



WEST BASIN MUNICIPAL WATER DISTRICT

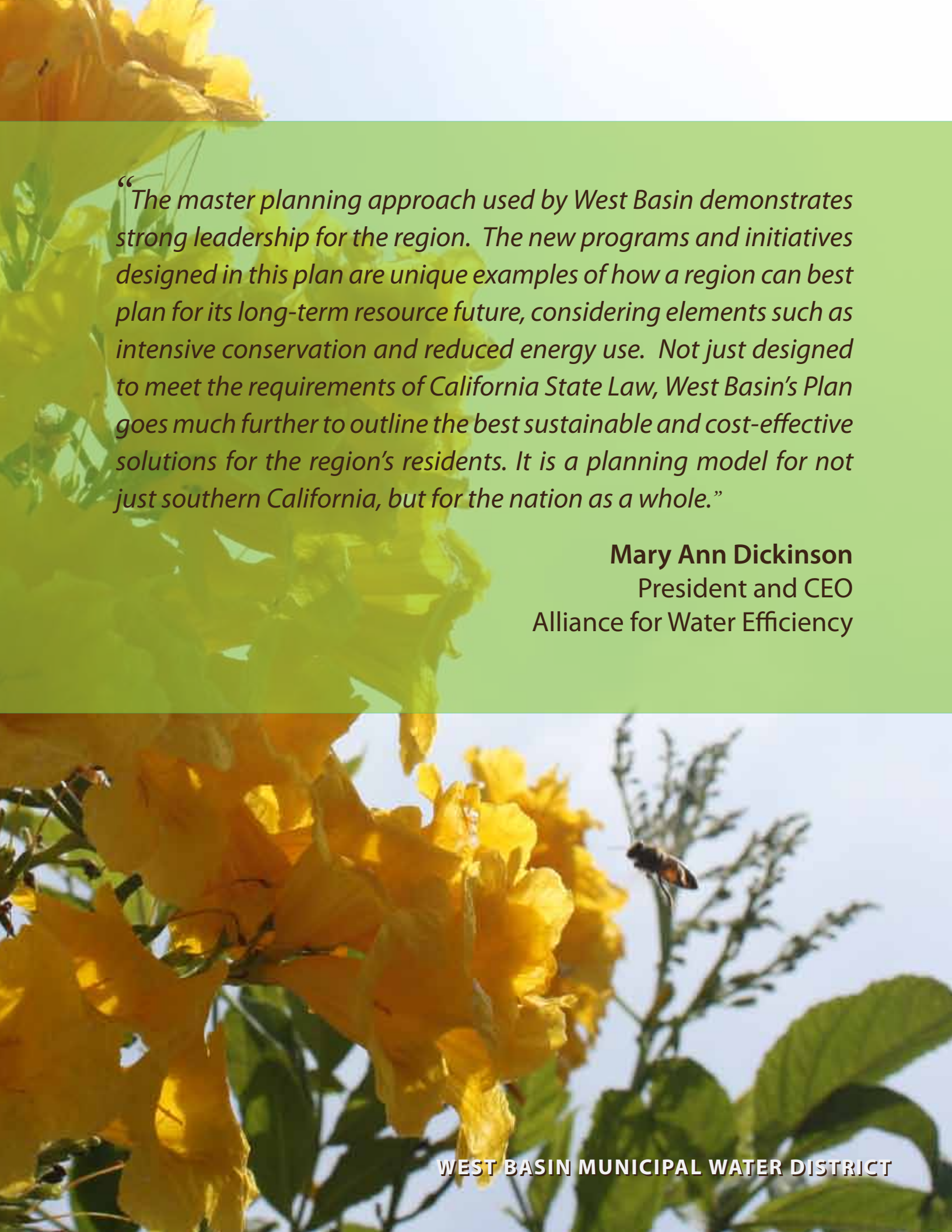
WATER EFFICIENCY

Master Plan Highlights

2011-2015

Part of West Basin's Water Reliability 2020 Program



A close-up photograph of bright yellow flowers, likely a type of geranium, with a small bee flying nearby. The background is a clear blue sky. The image is partially obscured by a light green semi-transparent overlay that contains text.

“The master planning approach used by West Basin demonstrates strong leadership for the region. The new programs and initiatives designed in this plan are unique examples of how a region can best plan for its long-term resource future, considering elements such as intensive conservation and reduced energy use. Not just designed to meet the requirements of California State Law, West Basin’s Plan goes much further to outline the best sustainable and cost-effective solutions for the region’s residents. It is a planning model for not just southern California, but for the nation as a whole.”

Mary Ann Dickinson
President and CEO
Alliance for Water Efficiency



INTRODUCTION

Southern California has a special and unique Mediterranean climate that is rare and only shared with a few countries around the world. Over the last five years, the Southern California region has experienced unpredictable periods of both wet and dry weather, and it is likely that we will continue to experience these types of climate changes over the next five years.

As the imported water wholesale provider for 17 cities and several unincorporated Los Angeles County areas, it is the mission of West Basin Municipal Water District (West Basin) to ensure that we have a safe and reliable supply of high quality water for the communities we serve.

In 2006, West Basin's Board of Directors provided leadership through the adoption of the first forward-looking Conservation Master Plan that set the stage to more than double West Basin's water conservation by the year 2020. Water efficiency is a key part of West Basin's Water Reliability 2020 (WR 2020) program to reduce its dependence on imported water. The WR 2020 goal is to increase from 10,000 acre-feet (AF) to more than 20,000 AF of water conserved by the year 2020, or from 3 billion to 6 billion gallons.

This "Highlights" report provides the major water efficiency accomplishments from the last five years and shows how West Basin plans to build on those successes with the updated 2011–2015 Water Efficiency Master Plan (Master Plan). The complete full version of the Master Plan provides a detailed analysis of programs and their value and can be found on West Basin's website, www.westbasin.org.



CUSTOMER SERVICE

It takes leadership, partnerships, and a conservation ethic to develop and implement cost-effective water efficiency programs. With this in mind, West Basin works closely with all of its customer agencies and other important partners to leverage funding and other resources that allow us to provide comprehensive, cost-effective programs to the communities we serve.

West Basin’s customer agencies include:

 *City of El Segundo*



 *City of Inglewood*

 *City of Lomita*



 *City of Manhattan Beach*

 *California American Water Company*

 *California Water Service Company*

 *Golden State Water Company*

 *Los Angeles County Waterworks District #29*



 *Water Replenishment District*



In addition to partnering with its customer agencies, West Basin collaborates with a host of important stakeholders that include environmental groups, energy utilities, nonprofit organizations, businesses, local government, residents and other local leaders. Through collaboration with this diverse group, West Basin is able to provide many creative and cost-effective water efficiency programs that increase local water reliability.

2006-2010 ACCOMPLISHMENTS

From 2006 through 2010, West Basin worked diligently to implement the goals and strategies of its first Conservation Master Plan. Here are some of West Basin's major accomplishments:

- *Acquired \$6.8 million in state and federal grants and partnership funds;*
- *Implemented several new water efficiency programs;*
- *Hired a Commercial Programs/Energy Efficiency Specialist Staff member;*
- *Developed two Ocean-Friendly Demonstration Gardens located at West Basin's Edward C. Little Water Recycling Facility in El Segundo and its Donald L. Dear headquarters building in Carson;*
- *Conducted 700 landscape surveys;*
- *Held 25 Ocean-Friendly Garden (OFG) classes for residents;*
- *Distributed 16,000 water efficiency devices;*
- *Conserved 1,500 AF* of water through active and passive conservation programs; and*
- *Led and participated in local and state efforts to develop Water-Energy nexus programs.*

* One acre-foot equals 326,000 gallons.



THREE NEW MAJOR INITIATIVES

West Basin is building on its successes from its first Conservation Master Plan through a broader and more inclusive 2011-2015 Water Efficiency Master Plan. Over the last several years, both West Basin and the State of California have launched new initiatives that will help advance water efficiency programs. Looking ahead, West Basin will focus on three major initiatives: Water Reliability 2020, the Water Conservation Act of 2009 and the Water-Energy Nexus.



WEST BASIN'S WATER RELIABILITY 2020 PROGRAM

In 2008, West Basin launched the Water Reliability 2020 (WR 2020) program. The goal of WR 2020 is to increase reliability of local water supplies to better protect our customers from fluctuations in imported water. West Basin will accomplish its WR 2020 goals by doubling recycled water production, doubling conservation and water use efficiency and adding 10% to local supplies through ocean-water desalination. The full version of the Master Plan provides the programs and strategies that West Basin will implement to meet its water efficiency goals in the WR 2020 program and is available at www.westbasin.org.

THE WATER CONSERVATION ACT OF 2009



In 2009, California's Governor signed into law the Water Conservation Act of 2009 (often referred to as SBx7-7 legislation). SBx7-7 requires individual retail water suppliers to set water conservation targets for 2015 and 2020 to support the State's goal of reducing urban potable *per capita* water use 20% by 2020.

West Basin provided leadership and secured a federal grant from the U.S. Bureau of Reclamation (USBR) to implement a comprehensive planning process with all of its customer agencies. The USBR grant encouraged West Basin and each customer agency to develop individual Water Efficiency Master Plans to guide each agency's compliance with SBx7-7 and encourage collaboration with West Basin on water efficiency programs.



WATER-ENERGY NEXUS

New to the Master Plan is the integration of the Water-Energy Nexus. West Basin is developing a long-term strategy and implementing short-term actions to combine energy and water efficiency programs. Chapter 6 of the full Master Plan provides further details on the strategies, programs and schedule of the water and energy programs. West Basin's goal is to develop pilot programs that will demonstrate both direct water and energy savings and indirect energy savings associated with the transport, treatment and delivery of water to end users (residents and businesses).

West Basin collaborates with one of its major partners, the South Bay Environmental Services Center (SBESC), to network with energy utilities and integrate water and energy efficiency messaging into its programs.

THE INTEGRATED PLANNING APPROACH

In 2009, West Basin initiated a unique master planning approach that involved the participation of all eight of its retail customer agencies to develop their own master plans. West Basin received a cost-sharing federal grant from USBR that required a 1:1 matching cost-share from each customer agency and West Basin. This grant and cost-sharing arrangement allowed for the creation of nine master plans to help each agency map out compliance with regulations set by SBx7-7 legislation.

PROJECTED WATER SAVINGS

With the 2011-2015 Master Plan, West Basin and its customer agencies together plan to achieve an estimated 12,838 acre-feet of active and passive water savings from all of the programs, as shown below:

PROGRAM SECTORS	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	5 Year Total
RESIDENTIAL	319	696	1,052	1,493	1,912	5,472
COMMERCIAL, INDUSTRIAL, INSTITUTIONAL & MULTI-FAMILY	410	682	922	1,290	1,644	4,948
LANDSCAPE	59	302	546	685	826	2,418
Annual Acre-Feet (AF) Savings	788	1,680	2,520	3,468	4,382	12,838

*Further details may be found in Chapter 7 of the full Master Plan on www.westbasin.org.

FROM ACTIVE (DEVICE-DRIVEN) AND PASSIVE PROGRAMS (CODES, LEGISLATION)

<p style="text-align: center;">SAVINGS BY SECTOR</p> <p>A pie chart titled 'SAVINGS BY SECTOR' showing the distribution of water savings. The largest slice is Residential at 42% (grey), followed by CII & Multi-Family at 39% (orange), and Landscape at 19% (green).</p>	<p>Water Efficiency is defined by two main characteristics, Active and Passive, as described below:</p> <p>Active Savings: Water savings produced from incentive-based programs such as rebates, giveaways, retrofits, and more.</p> <p>Passive Savings: Water savings from building and plumbing codes, consumer behavioral changes, and responses to price shifts.</p>
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RESIDENTIAL PROGRAMS

West Basin is building on its successes and continues to implement cost-effective programs where water efficiency opportunities exist. Below is a snapshot of existing and new programs that West Basin will implement as part of the 2011-2015 Master Plan. A complete list of all of the programs can be found in the full version of the Master Plan at www.westbasin.org.

HIGH-EFFICIENCY TOILET (HET) DISTRIBUTION PROGRAM

Technological advances have created 1.28 gallon-per-flush toilets that can conserve up to 36 gallons of water per day. With funding contributions from the Metropolitan Water District of Southern California (MWD) and several customer agencies, West Basin will continue to offer HETs through one-day toilet distribution events. Our annual goal is the distribution of 2,000 HETs, estimated to conserve more than 26 million gallons of drinking water per year.

OCEAN-FRIENDLY GARDEN (OFG) LANDSCAPE CLASSES

West Basin, in partnership with the Surfrider Foundation and Green Gardens Group (G3LA), has conducted 25 OFG classes and Hands-on Workshops. These classes and workshops teach residents how to develop a sustainable garden that uses water efficiently, reduces runoff and attracts birds, butterflies and insects into the garden. An additional 15 classes and workshops are planned for 2012 through 2014.

ENERGY UPGRADE CALIFORNIA IN LOS ANGELES COUNTY



This program offers increased incentives for single-family residential customers who complete qualifying energy-saving home upgrade projects. This is a partnership program between Southern California Edison (SCE), Southern California Gas Company (So Cal Gas) and various cities and counties across the state, including Los Angeles County. Energy Upgrade currently provides basic and advanced home weatherization methods that produce calculable kilowatt and therm savings.



COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL (CII) PROGRAMS

CASH FOR KITCHENS

West Basin has been working through the SBESC to offer a program for commercial kitchen facilities in the South Bay. Food service customers receive a combined water and energy assessment and training materials for employees. Sites may also qualify to receive high-efficiency device upgrades such as pre-rinse kitchen sprayers, faucet aerators, flow restrictors and waterbrooms. The SBESC coordinates and conducts site visits with So Cal Gas commercial service technicians to provide a comprehensive water and energy review for the customers they visit.

COMMERCIAL RESTROOM RETROFIT

The Commercial Restroom Retrofit program provides qualifying businesses, schools, restaurants and other commercial and public facilities with installation of HETs, urinals and flow restriction devices to increase water-use efficiency in the non-residential sector.

RECIRC AND SAVE

West Basin offers audits and performance incentives for industrial process improvement and cooling tower efficiency. This program is designed to help industrial water users involved in manufacturing, along with facilities with cooling towers, save water by improving the efficiency of their systems.

SCE COMMERCIAL AUDIT PILOT PROGRAM

The Commercial Audit program is a non-residential survey program conducted by SCE for small to medium-sized businesses. Customers are provided an energy audit of their site by SCE-trained professionals. West Basin is cross-training energy auditors to provide a comprehensive energy and water audit to help steer customers toward incentives or other efficiency programs, when available.

SMALL BUSINESS DIRECT INSTALL

SCE uses contracted vendors to conduct energy assessments and subsequently install energy efficiency measures in small to medium-sized commercial locations at no charge to the business. This program is open to all non-corporate-owned customers and requires only two hours per site while businesses remain open for operation. Water assessments are being integrated into this program to offer a more comprehensive water and energy efficiency program for customers.



LANDSCAPE EFFICIENCY PROGRAMS

NEW! LANDSCAPE SURVEYS AND INSTALLATIONS OF WATER EFFICIENT SPRINKLER NOZZLES

In 2011, West Basin partnered with several of its customer agencies to develop a new program that will provide residents and businesses with landscape surveys and installation of High-Efficiency (HE) sprinkler nozzles. Advances have been made in irrigation technology for parts such as HE nozzles that are designed to reduce water use 30%, resulting in reduced runoff to stormdrains and the ocean. Slowing down the distribution of water over the landscape allows the water to percolate slowly into the soil and reduce runoff, which has been a major issue with traditional sprinkler heads, especially on hillsides.

This program will provide the resident and small commercial customer with an evaluation of their landscape, a climate-appropriate watering schedule, HE nozzle(s), a report summarizing deficiencies in the landscape, and recommendations for improvement.

OCEAN-FRIENDLY GARDEN LANDSCAPE PROGRAM

In partnership with the California Department of Water Resources (DWR) and the Surfrider Foundation, West Basin continues to implement the OFG Landscape Program. Since 2009, this program has:

- *Created One Ocean-Friendly Garden – Inglewood Fire Station (left, lower right)*
- *Conducted 25 Free Ocean-Friendly Garden Classes (upper right)*
- *Installed 100+ Large Landscape “Smart” Sprinkler Controllers*

West Basin will continue offering this program through 2013.



FUTURE PILOT PROGRAMS

SPRINKLER NOZZLE VOUCHER PROGRAM - PILOT

West Basin will work with MWD to offer sprinkler nozzle incentives to West Basin’s customer agencies.

TURF REMOVAL INCENTIVES - PILOT

West Basin plans to partner with MWD, in addition to seeking outside grant funds, in support of a turf removal incentive program for customers. A new program will be developed to motivate the public to remove part of their turf and replace it with water-efficient irrigation and climate-appropriate landscaping.

WATER BUDGET - PILOT

Many residents do not know how much water they are using and sometimes are unaware of the correct amount to use. West Basin plans to work with its customer agencies to develop programs that provide residents with information and suggestions on water use.

Top Left: Lawndale Library Turf Replacement; **Middle and Right:** Demonstration Garden, Edward C. Little Water Recycling Facility; **Lower Left:** High Efficiency Sprinkler.



ADDITIONAL INITIATIVES

In addition to implementing new device-driven programs, West Basin also works in various areas to advance water efficiency measures. West Basin is actively working in the following additional areas to develop long-term water efficiency, through developing new policies, assisting with research, and developing new programs and strategies.

EDUCATION & TRAINING

- *In partnership with the Surfrider Foundation, West Basin provides OFG Classes that teach residents about the benefits of creating a water-efficient and sustainable garden;*
- *West Basin supports the efforts of the Green Plumbers Association to teach plumbers about the latest water efficiency products and practices;*
- *As part of West Basin's new Water Education Center and Ocean-Water Desalination Demonstration Facility, West Basin developed a hands-on water efficiency exhibit that teaches visitors how to become more water efficient in their daily indoor and outdoor water use; and*
- *In 2010, West Basin developed WaterStar, a new conservation-based education program for children. This program provides elementary students with information about conserving water and also directs them to West Basin's website where they can play West Basin's free online Water Monster video game.*

LEGISLATIVE ADVOCACY

West Basin actively supports the local, state and federal efforts that are being conducted to advance water efficiency. West Basin is participating in the Commercial, Industrial and Institutional (CII) Task Force created by the State, which was tasked with development of new Best Management Practices for CII programs. Water efficiency opportunities have also been identified for residential and landscape programs.

RESEARCH & DEVELOPMENT

West Basin is participating on the MWD Project Advisory Committee (PAC). The role of this committee is to recommend ways that MWD can reach its own 20% by 2020 goals required by the SBx7-7 legislation previously mentioned. Committee members research various areas that address water efficiency, such as researching new devices, developing new legislation and improving existing programs.

PARTNERSHIPS/MEMBERSHIPS/GRANTS

West Basin has many local, state and federal partners that provide grants, cost-sharing, or general support to advance water efficiency. Major partners include:

- *Alliance for Water Efficiency*
- *California Urban Water Conservation Council*
- *City of Torrance*
- *Department of Water Resources*
- *Metropolitan Water District of Southern California*
- *South Bay Cities Council of Governments / South Bay Environmental Services Center*
- *Southern California Edison*
- *Southern California Gas Company*
- *United States Bureau of Reclamation*
- *Water Replenishment District of Southern California*

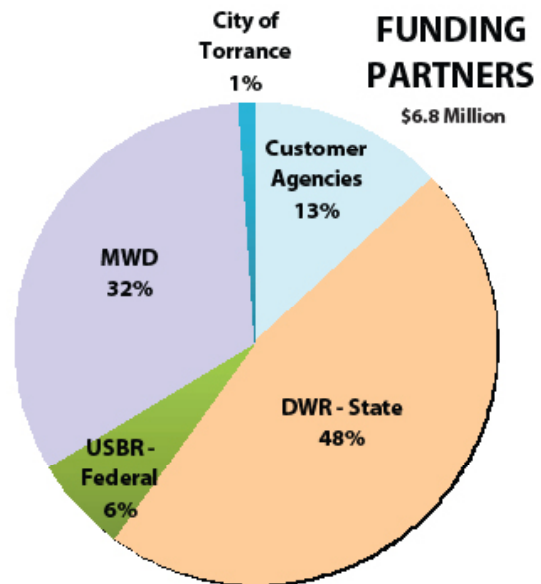
West Basin’s success is due, in part, to the combined success of all of its funding partners. As of development of this Master Plan, West Basin had leveraged an estimated \$6.8 million in funds for program development and implementation. Each agency receives the benefit of participating in a cost-effective program, but more importantly, the public receives great value. For every \$1 that West Basin invests in conservation, the public receives \$7 worth of programs.



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA



Golden State
Water Company
A Subsidiary of American States Water Company



* The City of Torrance is its own MWD Member Agency and partners with West Basin on programs in the South Bay where jurisdictions overlap, allowing us to provide comprehensive conservation programs to our customers.



ABOUT WEST BASIN

PUBLICLY-ELECTED BOARD OF DIRECTORS

West Basin Municipal Water District (West Basin) is governed by a five-member, publicly-elected Board of Directors, pictured right. Each director is elected to serve a four-year term.

SERVING THE PUBLIC

West Basin is a public agency that purchases imported water from the MWD. West Basin wholesales the imported water to cities and private companies in southwest Los Angeles County. Imported water is transported through the expansive Colorado River Aqueduct System and the Sacramento-San Joaquin Bay Delta. To reduce Southern California's dependence on imported water, West Basin also supplies the region with recycled water for municipal, commercial and industrial purposes and provides barrier water for injection into the South Bay's groundwater basin.

VOTE OF THE PEOPLE

In the mid-1940s, the cities charged with preserving underground water supplies and finding supplemental water recommended the establishment of West Basin. This recommendation was approved by the voters in 1947, forming the West Basin Municipal Water District. A year later, West Basin became a member agency of the MWD, a consortium of 26 cities and water districts that provides drinking water to nearly 18 million people in Southern California. The five-member West Basin Board appoints two representatives to serve on the 37-member MWD Board of Directors. With steady population growth and shrinking imported water supplies, West Basin has expanded its role in delivering a safe and reliable supply of water to the communities we serve by investing in locally-produced water supplies.

WATER DELIVERIES

Approximately 220,000 AF of water is used annually in West Basin's service area. An acre-foot of water is approximately 326,000 gallons, enough to meet the water needs of two average Southern California families of four, in and around their homes, each year.

BOARD OF DIRECTORS



DONALD L. DEAR
Division V
President



CAROL W. KWAN
Division III
Vice President



RONALD C. (RON) SMITH
Treasurer
Division I



GLORIA D. GRAY
Division II



EDWARD C. LITTLE
Division IV

“West Basin Municipal District's Water Use Efficiency Master Plan is a prime example of the types of partnership programs funded by the Bureau of Reclamation. The plan developed by West Basin will not only help the District achieve their savings objectives of 20 percent by 2020, but will also provide a model for other agencies to duplicate to help them achieve the State's new Water Conservation Act of 2009 (SBx7-7) targets. With ever increasing pressures on California agencies to conserve and manage local resources, this innovative and unique plan will help Southern California agencies better manage local supplies now - and in the future.”

Bill Steele

Southern California Area Manager
Bureau of Reclamation
United States Department of the Interior

FRONT COVER:

West Basin's Water Efficient Demonstration Garden at its Donald L. Dear headquarters building
17140 S. Avalon Blvd, Carson CA 90746

BACK COVER AND INSIDE FRONT AND BACK COVERS:

West Basin's Water Efficient Demonstration Garden at the Edward C. Little Water Recycling Facility
1935 S. Hughes Way, El Segundo CA 90245

These gardens have reduced water use by 80%.

Find out how you can make your yard healthier and more water efficient - take an Ocean-Friendly Garden (OFG) class or a Hands-On Workshop (HOW).

www.westbasin.org



West Basin Municipal Water District

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 Water Reliability 2020