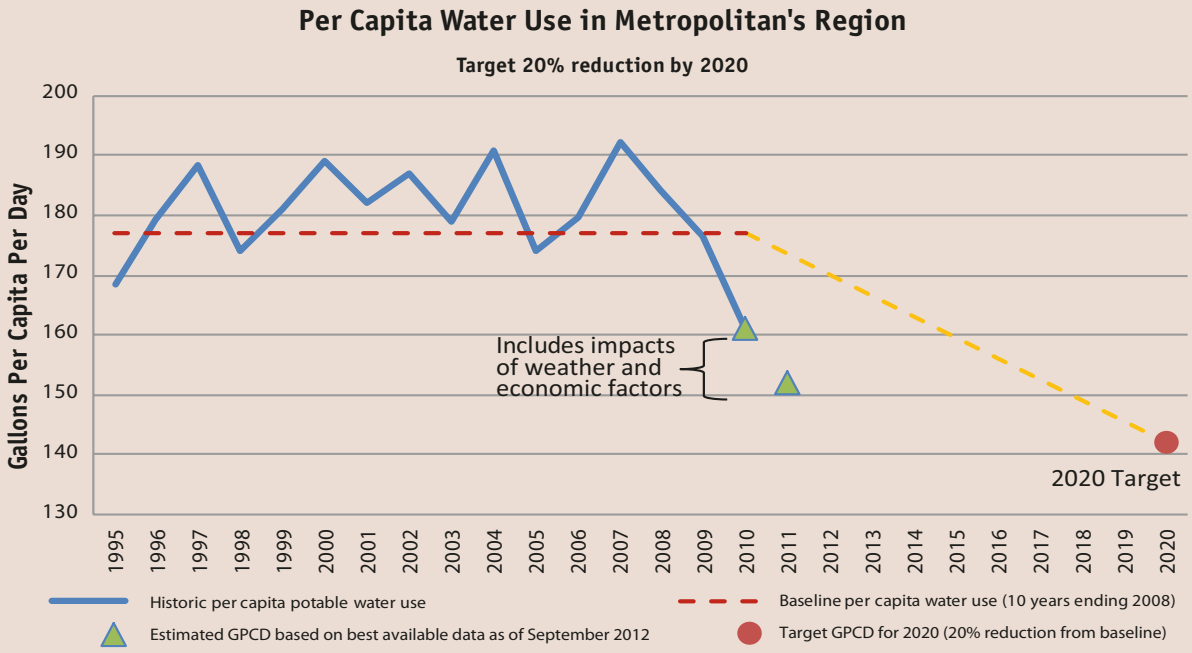
For more than 20 years, Metropolitan has been a member of the California Urban Water Conservation Council (CUWCC), which was created to increase efficient water use statewide through partnerships among urban water agencies, public interest organizations and private entities. CUWCC's goal is to integrate 14 urban water conservation Best Management Practices into the planning and management of California's water resources. Metropolitan was one of about 100 urban water agencies and environmental groups that signed the historic Memorandum of Understanding in 1991. Since then, Metropolitan has taken an active leadership role in CUWCC, participating in numerous initiatives including research, legislative and regulatory affairs, program implementation and joint studies.

At the national level, Metropolitan is a member of the Alliance for Water Efficiency, which is dedicated to the efficient and sustainable use of water. The organization serves as a national advocate for water-efficient products and programs and provides information and assistance on water conservation efforts. Key efforts also include advocacy, development of codes and standards, market transformation and training. It serves as a clearinghouse of information on water conservation efforts.

Water-Use Efficiency Strategy

Senate Bill X7-7 Water Conservation Act of 2009 (20x2020)

Metropolitan and the Natural Resources Defense Council cosponsored the Water Conservation Act of 2009 (SBX7-7), which targets a 20 percent reduction statewide in urban per capita water use by the year 2020. Metropolitan has long tracked per capita water use. The historic average per capita level in the service area since 1995 is presented in the graph below, along with the 2020 target of 142 gallons per capita per day (GPCD). The 2020 target is a 20 percent reduction of the calculated baseline per capita water use. The baseline per capita water use is 177 GPCD, which is the region-wide average per capita water use over the 10 years ending in 2008. The 2020 target will be pursued through a combination of conservation savings and increased use of recycled water. Water use for 2011 is estimated at 152 GPCD, which falls below the trend line needed to reach the 2020 target. The 2010 and 2011 GPCD are estimated using preliminary data.



Local Resources

Water recycling, groundwater recovery and groundwater storage are important elements in the region's diverse local resource portfolio and help bring greater water supply reliability to Southern California. Metropolitan provides financial incentives through its Local Resources Program (LRP) for the development and use of recycled water and recovered groundwater. Since the inception of the LRP in 1982, Metropolitan has invested more than $302 million (producing 1,679,000 acre-feet) in recycled water and $111 million (resulting in 594,000 acre-feet) in groundwater recovery. Metropolitan has partnered with member agencies on 64 recycling projects and 21 groundwater recovery projects.

Water Recycling and Groundwater Recovery

In fiscal year 2011/12, Metropolitan funding supported the production of about 171,000 acre-feet of recycled water for non-potable and indirect potable uses and about 40,000 acre-feet of recovered groundwater for municipal use. In addition, another estimated 125,000 acre-feet of recycled water and 52,000 acre-feet of recovered groundwater was produced by local agencies through other funding sources. Figures 1 and 2 (opposite page) illustrate total recycled water and groundwater recovery production in Metropolitan's service area, including local agency funded projects. Recently, production has declined reflecting decreased retail demand. Retail demand has been affected by a number of circumstances including the economic recession, relatively mild weather and responses to statewide drought conditions.

Fiscal Year 2011/12 LRP Highlights

Metropolitan entered into agreements with local agencies for seven recycled water projects, which collectively will produce about 24,300 acre-feet of recycled water when fully developed.

Los Angeles Department of Water and Power has four projects that will collectively produce 1,000 acre-feet per year of recycled water for landscape irrigation and 9,300 acre-feet per year of recycled water for industrial uses. Projects include North Atwater and Los Feliz Water Recycling Projects, Griffith Park South Water Recycling Project, Hansen Dam Golf Course Water Recycling Project and Harbor Industrial Recycled Water Project.

Eastern Municipal Water District's Recycled Water Expansion Project started operation and will produce up to 5,000 acre-feet per year of recycled water for landscape irrigation.

West Basin Municipal Water District's Water Recycling Program Phase V Project will produce up to 8,000 acre feet per year of recycled water for its seawater intrusion barrier.

City of San Clemente's San Clemente Recycled Water Expansion Project will produce up to 1,000 acre-feet per year of recycled water for landscape irrigation.

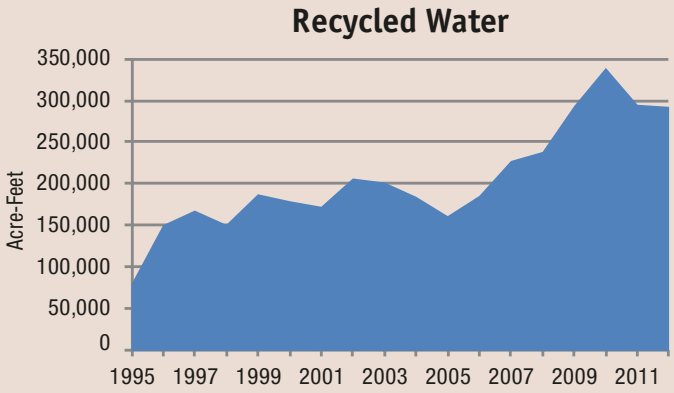


Figure 1

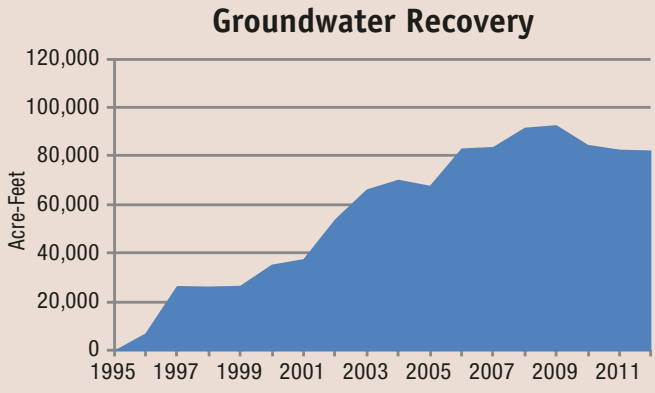


Figure 2

Groundwater Management

Conjunctive Use

Since the 1950s, Metropolitan's local water management strategy has included conjunctive use of surface and groundwater resources. Conjunctive use refers to the practice of storing imported surface water in groundwater basins during years when there is a surplus of supply for use in times of drought or other supply interruptions. Metropolitan currently has nine storage projects constructed in the 2000s specifically to increase dry-year supplies. These nine projects have about 212,000 acre-feet of storage capacity and can withdraw up to 70,000 acre-feet per year during shortage years. Since the program's inception, Metropolitan has stored more than 200,000 acre-feet in groundwater basins. During the 2007-2009 drought, Metropolitan extracted more than 140,000 acre-feet to meet demands. With improved water supply conditions beginning in fiscal year 2010/11, Metropolitan began to refill these accounts. As of July 1, 2012, more than 66,000 acre-feet are stored in nine conjunctive use accounts.

Watershed Initiatives

Metropolitan is active on planning boards and organizations formed to improve watershed management and restoration. Metropolitan works with stakeholders in the Sacramento-San Joaquin Delta watershed and participates in the Greater Los Angeles County Integrated Regional Water Management Plan, the Council for Watershed Health and the Southern California Water Committee.

Integrated Regional Water Management Planning

Integrated Regional Water Management (IRWM) is a state initiative that encourages collaboration among multiple agencies, stakeholders, individuals and groups within a region to manage all aspects of water resources. IRWM groups typically consist of public agencies with water or wastewater authorities, cities, counties, special districts and non-governmental organizations that address a broad range of issues. These issues include growing water demands; water supply reliability; water quality; stormwater management; open space and habitat; and project financing. There are currently seven IRWM groups within Metropolitan's service area, and all the member agencies participate in one or more IRWM groups. Metropolitan continues to participate in the Greater Los Angeles County Region Leadership Committee as its surface water management area representative. Metropolitan also provides data, reviews and participates in technical work groups of other IRWM groups in the service area when requested.

Stormwater Capture

Metropolitan's IRP identifies expanded stormwater capture as a potential resource for increased local water supply development. Existing regional stormwater capture efforts recharge about 477,000 acre-feet per year to groundwater basins within the Metropolitan service area. Studies have estimated about 1 million acre-feet per year in the region that is not captured. The IRP also identifies issues and challenges needing additional study and evaluation to answer how to cost effectively increase the capture of stormwater. These include:

- Correlations between stormwater capture, groundwater recharge and changes in groundwater production
- Costs and benefits associated with distributed and regional stormwater capture and recharge facilities
- Partnering with stormwater, flood control, water supply, water quality and groundwater management groups

Southern California Water Committee Stormwater Task Force

In January 2011, the Southern California Water Committee formed a Stormwater Task Force to bring together flood control, water supply, groundwater, water quality and environmental interests from throughout Southern California to explore common issues. Metropolitan supported the Southern California Water Committee in the formation of the task force, became a charter member and participated in its work to further stormwater as a water supply resource. The white paper - Stormwater Capture: Opportunities to Increase Water Supplies in Southern California - was published in 2012. The paper examines policies, goals and plans related to integrated stormwater management including opportunities and constraints for increased stormwater capture. Following the release of the white paper, a workshop was held in June 2012 to facilitate discussion on a range of topics including:

- Value of stormwater to local and regional water supply
- Quantification of the range of benefits achieved with stormwater capture and use
- Opportunities for partnerships among federal, state and local entities
- Funding strategies inclusive of state and federal grants, multi-benefit partnerships and stormwater fees

Council for Watershed Health

Metropolitan has been partnering with the Council for Watershed Health (CWH) since 2000 in various research studies and educational outreach efforts related to improving water supply reliability, water quality and promotion of water-use efficiency. CWH functions as a forum for coordination of multi-stakeholder watershed protection, planning and management activities. Currently CWH has four programs: urban stormwater, sustainable landscape, watershed coordination and watershed monitoring. Metropolitan provides staffing support to the CWH sustainable landscape program, which focuses on California Friendly® landscaping and promoting water conservation ethics. In addition, Metropolitan has been active in technical project oversight groups conducting research under the urban stormwater program. These groups investigate water supply potential and water quality gains from stormwater capture and management.

Sacramento-San Joaquin Delta Watershed

The Sacramento-San Joaquin Delta watershed is an important source of water supply delivered to Southern California through the State Water Project. A healthy Delta watershed ensures regional water supply reliability. Metropolitan continues to work with agencies and stakeholders throughout the Delta watershed to conduct studies and develop policies and programs to restore the ecosystem and protect Delta water quality for drinking water uses and aquatic wildlife.

Metropolitan participates in the Bay Delta Conservation Plan process, which is a voluntary collaboration of state, federal and local water agencies; state and federal fish and wildlife agencies; environmental organizations; and other interested parties. The purpose of the BDCP is to develop a long-term plan for restoration of Delta ecosystems and recovery of sensitive species and their habitats in a way that also will enhance water supply reliability.

The administrative drafts of the BDCP and associated environmental review documents were released in February 2012. The public comment period closed in fall 2012 and project approval is expected by mid-2013. The state and federal agencies are continuing to discuss the schedule.

Metropolitan continued to support the state Department of Water Resources' Municipal Water Quality Investigations (MWQI) Program, which implements water quality monitoring and special studies in the Delta and its tributaries. These investigations help to develop a better understanding of how constituents of concern appear in Delta waters and how drinking water quality is impacted. In fiscal year 2011/12, this program successfully installed a new monitoring station at O'Neill Forebay in Merced County and is collecting water quality data on a real-time basis. It also continued development of data and modeling tools in support of water quality forecasting activities.

Metropolitan continued to work on a multi-year effort with several agencies and stakeholder groups to develop a drinking water policy for surface waters in the Delta watershed. In February 2012, the final Central Valley Drinking Water Policy Workgroup Synthesis Report was completed. The report documents and integrates the results of several years of technical studies conducted by the workgroup to support the development of a drinking water policy. By July 2013, the Central Valley Regional Water Quality Control Board is scheduled to consider adoption of the drinking water policy. The policy report will contribute to an improved regulatory framework for drinking water quality protection activities in the Delta watershed.

Metropolitan also continued to work with the state and federal water contractors to support studies and regulatory decisions addressing the impacts of nutrients and ammonia in the Delta and the impact of nutrients on the Delta food web.

In addition to involvement in research efforts and studies, Metropolitan supported and financially assisted the Battle Creek Salmon and Steelhead Restoration Project, which began in fall 2010. This federal project is one of the largest cold-water fish restoration efforts in North America. It is being supported through federal, state and private funding. The project will open almost 50 miles of winter-, spring- and late fall-run salmon and steelhead habitat in the Sacramento River watershed. Construction is anticipated to be completed by 2015.

Ethics Office

The Ethics Office works collaboratively with Metropolitan's Board of Directors, general manager, general counsel and general auditor to promote the agency's core values: integrity, stewardship, diversity, leadership, open communication and teamwork.

In addition, the Ethics Office enforces ethics-related laws and policies, educates directors, officers and employees about what is expected of them in terms of ethical behavior and compliance and works with the board of directors and other departments to enhance Metropolitan's ethical culture.

In fiscal year 2011/12, Metropolitan's Ethics Office accomplished the following:

- Responded to 59 matters brought to the attention of the office, of which 56 percent were queries and 44 percent expressions of concern involving research (the breakdown of callers was 83 percent employees, 15 percent members of the public and 2 percent directors)
- Reviewed policies with the legal department and the general manager's office for possible revisions
- Developed Metropolitan-specific online AB 1234 ethics training for Metropolitan directors and officers
- Provided ethics education at field locations outside of the Los Angeles headquarters for employees and managers
- Distributed ethics posters to raise awareness
- Sent Operating Policy H-03 Ethics Policy to all employees for annual review
- Provided advice and support to the Metropolitan board, officers and employees as requested
- Provided ethics orientation to all new employees and managers

Excerpts From Public Hearing Comments

In accordance with section 130.5 of the MWD Act, Metropolitan held a public hearing on December 10, 2012 to receive comment on the draft annual report on achievements in conservation, recycling and groundwater recharge for fiscal year 2011/12. The following summaries are from comments received and submitted at the public hearing. Water-use efficiency programs for conservation and recycled water were the focus of reviewer comments and will be considered as Metropolitan develops the framework for regional long-term conservation and recycled water programs consistent with the 2010 Regional Urban Water Management Plan.

Marcus Castain, founder and CEO, Generation Water

Two programs that we are administering focus on sustainable landscape: the Rain Gardens Program in Los Angeles and the Inland Empire Landscape Transformation Program. The industry will talk about 30 percent savings opportunities, but we've seen more like 50 to 60 percent in the outdoor landscape. I know as a committee focusing on market transformation, right now this process feels clunky. Currently, we go through these long contracting periods and programs feel like they are government-driven agency programs, not market transformation programs where the private sector can really come in and in very transparent ways, take advantage of the rebates and incentives to more rapidly implement these water-saving technologies.

Robert Starr, strategic technologist, Toro Company

As water agencies take action to move the retail price of water in the direction of recovering its full cost, more of the public is taking notice and becoming more interested in learning what it takes to deliver quality water 24/7 directly to their homes and businesses for a fraction of the cost of bottled water. The implementation of tiered rates, water budgets based on landscape square footage, and the number of people living in a home will most likely continue to expand. Toro is in a unique position to be aware of multiple initiatives and programs that Metropolitan Water has implemented. Toro applauds MWD for its willingness to innovate, makes changes and act on feedback we see from irrigation program participants. Specifically, we think it is important to recognize MWD for implementing a strong public education awareness campaign based on scientific research and data. MWD has also implemented strong rebate programs aimed at accelerating adoption of new irrigation technologies by homeowners and commercial properties. These technologies include smart controllers, moisture sensors and high-efficiency nozzles for spray heads. As example of their continuous improvement is the unification of both residential and commercial rebate programs under the SoCalWaterSmart.com website. MWD has also taken initiative to establish other significant endeavors, such as the Community Partnering Program which helps provide funding for the community and educational programs, and the Southern California World Water Forum which provides grants for colleges. From the perspective of those of us who have the opportunity to work with MWD representatives, it is clear that MWD not only talks the talk, but walks the talk. Toro will continue to work hard to save water in California as well as the rest of the country. As such, we continue to advocate for climate-appropriate landscaping and the distinct value that healthy, well-maintained landscapes so uniquely provide.

Richard Atwater, executive director, Southern California Water Committee

I would like to focus on the efforts we have made working very collaboratively with Metropolitan, the six counties, all the member agencies, groundwater agencies throughout Southern California, public and private sector, on stormwater. Just to remind you, when you adopted in October of 2010 your Integrated Water Resources Plan, you recommended that we ought to get engaged in a regional effort to increase stormwater capture. Metropolitan's staff approached Southern California Water Committee over two years ago to have us take a leadership role in that. We began that process, and over the last two years we have held task force meetings and workshops in all six counties in Southern California leading to testimony with the legislature on Assemblymember Jose Solorio's historic bill on stormwater capture [AB 1750], workshops, papers, and presentations to all three Regional Boards on MS4 [Municipal Separate Storm Sewer Systems] compliance to encourage water supply. We appreciate the support and collaborative effort between Metropolitan and the Southern California Water Committee.

In addition to his oral comments, Mr. Atwater also provided written comments. Written comments are on file at Metropolitan and available upon request.

Jim Smith, division chief, Los Angeles County Parks and Recreation

We're here to report on some of our conservation programs sponsored by MWD. One of them, particularly in the last year, was the installation of smart irrigation controllers. This is the second phase. Phase 1 was done the previous year with some rebates. We were able to save in Phase 1 of our water conservation program about 219 million gallons of water last year. Parks and Rec, parks in general are the greatest users of potable water in L.A. County. About 80 percent of water used in the county is used to irrigate parks. So we have a myriad of programs going on, some turf reduction programs, stormwater management as parks are the only obvious open space left in the built-out urban core for water retention and groundwater recharge. We also have a very extensive recycled water program. We extend our operations in recycled water wherever hookups are available in collaboration with these different purveyors. We are now just culminating our Phase 2 of our smart controller program in which we did receive rebates from MWD. We actually have 116 controllers at 16 county parks under operation right now. This is not an easy task because current controllers in the ground sometimes use technology dating back to the '50s and '60s. Now, all of our new capital project refurbishments come online with smart controllers as part of the program.

Tracy Quinn, water policy analyst, Natural Resources Defense Council

I'd like to start by commending Metropolitan for continuing to support conservation efforts in Southern California. I'm very disappointed, however, to see the downward trend in both investments and water saved through conservation efforts over the past several years. Metropolitan can and should be doing more to promote conservation and efficiency in the region. Clearly, the traditional structure of incentive programs that Metropolitan has relied on in the past is insufficient to fully exploit the potential for expanded conservation savings. With Metropolitan's substantial 2020 water use reduction goals established in the 2011 Long Term Conservation Plan, the district needs to develop

and maintain more innovative conservation programs. Over the past few years, NRDC has been working with stakeholders to develop an alternative to Metropolitan's current offering of conservation programs that could increase the water savings attributed to conservation efforts while providing financial stability for the agency.

I would like to present some ideas and recommendations that we have. The first is expanding the range of entities that are eligible to participate in Metropolitan's conservation programs. The second is paying participants the full regional avoided cost of the water they saved, basing payments on measured and verified savings. And thirdly, utilizing a forward procurement process where water savings projects are selected and contracted at least two years in advance. Finally, it's time for Metropolitan to implement the commitment made in the Long Tern Conservation Plan to pay the full avoided regional cost of water saved through eligible conservation projects. The current value of $195 per acre foot is no longer supported by contemporary cost data and thus is increasingly arbitrary and obsolete.

On a positive note, we are very pleased to hear the progress being made with Metropolitan's new Water Savings Incentive Program, very pleased that the program allows a wide range of commercial, industrial, and institutional facilities to propose projects for consideration. This approach appears to have the potential to provide significant savings in the region and is clearly a step in the right direction.

In addition to her oral comments, Ms. Quinn also provided written comments. Written comments are on file at Metropolitan and available upon request.

Harvey De La Torre, principal water resource planner, Municipal Water District of Orange County

We would like to thank Metropolitan for their financial support through the regional rebate program. We feel it's the foundation for all the water agencies within the service area providing a consistent implementation of its programs and messaging to all its customers. The funding provided by Metropolitan is essential to the continued success of water-use efficiency efforts in the region, and it's also leveraged many times over by the member agencies and its retailers.

When it comes to regional input and collaboration, Metropolitan gives the member agencies opportunities to provide recommendations and modifications to improve the existing programs. The current effort which focuses on landscape irrigation, is the most significant area of all water use in the service area. We welcome its continued success and support.

Tim Brick, Metropolitan director, City of Pasadena

Metropolitan contributes to the Alliance for Water Efficiency, which on the national level is carrying forward the work of creating focus on water efficiency and conservation. I think it is another example of Metropolitan's leadership in a whole different area because much of this information, many of the developments that we are going to see in terms of conservation and the development of innovative technology, rate structures, and other issues, codes, and standards is going to be achieved at the national level.

Keith Lewinger, Vincent Mudd, Fern Steiner, and Doug Wilson, Metropolitan directors, San Diego County Water Authority (written comments submitted)

We request that this letter and all of its attachments be made a part of today's board record and included in Metropolitan Water District's Annual Report to the Legislature… We believe that the Draft Report continues to place too much emphasis on MWD subsidy programs rather than on the progress that has been made and the opportunity that exists to truly encourage and enhance conservation and local water supply development throughout Southern California.

The Water Authority recently compiled a list of projects which show the potential to develop up to 1.2 million acre-feet of local water supply in Southern California, including 415,000 acre-feet of planned projects and nearly 800,000 acre-feet of potential projects identified in MWD member agencies' Urban Water Management Plans. And yet, MWD has incorporated only 103,000 acre-feet of these supplies in its Regional Urban Water Management Plan (RUWMP) as an offset to demands on MWD. As an example, MWD has not included the Water Authority's seawater desalination project in Carlsbad – a fully permitted project that will produce up to 56,000 acre-feet of local water supply and which has now formally been approved by the Water Authority's board of directors.

We do not believe that MWD has done the analyses necessary – either in its 2010 Integrated Resources Plan (IRP) or 2010 RUWMP – to support and enhance water conservation, recycled water and groundwater recharge in Southern California. As member agencies begin to break even on Local Resources Program incentives (another subject that should have been included in the Report, but was not), it is increasingly clear that the payment of subsidies is not a sound basis upon which to encourage local water supply development. Local water supply development will continue to occur without the payment of subsidies as the price of MWD's imported water continues to escalate. Indeed, the greatest impediment to the development of local water supplies may very well be MWD's own perpetuation of the myth that these projects will only be developed if MWD subsidizes them. Conservation is also at an all-time high throughout the Southland as a result of the substantially higher water rates being charged by MWD.

We also believe it is noteworthy that the entire San Diego region has been disqualified from any participation in MWD LRP programs as a result of its litigation challenging MWD's water rates, even though MWD continues to collect more than $16 million annually from San Diego County water ratepayers to pay for these programs. The Legislature should be informed that the Water Authority is challenging MWD's actions and the constitutionality and legal propriety of its "Rate Structure Integrity" clause in the lawsuit now pending in San Francisco Superior Court. This is not merely an "internal contracting policy" associated with MWD programs (see January 18, 2012 letter from Jeff Kightlinger to the Water Authority's MWD Board Delegation attached hereto) – it is a matter of significant public policy relating to this report to the Legislature about the adequacy of MWD programs to achieve the intended purposes of SB 60. We request that this letter and all of its attachments be included in MWD's 2012 Report to the Legislature.

The letter in its entirety and its attachments are on file at Metropolitan and available upon request.

Jim Fryer, environmental scientist, Alliance for Water Efficiency (written comments submitted)

I congratulate MWD for a continued focus on water conservation, recycling, and groundwater recharge, particularly during these challenging economic times for many water utilities. It may be beneficial to identify the cost per acre-foot for the various water management options identified in the report. In particular, given the very attractive cost-effectiveness of the water conservation programs supported by MWD, noting this efficient use of capital would provide a very attractive public relations message. In addition, as a policy matter it would be beneficial to reconsider the relatively low cost ceiling for funding water conservation programs. Given the weather uncertainty introduced by the sector of climate change, maximizing the benefits of water conservation programs, to the extent they are cost-effective compare to other options, is sensible policy.

In addressing groundwater recharge and local stormwater capture, further exploring the potential to integrate local stormwater capture with opportunities that also provide seasonal wetlands along with groundwater recharge may be beneficial. It would be beneficial to pursue these types of opportunities that would enhance local control of water resources, reduce MWD's vulnerability to potential interruptions of distant supply sources, and improve local environmental conditions.

The letter in its entirety is on file at Metropolitan and available upon request.

Pablo Santoyo, landscape manager, The Irvine Company Apartment Communities (written comments submitted)

The Irvine Company Apartment Communities is fully committed to water recycling and conservation. We work closely with our landscape maintenance contractors and local water districts, in order to manage our irrigation systems infrastructure and stay within the water allocation parameters.

We work closely with irrigation equipment manufacturers to identify, research and implement new and more efficient technologies that help us improve our conservation efforts. We're particularly interested in pursuing any sizable incentives, in the way of rebates, for the installation of more efficient irrigation products. In 2011, we took advantage of a rebate program, sponsored by MWDSC, and installed 47 smart controllers at 8 of our communities.

We hope MWDSC continues to sponsor rebate programs geared towards the green industry to help us, the end user, improve our landscapes and be better stewards of our natural resources and the environment.

The letter in its entirety is on file at Metropolitan and available upon request.

David W. Smith, managing director, WateReuse California (written comments submitted)

The Recycled Water Policy adopted by the State Water Resources Control Board in 2009 calls for California water agencies to increase the use of recycled water over 2002 levels by at least 1 million acre-feet per year (AFY) by 2020 and by at least 2 million AFY by 2030. This is necessary because, as noted in the California Water Plan, demand is increasing due to in-stream needs and population growth, and supply is decreasing due to drought and possible climate change. Expansion of recycled water use to help meet this need is constrained by lack of funding and regulations that have not kept pace with water treatment technologies. Metropolitan continues to be an important force to relieve both of these constraints on water recycling.

WateReuse California is, with Metropolitan's active involvement and support, engaged in development of legislation to remove significant barriers to recycling. We sponsored AB 2398 (Hueso) and Metropolitan's support was instrumental in passage of this legislation by the Assembly in 2012. We continue to pursue enactment of such milestone legislation and commitment of continued support provided by Metropolitan is essential for success.

Metropolitan has been instrumental in the development of an important amendment to California Department of Public Health's regulations for groundwater recharge using recycling water and the State Water Resources Control Board's Recycled Water Policy Amendment. These are concrete steps to advance recycling in the State, and Metropolitan's involvement and support has been extremely significant.

Metropolitan's support of recycling as noted above is expected to result in increased recycling by reducing recycled water delivery costs and by reducing water conveyance infrastructure and energy consumption. WateReuse California is pleased to recognize Metropolitan's leadership in water recycling.

The letter in its entirety is on file at Metropolitan and available upon request.

Chris Brown, executive director, California Urban Water Conservation Council (written comments submitted)

In the early 1990s, MWD helped create the California Urban Water Conservation Council, and launched California as a worldwide leader in water conservation. Over the years, the subsidy you have provided MWD member water agencies toward their annual council dues has helped us continue to grow and innovate, and we appreciate that support.

It was with disappointment that we learned that in 2013, you will be discontinuing the dues subsidy. In anticipation that this will adversely affect our dues revenue and, potentially, our programs, we have reduced our 2013 budget in a number of areas.

With MWD's support over the years, the council has been able to play a leading role in statewide water conservation policy discussions, including the AB 2717 Landscape Task Force in 2004/2005, which led to the development of a statewide model landscape ordinance. Your support assisted the Urban Stakeholder Group, which led to agreed-upon consistent methods for calculating gallons per capita per day and the related water supply and population values for

urban water suppliers across the state in 2010. That support also assisted the 2011/2012 Commercial Institutional and Industrial (CII) Water Conservation Task Force, which developed a compendium of CII BMPs for use in the varied businesses that play a critical role in our economy and can help the state achieve our water use efficiency goals.

The council applauds MWD's commitment to water conservation, and notes that the report includes several fundamentals which will be essential to reaching the 20x2020 goals. These include continued implementation of best management practices, increased investments in turf conversion and landscape water conservation, and increased investment in commercial, institutional and industrial water conservation. The report also notes MWD's continued commitment to partnerships in the community with nonprofits and others who share MWD's water conservation goals.

With the challenge of reaching a 20 percent per capita reduction in consumption statewide, MWD's leadership is never more important than now. The council is the vehicle that can help us get there because it is the only venue that represents the majority of the urban water users and urban water consumption in the state. Metropolitan's continued support of this statewide initiative has never been more important than now. We encourage you to continue that commitment financially and programmatically.

The letter in its entirety is on file at Metropolitan and available upon request.

Lucinda A. McDade, interim executive director, Rancho Santa Ana Botanic Garden (written comments submitted)

Rancho Santa Ana Botanic Garden (RSABG) is partnering with the Metropolitan Water District of Southern California through the "Innovative Conservation Program" to provide user-friendly information to build awareness and empower Southern California homeowners to replace water-gulping lawns with attractive, readily available, climate appropriate, water-sipping plants. Located in Claremont for more than 85 years, RSABG has been dedicated to discovering knowledge about California's remarkably rich natural heritage of native plants and to educating the public about the values of this heritage. As awareness of the finite nature of water resources has deepened and spread, homeowners have become increasingly interested in landscapes that use far less water than lawns but that are colorful, lush and visually appealing in all seasons. It has, however, remained difficult for many homeowners to make such a choice, in significant part because information is not readily available.

Our project is bridging this gap by developing a mobile application for smart phones and tablets that will enable people to readily retrieve information on water-conserving plants. Illustrated with still and video images, as well as audio, the 'app' empowers users to make informed decisions, thus encouraging the use of climate appropriate plants in the home landscape. The 'app' uses QR code technology to link an attractive plant that a user may see at a demonstration project, public garden or arboretum to an expanded array of information, including water needs and cultivation notes, in an easily accessible, well-illustrated, attractively presented format. The project began with extensive consultation with stakeholders including participating gardens and other organizations, continued through development of the 'app' for 100 plants, and is now in the phase of evaluation of the effectiveness of the 'app' by user groups. Entitled 'PlantQuest,' the 'app' is currently available for free through the iTunes online store. Workshops

specifically focused on use of the 'app' for projects to replace front yard lawns with water-efficient landscapes have been very well received as reported in post-event surveys. The project will be completed by mid-2013.

By empowering Southern Californians to reduce water consumption while maintaining attractive landscapes, PlantQuest addresses the goals of both Rancho Santa Ana Botanic Garden and the MWD, building user-confidence in the use of water-efficient plants and thereby helping our region to attain a sustainable water future.

The letter in its entirety is on file at Metropolitan and available upon request.

Glossary

Acre-foot: The amount of water that would cover one acre of land, one foot deep. An acre-foot is 325,851 gallons. On average, an acre-foot supplies five to seven people in Southern California for one year.

Bewaterwise.com®: A website sponsored by Metropolitan that has extensive information on water-use efficiency.

California Friendly®: A program that encourages Southern California residents to make their homes California Friendly by using native and drought-tolerant plants, smart irrigation systems and water-wise appliances that meet certain efficiency standards.

Community Partnering Program: A Metropolitan program that provides funding for water-related, educational outreach on regional water resource issues, such as conservation, watershed protection or water quality.

Conjunctive Use: The storing of imported water in a local aquifer, in conjunction with groundwater, for later retrieval and use.

Groundwater Recovery: The extraction and treatment of groundwater making it usable for a variety of applications by removing chemicals and/or high levels of salts.

HECW (High-efficiency clothes washers): Washing machines that use less water than conventional washers; most are included in Metropolitan's incentive programs.

HET (High-efficiency toilet): Newer generation toilets that on average use about 1.28 gallons per flush, saving about 8,000 gallons per year.

IRP (Integrated Water Resources Plan): Metropolitan's plan to ensure reliable water delivery to its member agencies amid population growth, dry spells and droughts. The IRP mix includes water storage, conservation, best management practices, recycling, desalination and groundwater recovery, among others.

LRP (Local Resources Program): Metropolitan's funding mechanism for local recycling and groundwater recovery projects with member agencies.

Potable/Non-Potable: Drinkable and non-drinkable water, respectively, according to California Department of Public Health standards.

Replenishment: The delivery of Metropolitan water supplies to member agencies to replenish local groundwater basins, when supply and system conditions are favorable.

Smart Controllers (weather-based irrigation controllers): Smart controllers that adjust automatically to current weather conditions, increasing efficiency of irrigation systems.

Watershed: A region from which water drains or runs off to a river or a stream.

MWD Act

Sections 130.5 and 130.7 of The Metropolitan Water District Act

Added by Statutes of 1999, Chapter 415 (Senate Bill 60 (Hayden))

130.5. (a) The Legislature finds and declares all of the following:

(1) The Metropolitan Water District of Southern California reports that conservation provides 7 percent of its "water resource mix" for 1998, and conservation is projected to provide 13 percent of its total water resources by 2020.

Conservation, water recycling, and groundwater recovery combined, provide 12 percent of the district's total water resources for 1998 and those water resources are projected to increase to 25 percent of the district's total water resources by 2020.

(2) It is the intent of the Legislature that The Metropolitan Water District of Southern California expand water conservation, water recycling, and groundwater recovery efforts.

(b) The Metropolitan Water District of Southern California shall place increased emphasis on sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures.

(c) The Metropolitan Water District of Southern California shall hold an annual public hearing, which may be held during a regularly scheduled meeting of the Board of Directors of The Metropolitan Water District of Southern California, during which the district shall review its urban water management plan, adopted pursuant to Part 2.6 (commencing with Section 10610) of Division 6 of the Water Code, for adequacy in achieving an increased emphasis on cost-effective conservation, recycling, and groundwater recharge in accordance with this section.

The Board of Directors of The Metropolitan Water District of Southern California may modify any ongoing program as necessary to meet that requirement, consistent with the district's urban water management plan.

(d) The district shall invite to the hearings knowledgeable persons from the fields of water conservation and sustainability, and shall consider factors of availability, water quality, regional self-sufficiency, benefits for species and environment, the totality of life-cycle costs, including avoided costs, and short- and long-term employment and economic benefits.

(e) On or before February 1, 2001, and on or before each February 1 thereafter, The Metropolitan Water District of Southern California shall prepare and submit to the Legislature a report on its progress in achieving the goals of increased emphasis on cost-effective conservation, recycling, and groundwater recharge in accordance with this section, and any recommendations for actions with regard to policy or budget matters to facilitate the achievement of those goals.

(f) Nothing in this section shall diminish the authority of The Metropolitan Water District of Southern California pursuant to Section 25 or any other provision of this act, or otherwise affect the purposes of The Metropolitan Water District of Southern California as described in existing law.

130.7. (a) The Metropolitan Water District of Southern California, in cooperation with the following entities, shall participate in considering programs of groundwater recharge and replenishment, watershed management, habitat restoration, and environmentally compatible community development utilizing the resource potential of the Los Angeles River, the San Gabriel River, or other southern California rivers, including storm water runoff from these rivers:

(1) Member public agencies whose boundaries include any part of the Los Angeles River, the San Gabriel River, or any other river in southern California.

(2) The Water Replenishment District of Southern California.

(3) Local public water purveyors and other appropriate groundwater entities.

(4) The County of Los Angeles.

(5) The United States Army Corps of Engineers.

(b) Nothing in this section affects the powers and purposes of the Water Replenishment District of Southern California or any other groundwater management entity, the County of Los Angeles, local public water purveyors, or the United States Army Corps of Engineers.

Photography Captions By Section (Photographer noted in parentheses)

OVERVIEW

Metropolitan's overall distribution system, including the Colorado River Aqueduct, is more than 70 years old, which makes replacing and refurbishing the aging infrastructure essential. This continued investment and improvement in its imported water supply and delivery system will help ensure that Metropolitan provides a safe and reliable water supply. Metropolitan tests its water for almost 400 constituents and performs nearly 250,000 water quality tests a year.

Pictured on page 3, left to right: F.E. Weymouth Water Treatment Plant (Larry LaCom); Inlet/Outlet Tower at MWD's Robert A. Skinner Reservoir (Curtis Poling); Diamond Valley Lake (Tom Bleicher).

Pictured on page 5, left to right: Henry J. Mills Water Treatment Plant (Joe Niehus); Maintaining the Colorado River Aqueduct (Rick Ravenstine); Solar Panels at the Robert A. Skinner Water Treatment Plant (Larry LaCom).

Pictured on page 7, left to right: Microbiologist Reviews Juvenile Quagga Mussels in Colorado River Water (Larry LaCom); Oxidation Demonstration Plant (Mario Chavez); Priority for Safe Drinking Water (Patrick Knisely).

CONSERVATION

Metropolitan targets its conservation effort on reducing residential and commercial water use. SoCal Water$mart provides incentives for water-efficient hardware including multi-stream rotary sprinklers and turf removal in large landscaped areas. The Save Water Save a Buck Program provides rebates for water-saving plumbing fixtures; landscaping, food service, cleaning and medical equipment; and HVAC. An outreach program brings the conservation message to the public through advertising, community events and educational programs.

Pictured on page 9, left to right: SoCal Water$mart logo; Multi-Stream Sprinkler (Debra Sass); Water-Efficient Landscape (Tim and Laura McPherson).

Pictured on page 11, left to right: Save Water Save A Buck logo; Toilet Retrofit at the Westin Bonaventure Hotel (MWD File); Cooling Tower Controller at a Fresh & Easy market (MWD File)

Pictured on page 13, left to right: Metropolitan's Conservation Portal bewaterwise.com; Metropolitan's Spring Green Fair Promoting Water Efficiency (Larry LaCom); Community Partnering Program Grant Recipient – Chino Basin Water Conservation District Garden (Sally Aristei).

Pictured on page 15, left to right: Logo for Metropolitan's annual Solar Cup Boat Race; Solar Cup Participant (Tim Rue); Student Art Calendar Contest Winner (Mario Chavez).

LOCAL RESOURCES

Local resource development includes water recycling and follows the path of expanded production, increased connections and end use. It also includes recovery of contaminated groundwater and watershed initiatives that protect water supplies at their source.

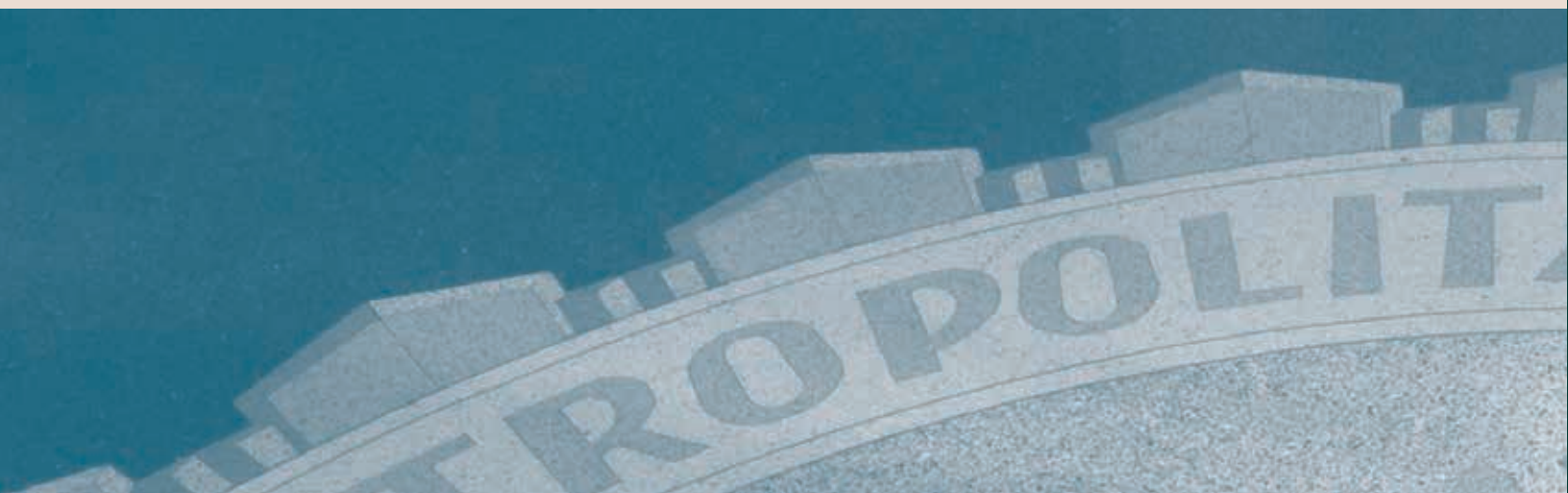
Pictured on page 17, left to right: West Basin Municipal Water District Recycled Water Facility (Sally Aristei); Recycled Water Connections at Orange County (MWD File); End use in San Diego County (MWD File).

WATERSHED INITIATIVES

Metropolitan is active on planning boards and organizations formed to improve watershed management and restoration.

Pictured on page 19, left to right: Shipley Ranch Reserve (Patrick Knisely); Santa Rosa Plateau (Linda Okamura); Shore of Diamond Valley Lake (Matt Hacker).

Pictured on page 20: Scenes from the Bay Delta (Debra Sass)



Metropolitan's Member Agencies

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928

Joined Metropolitan December 14, 1960

Joined Metropolitan November 12, 1954

Joined Metropolitan June 23, 1931

Joined Metropolitan October 16, 1950

Joined Metropolitan January 15, 1953

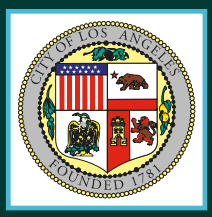
Joined Metropolitan February 27, 1931

Joined Metropolitan December 6, 1928

Joined Metropolitan November 26, 1951

Joined Metropolitan December 1, 1960

Joined Metropolitan February 27, 1931



Joined Metropolitan December 6, 1928

Joined Metropolitan November 26, 1951

Joined Metropolitan December 6, 1928

Joined Metropolitan December 17, 1946

Joined Metropolitan November 12, 1971

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928

Joined Metropolitan November 15, 1950

Joined Metropolitan February 27, 1931

Joined Metropolitan March 27, 1963

Joined Metropolitan July 23, 1948

Joined Metropolitan November 12, 1954

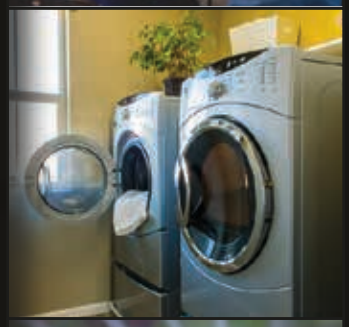
THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

mwdh2o.com
bewaterwise.com

1/13 600

Regional Progress Report

An Annual Report to the California State Legislature on Achievements in Conservation, Recycling and Groundwater Recharge

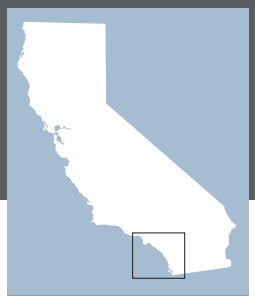


Implementing the Diversified Resource Portfolio

The Metropolitan Water District of Southern California

February 2014

About Metropolitan



ABOUT METROPOLITAN AND THIS REPORT

The Metropolitan Water District of Southern California was established in 1928 under an act of the state Legislature to provide supplemental water supplies to its member agencies in Southern California.

Metropolitan is a public agency and a regional water wholesaler. It is governed by a 37-member board of directors representing 26 member agencies that purchase some or all of their water from Metropolitan and serve about 19 million people across six Southern California counties.

The mission of Metropolitan is to provide its 5,200-square-mile service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Metropolitan draws supplies from the Colorado River through the Colorado River Aqueduct, which it owns and operates; from Northern California via the State Water Project; and from local programs and transfer arrangements. An increasing percentage of Southern California's water supply comes from conservation, water recycling and recovered groundwater, which are further described in this report.

Achievements in conservation, recycling and groundwater recharge have been chronicled in this report since the enactment of California Senate Bill 60 (SB60) in 1999. SB60 added Section 130.5 to the Metropolitan Water District Act (MWD Act) which states, "The Legislature finds and declares... The Metropolitan Water District of Southern California shall place increased emphasis on sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures." According to the MWD Act, Metropolitan is to prepare and submit to the legislature by February 1 of each year a report on Metropolitan's progress in achieving these goals. To coincide with the preparation of the report, the MWD Act requires Metropolitan to "hold an annual public hearing... during which the district shall review its urban water management plan... for adequacy in achieving an increased emphasis on cost-effective conservation, recycling, and groundwater recharge." While the Regional Urban Water Management Plan is prepared and updated every five years according to state requirements (with the next update due in 2015), Metropolitan hosts an annual December hearing to share progress on fiscal year plan objectives, and to receive public comments.

Cover Images:

Metropolitan engineered the Colorado River Aqueduct in the 1930s to bring water to a growing Southern California, providing residents with a reliable supply of water (photo far left). Imports from the Colorado River were supplemented in the 1960s with water drawn from Northern California through the State Water Project's California Aqueduct (photo second from left, courtesy of California Department of Water Resources). That conveyance system is being stabilized through the Bay Delta Conservation Plan which addresses supply reliability and environmental restoration. To extend the use of imported water and diversify the supply mix, Metropolitan and its member public agencies have focused on developing regional reuse projects that include recycling and groundwater replenishment projects (photo strip third from left). A robust regional conservation program reduces dependence on imported supplies and increases water use efficiency through training and education and promoting water-saving devices (photo strip right).

Table of Contents

For more information about this report contact Kathy Cole, Metropolitan's Executive Legislative Representative, at (916) 650-2642 or kcole@mwdh2o.com.

Overview

Metropolitan was created more than 80 years ago with a single objective – to build the Colorado River Aqueduct to supply water to a growing Southern California population. Metropolitan has expanded its legacy of engineering solutions to include water resource management, with a focus on supporting local resource development. Investments in conservation, recycling, groundwater treatment, storage and water transfers have brought diversity and stability to Metropolitan's water supply portfolio. This has helped Metropolitan manage risk and ensure a reliable water supply for Southern California.

Investments in conservation, recycling, groundwater treatment, storage and water transfers have brought diversity and stability to Metropolitan's water supply portfolio.

Metropolitan prepares this report to the state legislature to provide an update on achievements in water conservation, recycling and groundwater recharge. It details Metropolitan's progress in advancing these supply strategies and broadening the district's supply mix.

IMPORTED WATER

Metropolitan's base supply is its imported water. After the construction of the Colorado system in the 1930s, Metropolitan began importing water from Northern California via the State Water Project in the 1970s. But the drought of 1987 to 1992 and first-ever water shortages for the region motivated water providers across Southern California to examine supply alternatives that could better withstand dry cycles. Metropolitan responded with a long-term plan to bring greater balance between locally developed resources and imported supplies.

Metropolitan's Integrated Water Resources Plan (IRP), adopted in 1996, has been amended several times

Implementing The Diversified Resource Portfolio

Metropolitan developed its first Integrated Water Resources Plan in 1996 to address the complexity of developing, maintaining and delivering a reliable supply of water to its member agencies. The IRP established targets for a diversified portfolio of water supply investments that have provided the foundation for continued water supply reliability during periods of prolonged drought or regulatory limitations.

One of the fundamental innovations of the IRP was the understanding that regional water supply reliability could be achieved through the implementation of a diverse portfolio of resource investments and conservation measures. The IRP strategy is a balance between demand management and supply augmentation, as well as a balance between the use of local resources and imported supplies.

Long-term water planning in Southern California has shifted from a reliance on imported supplies to increased regional self-reliance in order to meet future needs. Today, Metropolitan's strategy for ensuring regional reliability is embodied in the latest update to the IRP, adopted in October 2010.

to respond to changing conditions and promote new solutions to the region's growing supply needs. In this plan, Metropolitan pioneered a "resource portfolio" concept as a means of improving the diversity and reliability of Southern California's water supplies in a cost-effective manner. Today, this approach is helping Metropolitan advance more innovative and sustainable water supplies.

The initial IRP called for imported supplies to comprise 60 percent of the Southland's overall water supply. But that has dramatically changed over time. The updated 2010 IRP has reduced reliance on the imported Colorado and State Water Project deliveries to 36 percent of the overall supply mix. Achieving these targets is made possible because of Metropolitan's increasing emphasis on local solutions.

STORAGE

To reduce reliance on Northern California supplies in dry years, Metropolitan has increased by more than 13-fold its storage network since the 1990s using Diamond Valley Lake reservoir in southwest Riverside County, local groundwater basins, and banking programs that were established in Lake Mead and the San Joaquin Valley between 2009 and 2013. Metropolitan currently has nine groundwater storage projects within its service area created to supplement dry-year supplies. As of July 2013, Metropolitan had more than 67,400 acre-feet in these conjunctive-use storage accounts where imported water is stored in local groundwater basins when there is a surplus of supply. Today, more than 5 million acre-feet of water can be stored in Metropolitan's storage network.

CONSERVATION

A growing piece of Metropolitan's reliability pie is water conservation. Over the past two decades, Metropolitan has invested more than $333 million for incentive programs to reduce residential and commercial water use, resulting in about 1.9 million acre-feet of cumulative savings.

Metropolitan's region-wide residential conservation program, operated under the umbrella of SoCal Water$mart, provided 31,000 rebates for water-efficient products in fiscal year 2012/13. The estimated water savings is about 1,300 acre-feet for the fiscal

The IRP seeks to stabilize Metropolitan's traditional imported water supplies and meet needs for the region's growth through a successful adaptive management approach with emphasis on conservation and local supply development.

Imported Resources

About half of Southern California's water needs are met with Metropolitan-supplied imported water. Metropolitan has been responsible for obtaining imported supplies for the region through its operation of the Colorado River Aqueduct and its contract with the state for State Water Project. Metropolitan receives water from the SWP through the California Aqueduct.

Conservation

Water-use efficiency is encouraged with financial incentives such as rebates and tiered pricing structures, outreach and education programs, and support for new plumbing and compliance codes that facilitate water savings.

Local Resources

In addition to traditional groundwater and surface water production, key elements in the region's diverse local resource portfolio include water recycling, groundwater recovery and groundwater storage all of which bring greater water supply reliability to Southern California.

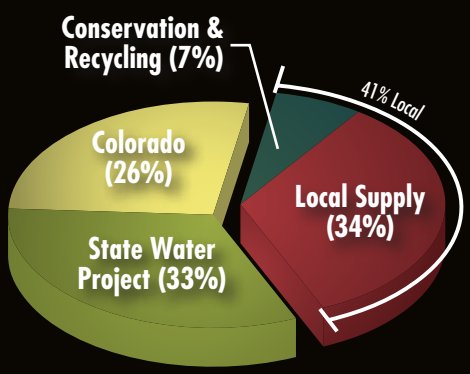
year. An additional water savings of 2,800 acre-feet was achieved through locally-administered water conservation programs that received funding from Metropolitan. Popular rebates included those for turf removal, high-efficiency clothes washers and toilets, multi-stream rotating nozzles for sprinklers and weather-based irrigation controllers. This fiscal year also saw the launch of a California Friendly® Landscape class for residential customers with a focus on managing irrigation.

Commercial conservation programs accounted for a projected water savings of about 4,500 acre-feet in fiscal year 2012/13 credited to the SoCal Water$mart program, Water Savings Incentive Program and member agency commercial programs. Introduced this fiscal year was a new service offering a landscape irrigation survey for qualifying non-residential properties within Metropolitan's service area to identify water-saving potential. Eligible landscapes include commercial and industrial sites, homeowner association common areas, and institutional sites like schools, parks and government facilities.

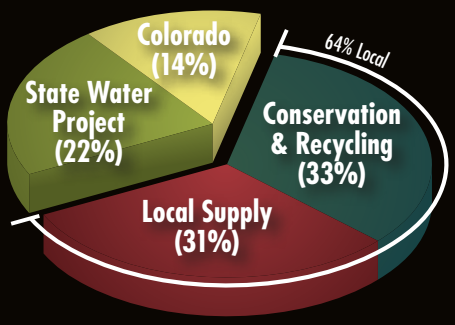
Together with member agencies that also implemented similar programs, a total of 8,600 acre-feet was saved through regional conservation incentives. Combined with "code-based" conservation through plumbing codes and ordinances, and from reduced consumption resulting from changes in water pricing, the region saved about 906,000 acre-feet in fiscal year 2012/13.

To encourage innovation, Metropolitan supports research and development of creative ways to conserve water though the Innovative Conservation Program. The competitive grant program, funded in partnership with the federal Bureau of Reclamation, Southern Nevada Water Authority, and Central Arizona Project, evaluates potential water savings of new devices, technologies and strategies. Metropolitan also received a grant from the federal Bureau of Reclamation for a conservation market study to identify water savings potential in commercial markets, such as fitness centers and landscaping markets where there could be future opportunities to expand water- use efficiency.

1990 Supply Mix



Planned 2035 Supply Mix



Water Supply Strategy

In 1990, local resources met about 41 percent of water demands. By 2035, about two-thirds will be met by local resources. Metropolitan's goal is to maintain, but not increase, traditional levels of imported supplies. The long-term portfolio approach looks to local solutions to sustain the region's continued growth. Over the long term, the regional portfolio flips the balance of local versus imported supplies.

Metropolitan's bewaterwise.com website supports conservation education and outreach through a repository of conservation-related tips and multi-media resources. This website attracted nearly 500,000 visitors in fiscal year 2012/13. Metropolitan supports water education at all levels with initiatives that include a college/university grant program called the Southern California World Water Forum; a newly redesigned website for kindergarten to 12th grade; Solar Cup™ (a solar boat building and race competition for high school students); and the Diamond Valley Lake Education Program.

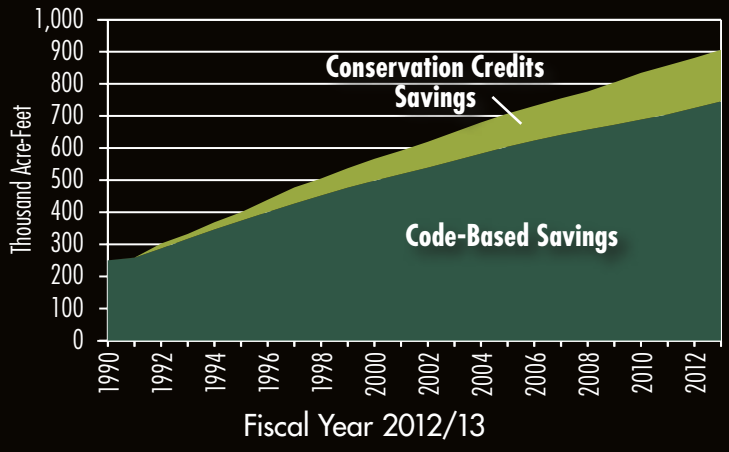
LOCAL RESOURCES

Since 1982, Metropolitan's Local Resources Program (LRP) has seen an investment of more than $331 million for recycled water projects and $118 million in groundwater recovery projects. This investment has resulted in the production of more than 2 million acre-feet of water. Metropolitan has partnered with member agencies on 73 recycling projects and 23 groundwater recovery projects.

In 2013, Metropolitan issued a request for proposals to its member agencies for technical studies and pilot projects that facilitate future production of recycled water, stormwater capture, seawater desalination and groundwater resources. As an outgrowth of Metropolitan's IRP, this "Foundational Actions Funding Program" involves low-risk actions that ensure the region's readiness to implement new water supply projects, if and when there is a need. In September, 2013, Metropolitan's board authorized up to $3.3 million in matching funds for 16 exploratory projects that will commence in 2014.

WATERSHED INITIATIVES

Metropolitan is participating in several statewide and local efforts to manage watersheds and enhance or restore environmental resources such as natural habitats and wetlands. A 50-year plan to balance the use of Colorado River water resources with the conservation of native species and their habitats is underway. The Habitat Restoration Plan extends over 400 miles of the lower Colorado River and will optimize opportunities for future water and power development while satisfying regulations intended

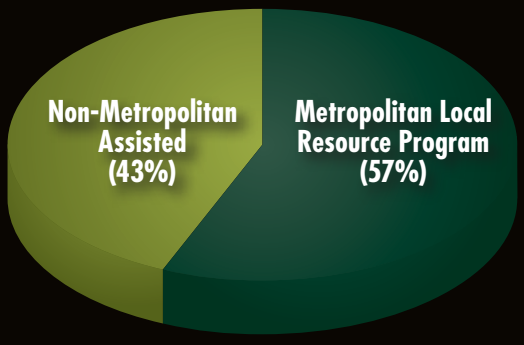


Regional Conservation Savings

By encouraging water-use efficiency, Metropolitan promotes the shift toward regional self-reliance. Since the 1990s, Metropolitan's Conservation Credits Program has directly invested in "active conservation," i.e. water agency-funded programs such as rebates, device installations and education. At the same time, there has been significant progress in "code-based" conservation achieved through legislation, building and plumbing codes and ordinances, and from reduced consumption resulting from changes in water pricing.

to safeguard endangered species. A high-quality supply from Northern California is key for local solutions such as water recycling to continue and expand. But supplies have become less reliable due to deteriorating environmental conditions in the Sacramento-San Joaquin Delta. Since 2007, state and federal leaders have been working toward a comprehensive solution to the environmental and infrastructure problems of the state's water supply hub. The Bay Delta Conservation Plan process outlines wide-scale plans with tens of thousands of acres of wetlands and floodplain earmarked for restoration to provide habitat for fish, wildlife and plant species. The BDCP aims to modernize the Delta's major water delivery systems to ensure reliable water supplies for urban and agricultural users, and to help protect the state's economy. In December 2013, a public review draft of the BDCP and environmental documentation was made available for 120 days of formal review, including a series of informational public meetings.

Metropolitan has always been an agency with an eye towards the future. The agency was formed to build an aqueduct to serve future Southern California residents. Over time, Metropolitan has moved from securing reliability by emphasizing imported supplies to embracing local solutions and a diverse portfolio approach. Recognizing the need to adapt to change and diversify the region's resource supply mix has allowed Metropolitan to remain true to its original mission of providing reliable water supplies to Southern California.



Fiscal Year 2012/13

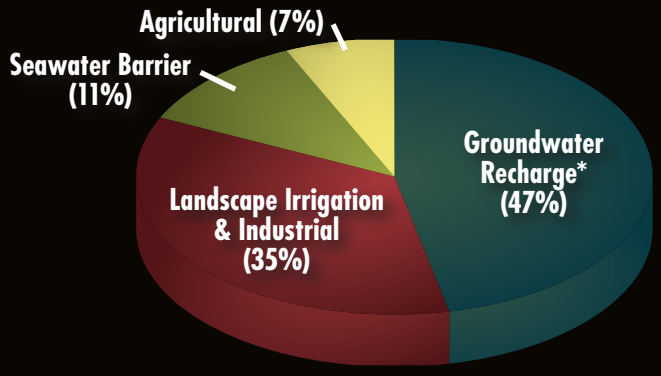
Recycled Water and Groundwater Recovery

While wastewater recycling and recovery of degraded groundwater are local sources of water supply, Metropolitan provides financial incentives for 57 percent of their development. Member agencies and other local agencies also independently fund and develop recycled water and groundwater recovery. In fiscal year 2012/13, about 413,000 acre-feet of recycled and groundwater recovery water were produced.

Metropolitan is active in groups focused on watershed protection to safeguard the reliability and quality of the Southland's drinking water supply, and to find ways to put local supplies to more beneficial use.

Uses of Recycled Water

Recycled water can be put toward various uses that benefit the region, which used more than 420,000 acre-feet of recycled water in fiscal year 2012/13. The largest portion of recycled water, about 47 percent, was used by local agencies to recharge groundwater basins. The remainder went toward landscape irrigation and industries (35 percent), seawater intrusion barriers along the coastal basins (11 percent) and farms producing livestock crops (7 percent).



Fiscal Year 2012/13

* Includes estimated recharge of wastewater discharges to the Santa Ana River base flow.

Achievements

ACHIEVEMENTS SCORECARD

Conservation	
FY 2012/13 New Water Saved From Conservation Credits Program	8,600 acre-feet
FY 2012/13 Water Saved From New And Existing Conservation Credits Program[1]	161,000 acre-feet
Cumulative Water Saved From Conservation Credits Program[2]	1.9 million acre-feet
FY 2012/13 Metropolitan Conservation Investment[3]	$11.4 million
FY 2012/13 Member Agency Investment[4]	$11.5 million
Cumulative Conservation Investment (excluding funding by member agencies)	$333 million
FY 2012/13 Annual Total Savings (including code-based savings)[5]	906,000 acre-feet
Recycled Water[6]	
FY 2012/13 Production	178,000 acre-feet
FY 2012/13 Investment	$28.9 million
Cumulative Production	1.853 million acre-feet
Cumulative Investment	$331 million
FY 2012/13 Annual Regional Production (including member, retail agencies and Santa Ana River base flow)	419,000 acre-feet
Groundwater Recovery[6]	
FY 2012/13 Production	55,000 acre-feet
FY 2012/13 Investment	$7.0 million
Cumulative Production	653,000 acre-feet
Cumulative Investment	$118 million
FY 2012/13 Annual Regional Production (including member and retail agencies)	100,000 acre-feet
Conjunctive Use Program[7]	
Metropolitan Cumulative Capital Investment	$26.5 million
Proposition 13 Grant Funds Administered by Metropolitan	$45.0 million
Water Stored Since Program Inception through August 2013	273,000 acre-feet
Water Extracted Since Program Inception through August 2013[7]	206,000 acre-feet
Groundwater Replenishment[8]	
Cumulative Investment through September 2013	$347 million
Cumulative Replenishment Delivery through September 2013	3.2 million acre-feet

REGIONAL SUMMARY

	FY 2012/13	Since 1991
Water Conservation[5], Recycled Water and Groundwater Recovery	1.43 million acre-feet	16.7 million acre-feet
Metropolitan's Investment in Water Conservation, Recycled Water and Groundwater Recovery	$47.3 million	$782 million

Footnotes on page 9

READER'S GUIDE TO THE ACHIEVEMENTS SCORECARD

Conservation

For the purpose of this report, conservation is water saved directly as a result of incentives from Metropolitan's Active Conservation Credits Program and other water agencies. The program, established in 1991, provides rebates for device retrofits, process improvements, landscape efficiency improvements and other efficiency measures utilized in commercial, industrial and residential sectors. Also shown is additional water conserved as a result of plumbing codes and other laws governing appliances and products' efficiency standards.

Recycled Water

Municipal water is recycled and treated to a quality level allowed for specific uses such as landscape irrigation, groundwater recharge and seawater intrusion barriers. Metropolitan provides financial assistance to produce recycled water through its Local Resources Program, which began in 1982.

Groundwater Recovery

Degraded groundwater is recovered for potable use through treatment techniques that reduce high salt or other contaminant levels. Financial assistance for groundwater recovery has been provided since 1991 through Metropolitan's Local Resources Program.

Conjunctive Use Program

Metropolitan works in partnership with its member agencies and groundwater basin managers to store surplus imported water in local aquifers for future withdrawal.

Groundwater Replenishment

When supply and system conditions are favorable, Metropolitan can deliver water supplies to its member agencies to replenish local groundwater supplies.

Footnotes for Achievement Scorecard on page 8

Numbers in this report are based on best available information during the production of this report and subject to revision for accounting reconciliation.

1. This includes water savings initially achieved through Metropolitan's Conservation Credits Program and subsequently maintained through plumbing codes. It includes savings from devices installed through fiscal year 2012/13 and savings from member agency-funded programs administered through Metropolitan's region-wide residential and commercial programs.
2. This is cumulative water savings since 1991 and includes water savings initially achieved through Metropolitan's Conservation Credits Program and subsequently maintained through plumbing codes.
3. Conservation investment includes administrative fees for contracted program vendors and education and advertising campaigns to promote conservation.
4. In addition to Metropolitan's Conservation Credits Program, member agencies and retailers also implemented local water conservation programs within their respective service areas. Member agency investment figures include rebate funding beyond rebates already provided by Metropolitan's Conservation Credits Program.
5. Annual total savings includes savings from Metropolitan's Conservation Credits Program, code-base conservation achieved through legislation, building and plumbing codes and ordinances, reduced consumption resulting from changes in water pricing, and pre-1990 device retrofit. Figure reflects revised demographic data from the Department of Finance that resulted in a lower figure compared to previous year's report.
6. Figures reflect actual and estimated deliveries for all Metropolitan-assisted projects and payments reported through June 2013; cumulative production and investment reflect accounting reconciliation as data become available; annual regional production for recycled water includes an estimated 106,000 acre-feet of wastewater discharged to the Santa Ana River base flow that percolates into downstream groundwater basins.
7. Construction of the conjunctive use storage programs was completed in 2008. Proposition 13 refers to Chapter 9 of the Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Bond Act of 2000. Water extracted since program inception includes losses.
8. Figure is cumulative since 1990. Prior to 2013, Metropolitan had provided replenishment water at a discounted rate to encourage long-term recharge and maintenance of groundwater basins and local reservoirs. Although the discounted replenishment rate was discontinued Jan. 1, 2013, Metropolitan continues to provide water for replenishment purposes at full service rates. Figure may not include all deliveries used for replenishment purposes.

Conservation

By the Numbers

Conservation Credits Program

7.3 million
rebates issued under Metropolitan's Conservation Credits Program since 1991

1.4 million
water budget programs, surveys and audits performed under Metropolitan's Conservation Credits Program that resulted in reduced water use since 1991

1.9 million acre-feet
of water saved to date from the Conservation Credits Program

$333 million
Metropolitan's cumulative investment in conservation since 1991

Metropolitan and its member agencies have long been leaders in water conservation. Water-use efficiency is encouraged with financial incentives and a tiered pricing structure, outreach and education programs, and support for new plumbing codes and other regulations that facilitate water savings. Metropolitan invested more than $333 million in the last two decades to improve water supply reliability.

Metropolitan offers financial incentives in the form of rebates for high-efficiency devices. Rebates funded through Metropolitan's Conservation Credits Program generated approximately 8,600 acre-feet of new water savings in fiscal year 2012/13. In total, the region had projected savings of 906,000 acre-feet of water from Metropolitan's Conservation Credits Program, code-based and price-based conservation in fiscal year during that same period.

Fiscal Year 2012/13 Program Highlights

- Metropolitan provided $10.9 million in rebates to help water customers improve water-use efficiency in their homes and businesses.
- Metropolitan launched the Water Savings Incentive Program, a pay-for-performance program for custom projects in the commercial, industrial, institutional, large landscapes, and agricultural sectors and signed up more than 25 projects.
- Metropolitan was awarded a $500,000 CALFED grant to increase the incentive for high-efficiency clothes washers from $85 to $110.
- Metropolitan began providing irrigation surveys to assist large landscape customers to identify opportunities to improve irrigation efficiency.
- Metropolitan resumed providing hands-on California Friendly® Landscape classes for residential customers with a focus on managing irrigation.
- Added targeted incentives to the regional rebate program as the result of a conservation market study that analyzed the needs of customers with commercial properties and large landscapes, using a $150,000 grant from the federal Bureau of Reclamation.

Conservation Credits Programs

Metropolitan's Conservation Credits Program focuses on two main areas: residential and commercial water use.

Residential Conservation Programs

Metropolitan's residential conservation programs consist of two targeted efforts: SoCal Water$mart for residential customers, and programs implemented by member agencies. Metropolitan projects savings of about 4,100 acre-feet of new water with rebates issued through the residential conservation programs in fiscal year 2012/13.

SoCal Water$mart

Launched in 2008, SoCal Water$mart provides rebates to residential customers to reduce the cost of water-efficient products. Current program rebates include high-efficiency clothes washers, multi-stream rotary sprinkler nozzles and weather-

based irrigation controllers. Recent refinements, such as online applications and automatic email notifications to customers, have streamlined operations, resulting in faster processing times and increased customer satisfaction while enhancing budget controls. Metropolitan projects savings of about 1,300 acre-feet of water from 31,000 rebates issued through the region-wide residential program in fiscal year 2012/13.

Member Agency Residential Programs

Metropolitan also provides funding to member agencies for locally-administered water conservation programs. Member agencies receive Metropolitan incentives for qualified water-saving activities. Qualifying residential projects included turf removal, toilet distribution and replacement programs, direct-installation clothes washer programs and residential water audits. Member agency residential programs were projected to save about 2,800 acre-feet of water annually with Metropolitan funding of about $1.3 million in fiscal year 2012/13.

Popular Rebates

Turf removal

Aided by a Proposition 50 grant from the state Department of Water Resources and grant funding from the federal Bureau of Reclamation, Metropolitan implemented a turf removal program that provides residential and commercial customers financial incentives to remove their lawn and replace it with lower water-use plants. Metropolitan projects savings of about 360 acre-feet of water annually from 2.7 million square-feet of turf removed in fiscal year 2012/13.

High-efficiency clothes washers

High-efficiency clothes washers (HECW) continue to be the most popular residential product in Metropolitan's rebate program. The eligibility requirement for HECWs is currently set at water factor 4.0, which saves more than 10,000 gallons per washer per year over a conventional top loading clothes washer. The water factor is the measure of the amount of water used to wash a standard load of laundry. Metropolitan projects HECW rebates issued in fiscal year 2012/13 to save about 960 acre-feet of water annually. Metropolitan supplements its HECW rebate using state or federal grants when they are available.

High-efficiency toilets

High-efficiency toilets (HET) use approximately 20 percent less water per flush than the conventional ultra-low-flush toilets currently required by law. Metropolitan uses the federal Environmental Protection Agency's WaterSense list of HET models to qualify for rebates. Metropolitan projects savings of about 2,140 acre-feet of water annually from HET rebates that were issued for both residential and commercial customers in fiscal year 2012/13.

Irrigation evaluations and residential surveys

Metropolitan provides funding to member agencies that offer customers irrigation evaluations and indoor water surveys. Evaluations include a recommended watering schedule, along with suggestions for system efficiency improvements. Indoor residential

By the Numbers

Turf Removal

9.5 million square feet
of turf removed and replaced with lower water-use plants to date, using financial incentives from Metropolitan's Conservation Credits Program

13,000 acre-feet
in projected lifetime water savings

$5 million
Total investment by Metropolitan since 2010

Irrigation Controllers

175,000
rebates for weather-based irrigation controllers provided with funding from Metropolitan's Conservation Credits Program

90,000 acre-feet
Amount of projected lifetime water savings

$20 million
Total investment by Metropolitan since 2005

By the Numbers

Clothes Washers

478,000
water-efficient clothes washer rebates provided with funding from Metropolitan's Conservation Credits Program

194,000 acre-feet
projected lifetime water savings

$46 million
Total investment by Metropolitan since 1995

Toilets

3 million
toilets distributed, retrofitted and rebated with financial incentives from Metropolitan's Conservation Credits Program

2.1 million acre-feet
in projected lifetime water savings

$187 million
Total investment by Metropolitan since 1991

surveys provide customers with information on how to identify leaks, as well as suggestions for water-saving fixtures. Metropolitan projects savings of about 690 acre-feet of water annually from irrigation evaluations and residential surveys conducted in fiscal year 2012/13.

Multi-stream rotating nozzles for sprinklers

Pop-up spray heads with multi-stream, multi-trajectory rotating nozzles improve distribution uniformity. With a grant from the federal Bureau of Reclamation, Metropolitan provides enhanced incentives to residential and commercial customers to replace conventional fan spray nozzles with these more efficient models. FreeSprinkerNozzles.com, an innovative online program that utilizes Metropolitan's rebates to provide vouchers for free multi-stream rotating nozzles, was established by Metropolitan's member agencies, and has helped increase installation of these water-efficient products. Metropolitan projects savings of 1,370 acre-feet of water annually from these rebates for nozzle replacements in fiscal year 2012/13.

Weather-based irrigation controllers

Weather-based irrigation controllers (WBICs) automatically adjust irrigation schedules based on a number of factors including rain, temperature, plant type, sunlight and soil type. Metropolitan provides incentives to residential and commercial customers to replace traditional irrigation controllers with WBICs. Metropolitan projects savings of 530 acre-feet of water annually from the new rebates issued for WBICs in fiscal year 2012/13.

Commercial Conservation Programs

Metropolitan's commercial conservation programs provide rebates for water-saving devices to businesses and institutions throughout Southern California. The programs are comprised of Metropolitan's SoCal Water$mart, the Water Savings Incentive Program and member agency commercial programs. Metropolitan projects savings of about 4,500 acre-feet of water annually from new rebates issued by commercial conservation programs in fiscal year 2012/13.

Save Water, Save-A-Buck Program/SoCal Water$mart

The majority of commercial conservation activity came from Metropolitan's SoCal Water$mart regional program. (The previous program, Save Water, Save-A-Buck, was replaced by SoCal Water$mart at the beginning of fiscal year 2012/13.) SoCal Water$mart provides rebates for water-saving plumbing fixtures, landscaping equipment, food service equipment, cleaning equipment, HVAC (heating, ventilating, air conditioning) and medical equipment. These programs also targeted multi-family dwellings for fixture replacements using high-efficiency washers and toilets, along with multi-stream rotating nozzles for pop-up spray heads. Metropolitan projects savings of about 2,700 acre-feet from nearly 3,600 new rebates issued in fiscal year 2012/13.

Member Agency Commercial Programs

Member and retail water agencies also implement water conservation programs for commercial sectors using Metropolitan incentives. Projects target specific local businesses, with many also receiving assistance from state or federal grant programs. Qualifying commercial projects have included turf removal, direct installation of high-efficiency toilets and multi-stream rotating nozzle distribution. Additionally, some member and retail water agencies created specialized water conservation programs designed for specific commercial sectors. Metropolitan projects savings of about 1,400 acre-feet of water annually from incentives in fiscal year 2012/13.

Water Savings Incentive Program

The Water Savings Incentive Program is a regional pay-for-performance program that is a collaborative effort between Metropolitan, its 26 member agencies and large water-using customers to improve water-use efficiency in the commercial, industrial, institutional, agricultural and large landscape sectors. In fiscal year 2012/13, Metropolitan projects savings of about 400 acre-feet of water annually from these programs. Incentives are paid based on the amount of water saved. Qualifying projects include but are not limited to:

- Changing an industrial process water system to capture, treat and reuse process wastewater
- Capturing condensation to supplement cooling tower water supply
- Installing new, water-efficient equipment in commercial kitchens and laundry facilities
- Changing overhead spray sprinklers to drip systems
- Installing valves and pumps to improve agricultural irrigation efficiency

Examples of commercial sector water-saving devices

The following is a list of current and past water-saving fixtures and equipment rebated through Metropolitan's commercial conservation programs:

- Connectionless food steamer
- Cooling tower conductivity meter
- Dry vacuum pump
- High-efficiency tank and flushometer toilets
- High-efficiency urinals – ultra low flush and zero water
- In-stem flow regulators
- Laminar flow restrictors
- Large rotors - high-efficiency nozzle
- Multi-stream rotating nozzles
- pH cooling tower controllers
- Turf removal
- Water brooms
- Weather-based irrigation controllers

By the Numbers

Urinals

35,000
Water-efficient urinal rebates provided with funding from Metropolitan's Conservation Credits Program

72,000 acre-feet
Projected lifetime water savings

$11 million
Total investment by Metropolitan since 1996

Pre-rinse Spray Head

17,000
Water-efficient pre-rinse spray head rebates provided with funding from Metropolitan's Conservation Credits Program

13,000 acre-feet
Projected lifetime water savings

$1.1 million
Total investment by Metropolitan since 2002

Research and Development

Innovative Conservation Program

Metropolitan encourages research and development of new and creative ways to conserve water. Metropolitan's Innovative Conservation Program is a competitive grant program that evaluates water savings and reliability of new water-savings devices, technologies and strategies. With funding provided by the federal Bureau of Reclamation, Southern Nevada Water Authority, and Central Arizona Project, approximately $450,000 of funding was available in 2013 for research. Proposals were selected through a competitive review process by an evaluation committee. Projects funded in the past include a return-on-investment calculator for landscape projects, school irrigation audit tools, plant selector applications, graywater irrigation treatment systems, real-time water-use evaluations and an economic study on demand elasticity and revenue stability.

In addition to the Innovative Conservation Program, Metropolitan has taken the following research actions to advance the field of knowledge in water-use efficiency:

- Studying the performance of multi-stream rotary nozzles.
- Spurring innovation and advances in efficiency by working with the Center for Irrigation Technology at California State University, Fresno to develop performance benchmarks for landscape irrigation technology.
- Studying the effects of drought and salinity on turf grasses in cooperation with the California Turfgrass and Landscape Foundation and the Turfgrass Research Facility at University of California, Riverside, and also supporting university researchers are also working to develop new, more drought tolerant turf grasses.
- Conducting a study on retention rates of waterless urinals in the Metropolitan service area.

Long Term Conservation Plan

In 2011, Metropolitan's Board of Directors adopted a Long Term Conservation Plan that was developed in collaboration with its member agencies, retailers and other stakeholders. The LTCP provides a framework for achieving water-use efficiency goals including a 20 percent reduction in per capita water use by 2020. The goals of the LTCP are to: 1) achieve the conservation target in the 2010 IRP Update, 2) pursue innovation that will advance water-use efficiency and 3) transform the public's perception of the value of water within the region. The LTCP identifies five key strategies to achieve these goals:

1. Use catalysts for market transformation
2. Encourage action through outreach and education
3. Develop regional technical capability
4. Build strategic alliances
5. Advance water efficiency standards

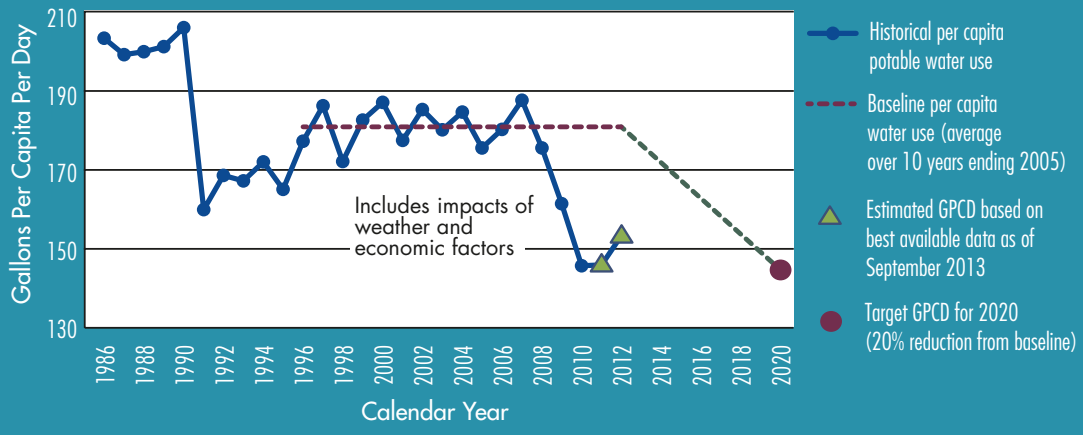
In fiscal year 2012/13, Metropolitan pursued the LTCP's goals and strategies through the many actions described in the Conservation section of this Regional Progress Report. In addition to providing funding assistance for water-saving devices, custom projects, and research-and-development for new technologies, Metropolitan conducted a conservation market study to analyze new opportunities for water-use efficiency within the commercial and large landscape sectors. Metropolitan's outreach and education efforts included irrigation surveys to assist large landscape customers and California Friendly® Landscape classes for residential customers. To promote development of the region's technical capability, Metropolitan hosted monthly meetings for water-use efficiency coordinators to share ideas and lessons learned and provided trainings through the Gas Company landscape training classes. Metropolitan collaborated with businesses, utilities, and government agencies through various venues and programs, including landscape forums and participation with the Alliance for Water Efficiency and the California Urban Water Conservation Council. To advance water-use efficiency, Metropolitan initiated several research studies, including collaborations with California State University, Fresno and the University of California, Riverside.

Select Southern California water customers qualify for a turf removal rebate that rewards homeowners for removing turf grass and replacing it with low-water-using plants and landscape elements. (Photos courtesy of Long Beach Water Department.)

Water-Use Efficiency Strategy

Senate Bill X7-7 Water Conservation Act of 2009 (20x2020)

Metropolitan and the Natural Resources Defense Council cosponsored the Water Conservation Act of 2009 (SBX7-7), which targets a 20 percent reduction statewide in urban per capita water use by the year 2020. Per capita water use is one indicator of progress in advancing water use efficiency. Although factors such as weather and economic conditions affect the calculation of per capita water use; the trend shows continued lower per capita water use over time. California is working to achieve a 20 percent reduction in urban per capita potable water use by 2020. After adjusting for revised population estimates resulting from the 2010 Census, Metropolitan's baseline is 181 gallons per capita per day and the 2020 reduction target is 145 GPCD (see chart below). Using preliminary data, per capita water use is estimated at 146 GPCD in 2011 and 153 GPCD in 2012. The region's increase in per capita water use in 2012 can be explained in part by improved economic conditions and drier weather as compared with the previous year. The current estimate of 153 GPCD represents a 15 percent decrease from baseline GPCD, and indicates solid progress toward the region's 2020 target.



Communications and Outreach

Metropolitan sponsored conservation-related educational outreach efforts and programs throughout its service area during fiscal year 2012/13. Online and social media included Google search advertising focused on water conservation and water-use efficiency. Metropolitan's bewaterwise.com® website continues to be an important tool in educating the public, attracting more than 484,600 unique visitors in fiscal year 2012/13. The site is also available in Spanish.

Community Outreach

Metropolitan continues to maintain a strong presence in community water resource education and conservation awareness activities and events. Metropolitan cosponsored numerous water-awareness conferences and other educational events throughout its six-county service area.

Education Programs

During fiscal year 2012/13, the Southern California World Water Forum College Grant Program concluded its two-year program cycle with presentations by the 15 grant recipients featuring water conservation and treatment technologies and water awareness messaging, among other projects. The purpose of the program is to provide grants to colleges and universities for projects that improve technology related to water supply and delivery, water conservation, and/or sanitation programs. The grants also pay for projects that enhance community awareness of water issues. In addition to Metropolitan, program sponsors include the federal Bureau of Reclamation, the Los Angeles County Sanitation Districts, Water for People and Friends of the United Nations.

Thirty-nine teams from Southern California high schools competed in the 11th annual Solar Cup™, Metropolitan's signature high school education event held at Lake Skinner in Temecula on May 17-19, 2013. More than 800 students participated in the event, which includes water conservation as a core part of the curriculum.

Teams from 39 Southland high schools competed in the nation's largest solar powered boat competition culminating an 8-month hands-on program of energy and water resources education.

For the 20th year, the Diamond Valley Lake Education Program conducted numerous field trips engaging nearly 2,100 fourth- through seventh-graders in the all-day program. Additionally, the education program provided ongoing activities for more than 3,100 students in grades 2-5 visiting the DVL Visitor Center in collaboration with the Western Science Center outreach program.

Metropolitan's website for K-12 students drew nearly 17,000 visitors, a 41 percent rise triggered by the increased emphasis on water in the core science curriculum. Metropolitan also expanded the number of program teachers from throughout the service area involved in the water education curriculum, adding 50 new teachers.

California Friendly® Landscape Online Training

During fiscal year 2012/13, Metropolitan continued to provide online water-wise landscape training for professional landscapers and residential homeowners.

Community Partnering Program

The Community Partnering Program (CPP) continued to support water-related educational outreach on water resource issues such as conservation, water quality and watershed protection. CPP enhances consumer awareness of water resource issues and fosters collaboration with a variety of stakeholders including community organizations, public agencies, professional associations and educational institutions through sponsorships and educational support services.

By the Numbers

Communications and Outreach

(fiscal year 2012/13)

484,600 visitors
to bewaterwise.com, a website sponsored by Metropolitan that has extensive information about how to use water more efficiently

17,000 visitors
to Metropolitan's education website portal for K-12 students

5,200 students
went on tour at Diamond Valley Lake Visitor Center

39 high school teams
with more than 800 students competed in Metropolitan's annual Solar Cup program which focuses on solar energy and water conservation

41 sponsorships
under Metropolitan's Community Partnering Program

8,600 visitors
completed online California Friendly® Landscape Training course on bewaterwise.com

Local Resources

By the Numbers

Local Resources Program

2.5 million acre-feet
of recycled water and recovered degraded groundwater produced with Metropolitan's incentives since 1982

$449 million
Total incentives by Metropolitan for recycled water and groundwater recovery since 1982

Water recycling, groundwater recovery and groundwater storage are important elements in the region's diverse local resource portfolio and help bring greater water supply reliability to Southern California. Metropolitan provides financial incentives through its Local Resources Program (LRP) for the development and use of recycled water and recovered groundwater. Since the inception of the LRP in 1982, Metropolitan has provided more than $331 million to produce about 1.9 million acre-feet of recycled water. Metropolitan also provided $118 million to produce 653,000 acre-feet of recovered degraded groundwater for municipal use. Currently, Metropolitan provides financial assistance for 73 recycling projects and 23 groundwater recovery projects.

In 2013, Metropolitan launched a two-year pilot Foundational Actions Funding Program to support member agencies in conducting technical studies and pilot projects that would reduce barriers to future production of recycled water, stormwater, seawater desalination, and groundwater resources if the need arises.

Water Recycling & Groundwater Recovery

In fiscal year 2012/13, Metropolitan funding supported the production of about 178,000 acre-feet of recycled water for non-potable and indirect potable uses and about 55,000 acre-feet of recovered groundwater for municipal use. In addition, another estimated 241,000 acre-feet of recycled water, which includes approximately 106,000 acre-feet of estimated base flow recharge from the Santa Ana River, and 44,000 acre-feet of recovered groundwater were produced by local agencies through other funding sources. Figures 1 and 2 illustrate total recycled water and groundwater recovery production in Metropolitan's service area, including local agency funded projects.

Water Recycling and Groundwater Recovery

Recycling and groundwater recovery are local resources that add balance to the region's diverse portfolio of resource options. Figures 1 and 2 show the production of these local resources as the region places greater emphasis on water-use efficiency and improving basin health. While water recycling and groundwater recovery projects are developed by local water agencies, many projects receive financial incentives for water production through Metropolitan's Local Resources Program. Figure 1 includes wastewater discharged to the Santa Ana River base flow that percolates into downstream groundwater basins.

Figure 1. Regional Recycled Water Production

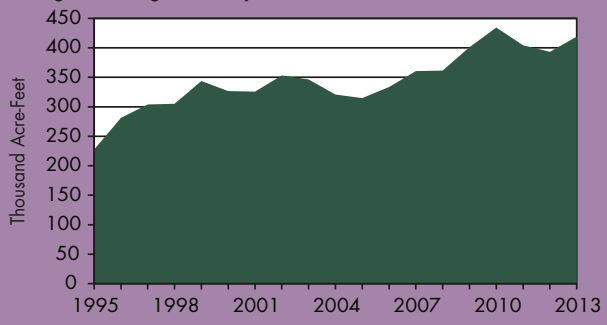
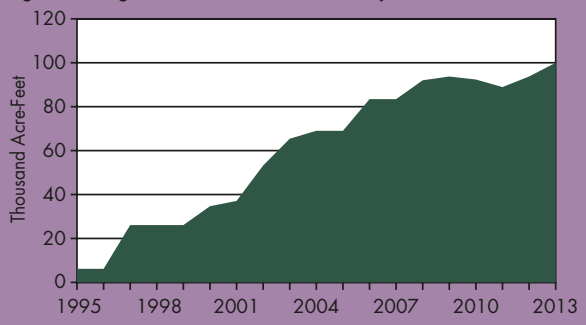


Figure 2. Regional Groundwater Recovery Production



Fiscal Year 2012/13 Local Resource Program Highlights

Metropolitan entered into agreements with local agencies for one recycled water project and one groundwater recovery project. When fully developed, they will produce about 1,175 acre-feet of recycled water and about 1,000 acre-feet of recovered groundwater, respectively.

The El Toro Water Recycling System Expansion Project will be owned and operated by El Toro Water District. The project will expand El Toro's existing recycled water distribution system. It will deliver up to 1,175 acre-feet per year of recycled water to new users for landscape irrigation in common areas, golf courses, parks, homeowners associations and a school.

The Round Mountain Water Treatment Plant Project will be owned and operated by Camrosa Water District. The project will treat up to 1,000 acre-feet per year of contaminated groundwater for potable use by California State University, Channel Islands and existing customers within Camrosa's service area. The project is part of Camrosa's Renewable Water Resource Management Program that seeks to improve local water quality through managed transport of salts out of the Calleguas Creek Watershed.

Groundwater Management

Conjunctive Use

Since the 1950s, Metropolitan's local water management strategy has included conjunctive use of surface and groundwater resources. Conjunctive use refers to the practice of storing imported surface water in groundwater basins during years when there is a surplus of supply for use in times of drought or other supply interruptions. Metropolitan currently has nine storage projects that were constructed in the 2000s specifically to increase dry-year supplies. These nine projects have nearly 212,000 acre-feet of storage capacity and can withdraw up to about 70,000 acre-feet per year during shortage years. During the 2007-2009 drought, Metropolitan extracted more than 140,000 acre-feet to meet demands. With improved water supply conditions beginning in fiscal year 2010/11, Metropolitan began to refill these accounts. As of July 1, 2013, more than 67,400 acre-feet are stored in nine conjunctive use accounts.

Foundational Actions Funding Program

As a component of the 2010 IRP Update's adaptive planning framework, Foundational Actions were identified as low-risk, low-regret actions that can be taken to help ensure the region's readiness to implement new water supply programs, should the need arise. In April 2013, Metropolitan's Board of Directors approved a two-year pilot Foundational Actions Funding (FAF) Program.

Actions proposed under the FAF Program consist of technical studies or pilot projects related to recycled water (including direct and indirect potable reuse), seawater desalination, stormwater and groundwater enhancement.

In May 2013, Metropolitan issued a Request for Proposals under the 2013 FAF Program. Under the FAF Program member agencies could request up to $500,000 of funding, which they would be required to match dollar-for-dollar with non-Metropolitan funds. In September 2013, the board authorized staff to enter into agreements for 16 proposals with a total funding level of up to $3.3 million. These proposals consist of six recycled water projects, six groundwater projects, two stormwater projects and two seawater desalination projects. Final reports for the projects are due February 2016.

Watershed Initiatives

Metropolitan is active on planning boards and organizations formed to improve watershed management and restoration. Metropolitan works with stakeholders in the Sacramento-San Joaquin Delta watershed and participates in the Greater Los Angeles County Integrated Regional Water Management Plan, the Council for Watershed Health and the Southern California Water Committee.

Integrated Regional Water Management Planning

Integrated Regional Water Management (IRWM) is a state initiative that encourages collaboration among multiple agencies, stakeholders, individuals and groups within a region generally organized around watershed boundaries to manage all aspects of water resources. IRWM groups typically consist of public agencies with water or wastewater authorities, cities, counties, special districts and non-governmental organizations that address a broad range of issues. These issues include growing water demands; water supply reliability; water quality; stormwater management; open space and habitat; and project financing. There are currently seven IRWM groups within Metropolitan's service area, and all the member agencies participate in one or more IRWM groups. Metropolitan continues to participate in the Greater Los Angeles County Region Leadership Committee as its surface water management area representative. Metropolitan also provides data and reviews, and participates in technical work groups of other IRWM groups in the service area when requested. DWR announced the draft recommendation for IRWMP grants in September 2013 and recommended more than $60 million for implementing Southern California regional projects. All the IRWM groups are preparing their IRWM Plans or are in the process of updating their previously adopted plans by Spring 2014 to be ready for the next round of state grants.

Stormwater Capture

Metropolitan's IRP identifies expanded stormwater capture as a potential resource for increased local water supply development. Existing regional stormwater capture efforts recharge about 477,000 acre-feet per year to groundwater basins in the Metropolitan service area. Studies have estimated about 1 million acre-feet per year in the region is not captured. The IRP also identifies issues and challenges needing additional study and evaluation to answer how to cost-effectively increase the capture of stormwater. These include:

- Correlations between stormwater capture, groundwater recharge and changes in groundwater production
- Costs and benefits associated with distributed and regional stormwater capture and recharge facilities
- Partnering with stormwater, flood control, water supply, water quality and groundwater management groups

Southern California Water Committee Stormwater Task Force

In January 2011, the Southern California Water Committee formed a Stormwater Task Force to bring together flood control, water supply, groundwater, water quality and environmental interests from throughout Southern California to explore common issues. Metropolitan supported the Southern California Water Committee in the formation of the task force, became a charter member and participated in its work to further stormwater as a water supply resource. The white paper – Stormwater Capture: Opportunities to Increase Water Supplies in Southern California – was published in 2012. The paper examines policies, goals and plans related to integrated stormwater management including opportunities and constraints for increased stormwater capture. Following the release of the white paper, a workshop was held in June 2012 to facilitate discussion on a range of topics including:

- Value of stormwater to local and regional water supply
- Quantification of the range of benefits achieved with stormwater capture and use
- Opportunities for partnerships among federal, state and local entities
- Funding strategies inclusive of state and federal grants, multi-benefit partnerships and stormwater fees

In June 2013, the Stormwater Task Force held a second workshop. Discussion focused on opportunities to integrate stormwater requirements for surface water quality (requirements of Municipal Separate Storm Sewer System permits) with increased capture of stormwater for local water supply. Topics addressed costs and benefits and partnering to achieve multi-purpose stormwater projects.

Los Angeles Basin Stormwater Conservation Study

The Los Angeles Basin Stormwater Conservation Study (Basin Study) is a cooperative effort among the Los Angeles County Flood Control District, the federal Bureau of Reclamation and several local agencies, including Metropolitan. The Basin Study area covers approximately 1,900 square miles and is home to about 10 million people (about one-quarter of California's population). The purpose of the Basin Study is to identify alternatives, conduct trade-off analyses and develop recommendations for bridging the gap between current and future water supplies and demands in the watersheds of the greater Los Angeles area. Its goals are to:

- Evaluate the long-term potential of existing LACFCD flood control dams, reservoirs, spreading grounds, and other interrelated facilities to conserve increased amounts of stormwater for water supply.
- Analyze the potential for new facilities and operational changes to capture increased stormwater volumes for water supply.

Work began on the $2.4 million Basin Study in December 2012, and is expected to be complete by May 2015. To date, Metropolitan has participated in scoping and technical advisory sessions.

Council for Watershed Health

Metropolitan has been partnering with the Council for Watershed Health since 2000 in various research studies and educational outreach efforts related to improving water supply reliability, water quality and promotion of water-use efficiency. The council functions as a forum for coordination of multi-stakeholder watershed protection, planning and management activities. Currently the council has four programs: urban stormwater, sustainable landscape, watershed coordination and watershed monitoring. Metropolitan provides staffing support to the council's sustainable landscape program, which focuses on California Friendly® landscaping and promoting water conservation ethics. In addition, Metropolitan has been active in technical project oversight groups conducting research under the urban stormwater program. These groups investigate water supply potential and water quality gains from stormwater capture and management.

The Lower Colorado River Multi-Species Conservation Program

The Lower Colorado River Multi-Species Conservation Program (LCR MSCP) was created to balance the use of Colorado River water resources with the conservation of native species and their habitats. The program works toward the recovery of species currently listed under the Endangered Species Act (ESA). Implemented over a 50-year period, the program accommodates current water diversions and power production, and will optimize opportunities for future water and power development by providing ESA compliance through the implementation of a Habitat Conservation Plan. The program area extends over 400 miles of the lower Colorado River from Lake Mead to the southernmost border with Mexico, and includes lakes Mead, Mohave, and Havasu, as well as the historic 100-year floodplain along the main stem of the lower Colorado River.

The Bureau of Reclamation is the implementing agency for the LCR MSCP. Input and oversight is provided by a steering committee comprised of 57 entities that include state and federal agencies, water and power users, municipalities, Native American tribes, conservation organizations, and other interested parties. Program costs are evenly divided between the federal government and non-federal partners. Metropolitan is the largest non-federal contributor to the program budget.

Metropolitan is a voting member of the steering committee and is actively involved in the development of the annual work plans and budget. On behalf of the other participating California agencies, Metropolitan administers two funds related to the LCR MSCP: the Habitat Maintenance Fund and the Remedial Measures Fund.

By the Numbers

Delta Watershed

25 million Californians
use water that passes through the Delta

12 million visitors
come to the Delta for recreation each year

500 million tons
of cargo is transported through the Delta each year

7 million acres
of farmland are irrigated in the Delta, producing 45 percent of the nation's fruits and vegetables

Sacramento-San Joaquin Delta Watershed

The Sacramento-San Joaquin Delta watershed is an important source of water supply delivered to Southern California through the State Water Project. A healthy Delta watershed ensures regional water supply reliability. Metropolitan continues to work with agencies and stakeholders throughout the Delta watershed to conduct studies and develop policies and programs to restore the ecosystem and protect Delta water quality for drinking water uses and aquatic wildlife.

Metropolitan participates in the Bay Delta Conservation Plan (BDCP) process, which is a voluntary collaboration of state, federal and local water agencies; state and federal fish and wildlife agencies; environmental organizations; and other interested parties. The BDCP's purpose is to develop a long-term plan for restoration of Delta ecosystems and recovery of sensitive species and their habitats in a way that also will enhance water supply reliability.

The revised administrative drafts of the BDCP and associated environmental review documents were released in spring 2013 for information sharing. The state and federal agencies released the public draft BDCP and accompanying environmental documents in December 2013 for formal public review.

Metropolitan continued to support the state Department of Water Resources' Municipal Water Quality Investigations (MWQI) Program, which implements water quality monitoring and special studies in the Delta and its tributaries. These investigations help to develop a better understanding of how constituents of concern appear in Delta waters and how drinking water quality is impacted. In fiscal year 2012/13, this program continued to operate five real-time water quality stations and expanded modeling tools in support of water quality forecasting activities.

Metropolitan continued to work on a multi-year effort with several agencies and stakeholder groups to develop a drinking water policy for surface waters in the Delta watershed. In February 2013, the Central Valley Regional Water Quality Control Board released the proposed Drinking Water Policy Basin Plan amendment for public review. The plan includes a narrative water quality objective for pathogens and water quality monitoring recommendations, which will help protect source water quality in the Delta watershed. In July 2013, the Central Valley Regional Water Quality Control Board adopted the amendment.

Metropolitan also continued to work with the state and federal water contractors to support studies and regulatory decisions addressing the impacts of nutrients and ammonia in the Delta watershed and the impact of nutrients on the Delta food web.

In addition to involvement in research efforts and studies, Metropolitan supported and financially assisted the Battle Creek Salmon and Steelhead Restoration Project, which began in fall 2010. This federal project is one of the largest cold-water fish restoration efforts in North America. It is being supported through federal, state and private funding. The project will open almost 50 miles of winter-, spring- and late fall-run salmon and steelhead habitat in the Sacramento River watershed. Construction is anticipated to be completed by 2016.

Ethics Office

Established by special legislation enacted in 2000, the Ethics Office is responsible for promoting a transparent and ethical culture at Metropolitan by proposing and administering Metropolitan's ethics-related regulations and providing advice and education to the Metropolitan community.

The Ethics Office maintains services to facilitate the reporting of potential violations of Metropolitan's ethics rules. For those who wish to remain anonymous, the Ethics Office maintains a hotline through an independent third-party vendor, which accepts anonymous reports of potential violations by directors, officers or employees.

The Ethics Office is responsible for conducting independent investigations of potential violations, including areas such as conflicts of interest, contracts, gifts, lobbying and campaign contributions. The Ethics Office must maintain procedures to protect the job security of individuals bringing allegations of ethics violations, the confidentiality of sources, and the due process rights of individuals under investigation. In addition the office must make available to the public the results of investigations, subject to any exceptions under the California Public Records Act or other applicable laws.

Ethics Office personnel routinely hold outreach events at various Metropolitan's facilities to increase awareness of the office and its ability to address ethics-related concerns and questions. During fiscal year 2012/13, the Ethics Office received approximately 100 communications requesting advice or reports of potential ethics-related violations.

The Ethics Office is also responsible for maintaining records regarding compliance with state-mandated ethics provisions, including state-mandated ethics training and sexual harassment prevention training. In addition to maintaining records of compliance, Ethics Office personnel track renewal requirements for directors and assist them with finding resources through which to access these trainings.

In November 2012, Metropolitan appointed a new Ethics Officer, Deena R. Ghaly, former director of enforcement at the Los Angeles City Ethics Commission. The new Ethics Officer has undertaken a comprehensive assessment of the Ethics Office's programs, policies and procedures, and is in the process of introducing a series of initiatives for consideration by Metropolitan's Board of Directors.

Public Hearing

In accordance with section 130.5 of the MWD Act, Metropolitan held a public hearing on Dec. 9, 2013 to receive comment on the draft annual report on achievements in conservation, recycling and groundwater recharge with an emphasis on fiscal year 2012/13. The following individuals provided comments at the public hearing:

- Anita Matlock, area specification manager, Rain Bird Corporation
- Kevin Shore, energy efficiency program operations manager, Southern California Gas Company
- Conner Everts, executive director, Southern California Watershed Alliance
- Nancy Steele, executive director, Council for Watershed Health
- Delon Kwan, engineer, City of Los Angeles Department of Water and Power
- Richard Hansen, general manager and chief engineer, Three Valleys Municipal Water District
- Randy A. Record, Metropolitan Board Member, Eastern Municipal Water District
- Keith Lewinger, Vincent Mudd, Fern Steiner, and Doug Wilson, Metropolitan Board Members, San Diego County Water Authority (written comments submitted)

Transcriptions of comments received at the public hearing are on file at Metropolitan and available upon request.

Glossary

Acre-foot: The amount of water that would cover one acre of land, one foot deep. An acre-foot is 325,851 gallons. On average, an acre-foot supplies five to seven people in Southern California for one year.

Bewaterwise.com®: A website sponsored by Metropolitan that has extensive information on water-use efficiency.

California Friendly®: A program that encourages Southern California residents to make their homes California Friendly by using native and drought-tolerant plants, smart irrigation systems and water-wise appliances that meet certain efficiency standards.

Community Partnering Program: A Metropolitan program that provides funding for water-related, educational outreach on regional water resource issues, such as conservation, watershed protection or water quality.

Conjunctive Use: The storing of imported water in a local aquifer, in conjunction with groundwater, for later retrieval and use.

Groundwater Recovery: The extraction and treatment of groundwater making it usable for a variety of applications by removing chemicals and/or high levels of salts.

HECW (High-efficiency clothes washers): Washing machines that use less water than conventional washers; most are included in Metropolitan's incentive programs.

HET (High-efficiency toilet): Newer generation toilets that on average use about 1.28 gallons per flush, saving about 8,000 gallons per year.

IRP (Integrated Water Resources Plan): Metropolitan's plan to ensure reliable water delivery to its member agencies amid population growth, dry spells and droughts. The IRP portfolio includes water storage, conservation, best management practices, recycling, desalination and groundwater recovery, among others.

LRP (Local Resources Program): Metropolitan's funding mechanism for local recycling and groundwater recovery projects with member agencies.

Potable/Non-Potable: Drinkable and non-drinkable water, respectively, according to California Department of Public Health standards.

Replenishment: The delivery of Metropolitan water supplies to member agencies to replenish local groundwater basins, when supply and system conditions are favorable.

Smart Controllers (weather-based irrigation controllers): Smart controllers that adjust automatically to current weather conditions, increasing efficiency of irrigation systems.

Watershed: A region from which water drains or runs off to a river or a stream.

MWD Act

Sections 130.5 and 130.7 of The Metropolitan Water District Act

Added by Statutes of 1999, Chapter 415 (Senate Bill 60 (Hayden))

130.5. (a) The Legislature finds and declares all of the following:

(1) The Metropolitan Water District of Southern California reports that conservation provides 7 percent of its "water resource mix" for 1998, and conservation is projected to provide 13 percent of its total water resources by 2020.

Conservation, water recycling, and groundwater recovery combined, provide 12 percent of the district's total water resources for 1998 and those water resources are projected to increase to 25 percent of the district's total water resources by 2020.

(2) It is the intent of the Legislature that The Metropolitan Water District of Southern California expand water conservation, water recycling, and groundwater recovery efforts.

(b) The Metropolitan Water District of Southern California shall place increased emphasis on sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures.

(c) The Metropolitan Water District of Southern California shall hold an annual public hearing, which may be held during a regularly scheduled meeting of the Board of Directors of The Metropolitan Water District of Southern California, during which the district shall review its urban water management plan, adopted pursuant to Part 2.6 (commencing with Section 10610) of Division 6 of the Water Code, for adequacy in achieving an increased emphasis on cost-effective conservation, recycling, and groundwater recharge in accordance with this section.

The Board of Directors of The Metropolitan Water District of Southern California may modify any ongoing program as necessary to meet that requirement, consistent with the district's urban water management plan.

(d) The district shall invite to the hearings knowledgeable persons from the fields of water conservation and sustainability, and shall consider factors of availability, water quality, regional self-sufficiency, benefits for species and environment, the totality of life-cycle costs, including avoided costs, and short- and long-term employment and economic benefits.

(e) On or before February 1, 2001, and on or before each February 1 thereafter, The Metropolitan Water District of Southern California shall prepare and submit to the Legislature a report on its progress in achieving the goals of increased emphasis on cost-effective conservation, recycling, and groundwater recharge in accordance with this section, and any recommendations for actions with regard to policy or budget matters to facilitate the achievement of those goals.

(f) Nothing in this section shall diminish the authority of The Metropolitan Water District of Southern California pursuant to Section 25 or any other provision of this act, or otherwise affect the purposes of The Metropolitan Water District of Southern California as described in existing law.

130.7. (a) The Metropolitan Water District of Southern California, in cooperation with the following entities, shall participate in considering programs of groundwater recharge and replenishment, watershed management, habitat restoration, and environmentally compatible community development utilizing the resource potential of the Los Angeles River, the San Gabriel River, or other southern California rivers, including storm water runoff from these rivers:

(1) Member public agencies whose boundaries include any part of the Los Angeles River, the San Gabriel River, or any other river in southern California.

(2) The Water Replenishment District of Southern California.

(3) Local public water purveyors and other appropriate groundwater entities.

(4) The County of Los Angeles.

(5) The United States Army Corps of Engineers.

(b) Nothing in this section affects the powers and purposes of the Water Replenishment District of Southern California or any other groundwater management entity, the County of Los Angeles, local public water purveyors, or the United States Army Corps of Engineers.

Metropolitan's Member Agencies

Joined Metropolitan
December 6, 1928

Joined Metropolitan
December 6, 1928

Joined Metropolitan
December 6, 1928

Joined Metropolitan
December 14, 1960

Joined Metropolitan
November 12, 1954

Joined Metropolitan
June 23, 1931

Joined Metropolitan
October 16, 1950

Joined Metropolitan
January 15, 1953

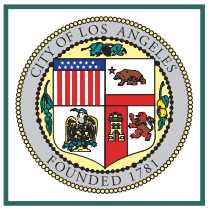
Joined Metropolitan
February 27, 1931

Joined Metropolitan
December 6, 1928

Joined Metropolitan
November 26, 1951

Joined Metropolitan
December 1, 1960

Joined Metropolitan
February 27, 1931



Joined Metropolitan
December 6, 1928

Joined Metropolitan
November 26, 1951

Joined Metropolitan
December 6, 1928

Joined Metropolitan
December 17, 1946

Joined Metropolitan
November 12, 1971

Joined Metropolitan
December 6, 1928

Joined Metropolitan
December 6, 1928

Joined Metropolitan
December 6, 1928

Joined Metropolitan
November 15, 1950

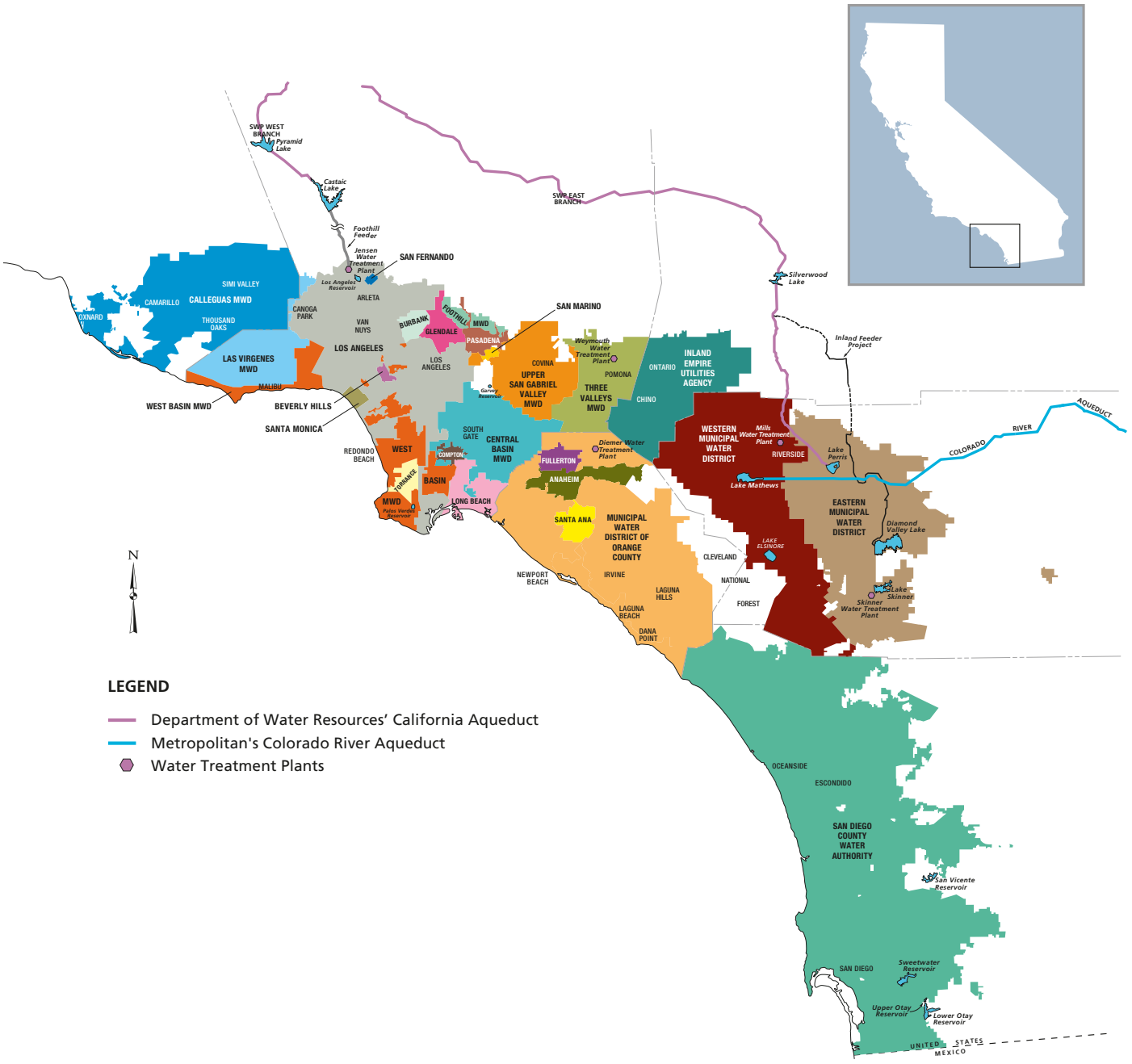
Joined Metropolitan
February 27, 1931

Joined Metropolitan
March 27, 1963

Joined Metropolitan
July 23, 1948

Joined Metropolitan
November 12, 1954

Metropolitan's Service Area



LEGEND

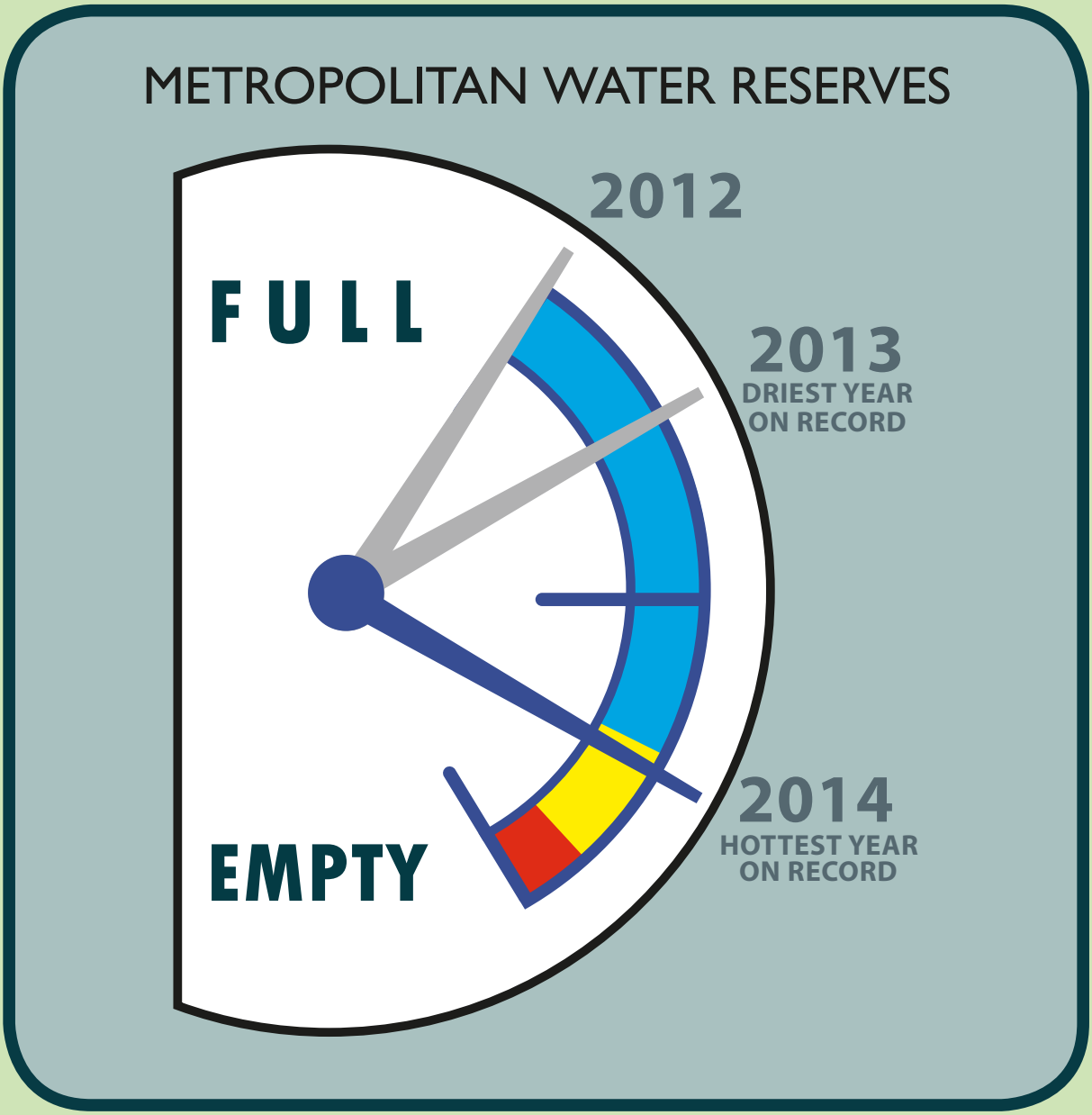
- Department of Water Resources' California Aqueduct
- Metropolitan's Colorado River Aqueduct
- Water Treatment Plants

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

mwdh2o.com

bewaterwise.com

RESPONDING TO DROUGHT



THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

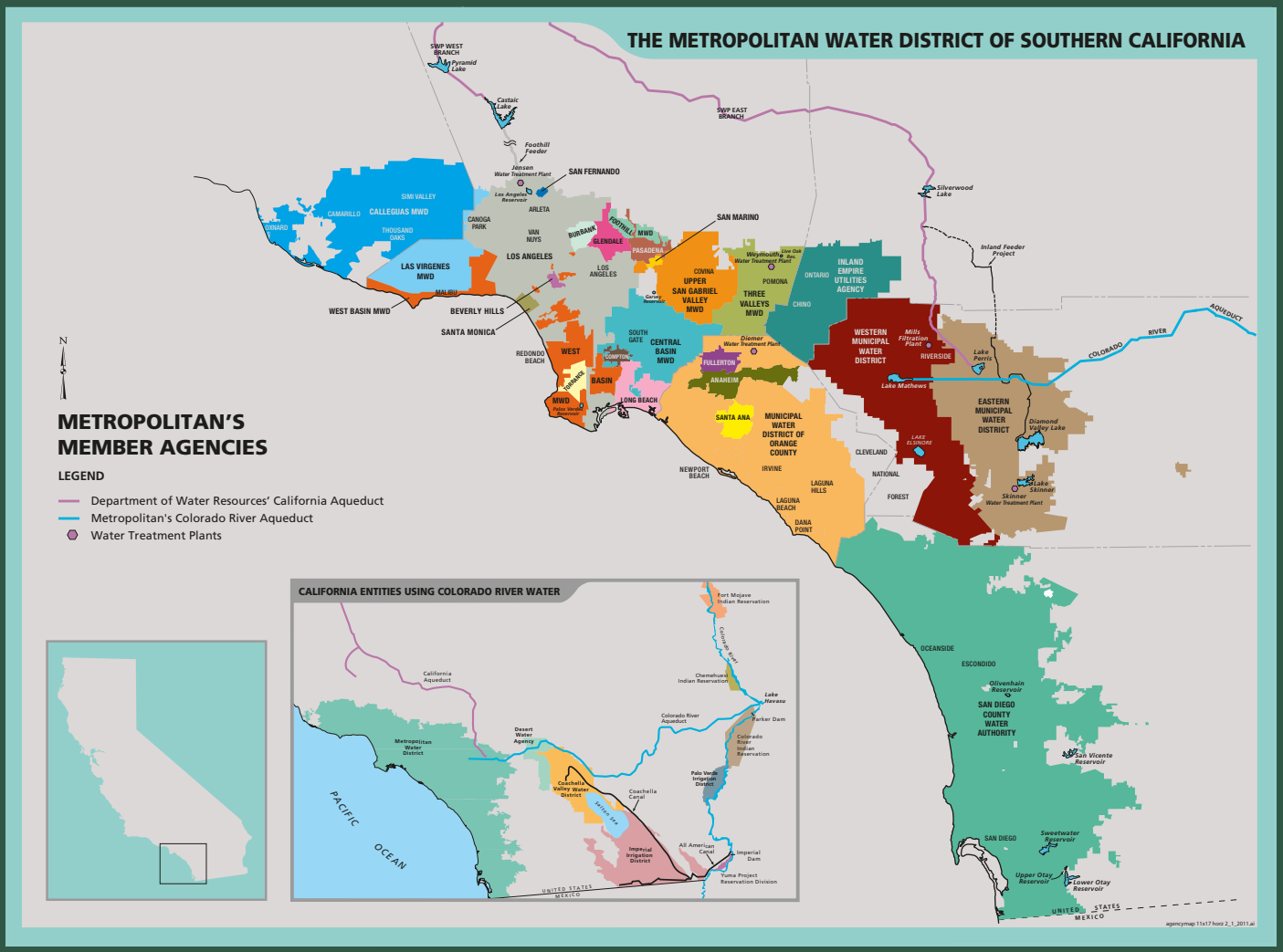
Regional Progress Report

An Annual Report to the California State Legislature on Achievements in Conservation, Recycling and Groundwater Recharge

2015

FEBRUARY

Covering the reporting period of July 2013 - June 2014



About Metropolitan

The Metropolitan Water District of Southern California was established in 1928 under an act of the State Legislature to provide supplemental water supplies to its member agencies in Southern California.

Metropolitan is a public agency and a regional water wholesaler. It is governed by a 37-member board of directors representing 26 member agencies that purchase some or all of their water from Metropolitan and serve about 19 million people across six Southern California counties.

The mission of Metropolitan is to provide its 5,200-square-mile service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Metropolitan draws supplies from the Colorado River through the Colorado River Aqueduct, which it owns and operates; from Northern California via the State Water Project; and from local programs and transfer arrangements. An increasing percentage of Southern California's water supply comes from conservation, water recycling and recovered groundwater, which are further described in this report.

Cover Graphic: The reserve gauge is an image used throughout Metropolitan's educational campaign to convey the seriousness of the drought.

About This Report

Achievements in conservation, recycling and groundwater recharge have been chronicled in this report since the enactment of California Senate Bill 60 (SB60) in 1999. SB60 added Section 130.5 to the Metropolitan Water District Act (MWD Act) which states, "The Legislature finds and declares... The Metropolitan Water District of Southern California shall place increased emphasis on sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures." According to the MWD Act, Metropolitan is to prepare and submit to the Legislature by February 1 of each year a report on Metropolitan's progress in achieving these goals. To coincide with the preparation of the report, the MWD Act requires Metropolitan to "hold an annual public hearing... during which the district shall review its urban water management plan... for adequacy in achieving an increased emphasis on cost-effective conservation, recycling, and groundwater recharge." While the Regional Urban Water Management Plan is prepared and updated every five years according to state requirements (with the next update due in 2016), Metropolitan hosts an annual December hearing to share progress on fiscal year plan objectives, and to receive public comments.

Introduction

The Metropolitan Water District of Southern California (Metropolitan) prepares this report to the state Legislature to provide an update on achievements in water conservation, recycling and groundwater recharge. It details Metropolitan's progress in advancing these supply strategies and broadening the district's supply mix.

Conservation

Metropolitan and its member agencies have long been leaders in water conservation. In general, conservation is encouraged with financial incentives and a tiered pricing structure, outreach and education programs, and support for new plumbing codes and other regulations that facilitate water savings. In fiscal year 2013/14, the region saved about of 923,000 acre-feet of water. Rebates funded through Metropolitan's Conservation Credits Program generated approximately 9,000 acre-feet of new water savings in fiscal year 2013/14. Since 1990, Metropolitan has invested more than $352 million in conservation.

Fiscal Year 2013/14 Program Highlights

- Metropolitan provided $18.6 million in rebates to help water customers improve water-use efficiency in their homes and businesses.
- Metropolitan doubled its annual conservation and outreach budget from $20 million to $40 million for fiscal year 2014/15.
- Metropolitan adopted a Water Supply Alert Resolution in February 2014 calling on its member agencies, retail water agencies, and cities in Southern California to implement extraordinary conservation measures, enforce water waste ordinances, and develop a unified message to reduce water demand.
- Metropolitan implemented the Public Agencies Landscape Program that provides financial incentives to Southern California public agencies to improve outdoor irrigation with water-efficient products.
- Metropolitan implemented the Recycled Water Hookup Pilot Program that provides financial incentives to help residential and business customers convert from potable water to recycled water systems to reduce outdoor potable demand.
- Metropolitan began an intensive outreach program informing residents of the drought and opportunities to use less water.
- Metropolitan increased the rebates on many water-efficient devices to encourage additional conservation. Rebates for replacing turf grass with a more sustainable landscape were doubled.

Residential Conservation Programs

Residential customers can receive rebates from Metropolitan through its SoCal Water$mart program and from programs administered and funded by member agencies. For fiscal year 2013/14, Metropolitan estimates savings of about 4,990 acre-feet of new water with rebates issued through the residential conservation programs.

SoCal Water$mart

Launched in 2008, SoCal Water$mart provides rebates to residential customers to encourage the use of water-efficient products. Current program rebates include turf removal, high-efficiency clothes washers, high-efficiency toilets, multi-stream rotary sprinkler nozzles and weather-based irrigation controllers. Metropolitan estimates savings of about 3,000 acre-feet of water from 45,000 rebates issued through the region-wide residential program in fiscal year 2013/14.

Turf removal

Metropolitan's turf removal program provides residential and commercial customers with financial incentives to replace their turf lawns with California Friendly® landscapes. In January 2014, Metropolitan added Turf Removal to the SoCal Water$mart Regional Program, making it available to customers throughout our service area. In addition, as an emergency drought response, Metropolitan doubled the base rebate for customers to $2 per square foot of turf removed. Coupled with additional member agency contributions, many residents can receive up to $3 per square foot of turf removed. Over 21 million square feet have been permanently removed under this program to date. In fiscal year 2013/14, Metropolitan estimates savings of about 530 acre-feet of water annually from 4 million square-feet of turf removed.

High-efficiency clothes washers

High-efficiency clothes washers (HECW) with a water factor 4.0 are eligible to receive rebates. The water factor is the measure of the amount of water used to wash a standard load of laundry. An HECW saves more than 10,000 gallons per washer per year over a conventional top loading clothes washer. In fiscal year 2013/14, Metropolitan estimates about 870 acre-feet of water savings annually from HECW rebates. Metropolitan supplements its HECW rebate using state or federal grants when they are available.

High-efficiency toilets

To qualify for rebates, Metropolitan uses the federal Environmental Protection Agency's WaterSense list of high-efficiency toilet (HET) models that use approximately 20 percent less water per flush than the conventional ultra-low-flush toilets. Metropolitan estimates savings of about 3,150 acre-feet of water annually from HET rebates that were issued for both residential and commercial customers in fiscal year 2013/14.

Member Agency Residential Programs

Metropolitan provides funding to member agencies for water conservation programs. Member agencies receive Metropolitan incentives for qualified water-saving activities. Qualifying residential projects included turf removal, toilet distribution and replacement programs, direct-installation clothes washer programs and residential water audits. Member agency residential programs were estimated to save about 1,990 acre-feet of water annually with Metropolitan funding of about $2.4 million in fiscal year 2013/14.

Commercial Conservation Programs

Metropolitan's commercial conservation programs provide rebates for water-saving devices to businesses and institutions throughout Southern California. The programs are comprised of SoCal Water$mart, member agency commercial programs, and the Water Savings Incentive Program. Metropolitan estimates savings of about 4,020 acre-feet of water annually from new rebates issued by commercial conservation programs in fiscal year 2013/14.

SoCal Water$mart and Member Agency Commercial Programs

The commercial programs provide rebates for high-efficiency devices for businesses and institutions. The majority of commercial conservation activity came from Metropolitan's SoCal Water$mart program. In addition, Metropolitan's member and retail water agencies also implemented water conservation programs for commercial sectors using Metropolitan incentives. Metropolitan estimates savings of about 2,280 acre-feet from 6,440 new rebates issued through SoCal Water$mart in fiscal year 2013/14. In fiscal year 2013/14, Metropolitan also estimates savings of about 1,630 acre-feet of water annually from member agency incentive programs. Qualifying commercial projects have included turf removal, direct installation of high-efficiency toilets and multi-stream rotating nozzle distribution.

Water Savings Incentive Program

The Water Savings Incentive Program is a regional pay-for-performance program that is a collaborative effort between Metropolitan, its member agencies, and large water customers to improve water-use efficiency in the commercial, industrial, institutional, agricultural, and large landscape sectors. In fiscal year 2013/14, Metropolitan estimates savings of about 110 acre-feet of water annually.

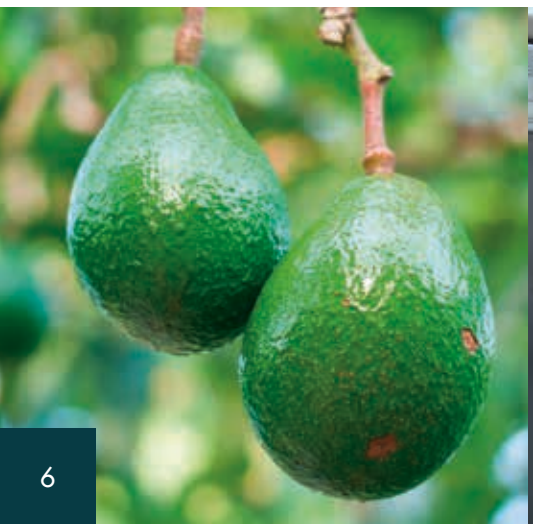
Research and Development

Innovative Conservation Program

Metropolitan's Innovative Conservation Program is a competitive grant program that evaluates water savings and reliability of new water-savings devices, technologies and strategies. New projects are identified and evaluated every other year. With funding provided by the federal Bureau of Reclamation, Central Arizona Project, and Southern Nevada Water Authority approximately $450,000 were available in 2013 funding cycle for research. Examples of projects funded include soil amendments, water audit mobile applications, home grey water systems, soil moisture sensors, and agricultural irrigation improvements.

In addition to the Innovative Conservation Program, Metropolitan has taken the following research actions to advance the field of knowledge in water-use efficiency:

- Studying the performance of multi-stream rotary nozzles
- Developing performance benchmarks for landscape irrigation technology with the Center for Irrigation Technology at California State University, Fresno
- Studying the effects of drought and salinity on turf grasses with the California Turfgrass and Landscape Foundation and the Turfgrass Research Facility at University of California, Riverside
- Completing a study on retention rates of waterless urinals in Metropolitan's service area
- Completing a study on the water savings from turf replacement



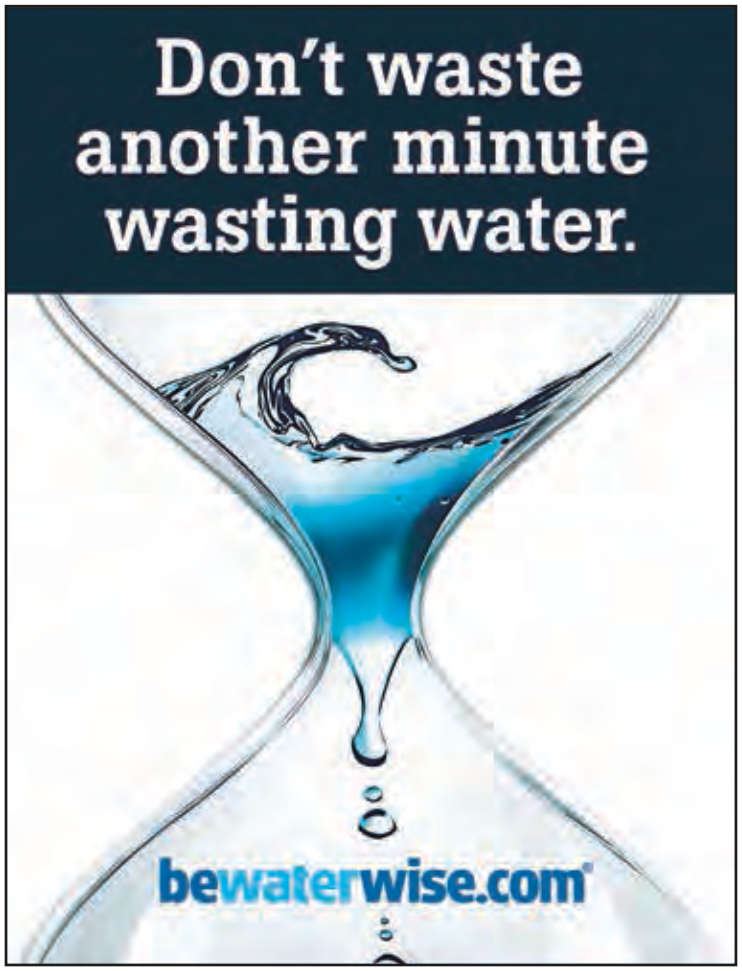
Communications and Outreach

Metropolitan sponsored conservation-related educational outreach efforts and programs throughout its service area during fiscal year 2013/14. In cooperation with the district's 26 member public agencies, Metropolitan launched a multi-pronged research-based public outreach and advertising campaign in late April 2014 that ran through October 2014 to promote the need to conserve water during the historic, ongoing drought. The ad buy is part of the $5.5 million authorized by Metropolitan's Board of Directors in March 2014 for a regional communications, outreach and advertising campaign. The campaign tag line "*Don't Waste Another Minute Wasting Water*" reinforces the immediate nature of the action that residents need to take – and emphasizes the seriousness of the drought. The comprehensive campaign educates residents through television and radio advertisements and traffic report sponsorships, along with online, streaming radio and mobile ads, plus focused billboard and movie theater advertising. In addition to English, radio advertisement and traffic report sponsorships were also featured in Spanish, Mandarin, Cantonese, Vietnamese, and Korean stations. Many of the campaign tools, such as television and radio ads and graphics for bill inserts, billboards, and websites, were made available to local agencies at no cost.

Metropolitan placed several "advertorial" news stories in the online editions of the Los Angeles Times and UT-San Diego newspapers promoting the ongoing need for conservation in Southern California, describing long-term investments in water storage and development of local water resources, and the availability of rebates and incentives for turf removal and purchase of water-saving devices and appliances.

In 2014, Metropolitan began a focused outreach effort for leading businesses and industries that are high-volume water use customers within Metropolitan's service area. Metropolitan's executive management met with executives in the beverage, bottling, aerospace, tourism, and golf industries to discuss Southern California's water outlook, the need for conservation, and key policy issues.

Metropolitan's Bewaterwise.com® website continues to play a key role in educating the public, attracting 726,371 unique visitors from July 1, 2013 through June 30, 2014. The website includes a new page focused on the drought and enhanced information on Metropolitan's rebate and incentive programs. Metropolitan also provides a Spanish language version of the site to help educate and inform the region's Spanish-speaking population.



Community Outreach

Metropolitan continues to maintain a strong presence in community water resource education and conservation awareness activities and events. Metropolitan cosponsored and staffed booths at numerous water-awareness conferences and other educational events throughout its six-county service area.

Education Programs

During fiscal year 2013/14, the Southern California World Water Forum College Grant Program concluded the third funding cycle. The 15 college projects focused on the research of water-use efficient technology and communications strategies related to water quality, supply, delivery and sanitation. In addition to Metropolitan, program sponsors include the federal Bureau of Reclamation, the Sanitation Districts of Los Angeles County, Water For People, and Friends of the United Nations.

Forty teams from Southern California high schools competed in the 12th annual Solar Cup™ event held at Lake Skinner in Temecula on May 16-18, 2014. More than 650 students participated in this event, which includes water conservation as a core part of the curriculum.

For the 21st year, the Diamond Valley Lake Education Program conducted numerous field trips engaging nearly 2,100 fourth- through seventh-graders in the all-day program. Additionally, the education program provided ongoing activities for more than 2,640 students in grades 2-5 visiting the DVL Visitor Center in collaboration with the Western Science Center outreach program.

Metropolitan's website for K-12 students drew more than 34,700 visitors, about a 90 percent rise from the previous year due to current drought conditions. Metropolitan added 25 new teachers to its education program database.

Community Partnering Program

The Community Partnering Program continued to support water-related educational outreach on water resource issues such as conservation, water quality and watershed protection. CPP enhances consumer awareness of water resource issues and fosters collaboration with a variety of stakeholders including community organizations, public agencies, professional associations and educational institutions through sponsorships and educational support services.

California Friendly® Online Training

Metropolitan provides online water-wise landscape training for professional landscapers and residential homeowners. Metropolitan offers classes to homeowners at no cost on water-wise gardening. During fiscal year 2013/14, 129 classes were held in cooperation with local water agencies, with 4,167 participants.

Local Resources

Water recycling, groundwater recovery and groundwater storage are important elements in the region's diverse local resource portfolio and help bring greater water supply reliability. Metropolitan provides financial incentives through its Local Resources Program (LRP) for the development and use of recycled water and recovered groundwater. Since the inception of the LRP in 1982, Metropolitan has provided $356 million to produce about 2 million acre-feet of recycled water. Metropolitan also provided approximately $125 million to produce 729,000 acre-feet of recovered degraded groundwater for municipal use. So far, there are 75 water recycling projects and 24 groundwater recovery projects in the program.

Water Recycling and Groundwater Recovery

In fiscal year 2013/14, Metropolitan's funding supported the production of about 180,000 acre-feet of recycled water for non-potable and indirect potable uses and about 68,000 acre-feet of recovered groundwater for municipal use. In addition, another 267,000 acre-feet of recycled water, which includes 94,000 acre-feet of the base flow recharge from the Santa Ana River and 64,000 acre-feet of recovered groundwater, were produced by local agencies through other funding sources.

Fiscal Year 2013/14 LRP Highlights

Metropolitan launched the On-site Retrofit Pilot Program to provide financial incentives to property owners to convert their potable water systems to recycled water. The program, budgeted at $7.5 million over three years, is open to commercial, industrial and irrigation users.

Metropolitan also entered into agreements with local agencies for two recycled water projects and one groundwater recovery project. When fully developed, they will produce about 3,600 acre-feet of recycled water and about 250 acre-feet of recovered groundwater, respectively.

- The Leo J. Vander Lans Water treatment Facility Expansion Project will be owned and operated by Water Replenishment District and operated by City of Long Beach. This project will increase recycled water use for the Alamitos Seawater Barrier by about 3,475 acre-feet per year.
- The Recycling Demonstration Project is owned and operated by the city of Anaheim. This project will provide up to 110 acre-feet per year of recycled water for landscape irrigation in downtown Anaheim, as well as for toilet flushing in one of the city's office buildings. In addition, this project will be a showcase and an educational facility for students and general public on recycled water treatment and use.
- The Cal Poly Pomona Water Treatment Plant Project will be owned and operated by California State Polytechnic University, Pomona. The project will treat up to 250 acre-feet per year of contaminated groundwater for potable use within the university.

Groundwater Management

Metropolitan partners with local agencies to store imported surface water in groundwater basins for use in times of shortage under conjunctive use agreements. Metropolitan currently has nine storage projects with nearly 212,000 acre-feet of storage capacity and can withdraw up to about 70,000 acre-feet per year during shortage years. In spring 2014, Metropolitan requested nearly 40,000 acre-feet to be produced from these storage accounts over a 15-month period through 2015.

Foundational Actions Funding Program

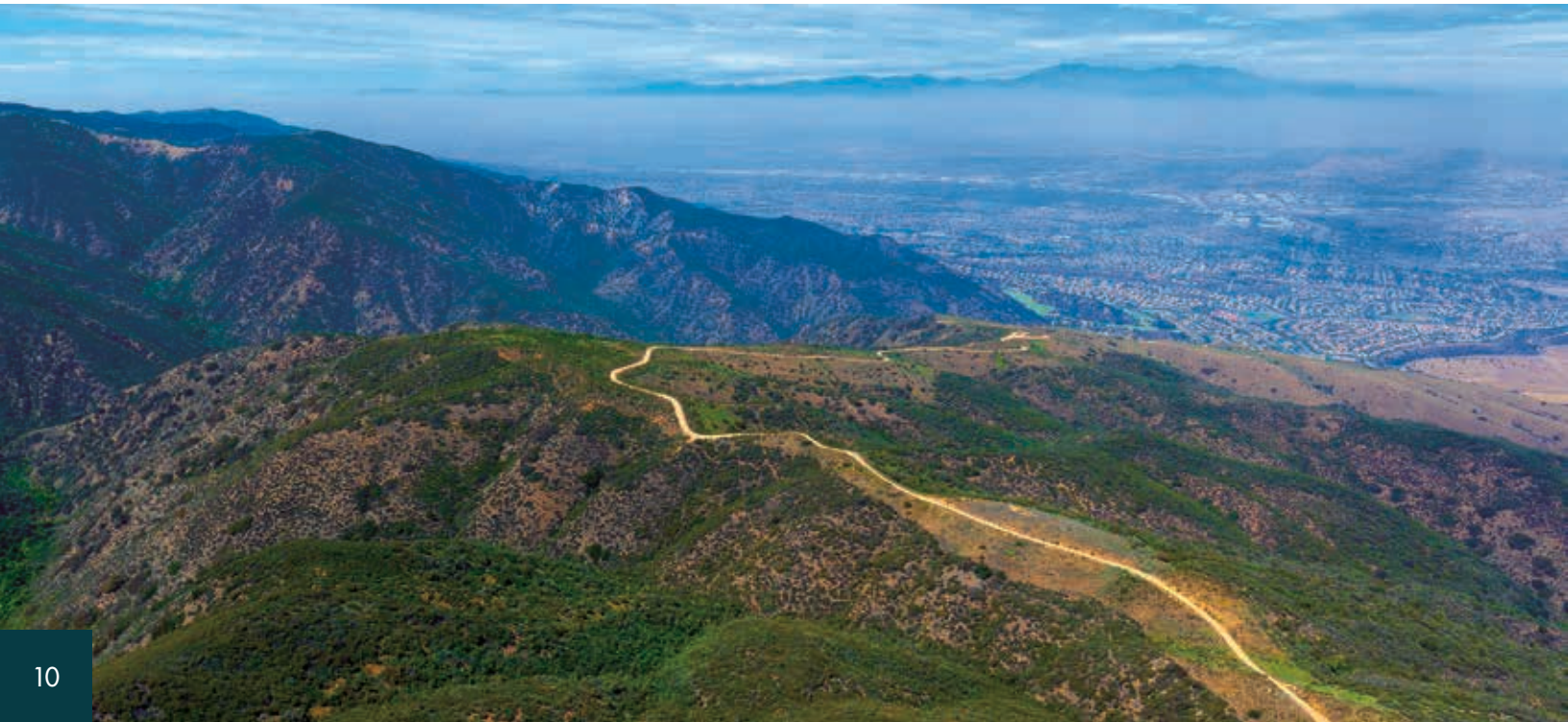
In April 2013, Metropolitan's Board of Directors approved a two-year pilot Foundational Actions Funding Program to address regional funding needs for actions that reduce barriers to future water resource production. The program is open to Metropolitan's member agencies. Proposed actions consist of technical studies or pilot projects related to recycled water, seawater desalination, stormwater, and groundwater enhancement. Metropolitan entered into thirteen contracts for technical studies and pilot projects totaling $3 million in matching funds. These projects are currently underway, and final results are due to Metropolitan in early 2016.

Watershed Initiatives

Metropolitan is active on planning boards and organizations formed to improve watershed management and restoration. Metropolitan works with stakeholders from the following organizations:

Local Organizations

Integrated Regional Water Management: Metropolitan continues to participate in the Greater Los Angeles County Region Leadership Committee as its surface water management area representative. The Greater Los Angeles County Region IRWM Leadership Committee submitted applications $27.2 million in Drought Grant funding from Proposition 84 for local projects totaling over $184 million. **Southern California Water Committee Stormwater Task Force:** Metropolitan hosted the third annual workshop in June 2014 to discuss lessons learned through the Municipal Separate Storm Sewer System permit process, funding strategies and legislation opportunities. **The Los Angeles Basin Stormwater Conservation Study:** The $2.4 million study is a cooperative effort among the Los Angeles County Flood Control District, the federal Bureau of Reclamation and several local agencies, including Metropolitan. The Basin Study, expected to be complete by May 2015, identifies alternatives, conducts trade-off analyses and develops recommendations for meeting future water demands in the watersheds. **Council for Watershed Health:** Metropolitan has been partnering with the Council for Watershed Health since 2000 in various research studies and educational outreach efforts related to improving water supply reliability, water quality and promotion of water-use efficiency. Currently, the council has four programs: urban stormwater, sustainable landscape, watershed coordination, and watershed monitoring.



Water Recycling and Groundwater Recovery

Recycling and groundwater recovery are local resources that add balance to the region's diverse portfolio of resource options. Figures 1 and 2 show the production of these local resources as the region places greater emphasis on water-use efficiency and improving basin health. While water recycling and groundwater recovery projects are developed by local water agencies, many projects receive financial incentives for water production through Metropolitan's Local Resources Program. Figure 1 includes treated wastewater discharged to the Santa Ana River base flow that percolates into downstream groundwater basins.

Figure 1. Regional Recycled Water Production

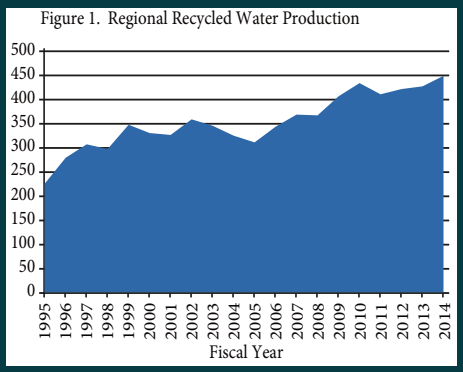
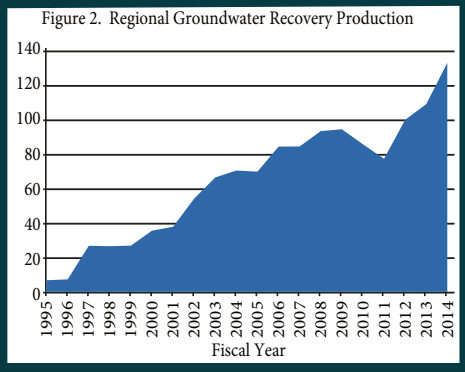


Figure 2. Regional Groundwater Recovery Production



Colorado River

Lower Colorado River Multi-Species Conservation Program: The program was created to balance the use of Colorado River water resources with the conservation and recovery of native species and their habitats. Metropolitan is actively involved in developing the annual work plans and budget and administers the Habitat Maintenance Fund and the Remedial Measures Fund.

Sacramento-San Joaquin Delta

Bay Delta Conservation Plan: Metropolitan participates in the BDCP process and continues to work with agencies and stakeholders throughout the Delta watershed to restore the ecosystem and to protect Delta water quality for drinking water uses and aquatic wildlife. **Municipal Water Quality Investigations Program:** Metropolitan continues to support the state Department of Water Resources' MWQI, which implements water quality monitoring and special studies in the Delta and its tributaries. In fiscal year 2013/14, this program continued to operate five real-time water quality stations, completed seasonal water quality forecasts, and initiated a State Water Project limnology study. **Delta nutrient impact studies:** Metropolitan continues to work with the state and federal water contractors to support studies and management actions addressing the impacts of nutrients and other water quality stressors in the Delta watershed. Metropolitan also participated in the Central Valley and San Francisco Bay Regional Water Quality Control Boards' nutrient management programs. **Battle Creek Salmon and Steelhead Restoration Project:** This federal project, begun in 2010, is one of the largest cold-water fish restoration efforts in North America. Metropolitan supported and financially assisted this project which will open almost 50 miles of winter-, spring- and late fall-run salmon and steelhead habitat in the Sacramento River watershed. Construction is anticipated to be completed by 2019.

ACHIEVEMENT SCORECARD
FISCAL YEAR 2013/14

CONSERVATION	
FY 2013/14 Total Water Saved[1]	**923,000 acre-feet**
New Water Saved From Metropolitan Conservation Credits Program[2]	9,000 acre-feet
Water Saved From Existing Metropolitan Conservation Credits Program[3]	157,000 acre-feet
Water Saved From Code-Based, Price, & Pre-1990 Device Retrofit	757,000 acre-feet
FY 2013/14 Investment	**$33.7 million**
Metropolitan Conservation Credits Program Investment[4]	$18.6 million
Member Agency Conservation Investment[5]	$14.4 million
Metropolitan Outreach & Education	$0.7 million
Cumulative Savings Since 1990	
Water Saved From Metropolitan Conservation Credits Program[6]	2,050,000 acre-feet
Metropolitan Conservation Investment (excl. funding by member agencies)	$352 million
RECYCLED WATER[7]	
FY 2013/14 Production	**447,000 acre-feet**
Water Produced From Projects Receiving Metropolitan Funding	180,000 acre-feet
Water Produced From Projects Without Metropolitan Funding (incl. Santa Ana River base flow)	267,000 acre-feet
FY 2013/14 Investment	
Metropolitan Funding	$30 million
Cumulative Production & Investment Since Inception[8]	
Production With Metropolitan Funding	2,006,000 acre-feet
Metropolitan Investment	$356 million
GROUNDWATER RECOVERY[7]	
FY 2013/14 Production	**132,000 acre-feet**
Water Produced From Projects Receiving Metropolitan Funding	68,000 acre-feet
Water Produced From Projects Without Metropolitan Funding	64,000 acre-feet
FY 2013/14 Investment	
Metropolitan Funding	$9.4 million
Cumulative Production & Investment Since Inception[9]	
Production With Metropolitan Funding	729,000 acre-feet
Metropolitan Investment	$125 million
CONJUNCTIVE USE PROGRAM[10]	
Metropolitan Cumulative Capital Investment	$26.5 million
Proposition 13 Grant Funds Administered by Metropolitan	$45.0 million
Water Stored Since Program Inception through September 2014	273,000 acre-feet
Water Extracted Since Program Inception through September 2014[7]	220,000 acre-feet
GROUNDWATER REPLENISHMENT[11]	
Cumulative Investment through December 2014	$347 million
Cumulative Replenishment Delivery through December 2014	3,256,000 acre-feet

REGIONAL SUMMARY		
	FY 2013/14	**Since 1990**
Water Conservation[12], Recycled Water and Groundwater Recovery	1.5 million acre-feet	17.9 million acre-feet
Metropolitan's Investment in Water Conservation, Recycled Water and Groundwater Recovery	$58 million	$833 million

FOOTNOTES FOR ACHIEVEMENT SCORECARD

Numbers in this report are based on best available information during the production of this report and subject to revision for accounting reconciliation.

1. Annual total savings include Metropolitan's Conservation Credits Program, code-based conservation achieved through legislation, building and plumbing codes and ordinances, reduced consumption resulting from changes in water pricing, and pre-1990 device retrofits.

2. New water savings achieved through Metropolitan's Conservation Credits Program and from member agency-funded programs installed in fiscal year 2013/14.

3. Includes water savings initially achieved through Metropolitan's Conservation Credits Program and subsequently maintained through plumbing codes.

4. Active conservation investment includes administrative fees for contracted program vendors.

5. In addition to Metropolitan's Conservation Credits Program, member agencies and retailers also implemented local water conservation programs within their respective service areas. Member agency investment figures include rebate funding beyond rebates already provided by Metropolitan's Conservation Credits Program.

6. Cumulative water savings since 1990 that include water savings initially achieved through Metropolitan's Conservation Credits Program and subsequently maintained through plumbing codes.

7. Figures reflect actual and estimated deliveries for all Metropolitan-assisted projects and payments reported through June 2014; cumulative production and investment reflect accounting reconciliation as data become available; annual regional production for recycled water includes an estimated 94,000 acre-feet of treated wastewater discharged to the Santa Ana River base flow that percolates into downstream groundwater basins.

8. Metropolitan initiated its Local Resources Program in 1982 to encourage production of recycled water for municipal purposes.

9. Metropolitan initiated its Groundwater Recovery Program in 1991 to encourage treatment and use of degraded groundwater for municipal purposes.

10. Construction of the conjunctive use storage programs was completed in 2008. Proposition 13 refers to Chapter 9 of the Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Bond Act of 2000. Water extracted since program inception includes losses.

11. Figure is cumulative since 1990. Prior to 2013, Metropolitan provided replenishment water at a discounted rate to encourage long-term recharge and maintenance of groundwater basins and local reservoirs. Although the discounted replenishment rate was discontinued Jan. 1, 2013, Metropolitan continues to provide water for replenishment purposes at full service rates. Figure may not include all deliveries used for replenishment purposes.

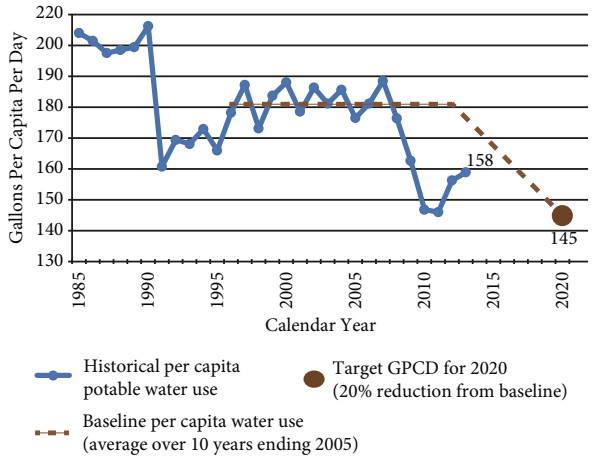
12. Cumulative water savings since 1990 include Metropolitan's Conservation Credits Program, code-based conservation achieved through legislation, building and plumbing codes and ordinances, reduced consumption resulting from changes in water pricing, and pre-1990 device retrofit.

Water-Use Efficiency Strategy

Metropolitan and the Natural Resources Defense Council cosponsored the Water Conservation Act of 2009 (SBX7-7), which targets a 20 percent reduction statewide in urban per capita water use by the year 2020. Per capita water use is one indicator of progress in advancing water-use efficiency. Metropolitan's baseline is 181 gallons per capita per day and the 2020 reduction target is 145 GPCD (Figure 3). Since 2011, the region saw a slight increase in per capita water use that can be explained in part by continued economic recovery and drier weather as compared with previous years. The calendar year 2013 GPCD of 158 is a 13 percent decrease from the baseline and shows that the region is on track to meet its 2020 target.

Metropolitan's commitment to water-use efficiency is demonstrated through more than two decades of conservation and water recycling. Metropolitan will continue to support the region's effort to meet the 2020 target through conservation and recycled water programs.

Figure 3. Regional Potable Per Capita Water Use



California's Extreme Drought Conditions

Metropolitan has responded to California's extreme drought conditions by calling on local cities and water agencies to implement extraordinary conservation and continuing its effort to expand the conservation and recycled water programs.

Statewide Water Emergency

Although multi-year dry periods are a fact of life in California, the current drought is unprecedented in geographic scope and severity. As of October 14, 2014, the National Weather Service (NWS) reported that 82 percent of California is in extreme drought or higher, up from 28 percent at the start of the calendar year. Over 58 percent of the state is in "exceptional drought" – the highest level – according to the NWS drought monitor. Virtually the entire state and its surrounding watersheds are affected by drought. The NWS also reported that the first six months of 2014 were 4.7 degrees hotter than average, setting a new record for California. The heat wave was more intense in Southern California, where the first six months were 5.7 degrees hotter than average, also a record. These conditions, preceded by two dry years, have adversely affected water supplies across the state. The State Water Project (SWP) record low five percent allocation in 2014 is but one example.

Managing the state's stressed water supplies is vital to the health and wellbeing of California's population, economy, agriculture and environment. Metropolitan appreciates the strong leadership demonstrated by Governor Edmund G. Brown Jr., the State Water Resources Control Board (SWRCB), and other state agencies. In January 2014, the governor issued a drought emergency proclamation calling for Californians to reduce their water use by 20 percent and for water agencies to implement water shortage plans. In April, the governor issued a second proclamation, asking the state to redouble drought actions and directing the SWRCB to adopt emergency regulations to implement the directive. Accordingly, the SWRCB adopted outdoor water restrictions on July 15, 2014 that targeted outdoor urban water use that would normally increase under the hot and dry conditions afflicting California.

Metropolitan's Actions

Metropolitan's mission is to provide high quality, reliable supplies to our region in an economically and environmentally responsible way. Metropolitan and its member agencies have spent the past 25 years preparing for drought by investing in a robust, diversified water resource portfolio. In the process, utilities in the region have become statewide leaders in water conservation, wastewater recycling and groundwater recovery. Metropolitan's cumulative investments in reliable local supplies exceed $1 billion and include:

- $352 million for conservation programs,
- $356 million for recycled water projects,
- $125 million for groundwater recovery projects, and
- $373 million for groundwater storage programs.

Metropolitan also supports stringent requirements for water efficient appliances. Along with its member agencies, Metropolitan has pushed the envelope for recycled water use. Since 1991, these efforts have generated a cumulative 17.9 million acre feet of reduced demands and new supplies.

Southern California's investment in conservation, recycling, and groundwater recovery has created a remarkable reduction in water demands and increased local supplies. As shown in this Regional Progress Report for fiscal year 2013/14, Southern California conserved 923,000 acre-feet and produced 447,000 acre-feet of water through recycling and 132,000 acre-feet of groundwater recovery. The combined water savings and production is more than the total water used by the cities of Los Angeles, San Francisco, and San Diego. In fact, it is more water than can be supplied through Metropolitan's Colorado River Aqueduct in a given year.

Public Hearing

In accordance with section 130.5 of the MWD Act, Metropolitan held a public hearing on Dec. 8, 2014 to receive comment on the draft Regional Progress Report on achievements in conservation, recycling and groundwater recharge with an emphasis on fiscal year 2013/14. Transcriptions of comments received at the public hearing are on file at Metropolitan and available upon request.

MANAGING WATER DEMAND

Potable retail demands in Metropolitan's service area reflect the investments shown above. In the late 1980s, potable demands averaged 199 gallons per capita per day (GPCD). By comparison, the average potable demand from 2010 to 2013 was 151 GPCD – a 24 percent reduction. Over the same period, Metropolitan has invested $2 billion to build Diamond Valley Lake, doubling the region's surface water storage capacity; $500 million on dry-year storage, transfer and exchange programs along the SWP and the Colorado River Aqueduct, and groundwater programs within its service area. Metropolitan is leveraging the region's investments in conservation, local supplies and dry-year storage to manage and mitigate the drought's impacts on the region's nearly 19 million residents and trillion dollar economy.

Conservation, local supplies and storage have all reduced Southern California's reliance on imported supplies. In fiscal year 2006/07, the beginning of the last significant dry period, Metropolitan delivered 2.41 million acre-feet of imported supplies. By comparison, Metropolitan delivered 2.06 million acre-feet in fiscal year 2013/14. The 350,000 acre-feet drop amounts to a 15 percent reduction in imported supplies despite the current drought's record heat and over a half a million more people living in Southern California. Even with these significant reductions in demand, Southern California is committed to continued increases in water-use efficiency, particularly in outdoor water use.

RESPONSE TO THE GOVERNOR'S DROUGHT PROCLAMATION

After meeting with the governor earlier this year, Metropolitan ramped up conservation efforts in Southern California. In February 2014, Metropolitan called on local cities and water agencies to immediately implement extraordinary conservation measures and institute local drought ordinances. Metropolitan also significantly expanded its water conservation programs. Metropolitan doubled its annual conservation budget from $20 million to $40 million. The increase will be combined with its member and local retail agencies' contributions to achieve additional water savings throughout the year.

Metropolitan's Conservation Effort

The region's conservation efforts in the past 25 years primarily targeted indoor water use, such as retrofitting homes and businesses with high efficiency shower heads, toilets, faucet aerators, clothes washing machines, waterless urinals, and commercial processes and equipment. In recent years, Metropolitan has increased focus on outdoor water use with efficient irrigation controllers, sprinkler nozzles, rain barrels and turf removal.

Metropolitan's turf removal program provides residential and commercial customers with rebates to replace their water-thirsty turf lawns with California Friendly® landscapes. To date, more than 21 million square feet of turf have been permanently removed.

Metropolitan also more than doubled recycled water retrofit incentives to large landscape irrigators to accelerate conversions from potable to recycled water.

Regional Outreach Campaign

In July 2014, Metropolitan launched a $5.5 million outreach campaign, the largest in Metropolitan's history. The goal of the campaign was to raise awareness of the drought and urge residents and businesses to save water this year. The campaign features multiple media platforms, including radio and television, with enhanced outreach to the region's ethnic communities. Activity on Metropolitan's bewaterwise.com® website quadrupled as a result of the campaign. Metropolitan's conservation programs saw record-breaking increases in applications for rebates. It is clear that Southern California is responding to these calls for increased conservation efforts.

Metropolitan is committed to doing its part in promoting water-use efficiency and increasing local supplies while collaborating with other stakeholders to protect critical reserves.

METROPOLITAN'S MEMBER AGENCIES

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928

Joined Metropolitan December 14, 1960

Joined Metropolitan November 12, 1954

Joined Metropolitan June 23, 1931

Joined Metropolitan October 16, 1950

Joined Metropolitan January 15, 1953

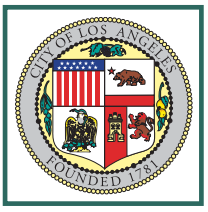
Joined Metropolitan February 27, 1931

Joined Metropolitan December 6, 1928

Joined Metropolitan November 26, 1951

Joined Metropolitan December 1, 1960

Joined Metropolitan February 27, 1931



Joined Metropolitan December 6, 1928

Joined Metropolitan November 26, 1951

Joined Metropolitan December 6, 1928

Joined Metropolitan December 17, 1946

Joined Metropolitan November 12, 1971

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928

Joined Metropolitan December 6, 1928

Joined Metropolitan November 15, 1950

Joined Metropolitan February 27, 1931

Joined Metropolitan March 27, 1963

Joined Metropolitan July 23, 1948

Joined Metropolitan November 12, 1954

CONTACT METROPOLITAN

For more information about this report contact Kathy Cole, Metropolitan's Executive Legislative Representative, at (916) 650-2642 or kcole@mwdh2o.com. For more information about the Metropolitan Water District of Southern California, please visit mwdh2o.com or bewaterwise.com®.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

The Metropolitan Water District
of Southern California
P.O. Box 54153
Los Angeles, CA 90054-0153
mwdh2o.com
bewaterwise.com