



### ● **Semiannual Report on Local Resources, Conservation, and Desalination Programs**

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Metropolitan continues to implement its Local Resources, Conservation, and Desalination programs to advance local water resource development and help achieve regional water supply reliability. During this reporting period, Metropolitan provided approximately \$17 million in incentives under the Local Resources Program (LRP) for the development of more than 100,000 acre-feet of recycled water and recovered groundwater. Approximately \$5 million has been provided for water conservation programs garnering lifetime water savings of roughly 25,000 acre-feet. Incentives have not been provided for desalination projects as all are still in planning and development stages.

This report summarizes Metropolitan's efforts to encourage the development of local resources and water use efficiency for the first half of FY 2011/12 with the inclusion of recent notable achievements.

#### **Summary**

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Activities found within the report:

##### **Local Resources Program**

- During the first half of the fiscal year, LRP production exceeded 100,000 AF for recycled water and recovered groundwater projects.
- Metropolitan's Local Resources Development Strategy (LRDS) Task Force reviewed the current Local Resources Program and recycled water policy principles to identify improvements and alternatives to support local resource development. Periodic updates were provided to the Board.
- A professional accounting firm was retained to conduct financial audits of four LRP projects.

##### **Conservation Programs**

- Metropolitan's Board adopted the Long Term Conservation Program, which focuses on methods to achieve a regional reduction in per capita water use of 20 percent by 2020.
- Metropolitan's agricultural program added 17 new projects with lifetime water savings totaling more than 5,600 acre-feet.
- Federal and state grant funding helped Metropolitan implement new, water efficient landscape programs. Installation of efficient irrigation devices and expansion of California Friendly landscapes are helping to change consumer preferences and advance market transformation.
- Metropolitan worked with landscape industry allies to increase consumer awareness and availability of water efficient devices. Staff is working with the California Urban Water Conservation Council to evaluate new water saving devices and implementation approaches.
- Metropolitan created an online, educational toolbox focusing on irrigation control for member and retail agency use.
- Metropolitan helped evaluate 20X2020 water savings opportunities for the commercial, industrial and institutional sectors. Staff serves on the Irrigation Association's Smart Water Application Technologies team to advance water efficiency standards.
- Metropolitan applied for four 2012 United States Bureau of Reclamation (USBR) water use efficiency grants.
- Metropolitan's Innovative Conservation Program, in cooperation with USBR, selected 11 new projects for participation.

##### **Seawater Desalination Program**

- Metropolitan joined West Basin Municipal Water District in a study to evaluate the integration of desalinated seawater into Metropolitan's regional distribution system.
- The State Water Resources Control Board began reviewing its California Ocean Plan update, which will include new regulations specifically for desalination.
- Metropolitan worked together with member agencies and CalDesal to advocate for changes to the California Ocean Protection Council's draft Five-Year Strategic Plan. The changes were meant to preserve the opportunity for future seawater desalination projects within Metropolitan's region.

## Detailed Report

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### Local Resources Program (LRP)

Metropolitan supports development of water recycling and groundwater recovery projects that reduce or prevent new demand on imported water supplies through direct replacement of potable water or increased regional groundwater production. Metropolitan's efforts, in collaboration with member agencies, increase regional supply reliability and help achieve 2010 IRP targets.

#### Production and Incentive Payments

Production from the LRP's 82 recovered groundwater and recycled water projects in operation was in excess of 100,000 acre-feet (AF) for this reporting period. The following table summarizes recovered groundwater and recycled water deliveries and payments during the first half of FY 2011/12:

LRP	Recovered Groundwater	Recycled Water	Totals
Projects	21	66	87
In Operation	21	61	82
Annual Contract Yield (AF)	80,875	322,800	403,675
Deliveries*(AF)	9,450	93,120	102,570
Payments* (\$)	1.7 million	15.1 million	16.8 million

*\*During the period from July 2011 thru December 2011*

#### LRP Production

Production during this reporting period was lower than expected due to cooler weather, shutdowns for unscheduled maintenance, repairs, and water quality issues. LRP expenditures are projected to be about \$33 million for FY 2011/12.

#### Local Resources Development Strategy Task Force

Since 2011, staff has worked with member agencies through the Local Resources Development Strategy Task Force (Task Force) to review the current Local Resources Program and identify program improvements and alternative mechanisms to support local resource development. Task Force discussions have focused on both financial and non-financial approaches, including review and improvements to Metropolitan's recycled water policy principles.

Staff provided three updates to the Board on the progress of the Task Force:

- August 2011- LRP background, Task Force purpose and goals, and non-financial and financial approaches under review;
- November 2011 - update on nine incentive approaches and a model to evaluate financial impacts to Metropolitan and member agencies;
- January 2012 - ranking analysis of financial approaches identifying the preferred approaches from the Task Force.

The Task Force also reviewed Metropolitan's recycled water policy principles. These principles are intended to help promote the use of recycled water and provide a framework for Metropolitan's staff in addressing and

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conducting regulatory and legislative reviews, project financing support, resource management, institutional arrangements, regulatory issues and public education.

At the Board's request, staff is conducting a study to evaluate current demand conditions and determine the need for future local resource development. Staff will continue working with the Task Force and present program recommendations for Board consideration later this year once the demand analysis is complete. In addition, staff is updating recycled water and desalination policy principles as part of a comprehensive review of Metropolitan's policies.

### **Conservation Programs**

Metropolitan's conservation programs are guided by the Long Term Conservation Plan (LTCP) adopted by the Board in August 2011. The LTCP focuses on key goals intended to reduce per capita water use through conservation and water use efficiency. LTCP goals include achieving 20 percent reduction in regional per capita water use; pursuing innovative approaches to advance water use efficiency; and a pivotal shift in the public's perception of the value of water.

### **Agricultural Program**

Metropolitan's agricultural incentive program assists agricultural customers in improving irrigation system efficiency. 17 new projects were approved from July 2011 through January 2012, raising the program total to 27 projects. The projected lifetime water savings from these new projects is expected to exceed 5,600 acre-feet. Most recently, Calleguas Municipal Water District enlisted in the program, becoming the seventh member agency to do so since the program began in July 2010.

### **Catalysts for Market Transformation**

Landscape water use offers significant water savings potential and is a key area for reducing per capita demand. Metropolitan is implementing a \$7 million turf removal program with funding provided through federal and state grants. Through December 2011, Metropolitan provided \$3.7 million in incentives for the removal of nearly 90 acres of high-water use turfgrass. Metropolitan is also implementing the California Friendly Multi-Family Irrigation Retrofit Program. With funding provided through a Prop. 50 grant, smart irrigation controllers and high-efficiency nozzles are being installed at 44 sites within multi-family communities. In addition, Metropolitan provided \$853,750 in incentives for 11,000 smart controllers and over 157,000 sprinkler nozzles through regional and local programs. These efforts are helping to change consumer preferences and transform the market to water-efficient, California Friendly landscapes.



### **Strategic Alliances**

Metropolitan continues to work with irrigation manufacturers, distributors and retailers to build consumer awareness of the benefits of water-efficient devices and increase product availability at retail stores.

Metropolitan currently participates on several California Urban Water Conservation Council committees that evaluate the water savings potential of new devices and implementation approaches. In collaboration with California water agencies, Metropolitan hosts quarterly discussions of water use efficiency strategies with other key agencies from the southern United States.

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### Outreach and Education

Metropolitan is collaborating with member and retail agencies to provide outreach and education on water-efficient, California Friendly landscapes. The primary focus is on proper irrigation control. Metropolitan created an online toolbox for agencies and other organizations interested in educating the public on landscape water use efficiency. The toolbox includes informational material, guides, videos and other resources developed by water agencies and irrigation manufacturers, including links to websites providing additional information on proper irrigation.

### Regional Technical Capability

Metropolitan encourages member and retail agencies to share their water use efficiency expertise in regular monthly meetings for water conservation coordinators. The September 2011 meeting focused on landscape programs and included presentations on local programs implemented by water agencies, retailers, and environmental groups. These meetings help disseminate information and expand knowledge on water efficiency and conservation.

### Water Efficiency Standards

Establishing performance standards for irrigation devices helps increase regional water savings. By serving on the Irrigation Association's Smart Water Application Technologies Task Team, staff is helping to identify research and promote technology innovations and management practices that advance efficient water use. Staff also served on the Commercial, Industrial and Institutional Task Force to evaluate water savings opportunities in multiple commercial sectors which can further advance water savings and help comply with SBX7-7 (20X2020).

### United States Bureau of Reclamation Water Use Efficiency Grants

In January, Metropolitan submitted two grant proposals for water and energy efficient projects in response to the Bureau of Reclamation's (USBR) WaterSMART Water and Energy Efficiency Grants for FY 2012:

- The California Friendly Turf Replacement Incentive Program – Phase 2 (an expansion of the original program) requested \$1.5 million from USBR matched against \$1.5 million from Metropolitan to replace high-water use turfgrass, saving about 8,280 acre-feet of water over a 10-year life.



- A second grant proposal requested \$150,000 from USBR with an equal cost share from Metropolitan to replace commercially used water cooled ice machines with water and energy efficient models that would save roughly 3,600 acre-feet of water over a 10 year life.

If selected for USBR funding, program benefits include increased participation and water savings. In February, the Board adopted resolutions required by USBR, and authorized staff to enter into contracts with USBR for both programs if awarded. Notification of awards should be made by April 2012.

In March, Metropolitan submitted two grant proposals in response to the Bay-Delta Restoration Program CALFED Water Use Efficiency Grants for FY 2012:

- The Sprinkler Nozzle Incentive Program requested supplemental funding of \$0.5 million from USBR and a cost share of \$1.5 million provided by Metropolitan to replace less efficient residential and commercial sprinkler nozzles, saving approximately 10,000 acre-feet of water over a 5-year life.

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- The Recycled Water Retrofit Program requested \$1million from USBR and a cost share of \$5 million provided by local agencies for conversion of public irrigation systems to recycled water, saving about 64,000 acre-feet of water over a 20-year life.

If selected for funding, program benefits include expanded recycled water use, increased water savings for landscape irrigation, and reduced per capita water use. Funding awards should be announced in July 2012.


### **Innovative Conservation Program**

Metropolitan's Innovative Conservation Program (ICP) is Metropolitan's competitive program to evaluate water savings and reliability of new water savings devices, technologies, and strategies. Approximately \$250,000 of funding is available bi-annually in cooperation with the USBR for research. Projects are evaluated on a competitive basis through a request for proposals. Eight projects were selected in 2011 including a return on investment calculator, school irrigation audit tool, plant selector application, greywater irrigation treatment, real-time water use evaluations, and demand elasticity and revenue stability study. Project results will be shared with the public through the [www.Bewaterwise.com](http://www.Bewaterwise.com) website.

### **Seawater Desalination Program**

Seawater desalination is identified in Metropolitan's IRP as a water supply option to help meet future demand. Metropolitan's Seawater Desalination Program (SDP) offers financial incentives for the development of local seawater desalination projects. Furthermore, Metropolitan actively participates and works with its member agencies and CalDesal to advance the regional potential for this resource.

### **CalDesal Activities**

 In February, Metropolitan staff participated in CalDesal's annual Executive Committee, which established priorities for 2012/13 such as legislative and regulatory actions, membership, and partnerships. CalDesal is focused on encouraging regulators to consider a comprehensive scientific method to evaluate desalination projects that accounts for reduced impacts to marine life. Over the past six months, CalDesal has been instrumental in coordinating water agency response to proposed regulations.

### **West Basin Municipal Water District: Ocean Desalination Master Plan**

Metropolitan is participating in a joint study with West Basin Municipal Water District to evaluate the potential for integrating desalinated seawater into Metropolitan's regional distribution system. Results of the study will be included in West Basin's Ocean Desalination Master Plan (Master Plan), which will guide full-scale project development at one of two potential sites in either El Segundo or Redondo Beach. Metropolitan worked with West Basin staff and consultants on technical memos that assess regional system integration opportunities and constraints relative to demands, distribution system factors, water quality, as well as pumping requirements and alignments. Staff is currently assisting West Basin in reviewing related consultant reports and analysis.

### **State Water Resources Control Board Triennial Ocean Plan Update**

Every three years, the State Water Resources Control Board (SWRCB) updates California's Ocean Plan, which sets water quality standards and discharge limits for the State's oceans and coasts. The 2012 update will include new regulations specifically for desalination. To help develop the regulations, the SWRCB initiated three studies, including expert panels on brine discharges and seawater intakes, and a brine toxicity study. In coordination with CalDesal and the member agencies, Metropolitan is participating in the process by providing both written and oral testimony at workshops and hearings. Study reports are expected in spring 2012 and the SWRCB plans to hold a hearing to adopt the plan in December.

### **California Ocean Protection Council Strategic Plan Update**

The California Ocean Protection Council (OPC), created in 2004 to coordinate ocean policy and regulations for the state, develops resolutions and policies implemented by state agencies and commissions with ocean resource

management responsibilities. Included in the Council's recent update of its Five-Year Strategic Plan were draft actions that could impact potential member agency seawater desalination projects. This included having the OPC adopt positions of "no open-intakes for ocean desalination" and "no co-location (with power plants) of ocean desalination facilities." In response, Metropolitan worked with CalDesal and the member agencies to promote less prescriptive actions for seawater desalination and to disassociate desalination from power plant once-through cooling. The OPC addressed most of these concerns in the final plan adopted in February. Metropolitan will continue to work with CalDesal to monitor implementation of the plan, as well as the potential for an OPC resolution for seawater desalination.

### **Seawater Desalination Integration Survey Report**

Metropolitan completed a report summarizing a survey of international seawater desalination system integration practices. The report surveyed 10 projects spanning seven countries on topics such as water quality, corrosion, blending requirements, intake location, operations and other related considerations. Survey findings include the importance of pilot tests, water quality, and performing hydraulic studies prior to design and construction to ensure successful integration. The report also includes a comprehensive listing of past research efforts. A recent presentation of the results won "Best Paper" at a AWWA/AMTA conference in March.