



● **Board of Directors**
Water Planning and Stewardship Committee

2/8/2011 Board Meeting

9-1

Subject

Report on a Draft Long-Term Conservation Plan

Description

Since September 2009, staff has worked with the member and retail agencies to develop a long-term conservation plan to help achieve the water use efficiency target in the 2010 Integrated Water Resources Plan Update (IRP). This IRP target reflects a 20 percent reduction in regional per capita water use by 2020 through increased conservation and water recycling. Reducing average per capita potable water use from 177 gallons per capita per day (GPCD)¹ to 141 GPCD within a ten-year time period will require strategies that transform markets by attempting to change customer values, behaviors, and water use technology preferences. Therefore, the focus of the planning effort is to create lasting and accelerated water savings through outreach, education, training, partnerships, incentives, and regulations.

This letter describes the strategies and implementation approaches that are being developed. Staff plans to return to the Board later this year with a draft plan, updated water conservation policy principles, and specific near-term actions.

IRP Target and Per Capita Water Use

The IRP sets water use efficiency targets consistent with the 2009 Water Conservation Act, which calls for a 20 percent reduction in urban per capita water use by the year 2020 (“20x2020”). These reductions can be achieved through conservation and water use efficiency, including water recycling. To achieve the IRP target for 2020, the region’s potable per capita water use will need to decline from a historical average of 177 GPCD to 141 GPCD.

2010 IRP Water Use Efficiency Target
(Gallons per capita per day)

	2005 ¹	2015	2020	2025	2030	2035
Implied Regional GPCD	177	159	141	141	141	141

In 2008, regional per capita use was 166 GPCD, which reflects a 6 percent drop from 2005. As data is collected for 2009 and 2010, it is anticipated that per capita water use will have dropped further. Lower retail demand from historical averages is attributed to the economic recession, conservation ordinances, watering restrictions, cooler weather and increased cost of water. Over the past two decades, lower per capita use due to short-term or cyclical conditions has typically rebounded as a result of increased economic activity, removal of water use restrictions, normal weather patterns, and public perception of water supply conditions. Without strategic actions outlined in the long-term conservation plan, an increase in regional per capita water use is anticipated as conditions improve in the region. Staff will continue to collect data to determine per capita water use, evaluate and monitor performance, and report on progress to the Board annually.

¹ Regional average GPCD from 1996 to 2005

Challenges

Several challenges to achieving the IRP target will need to be addressed in the plan. First, there is a relatively short timeframe of ten years to achieve the target. Per capita water use is currently in a decline; however, as economic conditions improve the challenge of meeting the target will become more difficult. Second, non-drought conditions could diminish public support for water use efficiency and impact adoption of new technologies. Third, budget constraints require new strategies to effectively leverage funding and achieve increased water savings in the most cost-effective manner. Because of these challenges, the long-term conservation plan must recognize that financial incentives are only one component of an overall strategy to reduce per capita water use. Other methods must be employed to change customer behaviors, technology preferences, and the perception of value attributed to water.

An important consideration of the plan is the need for both regional and local efforts to achieve the IRP target. Reductions in per capita use will require the effort of Metropolitan as well as retail agencies attempting to comply with 20x2020. Retail agencies can use tools that are not available to Metropolitan, such as conservation-based rate structures and enforcement of conservation ordinances, locally targeted outreach, and implementation of local programs. Metropolitan can support retail compliance and work toward the IRP target through regional conservation incentive programs, coordinated outreach and messaging, research, technical assistance, and leveraging strategic alliances with partners to increase public awareness and identify water savings opportunities.

Maintaining the status quo will not achieve the IRP target by 2020. A new model for conservation is needed to create lasting changes in consumer values, behaviors and preferences for water-efficient technologies. These changes occur through collective actions, policies and programs that seek to transform the market for water - efficient devices and services over time. Market transformation, a new concept for Metropolitan's conservation programs, is achieved through the focused use of strategies to change consumer preferences and increase market share of efficient products and services. It culminates with customer preferences and standards for water-efficient devices and services. Outreach, training and incentives are used as catalysts during the process; as market saturation increases, standards, codes or regulations are pursued to maintain minimum efficiency levels. With market saturation and industry support for efficiency standards, outreach and incentives can be focused on other new devices or services.

Market transformation has been successful for energy utilities in energy-efficient refrigerators and is a current strategy for lighting. Successful market transformation for water use efficiency will require collaborative efforts between Metropolitan, member agencies, manufacturers, the building, plumbing, and landscape industries, and retailers to effectively leverage the region's ability to change consumer behaviors and technology preferences in Metropolitan's service area. Staff is working with member and retail agencies to develop implementation strategies for the long-term plan.

Conservation Strategies

Strategies that are being developed to support market transformation through behavioral and technological change include the following:

1. **Use catalysts for market transformation.** Metropolitan can drive innovation and affect consumer decision-making through catalysts, such as entrepreneurial opportunities, strategic alliances, outreach and education, codes and standards, retail rate structures, and device and performance-based incentives.
2. **Encourage action through outreach and education.** Metropolitan can provide public outreach, education, and training through a range of media and formats, which are essential to changing perceptions of the value of water.
3. **Develop regional technical capacity.** Metropolitan can conduct or sponsor research, facilitate information sharing, and provide technical assistance to support local conservation efforts.
4. **Build strategic alliances.** Metropolitan can form strategic alliances with partners to leverage resources, opportunities and program momentum. Potential partners include product manufacturers,

distributors and retailers; energy utilities; professional organizations; and watershed and environmental groups.

5. **Advance water efficiency standards.** Metropolitan can work to advance water efficiency codes and standards and support the adoption of regulations and local ordinances to increase efficiency and reduce water waste.

Implementation

Market transformation requires a long-term effort and adaptive implementation approaches that respond to changing social and market conditions. A traditional program would still be implemented – with incentives, outreach, education and training for a broad range of water use behaviors and technologies – to provide a foundation of market acceptance for new and existing products and services. New pilot programs that have greater water savings potential would be tested. In addition, a single area of water use would be targeted to increase market share of efficient technologies and impact long-lasting change in consumer preferences and behavior. Staff would conduct research and evaluate progress annually; implementation strategies would be adjusted accordingly. These combined efforts increase the potential for water savings to meet the IRP target.

In developing the implementation approaches for the long-term conservation plan, landscape irrigation has been identified as a primary focus area for market transformation. A 2003 state-sponsored study noted the potential for 25 percent savings from proper irrigation scheduling in the residential sector alone. Under the adaptive implementation approaches described above, proper irrigation control could be a potential area of focus for FY 2011/12. Homeowners could be encouraged to adjust existing controllers in response to seasonal changes or upgrade to a smart controller; property managers and contractors could be encouraged to increase the use of smart controllers in professionally managed landscapes. Strategies may include coordinated public messaging and outreach, education, partnerships with professional organizations and manufacturers, product promotions, and increased incentives.

Benefits

The strategies and adaptive implementation approaches would provide several benefits, including:

- Support for achieving the IRP target with a 20 percent reduction in per capita water use by 2020;
- The ability to leverage the regional efforts of Metropolitan with the local and retail agency efforts toward the 20x2020 goals;
- Increased focus on strategies to affect consumer behavior beyond rebates, allowing incentive programs to be targeted for greater impact;
- Targeted research to guide program development and implementation; and
- Maintaining successful regional incentive programs while pursuing accelerated water savings in targeted areas.

This approach should allow Metropolitan's budget for conservation incentives and other programmatic elements to remain at \$20 million on average, adjusted for inflation over time. Annual variations in budget could be used to respond to drought, wet periods or budget demands.

Next Steps

Staff will incorporate board comments and continue to work with the member agencies to draft a plan and develop near-term implementation actions for board consideration. Staff will also work to develop recycled water projections that help refine the conservation component of the IRP target. Staff anticipates returning to the Board with a draft plan, updated water conservation policy principles, and specific near-term actions later this year.

Policy

By Minute Item 48449, dated October 12, 2010, the Board adopted the 2010 Integrated Water Resources Plan Update.

By Minute Item 48266, dated May 11, 2010, the Board authorized Metropolitan's FY 2010/11 Water Conservation Program.

By Minute Item 45208, dated February 11, 2003, the Board adopted policy principles regarding water conservation activities.

Fiscal Impact

The Long-Term Conservation Plan would be implemented through the Conservation Credits Program and public outreach/education programs within approved budgets.



Deven N. Upadhyay
Manager, Water Resource Management

1/27/2011
Date



Jeffrey Nightlinger
General Manager

1/27/2011
Date