



• **Semiannual Report on Local Resources, Conservation, and Desalination Programs**

Over the past three decades, Metropolitan has encouraged the development of local resources to help ensure regional water supply reliability. Metropolitan has provided financial incentives to serve as a catalyst for water conservation, water recycling, groundwater recovery, and seawater desalination projects. Since inception of the Local Resources Program (LRP) in 1982, Metropolitan has provided approximately \$375 million for the development of more than 2 million acre-feet of recycled water and recovered groundwater. For conservation, Metropolitan has provided approximately \$311 million in incentives since 1990, saving about 1.6 million acre-feet. To date, no incentives have been paid for product water from seawater desalination.

However, financial incentives are only one element of Metropolitan's efforts. Metropolitan has also actively engaged in advancing water use efficiency through non-financial strategies including legislation, regulations, outreach, education, and training. This coordinated, comprehensive approach is consistent with Metropolitan's Long-Term Conservation Plan (LTCP) adopted by the Board in August 2011 and current efforts with member agencies to review Metropolitan's local resources development strategy.

This report summarizes Metropolitan's water use efficiency accomplishments in FY 2010/11. The report also describes efforts leading to key advancements that resulted in positive lasting changes, and legislative initiatives that helped support productive and cost-effective local water resource development.

Summary

Activities found within the report:

Local Resources Program (Page 2)

- Metropolitan provided financial incentives to support member agency development of recycled water projects under the LRP. In FY 2010/11, two new projects were approved. Recycled water and groundwater production for 81 projects in operation reached about 205,000 AF.
- Metropolitan established the Local Resources Development Strategy (LRDS) Task Force in collaboration with member agencies. The group is reviewing Metropolitan's LRP and assessing alternate approaches to support local resources development.

Conservation Programs (Page 3)

- Metropolitan's FY 2010/11 incentives resulted in nearly 13,000 acre-feet of water saved through regional and locally implemented programs.
- Metropolitan, member and retail agencies, and irrigation manufacturers collaborated on outreach to encourage landscape irrigation efficiency using the common theme of "Take Control of Your Sprinkler Controller".
- Metropolitan implemented the 2011 Innovative Conservation Program with partner funding from the U.S. Bureau of Reclamation (USBR) and selected eight projects for further evaluation.
- Metropolitan is conducting a conservation market study to identify water savings opportunities and has initiated research on customer acceptance for new and existing products and services.

Seawater Desalination Program (Page 5)

- Metropolitan is a founding member of CalDesal, a non-profit organization that advocates legislative and regulatory action to facilitate the use of desalination to help meet California's water-supply challenges. Metropolitan serves on its Board of directors and executive committee, and actively participates in CalDesal's regulatory and legislative initiatives.
- Metropolitan and West Basin Municipal Water District are participating in a joint study to evaluate the potential for integrating desalinated seawater into Metropolitan's regional distribution system.

Detailed Report

Metropolitan's 2010 Integrated Resources Plan (IRP) identifies the resources needed to meet the region's water demands through 2035. It includes targets for local resource augmentation as well as water use efficiency. The local resource augmentation targets are expected to be achieved through recycled water, groundwater recovery, and seawater desalination. The water use efficiency target will be reached through any combination of increased conservation, improved water use efficiency, and increased use of recycled water. Achieving this target is expected to result in a 20 percent reduction in the region's per capita potable water use by 2020. This is consistent with the 2009 Water Conservation Act that seeks a statewide 20 percent reduction in per capita water use by 2020 (20x2020).

Metropolitan's efforts to achieve these targets will be guided by the goals and strategies developed by the LRDS Task Force as well as the Long-Term Conservation Plan (LTCP) adopted in August. The LTCP identifies three key goals:

- achieve the IRP water use efficiency target in coordination with recycled water;
- pursue innovation to advance water use efficiency; and
- change the public's perception of the value of water for this region.

These goals will be achieved through market transformation, which is demonstrated by lasting changes in market demand for water efficient technologies, services and designs. Transforming markets requires long-term efforts and adaptive implementation approaches that respond to changing social and market conditions.

Local Resources Program

To help achieve the IRP targets for local resources, Metropolitan supports the development of water recycling and groundwater recovery projects. These projects reduce demand or prevent a new demand on Metropolitan's imported water supplies through either direct replacement of potable water or increased regional groundwater production.

Production and Incentive Payments

In FY 2010/11, the Board approved two new projects for participation in the LRP that are expected to yield 17,000 acre-feet per year (AFY).

Board Approved Projects		
Project Name	Yield (AFY)	Type
IRWD Wells 21 and 22 (MWDOC)	6,400	Recycled Water
Chino Desalter Phase III (Western/IEUA)	10,600	Groundwater

Production for the LRP's 81 recycled water and groundwater projects was nearly 205,000 AF in FY 2010/11. After experiencing several years of steady growth, there was a noticeable drop in recycled water production this past fiscal year. Lower recycled water demands are attributed to precipitation, cooler weather and unscheduled maintenance shutdowns.



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The following table summarizes fiscal year recovered groundwater and recycled water deliveries:

Local Resources Program Projects	Recovered Groundwater	Recycled Water	Totals*
Total	21	64	85
In Operation	21	60	81
Contract Yield (AFY)	80,875	322,800	403,675
FY Deliveries (AF)	42,970	161,990	204,960
FY Payments (\$)	7.7 Million	26.2 Million	34.0 Million

*Deliveries and payments are estimated until actual costs are reconciled.

Three agreements totaling approximately 12,400 AF expired. However, the projects summarized below remain in operation and production continues to help improve regional water supply reliability.

Expired Agreements		
Name	Yield (AF)	Type
Long Beach Reclamation Project (City of Long Beach)	1,700	Recycled Water
Rincon Del Diablo Recycled Water Program (SDCWA)	648	Recycled Water
Irvine Reclamation Project (MWDOC)	10,000	Recycled Water

Local Resources Development Strategy Task Force

The LRDS Task Force was initiated to review Metropolitan's Local Resources Program (LRP). Metropolitan and the member agencies are collaborating in this effort to review alternative local resource strategies, identify program improvements, and examine alternative mechanisms to support development of local resources consistent with the IRP. The Task Force plans to provide the Board with recommendations for consideration later in the fiscal year.

The range of opportunities available to the LRDS Task Force is a direct result of Metropolitan's efforts over the past few years to advance water recycling and groundwater recovery in state regulations. These efforts include:

- 20x2020: Metropolitan co-sponsored the legislation that recognizes recycled water as an essential component of water use efficiency within California.
- Uniform water recycling criteria: Metropolitan encouraged the Department of Public Health (DPH) to adopt uniform water recycling criteria for indirect potable reuse and surface water augmentation. SB 918 (Pavley, 2010) expands recycled water use by allowing treatment technologies to be combined in ways to meet water quality standards that best optimize a project and its costs.
- State Recycled Water Policy and Landscape Irrigation Permit for Recycled Water: Metropolitan worked with the State Water Resources Control Board (SWRCB) and other stakeholders to include language in the state's recycled water policy that expands use and streamlines permitting of water recycling processes. Metropolitan also worked to clarify the landscape irrigation permit process to encourage increased use of recycled water.
- Amendment to Los Angeles Regional Water Quality Control Board Water Reclamation Requirements: Metropolitan supported an amendment to ease project approval requirements to use recycled water for groundwater recharge.

Metropolitan is also actively involved in the WaterReuse Research Foundation and WaterReuse Association. These groups focus on applied research and legislative/regulatory activities to advance recycled water technologies and use of this resource. Metropolitan is a member of the Foundation's Board of Directors and serves on the Board of the Association's Los Angeles County Chapter.

Conservation Programs

Metropolitan's conservation programs are guided by the Long Term Conservation Plan (LTCP) adopted by the Board in August 2011. The LTCP identifies strategies to help achieve IRP water use efficiency targets and reduce per capita potable water use through market transformation. Strategies include catalysts, outreach and education, regional technical capabilities, strategic alliances and advancement of water efficient standards.

Catalysts for Market Transformation

Metropolitan's Conservation Credits Program is a key financial catalyst that affects market demand. In FY 2010/11, Metropolitan's expenditures for the Program totaled \$14 million yielding nearly 13,000 acre feet of water savings in the first year and about 110,700 acre feet over the lifetime of the devices. The Program provides funding for Metropolitan's regional residential and commercial programs, agricultural water use efficiency incentives, and programs implemented by the member agencies to meet the needs of their service areas. Since 1990, Program expenditures totaled \$311 million, saving about 1.6 million acre feet.

The Innovative Conservation Program (ICP) serves as another important catalyst to encourage development of new water efficient technologies. It is designed to provide financial assistance to help evaluate the water savings potential and functional reliability of new water efficient devices, technologies, and strategies. With USBR as a funding partner, Metropolitan completed a competitive process for research proposals for the 2011 ICP. Over 75 proposals requesting over \$8 million were received and evaluated. Eight projects were recommended for funding by an independent review panel comprised of Metropolitan and member agency staff and environmental community advocacy groups. Project findings will be shared with the public through Bewaterwise.com® and Metropolitan's Program Advisory Committee for evaluation as part of future incentive programs.

Metropolitan's research efforts will help determine what catalysts are needed to further change market demand. With funding from USBR, Metropolitan is conducting a conservation market study to identify water savings opportunities. Metropolitan initiated research on customer acceptance for new and existing products and services, and is assisting USBR with a regional study on the impact of retail water rates on water demand.

Strategic Alliances

Metropolitan is collaborating with energy utilities, landscape industry organizations, and water agencies throughout the state to advance water use efficiency:

- Energy utilities: Metropolitan is collaborating with the Southern California Gas Company on a program to directly install high efficiency clothes washers in low income homes. Metropolitan is also participating in a water/energy workgroup sponsored by the UC Davis Center for Water Efficiency to evaluate the opportunities and challenges of the state-wide water/energy nexus.
- Landscape industry: Metropolitan is working with irrigation manufacturers to make smart controllers more accessible and affordable in retail stores.
- Water agencies: Metropolitan is actively participating in the California Urban Water Conservation Council, which includes a broad membership of water agencies throughout the state. Staff has held leadership positions in the Council's Board of Directors and participates on several committees. Metropolitan holds quarterly statewide water use efficiency meetings to discuss legislation, regulations, and best management practices.

Outreach and Education

Metropolitan is providing regional outreach and education through two key efforts:

- Strategic Focus – Irrigation Control: Metropolitan is leveraging opportunities to change market demand for water-efficient landscapes and irrigation technologies. Metropolitan is collaborating with member and retail agencies and irrigation manufacturers to develop strategies and themes for regional and local outreach efforts. Using a common theme of "Take Control of Your Sprinkler Controller", the workgroup is developing resources to be shared among water agencies and other organizations interested in educating the public on landscape water use efficiency.
- Bewaterwise.com®: Metropolitan's conservation website attracted nearly 340,000 visitors through June 2011. Metropolitan used online and social media including a [Bewaterwise Facebook page](https://www.facebook.com/Bewaterwise) and on-line advertising focused on water conservation.

Regional Technical Capability

Metropolitan is encouraging the development of water use efficiency expertise by hosting regular meetings with the region's conservation coordinators. These meetings allow member and retail agencies to share information and learn about new programs and implementation approaches. The quarterly statewide meetings described above provide opportunities to share information with agencies in other regions.

Water Efficiency Standards

Establishing water efficiency standards is a key to Metropolitan's LTCP. Metropolitan has actively pursued these standards since the early 1990's. Recent efforts that are contributing to market transformation include:

- Performance standards for smart irrigation controllers and soil moisture sensors: Metropolitan is helping to develop performance specifications for smart controllers and soil moisture sensors by serving on the U.S. Environmental Protection Agency's WaterSense program technical committee.
- Smart controller water savings study: Metropolitan, with support from USBR, conducted a pilot "Smart Irrigation Control Program" that installed and monitored sprinkler controllers. Metropolitan recently received a \$60,000 grant from USBR to evaluate the long-term water savings of this technology.
- California building standards: Metropolitan collaborated with the California Municipal Utilities Association to have water use efficiency expertise included on the Building Standards Commission's Green Building Committee and the Plumbing, Electrical, Mechanical, and Energy Committee.
- Plumbing industry standards: Metropolitan is a member of the International Association of Plumbing and Mechanical Officials Green Technical Committee. The Committee identifies opportunities to make codes and standards more sustainable and develops the Green Plumbing and Mechanical Supplement for building standards.
- 20x2020: Metropolitan served as a member of the Urban Stakeholder Committee to help implement 20x2020 which seeks a statewide 20 percent reduction in urban per capita water use by 2020. Metropolitan is also serving on the state's Commercial, Industrial, and Institutional Task Force, which is evaluating best practices and water savings opportunities for this sector.
- Model Water Conservation Ordinance: Metropolitan facilitated development and implementation of a model water conservation ordinance for local agencies. Metropolitan continues to provide guidance to agencies on local ordinances.

Desalination

Seawater desalination will help meet the IRP's goal for local supply augmentation. The IRP identifies foundational actions for seawater desalination that lay the groundwork for expanded implementation as needed. Metropolitan's Seawater Desalination Program (SDP) offers financial incentives to support development of local seawater desalination projects. Metropolitan also provides regional facilitation to the member agencies through regular meetings, active participation in CalDesal, and support for local projects during the permitting process.

Seawater Desalination Program

Consistent with the IRP's Local Resources Augmentation Goal, member agencies are currently considering eight seawater desalination projects in the service area representing over 350,000 AF of potential new in-basin supplies. Of the five member agency projects originally in the SDP, four are actively being developed and three have executed SDP incentive agreements with Metropolitan. The four active projects would produce up to 102,000 AFY. Member agencies are also pursuing three additional local projects not currently included under the SDP which could produce over 250,000 AFY if developed.

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Projects	Agreement	Online Date	Projected Capacity (AFY)	Status
Long Beach	Yes	2020	10,000	Pilot Testing
Los Angeles	No	N/A	N/A	Inactive
MWDOC-Dana Point	Yes	2017	16,000	Pilot Testing
San Diego - Carlsbad	No	2016	56,000	Permitting Complete
West Basin	Yes	2017	20,000	Pilot Testing
		Total	102,000	

Additional Local Projects	Online Date	Projected Capacity (AFY)	Status
MWDOC - Huntington Beach	NA	56,000	Permitting
San Diego - Camp Pendleton*	2019	168,000	Feasibility study
San Diego - Rosarito Beach / Otay**	NA	28,000	Feasibility study
	Total	252,000	

*Phased in 56,000 AFY increments starting in 2019;

**Could receive a share of the project's 56,000 AF supply, online date not determined; Metropolitan is a partner in the feasibility study

CalDesal

Metropolitan supports regulatory/legislative efforts that enhance local resources development. As a founding member of CalDesal, Metropolitan serves on its Board of Directors and executive committee, and actively participates in CalDesal's regulatory and legislative initiatives. Recent activities include:

- California Ocean Plan Update: The SWRCB is updating the triennial Ocean Plan Update with new regulations for seawater desalination intakes and brine discharges. Metropolitan and member agencies helped develop CalDesal's strategy to ensure that the regulatory process includes water utility input. CalDesal and Metropolitan have testified at several SWRCB hearings promoting sound science in the development of regulations.
- Ocean Protection Council: In conjunction with CalDesal and the member agencies, Metropolitan provided oral testimony to the Council on the Strategic Action Plan and submitted written comments in September. Metropolitan urged the Council not to pre-empt the SWRCB regulatory process and to reconsider provisions mandating how water agencies evaluate water supply choices. Proposed changes to the action plan include new policies that could adversely impact member agency seawater desalination projects. The Council sets policy for state agencies with regulatory authority over ocean and coastal resources.

West Basin Integration Study

Metropolitan supports research and development of technological advances that provide regional benefits. 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. As part of the study, Metropolitan staff developing technical memos on integrating desalinated seawater in the distribution system including: system demands/operations, conveyance, pumping, and water quality.

Seawater Desalination Integration Survey

Staff completed a survey of international seawater desalination projects to understand how these facilities were integrated into existing potable distribution systems. Survey findings will help Metropolitan determine the types of studies and infrastructure improvements that are needed to ensure successful integration. The survey represents a foundational action for seawater desalination, as several local projects have proposed integrating desalinated seawater into Metropolitan's distribution system. The final report will be completed later this year.



Seawater desalination intake test screen

