



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

**Date:** November 19, 2012  
**To:** Board of Directors  
**From:** Jeffrey Kightlinger, General Manager  
**Subject:** Transmittal of Draft Report *Achievements in Conservation, Recycling and Groundwater Recharge, Annual Progress Report to the California State Legislature, February 2013*

Attached for your review is the draft Metropolitan report, *Achievements in Conservation, Recycling and Groundwater Recharge, Annual Progress Report to the California State Legislature*. Section 130.5 of the MWD Act requires Metropolitan to prepare and submit, on or before February 1 of each year, an annual report to the California State Legislature on our progress in achieving the goals of increased emphasis on cost-effective conservation, recycling, and groundwater recharge. This will be Metropolitan's twelfth annual progress report. This draft report presents the achievements in conservation, recycling, groundwater recovery, and recharge during the fiscal year 2011/12.

In conjunction with this draft report and in accordance with Section 130.5, Metropolitan will hold a public hearing on this report at its regularly scheduled Water Planning and Stewardship Committee meeting on December 12, 2011 at 10:30 a.m. to review the achievements in promoting cost-effective conservation, recycling, and groundwater recharge. Also in accordance with Section 130.5, Metropolitan has invited knowledgeable persons from the fields of water conservation and sustainability to comment at the hearing. The public hearing will commence with a staff report reviewing the achievements during the fiscal year 2011/12 and invites public comments. Thereafter, the public will be invited to comment on the report. Excerpts from oral and written comments received at the public hearing will be summarized in the final report.

A copy of the final report will be distributed prior to the February Board and Committee Meetings. Metropolitan will be submitting the final report to the California State Legislature by February 1, 2013.

Jeffrey Kightlinger

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Attachment

cc: Member Agencies

*DRAFT*

THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA



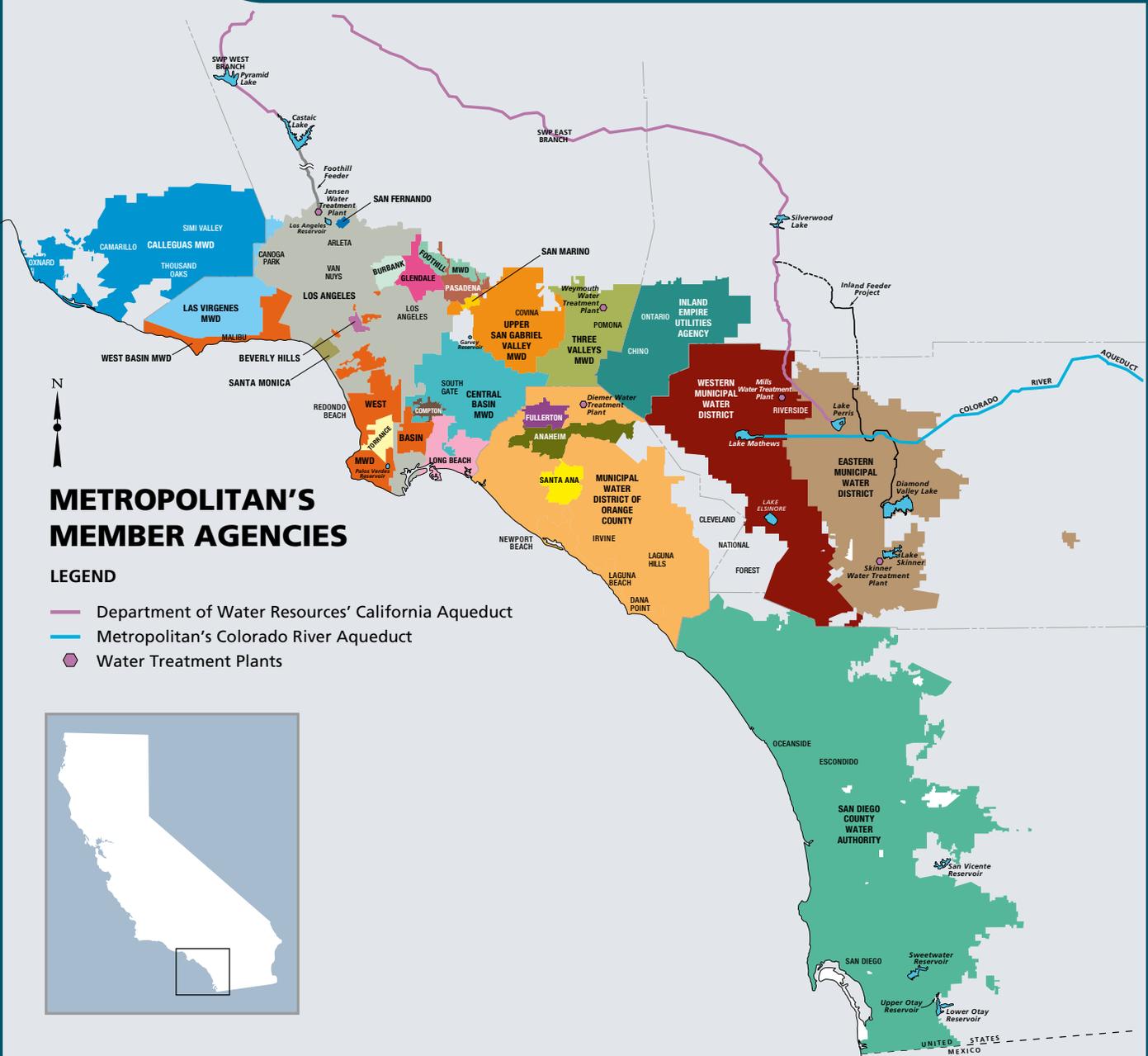
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Annual Progress Report to the California State Legislature  
Achievements in Conservation, Recycling and Groundwater Recharge

*February 2013*

# THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA



Pictured on the cover:

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

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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 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](mailto: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 BENEFITTED 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.



METROPOLITAN ensures  
RELIABILITY

# Overview

The Metropolitan Water District of Southern California was formed more than eighty 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.

During the same two-year cycle, Metropolitan will invest \$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). The IRP was updated in 2010, and is Metropolitan's long-term water plan to protect the region from future supply shortages. The IRP emphasizes on 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.

The RUWMP describes and evaluates sources of supply, efficient uses, water

IN ACCORDANCE WITH 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.



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, and 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 provides for 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. In fiscal year 2011/12, the region-wide residential program, operated under Metropolitan's SoCal WaterSmart program, issued about new 41,000 new rebates. Metropolitan projects to save about 1,520 acre-feet of water annually. Metropolitan also provided \$2.2 million to its public 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 of water annually. 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 efforts saw the addition of a new program with the introduction of the Water Savings Incentive Program (WSIP). This regional pay-for-performance program targets large water users in the landscape, agricultural, industrial, and commercial 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



**METROPOLITAN** *upgrades*  
**infrastructure**

Program will be managed as a part of the new WSIP. Metropolitan projects to save about 310 acre-feet of water annually from projects started under this program.

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 of water.

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 the efforts of 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 with 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 (BDCP). 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 on the Draft BDCP and EIR/S is anticipated for fall 2012 and project approval is expected by mid-2013. The state and federal agencies are continuing to discuss the schedule.

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.



<b>Achievements Scorecard</b>	
<b>Metropolitan-Assisted Programs</b>	
<b>Conservation</b>	
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 <sup>1</sup>	156,000 acre-feet
Cumulative Water Saved From Conservation Credits Program <sup>2</sup>	1,720,000 acre-feet
FY 2011/12 Metropolitan Conservation Investment <sup>3</sup>	\$12.9 million
FY 2011/12 Member Agency Investment <sup>4</sup>	\$9.2 million
Cumulative Conservation Investment (excluding funding by member agencies)	\$322 million
Total FY 2011/12 Conservation Investment <sup>5</sup>	\$13.4 million
<b>Recycled Water<sup>6</sup></b>	
FY 2011/12 Production	171,000 acre-feet
FY 2011/12 Investment	\$27.5 million
Cumulative Production	1,669,000 acre-feet
Cumulative Investment	\$270 million
<b>Groundwater Recovery<sup>6</sup></b>	
FY 2011/12 Production	40,000 acre-feet
FY 2011/12 Investment	\$5.9 million
Cumulative Production	625,000 acre-feet
Cumulative Investment	\$102.8 million
<b>Conjunctive Use Program<sup>7</sup></b>	
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 <sup>7</sup>	206,000 acre-feet
<b>Groundwater Replenishment<sup>8</sup></b>	
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.
4. In addition to Metropolitan's Conservation Credits Program, member agencies and retailers also implemented local water conservation programs within their respective

Footnotes continue next page

METROPOLITAN *safeguards*  
Water Quality

## Reader's Guide to the Achievements Scorecard

### Conservation

Conservation is water saved directly as a result of incentives from Metropolitan's Active Conservation Credits Programs 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. Achievements Scorecard does not reflect additional water conserved as a result of plumbing codes and other laws governing appliances and other 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.

- 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 over the last twenty 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 to 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.

## Fiscal Year 2011/12 Program Highlights

- Metropolitan issued rebates valued at \$12.9 million.
- With the help of state and federal funding grants, Metropolitan's turf removal rebates increased by nearly 40 percent.
- Metropolitan 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.



METROPOLITAN  
*Encourages*  
Conservation

## ***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 with 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**

### ***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 for 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 available.

### ***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 with 3.9 million square-feet of turf removed in fiscal year 2011/12.



***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 with 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 with 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 with 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 with 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 Performance Program, the Agricultural Conservation Program and member agency commercial program. Metropolitan projects savings of about 5,390 acre-feet of water annually with new rebates issued by commercial conservation programs in fiscal year 2011/12.



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Encourages  
Conservation

### 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 with nearly 2,900 new rebates issued by the Save A Buck program in fiscal year 2011/12.

### Member Agency Commercial Programs

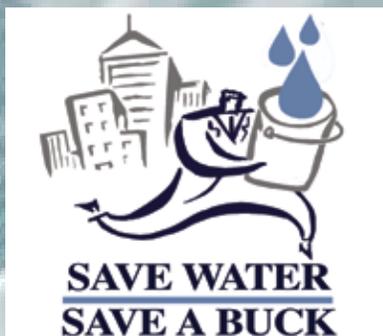
Member and retail water agencies also implement water conservation programs for commercial sectors using Metropolitan incentives. Projects target specific local businesses, with many also receiving assistance from state or federal grant programs. Qualifying commercial projects have included turf removal, 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 with 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 public member agencies, and large water-using customers to improve water use efficiency in the commercial, industrial, institutional, agricultural, and large landscape sectors. 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; and
- Installing valves and pumps to improve agricultural irrigation efficiency.

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.



## Agricultural Conservation Program

The Agricultural Conservation Program was created to provide financial incentives to growers who perform improvements to irrigation systems to 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.

METROPOLITAN  
*encourages*  
Conservation



## ***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 Web site continues to be an important tool in educating the public, attracting over 400,000 unique visitors for 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 of 2012. Through another program, Metropolitan 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 tenth 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' Web site drew more than 11,000 unique visitors over the course of the fiscal year.

The logo for bewaterwise.com, featuring the text "bewaterwise.com" in a blue, sans-serif font with a registered trademark symbol (®) to the right.

### ***California Friendly® Landscape Online Training***

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

### ***Community Partnering Program***

The Community Partnering Program continues 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.

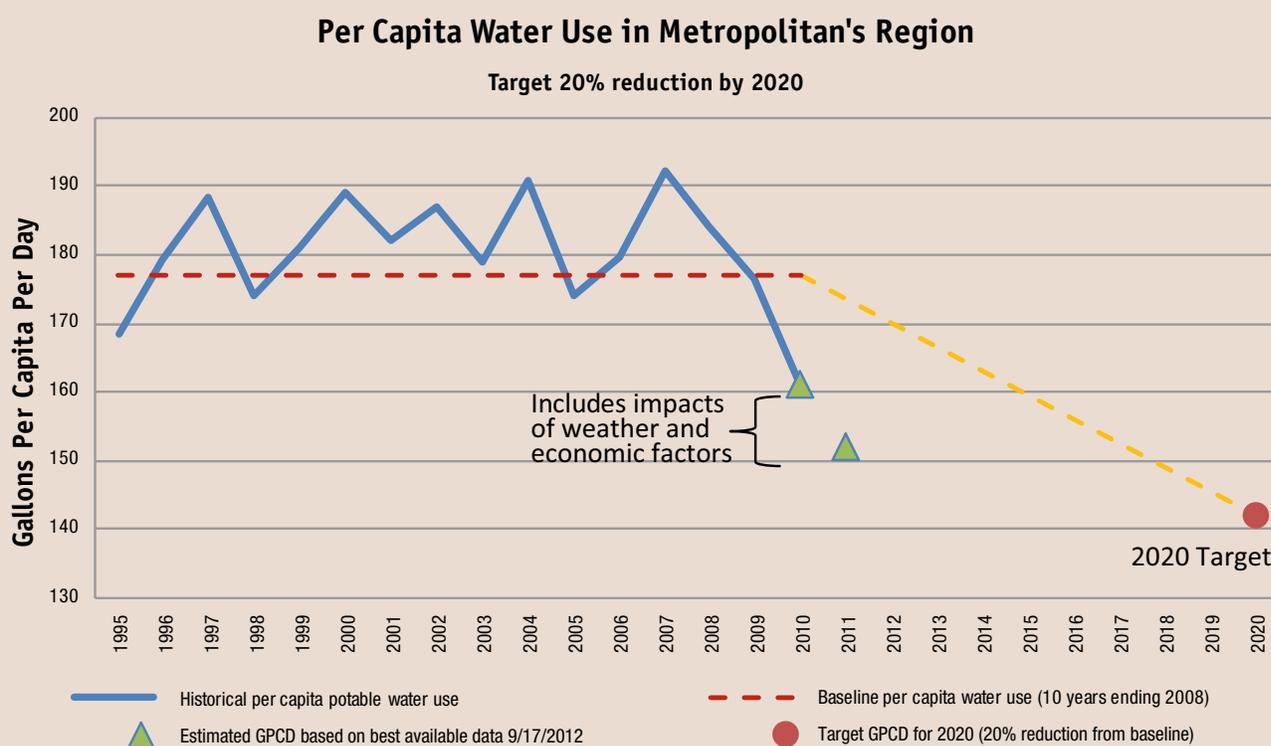


METROPOLITAN  
*encourages*  
Conservation

## Water Use Efficiency Strategy

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

Metropolitan and the Natural Resources Defense Council co-sponsored 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 \$270 million (producing 1,669,000 acre-feet) in recycled water and \$103 million (resulting in 625,000 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 120,000 acre-feet of recycled water and 42,000 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 state-wide 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;
  - South 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.



**METROPOLITAN**  
Water *supports*  
Recycling

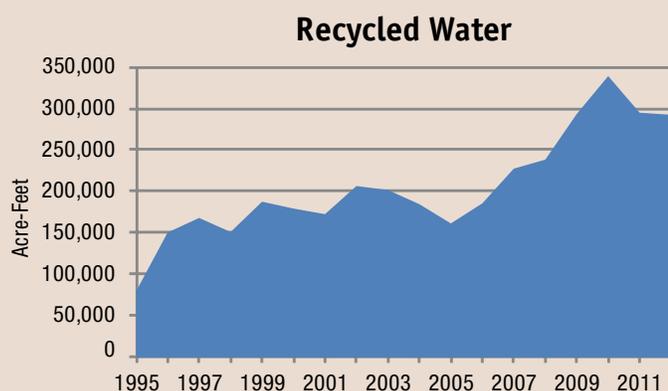


Figure 1

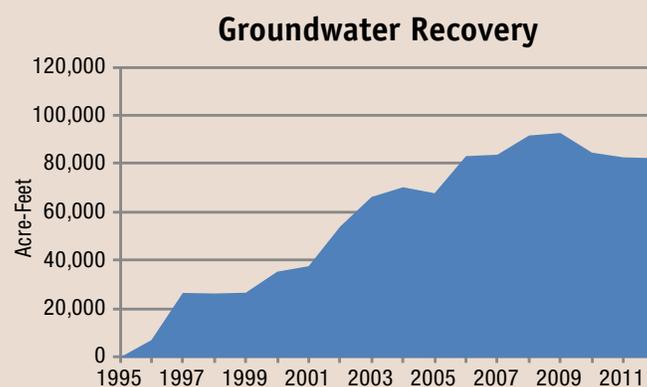


Figure 2

## 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 inception, Metropolitan has stored more than 200,000 acre-feet in groundwater basins. During the 2007-2009 drought period, 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 between 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; and
- Partnering with stormwater, flood control, water supply, water quality, and groundwater management groups.



METROPOLITAN *protects*  
the environment

### ***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; and
- Funding strategies inclusive of state and federal grants, multi-benefit partnerships, and stormwater fees.

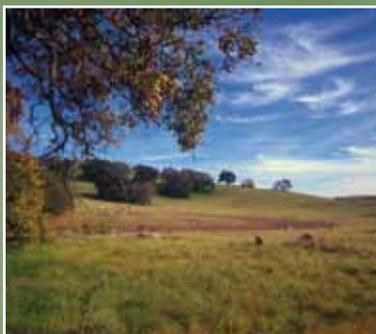
### **Council For Watershed Health**

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 for 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 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 (EIR/S) were released in February 2012. The public comment period on the Draft BDCP and EIR/S is anticipated for 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 to develop a better understanding of the sources and effects of drinking water quality constituents of concern. In fiscal year 2011/12, the MWQI 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. The MWQI also continued development of data and modeling tools in support of water quality forecasting activities.

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 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. Fifty-six percent were queries and 44 percent were expressions of concern involving research. Callers included employees (83%), members of the public (15%), and directors (2%);
- Reviewed policies with the Legal Department and the General Manager's office for possible revisions;
- Developed Metropolitan-specific online AB 1234 ethics training for Directors and Officers of Metropolitan;
- 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; and
- Provided ethics orientation to all new employees and managers.

**METROPOLITAN**  
**ETHICAL** *fosters* **CULTURE**

# 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 and for consideration by Metropolitan's Board of Directors.

**Placeholder**





# 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 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:** Metropolitan's Community Partnering Program 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 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 water supplies to its member agencies 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.*



**Photography Captions By Section (Photographer noted in parentheses)****EXECUTIVE SUMMARY**

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](http://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).

**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



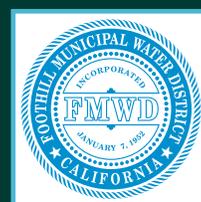
Joined Metropolitan  
November 12, 1954



Joined Metropolitan  
February 27, 1931



Joined Metropolitan  
October 16, 1950



Joined Metropolitan  
January 15, 1953



Joined Metropolitan  
February 27, 1931



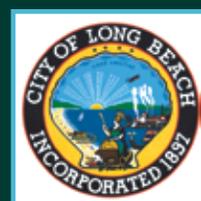
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December 6, 1928



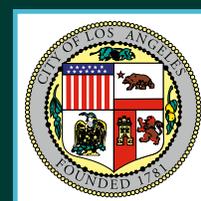
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November 26, 1951



Joined Metropolitan  
December 1, 1960



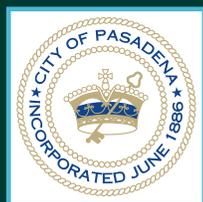
Joined Metropolitan  
February 27, 1931



Joined Metropolitan  
December 6, 1928



Joined Metropolitan  
November 26, 1951



Joined Metropolitan  
December 6, 1928



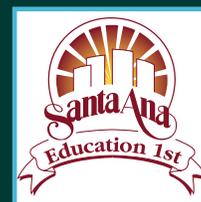
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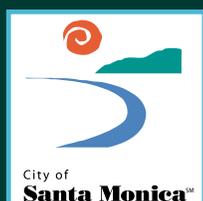
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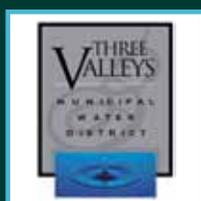
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December 6, 1928



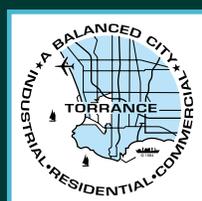
Joined Metropolitan  
December 6, 1928



Joined Metropolitan  
December 6, 1928



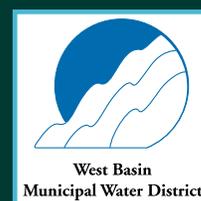
Joined Metropolitan  
November 15, 1950



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](http://mwdh2o.com)  
[bewaterwise.com](http://bewaterwise.com)